Chevrolet Equinox Fuel Cell Owner Manual

Seats and Restraint Systems 1-1
Front Seats 1-2
Rear Seats 1-10
Safety Belts 1-12
Child Restraints 1-32
Airbag System 1-56
Restraint System Check 1-70

Features and Controls 2-1
Keys 2-2
Doors and Locks 2-6
Windows 2-9
Start and Operating Your Vehicle 2-12
Mirrors 2-19
OnStar® System 2-21
Storage Areas 2-24

Instrument Panel 3-1
Instrument Panel Overview 3-4
Climate Controls 3-17
Warning Lights, Gages, and Indicators 3-23
Driver Information Center (DIC) 3-38
Audio System(s) 3-54

Driving Your Vehicle 4-1
Your Driving, the Road, and Your Vehicle 4-2
Towing 4-22

Service and Appearance Care 5-1
Service 5-3
Fuel 5-3
Owner Checks 5-8
Headlamp Aiming 5-11
Bulb Replacement 5-11
Windshield Wiper Blade Replacement 5-12
Tires 5-13
Appearance Care 5-45
Vehicle Identification 5-52
Electrical System 5-53
Capacities and Specifications 5-54

Maintenance Schedule 6-1
Maintenance Schedule 6-2

Customer Assistance Information 7-1
Customer Assistance and Information 7-2
Reporting Safety Defects 7-4
Vehicle Data Recording and Privacy 7-4

Index 1

GENERAL MOTORS, GM, the GM Emblem, CHEVROLET, the CHEVROLET Emblem, and the name EQUINOX are registered trademarks 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 notice.

This manual describes features that may be available in this model, but your vehicle may not be have all of them.

Keep this manual in the vehicle for quick reference.

Litho in U.S.A.
Part No. 1X264361 A First Printing

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.

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.

©2007 General Motors Corporation. All Rights Reserved.

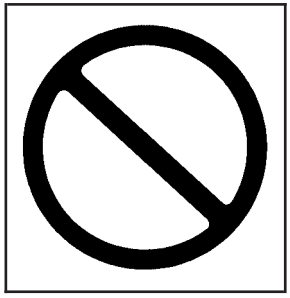
Safety Warnings and Symbols

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

You will also find notices in this manual.

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

A notice tells about something that can damage the vehicle. The notice also 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
Manual Seats 1-2
Seat Height Adjuster 1-3
Power Seat 1-3
Manual Lumbar 1-4
Heated Seats 1-4
Manual Reclining Seatbacks 1-5
Head Restraints 1-7
Passenger Folding Seatback 1-8

Rear Seats 1-10
Split Folding Rear Seat 1-10

Safety Belts 1-12
Safety Belts: They Are for Everyone 1-12
How to Wear Safety Belts Properly 1-17
Lap-Shoulder Belt 1-26
Safety Belt Use During Pregnancy 1-31
Safety Belt Extender 1-31

Child Restraints 1-32
Older Children 1-32
Infants and Young Children 1-35
Child Restraint Systems 1-39
Where to Put the Restraint 1-42
Lower Anchors and Tethers for Children (LATCH) 1-44
Securing a Child Restraint in a Rear Seat Position 1-50
Securing a Child Restraint in the Right Front Seat Position 1-52

Airbag System 1-56
Where Are the Airbags? 1-59
When Should an Airbag Inflate? 1-61
What Makes an Airbag Inflate? 1-62
How Does an Airbag Restrain? 1-62
What Will You See After an Airbag Inflates? 1-63
Passenger Sensing System 1-64
Servicing Your Airbag-Equipped Vehicle 1-68
Adding Equipment to Your Airbag-Equipped Vehicle 1-69

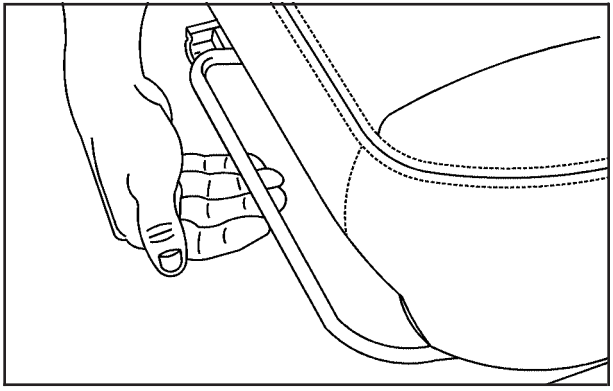
Restraint System Check 1-70
Checking the Restraint Systems 1-70
Replacing Restraint System Parts After a Crash 1-71

Front Seats

Manual Seats

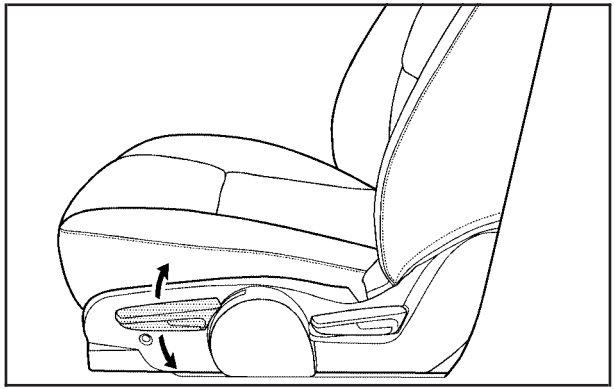
⚠ CAUTION:

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.



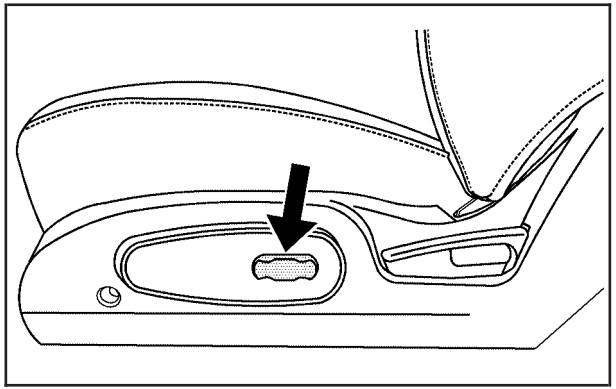
Lift the bar located under the front of the seat to unlock it. Slide the seat to where you want it and release the bar. Try to move the seat with your body to be sure the seat is locked in place.

Seat Height Adjuster



To manually raise or lower the seat, move the lever repeatedly upward or downward

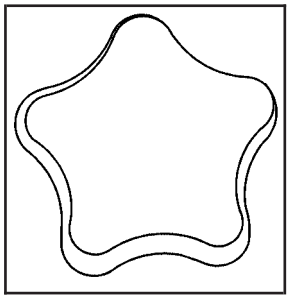
Power Seat



To adjust the seat:

- Slide the control forward or rearward to move the seat forward or rearward.
- Move the front and rear of the control up or down to raise or lower the front and rear part of the seat cushion.

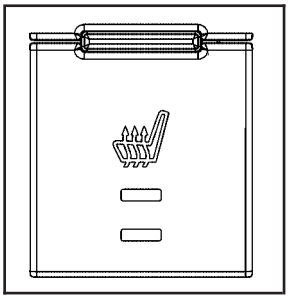
Manual Lumbar



On vehicles with this feature, the knob is located on the front of the driver seat lower cushion on the inboard side.

Turn the knob clockwise or counterclockwise to increase or decrease the lumbar support.

Heated Seats



If your vehicle has heated seats, the switches are located on the instrument panel near the climate controls.

The vehicle must be on for the heated seats to operate.

Press the switch, nearest to the seat, once to turn the heated seat on to the high setting. Both indicator lights will be lit. Press the switch a second time to turn the heated seat to the low setting. One indicator light will be lit. Press the switch a third time to turn the heated seat off.

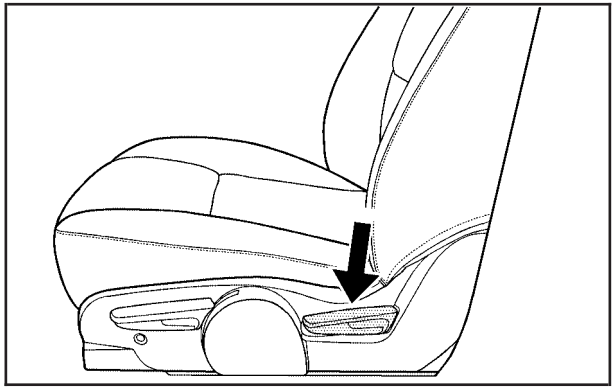
Manual Reclining Seatbacks

⚠ 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.

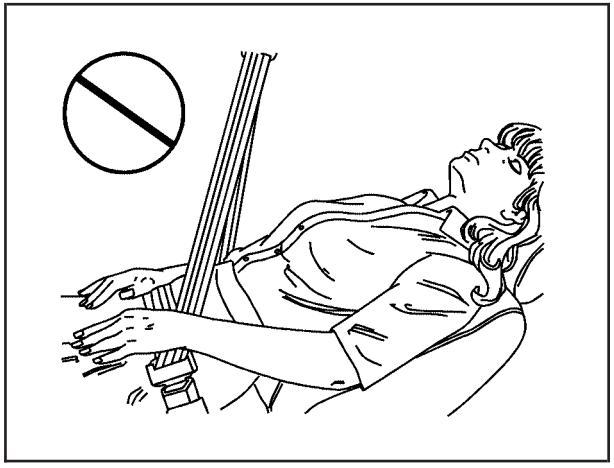
⚠ CAUTION:

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.



Driver's Seat shown, Passenger Seat similar

To adjust the seatback, lift the lever on the outboard side of the seat and move the seatback to the desired position. Then release the lever to lock the seatback in place. If the passenger's seat is a flat folding seat, fully raise the lever to disengage the seatback.



⚠ 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.

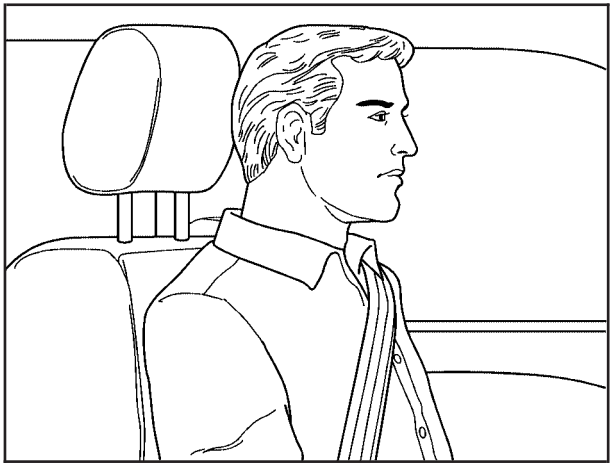
The shoulder belt cannot do its job because it will not be against your body. Instead, it will be in front of you. In a crash, you could go into it, receiving neck or other injuries.

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.

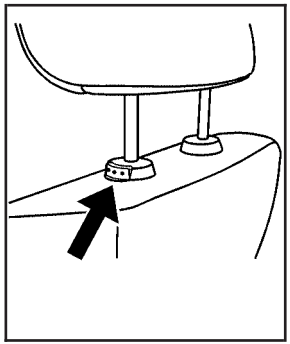
For proper protection when the vehicle is in motion, have the seatback upright. Then sit well back in the seat and wear your safety belt properly.

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 button, located on the top of the seatback, and push the restraint down.

Passenger Folding Seatback

⚠ CAUTION:

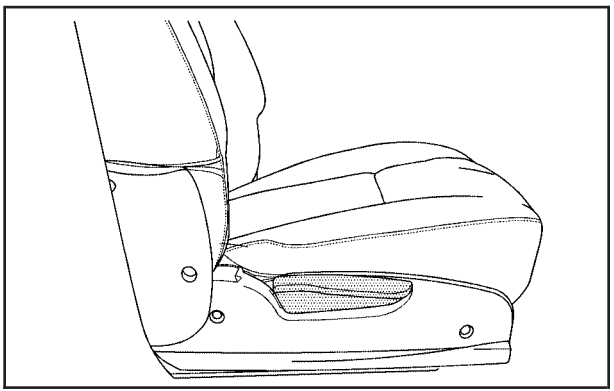
If you fold the seatback forward to carry longer objects, such as skis, be sure any such cargo is not near an airbag. In a crash, an inflating airbag might force that object toward a person. This could cause severe injury or even death. Secure objects away from the area in which an airbag would inflate. For more information, see *Where Are the Airbags? on page 1-59* and *Loading Your Vehicle on page 4-17*.

⚠ CAUTION:

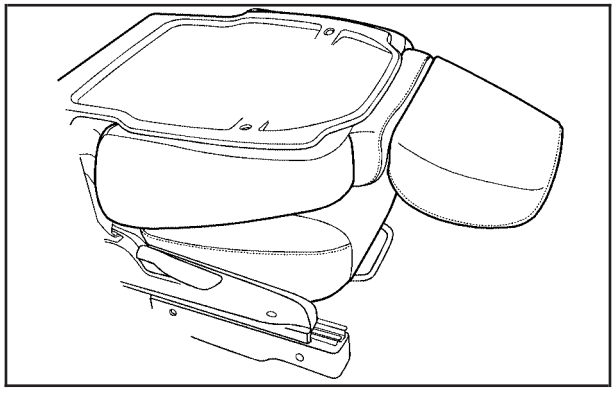
Things you put on this seatback can strike and injure people in a sudden stop or turn, or in a crash. Remove or secure all items before driving.

On vehicles with this feature, to fold the seatback:

1. Lower the head restraint all the way.
2. Lift the bar under the front of the seat to unlock it. Slide the seat as far back as it will go and release the bar. Try to move the seat back and forth to make sure it is locked into place.



3. Lift up fully on the recliner lever, located on the outboard side of the seat, and fold the seatback forward until it disengages.



4. Continue to fold the seat forward until it locks in the folded position.
5. Pull up on the seatback to be sure it is locked.

To raise the seatback, do the following:

1. Lift up fully on the recliner lever, located on the outboard side of the seat, and push up on the seatback.
2. Continue raising the seatback until the seatback re-engages.

⚠ 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.

The recliner lever is also used to recline the seatback while a passenger is seated. See *Manual Reclining Seatbacks on page 1-5*.

Rear Seats

Split Folding Rear Seat

The rear split bench seatbacks have three available positions — folded forward, upright, or partially reclined. Each of the rear seatbacks can be moved to any of the three positions independent of the other seatback position.

⚠ CAUTION:

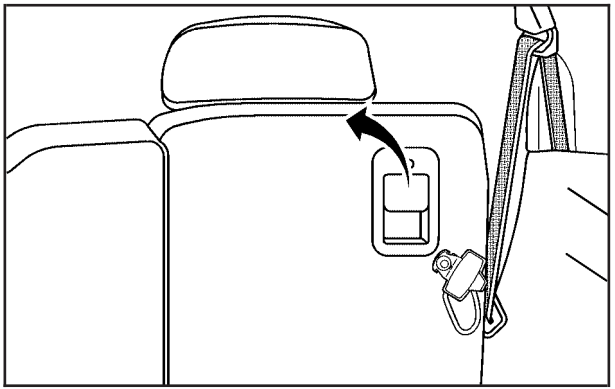
A safety belt that is improperly routed, not properly attached, or twisted will not provide the protection needed in a crash. The person wearing the belt could be seriously injured. After raising the rear seatback, always check to be sure that the safety belts are properly routed and attached, and are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

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.**

Prior to lowering the seatback, ensure that both of the seatbelts are unbuckled and the front seats are not reclined.

⚠ 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.



Lift the lever on the upper back corner of the seatback to move it to the desired position and then release it. Push and pull on the seatback to be sure it is locked in place.

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 3-26*.

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

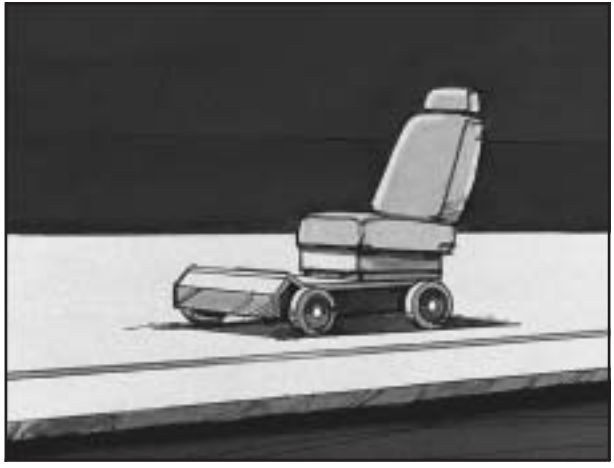
You never know if you will be in a crash. If you do have a crash, you do not know if it will be a serious one.

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.

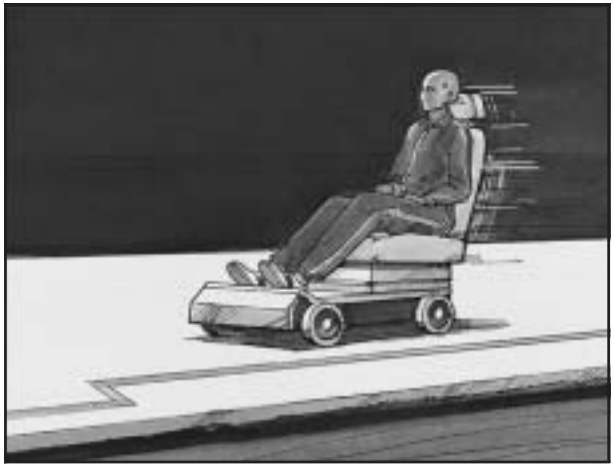
After more than 40 years of safety belts in vehicles, the facts are clear. In most crashes buckling up does matter... a lot!

Why Safety Belts Work

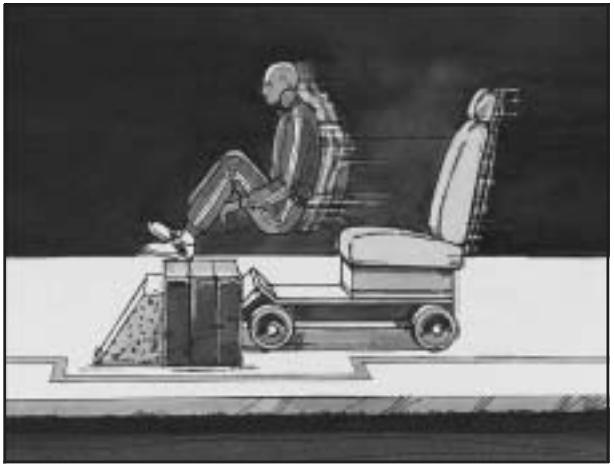
When you ride in or on anything, you go as fast as it goes.



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

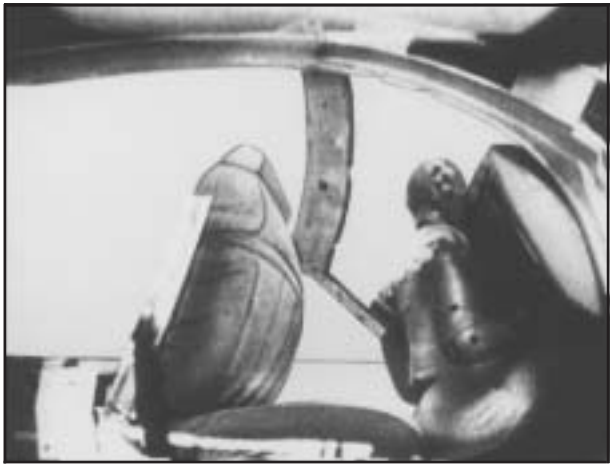


Put someone on it.



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

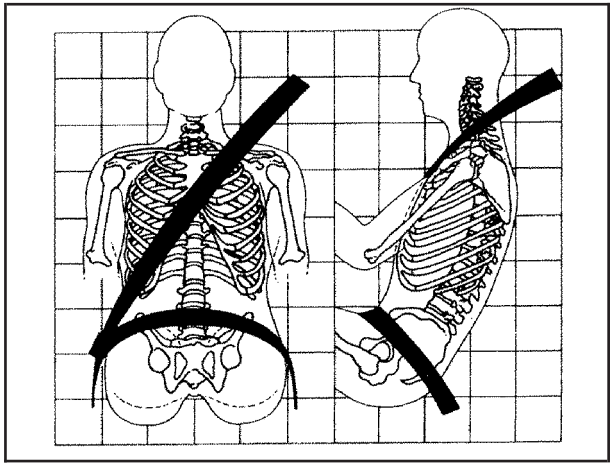
This section is only for people of adult size.

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 1-32* or *Infants and Young Children on page 1-35*. 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.

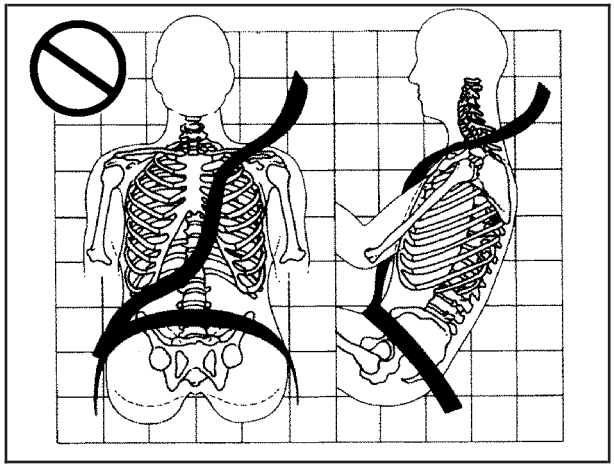
First, before you or your passenger(s) wear a safety belt, there is important information you should know.



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?

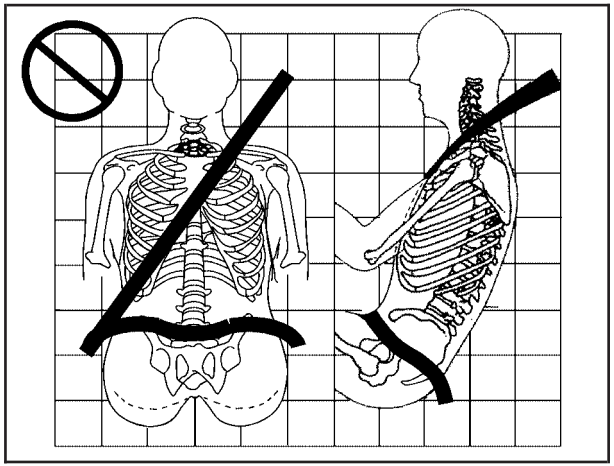


A: The shoulder belt is too loose. It will not give as much protection this way.

⚠ 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?

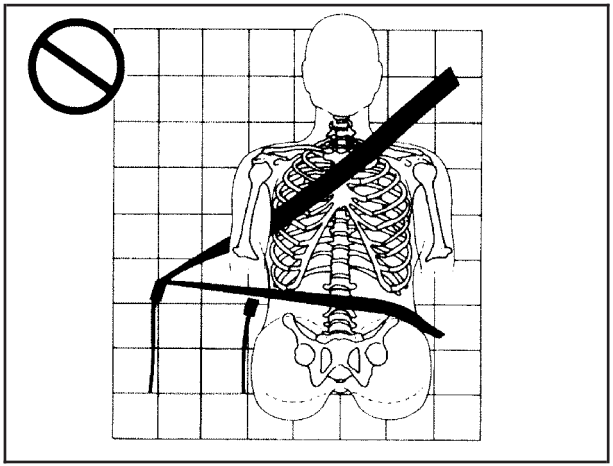


A: The lap belt is too loose. It will not give nearly as much protection this way.

⚠ 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?

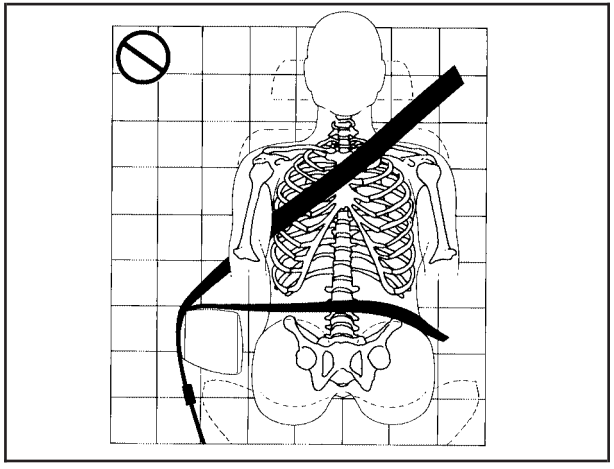


A: The belt is buckled in the wrong place.

⚠ 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?

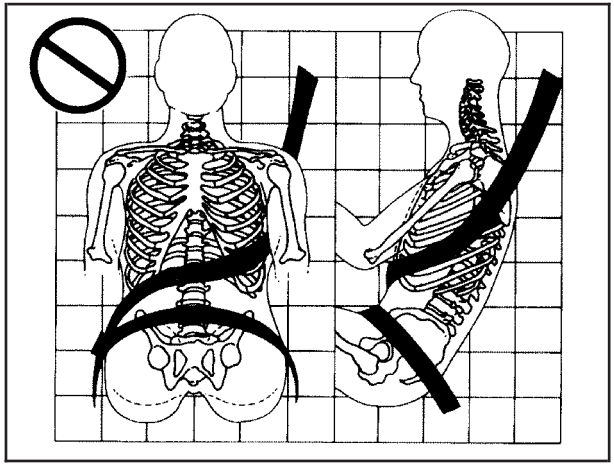


A: The belt is over an armrest.

⚠ 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?

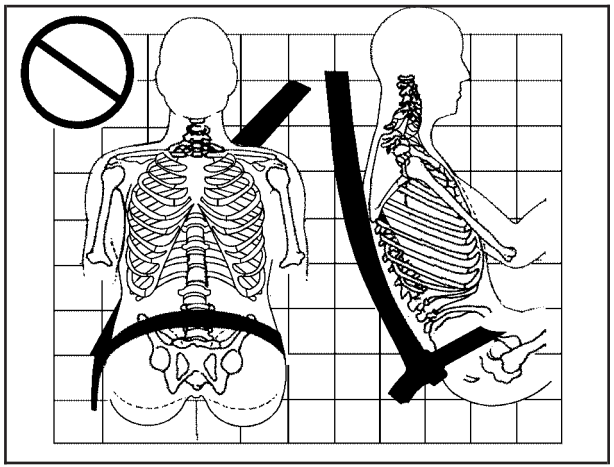


A: The shoulder belt is worn under the arm. It should be worn over the shoulder at all times.

⚠ 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?

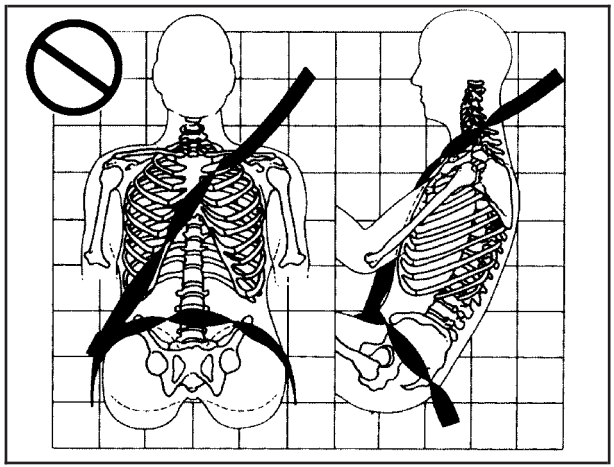


A: The belt is behind the body.

⚠ 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 Driver Relationship Manager (DRM) to fix it.

Lap-Shoulder Belt

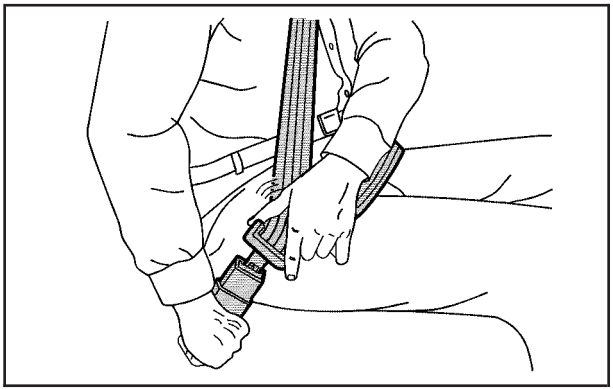
All seating positions in your vehicle have a lap-shoulder belt.

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.

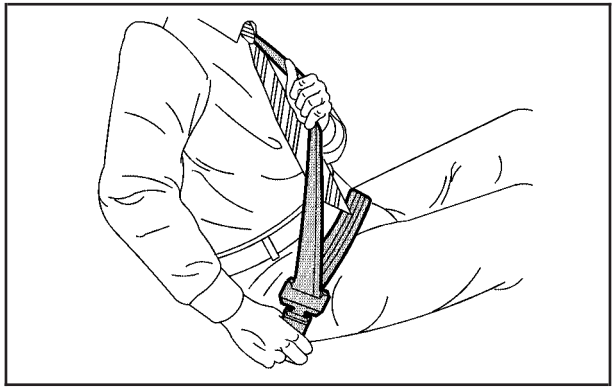
   If you ever pull the shoulder portion of a passenger belt out all the way, you may engage the child restraint locking feature. If this happens, just let the belt go back all the way and start again.

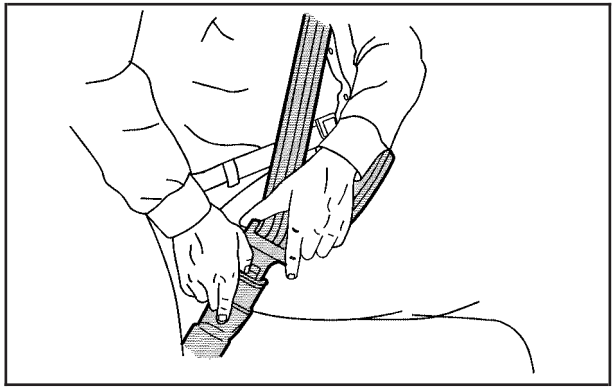


3. Push the latch plate into the buckle until it clicks.

   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 1-31*.

   Make sure the release button on the buckle is positioned so you would be able to unbuckle the safety belt quickly if necessary.
4. 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.





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

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

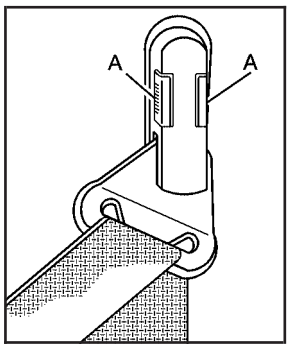
To unlatch the belt, just push the button on the buckle. For outboard seating positions, when the safety belt is not in use, slide the latch plate up the safety belt webbing. The latch plate should rest on the stitching on the safety belt, near the guide loop.

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 Adjuster

Your vehicle has a shoulder belt height adjuster 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. Improper shoulder belt height adjustment could reduce the effectiveness of the safety belt in a crash.



To move it up or down, squeeze the release buttons (A) together and move the height adjuster to the desired position.

After you move the height adjuster to where you want it, try to move it up or down without squeezing the release buttons 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 and near frontal crash if the threshold conditions for pretensioner activation are met.

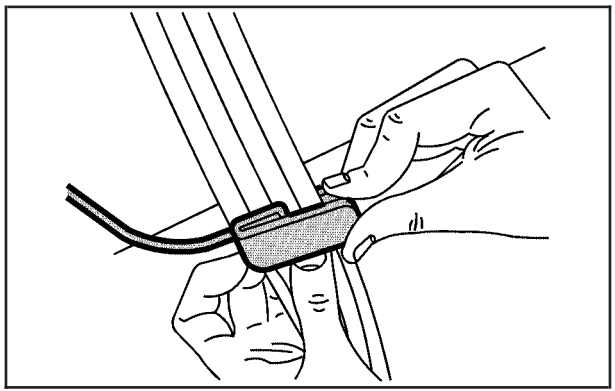
Pretensioners work only once. If they activate in a crash, you will need to get new ones, and probably other new parts for your safety belt system. See *Replacing Restraint System Parts After a Crash on page 1-71*.

Rear Safety Belt Comfort Guides

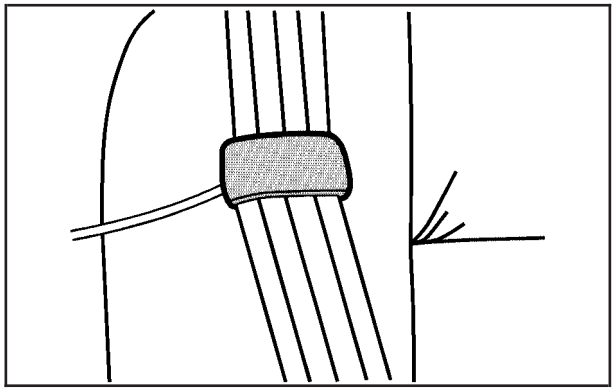
Rear shoulder belt comfort guides may provide added safety belt comfort for older children who have outgrown booster seats and for some adults. When installed on a shoulder belt, the comfort guide positions the belt away from the neck and head.

There is one guide for each outside passenger position in the rear seat. Here is how to install the comfort guide to the shoulder belt:

1. Remove the guide from its storage clip on the back of the seatback.



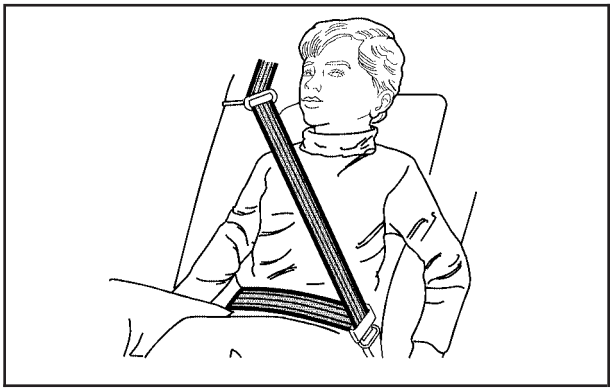
2. Place the guide over the belt, and insert the two edges of the belt into the slots of the guide.



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

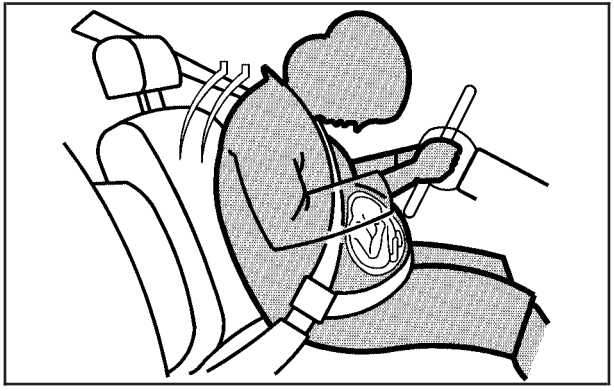


4. Buckle, position, and release the safety belt as described previously in this section. Make sure that the shoulder belt crosses the shoulder.

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 back onto its storage clip located on the seatback.

Safety Belt Use During Pregnancy

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



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

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

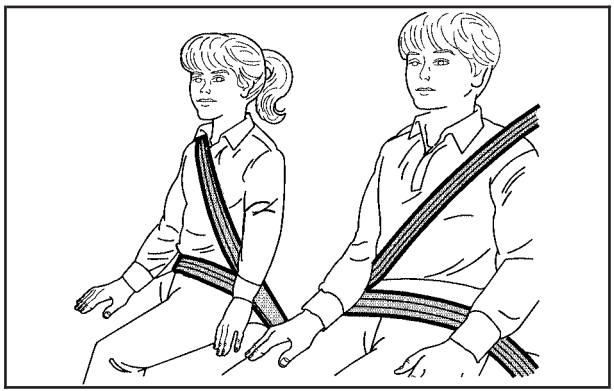
Safety Belt Extender

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

But if a safety belt is not long enough, your Driver Relationship Manager (DRM) 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 1-26* 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 1-26*.

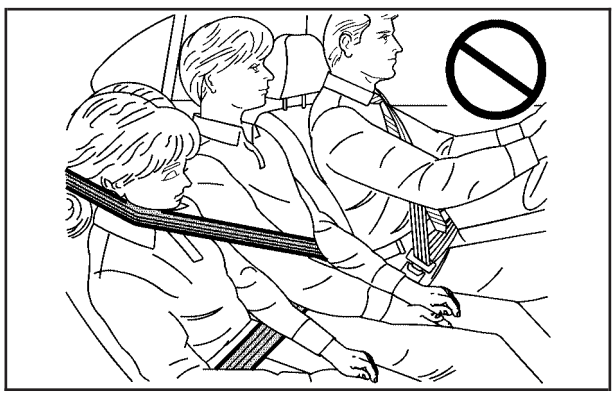
According to accident statistics, children and infants are safer when properly restrained in the rear seating positions than in the front seating positions.

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.

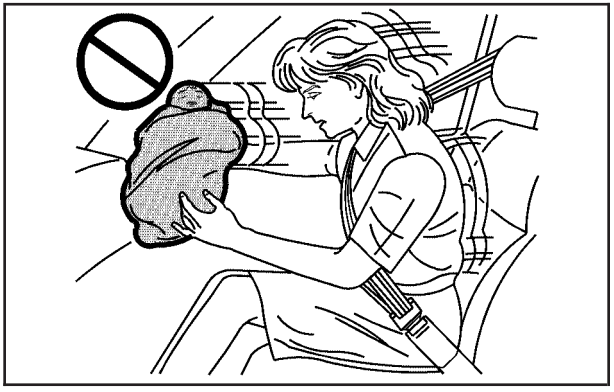
⚠ CAUTION:

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.

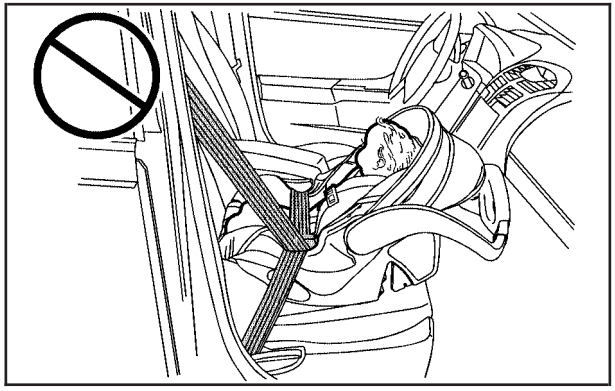
⚠ CAUTION:

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.

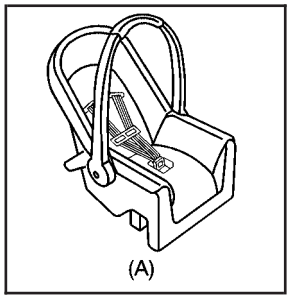
⚠ CAUTION:

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:

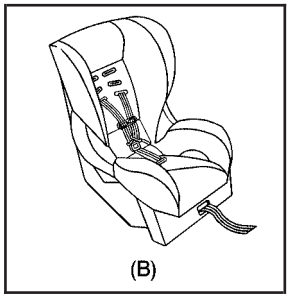
The body structure of a young child is quite unlike that of an adult or older child, for whom the safety belts are designed. A young child's hip bones are still so small that the vehicle's regular safety belt may not remain low on the hip bones, as it should. Instead, it may settle up around the child's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

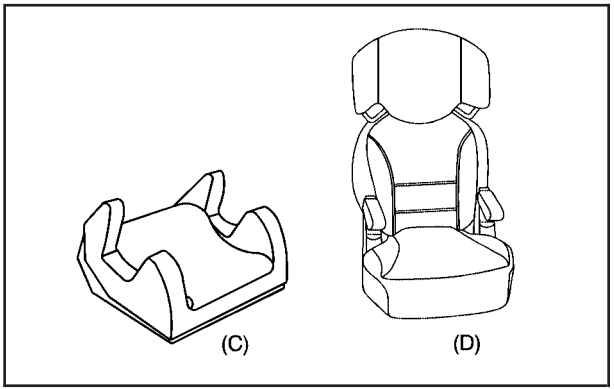


A rear-facing infant seat (A) provides restraint with the seating surface against the back of the infant.

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



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 1-44* 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.

Even though the passenger sensing system is designed to turn off the right front passenger's frontal airbag 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 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 1-64* 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)

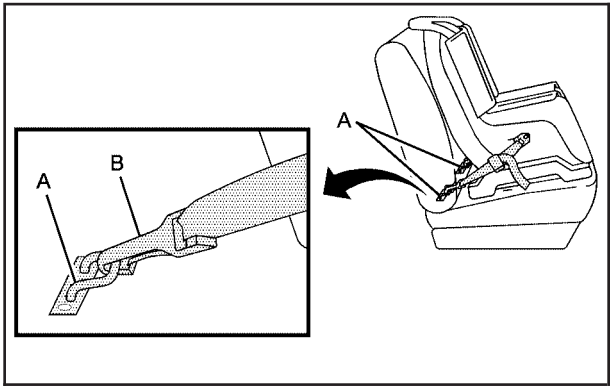
The LATCH system holds a child restraint during driving or in a crash. This system is designed to make installation of a child restraint easier. The LATCH system uses anchors in the vehicle and attachments on the child restraint that are made for use with the LATCH system.

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 installed 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.

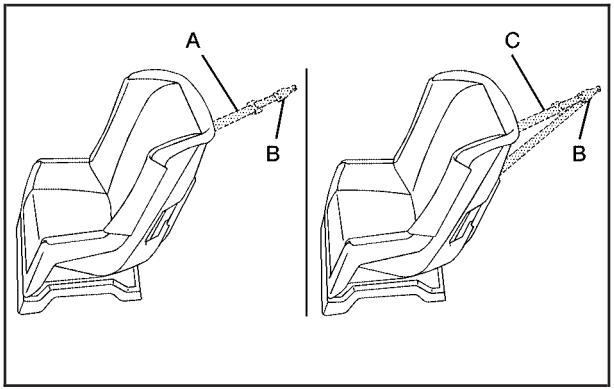
Not all vehicle seating positions or child restraints have lower anchors and attachments or top tether anchors and attachments.

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



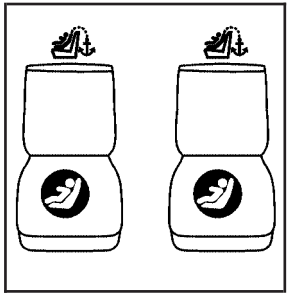
A top tether (A, C) anchors the top of the child restraint to the vehicle. A top tether anchor is built into the vehicle. The top tether attachment (B) on the child restraint connects to the top tether anchor in the vehicle in order to reduce the forward movement and rotation of the child restraint during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

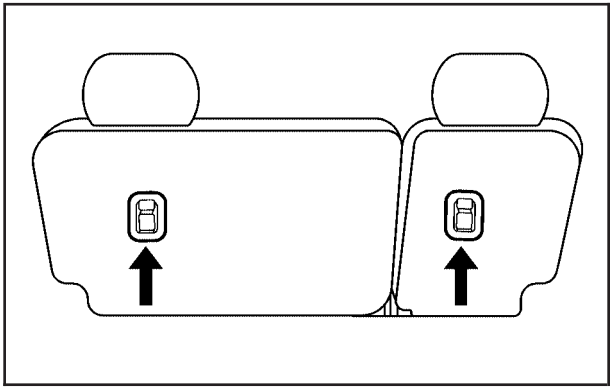


Rear Seat

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

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

Each rear seating position has exposed metal anchors located in the crease between the seatback and the seat cushion.



The top tether anchors for each rear seating position are located on the back of the rear seatback. 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.

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 1-42* 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:

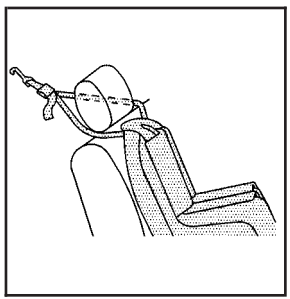
Children can be seriously injured or strangled if a shoulder belt is wrapped around their neck and the safety belt continues to tighten. Secure any unused safety belts behind the child restraint so children cannot reach them. Pull the shoulder belt all the way out of the retractor to set the lock, if 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.**

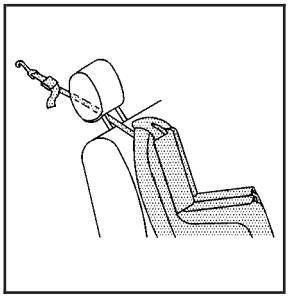
Folding an empty rear seat with the safety belts secured may cause damage to the safety belt or the seat. When removing the child restraint, always remember to return the safety belts to their normal, stowed position before folding the rear seat.

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. Put the child restraint on the seat.
   1.3. 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 equipped. Refer to the child restraint instructions and the following steps:
   2.1. Find the top tether anchor.
   2.2. Route, attach and tighten the top tether according to your child restraint instructions and the following instructions:



If the position you are using has an adjustable 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 an adjustable headrest or head restraint and you are using a single tether, raise the headrest or head restraint and route the tether under the headrest or head restraint and in between the headrest or head restraint posts.

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 1-44* 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 1-44* for top tether anchor locations.

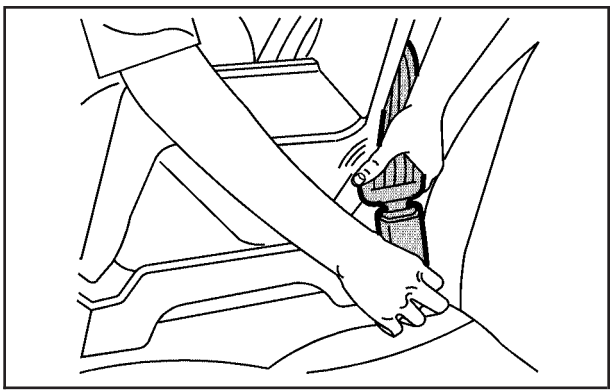
Do not secure a child restraint in a position without a top tether anchor if a national or local law requires that the top tether be anchored, or if the instructions that come with the child restraint say that the top strap must be anchored.

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.

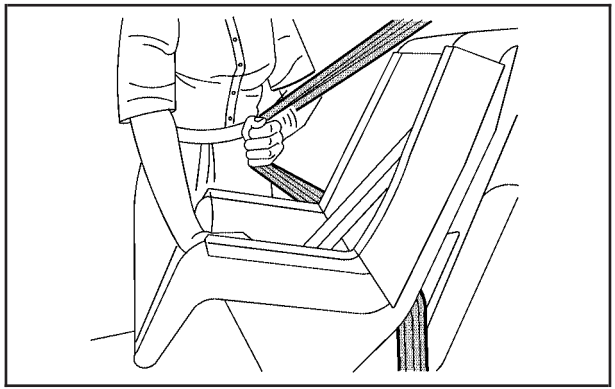
If you need to install more than one child restraint in the rear seat, be sure to read *Where to Put the Restraint on page 1-42*.

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.

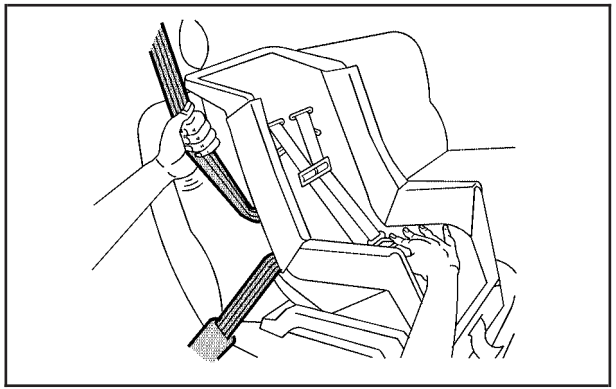


3. Push the latch plate into the buckle until it clicks.

   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 1-44* 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's safety belt and let it go back all the way. 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 1-42*.

In addition, your vehicle has a passenger sensing system which is designed to turn off the right front passenger's frontal airbag under certain conditions. See *Passenger Sensing System on page 1-64* and *Passenger Airbag Status Indicator on page 3-28* 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 though the passenger sensing system is designed to turn off the right front passenger's frontal airbag 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 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 1-64* for additional information.

If your child restraint has the LATCH system, see *Lower Anchors and Tethers for Children (LATCH) on page 1-44* 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 1-44* 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.

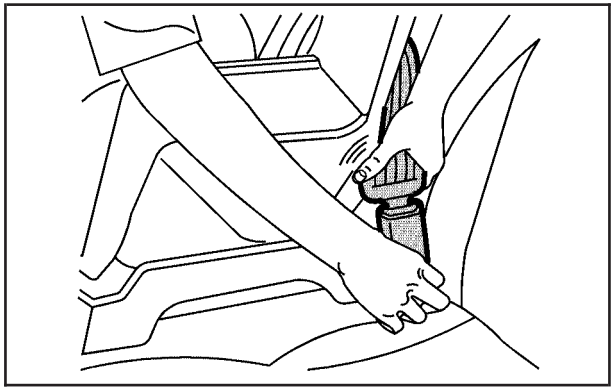
You will be using the lap-shoulder belt to secure the child restraint in this position. Follow the instructions that came with the child restraint.

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, 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 3-28*.

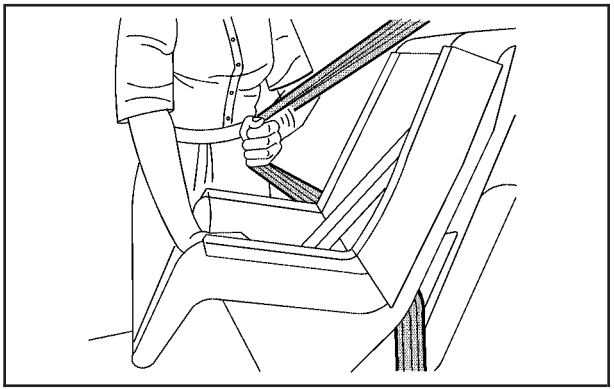
2. Put the child restraint on the seat.

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.

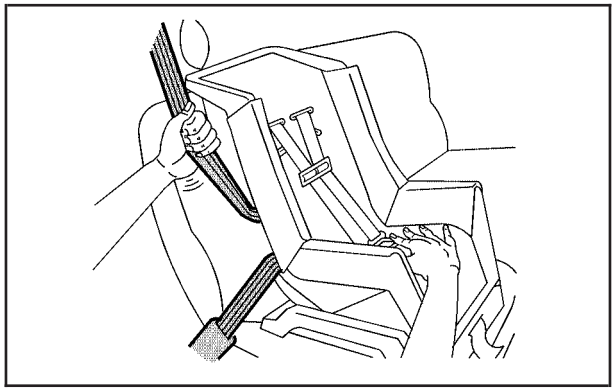


4. Push the latch plate into the buckle until it clicks.

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

If a child restraint has been installed and the on indicator is lit, 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 Driver Relationship Manager (DRM).

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 roof-rail airbag for the driver and the passenger seated directly behind the driver.
- A roof-rail airbag for the right front passenger and the passenger seated directly behind the right front passenger.

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 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.

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

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

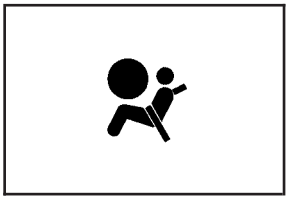
⚠ CAUTION:

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 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 1-32* or *Infants and Young Children on page 1-35*.



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 3-27* for more information.

Where Are the Airbags?

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

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

Driver Side shown, Passenger Side similar

The roof-rail airbags for the driver, right front passenger, and second 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.

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 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 roof-rail airbags. See *Airbag System on page 1-56*. 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. 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.

Roof-rail airbags are not intended to inflate in frontal impacts, near-frontal impacts, or rear impacts. 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.

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 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 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. 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 and second 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 1-61* 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 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 1-62*.

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.

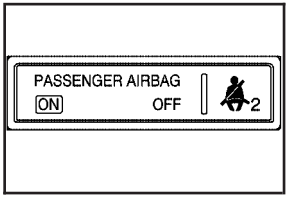
Your vehicle has a feature that may automatically unlock the doors, turn the interior lamps on, and turn the hazard warning flashers on when the airbags inflate. You can lock the doors, turn the interior lamps off, and turn the hazard warning flashers off by using the controls for those features.

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 7-4* and *Event Data Recorders on page 7-5*.
- Let only qualified technicians work on the airbag systems. Improper service can mean that an airbag system will not work properly. See your Driver Relationship Manager (DRM) 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.



The words ON and OFF will be visible during the system check. When the system check is complete, either the word ON or the word OFF will be visible.

See *Passenger Airbag Status Indicator on page 3-28*.

The passenger sensing system will turn off the right front passenger's frontal 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 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 though the passenger sensing system is designed to turn off the right front passenger’s frontal airbag if the system detects a rear-facing child restraint, no system is fail-safe, and no one can guarantee that an

CAUTION: (Continued)

CAUTION: (Continued)

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 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 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, the off indicator will light and stay lit to remind you that the airbag is off. See *Passenger Airbag Status Indicator on page 3-28*.

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 1-52*.

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 1-7*.

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 Driver Relationship Manager (DRM).

The passenger sensing system is designed to enable (may inflate) the right front passenger's frontal 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 airbag to be enabled, the on indicator will light and stay lit to remind you that the airbag is 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, 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.

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 3-27* 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 1-69* 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 Driver Relationship Manager (DRM) and the service manual have information about servicing your vehicle and the airbag system.

⚠ CAUTION:

For up to 10 seconds after the propulsion system 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, overhead console, 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 1-64*.

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 5-29* 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 Driver Relationship Manager (DRM) 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 3-26* for more information.

Keep safety belts clean and dry. See *Care of Safety Belts on page 5-48*.

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 3-27* 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 1-62*. See your Driver Relationship Manager (DRM) 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 Driver Relationship Manager (DRM) 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 3-27*.

NOTES

Section 2 Features and Controls

Keys 2-2
Remote Keyless Entry (RKE) System 2-3
Remote Keyless Entry (RKE) System Operation 2-4

Doors and Locks 2-6
Door Locks 2-6
Power Door Locks 2-6
Delayed Locking 2-6
Programmable Automatic Door Locks 2-7
Rear Door Security Locks 2-7
Lockout Protection 2-7
Liftgate 2-8

Windows 2-9
Power Windows 2-10
Sun Visors 2-11

Start and Operating Your Vehicle 2-12
Starting Switch Positions 2-12
Retained Accessory Power (RAP) 2-13
Starting Your Vehicle 2-13
Loss of Propulsion 2-14
Drive Unit Operation 2-14
Parking Brake 2-16
Regenerative Braking 2-16
Shifting Into PARK (P) 2-17
Vehicle Shutdown 2-18
Shifting Out of PARK (P) 2-18
Running the Vehicle While Parked 2-19

Mirrors 2-19
Manual Rearview Mirror 2-19
Outside Power Mirrors 2-20
Outside Convex Mirror 2-20

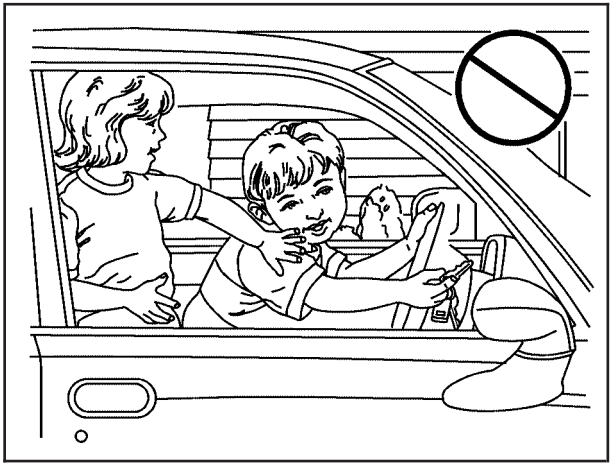
OnStar® System 2-21

Storage Areas 2-24
Glove Box 2-24
Cupholder(s) 2-24
Rear Storage Area 2-24
Cargo Tie Downs 2-24

Keys

⚠ CAUTION:

Leaving children in a vehicle with the 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 key in the start switch 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 to start the vehicle and for all locks.

The key has a bar-coded key tag that the Driver Relationship Manager (DRM) can use to make new keys. Store this information in a safe place, not in your vehicle.

Notice: **If you ever lock your key in your vehicle, you may have to damage the vehicle to get in. If you are locked out, call OnStar or your Driver Relationship Manager (DRM).**

Remote Keyless Entry (RKE) System

If the vehicle has the Remote Keyless Entry (RKE) system, it 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.

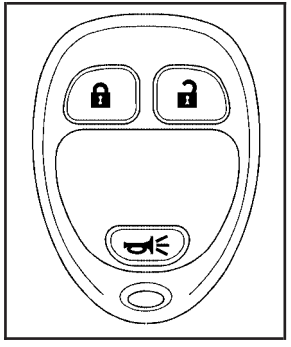
At times you may notice a decrease in range. This is normal for any RKE system. If the transmitter does not work or if you have to stand closer to your vehicle for the transmitter to work, try this:

- Check the distance. You may be too far from your vehicle. You may need to 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 to determine if battery replacement is necessary. See “Battery Replacement” later in this section.
- If you are still having trouble, see your Driver Relationship Manager (DRM) for service.

Remote Keyless Entry (RKE) System Operation

The Remote Keyless Entry (RKE) transmitter functions will work up to 65 feet (20 m) away.

There are other conditions which can affect the performance of the transmitter. See *Remote Keyless Entry (RKE) System on page 2-3*.



The following functions may be available if your vehicle has the RKE system:

(Lock): Press the lock button to lock the doors and liftgate. 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 the lock button is pressed again within five seconds of the previous press of the lock button. See *DIC Vehicle Personalization on page 3-48* for additional information.

(Unlock): Press the unlock button to unlock the driver's door. If the button is pressed again within five seconds, all remaining doors, and the liftgate, will unlock. The interior lamps will come on and stay on for 20 seconds or until the vehicle is turned on. If enabled through the DIC, the parking lamps will flash once to indicate unlocking has occurred. See *DIC Vehicle Personalization on page 3-48*.

(Vehicle Locator/Panic Alarm): Press and release this button to locate your vehicle. The turn signal lamps will flash and the horn will sound three times. Press and hold this button 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 key is moved to System On or is pressed again. The key must be in System 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, contact your Driver Relationship Manager (DRM) for a replacement. Remember to bring any additional transmitters so they can also be re-coded to match the new transmitter. Once your Driver Relationship Manager (DRM) has coded the new transmitter, the lost transmitter will not unlock your vehicle. The vehicle can have a maximum of four transmitters matched to it. Or, see “Learn Remote Key” under *DIC Operation and Displays on page 3-39* for instructions on how to match RKE transmitters to your vehicle.

Battery Replacement

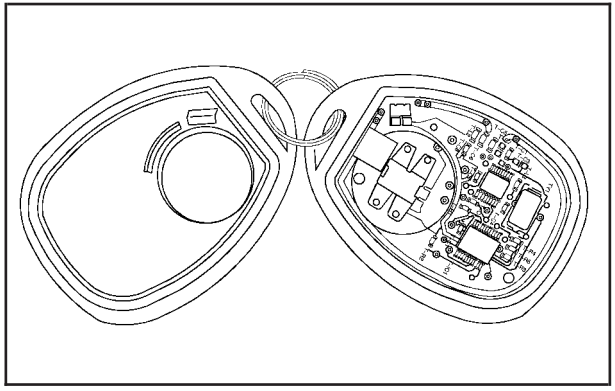
Under normal use, the battery in your RKE transmitter should last about four years.

The battery is weak if the transmitter will not work at the normal range in any location. If you have to get close to your vehicle before the transmitter works, it is probably time to change the battery.

Notice: **When replacing the battery, use care not to touch any of the circuitry. Static from your body transferred to these surfaces may damage the transmitter.**

To replace the battery in the RKE transmitter:

1. Use a flat thin object to pry open the transmitter.



2. Once the transmitter is separated, use a pencil or similar object to remove the old battery. Do not use a metal object.
3. Slide the new battery into the transmitter with the positive side of the battery facing down. Use a type CR2032 battery, or equivalent type.
4. Snap the transmitter back together tightly to be sure no moisture can enter.
5. Check the operation of the transmitter.

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.**
- **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.**

To lock or unlock the driver's door, use the key from the outside or the door lock from the inside.

Power Door Locks

The power door lock switches are located on the driver's and front passenger's doors.

(Unlock): To unlock the doors, press the unlock symbol.

(Lock): Remove the key and press the lock symbol to lock all of the doors.

Delayed Locking

A chime will sound three times to indicate a door or liftgate is open when you try to lock the doors with the power door lock switch. The doors will not lock, and the theft-deterrent system will not arm until all the doors are closed and ten seconds have passed.

The delayed locking feature can be programmed through the Driver Information Center (DIC). See *DIC Vehicle Personalization on page 3-48*.

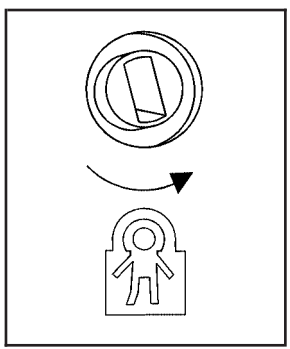
See also *Remote Keyless Entry (RKE) System Operation on page 2-4*.

Programmable Automatic Door Locks

Your vehicle has an automatic lock/unlock feature which enables you to program the power door locks through the Driver Information Center (DIC). See *DIC Vehicle Personalization on page 3-48* 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

If you press the power door lock switch when the key is in the start switch and any door is open, all the doors will lock and only the driver's door will unlock. Be sure to remove the key from the start switch when locking your vehicle.

If the keyless entry transmitter is used to lock the doors and the key is in the start switch, a chime will sound three times. All passenger doors will lock, but the driver's door will remain unlocked.

Liftgate

To unlock the liftgate, press the unlock button on the Remote Keyless Entry (RKE) transmitter twice or use the power door lock switch.

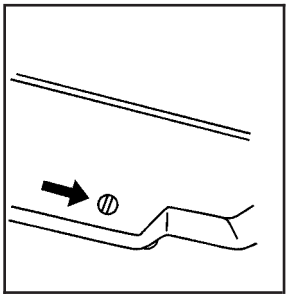
To lock the liftgate, press the lock button on the RKE transmitter or use the power door lock switch. The liftgate does not have a key lock cylinder.

To open the liftgate, press the touchpad centered on the underside of the liftgate handle and pull up.

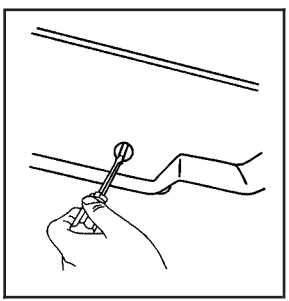
When closing the liftgate, use the molded handles to pull the liftgate down. Push the liftgate closed until it latches.

Liftgate Operation with Loss of Power

The liftgate is equipped with an electric latch. If the battery is disconnected or has low voltage, the liftgate will not open.



To open the liftgate if this happens, remove the interior trim plug located at the base of the liftgate from inside the vehicle.



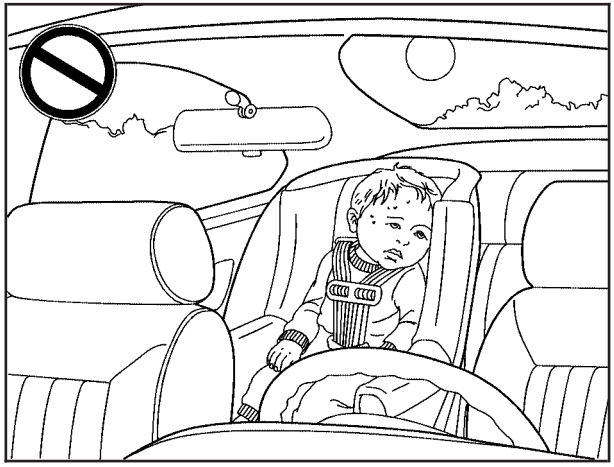
Use a tool to push the service release lever located on the latch until you hear or feel the gate release.

The liftgate can now be opened and closed manually. You will need to use this procedure to open the liftgate until the power is restored.

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.

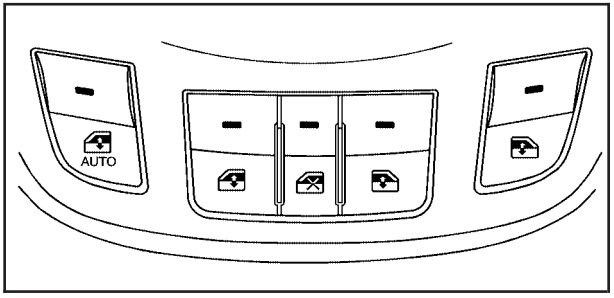


Power Windows

⚠ 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.



The window switches for all doors are located on the center console. A window switch for each rear window is located on each rear door.

To open a window, press the bottom of the switch. To close a window, press the top of the switch.

The power windows operate when the start switch is in SYSTEM ON, SYSTEM OFF/STEERING UNLOCKED, or while in Retained Accessory Power (RAP). See *Retained Accessory Power (RAP) on page 2-13*.

Express-Down Window

The driver's window switch has an express-down feature that allows the window to be lowered without holding the switch. Press the bottom of the switch part way, and the driver's window will open a small amount. Press the switch down all the way down and release it and the window will go down automatically.

To stop the window while it is lowering, press and release the top of the switch.

Window Lockout

(Window Lockout): Your vehicle has a lockout feature to prevent rear seat passengers from operating the windows. Press the lockout button, located with the power window switches, to turn the feature on and off. The window switch has a light that will come on when the switch is active.

Sun Visors

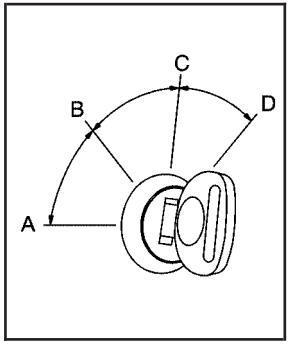
To block out glare, swing the sun visor down. You can also detach the driver's sun visor from the center mount and slide it along the rod from side-to-side for greater coverage.

Visor Vanity Mirrors

Your vehicle has covered visor vanity mirrors on both the driver's and passenger's side.

Start and Operating Your Vehicle

Switch Positions



The key can be turned to four different positions. A warning tone will sound when the driver's door is opened and the key has not been removed from the start switch.

Notice: **Using a tool to force the key from the start 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 in all the way. If none of this works, then your vehicle needs service.**

A. (SYSTEM OFF/STEERING LOCKED): The key can only be removed from the start switch in this position.

The switch cannot be turned to SYSTEM OFF/STEERING LOCKED unless the shift lever is in PARK (P).

The steering wheel is locked in this position.

B. (SYSTEM OFF/STEERING UNLOCKED): The key in this position operates some of the electrical accessories.

The steering wheel is unlocked in this position.

C. (SYSTEM ON): The key returns to this position after the propulsion system is started.

D. (START): This key starts the propulsion system in this position. When the propulsion system starts, release the key.

The time required for starting depends on the system temperature and can take up to 3 minutes in cold weather.

Key In the Start Switch

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 start switch and park your vehicle, a chime will sound when you open the driver's door. Always remember to remove your key from the start switch and take it with you. This will lock the propulsion system and drive unit. Also, always remember to lock the doors.

The battery could be drained if the key is left in the start switch 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 propulsion system is turned off:

- Audio System
- Power Windows

Power to these accessories will continue to operate for up to 10 minutes or until the driver's door is opened.

These features will work when the key is in SYSTEM ON or SYSTEM OFF/STEERING UNLOCKED.

Starting Your Vehicle

Move the shift lever to PARK (P) or NEUTRAL (N). The propulsion system 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 drive unit. Shift to PARK (P) only when your vehicle is stopped.**

Starting Procedure

1. Turn the key to SYSTEM ON.
2. Turn the key to START, then release it.

   The system starts up. The time required to start depends on system temperature and can take up to 3 minutes.

   While the fuel cell is starting, the message STARTING UP...PLEASE WAIT will be displayed in the Driver Information Center (DIC). The vehicle should remain in PARK (P) while this message is displayed.
3. The vehicle is drivable when the vehicle ready lamp is on. The DIC message SYSTEM WARMING UP POWER LIMITED will be displayed, and the reduced power lamp will be on. The vehicle can be driven with reduced power during the warm-up period. When this DIC message and lamp are turned off, the propulsion system is capable of full power.

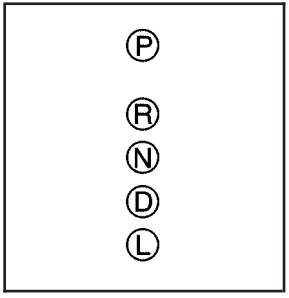
Loss of Propulsion

If there is a malfunction, the fuel cell system can shut down.

- There is immediate power reduction. The fuel cell system is off.
- The Reduced Power Lamp is illuminated. See *Reduced Power Indicator on page 3-34*

If this occurs, bring the vehicle to a stop. Put the vehicle in PARK (P) and attempt to restart the fuel cell system. Contact OnStar® or your Driver Relationship Manager (DRM).

Drive Unit Operation



Your drive unit 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 fuel cell system 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 propulsion system is running unless you have to. If you have left the propulsion system 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 (P) on page 2-17*.

Make sure the shift lever is fully in PARK (P) before starting the propulsion system. Your vehicle has a drive unit 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 start switch key is in SYSTEM ON. 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 (P) on page 2-18*.

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

Notice: **Shifting to REVERSE (R) while your vehicle is moving forward could damage the drive unit. Shift to REVERSE (R) only after your vehicle is stopped.**

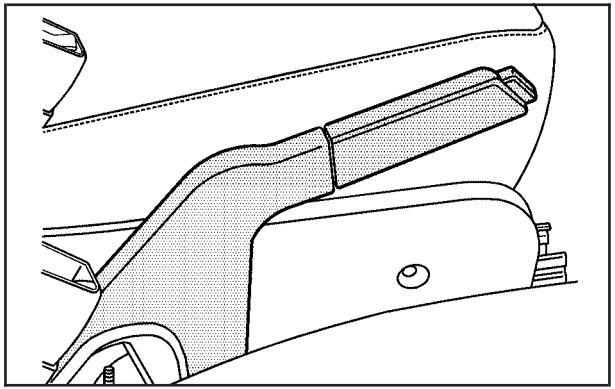
To rock your vehicle back and forth to get out of snow, ice or sand without damaging your drive unit, see *If Your Vehicle is Stuck in Sand, Mud, Ice, or Snow on page 4-16*.

NEUTRAL (N): In this position, your propulsion system does not connect with the wheels. To restart when you are already moving, use NEUTRAL (N) only.

DRIVE (D): This position is for normal driving.

LOW (L): You can use LOW (L) on very steep hills, or in deep snow or mud. The increased deceleration in LOW (L) comes from regenerative braking. See *Regenerative Braking on page 2-16*.

Parking Brake



The parking brake lever is located to the right of the driver's seat.

To set the parking brake, hold the brake pedal down and pull up on the parking brake lever. If the start switch is in the SYSTEM ON position, the brake system warning light will come on.

To release the parking brake, hold the brake pedal down. Pull the parking brake lever up until you can press the release button. Hold the release button in as you move the brake lever all the way down.

Make sure to release the parking brake before driving the vehicle.

If the parking brake is applied and the vehicle is moving at least 4 mph (6 km/h), a chime will activate to remind you to release the parking brake.

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.**

Regenerative Braking

Regenerative braking takes some of the energy from the moving vehicle and turns it back into electrical energy. This energy is then stored back into the vehicle's battery system, contributing to increased fuel efficiency.

Regenerative braking occurs more frequently when the shifter is in LOW (L). Regenerative braking can be observed when the power indicator gage on the instrument panel shows a negative number. See *Power Indicator Gage on page 3-25*.

Shifting Into PARK (P)

⚠ 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 propulsion system 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.

1. Hold the brake pedal down with your foot and set the parking brake. See *Parking Brake on page 2-16* for more information.
2. Move the shift lever into PARK (P) by pressing the button on the shift lever and pushing the lever all the way toward the front of the vehicle.
3. Turn the Start Switch key to SYSTEM OFF/STEERING LOCKED.
4. Remove the key and take it with you. If you can leave your vehicle with the key, your vehicle is in PARK (P).

Leaving Your Vehicle With the Propulsion System Running

⚠ CAUTION:

It can be dangerous to leave your vehicle with the propulsion system 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 propulsion system running, it could overheat and even catch fire. You or others could be injured. Do not leave your vehicle running with the key in the start switch.

If you have to leave your vehicle with the propulsion system 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 pressing the button on the console shift lever. If you can, it means that the shift lever was not fully locked into PARK (P).

Torque Lock

If you are parking on a hill and you do not shift your drive unit into PARK (P) properly, the weight of the vehicle may put too much force on the parking pawl in the drive unit. 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 (P) on page 2-17*.

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, contact OnStar® or your Driver Relationship Manager (DRM).

Vehicle Shutdown

1. Set the parking brake. See *Parking Brake on page 2-16*. Move the shift lever to Park (P).
2. Turn the key to “SYSTEM OFF/STEERING LOCKED” and remove the key.

The fuel cell system may run for several minutes after switch off, for cooling down and shutting off the fuel cell system.

Shifting Out of PARK (P)

This vehicle is equipped with an electronic shift lock release system. The shift lock release is designed to:

- Prevent 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 key is in SYSTEM ON or SYSTEM OFF/STEERING UNLOCKED and the regular brake pedal is applied.

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), contact OnStar® or your Driver Relationship Manager (DRM).

Running the Vehicle While Parked

It is better not to park with the vehicle running. But if you ever have to, here are some things to know.

> **⚠ 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 it is running unless you have to. If you have left the vehicle running, it 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 (P) on page 2-17*.

Mirrors

Manual Rearview Mirror

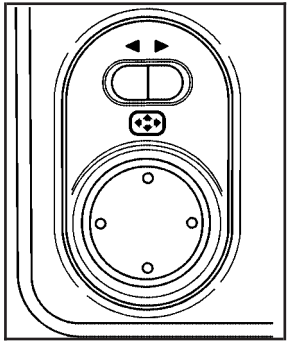
Adjust the mirror to see clearly behind your vehicle. Hold the mirror in the center to move it up or down and side to side. The day/night adjustment allows you to adjust the mirror to avoid glare from the lamps behind. Push the tab forward for daytime use and pull it for nighttime use.

There are also OnStar® buttons located at the bottom of the mirror. Contact your Driver Relationship Manager (DRM) for more information on the system and how to subscribe to OnStar®. See *OnStar® System on page 2-21* for more information about the services OnStar® provides.

Cleaning the Mirror

Use a paper towel or similar material dampened with glass cleaner. Do not spray glass cleaner directly on the mirror as that may cause the liquid cleaner to enter the mirror housing. See *Interior Cleaning on page 5-45* for more information.

Outside Power Mirrors



The controls are located on the instrument panel.

To adjust the mirrors:

1. Move the selector switch to the left or right to choose the driver's or passenger's mirror.
2. Press the corresponding edges of the round control pad to move each mirror to the desired direction.

Adjust each outside mirror so that you can see a little of your vehicle, and the area behind your vehicle.

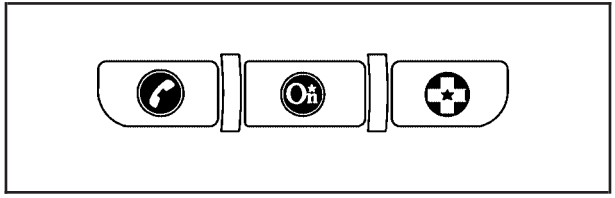
Outside Convex Mirror

The passenger side mirror is convex. A convex mirror's surface is curved, creating a wider area of vision for the driver.

⚠ 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.

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 and/or your Driver Relationship Manager (DRM) 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.

For a full description of OnStar services and system limitations, see the OnStar Owner's Guide in your glove box or visit onstar.com. Additional questions can be answered by pressing the OnStar button or contacting your Driver Relationship Manager (DRM).

OnStar Services

For new vehicles with OnStar, the Safe & Sound Plan, or the Directions & Connections Plan is included. For more information, press the OnStar button to speak with an advisor.

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
- 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
- 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. To find out more, refer to the OnStar Owner's Guide in the vehicle's glove box, visit www.onstar.com or speak with an OnStar advisor by pressing the OnStar button, calling 1-888-4-ONSTAR (1-888-466-7827) and/or contacting your Driver Relationship Manager (DRM).

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 3-55* for more information.

You may have to hold the button for a few seconds and give the command "ONSTAR" to activate the OnStar Hands-Free Calling.

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.

Storage Areas

Glove Box

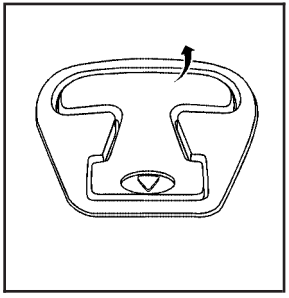
To open the glove box, pull the handle to the left and pull the glove box door down until it stops and is fully open.

Cupholder(s)

There are two molded cupholders located at the lower front of the center console and two molded cupholders located in the center of the rear seat.

Rear Storage Area

There is a storage compartment in the floor of the rear hatch/trunk area.



To access the storage compartment, push on the arrow symbol to lift the top of the handle and then pull up on the handle to open the lid. The lid cannot be removed.

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.

Section 3 Instrument Panel

Instrument Panel Overview 3-4
Hazard Warning Flashers 3-6
Horn 3-6
Tilt Wheel 3-6
Turn Signal/Multifunction Lever 3-7
Turn and Lane-Change Signals 3-7
Headlamp High/Low-Beam Changer 3-8
Flash-to-Pass 3-8
Windshield Wipers 3-8
Windshield Washer 3-9
Rear Window Wiper/Washer 3-10
Cruise Control 3-10
Headlamps 3-13
Headlamps on Reminder 3-14
Daytime Running Lamps (DRL) 3-14
Automatic Headlamp System 3-14
Instrument Panel Brightness 3-15
Dome Lamp 3-15
Entry Lighting 3-15
Map Lamps 3-16
Cargo Lamp 3-16
Accessory Power Outlet(s) 3-16

Climate Controls 3-17
Automatic Climate Control System 3-17
Outlet Adjustment 3-22
Passenger Compartment Air Filter 3-22

Warning Lights, Gages, and Indicators 3-23
Instrument Panel Cluster 3-24
Speedometer and Odometer 3-25
Trip Odometer 3-25
Power Indicator Gage 3-25
Safety Belt Reminders 3-26
Airbag Readiness Light 3-27
Passenger Airbag Status Indicator 3-28
Hydrogen Warning Light 3-30
Charging System Light 3-31
Brake System Warning Light 3-31
Anti-lock Brake System (ABS) Warning Light 3-32
Traction Control System (TCS) Warning Light 3-33
Service Fuel Cell System Soon 3-33
Reduced Power Indicator 3-34
Coolant Temperature Warning Light 3-34
Coolant Temperature Gage 3-35

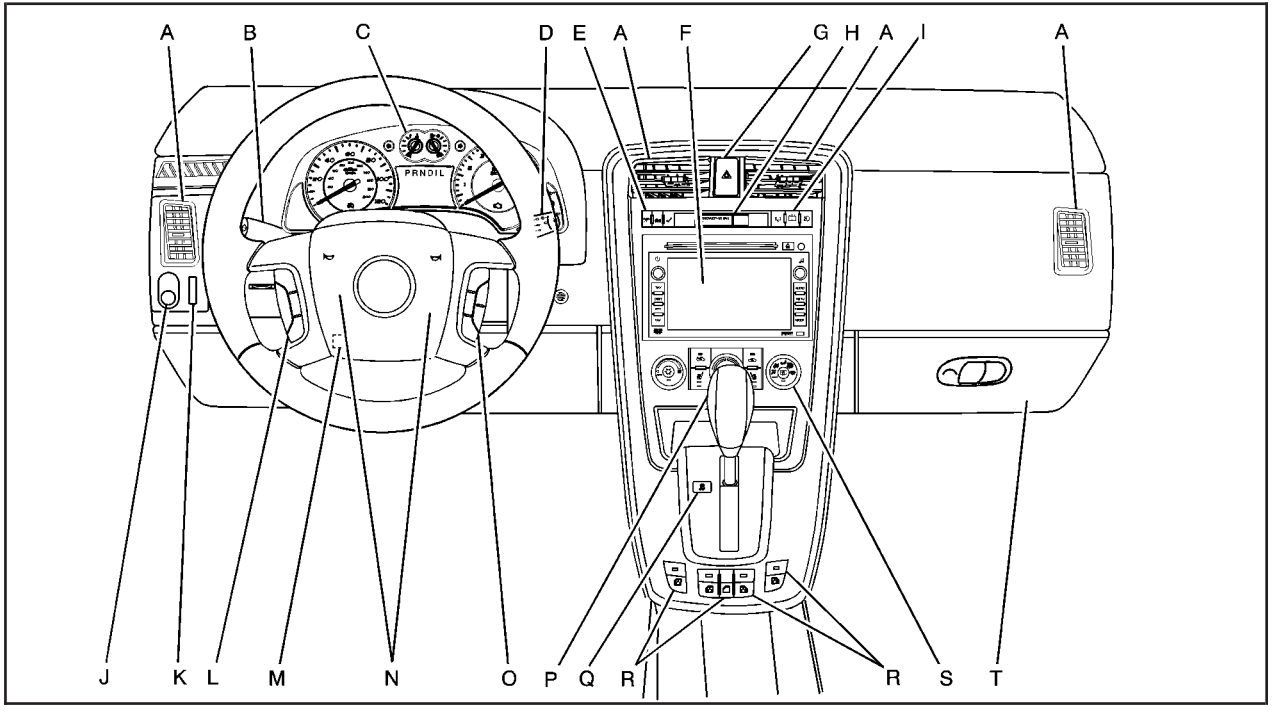
Tire Pressure Light 3-35
Fueling Mode 3-36
Vehicle Ready Light 3-36
Cruise Control Light 3-36
Highbeam On Light 3-36
Gate Ajar Light 3-37
Door Ajar Light 3-37
Fuel Gage 3-37
Low Fuel Warning Light 3-38

Driver Information Center (DIC) 3-38
DIC Operation and Displays 3-39
DIC Warnings and Messages 3-42
DIC Vehicle Personalization 3-48

Audio System(s) 3-54
Navigation/Radio System 3-54
Audio Steering Wheel Controls 3-55
Multi-Band Antenna 3-56

NOTES

Instrument Panel Overview



The main components of the instrument panel are the following:

A. Air Outlets. See *Outlet Adjustment on page 3-22*.

B. Turn Signal/Multifunction Lever. See *Turn Signal/Multifunction Lever on page 3-7*.

C. Instrument Panel Cluster. See *Instrument Panel Cluster on page 3-24*.

D. Windshield Wiper/Washer Lever. See *Windshield Wipers on page 3-8*.

E. Driver Information Center Controls. See *DIC Operation and Displays on page 3-39*.

F. Navigation/Radio System. See *Navigation/Radio System on page 3-54*.

G. Hazard Warning Flashers. See *Hazard Warning Flashers on page 3-6*.

H. Passenger Airbag Status Indicator. See *Passenger Airbag Status Indicator on page 3-28*.

I. Rear Window Wiper/Washer Buttons. See *Rear Window Wiper/Washer on page 3-10*.

J. Power Mirror Control. See *Outside Power Mirrors on page 2-20*.

K. Instrument Panel Brightness Control. See *Instrument Panel Brightness on page 3-15*.

L. Cruise Controls. See *Cruise Control on page 3-10*.

M. Tilt Wheel. See *Tilt Wheel on page 3-6*.

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

O. Audio Steering Wheel Controls. See *Audio Steering Wheel Controls on page 3-55*.

P. Shift Lever. See *Shifting Into PARK (P) on page 2-17*.

Q. Traction Control System (TCS) Button. See *Traction Control System (TCS) on page 4-5*.

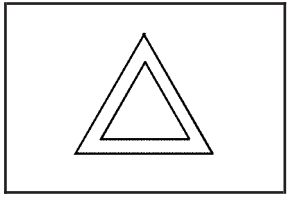
R. Power Window Switches. See *Power Windows on page 2-10*.

S. Automatic Climate Control System. See *Automatic Climate Control System on page 3-17*. Heated Seat Buttons (If Equipped). See *Heated Seats on page 1-4*.

T. Glove Box. See *Glove Box on page 2-24*.

Hazard Warning Flashers

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



The hazard warning flasher button is on the instrument panel.

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

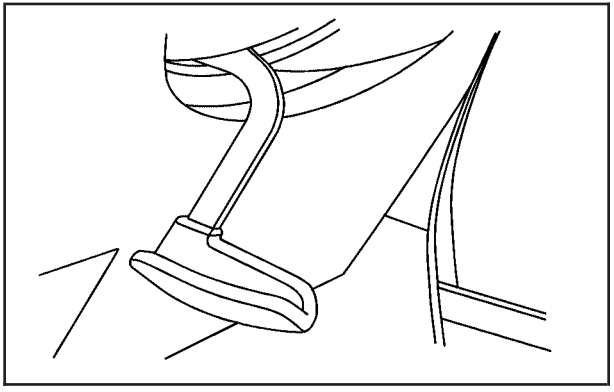
The hazard warning flashers work even if the key is not in the start switch.

Horn

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

Tilt Wheel

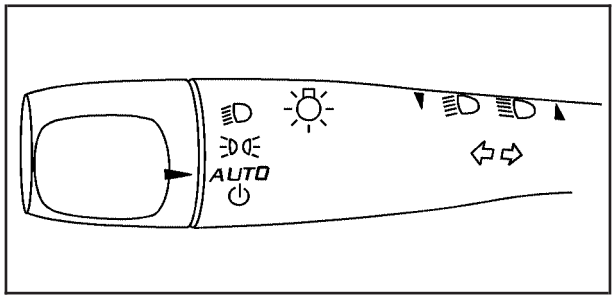
Your vehicle has a tilt wheel that allows you to adjust the steering wheel.



The lever to tilt the steering wheel is located on the left side of the steering column.

To tilt the wheel, hold the steering wheel and push the lever down. Then, move the steering wheel to a comfortable position and pull the lever up firmly to lock the column in place.

Turn Signal/Multifunction Lever

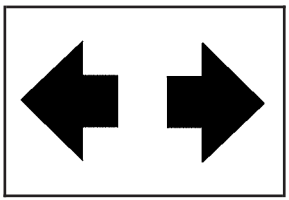


The lever on the left side of the steering column includes the following:

- ⇦⇨ Turn and Lane-Change Signals. See *Turn and Lane-Change Signals on page 3-7*.
- Headlamp High/Low-Beam Changer. See *Headlamp High/Low-Beam Changer on page 3-8*.
- Flash-to-Pass. See *Flash-to-Pass on page 3-8*.
- Exterior Lamp Control. See *Headlamps on page 3-13*.

Turn and Lane-Change Signals

Move the turn signal up (for right turns) and down (for left turns) positions, to signal a turn or a lane change.



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

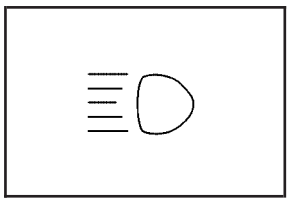
To signal a lane change, raise or lower the lever until the indicator arrow on the instrument panel starts to flash. Hold it there until the lane change is completed. The lever will return by itself when it is released.

As you signal a turn or a lane change, if the arrows flash rapidly, a signal bulb may be burned out and other drivers will not see your turn signal.

If a bulb is burned out, it will need to be replaced to help avoid an accident. If the arrows do not go on at all when you signal a turn, there may be a problem with the fuse or a burned out bulb.

Headlamp High/Low-Beam Changer

To change the headlamps from low beam to high, push the turn signal lever away from you. To change from high beam to low beam, pull the turn signal lever towards you. To flash the high beams from low beam, pull the turn signal lever all the way towards you. Then release it.



When the high beams are on, this light on the instrument panel cluster will also be on.

Flash-to-Pass

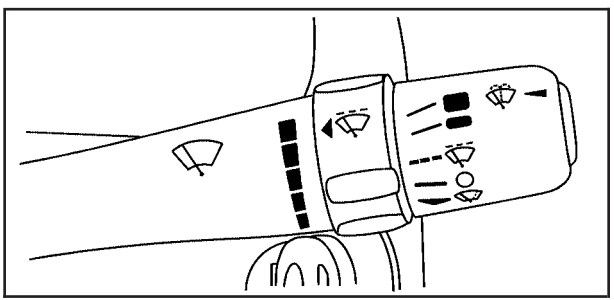
This feature lets you use your high-beam headlamps to signal a driver in front of you that you want to pass.

To flash the high beams from low beam, pull the turn signal/multifunction lever all the way towards you. Then release it.

Windshield Wipers

Be sure to clear ice and snow from the wiper blades before using them. If the wiper blades are frozen to the windshield, gently loosen or thaw them. If the blades do become damaged, install new blades or blade inserts. See *Windshield Wiper Blade Replacement on page 5-12*.

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.



Use the lever on the right side of the steering column to operate the windshield wipers.

(High Speed): Move the lever to this position for steady wiping at high speed.

(Low Speed): Move the lever to this position for steady wiping at low speed.

(Delay): Move the lever to this position to set a delay between wipes.

(Delay Adjustment): Move the lever to the delay position to choose a delayed wiping cycle. Turn the intermittent adjust band down for a longer delay or up for a shorter delay.

(Off): Move the lever to this position to turn off the windshield wipers.

(Mist): Move the lever all the way down to mist and release for a single wiping cycle. The windshield wipers will stop after one wipe and the lever returns to its parked position. If more wipes are needed, hold the lever on mist longer.

Windshield Washer

⚠ 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.

There is a button marked with the windshield washer symbol at the end of the windshield wiper lever. Press this button to spray washer fluid on the windshield. The wipers will run for a few cycles to clear the window and then either stop or return to your preset speed. For more wash cycles, press and hold the button longer.

Rear Window Wiper/Washer

The rear wiper and rear wash buttons are located on the instrument panel above the audio system.

(Rear Wiper): Press this button to turn the rear wiper on and off. When the wiper is on it runs continuously at a preset speed.

(Wash): Press this button 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 stays 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 5-9*.

Cruise Control

Cruise control lets you 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 25 mph (40 km/h).

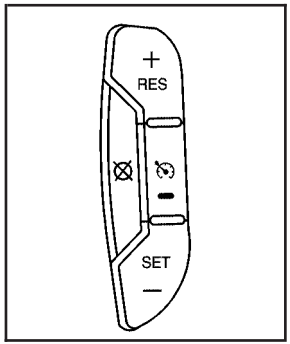
⚠ CAUTION:

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.

⚠ 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.



The cruise control buttons are located on the steering wheel.

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

+RES (Resume): Press this button to resume a set speed and to accelerate the speed.

SET– (Set): Press this button to set a speed and to decrease the speed.

(Cancel): Press this button to cancel cruise control without erasing the set speed from memory.

Setting Cruise Control

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

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

When the brakes are applied, the cruise control shuts off.

If the vehicle is in cruise control and the Traction Control System (TCS) begins to limit wheel spin, the cruise control automatically disengages. See *Traction Control System (TCS) on page 4-5*. When road conditions allow, the cruise control can be used again.

Resuming a Set Speed

If the cruise control is at the set speed desired and the brakes are applied, the cruise control shuts off. The cruise symbol in the instrument panel cluster also goes off indicating cruise is no longer engaged. To return to the previously set speed, you do not need to go through the set process again.

Once the vehicle is moving about 25 mph (40 km/h) or more, press the +RES button on the steering wheel. The vehicle goes back to the previous set speed and stays there.

Increasing Speed While Using Cruise Control

There are two ways to go to a higher speed.

- Press and hold the +RES button on the steering wheel until the desired speed is reached, then release it.
- To increase vehicle speed in small amounts, press the +RES button. Each time this is done, the vehicle goes about 1 mph (1.6 km/h) faster.

Reducing Speed While Using Cruise Control

To reduce the vehicle speed while using cruise control:

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

Passing Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase the vehicle's speed. When you take your foot off the pedal, the vehicle slows down to the cruise control speed that was set earlier.

Using Cruise Control on Hills

How well the cruise control works on hills depends upon the vehicle's speed, load, and the steepness of the hills. While going up steep hills, you might have to step on the accelerator pedal to maintain the vehicle's speed. While going downhill, you might have to brake or shift to a lower gear to keep the vehicle at a lower speed. However, when the brakes are applied the cruise control turns off. 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 button on the steering wheel.
- Press the button on the steering wheel.

Erasing Speed Memory

The cruise control set speed memory is erased when the cruise control or the start switch is turned off.

Headlamps

The exterior lamp control is located on the turn signal/multifunction lever.

(Exterior Lamp Control): Turn the control with this symbol on it to operate the exterior lamps.

The exterior lamp control has the following positions:

AUTO (Off/Automatic Headlamps): Turn the control to this position to put the headlamps in automatic mode. Automatic mode will turn the exterior lamps on and off depending upon how much light is available outside of the vehicle.

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

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

(Headlamps): Turning the control to this position turns on the headlamps, together with the previously listed lamps and lights.

Headlamps on Reminder

If the driver's door is opened with the start switch off and the lamps on, a warning chime will sound.

Daytime Running Lamps (DRL)

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.

The DRL system will make the low-beam headlamps come on at a reduced brightness in daylight when the following conditions are met:

- The start switch is on.
- The exterior lamp band is in the automatic position.
- The drive unit is not in PARK (P).
- The light sensor determines it is daytime.
- The parking brake is released.

When the DRL are on, the low-beam headlamps will be on at a reduced brightness. The taillamps, sidemarker and other lamps will not be on. The instrument panel will not be lit up either.

When the exterior lamp band is turned to the headlamp position, the low-beam headlamps come on. The other lamps that come on with the headlamps will also come on.

When the headlamps are turned off, the regular lamps will go off, and the low-beam headlamps come on to the reduced brightness.

To idle the vehicle with the DRL off, move the shift lever to PARK (P). The DRL will stay off until the shift lever is moved out of the PARK (P) position.

The regular headlamp system should be turned on when needed.

Automatic Headlamp System

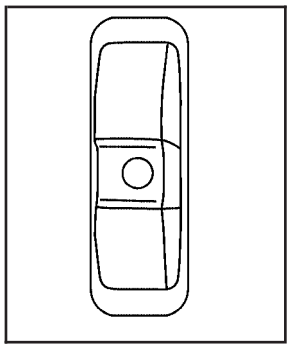
When it is dark enough outside and the exterior lamps control is in the automatic position, the headlamps come on automatically. See *Headlamps on page 3-13*.

The vehicle has a light sensor located on top of the instrument panel. Make sure it is not covered, or the headlamps will be on when they are not needed.

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

Instrument Panel Brightness

This feature controls the brightness of the instrument panel lights.



The control for this feature is located on the instrument panel to the left of the steering column.

Turn the control up to brighten the lights or down to dim them.

Dome Lamp

If the vehicle has a dome lamp with a switch, the following are the settings.

(Off): Move the lever to this position to turn the lamp off, even when a door is open.

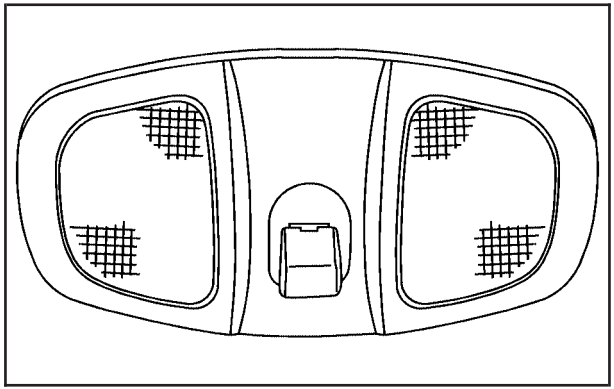
(Door): Move the lever to this position so that the lamp comes on when a door is opened.

(On): Move the lever to this position to turn the dome lamp on.

Entry Lighting

The dome lamp and the cargo lamp inside the vehicle comes on when any door is opened, if the dome lamp is in the door position. In addition, these lamps come on when the Remote Keyless Entry (RKE) unlock button is pressed. It stays on for 20 seconds or until a door is opened. After the door is opened and then closed, the light remains on for 20 seconds, or until the key is put in the start switch and turned to the SYSTEM ON position.

Map Lamps



Your vehicle may have lamps located on the headliner above the rearview mirror. Push on the lens in the lamp to turn them on and off.

Cargo Lamp

The cargo lamp is located over the rear compartment, and is controlled by the dome lamp. See *Dome Lamp on page 3-15*.

Accessory Power Outlet(s)

The accessory power outlet can be used to connect electrical equipment such as a cellular phone or CB radio.

The accessory power outlet is located in the front center console storage area.

To use the outlet, remove the cover. When not in use, always cover the outlet with the protective cap.

Notice: **If electrical devices are left plugged into a power outlet, the battery may drain causing your vehicle not to start or damage to the battery. This would not be covered by the warranty. Always unplug all electrical devices when turning off your vehicle.**

Certain electrical accessories may not be compatible with the accessory power outlets and could result in blown vehicle or adapter fuses. If you experience a problem, see your Driver Relationship Manager (DRM) for additional information on the accessory power outlet.

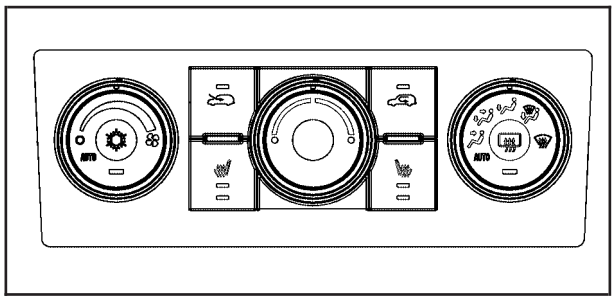
Notice: **Adding any electrical equipment to the vehicle may damage it or keep other components from working as they should. The repairs would not be covered by your warranty. Do not use equipment exceeding maximum amperage rating of 20 amperes. Check with your Driver Relationship Manager (DRM) before adding electrical equipment.**

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.**

Climate Controls

Automatic Climate Control System

The heating, cooling, and ventilation for your vehicle can be controlled with this system.



Automatic Operation

When automatic operation is active it allows the climate control system to automatically control the inside air temperature and the direction of the airflow.

AUTO (Automatic Fan): Turn the fan knob to AUTO for the system to automatically adjust the fan speed to reach the desired inside temperature.

Temperature Control: Select the desired cabin air temperature between 60-90°F (16-32°C). Typically, the best setting is near 75°F (23°C). Choosing the coldest or warmest temperature setting does not cause the system to heat or cool any faster. In cold weather; the system starts at lower fan speeds to avoid blowing air into the vehicle until warmer air is available. The system begins blowing air at the floor, but can change modes automatically as the vehicle warms up to maintain the chosen temperature setting.

Do not to cover the sensor located on the top of the instrument panel near the windshield.

AUTO (Automatic Air Delivery Mode): Turn the air delivery mode knob to AUTO for the system to automatically control the direction of the airflow to help reach the desired inside temperature.

The system automatically controls the air inlet to supply the outside air or recirculated inside air needed to heat or cool the vehicle faster. The indicator light on the recirculation button will be lit whenever the system switches to recirculation.

You can switch to outside air by pressing the outside air button. However, the recirculation mode may turn back on automatically.

In cold weather, the system starts at lower fan speeds to avoid directing cold air into the vehicle until warmer air is available. The climate control system directs air to the floor, but may automatically change modes as the vehicle warms up to maintain the chosen temperature setting. The length of time needed to warm the interior depends on the outside temperature and inside temperature of the vehicle.

(Automatic Recirculation): Using the previous temperature setting, the system automatically controls the air inlet to supply fresh outside air or recirculate the interior air to cool the car faster. The indicator light on the recirculation button lights whenever the system switches to recirculation. Switch to outside air by pressing the outside air button. The next time AUTO fan or AUTO mode is selected, the air inlet resets back to auto operation.

Manual Operation

To change the current fan speed, turn the left knob.

(Fan): Turn the left knob clockwise or counterclockwise to increase or decrease the fan speed. To turn the fan off, turn the left knob to the ◯ position. In any setting other than off, the fan runs continuously with the start switch on. The fan must be turned on to run the air conditioning compressor. There will be some airflow noticeable from the various outlets when driving, even with the fan in the off position. This is to ensure some fresh air is always available in the vehicle. To turn off the air completely, turn the fan to ◯ and select the recirculation button.

Temperature Control: Select the desired cabin air temperature between 60-90°F (16-32°C). Typically, the best setting is near 75°F (23°C). Choosing the coldest or warmest temperature setting does not cause the system to heat or cool any faster.

To change the current air delivery mode, use the right knob to select one of the following:

(Vent): This mode directs air to the instrument panel outlets.

(Bi-Level): This mode splits the air between the instrument panel outlets and the floor outlets.

(Floor): This mode directs most of the air to the floor outlets with some air directed to the windshield.

When this mode is selected, the system turns the recirculation mode off. Recirculation mode cannot be selected while in floor mode. This is to help prevent window fogging.

The right knob can also be used to select defog or defrost mode. See “Defogging and Defrosting” later in this section.

(Air Conditioning): Press this button to turn the air conditioning system on or off. When this button is pressed, an indicator light comes on to show that the air conditioning is activated. The air conditioning can be selected in any mode as long as the fan is on and the outside temperature is above freezing. A flashing indicator light indicates that the air conditioning compressor is currently not available.

On hot days, use the automatic fan and air delivery mode settings and the vehicle will reach the desired temperature more quickly. The desired fan and air delivery mode settings can still be adjusted manually. Open the windows to let the hot inside air escape, then close them. This helps reduce the time it takes for the vehicle to cool down and helps the system to operate more efficiently.

For quick cool down on hot days, select the following settings together:

1. Select mode.
2. Press the button.
3. Turn the air conditioning on.
4. Select the coolest temperature and highest fan speed.
5. Once the vehicle's interior temperature is below the outside temperature, select recirculation mode for enhanced cooling.

Using these settings together for long periods of time may cause the air inside of the vehicle to become too dry. To prevent this from happening, after the air inside of the vehicle has cooled, turn the recirculation mode off.

The air conditioning system removes moisture from the air, so a small amount of water might drip underneath the vehicle while idling or after turning off the vehicle. This is normal.

/ **(Heated Seats):** This vehicle has heated seats, see *Heated Seats on page 1-4*.

(Outside Air): Press this button to turn the outside air mode on. An indicator light in the button comes on to show that it is activated. Air from outside the vehicle will circulate throughout the vehicle. The outside air mode can be used with all modes, but it cannot be used with the recirculation mode. Pressing this button will cancel the recirculation mode.

(Recirculation): Press this button to turn on the recirculation mode. An indicator light in the button comes on to show that it is activated. The air inside the vehicle will be recirculated through the climate control system and the vehicle, not from outside the vehicle. This mode can be used to prevent outside air and odors from entering the vehicle or to help heat or cool the air inside the vehicle more quickly. Avoid using the recirculation mode during high periods of humidity and cool outside temperatures since this may result in increased window fogging. If window fogging is experienced, select the defrost mode.

Recirculation mode is not available in floor, defog or defrost modes and will shut off automatically and change to outside air. If the button is selected in these modes, the indicator will flash. This helps prevent window fogging and moisture building up within the cabin.

Defogging and Defrosting

Fog on the inside of 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 the windshield and side windows. Use the defog mode to clear the windows of fog or moisture and warm the passengers. Use the defrost mode to remove fog or frost from the windshield more quickly. When either of these modes or the floor mode is selected, the system runs the air conditioning compressor and cancels recirculation mode to dry the air; however, the recirculation light stays on. For best results, clear all snow and ice from the windshield before defrosting.

When using the automatic mode setting, the system will automatically use the defog or defrost modes as needed.

Manually turn the right knob to select the defog or defrost mode.

(Defog): This mode directs air to the windshield, side window outlets and floor outlets. When this mode is selected, the system will turn recirculation mode off and run the air conditioning compressor unless the outside air is at or below freezing. Recirculation mode cannot be selected while in defog mode. This helps prevent window fogging and moisture building up within the cabin.

(Defrost): This mode directs most of the air to the windshield, with some air directed to the side window outlets and the floor outlets. When this mode is selected, the system will turn recirculation mode off automatically and will run the air conditioning compressor unless the outside air is at or below freezing. Recirculation mode cannot be selected while in defrost mode. This helps prevent window fogging and moisture building up within the cabin.

Rear Window Defogger

The rear window defogger uses a warming grid to remove fog from the rear window.

The rear window defogger only works when the start switch is in the SYSTEM ON position.

(Rear Window Defogger): Press the button to turn the rear window defogger on or off. An indicator light on the button comes on to show that the rear window defogger is activated.

The rear window defogger will stay on for approximately 10 minutes after the button is pressed, unless the start switch is turned to SYSTEM OFF/STEERING UNLOCKED or SYSTEM OFF/STEERING LOCKED. If turned on again, the defogger only runs for approximately five minutes before turning off. At higher vehicle speeds, the defogger may stay on continuously. The defogger can always be turned off by pressing the button again or by turning off the vehicle.

Notice: **Do not use anything sharp on the inside of the rear window. If you do, you could cut or damage the warming grid, and the repairs would not be covered by the vehicle warranty. Do not attach a temporary vehicle license, tape, a decal or anything similar to the defogger grid.**

Outlet Adjustment

Use the louvers located on the air outlets to change the direction of the airflow.

Operation Tips

- Clear away any ice, snow, or leaves from the air inlets at the base of the windshield that may block the flow of air into the vehicle.
- Do not use any non-GM approved hood deflectors that could adversely affect the performance of the system.
- Keep the path under the front seats clear of objects to help circulate the air inside of the vehicle more effectively. This is especially important under the driver side seat, because there is an air duct that feeds cooling air to the propulsion system's battery pack.

  Obstructing airflow into this duct can reduce vehicle performance. Be sure the rear floor mat is not pushed forward under the driver side seat, since it could cover this air inlet.

Passenger Compartment Air Filter

Outside air is routed through a passenger compartment air filter before entering the vehicle. This filter removes certain particles from the air, including pollen and dust particles. Reductions in airflow, which may occur more quickly in dusty areas, indicate that the filter needs to be replaced.

Warning Lights, Gages, and Indicators

This section describes the warning lights and gages that may be on your vehicle. The pictures will help you locate them.

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 your warning lights and gages could also save you or others from injury.

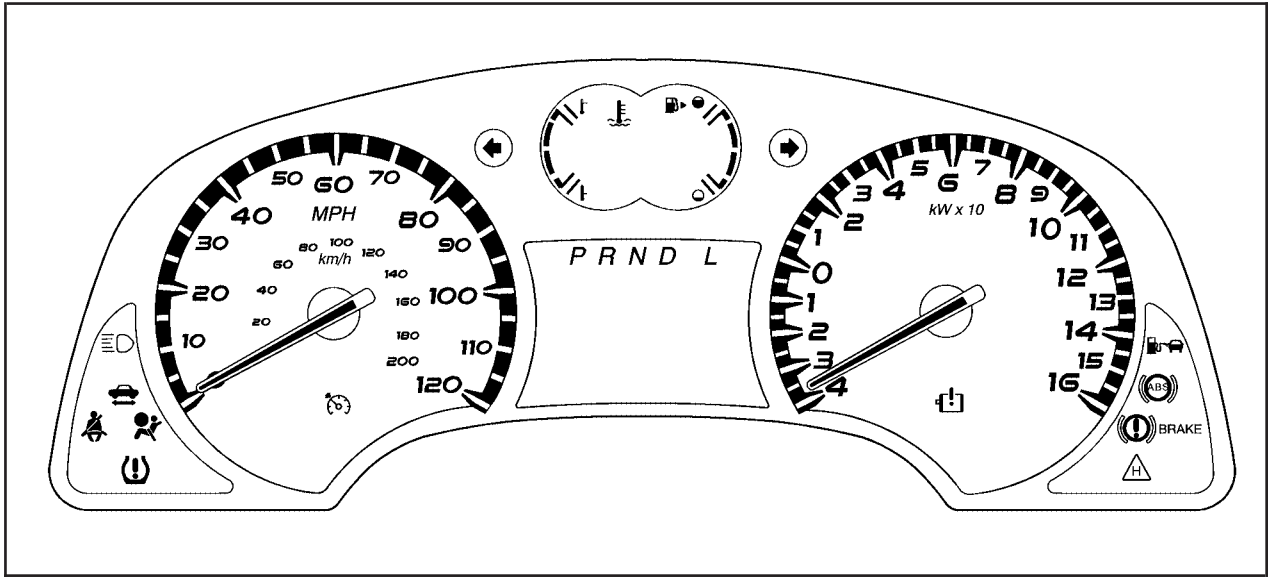
Warning lights come on when there may be or is a problem with one of your vehicle's functions. As you will see in the details on the following pages, some warning lights come on briefly when you start the vehicle just to let you know they are working.

Gages can indicate when there may be or is a problem with one of your vehicle's functions. Often gages and warning lights work together to let you know when there is a problem with your vehicle.

When one of the warning lights comes on and stays on when you are driving, or when one of the gages shows there may be a problem, check the section that tells you what to do about it. Please follow this manual's advice. Waiting to do repairs can be costly and even dangerous. So please get to know your warning lights and gages. They are a big help.

Instrument Panel Cluster

Your instrument panel cluster is designed to let you know at a glance how your vehicle is running. You will know how fast you are going, how much fuel you are using, and many other things you will need to drive safely and economically.



Speedometer and Odometer

Your speedometer lets you see your speed in both miles per hour (mph) and kilometers per hour (km/h).

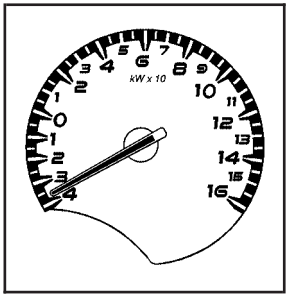
Your odometer shows how far your vehicle has been driven.

Your vehicle has a tamper resistant odometer. The digital odometer will read 999,999 if someone tries to turn it back.

Trip Odometer

Your trip odometer is located in the Driver Information Center and shows how far your vehicle has been driven since the trip odometer was last reset. For more information see *DIC Operation and Displays on page 3-39*.

Power Indicator Gage



There is a power indicator instead of a tachometer in the instrument panel.

The power indicator shows the power being delivered by the fuel cell system in Kilowatts (kW).

The Power Meter has a negative area to indicate when regenerative braking is taking place. This is why 0 kW is not at the bottom of the gage. See *Regenerative Braking on page 2-16* for more information.

Safety Belt Reminders

Safety Belt Reminder Light

When the propulsion system 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

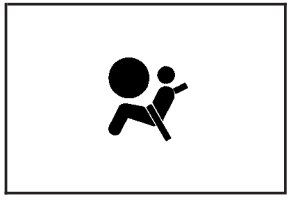
Several seconds after the propulsion system is started, a chime will sound for several seconds to remind the front passenger to buckle their safety belt. This would only occur if the passenger airbag is enabled. See *Passenger Sensing System on page 1-64* for more information. The passenger safety belt 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 1-56*.



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.

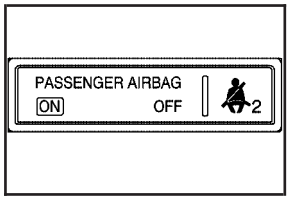
⚠ CAUTION:

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 vehicle. 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 3-42* for more information.

Passenger Airbag Status Indicator

Your vehicle has the passenger sensing system. Your instrument panel has a passenger airbag status indicator.



When you start the vehicle, the passenger airbag status indicator will light ON and OFF for several seconds as a system check.

Then, after several more seconds, the status indicator will light either ON or OFF to let you know the status of the right front passenger's frontal airbag.

If the word ON is lit on the passenger airbag status indicator, it means that the right front passenger's frontal airbag is 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. 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 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 the rear seat, even if the airbag is off.

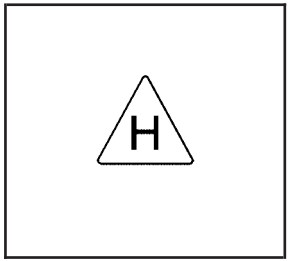
If the word OFF is lit on the airbag status indicator, it means that the passenger sensing system has turned off the right front passenger's frontal airbag. See *Passenger Sensing System on page 1-64* for more on this, including important safety information.

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 Driver Relationship Manager (DRM) 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 3-27* for more on this, including important safety information.

Hydrogen Warning Light



The hydrogen warning light, located on the right side of the instrument panel, comes on if a hydrogen leak is detected by sensors in the propulsion system or passenger compartments, or the underside of the vehicle.

This light comes on briefly when the vehicle is started.

The hydrogen warning light has two levels:

Warning Level: This warning light comes on when hydrogen sensors detect a low level of hydrogen.

The message HYDROGEN DETECTED displays in the Driver Information Center (DIC).

Contact OnStar or your Driver Relationship Manager (DRM) as soon as possible if the Warning Level light comes on. The vehicle can still be driven.

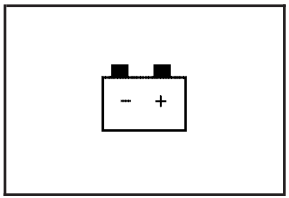
Alarm Level: This warning light flashes and an alarm sounds when the hydrogen sensors detect a higher level of hydrogen.

The message HYDROGEN DETECTED EVACUATE VEHICLE displays in the Driver Information Center (DIC).

Stop the vehicle as soon as safely possible, shut the propulsion system off, and exit the vehicle immediately.

If the warning light and alarm stop, the vehicle can be driven for a short distance. Contact your Driver Relationship Manager (DRM) as soon as possible.

Charging System Light



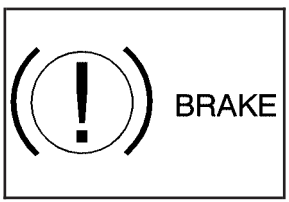
This light will come on briefly when you turn on the start switch, but the propulsion system is not running, as a check to show you it is working.

It should go out once the propulsion system 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 3-42* for more information. This light could indicate that there are electrical problems. 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.

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 brake system warning light comes on, there is a brake problem. Have your brake system inspected right away.



The brake light is located in the instrument panel cluster.

This light should come on briefly when you turn the start switch to SYSTEM ON. If it does not come on then, have it fixed so it will be ready to warn you if there is a problem.

When the start switch is on, the brake light will come on when you set your parking brake. The light will stay on if your parking brake does not release fully. A chime will also sound if the parking brake is not fully released and the vehicle is moving. If it stays on after your parking brake is fully released, it means you have a brake problem.

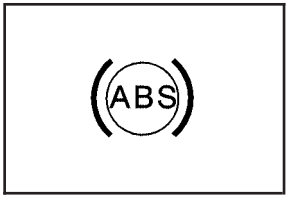
The brake light will also come on to indicate a low brake fluid level. See *Brakes on page 5-10* for more information.

If the light comes on while you are driving, pull off the road and stop carefully. 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 4-22*.

⚠ 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



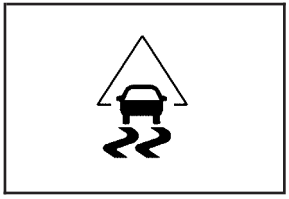
For vehicles with the Antilock Brake System (ABS), this light comes on briefly when the vehicle is started.

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 vehicle off. If the light comes on when you are driving, stop as soon as it is safely possible and turn the vehicle off. Then start the vehicle again to reset the system. If the ABS light still stays on, or comes on again while you are driving, contact OnStar or your Driver Relationship Manager (DRM). 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 3-31*.

For information on the Driver Information Center (DIC), see *DIC Warnings and Messages on page 3-42* for all brake related DIC messages.

Traction Control System (TCS) Warning Light



Your vehicle has a Traction Control System (TCS) and StabiliTrak® warning light.

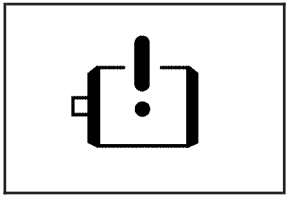
When the traction control is activated the light will flash when the TCS is limiting wheel spin or when the StabiliTrak® system is active. You may feel or hear the system working, but this is normal. This light may also come on after extended heavy braking indicating the brakes have become too hot to limit wheel spin.

This light will come on and stay on if the TCS is turned off using the traction control on/off button, located next to the gear shift lever.

If the TCS warning light comes on and stays on for an extended period of time when the system is turned on, your vehicle needs service. See *Traction Control System (TCS) on page 4-5* and *StabiliTrak® System on page 4-6* for more information.

Service Fuel Cell System Soon

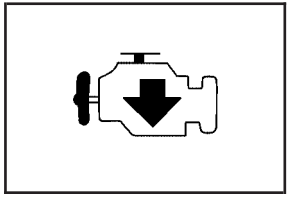
The Service Fuel Cell System (FCS) Soon indicator provides the status of the propulsion system. It is sometimes referred to as the Malfunction Indicator Lamp (MIL). If the light comes on and stays on, contact OnStar or your Driver Relationship Manager (DRM).



This light comes on, as a check to show it is working, when the key is turned to SYSTEM ON but the vehicle is not running.

If the light does not come on as a bulb check, contact OnStar or your Driver Relationship Manager (DRM).

Reduced Power Indicator



The vehicle has a reduced power light, located on the left side of the instrument panel.

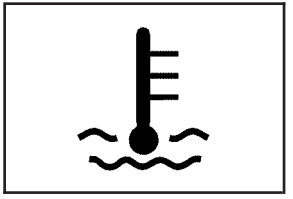
This light will come on briefly when you start your vehicle.

The light will stay on while the system warms up. There is no need to wait for the light to turn off before driving at reduced power, unless, while shifting out of PARK (P), the DIC message SYSTEM WARMING UP POWER LIMITED appears. See *DIC Warnings and Messages on page 3-42*.

This light, and service fuel cell system soon light or PROPULSION POWER REDUCED message will display when a noticeable reduction in the vehicle's performance occurs. Stop the vehicle and turn off the start switch. Wait for 10 seconds and restart your vehicle. This may correct the condition. See *Service Fuel Cell System Soon on page 3-33* and *DIC Warnings and Messages on page 3-42* for more information.

The vehicle can be driven at a reduced speed when the reduced power light is on, but acceleration and speed could be reduced. Reduced performance could continue until the next time the vehicle is driven. If this light stays on, contact OnStar or your Driver Relationship Manager (DRM).

Coolant Temperature Warning Light

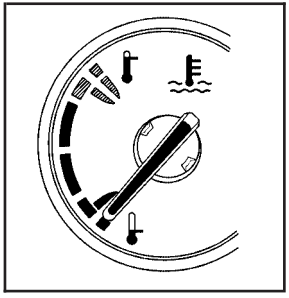


The fuel cell coolant temperature warning light comes on when the fuel cell has overheated. If this happens pull over and turn off the fuel cell as soon as possible.

Notice: **Driving with the coolant temperature warning light on could cause your vehicle to overheat. Your vehicle could be damaged, and it might not be covered by your warranty. Never drive with the coolant temperature warning light on.**

This light will also come on briefly when starting your vehicle. If it does not, contact OnStar or your Driver Relationship Manager (DRM).

Coolant Temperature Gage

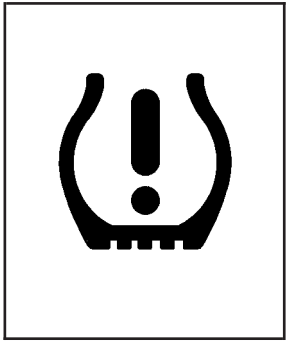


This gage measures the temperature of the vehicle's fuel cell system.

If the indicator needle moves into the shaded area, the fuel cell system is too hot. A temperature indicator light will turn on.

If you have been operating your vehicle under normal driving conditions, and the temperature indicator light comes on, you should pull off the road, stop your vehicle and turn off the fuel cell system as soon as possible.

Tire Pressure Light



This light comes on briefly when the fuel cell is started.

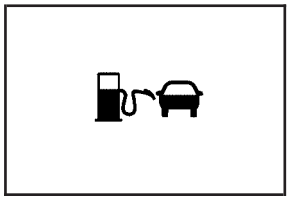
This light will also come on when one or more of your tires are significantly underinflated.

A tire pressure message in the Driver Information Center (DIC), may accompany the light. See *DIC Warnings and Messages on page 3-42* 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 5-13* for more information.

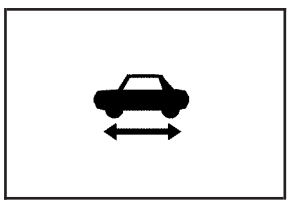
If a problem is detected with the Tire Pressure Monitor System, this light will flash for approximately 60 seconds and then stay on solid for the remainder of the starting cycle. See *Tire Pressure Monitor System on page 5-20* for more information.

Fueling Mode



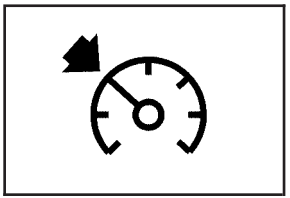
The Fueling Mode Indicator notifies the driver when the vehicle cannot be driven or started, because fueling is in progress.

Vehicle Ready Light



The Vehicle Ready Indicator comes on when the vehicle is ready to be driven. This light stays on until the vehicle is shut down.

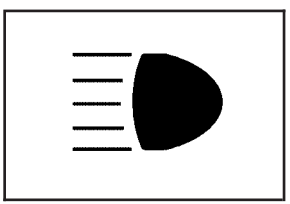
Cruise Control Light



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 3-10* for more information.

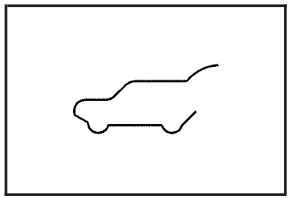
Highbeam On Light



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

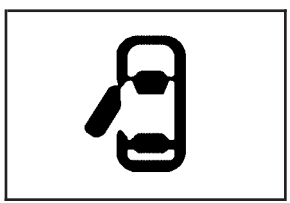
See *Headlamp High/Low-Beam Changer on page 3-8* for more information.

Gate Ajar Light



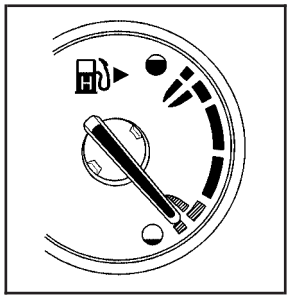
If this light comes on, your liftgate is not completely closed.

Door Ajar Light



This light will come on when a door is open. Before driving, check that all doors are properly closed.

Fuel Gage

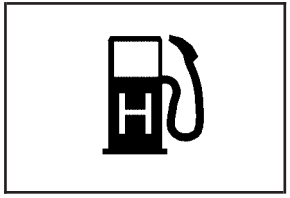


When the start switch is on, the fuel gage tells you about how much fuel you have left in your tank.

When the indicator nears empty, the low fuel light will come on. See *Low Fuel Warning Light on page 3-38* for more information.

For your tank capacity, see *Capacities and Specifications on page 5-54*.

Low Fuel Warning Light



This light, below the fuel gage, will come on briefly when the vehicle is started.

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

Stage 1: The first alert will be a Driver Information Center (DIC) message displaying LESS THAN 50 MILE RANGE (LESS THAN 80 km RANGE).

Stage 2: The second alert will be a DIC message displaying FUEL LEVEL LOW when there is approximately 25 mile (40 km) range remaining.

See FUEL LEVEL LOW in *DIC Warnings and Messages on page 3-42* for more information.

Stage 3: The third alert will be the Low Fuel Warning Light in the instrument panel cluster turns on and the FUEL LEVEL LOW message displays in the DIC. Refill the fuel tank as soon as possible.

See FUEL LEVEL LOW in *DIC Warnings and Messages on page 3-42* for more information.

Driver Information Center (DIC)

Your vehicle has a Driver Information Center (DIC).

All messages will appear in the DIC display located in the center of the instrument panel cluster. The DIC buttons are located on the center of the instrument panel.

The DIC comes on when the vehicle is on. After a short delay, the DIC will display the information that was last displayed before the fuel cell system was turned off.

The DIC displays trip, fuel, vehicle system information, and warning messages if a system problem is detected. The top of the DIC display shows the shift lever position indicator. See *Drive Unit Operation on page 2-14* for more information.

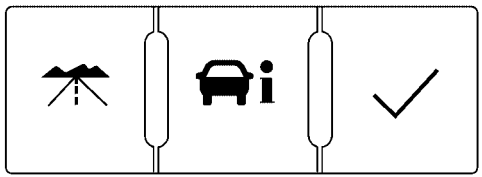
If your vehicle has this feature, the DIC also displays the outside air temperature when viewing the trip and fuel information. If there is a problem with the system that controls the temperature display, the numbers will be replaced with dashes. If this occurs, have the vehicle serviced by your Driver Relationship Manager (DRM). If an abnormal temperature reading is displayed for an extended period of time, contact OnStar or your Driver Relationship Manager (DRM). Under certain circumstances, especially when the vehicle is idling, a delay updating the temperature display is normal.

The DIC also allows some features to be personalized. See *DIC Vehicle Personalization on page 3-48* for more information.

DIC Operation and Displays

The DIC has different displays which can be accessed by pressing the DIC buttons located on the center of the instrument panel.

DIC Buttons



The buttons are the trip/fuel, vehicle information, and set/reset buttons. The button functions are detailed in the following pages.

(Trip/Fuel): Press this button to scroll through the trip and fuel displays. See “Trip/Fuel Menu Items” following for more information on these displays.

(Vehicle Information): Press this button to scroll through the vehicle information displays and to personalize the feature settings on your vehicle. See “Vehicle Information Menu Items” following and *DIC Vehicle Personalization on page 3-48* for more information on these displays.

(Set/Reset): Press this button to set or reset certain functions and to turn off or acknowledge messages on the DIC.

Trip/Fuel Menu Items

(Trip/Fuel): Press this button to scroll through the following displays:

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). This display will also show the outside air temperature in either degrees Fahrenheit (°F) or degrees Celsius (°C).

To change the DIC display to English or metric units, see “UNITS” later in this section.

TRIP

Press the trip/fuel button until TRIP displays. This display shows the current distance traveled in either miles (mi) or kilometers (km) since the last reset for the trip odometer. This display will also show the outside air temperature in either degrees Fahrenheit (°F) or degrees Celsius (°C).

The trip odometer can be reset to zero by pressing the set/reset button while the trip odometer is displayed.

AVG (Average) SPD (Speed)

Press the trip/fuel button until AVG (Average) SPD (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, press and hold the set/reset button. The display will return to zero.

AVG (Average) ECON (Economy)

Press the trip/fuel button until AVG (Average) ECON (Economy) displays. This display shows the approximate average kilograms per mile (kg/mi), kilometers per kilogram (km/kg), or kilograms per 100 kilometers (kg/100 km). This number is calculated based on the value recorded since the last time this menu item was reset. To reset this display, press and hold the set/reset button. The display will return to zero.

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 before fueling.

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.

If your vehicle is low on fuel, the FUEL LEVEL LOW message will be displayed. See "FUEL LEVEL LOW" under *DIC Warnings and Messages on page 3-42* for more information.

Vehicle Information Menu Items

(Vehicle Information): Press this button to scroll through the following displays:

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.

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) LF ## RF ##. Press the vehicle information button again until the DIC displays REAR TIRES PSI (kPa) LR ## RR ##.

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 5-19* and *DIC Warnings and Messages on page 3-42* 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, contact OnStar or see your Driver Relationship Manager (DRM) for service.

BATTERY

Press the vehicle information button until BATTERY displays. This display shows the accessory battery voltage. If the voltage is normal, the display will show NORMAL. If the voltage is low or high, the display will show LOW or HIGH. Your vehicle's charging system regulates voltage based on the state of the battery. The battery voltage may fluctuate when viewing this information on the DIC. This is normal. See *Charging System Light on page 3-31* for more information.

If there is a problem with the battery charging system, the DIC will display SERVICE BATTERY CHARGING SYSTEM. See "SERVICE BATTERY CHARGING SYSTEM" under *DIC Warnings and Messages on page 3-42*.

LEARN REMOTE KEY

This display allows you to match Remote Keyless Entry (RKE) transmitters to your vehicle. To match an RKE transmitter to your vehicle contact your Driver Relationship Manager (DRM).

FEATURE SETTNGS (Settings): PRESS ✓ TO SELCT (Select)

This display allows you to personalize the feature settings on your vehicle. See *DIC Vehicle Personalization on page 3-48* for more 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 the set/reset button to acknowledge that you received the messages and to clear them from the display. Pressing any of the DIC buttons also acknowledges and clears any messages.

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.

BUCKLE PASSENGER SEATBELT

This message reminds you to buckle the passenger's safety belt. See *Passenger Sensing System on page 1-64*.

This message displays and a chime sounds when the vehicle is on, the driver's safety belt is buckled, the passenger's safety belt is unbuckled with the passenger airbag enabled, and the vehicle is in motion. You should have the passenger buckle their safety belt.

This reminder will be repeated if the vehicle is on, the vehicle is in motion, the driver is buckled and the passenger is still unbuckled, and the passenger airbag is enabled. If the passenger's safety belt is already buckled, this message and chime will not come on.

BUCKLE SEATBELT

This message reminds you to buckle the driver's safety belt.

This message displays and a chime sounds when the vehicle is on, the driver's safety belt is unbuckled, and the vehicle is in motion. You should buckle your safety belt.

If the driver remains unbuckled when the vehicle is on and the vehicle is in motion, the reminder will be repeated. If the driver's safety belt is already buckled, this message and chime will not come on.

This message is an additional reminder to the Safety Belt Reminder Light in the instrument panel cluster. See *Safety Belt Reminders on page 3-26*.

CALL SERVICE CENTER NOW

This message displays when there is a problem with the vehicle. Contact OnStar or your Driver Relationship Manager (DRM) immediately.

CALL SERVICE CENTER SOON

This message displays when there is a problem with the fuel cell system. Contact OnStar or your Driver Relationship Manager (DRM).

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 FRNT (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 5-13*, *Loading Your Vehicle on page 4-17*, and *Inflation - Tire Pressure on page 5-19*. The DIC also shows the tire pressure values. See *DIC Operation and Displays on page 3-39*. If the tire pressure is low, the low tire pressure warning light comes on. See *Tire Pressure Light on page 3-35*.

DRIVER DOOR OPEN

This message displays when the driver door is not closed properly. Close the door completely.

FUEL CELL SYSTEM OVERHEATED

This message displays when the fuel cell system is overheated. Turn off the vehicle and wait for the fuel cell system to cool down. If the problem persists, contact OnStar or your Driver Relationship Manager (DRM).

FUEL CELL SYSTEM SHUT OFF

This message displays when the fuel cell system shuts off due to a system error. Try restarting the vehicle by turning the key. If the problem persists, contact OnStar or your Driver Relationship Manager (DRM).

FUEL CELL SYSTEM STARTING

This message displays when the fuel cell system is starting.

FUEL LEVEL LOW

This message displays and the Low Fuel Warning Light in the instrument panel cluster turns on when your vehicle is low on fuel. Refill the fuel tank as soon as possible. See *Fuel Gage on page 3-37* and *Low Fuel Warning Light on page 3-38* for more information.

HOOD OPEN

This message displays on some vehicles when the hood is not closed properly. Close the hood completely.

HYDROGEN DETECTED

This message displays when abnormal levels of hydrogen are detected. Contact OnStar or your Driver Relationship Manager (DRM).

HYDROGEN DETECTED EVACUATE VEHICLE

This message displays when elevated levels of hydrogen are detected. Leave the vehicle immediately. Contact your Driver Relationship Manager (DRM).

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.

LESS THAN 50 MILE RANGE or LESS THAN 80 km RANGE

This message displays when the fuel level is low and you can only drive approximately 50 miles (80 km) with the amount of fuel remaining in the vehicle. See *Low Fuel Warning Light on page 3-38* for more information.

LIFTGATE OPEN

This message displays when the liftgate is not closed completely. Close the liftgate completely. See *Liftgate on page 2-8*.

PASSENGER DOOR FRONT/ REAR OPEN

This message displays when one or more of the passenger doors are not closed properly. Close the doors completely.

PROPULSION POWER IS REDUCED

This message displays when the vehicle's propulsion power is reduced due to a system failure. Reduced power can affect the vehicle's ability to accelerate. The vehicle may be driven at a reduced speed while this message is on, but acceleration and speed may be reduced. If the problem persists, contact OnStar or your Driver Relationship Manager (DRM).

REFUELING TURN KEY TO OFF

This message displays when the vehicle's fuel gate is open while the vehicle is on. For safety reasons, the vehicle will not start when fueling. Turn the key to SYSTEM OFF/STEERING LOCKED. Finish refueling and/or close the fuel gate before starting the vehicle.

REMOTE KEY LEARNING ACTIVE

This message displays while you are matching a Remote Keyless Entry (RKE) transmitter to your vehicle. See "LEARN REMOTE KEY" under *DIC Operation and Displays on page 3-39* for more information.

SERVICE A/C (Air Conditioning) SYSTEM

This message displays when there is a problem detected in the air conditioning system. Contact OnStar or your Driver Relationship Manager (DRM).

SERVICE AIR BAG

This message displays when there is a problem with the airbag system. Contact OnStar or your Driver Relationship Manager (DRM) immediately. See *Airbag Readiness Light on page 3-27* for more information.

SERVICE BATTERY CHARGING SYSTEM

This message displays when there is a problem with the battery charging systems. Driving with this problem could drain the vehicle's propulsion or accessory battery. Turn off all unnecessary accessories. Stop and turn off the vehicle as soon as it is safe to do so. Contact OnStar or your Driver Relationship Manager (DRM) immediately.

Connecting a battery charger to your vehicle while the key is in any position other than SYSTEM OFF/ STEERING LOCKED may cause this message to appear. If you need to charge your vehicle, make sure that the key is in SYSTEM OFF/STEERING LOCKED or removed during charging.

SERVICE BRAKE SYSTEM

This message displays and a chime sounds when the brake fluid level is low. The brake system warning light also appears on the instrument panel cluster when this message appears on the DIC. See *Brake System Warning Light on page 3-31*. Contact OnStar or your Driver Relationship Manager (DRM) as soon as possible.

SERVICE STABILITRAK

This message displays if there has been a problem detected with the StabiliTrak® System. A warning light also appears on the instrument panel cluster. See *Traction Control System (TCS) Warning Light on page 3-33*. See *StabiliTrak® System on page 4-6* for more information.

If this message turns on while you are driving, pull off the road as soon as possible and stop carefully. Try resetting the system by turning the vehicle off and then back on. If this message still stays on or turns back on again while you are driving, your vehicle needs service. Contact OnStar or your Driver Relationship Manager (DRM) as soon as possible.

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 key cycle. See *Tire Pressure Light on page 3-35*. Several conditions may cause this message to appear. See *Tire Pressure Monitor Operation on page 5-22* for more information. If the warning comes on and stays on, there may be a problem with the TPMS. Contact OnStar or your Driver Relationship Manager (DRM).

SERVICE TRACTION CONTROL

This message displays when the Traction Control System (TCS) is not functioning properly. A warning light also appears on the instrument panel cluster. See *Traction Control System (TCS) Warning Light on page 3-33* and *Traction Control System (TCS) on page 4-5* for more information. Contact OnStar or your Driver Relationship Manager (DRM) as soon as possible.

STABILITRAK NOT READY

This message may display and a warning light on the instrument panel cluster may be on after first driving the vehicle and exceeding 30 mph (48 km/h) for 30 seconds. See *Traction Control System (TCS) Warning Light on page 3-33*. The StabiliTrak® System is not functional until the light has turned off. See *StabiliTrak® System on page 4-6* for more information.

STABILITRAK OFF

This message displays any time the StabiliTrak® System turns off. When this message has been displayed, StabiliTrak® is no longer available to assist you with directional control of the vehicle. Adjust your driving accordingly. See *StabiliTrak® System on page 4-6*.

This message displays only while the vehicle is on.

Any of the following conditions may cause the StabiliTrak® System to turn off:

- The StabiliTrak® System is turned off by pressing and holding the traction control button. See *StabiliTrak® System on page 4-6* for more information.
- The battery is low.
- There is a StabiliTrak® System failure. Contact OnStar or your Driver Relationship Manager (DRM) for service.

STARTING DISABLED

This message displays when starting the vehicle is prohibited due to a system error. Contact OnStar or your Driver Relationship Manager (DRM).

STARTING UP PLEASE WAIT

This message displays when the fuel cell system is starting up. The vehicle may not be driven until the fuel cell system is ready.

SYSTEM WARMING UP POWER LIMITED

This message displays when propulsion power is limited when the fuel cell system first starts up. The vehicle may be driven at a reduced speed while the system is warming up, but acceleration and speed are reduced.

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 5-25*, *Tire Pressure Monitor System on page 5-20*, and *Inflation - Tire Pressure on page 5-19* for more information.

TRACTION CONTROL OFF

This message displays when the Traction Control System (TCS) turns off. See *Traction Control System (TCS) on page 4-5* for more information.

This message only displays while the vehicle is on and disappears after 10 seconds, unless it is acknowledged or an urgent warning appears.

Any of the following conditions may cause the TCS to turn off:

- The TCS is turned off by pressing the traction control button. See *Traction Control System (TCS) on page 4-5* for more information.
- The battery is low.
- There is a TCS failure. Contact OnStar or your Driver Relationship Manager (DRM) for service.

TRACTION CONTROL ON

This message displays when the Traction Control System (TCS) turns on. See *Traction Control System (TCS) on page 4-5* for more information.

TURN KEY TO START

This message displays when the fuel cell system is ready to start. Turn the key to start the vehicle.

TURN SIGNAL ON

This message displays as a reminder to turn off the turn signal if you drive your vehicle for more than about 0.75 mile (1.2 km) with a turn signal on. See *Turn Signal/Multifunction Lever on page 3-7*.

This message displays and a chime sounds only when the vehicle is on. The message will not disappear until the turn signal is manually turned off, or a turn is completed.

DIC Vehicle Personalization

Your vehicle has personalization capabilities that allow you to program certain features to one preferred setting.

Only the options available will be displayed on the DIC.

The default settings for the personalization features were set when your vehicle left the factory, but may have been changed from their default state since then.

To change personalization preferences, use the following procedure.

Entering the Feature Settings Menu

1. Turn the vehicle on and place the shift lever in PARK (P).

   To avoid excessive drain on the battery, it is recommended that the headlamps are turned off.

2. Press the vehicle information button until FEATURE SETTNGS (Settings): PRESS ✓ TO SELCT (Select) appears on the DIC display.

3. Press the set/reset button to enter the feature settings menu.

   If the menu is not available, FEATURE SETTNGS (Settings): AVAILABLE IN PRK (Park) will display. Before entering the menu, make sure the vehicle is in PARK (P).

Feature Settings Menu Items

The following are personalization features that allow you to program settings to the vehicle:

DISPLAY 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 vehicle information button until the PRESS ✓ TO DISPLAY ENGLISH screen appears on the DIC display. Press the set/reset button to display all DIC messages in English.

DISPLAY LANG. (Language)

This feature allows you to select the language in which the DIC messages will appear.

Press the vehicle information button until DISPLAY LANG. (Language) appears on the DIC display. Press the set/reset button to access the settings for this feature. Then press the vehicle information button to scroll through the following settings:

ENGLISH (default): All messages will appear in English.

FRENCH: All messages will appear in French.

SPANISH: 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 LOCK

This feature allows you to select when the vehicle's doors will automatically lock. See *Programmable Automatic Door Locks on page 2-7* for more information.

Press the vehicle information button until AUTO LOCK appears on the DIC display. Press the set/reset button to access the settings for this feature. Then press the vehicle information button to scroll through the following settings:

OUT OF PARK (default): The vehicle's doors automatically lock when the doors are closed and the vehicle is shifted out of PARK (P).

AT SPEED: The vehicle's doors automatically lock when the vehicle speed is above 5 mph (8 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 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 2-7* for more information.

Press the vehicle information button until AUTO UNLOCK appears on the DIC display. Press the set/reset button to access the settings for this feature. Then press the vehicle information button to scroll through the following settings:

OFF: None of the doors will automatically unlock.

DRIVER KEY OUT: Only the driver's door will unlock when the key is removed.

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 removed.

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 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 any of the doors are open. See *Remote Keyless Entry (RKE) System Operation on page 2-4* for more information.

Press the vehicle information button until REMOTE LOCK appears on the DIC display. Press the set/reset button to access the settings for this feature. Then press the vehicle information button to scroll through the following settings:

HORN/LIGHTS 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 CHIRP ONLY: The horn will sound on the second press of the lock button on the RKE transmitter.

HORN/ LIGHTS ON (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 UNLOCK

This feature allows you to select the type of feedback you will receive when unlocking the vehicle with the 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 2-4* for more information.

Press the vehicle information button until REMOTE UNLOCK appears on the DIC display. Press the set/reset button to access the settings for this feature. Then press the vehicle information 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 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 removed 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 2-6* for more information.

Press the vehicle information button until DELAY LOCK appears on the DIC display. Press the set/reset button to access the settings for this feature. Then press the vehicle information button to scroll through the following settings:

LOCK DELAY OFF: There will be no delayed locking of the vehicle's doors.

LOCK DELAY 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 LIGHTNG (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 SYSTEM ON to SYSTEM OFF/STEERING LOCKED.

Press the vehicle information button until EXIT LIGHTNG (Lighting) appears on the DIC display. Press the set/reset button to access the settings for this feature. Then press the vehicle information 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.

APPRCH (Approach) LIGHTNG (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 RKE transmitter.

Press the vehicle information button until APPRCH (Approach) LIGHTNG (Lighting) appears on the DIC display. Press the set/reset button to access the settings for this feature. Then press the vehicle information 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 2-4* 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 vehicle information button until CHIME VOLUME appears on the DIC display. Press the set/reset button to access the settings for this feature. Then press the vehicle information 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.

FACTORY SETTNGS (Settings)

This feature allows you to set all of the personalization features back to their factory default settings.

Press the vehicle information button until FACTORY SETTNGS (Settings) appears on the DIC display. Press the set/reset button to access the settings for this feature. Then press the vehicle information button to scroll through the following settings:

RESTORE ALL (default): The personalization features will be set to their factory default settings.

DO NOT RESTORE: The personalization 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.

FEATURE SETTNGS (Settings): PRESS √ TO EXIT

This feature allows you to exit the feature settings menu.

Press the vehicle information button until FEATURE SETTNGS (Settings): PRESS √ TO EXIT appears in the DIC display. Press the set/reset button to exit the menu.

If you do not exit, pressing the vehicle information button again will return you to the beginning of the vehicle information 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 SYSTEM ON.
- The trip/fuel DIC button is 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)

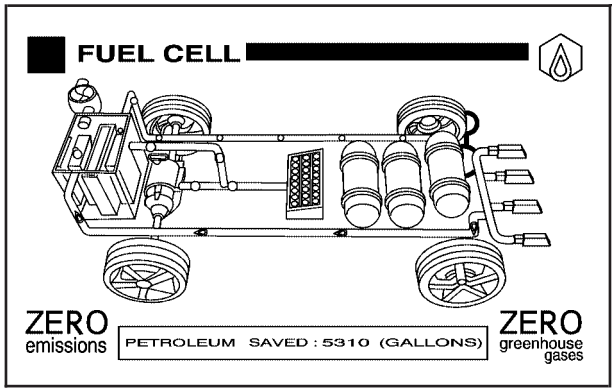
Navigation/Radio System

This vehicle has a navigation radio system. See the Navigation System manual for more information.

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 tips to help reduce distractions while driving.

Energy Display

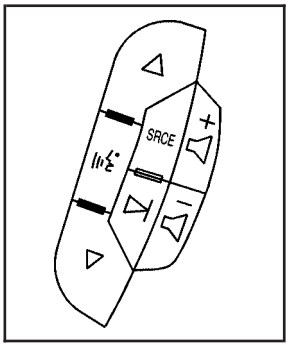
The energy display screen shows the energy flow, operation of the fuel cell, and regenerative braking.



To View the energy display screen:

- Touch the “AUX” tab on the radio display.
- Touch “FULL SCREEN” to have the energy display fill the entire screen.
- Touch the screen anywhere to go back to the normal display.

Audio Steering Wheel Controls



Audio controls that can be adjusted at the steering wheel include the following:

▽△ **(Next/Previous):** Press ▽ or △ to do the following:

- Go to the next or previous radio station stored as a favorite while the radio is playing.
- Go to the next or previous track while a CD is playing.

Pressing ▽ while using OnStar® will end a Hands-Free Call or the Advisor Playback. It also cancels or hangs-up an incoming Hands-Free Call.

(Mute/Voice Recognition): Press and release to mute the system. Press and release again to hear the audio.

- Press and hold for longer than one second to initiate voice recognition for the Navigation System. See “Voice Recognition” in the Navigation System manual for more information.
- Press and hold for longer than one second to initiate voice recognition for the Navigation System and say “OnStar” to enter OnStar mode. See the *OnStar® System on page 2-21* in this manual for more information.

SRCE (Source): Press SRCE to switch between AM, FM, XM™, CD, and auxiliary input jack.

+ – (Volume): Press + to increase the volume, or – to decrease the volume.

(Seek): Press to go to the next radio station and stay there.

Some of the audio steering wheel controls work when a CD is playing in the navigation radio. See the Navigation System manual for more information.

Multi-Band Antenna

The multi-band antenna is located on the roof of the vehicle. This antenna is used for the AM/FM radio, OnStar® and the XM™ Satellite Radio Service System. Make sure the multi-band antenna is not obstructed. Snow and ice build up can interfere with the performance of the radio and OnStar® systems.

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
Traction Control System (TCS) 4-5
StabiliTrak® System 4-6
Steering 4-7
Off-Road Recovery 4-9
Passing 4-10
Loss of Control 4-10
Driving at Night 4-11
Driving in Rain and on Wet Roads 4-12
Hill and Mountain Roads 4-13
Winter Driving 4-14
If Your Vehicle is Stuck in Sand, Mud, Ice, or Snow 4-16
Rocking Your Vehicle to Get It Out 4-16
Loading Your Vehicle 4-17
Towing 4-22
Towing Your Vehicle 4-22
Towing a Trailer 4-23

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 1-12*.

⚠ 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.

Braking

See *Brake System Warning Light on page 3-31*.

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.

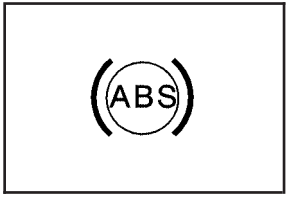
Avoid needless heavy braking. Some people drive in spurts — heavy acceleration followed by heavy braking — rather than keeping pace with traffic. This is a mistake. The brakes might not have time to cool between hard stops. The brakes will wear out much faster if you do a lot of heavy braking. If you 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 propulsion system 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 vehicle 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.

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 vehicle 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 3-32*.

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

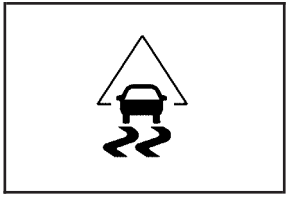
Do not pump the brakes. Just hold the brake pedal down firmly and let antilock work for you. You might hear the antilock pump or motor operate, and feel the brake pedal pulsate, but this is normal.

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.

Traction Control System (TCS)

Your vehicle has a traction control system that limits wheel spin. This is especially useful in slippery road conditions. The system operates only if it senses that one or more of the wheels are spinning or beginning to lose traction. When this happens, the system works the brakes and reduces power to limit wheel spin.



This light flashes while the traction control system is limiting wheel spin.

You may feel or hear the system working, but this is normal. This light may also come on after extended heavy braking indicating the brakes have become too hot to limit wheel spin.

The traction control system automatically comes on whenever the vehicle is started. To limit wheel spin, especially in slippery road conditions, you should always leave the system on. But you can turn the traction control system off if you ever need to. You should turn the system off if your vehicle ever gets stuck in sand, mud, ice, or snow and rocking the vehicle is required. See *Rocking Your Vehicle to Get It Out on page 4-16*.

The traction control system can be turned off by pressing the traction control button, located next to the gear shift lever.

When the traction control system is turned off, the traction control warning light on the instrument panel cluster comes on and TRACTION CONTROL OFF briefly displays.

The traction control system can be activated again by pressing the traction control button. While the traction control system is activated, the traction control system warning light on the instrument panel cluster comes on and TRACTION CONTROL ON briefly displays.

If the system is limiting wheel spin when you press the button, the traction control off light appears on the instrument panel cluster. The system will not turn off until there is no longer a current need to limit wheel spin. Turn the system back on by pressing the button again. If the light does not come on, traction control might not be working and your vehicle should be serviced. Contact OnStar or your Driver Relationship Manager (DRM).

StabiliTrak® System

Your vehicle has this feature. The StabiliTrak system is an advanced computer controlled system that helps the driver maintain directional control of the vehicle in difficult driving conditions. This is accomplished by selectively applying any one of the vehicle's brakes and reducing power. The Stabilitrak system comes on automatically whenever you start your vehicle.

The STABILITRAK NOT READY message may be displayed in the DIC and the traction control system and Stabilitrak warning light on the instrument panel cluster will be on after first driving the vehicle and exceeding 30 mph 48 (km/h) for 30 seconds. The StabiliTrak system is off until the light has turned off. This could take up to 15 minutes. See *DIC Warnings and Messages on page 3-42* for more information.

The traction control system and StabiliTrak warning light on the instrument panel cluster will flash when the system is operating. You may also feel or hear the system working. This is normal. This light may also come on after extended heavy braking indicating the brakes have become too hot to limit wheel spin.

StabiliTrak can be turned off using the traction control button. To disable StabiliTrak, press and hold the traction control button for five seconds. StabiliTrak can be activated again by pressing the traction control button.

The SERVICE STABILITRAK message will be displayed and the traction control system and StabiliTrak warning light on the instrument panel cluster will come on if there is a problem with the system. When this light and the SERVICE STABILITRAK message are on, the system is not operational. Adjust your driving accordingly.

Steering

If the propulsion system stalls while you are driving, the power steering assist system will continue to operate. If you lose power steering assist because the electric power steering system is not functioning, you can steer, but it will take more effort.

If you turn the steering wheel in either direction several times until it stops, or hold the steering wheel in the stopped position for an extended amount of time, you may notice a reduced amount of power steering assist. The normal amount of power steering assist should return shortly after a few normal steering movements.

The electric power steering system does not require regular maintenance. If you suspect steering system problems, such as abnormally high steering effort for a prolonged period of time, contact OnStar or your Driver Relationship Manager (DRM) for service repairs.

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.

The traction you can get 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 you are 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 *Traction Control System (TCS) on page 4-5* and *StabiliTrak® System on page 4-6*.

What should you do if this ever happens? Ease up on the brake or 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.

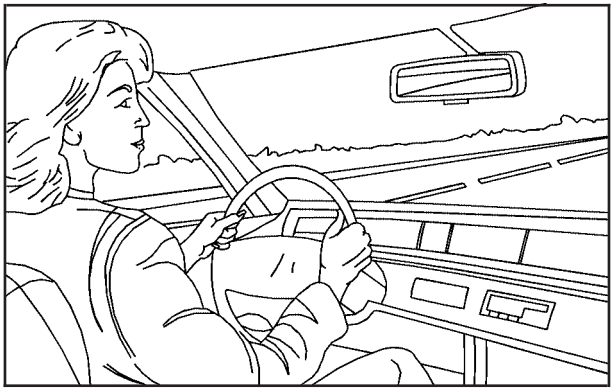
If you need to reduce your speed as you approach a curve, do it before you enter the curve, while the front wheels are straight ahead.

Try to adjust your 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.

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.

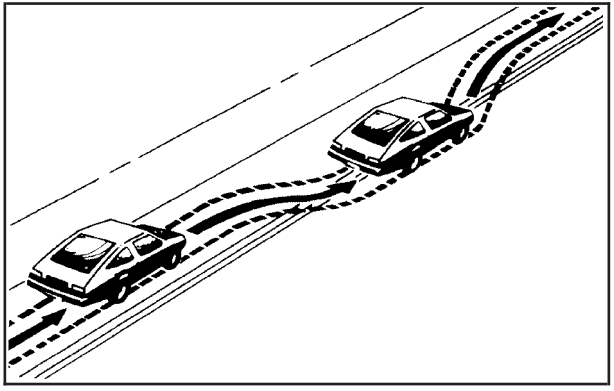


An emergency like this requires close attention and a quick decision. If you are holding the steering wheel at the recommended 9 and 3 o'clock positions, you can turn it a full 180 degrees very quickly without removing either hand. But you have to act fast, steer quickly, and just as quickly straighten 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

You may find that your vehicle's right wheels have dropped off the edge of a road onto the shoulder while you are 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. You can 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, we suggest the following tips:

- 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.

Remember: Any traction control system helps avoid only the acceleration skid. If your traction system is off, then an acceleration skid is also best handled by easing your foot off the accelerator pedal. See *Traction Control System (TCS) on page 4-5* and *StabiliTrak® System on page 4-6*.

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 will want to slow down and adjust your driving to these conditions. It is important to slow down on slippery surfaces because stopping distance will be 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 downshifting. Any sudden changes could cause the tires to slide. You may 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 your 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 5-13*.

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 brakes and tires.
- Going down steep or long hills, shift down.

⚠ 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 propulsion system assist the brakes on a steep downhill slope.

⚠ CAUTION:

Coasting downhill in NEUTRAL (N) or with the key in SYSTEM OFF/STEERING LOCKED 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 propulsion system running and your vehicle in DRIVE (D) or LOW (L) 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 5-13*.

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.

Traction control improves your ability to accelerate when driving on a slippery road. But you can turn the traction system off if you ever need to. You should turn the traction system off if your vehicle ever gets stuck in sand, mud, ice, or snow. See *If Your Vehicle is Stuck in Sand, Mud, Ice, or Snow on page 4-16*. Even though your vehicle has a traction system, slow down and adjust your driving to the road conditions. Under certain conditions, you might want to turn the traction system off, such as when driving through deep snow and loose gravel, to help maintain vehicle motion at lower speeds. See *Traction Control System (TCS) on page 4-5* and *StabiliTrak® System on page 4-6*.

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.

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 4-16*.

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 underhood 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 5-34*.

Rocking Your Vehicle to Get It Out

First, turn the steering wheel left and right to clear the area around the front wheels. Turn off any traction or stability system. See *Traction Control System (TCS) on page 4-5* and *StabiliTrak® System on page 4-6*. Then shift back and forth between REVERSE (R) and DRIVE (D) or LOW (L), spinning the wheels as little as possible. Wait until the wheels stop spinning before shifting. Release the accelerator pedal while you shift, and press lightly on the accelerator pedal after shifting. 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 4-22*.

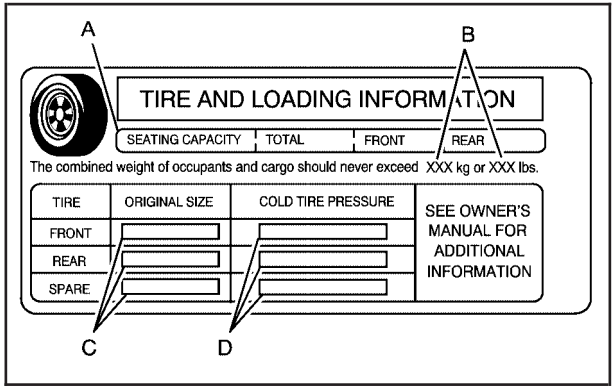
Loading Your Vehicle

It is very important to know how much weight the vehicle can carry. Two labels on the vehicle show how much weight it may properly carry, the Tire and Loading Information label and the Vehicle Certification/Tire label.

⚠ CAUTION:

Do not load your 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 your 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 your vehicle.

Tire and Loading Information Label



Label Example

A vehicle specific Tire and Loading Information label is attached to the vehicle's center pillar (B-pillar). With the driver's door open, you will find the label attached below the door lock post (striker). The tire and loading information label lists the number of occupant seating positions (A), and the maximum vehicle capacity weight (B) in kilograms and pounds. The vehicle capacity weight includes the weight of all occupants, cargo, and all nonfactory-installed options.

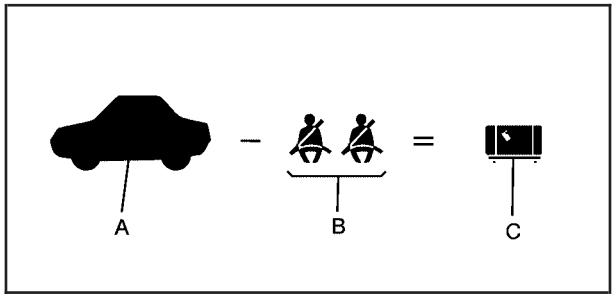
The Tire and Loading Information label also lists the tire size of the original equipment tires (C) and the recommended cold tire inflation pressures (D). For more information on tires and inflation, see *Tires on page 5-13* and *Inflation - Tire Pressure on page 5-19*.

There is also important loading information on the Certification/Tire label. It tells you the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR) for the front and rear axles. See “Certification/Tire Label” later in this section.

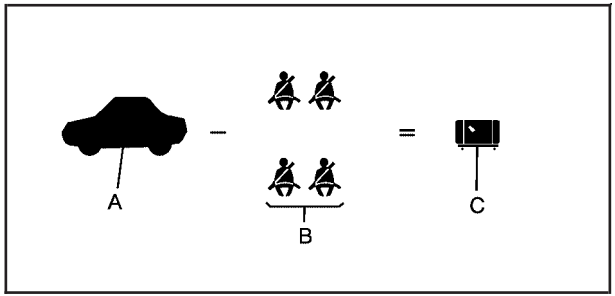
Steps for Determining Correct Load Limit

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.

The vehicle is not designed or intended to tow a trailer.



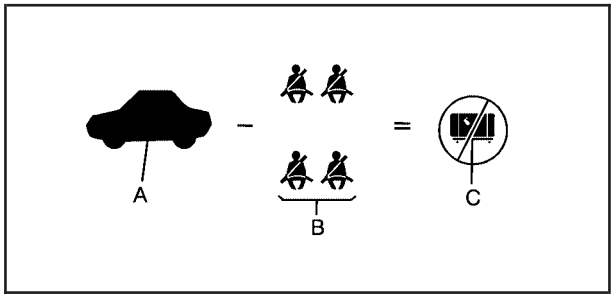
Example 1



Example 2

Item	Description	Total
A	Maximum Vehicle Capacity Weight for Example 1 =	700 lbs (317 kg)
B	Subtract Occupant Weight 150 lbs (68 kg) × 2 =	300 lbs (136 kg)
C	Available Occupant and Cargo Weight =	400 lbs (181 kg)

Item	Description	Total
A	Maximum Vehicle Capacity Weight for Example 2 =	700 lbs (317 kg)
B	Subtract Occupant Weight 150 lbs (68 kg) × 4 =	600 lbs (272 kg)
C	Available Cargo Weight =	100 lbs (45 kg)

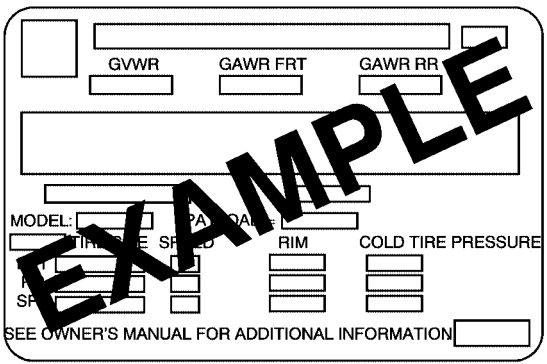


Example 3

Item	Description	Total
A	Maximum Vehicle Capacity Weight for Example 3 =	700 lbs (317 kg)
B	Subtract Occupant Weight 175 lbs (79 kg) × 4 =	700 lbs (317 kg)
C	Available Cargo Weight =	0 lbs (0 kg)

Refer to the vehicle's tire and loading information label for specific information about the vehicle's maximum vehicle capacity weight and seating positions. The combined weight of the driver, passengers, and cargo should never exceed the vehicle's maximum vehicle capacity weight.

Certification Label



A vehicle specific Certification/Tire label is found on the rear edge of the driver's door, or on the vehicle's center pillar (B-pillar).

The label shows the size of the original tires and the inflation pressures needed to obtain the gross weight capacity of the 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 the front and rear axles, you need to go to a weigh station and weigh the vehicle. Your dealer can help you with this. Be sure to spread out the load equally on both sides of the centerline.

Never exceed the GVWR for the vehicle or the GAWR for either the front or rear axle.

⚠ CAUTION:

Do not load your 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 your 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 your 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.**

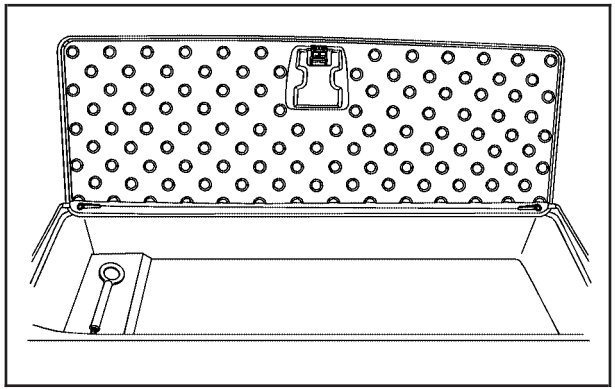
Towing

Towing Your Vehicle

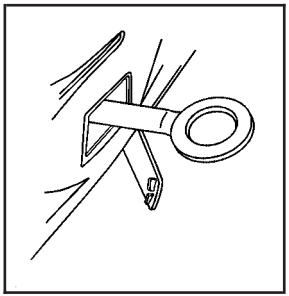
Do not tow your vehicle with any of the wheels on the ground. If you tow your vehicle with the wheels on the ground, the electric drive motor and components of the fuel cell system will be damaged.

Consult OnStar or your Driver Relationship Manager (DRM) if you need to have your disabled vehicle towed. See *Roadside Assistance Program on page 7-2*.

Your disabled vehicle should only be loaded onto a flatbed vehicle carrier using the provided tow eye. Improperly positioned tow straps, hooks, or chains can damage the fuel cell system.



The tow eye is located in the storage compartment in the floor of the rear hatch/trunk area.



Open the small cover on the front fascia below the passenger side headlamp and install the tow eye. Use the tow eye to load the vehicle onto the carrier.

Towing a Trailer

The vehicle is neither designed nor intended to tow a trailer.

NOTES

Section 5 Service and Appearance Care

Service 5-3
Accessories and Modifications 5-3
California Proposition 65 Warning 5-3
California Perchlorate Materials Requirements 5-3

Fuel 5-3
Hydrogen Safety 5-4
Vehicle Hydrogen Sensors 5-4
Filling the Tank 5-5
Filling a Portable Gasoline Container 5-7

Owner Checks 5-8
Hood Release 5-8
Windshield Washer Fluid 5-9
Brakes 5-10
Battery 5-10
Jump Starting 5-11

Headlamp Aiming 5-11

Bulb Replacement 5-11
Halogen Bulbs 5-11

Windshield Wiper Blade Replacement 5-12

Tires 5-13
Tire Sidewall Labeling 5-14
Tire Terminology and Definitions 5-16
Inflation - Tire Pressure 5-19
Tire Pressure Monitor System 5-20
Tire Pressure Monitor Operation 5-22
Tire Inspection and Rotation 5-25
When It Is Time for New Tires 5-26
Buying New Tires 5-27
Different Size Tires and Wheels 5-29
Uniform Tire Quality Grading 5-30
Wheel Alignment and Tire Balance 5-31
Wheel Replacement 5-32
Tire Chains 5-34
If a Tire Goes Flat 5-35
Tire Sealant and Compressor Kit 5-36

Appearance Care 5-45
Interior Cleaning 5-45
Fabric/Carpet 5-46

Section 5 Service and Appearance Care

Instrument Panel, Vinyl, and Other Plastic Surfaces 5-48
Care of Safety Belts 5-48
Weatherstrips 5-48
Washing Your Vehicle 5-49
Cleaning Exterior Lamps/Lenses 5-49
Finish Care 5-49
Windshield and Wiper Blades 5-50
Aluminum or Chrome-Plated Wheels and Trim 5-51
Tires 5-52
Sheet Metal Damage 5-52
Finish Damage 5-52

Vehicle Identification 5-52
Vehicle Identification Number (VIN) 5-52

Electrical System 5-53
High Voltage Devices and Wiring 5-53
Windshield Wiper Fuses 5-53
Fuses and Circuit Breakers 5-53
Instrument Panel Fuse Block 5-53

Capacities and Specifications 5-54

Service

For service and parts needs, contact your Driver Relationship Manager (DRM) for genuine GM parts and GM-trained and supported service people.

Accessories and Modifications

Adding accessories and/or making modifications are not permitted on this vehicle.

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.

Fuel

Use of the recommended fuel is an important part of the proper maintenance of your vehicle. To help keep your tank and fuel cell system clean and maintain optimum vehicle performance, use only fueling stations approved by GM.

Notice: **Your vehicle was not designed for receiving fuels other than compressed hydrogen. Fueling nozzles other than those for compressed hydrogen can cause damage to metal, plastic, and rubber parts.**

Hydrogen Specifications

Use only hydrogen meeting specification J2719.

Fueling Station Pressure Levels

The vehicle is designed for 10,000 psi (70 MPa) compressed hydrogen.

If no 10,000 psi (70 MPa) compressed hydrogen fueling dispenser is available, a dispenser with a lower pressure level, such as 5,000 psi (35 MPa), can also be connected to your vehicle. In the case of a low pressure fill, the vehicle hydrogen tank only gets filled to the pressure level used for the fueling.

Hydrogen Safety

⚠ CAUTION:

The hydrogen fuel system operates under high pressure and it is unsafe to open the hoses or pipes of the system. Severe or fatal injury could occur. Do not try to open hoses or pipes.

Vehicle Hydrogen Sensors

The vehicle has several hydrogen sensors which automatically shut off the hydrogen supply and set off a warning alarm as soon as a hydrogen leak is detected. The sensors are located:

- Under the engine compartment hood
- In the passenger compartment roof
- In the underbody near the hydrogen storage tank
- In the exhaust

Filling the Tank

⚠ CAUTION:

Fuel, including hydrogen, 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 vehicle 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.

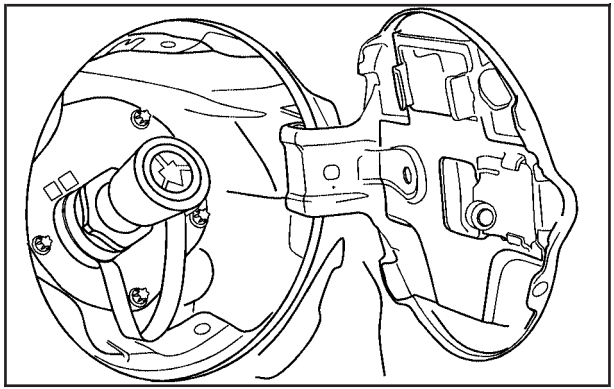
There are three types of fueling procedures:

1. Non-Communication Fueling (5000 psi (35MPa)): No additional actions needed for communication reasons.
2. Hardwired Communication Fueling: You will need to connect the dispenser pump side hardwired fueling plug to the vehicle.
3. Infrared (IR) Communication Fueling: Infrared communication establishes itself automatically. No additional actions needed.

To begin filling your tank with compressed hydrogen:

- Park your vehicle beside the dispenser.
- Put the shift lever in PARK (P).
- Turn off the fuel cell system.
- Set the parking brake firmly.
- Open the fuel filler door and remove the fuel filler cap.

The fuel cap is located behind a hinged door on the passenger side of the vehicle.



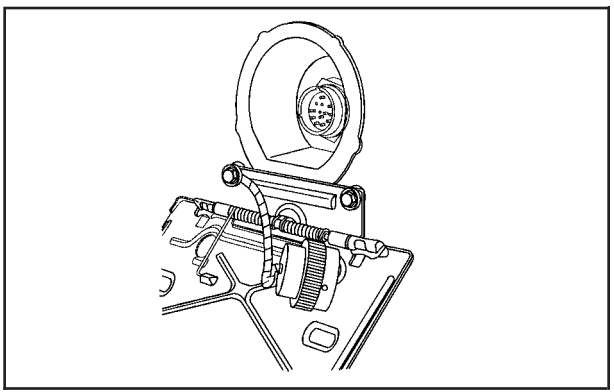
The IR-Fueling Communication system is located on the vehicle above the fueling receptacle.

The communication system may not work if the fuel cell system is not turned off, the parking brake is not set firmly, or the shift lever is not in PARK (P).

- No LED: Vehicle is not ready for fueling. Do not connect the fueling nozzle.
- Yellow LED: Vehicle is ready for a non-communication fueling operation
- Green LED: Vehicle is ready for a communication fueling operation.
- Yellow LED blinking: Vehicle interrupted communication.

Find the station communication system.

If the fueling dispenser has an IR-Interface no further action is required.



If the fueling dispenser has the hardwired connector, but no IR-Interface, connect the plug to your vehicle.

If no communication system is available, no further action is required.

You may begin fueling according to the status of the LEDs.

The fueling operation will stop automatically when the tank is full.

⚠ 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.

When replacing the fuel cap, make sure the cap is fully connected.

Filling a Portable Gasoline Container

⚠ CAUTION:

Filling a portable gasoline container while it is in your vehicle could result in ignition by static electricity. You can be badly burned and your vehicle damaged if this occurs. To help avoid injury to you and others:

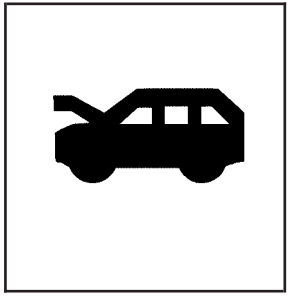
- **Never fill a portable gasoline container while it is in the vehicle, the vehicle's trunk, pickup bed, or on any surface other than the ground.**
- **Dispense gasoline only into approved containers.**
- **Bring the fill nozzle in contact with the inside of the fill opening before operating the nozzle. Contact should be maintained until the filling is complete.**
- **Do not smoke while pumping fuel.**
- **Do not use a cellular phone while pumping fuel.**

Owner Checks

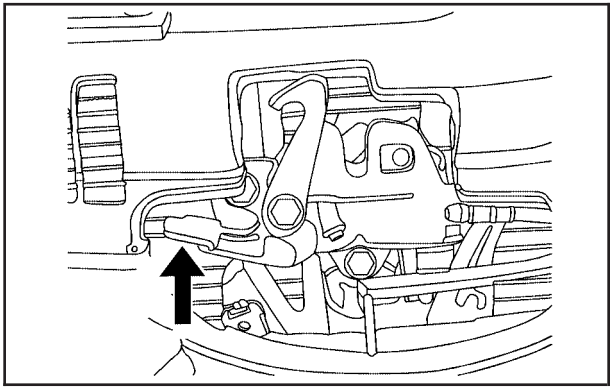
Hood Release

To open the hood, do the following:

Notice: **Do not open the hood while the fuel cell is running or until vehicle shut down is complete. Opening the hood while the fuel cell is running or before vehicle shut down is complete can shorten the life of the fuel cell.**



1. Pull the handle with this symbol on it. It is located inside the vehicle, to the left of the brake pedal.



2. Then go to the front of the vehicle and lift up on the secondary hood release lever.
3. Lift the hood, release the hood prop from its retainer and put the hood prop into the slot in the hood.

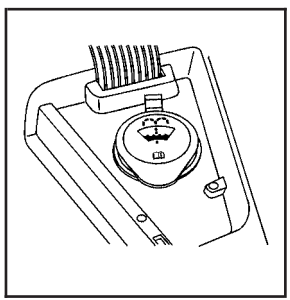
Before closing the hood, be sure all the filler caps are on properly. Then lift the hood to relieve pressure on the hood prop. Remove the hood prop from the slot in the hood and return the prop to its retainer. Then just let the hood down and close it firmly.

Windshield Washer Fluid

What to Use

When you need windshield or rear window washer fluid be sure to read the instructions before use. If you will be operating your vehicle in an area where the temperature may fall below freezing, use a fluid that has sufficient protection against freezing.

Adding Windshield Washer Fluid



The windshield washer fluid reservoir is located in the passenger side of the rear compartment.

Open the cap with the washer symbol on it. Add washer fluid until the tank is full.

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

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 5-54*.

Brake linings should always be replaced as complete axle sets.

Brake Pedal Travel

Contact your Driver Relationship Manager (DRM) 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.

Battery

Your vehicle has a maintenance free sealed 12-volt battery and a high-voltage battery.

If the vehicle will not start, contact OnStar or your Driver Relationship Manager (DRM).

Do not attempt to jump start your vehicle.

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.

Jump Starting

Do not attempt to jump start your vehicle.

If the vehicle will not start, you must call OnStar® or your Driver Relationship Manager (DRM) for assistance by pressing the OnStar® button. You can call OnStar® at 1-888-4-ONSTAR (1-888-466-7827).

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, contact your Driver Relationship Manager (DRM).

Bulb Replacement

For bulb replacements, contact your Driver Relationship Manager (DRM).

Halogen Bulbs

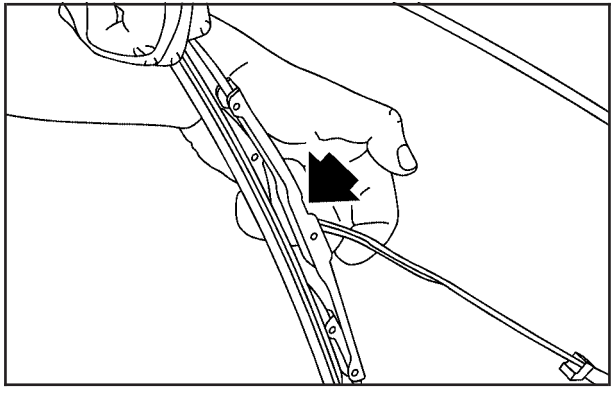
⚠ CAUTION:

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.

Windshield Wiper Blade Replacement

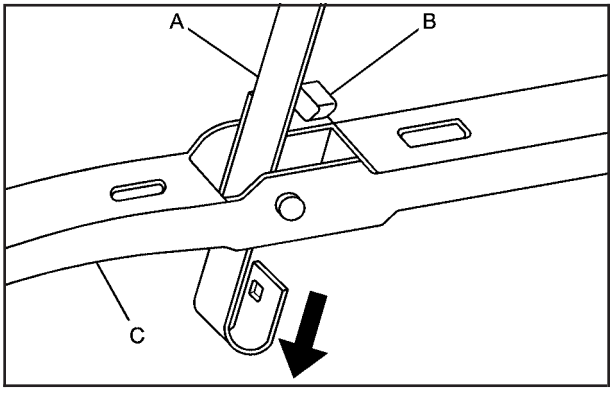
Windshield wiper blades should be inspected for wear and cracking. Contact your Driver Relationship Manager (DRM).

Replacement blades come in different types and are removed in different ways. For proper type and length, see *Maintenance Replacement Parts on page 6-2*.



To replace the windshield wiper blade assembly do the following:

1. Lift the wiper arm away from the windshield.



2. Push the release lever (B) to disengage the hook and push the wiper arm (A) out of the blade (C).
3. Push the new wiper blade securely on the wiper arm until you hear the release lever click into place.

Tires

Your new vehicle comes with high-quality tires made by a leading tire manufacturer. If you ever have questions about the tires, see your Driver Relationship Manager (DRM) for details.

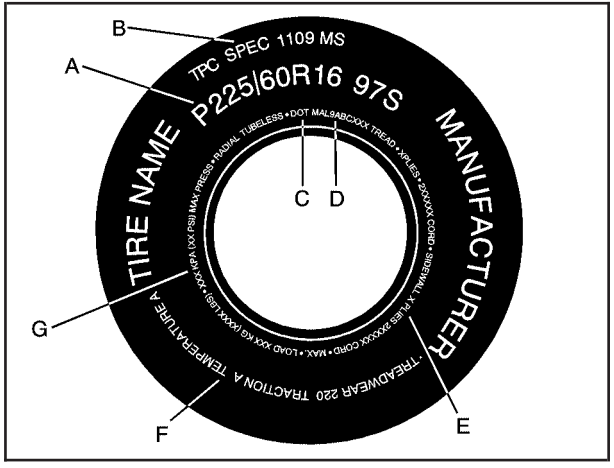
⚠ CAUTION:

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 4-17*.**
- **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 5-19*.**
- **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 example below shows a typical passenger (p-metric) 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 code are 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.

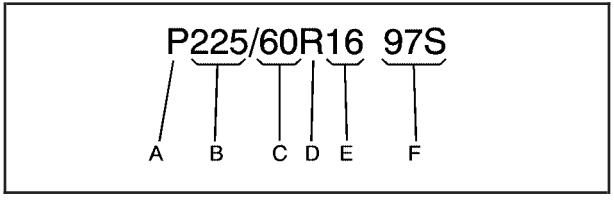
(E) Tire Ply Material: The type of cord and number of plies in the sidewall and under the tread.

(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 5-30*.

(G) Maximum Cold Inflation Load Limit: Maximum load that can be carried and the maximum pressure needed to support that load.

Tire Size

The following illustration shows an example of a typical passenger (p-metric) 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 5-19*.

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 4-17*.

GAWR FRT: Gross Axle Weight Rating for the front axle. See *Loading Your Vehicle on page 4-17*.

GAWR RR: Gross Axle Weight Rating for the rear axle. See *Loading Your Vehicle on page 4-17*.

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 4-17*.

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 5-19* and *Loading Your Vehicle on page 4-17*.

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 5-26*.

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 5-30*.

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 4-17*.

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 4-17*.

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 4-17*. 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.

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 5-22* 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.

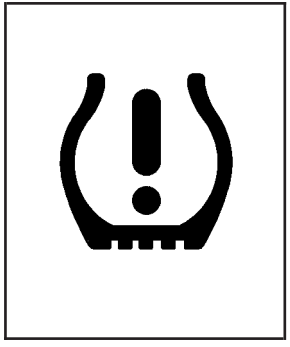
The Tire Pressure Monitor System (TPMS) operates on a radio frequency and complies with RSS-210 of Industry and Science Canada. Operation is subject to the following two conditions:

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. The TPMS sensors monitor the air pressure in the vehicle's tires and transmit 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 time the vehicle is started 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 3-39* and *DIC Warnings and Messages on page 3-42*.

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 4-17*, for an example of the Tire and Loading Information label and its location on your vehicle. Also see *Inflation - Tire Pressure on page 5-19*.

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 5-25* and *Tires on page 5-13*.

Notice: **Using non-approved tire sealants could damage the Tire Pressure Monitor System (TPMS) sensors. Always use the GM approved tire sealant available through your Driver Relationship Manager (DRM).**

The vehicle, when new, included a factory-installed Tire Sealant and Compressor Kit. This kit uses a GM approved liquid tire sealant. Using non-approved tire sealant could damage the TPMS sensors.

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 until the vehicle is turned off. A DIC warning message is also displayed. The low tire warning light and DIC warning message come on each time the vehicle is started until the problem is corrected. Some of the conditions that can cause the malfunction light and DIC message to come on are:

- 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 Driver Relationship Manager (DRM) 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 5-27*.
- 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 DRM 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 the 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 DRM 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 start switch to SYSTEM ON with the vehicle 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 start switch to SYSTEM OFF/STEERING LOCKED.
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

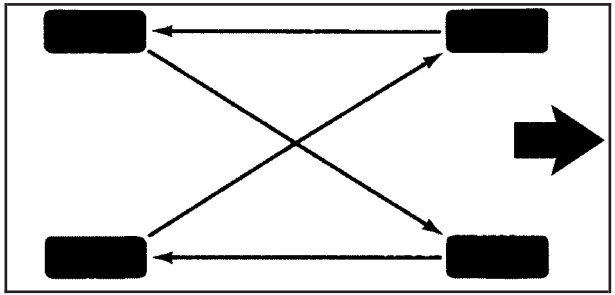
Your Driver Relationship Manager (DRM) will arrange for all tire inspection and tire service.

We recommend that you regularly inspect the vehicle's tires for signs of wear or damage. See *When It Is Time for New Tires on page 5-26* for more information.

Tires should be rotated every 5,000 to 8,000 miles (8 000 to 13 000 km).

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, contact your DRM as soon as possible.



When rotating the vehicle's tires, always use the correct rotation pattern shown here.

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 5-19* and *Loading Your Vehicle on page 4-17*.

Reset the Tire Pressure Monitor System. See *Tire Pressure Monitor Operation on page 5-22*.

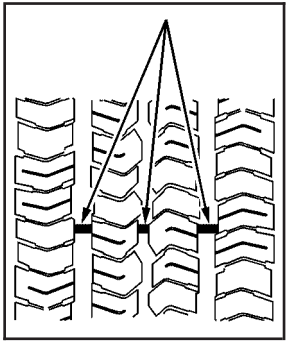
Make certain that all wheel nuts are properly tightened. See “Wheel Nut Torque” under Capacities and Specifications.

⚠ CAUTION:

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after a time. The wheel could come off and cause a crash. 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 you need to, to get all the rust or dirt off.

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 appear when your tires have only 1/16 inch (1.6 mm) or less of tread remaining. Some commercial truck tires may not have treadwear indicators.

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 a MS, for mud and snow. See *Tire Sidewall Labeling on page 5-14* 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 5-25* 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 your vehicle's wheels.

⚠ 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 5-20*.

Your vehicle's original equipment tires are listed on the Tire and Loading Information label. See *Loading Your Vehicle on page 4-17*, 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 5-27* 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 the vehicle pulling to one side or the other, the alignment might need to be checked. If you notice the vehicle vibrating when driving on a smooth road, the tires and wheels might need to be rebalanced. See your Driver Relationship Manager (DRM) 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 Driver Relationship Manager (DRM) if any of these conditions exist.

Your DRM 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 or wheel nuts, replace them only with new GM original equipment parts. This way, you will be sure to have the right wheel, wheel bolts and wheel nuts 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 clearance to the body and chassis.**

⚠ CAUTION:

Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after a time. The wheel could come off and cause a crash. 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 you need to, to get all the rust or dirt off.

⚠ CAUTION:

Never use oil or grease on studs or the threads of the wheel nuts. If you do, the wheel nuts might come loose and the wheel could fall off, causing a crash.

⚠ CAUTION:

Incorrect wheel nuts or improperly tightened wheel nuts can cause the wheel to become loose and even come off. This could lead to a crash. Be sure to use the correct wheel nuts. If you have to replace them, be sure to get new GM original equipment wheel nuts.

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.**

Used Replacement Wheels

⚠ CAUTION:

Putting a used wheel on your 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 your 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 your vehicle and tire size combination and road conditions. Follow that manufacturer's instructions. To help avoid damage to your vehicle, drive slowly, readjust or remove the device if it is contacting your vehicle, and do not spin your vehicle's wheels. If you do find traction devices that will fit, install them on the front tires.

If a Tire Goes Flat

Your vehicle has a tire sealant and compressor kit. There is no spare tire, no tire changing equipment, and no place to store a tire.

It is unusual for a tire to blow out while you are driving, especially if you maintain your tires properly. See *Tires on page 5-13*. If air goes out of a tire, it is much more likely to leak out slowly. But, if you should ever have a blow out, 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 blow out, particularly on a curve, acts much like a skid and may require the same correction you would use in a skid. In any rear blow out, 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.

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place and stopping. Then do this:

1. Turn on the hazard warning flashers. See *Hazard Warning Flashers on page 3-6*.
2. Park your vehicle. Set the parking brake firmly and put the shift lever in PARK (P). See *Shifting Into PARK (P) on page 2-17* for additional information.
3. Turn off the fuel cell system. See *Vehicle Shutdown on page 2-18*.
4. Contact OnStar® or your Driver Relationship Manager (DRM).

If the tire has been separated from the wheel, has damaged sidewalls, or has a puncture larger than a ¼ inch (6 mm), the tire is too severely damaged for the tire sealant and compressor kit to be effective. See *Roadside Assistance Program on page 7-2*.

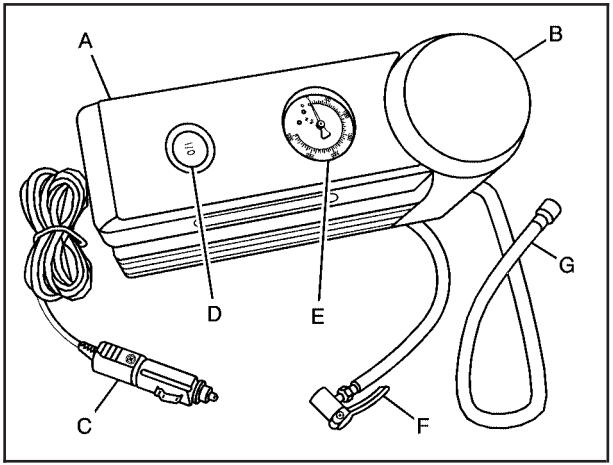
If the tire has a puncture less than a ¼ inch (6 mm) in the tread area of the tire, see *Tire Sealant and Compressor Kit on page 5-36*.

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 the tire 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 5-19*, the vehicle must be driven for five miles to distribute the sealant in the tire and seal the puncture. After driving five miles, the tire pressure must be rechecked and adjusted as needed. See “Using the Tire Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tire” later in this section.

After temporarily repairing a tire using the tire sealant and compressor kit, contact your Dealer Relationship Manager (DRM) as soon as possible. If the sealant is removed from the tire within 100 miles (161 kilometers) of driving, then it is easier to clean from the tire and you are less likely to require a replacement tire.

Be sure to read and follow all of the tire sealant and compressor kit instructions. The kit includes:



A. Air Compressor
B. Tire Sealant Canister
C. Air Compressor Accessory Plug
D. On/Off Switch
E. Air Pressure Gage
F. Air Only Hose
G. Sealant/Air Hose

Accessing the Tire Sealant and Compressor Kit

To access the tire sealant and compressor kit, do the following:

1. Open the liftgate. See *Liftgate on page 2-8* for more information
2. The tire sealant and compressor kit is located behind the driver side panel in the rear cargo area.
3. Remove the panel by pressing the two latches in while pulling the door straight toward you.
4. Separate the velcro straps.
5. Pull the kit straight out.

Tire Sealant

When using the tire sealant and compressor kit during cold temperatures, warm the tire sealant and compressor kit in a heated environment such as the vehicle for five minutes. This will help to inflate the tire faster.

Read and follow the safe handling instructions on the instructional label adhered to the tire sealant canister.

Check the tire sealant expiration date on the sealant canister. The sealant canister should be replaced before its expiration date. For replacement canisters contact your Driver Relationship Manager (DRM). See “Removal and Installation of Sealant Canister” later in this section.

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 unseated from the wheel. See *OnStar® on page 7-6* or contact your Driver Relationship Manager (DRM).

The sealant can only be used to seal one tire. After usage the tire sealant canister and sealant/air hose assembly must be replaced. Contact your Dealer Relationship Manager (DRM). See “Removal and Installation of Sealant Canister” later in this section.

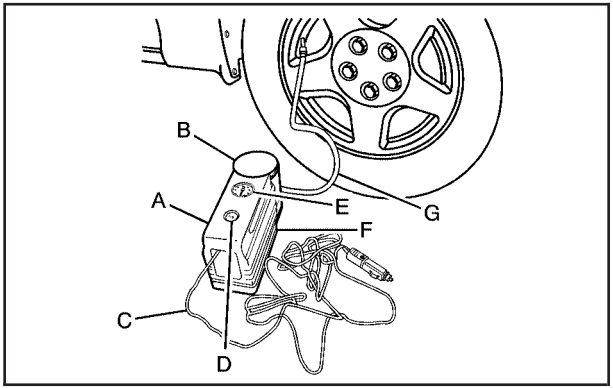
Using the Tire Sealant and Compressor Kit to Temporarily Seal and Inflate a Punctured Tire

Follow the directions closely for correct sealant usage.

1. Do a safety check before proceeding. See *If a Tire Goes Flat on page 5-35*.
2. Inspect the damaged tire.

   The sealant cannot seal sidewall damage, large punctures, or a tire that has unseated from the wheel. See *OnStar® on page 7-6* or contact your Dealer Relationship Manager (DRM).

   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 (G) 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 (G) onto the tire valve stem. Turn it clockwise until it is tight.

   Make sure the sealant and compressor kit On/Off switch (D) is in the O (off) position.
6. Remove the air compressor accessory plug (C) from the unit.

7. Plug the air compressor accessory plug (C) into the accessory power outlet in the vehicle. See *Accessory Power Outlet(s) on page 3-16*.

   Do not slam the door or close the window on the compressor accessory plug cord.

8. Start the vehicle. See *Starting Your Vehicle on page 2-13* for more information. 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).

9. Push the On/Off switch (D) to the I (on) position.

   The tire sealant and compressor kit will inject sealant and air into the tire.

   The pressure gage (E) 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 5-19*.

    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.

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 7-2* for more information.**

11. Turn the compressor off by pushing the On/Off (D) switch to the I (off) position.

    The tire is not sealed and will continue to leak air until the vehicle is driven and the sealant is distributed in the tire.

    Steps 13 through 22 must be done right after Step 12

12. Unplug the air compressor accessory plug (C) from the accessory power outlet in the vehicle.

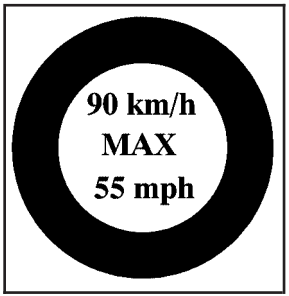
13. Disconnect the sealant/air hose (G) from the valve stem by turning it counterclockwise and replace the tire valve stem cap.

    Be careful when handling the tire inflator components as they could be hot after usage.

14. Wrap the sealant/air hose (G) around the air compressor channel to stow it in its original location.

15. Stow the air compressor accessory plug back in the air compressor. To do this, wrap the air compressor accessory plug, snap in the plug, and then push in the bottom and then the top of the wrapped air compressor accessory plug.

16. Stow the air compressor accessory plug (C) back in the air compressor. To do this, wrap the air compressor accessory plug, snap in the plug, and then push in the bottom and then the top of the wrapped air compressor accessory plug.



17. If the flat tire was able to inflate to the recommended inflation pressure, remove the maximum speed label from the sealant canister (B).

18. 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.

19. Return the equipment to the proper storage location in the rear of your vehicle. container with the foam retainer bolt.

⚠ CAUTION:

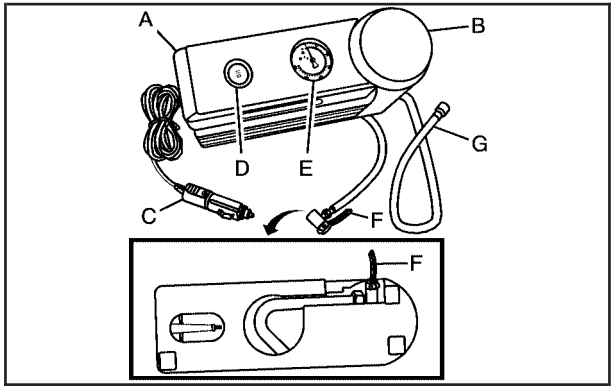
Storing the tire sealant and compressor kit or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store the tire sealant and compressor kit in its original location.

20. Immediately drive the vehicle 5 miles (8 km) to distribute the sealant in the tire.
21. Stop at a safe location and check the tire pressure, refer to Steps 1 through 11 under “Using the Tire Sealant and Compressor Kit without Sealant to Inflate an Underinflated Tire (Not Punctured).

    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 7-2* for more information.
22. Wipe off any sealant from the wheel, tire and vehicle.
23. Dispose of the sealant canister (B) and sealant/air hose (G) assembly with your Driver Relationship Manager (DRM).
24. After temporarily sealing a tire with the tire sealant and compressor kit, contact your Driver Relationship Manager (DRM) to have the tire 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:



1. Unlock the air only hose (F) from the sealant canister (B) by pulling up on the lever.
2. Pull the air only hose (F) from the sealant canister (B).
3. Remove the tire valve stem cap from the flat tire by turning it counterclockwise.
4. Push the air only hose (F) onto the tire valve stem and push the lever down to secure in place.
5. Remove the air compressor accessory plug (C) from the unit.
6. Plug the air compressor accessory plug into an accessory power outlet in the vehicle. See *Accessory Power Outlet(s) on page 3-16*.

   Do not slam the door or close the window on the compressor accessory plug cord.
7. Start the vehicle. See *Starting Your Vehicle on page 2-13* for more information. 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. Push the On/Off switch (D) to the I (on) position.

9. Inflate the tire up to the recommended inflation pressure using the air pressure gage (E) on the top of the unit. See *Inflation - Tire Pressure on page 5-19*.

   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.

10. Turn off the air compressor by pushing the On/Off switch to the O (off) position.

    Be careful while handling the tire sealant and compressor kit as they could be hot after usage.

11. Unplug the air compressor accessory plug (C) from the accessory power outlet in the vehicle.

12. Disconnect the air only hose (F) from the tire valve stem, by pulling the lever up and hose up.

13. Wrap the air only hose (F) around the side of the air compressor channel to stow it back in its original location.

14. Stow the air compressor accessory plug (C) back in the air compressor. To do this, wrap the air compressor accessory plug, snap in the plug, and then push in the bottom and then the top of the wrapped air compressor accessory plug.

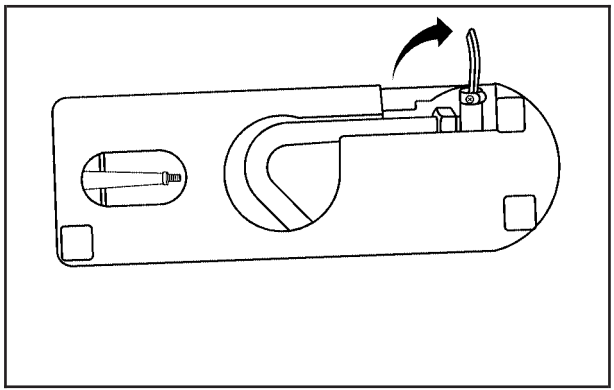
⚠ CAUTION:

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.

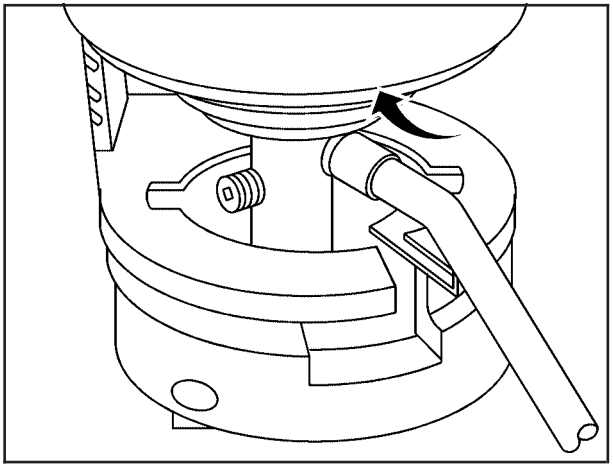
15. Return the equipment to its original storage location of your vehicle.

Removal and Installation of the Sealant Canister

To remove the sealant canister, do the following:



1. Unlock the air only hose from the sealant canister by pulling up on the lever.
2. Pull the air only hose from the sealant canister.
3. Unwrap the sealant/air hose from the compressor.



4. Turn the sealant canister so the inflator filling hose is aligned with the slot in the compressor.
5. Lift the sealant canister from the compressor.
6. Replace with a new sealant canister. See your Driver Relationship Manger (DRM) for the new canister.

To install a new sealant canister, do the following:

1. Align the sealant/air hose with the slot in the air compressor.
2. Push the sealant canister straight down and turn it clockwise.
3. Wrap the sealant filling hose around the air compressor channel to stow it in its original location.
4. Push the air only hose onto the sealant canister inlet and push the lever down to secure.

Appearance Care

Interior Cleaning

The interior, including the instrument panel, should only be cleaned with a damp cloth. Do not use commercial cleaners or aerosols.

⚠ CAUTION:

Cleaning products or aerosols containing silicone can damage the hydrogen sensors installed on this vehicle. Damaged hydrogen sensors would not work properly and could cause the hydrogen safety system to malfunction.

The vehicle's interior will continue to look its best if it is cleaned often. Although not always visible, dust and dirt can accumulate on upholstery. Dirt can damage carpet, fabric, leather, and plastic surfaces. Regular vacuuming is recommended to remove particles from the upholstery. It is important to keep the upholstery from becoming and remaining heavily soiled. Soils should be removed as quickly as possible. The 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 might also transfer color to the vehicle's interior.

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.**

Dust may be removed from small buttons and knobs using a small brush with soft bristles.

Do not clean your vehicle using the following cleaners or techniques:

- Never use a knife or any other sharp object to remove a soil from any interior surface.
- Never use a stiff brush. It can cause damage to the vehicle's interior surfaces.
- Never apply heavy pressure or rub aggressively with a cleaning cloth. Use of heavy pressure can damage the interior and does not improve the effectiveness of soil removal.
- Do not heavily saturate your upholstery while cleaning.
- Damage to your vehicle's interior may result from the use of many organic solvents such as naptha, alcohol, etc.

Fabric/Carpet

Cleaning Fabric/Carpet

The interior should only be cleaned with a damp cloth. Do not use commercial cleaners or aerosols.

⚠ CAUTION:

Cleaning products or aerosols containing silicone can damage the hydrogen sensors installed on this vehicle. Damaged hydrogen sensors would not work properly and could cause the hydrogen safety system to malfunction.

Use a vacuum cleaner often to get rid of dust and loose dirt. Wipe vinyl, leather, plastic, and painted surfaces with a clean, damp cloth.

Here are some cleaning tips:

- Clean up stains as soon as you can, before they set.
- Carefully scrape off any excess stain.
- Use a clean cloth or sponge, and change to a clean area often. A soft brush may be used if stains are stubborn.
- To avoid forming a ring on fabric after spot cleaning, clean the entire area immediately or it will set.

Most stains can be removed with club soda water. To clean, use the following instructions:

1. For liquids: blot with a clean, soft white cloth.

   For solids: remove as much as possible and then vacuum or brush.
2. Apply club soda water to a clean, soft white cloth. Do not over-saturate; the cloth should not drip water.
3. Clean the entire area. Avoid getting the fabric too wet.
4. Start cleaning from the seams into the stain to avoid a ring effect.
5. Continue cleaning, using a clean area of the cloth each time it becomes soiled.
6. When the stain is removed, blot the cleaned area with another dry clean, soft white cloth.

Special Fabric Cleaning Problems

Stains caused by such things as catsup, coffee, tea, milk, fruit, fruit juice, jelly, cheese, chocolate, vomit, urine, and blood can be removed using the club soda water instructions given earlier in this section. If an odor lingers after cleaning vomit or urine, treat the area with a water and baking soda solution: 1 teaspoon (5 ml) of baking soda to 1 cup (250 ml) of lukewarm water. Let dry.

Stains caused by oil and grease can be cleaned with an approved GM cleaner and a clean, white cloth.

1. Carefully scrape off excess stain.
2. Clean with cool water and allow to dry completely.

Instrument Panel, Vinyl, and Other Plastic Surfaces

The interior, including the instrument panel, should only be cleaned with a damp cloth. Do not use commercial cleaners or aerosols.

⚠ CAUTION:

Cleaning products or aerosols containing silicone can damage the hydrogen sensors installed on this vehicle. Damaged hydrogen sensors would not work properly and could cause the hydrogen safety system to malfunction.

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.

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.

Washing Your Vehicle

The best way to preserve the 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 the 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 could occur.**

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 the vehicle. Approved cleaning products can be obtained from your Driver Relationship Manager (DRM). 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

Notice: **Do not use high pressure washes under the hood or under the vehicle. High pressure washes can damage the fuel cell system.**

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 5-49*.

Finish Care

Occasional waxing or mild polishing of the vehicle by hand may be necessary to remove residue from the paint finish. You can get approved cleaning products from your Driver Relationship Manager (DRM).

The 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 the vehicle's finish if they remain on painted surfaces. Wash the vehicle as soon as possible. If necessary, use non-abrasive cleaners that are marked safe for painted surfaces to remove foreign matter.

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 the 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 and Wiper Blades

Clean the outside of the windshield 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 cleaning 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

The 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: **Do not use strong soaps, chemicals, abrasive polishes, cleaners, brushes, or cleaners that contain acid on aluminum or chrome-plated wheels, because they could damage the surface of the wheel(s). Use only approved cleaners on aluminum or chrome-plated wheels.**

The surface of these wheels is similar to the painted surface of the 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, the repair or replacement will be handled by your Driver Relationship Manager (DRM).

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 Driver Relationship Manager (DRM). For larger areas of finish damage contact your Driver Relationship Manager (DRM).

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. You can see it if you look through the windshield from outside your vehicle. The VIN also appears on the Vehicle Certification label and the certificates of title and registration.

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.

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.

Fuses and Circuit Breakers

The wiring circuits in your vehicle are protected from short circuits by fuses and circuit breakers. This greatly reduces the chance of circuit overload and fire caused by electrical problems.

Contact your Driver Relationship Manager (DRM) for any questions or concerns on the vehicle's fuses or circuit breakers.

Instrument Panel Fuse Block

For replacement of fuses, see your Driver Relationship Manager (DRM).

Capacities and Specifications

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 for more information.	
Fuel Tank	9.3 lb*	4.2 kg*
Wheel Nut Torque	100 lb ft	140 N•m
*At 10,000 psi (70MPa) and 59°F (15°C).		
All capacities are approximate.		

Section 6 Maintenance Schedule

Maintenance Schedule 6-2
Maintenance Replacement Parts 6-2

Maintenance Schedule

Maintenance Replacement Parts

Replacement parts identified below by name, part number, or specification can be obtained from your Driver Relationship Manager (DRM).

Part	GM Part Number	ACDelco Part Number
Windshield Wiper Blades		
Driver Side – 24 inches (60.0 cm)	22703508	—
Passenger Side – 19 inches (47.5 cm)	22703507	—
Rear – 15.2 inches (38.6 cm)	19120327	—

Section 7 Customer Assistance Information

Customer Assistance and Information 7-2
Customer Satisfaction Procedure 7-2
Customer Assistance Offices 7-2
Roadside Assistance Program 7-2
Reporting Safety Defects 7-4
Reporting Safety Defects to the United States Government 7-4
Vehicle Data Recording and Privacy 7-4
Event Data Recorders 7-5
OnStar® 7-6
Navigation System 7-6
Radio Frequency Identification (RFID) 7-6

Customer Assistance and Information

Customer Satisfaction Procedure

An OnStar® Advisor is available to answer your questions or concerns. To access an Advisor, press the blue OnStar button. To contact OnStar outside the vehicle, call 1-888-4-OnStar. If the OnStar Advisor is unable to help you, they will contact the Driver Relationship Manager (DRM).

Your DRM is also available 24 hours a day, 7 days a week, to answer your questions or concerns. The DRM contact information should have been provided to you prior to delivery of the Equinox Fuel Cell. This information should be kept available at all times.

These dealers are supporting the Equinox Fuel Cell Program:

Rydell Chevrolet
5601 Van Nuys Blvd.
Van Nuys, CA 91401

Arroway Chevrolet
140 Bedford
Katonah, NY 10536

Criswell Chevrolet
503 Quince Orchard Rd.
Gaithersburg, MD 20878

Customer Assistance Offices

Chevrolet encourages customers to call the toll-free number for assistance. However, if a customer wishes to write or e-mail Chevrolet, the letter should be addressed to:

Chevrolet Motor Division
Chevrolet Customer Assistance Center
P.O. Box 33170
Detroit, MI 48232-5170

www.Chevrolet.com
1-800-222-1020
1-800-833-2438 (For Text Telephone devices (TTYs))
Roadside Assistance: 1-800-CHEV-USA (243-8872)
Fax Number: 313-381-0022

Roadside Assistance Program

Call **1-800-CHEV-USA (1-800-243-8872); (Text telephone (TTY): 1-888-889-2438)**.

Service is available 24 hours a day, 365 days a year.

As the driver of this Chevrolet Equinox Fuel Cell, you are automatically enrolled in the Chevrolet Roadside Assistance program.

Who is Covered?

Roadside Assistance coverage is for the vehicle operator, regardless of ownership.

Services Provided

The following services are provided in the U.S. up to 5 years/100,000 miles, whichever occurs first.

- **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.
- **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.

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, State, 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. Chevrolet reserves the right to make any changes or discontinue the Roadside Assistance program at any time without notification.

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.

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 fuel cell propulsion system performance, to monitor the conditions for airbag deployment and deploy airbags in a crash, and to provide antilock braking to help the driver control the vehicle. These modules may store data to help technicians service your vehicle. Some modules 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.

Additional Data Recording Unique to This Fuel Cell Vehicle

Because the Equinox Fuel Cell Vehicle is a market test engineering development vehicle, it is designed to record more data during its operation than is the case with regular production vehicles. This additional data is intended to help GM understand the vehicle operating conditions and performance, including how the fuel cell system performs during all types of driving. Data is automatically collected by a computer-based data acquisition system whenever the vehicle is turned on. This data acquisition system can record approximately 1700 variables every 10 milliseconds from the fuel cell system and other vehicle system controllers. The data includes such things as vehicle speed, accelerator pedal position, power requested, brake pedal position, drive motor actual power level, and hydrogen fuel flow. These parameters are saved in a digital file format and are periodically transferred from the vehicle to a central computer where they may be used for analysis to support improvements in the design and operation of the fuel cell system and the other vehicle systems. Some of this data may also be combined with other information and included in reports to the U.S. Department of Energy and other federal or state agencies in connection with their support of fuel cell vehicle demonstrations and development.

Your use of this vehicle may similarly provide experience in dealing with hydrogen as a motor vehicle fuel, including information useful to the development of global codes and standards surrounding the use and storage of hydrogen as a fuel for regular production vehicles.

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 2-21* 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.

A

Accessories and Modifications 5-3
Adding Equipment to Your Airbag-Equipped
  Vehicle 1-69
Air Conditioning 3-17
Airbag
  Passenger Status Indicator 3-28
  Readiness Light 3-27
Airbag System 1-56
  What Will You See After an Airbag Inflates? 1-63
  When Should an Airbag Inflate? 1-61
  Where Are the Airbags? 1-59
Airbag Systems
  Adding Equipment to Your Airbag-Equipped
    Vehicle 1-69
  How Does an Airbag Restrain? 1-62
  Passenger Sensing System 1-64
  Servicing Your Airbag-Equipped Vehicle 1-68
  What Makes an Airbag Inflate? 1-62
Antilock Brake System (ABS) 4-4
Anti-lock Brake, System Warning Light 3-32
Appearance Care
  Aluminum or Chrome-Plated Wheels 5-51
  Care of Safety Belts 5-48
  Cleaning Exterior Lamps/Lenses 5-49
  Fabric/Carpet 5-46
  Finish Care 5-49
Appearance Care (cont.)
  Finish Damage 5-52
  Instrument Panel, Vinyl, and Other Plastic
    Surfaces 5-48
  Interior Cleaning 5-45
  Sheet Metal Damage 5-52
  Tires 5-52
  Washing Your Vehicle 5-49
  Weatherstrips 5-48
  Windshield and Wiper Blades 5-50
Audio System
  Audio Steering Wheel Controls 3-55
  Navigation/Radio System, see Navigation
    Manual 3-54
Automatic Climate Control System 3-17
Automatic Headlamp System 3-14

B

Battery 5-10
Brake
  Emergencies 4-5
Brakes 5-10
  Regenerative Braking 2-16
  System Warning Light 3-31
Braking 4-3
Braking in Emergencies 4-5

Bulb Replacement 5-11
Halogen Bulbs 5-11
Headlamp Aiming 5-11
Buying New Tires 5-27

C

California Perchlorate Materials Requirements 5-3
California Proposition 65 Warning 5-3
Capacities and Specifications 5-54
Carbon Monoxide 4-14, 4-23
Care of
Safety Belts 5-48
Cargo Lamp 3-16
Cargo Tie Downs 2-24
Chains, Tire 5-34
Charging System Light 3-31
Child Restraints
Child Restraint Systems 1-39
Infants and Young Children 1-35
Lower Anchors and Tethers for Children 1-44
Older Children 1-32
Securing a Child Restraint in a Rear Seat Position 1-50
Securing a Child Restraint in the Right Front Seat Position 1-52
Where to Put the Restraint 1-42
Cleaning
Aluminum or Chrome-Plated Wheels 5-51
Exterior Lamps/Lenses 5-49
Fabric/Carpet 5-46
Finish Care 5-49
Instrument Panel, Vinyl, and Other Plastic Surfaces 5-48
Interior 5-45
Tires 5-52
Washing Your Vehicle 5-49
Weatherstrips 5-48
Windshield and Wiper Blades 5-50
Climate Control System
Air Filter, Passenger Compartment 3-22
Automatic 3-17
Outlet Adjustment 3-22
Compressor Kit, Tire Sealant 5-36
Control of a Vehicle 4-3
Coolant
Temperature Gage 3-35
Temperature Warning Light 3-34
Coolant Temperature Gage 3-35
Cruise Control 3-10
Cruise Control Light 3-36
Cupholder(s) 2-24
Customer Assistance Information
Customer Assistance Offices 7-2
Customer Satisfaction Procedure 7-2

Customer Assistance Information (cont.)
Reporting Safety Defects to the United States Government 7-4
Roadside Assistance Program 7-2

D

Daytime Running Lamps 3-14
Defensive Driving 4-2
Delayed Locking 2-6
Diesel
Running Out of Fuel 2-19
Dome Lamp 3-15
Door
Ajar Light 3-37
Delayed Locking 2-6
Locks 2-6
Power Door Locks 2-6
Programmable Automatic Door Locks 2-7
Rear Door Security Locks 2-7
Drive Unit Operation 2-14
Driver
Seat Height Adjuster 1-3
Driver Information Center (DIC) 3-38
DIC Operation and Displays 3-39
DIC Vehicle Personalization 3-48
DIC Warnings and Messages 3-42
Driving
At Night 4-11
Defensive 4-2
Driving (cont.)
Drunken 4-2
Hill and Mountain Roads 4-13
In Rain and on Wet Roads 4-12
Rocking Your Vehicle to Get it Out 4-16
Winter 4-14

E

EDR 7-4
Electrical System
Fuses and Circuit Breakers 5-53
Instrument Panel Fuse Block 5-53
Windshield Wiper Fuses 5-53
Entry Lighting 3-15
Event Data Recorders 7-5
Extender, Safety Belt 1-31

F

Finish Damage 5-52
Flashers, Hazard Warning 3-6
Flash-to-Pass 3-8
Flat Tire 5-35
Fluid
Windshield Washer 5-9
Folding Rear Seat 1-10
Folding Seatback, Passenger 1-8

Fuel 5-3
Filling the Tank 5-5
Gage 3-37
Low Warning Light 3-38
Running Out of 2-19
Fuel Cell
Service System Soon Light 3-33
Fueling Mode 3-36
Fuses
Fuses and Circuit Breakers 5-53
Instrument Panel Fuse Block 5-53
Windshield Wiper 5-53

G

Gage
Coolant Temperature 3-35
Fuel 3-37
Power Indicator 3-25
Speedometer 3-25
Gasoline
Filling a Portable Gasoline Container 5-7
Gate Ajar Light 3-37
Glove Box 2-24

H

Hazard Warning Flashers 3-6
Head Restraints 1-7
Headlamp
Aiming 5-11
Headlamps 3-13
Bulb Replacement 5-11
Daytime Running Lamps 3-14
Flash-to-Pass 3-8
Halogen Bulbs 5-11
High/Low Beam Changer 3-8
On Reminder 3-14
Heated Seats 1-4
Heater 3-17
Height Adjuster, Driver Seat 1-3
High Voltage Devices and Wiring 5-53
Highbeam On Light 3-36
Hill and Mountain Roads 4-13
Hood Release 5-8
Horn 3-6
How to Wear Safety Belts Properly 1-17
Hydrogen
Safety 5-4
Sensors 5-4
Warning Light 3-30

I

Infants and Young Children, Restraints 1-35
Inflation - Tire Pressure 5-19
Inflator Kit, Tire 5-36
Instrument Panel
  Brightness 3-15
  Cluster 3-24
  Overview 3-4

J

Jump Starting 5-11

K

Keyless Entry System 2-3
Keys 2-2

L

Labeling, Tire Sidewall 5-14
Lamps
  Cargo 3-16
  Dome 3-15
  Map 3-16
Lap-Shoulder Belt 1-26
LATCH System
  Child Restraints 1-44
Liftgate
  Carbon Monoxide 2-8
Light
  Airbag Readiness 3-27
  Anti-lock Brake System (ABS) Warning 3-32
  Brake System Warning 3-31
  Charging System 3-31
  Coolant Temperature Warning 3-34
  Cruise Control 3-36
  Door Ajar 3-37
  Gate Ajar 3-37
  Highbeam On 3-36
  Hydrogen Warning 3-30
  Low Fuel Warning 3-38
  Passenger Airbag Status Indicator 3-28
  Reduced Power Indicator 3-34
  Safety Belt Reminders 3-26
  Service Fuel Cell System Soon 3-33
  TCS Warning Light 3-33
  Tire Pressure 3-35
  Traction Control System (TCS) Warning 3-33
  Vehicle Ready 3-36
Lighting
  Entry 3-15

Lights 3-13
Flash-to-Pass 3-8
High/Low Beam Changer 3-8
On Reminder 3-14
Loading Your Vehicle 4-17
Lockout Protection 2-7
Locks
Delayed Locking 2-6
Door 2-6
Lockout Protection 2-7
Power Door 2-6
Programmable Automatic Door Locks 2-7
Rear Door Security Locks 2-7
Loss of Control 4-10
Loss, Propulsion 2-14
Low Fuel Warning Light 3-38
Lumbar
Manual Controls 1-4

M

Maintenance Schedule
Maintenance Replacement Parts 6-2
Manual Lumbar Controls 1-4
Manual Reclining Seatbacks 1-5
Manual Seats 1-2
Manual, Using ii
Map Lamps 3-16
Message
DIC Warnings and Messages 3-42
Mirrors
Manual Rearview Mirror 2-19
Outside Convex Mirror 2-20
Outside Power Mirrors 2-20
Mode
Fueling 3-36

N

Navigation System, Privacy 7-6
Navigation/Radio System, see Navigation
Manual 3-54

O

Odometer 3-25
Odometer, Trip 3-25
Off-Road Recovery 4-9
Older Children, Restraints 1-32
OnStar, Privacy 7-6
OnStar® System, see OnStar® Manual 2-21
Orange Covered Wiring 5-53
Outlet Adjustment 3-22
Outlets
Accessory Power 3-16

Outside
Convex Mirror 2-20
Power Mirrors 2-20

P

Paint, Damage 5-52
Park Brake 2-16
Park (P)
Shifting Into 2-17
Shifting Out of 2-18
Passenger Airbag Status Indicator 3-28
Passenger Compartment Air Filter 3-22
Passenger Sensing System 1-64
Passing 4-10
Perchlorate Materials Requirements, California 5-3
Power
Door Locks 2-6
Indicator Gage 3-25
Reduced Indicator 3-34
Retained Accessory (RAP) 2-13
Seat 1-3
Windows 2-10
Privacy 7-4
Event Data Recorders 7-5
Navigation System 7-6
Privacy (cont.)
OnStar 7-6
Radio Frequency Identification 7-6
Programmable Automatic Door Locks 2-7
Propulsion, Loss 2-14

R

Radio Frequency Identification (RFID), Privacy 7-6
Radios
Navigation/Radio System, see Navigation Manual 3-54
Rear Door Security Locks 2-7
Rear Storage Area 2-24
Rear Windshield Washer/Wiper 3-10
Rearview Mirrors 2-19
Reclining Seatbacks, Manual 1-5
Reduced Power Indicator 3-34
Regenerative Braking 2-16
Releasing
Hood 5-8
Remote Keyless Entry (RKE) System 2-3
Remote Keyless Entry (RKE) System, Operation ... 2-4
Replacement Parts, Maintenance 6-2
Reporting Safety Defects
United States Government 7-4

Restraint System Check
Checking the Restraint Systems 1-70
Replacing Restraint System Parts After a Crash 1-71
Retained Accessory Power (RAP) 2-13
Roadside
Assistance Program 7-2
Rocking Your Vehicle to Get it Out 4-16
Running Out of Fuel 2-19

S

Safety Belt
Reminder Light 3-26
Safety Belts
Care of 5-48
How to Wear Safety Belts Properly 1-17
Lap-Shoulder Belt 1-26
Safety Belt Extender 1-31
Safety Belt Use During Pregnancy 1-31
Safety Belts Are for Everyone 1-12
Safety Warnings and Symbols iii
Seatback, Folding Passenger 1-8
Seats
Driver Seat Height Adjuster 1-3
Head Restraints 1-7
Heated Seats 1-4
Manual Lumbar 1-4
Seats (cont.)
Manual Reclining Seatbacks 1-5
Passenger Folding Seatback 1-8
Power Seat 1-3
Split Folding Rear Seat 1-10
Securing a Child Restraint
Rear Seat Position 1-50
Right Front Seat Position 1-52
Service 5-3
Accessories and Modifications 5-3
California Perchlorate Materials Requirements ... 5-3
California Proposition 65 Warning 5-3
Fuel Cell System Soon 3-33
Servicing Your Airbag-Equipped Vehicle 1-68
Sheet Metal Damage 5-52
Shifting Into Park (P) 2-17
Shifting Out of Park (P) 2-18
Shutdown, Vehicle 2-18
Signals, Turn and Lane-Change 3-7
Specifications, Capacities 5-54
Speedometer 3-25
Split Folding Rear Seat 1-10
Stabilitrak® System 4-6
Start Switch Positions 2-12
Starting Vehicle 2-13
Steering 4-7
Steering Wheel Controls, Audio 3-55
Steering Wheel, Tilt Wheel 3-6

Storage Areas
Cupholder(s) 2-24
Glove Box 2-24
Rear Storage Area 2-24
Stuck in Sand, Mud, Ice, or Snow 4-16
Sun Visors 2-11

T

TCS Warning Light 3-33
Tilt Wheel 3-6
Tire
Pressure Light 3-35
Tires 5-13
Aluminum or Chrome-Plated Wheels,
Cleaning 5-51
Buying New Tires 5-27
Chains 5-34
Cleaning 5-52
Different Size 5-29
If a Tire Goes Flat 5-35
Inflation - Tire Pressure 5-19
Inspection and Rotation 5-25
Pressure Monitor Operation 5-22
Pressure Monitor System 5-20
Tire Sealant and Compressor Kit 5-36
Tire Sidewall Labeling 5-14
Tire Terminology and Definitions 5-16
Uniform Tire Quality Grading 5-30
Tires (cont.)
Wheel Alignment and Tire Balance 5-31
Wheel Replacement 5-32
When It Is Time for New Tires 5-26
Towing
Towing a Trailer 4-23
Your Vehicle 4-22
Traction
Control System (TCS) 4-5
Control System Warning Light 3-33
Stabilitrak® System 4-6
Transmission Operation, Automatic 2-14
Trip Odometer 3-25
Turn and Lane-Change Signals 3-7
Turn Signal/Multifunction Lever 3-7

U

Uniform Tire Quality Grading 5-30
Using this Manual ii

V

Vehicle
Control 4-3
Damage Warnings iv
Hydrogen Sensors 5-4
Loading 4-17

Vehicle (cont.)
Ready Light 3-36
Shutdown 2-18
Starting 2-13
Symbols iv
Vehicle Data Recording and Privacy 7-4
Vehicle Identification
Number (VIN) 5-52
Vehicle Personalization
DIC 3-48
Ventilation Adjustment 3-22
Visors 2-11
Voltage Devices, High and Wiring 5-53

W

Warning Lights, Gages and Indicators 3-23
Warnings
DIC Warnings and Messages 3-42
Hazard Warning Flashers 3-6
Warnings (cont.)
Safety and Symbols iii
Vehicle Damage iv
Wheels
Alignment and Tire Balance 5-31
Different Size 5-29
Replacement 5-32
Where to Put the Restraint 1-42
Windows 2-9
Power 2-10
Windshield
Washer 3-9
Washer Fluid 5-9
Wiper Blade Replacement 5-12
Wiper Blades, Cleaning 5-50
Wiper Fuses 5-53
Wipers 3-8
Windshield, Rear Washer/Wiper 3-10
Winter Driving 4-14
Wiring, High Voltage Devices 5-53