

1000  
1998

**PRIZM**



GENUINE CHEVROLET



**Chevrolet  
backs every  
1998 Prizm  
under warranty  
with the  
following  
services**

**Bumper-to-Bumper  
3-years/36,000 miles  
(60 000 km)  
Limited Warranty**

**Courtesy  
Transportation**

**24-hour  
Roadside Assistance  
1-800-CHEV-USA  
(In Canada, call 1-800-268-6800)  
that provides in an emergency:**

- Free lockout assistance
- Free dead-battery assistance
- Free out-of-fuel assistance
- Free flat-tire change

**THE INFORMATION ON THE NEXT FEW PAGES IS TO HELP YOU FIND THE MOST COMMONLY REFERRED TO TOPICS QUICKLY. FOR INFORMATION NOT INCLUDED HERE, PLEASE USE THE TABLE OF CONTENTS OR THE INDEX IN THE MANUAL.**

## Safety

Section 1

Wearing a safety belt correctly is one of the most important things you and your passengers can do. This section contains very important information about safety belt usage, air bags and child restraints.

## Adjusting the Seat

Pages 1-2  
to 1-4

One of the first things you'll probably want to do when you get in your new vehicle is adjust the seats.

## Maintaining the Temperature

Pages 3-2  
to 3-5

Read through these pages to learn more about how to use the heating, cooling, defogging and defrosting features in your vehicle.

## Setting the Clock

Page 3-6

To set the clock, press and hold **RECALL (TIME SET)**. At the same time press and hold the **TUNE left arrow (H)** to set the hour or press and hold the **TUNE right arrow (M)** to set the minutes.

## Features and Controls

Sections  
2 & 3

*Included in this section is a picture of the overall instrument panel (page 2-40). The location of the features and controls you will use are noted here. Refer to the following pages for information about:*

- Rear Door Security Locks
- Turn Signal/Multifunction Lever
- Changing the High /Low Beams
- Windshield Wipers and Washer
- Cruise Control
- Turning on Headlamps and Other Lamps
- Warning Lights, Gages, and Indicators

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Page 2-45

## Audio

Section 3

- Radios Available
  - AM-FM Stereo
  - AM-FM Stereo with Cassette & Auto Tone Control
  - AM-FM Stereo with CD & Auto Tone Control

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Page 3-8

Page 3-11

**Problems That  
May Occur  
While  
Driving**

**Section 5**

**Special Features  
That May Be  
On Your  
Vehicle**

**Section 2**

*Although we hope you'll never run into trouble on the road, refer to the following pages for help with some of the most common problems that may occur.*

- How to turn on your hazard warning flashers **Page 5-2**
- How to jump start your vehicle **Page 5-3**
- How your vehicle should be towed **Page 5-8**
- What to do when your engine overheats **Page 5-14**
- How to change a flat tire **Page 5-23**

- Power Door Locks **Page 2-5**
- Keyless Entry System **Page 2-6**
- Power Windows **Page 2-25**
- Tilt Column **Page 2-26**
- Sunroof **Page 2-39**



# The 1998 Chevrolet Prizm Owner's Manual

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## **1-1 Seats and Restraint Systems**

This section tells you how to use your seats and safety belts properly. It also explains the air bag system.

## **2-1 Features and Controls**

This section explains how to start and operate your vehicle.

## **3-1 Comfort Controls and Audio Systems**

This section tells you how to adjust the ventilation and comfort controls and how to operate your audio system.

## **4-1 Your Driving and the Road**

Here you'll find helpful information and tips about the road and how to drive under different conditions.

## **5-1 Problems on the Road**

This section tells what to do if you have a problem while driving, such as a flat tire or overheated engine, etc.

## **6-1 Service and Appearance Care**

Here the manual tells you how to keep your vehicle running properly and looking good.

## **7-1 Maintenance Schedule**

This section tells you when to perform vehicle maintenance and what fluids and lubricants to use.

## **8-1 Customer Assistance Information**

This section tells you how to contact Chevrolet for assistance and how to get service and owner publications. It also gives you information on "Reporting Safety Defects" on page 8-10.

## **9-1 Index**

Here's an alphabetical listing of almost every subject in this manual. You can use it to quickly find something you want to read.



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This manual includes the latest information at the time it was printed. We reserve the right to make changes in the product after that time without further notice. For vehicles first sold in Canada, substitute the name "General Motors of Canada Limited" for Chevrolet Motor Division whenever it appears in this manual.

Please keep this manual in your vehicle, so it will be there if you ever need it when you're on the road. If you sell the vehicle, please leave this manual in it so the new owner can use it.



We support voluntary technician certification.



# The Heritage of Chevrolet



*The dynamic William C. "Billy" Durant shifted gears from making carriages to making cars, forming half the team that gave birth to Chevrolet.*

**W**elcome to the largest automotive family in the world -- the family of Chevrolet owners. You have selected a vehicle designed, engineered and crafted by teamwork, a

vehicle backed by a proud history of performance and value. Since the first "Classic Six" rolled off the line in 1912, more than 110 million Chevrolet cars and trucks have

worn the Chevrolet marque. That kind of reception from auto owners is unmatched by any other car manufacturer in the world.

*Louis Chevrolet, the other half of the team, at the wheel of his experimental "Classic Six," which entered production in 1912. That year 2999 vehicles were produced.*



The Chevrolet blend of value and performance has become an American tradition -- whether bred for the racetrack like the legendary Corvette and Camaro, or

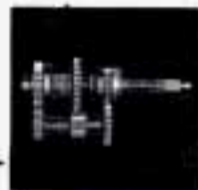
created for the pleasure of the open road.

Every decade, Chevrolet has reinforced its heritage of affordable performance with quality and value crafted

into each vehicle. It's not surprising that for 80 years "Genuine Chevrolet" has been America's automobile.

We're proud to continue that heritage in your Chevrolet,

*In 1932 Chevrolet introduced the Synchro-Mesh transmission and offered a host of accessories -- including such niceties as a clock!*



*The legacy of America's favorite sportscar began in 1953, when 319 hand-assembled white Corvettes*



*launched the first use of a fiberglass body in a production car.*



*The 1957 Chevy started a romance with the American public -- and was powered by an available fuel-injected V8.*

and we are pledged to  
make ownership of your  
Chevrolet an enjoyable  
and rewarding experience.



*Your new Chevrolet continues a tradition of quality and value.*

*60's automotive excitement  
included Chevrolet landmarks  
like the Corvette Sting Ray,  
the sporty Camaro, and  
powerplants like the  
legendary 327 V8.*



## How to Use this Manual

Many people read their owner's manual from beginning to end when they first receive their new vehicle. If you do this, it will help you learn about the features and controls for your vehicle. In this manual, you'll find that pictures and words work together to explain things quickly.

## Index

A good place to look for what you need is the Index in back of the manual. It's an alphabetical list of what's in the manual, and the page number where you'll find it.

## Safety Warnings and Symbols

You will find a number of safety cautions in this book. We use a box and the word CAUTION to tell you about things that could hurt you if you were to ignore the warning.



**CAUTION:**

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

In the caution area, we tell you what the hazard is. Then we tell you what to do to help avoid or reduce the hazard. Please read these cautions. If you don't, you or others could be hurt.



You will also find a circle with a slash through it in this book. This safety symbol means "Don't," "Don't do this" or "Don't let this happen."

## Vehicle Damage Warnings

Also, in this book you will find these notices:

### **NOTICE:**

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

In the notice area, we tell you about something that can damage your vehicle. Many times, this damage would not be covered by your warranty, and it could be costly. But the notice will tell you 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.

You'll also see warning labels on your vehicle. They use the same words, CAUTION or NOTICE.

## Vehicle Symbols

These are some of the symbols you may find on your vehicle.

For example, these symbols are used on an original battery:

CAUTION  
POSSIBLE  
INJURY



PROTECT  
EYES BY  
SHIELDING



CAUSTIC  
BATTERY  
ACID COULD  
CAUSE  
BURNS



AVOID  
SPARKS OR  
FLAMES



SPARK OR  
FLAME  
COULD  
EXPLODE  
BATTERY



These symbols are important for you and your passengers whenever your vehicle is driven:

DOOR LOCK  
UNLOCK



FASTEN  
SEAT  
BELTS



POWER  
WINDOW



AIR BAG



These symbols have to do with your lamps:

MASTER  
LIGHTING  
SWITCH



TURN  
SIGNALS



PARKING  
LAMPS



HAZARD  
WARNING  
FLASHER



DAYTIME  
RUNNING  
LAMPS



FOG LAMPS



These symbols are on some of your controls:

WINDSHIELD  
WIPER



WINDSHIELD  
WASHER



WINDSHIELD  
DEFROSTER



REAR  
WINDOW  
DEFOGGER



VENTILATING  
FAN

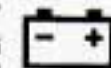


These symbols are used on warning and indicator lights:

ENGINE  
COOLANT  
TEMP



BATTERY  
CHARGING  
SYSTEM



BRAKE



COOLANT



ENGINE OIL  
PRESSURE



ANTI-LOCK  
BRAKES



Here are some other symbols you may see:

FUSE



LIGHTER



HORN



SPEAKER



FUEL





## Section 1 Seats and Restraint Systems

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Here you'll find information about the seats in your Chevrolet and how to use your safety belts properly. You can also learn about some things you should *not* do with air bags and safety belts.

1-2	Seats and Seat Controls	1-30	Rear Seat Passengers
1-7	Safety Belts: They're for Everyone	1-33	Children
1-12	Here Are Questions Many People Ask About Safety Belts -- and the Answers	1-36	Built-in Child Restraint (Option)
1-13	How to Wear Safety Belts Properly	1-48	Child Restraints
1-13	Driver Position	1-58	Larger Children
1-20	Safety Belt Use During Pregnancy	1-61	Safety Belt Extender
1-21	Right Front Passenger Position	1-61	Checking Your Restraint Systems
1-21	Air Bag Systems	1-62	Replacing Restraint System Parts After a Crash

## Seats and Seat Controls

This part tells you about the seats -- how to adjust them, and also about reclining front seatbacks, head restraints and rear folding seatbacks.

### Manual Front 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 don't want to. Adjust the driver's seat only when the vehicle is not moving.**



Lift the lever under the front seat to unlock it. Slide the seat to where you want it. Release the lever and try to move the seat with your body, to make sure the seat is locked into place.

Don't put anything under the front seats. Items under the seats could keep the seats from locking into place properly.



## Reclining Front Seatbacks



To adjust the seatback, lift the lever on the outer side of the seat. Release the lever to lock the seatback where you want it. Push on the seat to make sure it's locked into position. Pull up on the lever, and the seat will go to its original upright position.



But don't have a seatback reclined if your vehicle is moving.

### **CAUTION:**

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

**CAUTION: (Continued)**

### **CAUTION: (Continued)**

**The shoulder belt can't do its job because it won't 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 can't 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.**

## **Head Restraints**

Slide the head restraint up or down so that the top of the restraint is closest to the top of your ears. This position reduces the chance of a neck injury in a crash.

Pull up to raise the restraint. To lower it, push the release button and push down.

Make sure the head restraint is locked in place after you adjust it.

## **Rear Seats**



### **CAUTION:**

**If a head restraint is not installed on the seatback or stored in the vehicle properly, it could be thrown about the vehicle in a crash or sudden maneuver. People in the vehicle could be injured. Remove the head restraints only when you need to fold the seat, and be sure that the head restraints are stored securely in the trunk. When the seat is returned to the passenger position, be sure the head restraints are installed properly.**

### Rear Head Restraint Removal

To remove the rear head restraints:

1. Press the release button located under the left side of the head restraint.
2. Lift the head restraint upward.
3. Secure the head restraints in the trunk using the tie-down straps located on each side of the trunk floor.

To reinstall the rear head restraints:

1. Remove the head restraints from the trunk.
2. Press and hold the release button on the seat back while inserting the head restraint.
3. Push the head restraint down. After releasing the button, pull on the head restraint to make sure it is secure.

### Rear Folding Seatback (If Equipped)

You can fold either side of the seatback down in your vehicle for more cargo space. On vehicles with a built-in child restraint system, only the driver's side rear passenger seatback can be folded down. Make sure the front seat isn't reclined. If it is, the rear seatback won't fold down all the way.

 **CAUTION:**

**A safety belt that is twisted or not properly attached won't provide the protection needed in a crash. A person wearing a twisted or not properly attached belt could be seriously injured. After raising the rear seatback, always check to be sure that the safety belt is not twisted and is properly attached.**

To fold either seatback down:

1. Remove the head restraints. See "Rear Head Restraint Removal" earlier in this section.



2. Remove the rear center lap-shoulder belt latch by using a key to press the release button.



3. Pull the release on the driver's side in the trunk. (Repeat the procedure for the other side if you do not have a built-in child restraint.)



4. Fold the seatback down.

To raise the seatback:

1. Pull the seatback up and push it back to lock it into place. Make sure the safety belts are not twisted or caught in the seatback.
2. Push and pull the top of the seatback to be sure it is locked into position.



3. Reconnect the center seat belt.

## Safety Belts: They're 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.

And it explains the air bag system.

### CAUTION:

**Don't let anyone ride where he or she can't wear a safety belt properly. If you are in a crash and you're not wearing a safety belt, your injuries can be much worse. You can hit things inside the vehicle or be ejected from it. You can 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 passengers' belts are fastened 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 a light that comes on as a reminder to buckle up. (See “Safety Belt Reminder Light” in the Index.)

In most states and Canadian provinces, the law says to wear safety belts. Here's why: *They work.*

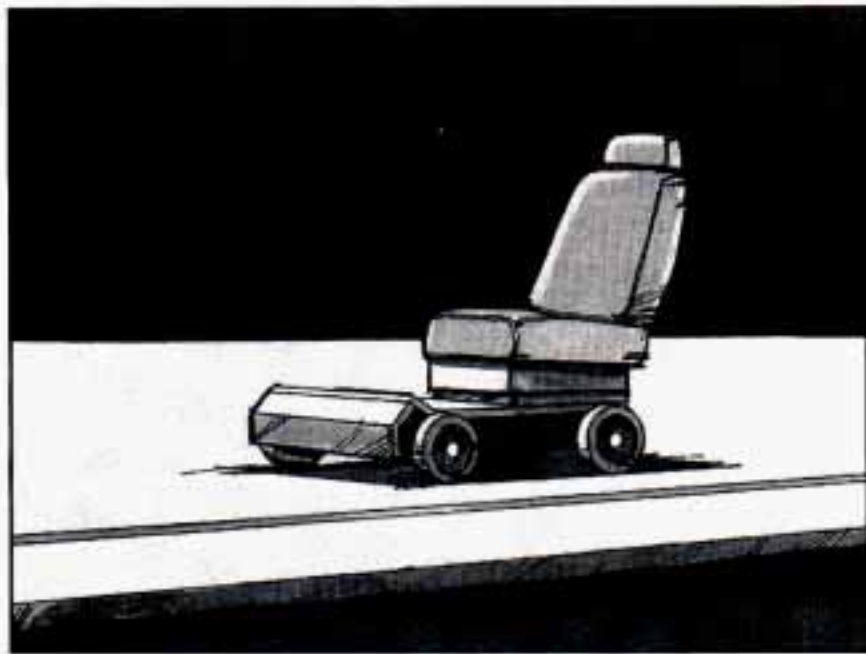
You never know if you'll be in a crash. If you do have a crash, you don't know if it will be a bad one.

A few crashes are mild, and some crashes can be so serious that even buckled up a person wouldn't 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 30 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's just a seat on wheels.



Put someone on it.



Get it up to speed. Then stop the vehicle. The rider doesn't stop.

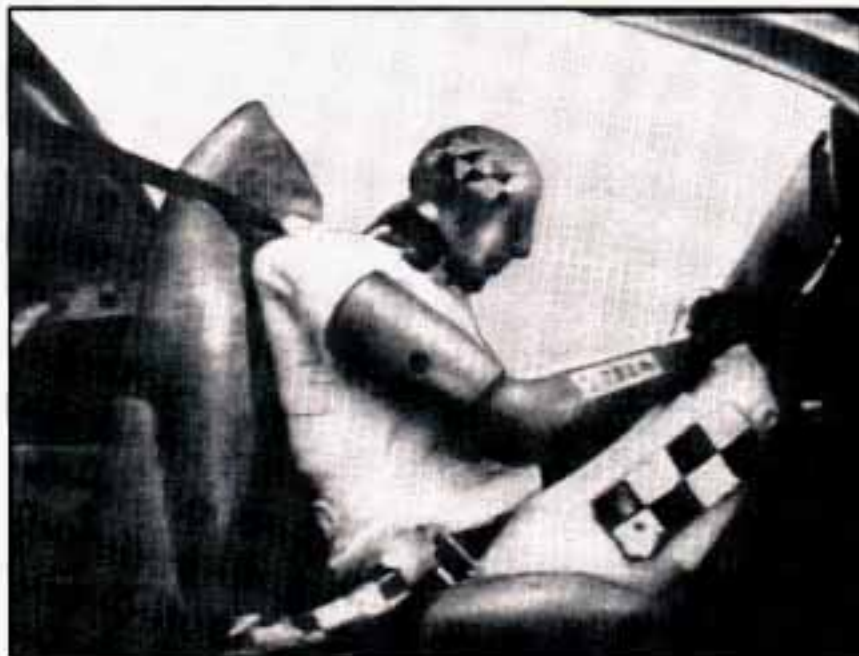


The person keeps going until stopped by something. In a real vehicle, it could be the windshield ...





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's why safety belts make such good sense.

## Here Are Questions Many People Ask About Safety Belts -- and the Answers

**Q:** Won't I be trapped in the vehicle after an accident if I'm wearing a safety belt?

**A:** You *could* be -- whether you're wearing a safety belt or not. But you can unbuckle a safety belt, even if you're upside down. And your chance of being conscious during and after an accident, so you *can* unbuckle and get out, is *much* greater if you are belted.

**Q:** If my vehicle has air bags, why should I have to wear safety belts?

**A:** Air bags are in many vehicles today and will be in most of them in the future. But they are supplemental systems only; so they work *with* safety belts -- not instead of them. Every air bag system ever offered for sale has required the use of safety belts. Even if you're in a vehicle that has air bags, you still have to buckle up to get the most protection. That's true not only in frontal collisions, but especially in side and other collisions.

**Q:** If I'm 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're in an accident -- even one that isn't your fault -- you and your passengers can be hurt. Being a good driver doesn't 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

## Adults

This part 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 the part of this manual called "Children." Follow those rules for everyone's protection.

First, you'll want to know which restraint systems your vehicle has.

We'll start with the driver position.

## Driver Position

This part describes the driver's restraint system.

### Lap-Shoulder Belt

The driver has a lap-shoulder belt. Here's how to wear it properly.

1. Close and lock the door.
2. Adjust the seat (to see how, see "Seats" in the Index) so you can sit up straight.



3. Pick up the latch plate and pull the belt across you. Don't let it get twisted.

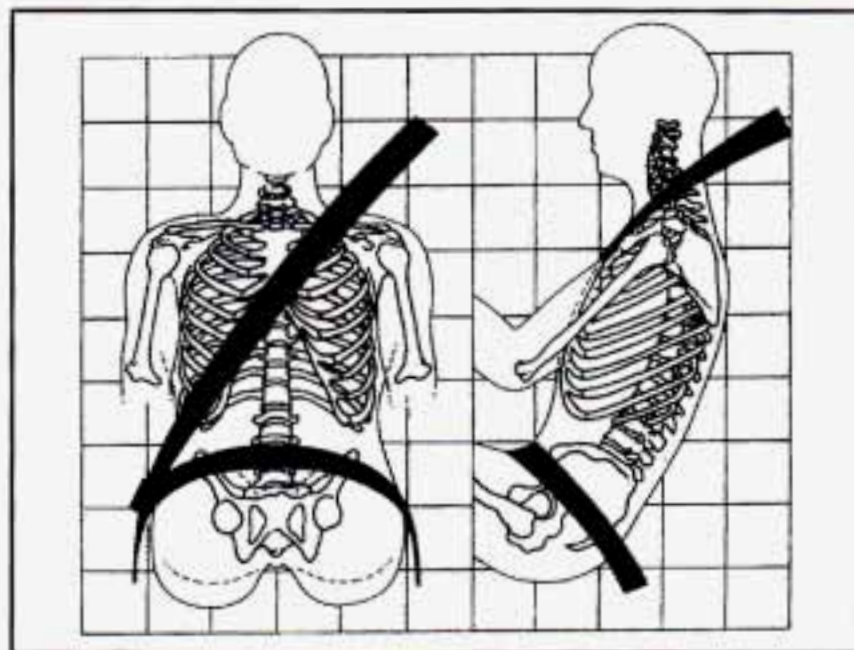
The shoulder belt may lock if you pull the belt across you very quickly. If this happens, let the belt go back slightly to unlock it. Then pull the belt across you more slowly.

4. 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 isn't long enough, see "Safety Belt Extender" at the end of this section.

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



5. To make the lap part tight, pull down on the buckle end of the belt as you pull up on the shoulder belt.



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'd be less likely to slide under the lap belt. If you slid under it, the belt would apply force at 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 safety belt locks if there's a sudden stop or crash, or if you pull the belt very quickly out of the retractor.

## Shoulder Belt Height Adjuster

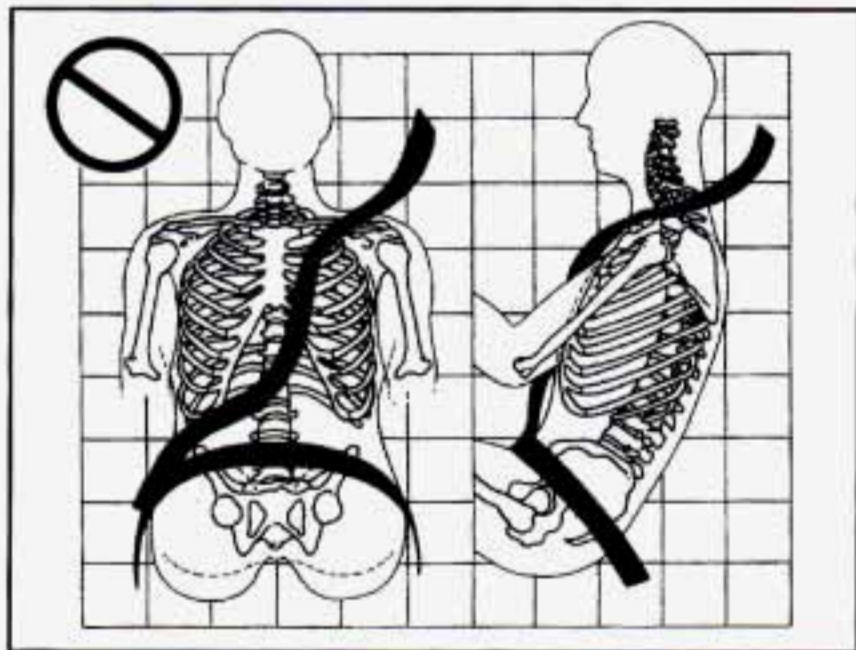
Before you begin to drive, move the shoulder belt adjuster to the height that is right for you.



To move it down, squeeze the release button and move the adjuster to the desired position. You can move the adjuster up just by pushing up on the shoulder belt guide. After you move the adjuster to where you want it, try to move it down without squeezing the release button to make sure it has locked into position.

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.

**Q:** What's wrong with this?

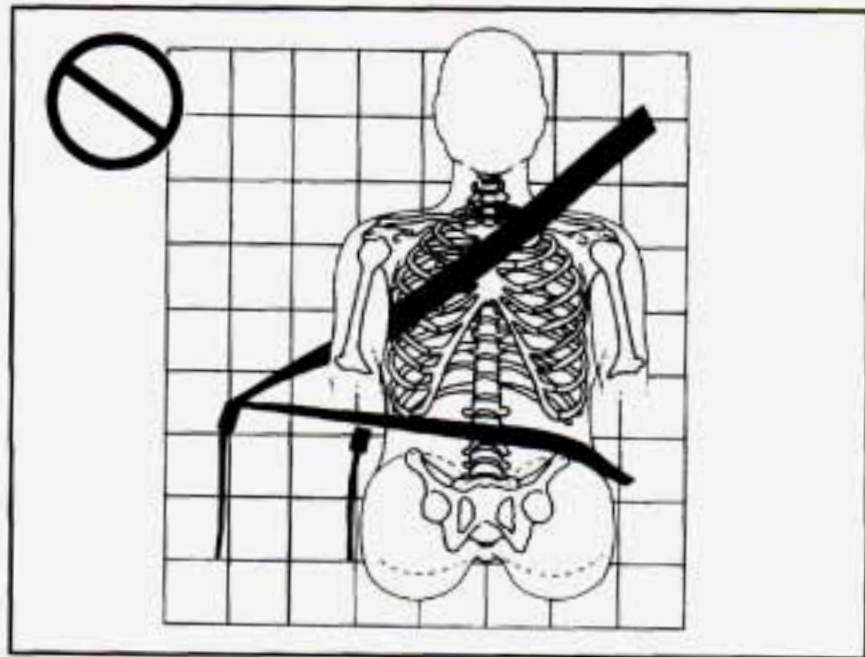


**⚠ CAUTION:**

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 against your body.

**A:** The shoulder belt is too loose. It won't give nearly as much protection this way.

**Q:** What's wrong with this?

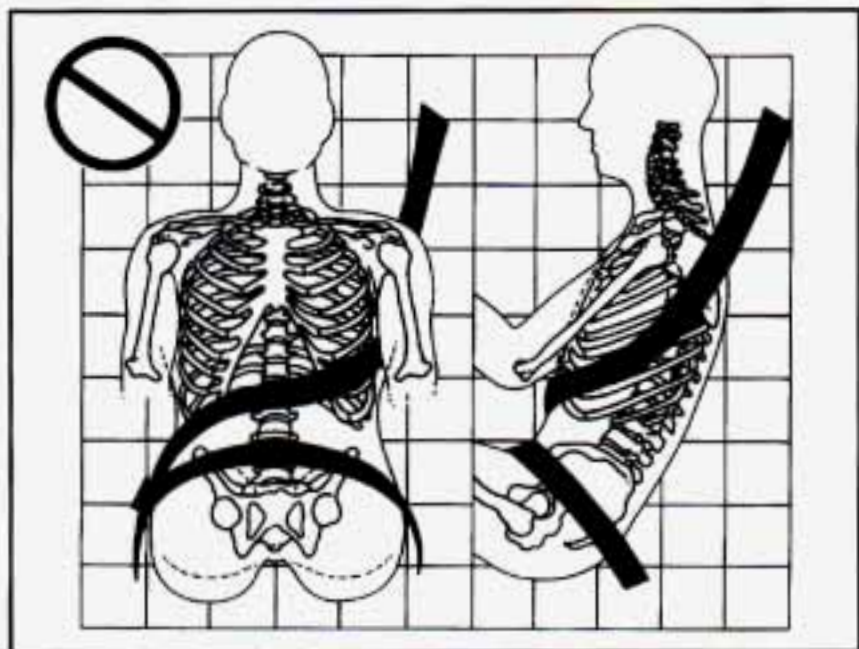


**A:** The belt is buckled in the wrong place.

**⚠ 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 at the pelvic bones. This could cause serious internal injuries. Always buckle your belt into the buckle nearest you.

**Q:** What's wrong with this?



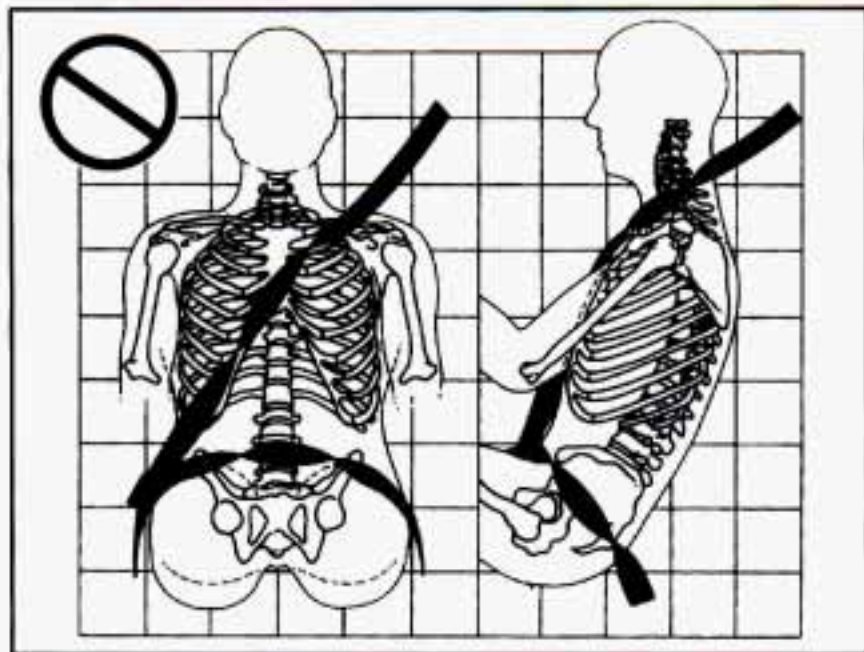
**A:** The shoulder belt is worn under the arm. It should be worn over the shoulder at all times.

**⚠ 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 aren't as strong as shoulder bones. You could also severely injure internal organs like your liver or spleen.



**Q:** What's 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 wouldn't have the full width of the belt to spread impact forces. If a belt is twisted, make it straight so it can work properly, or ask your dealer to fix it.



To unlatch the belt, just push the button on the buckle. The belt should go back out of the way.

Before you close the 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.

## 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 don't 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's more likely that the fetus won't be hurt in a crash. For pregnant women, as for anyone, the key to making safety belts effective is wearing them properly.

## Right Front Passenger Position

To learn how to wear the right front passenger's safety belt properly, see "Driver Position" earlier in this section.

The right front passenger's safety belt works the same way as the driver's safety belt -- except for one thing. If you ever pull the shoulder portion of the belt out all the way, you will engage the child restraint locking feature. If this happens, just let the belt go back all the way and start again.

## Air Bag Systems

This part explains the frontal and side impact air bag systems.

Your vehicle has air bags -- a "Next Generation" reduced-force frontal air bag for the driver and another "Next Generation" reduced-force frontal air bag for the right front passenger. Reduced-force frontal air bags are

designed to help reduce the risk of injury from the force of an inflating frontal air bag. But even these air bags must inflate very quickly if they are to do their job and comply with federal regulations. Your vehicle may also have side impact air bags -- a side impact air bag for the driver and another side impact air bag for the right front passenger.

If your vehicle has side impact air bags, it will say SRS - SIDE AIRBAG on a label on the side of the driver's and right front passenger's seat closest to the door.



Here are the most important things to know about the air bag systems:

 **CAUTION:**

**You can be severely injured or killed in a crash if you aren't wearing your safety belt -- even if you have air bags. Wearing your safety belt during a crash helps reduce your chance of hitting things inside the vehicle or being ejected from it. Air bags are "supplemental restraints" to the safety belts. All air bags -- even reduced-force air bags -- are designed to work with safety belts but don't replace them.**

**CAUTION: (Continued)**

**CAUTION: (Continued)**

**Reduced-force frontal air bags for the driver and right front passenger are designed to work only in moderate to severe crashes where the front of your vehicle hits something. They aren't designed to inflate at all in rollover, rear, side or low-speed frontal crashes. And, for unrestrained occupants, reduced-force frontal air bags may provide less protection in frontal crashes than more forceful air bags have provided in the past. The side impact air bags for the driver and right front passenger are designed to inflate only in moderate to severe crashes where something hits the side of your vehicle. They aren't designed to inflate in frontal, in rollover or in rear crashes. Everyone in your vehicle should wear a safety belt properly -- whether or not there's an air bag for that person.**

 **CAUTION:**

Both frontal and side impact air bags inflate with great force, faster than the blink of an eye. If you're too close to an inflating air bag, it could seriously injure you. This is true even with reduced-force frontal air bags. Safety belts help keep you in position for air bag inflation before and during a crash. Always wear your safety belt, even with reduced-force frontal air bags. The driver should sit as far back as possible while still maintaining control of the vehicle. Front occupants should not lean on or sleep against the door.

 **CAUTION:**

Children who are up against, or very close to, an air bag when it inflates can be seriously injured or killed. This is true even though your vehicle has reduced-force frontal air bags. Air bags plus

**CAUTION: (Continued)**

**CAUTION: (Continued)**

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 air bag 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 the part of this manual called "Children" and see the caution labels on the sunvisors and the right front passenger's safety belt.

**AIR  
BAG**

There is an air bag readiness light on the instrument panel, which shows AIR BAG.

The system checks the air bag electrical system for malfunctions. The lights tell you if there is an electrical problem. See "Air Bag Readiness Light" in the Index for more information.

## How the Air Bag Systems Work

### Where are the air bags?

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



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



The driver's side impact air bag is in the side of the driver's seatback closest to the door.

The right front passenger's side impact air bag is in the side of the passenger's seatback closest to the door.



**⚠ CAUTION:**

If something is between an occupant and an air bag, the bag might not inflate properly or it might force the object into that person. The path of an inflating air bag must be kept clear. Don't put anything between an occupant and an air bag, and don't attach or put anything on the steering wheel hub or on or near any other air bag covering and don't let seat covers block the inflation path of a side impact air bag.

## **When should an air bag inflate?**

The driver's and right front passenger's frontal air bags are designed to inflate in moderate to severe frontal or near-frontal crashes. The frontal air bags are designed to inflate only if the impact speed is above the system's designed "threshold level." If your vehicle goes straight into a wall that doesn't move or deform, the threshold level is about 11 to 15 mph (18 to 24 km/h). The threshold level can vary, however, with specific vehicle design, so that it can be somewhat above or below this range. If your vehicle strikes something that will move or deform, such as a parked car, the threshold level will be higher. The driver's and right front passenger's frontal air bags are not designed to inflate in rollovers, side impacts, or rear impacts, because inflation would not help the occupant.

The driver's and right front passenger's side impact air bags are designed to inflate in moderate to severe side crashes involving a front door. A side impact air bag will inflate if the crash severity is above the system's designed "threshold level." The threshold level can vary with specific vehicle design. Side impact air bags are not designed to inflate in frontal or near-frontal impacts, rollovers or rear impacts, because inflation would not help the occupant. A side impact air bag will only deploy on the side of the vehicle that is struck.

It is possible that, in a crash involving the front of your vehicle, only one of the two frontal air bags in your vehicle will deploy. This is rare, but it can happen in a crash just severe enough to make a frontal air bag inflate.

In any particular crash, no one can say whether an air bag should have inflated simply because of the damage to a vehicle or because of what the repair costs were. For frontal air bags, inflation is determined by the angle of the impact and how quickly the vehicle slows down in frontal and near-frontal impacts. For side impact air bags, inflation is determined by the location of the impact and how quickly the side of the vehicle deforms.

## **What makes an air bag inflate?**

In an impact of sufficient severity, the air bag sensing system detects that the vehicle is in a crash. For both frontal and side impact air bags, the sensing system triggers a release of gas from the inflator, which inflates the air bag. The inflator, air bag and related hardware are all part of the air bag modules inside the steering wheel, instrument panel and the side of the front seatbacks closest to the door.



## How does an air bag 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. The air bag supplements the protection provided by safety belts. Air bags distribute the force of the impact more evenly over the occupant's upper body, stopping the occupant more gradually. But the frontal air bags would not help you in many types of collisions, including rollovers, rear impacts, and side impacts, primarily because an occupant's motion is not toward the air bag. Side impact air bags would not help you in many types of collisions, including frontal or near frontal collisions, rollovers, and rear impacts, primarily because an occupant's motion is not toward those air bags. Air bags should never be regarded as anything more than a supplement to safety belts, and then only in moderate to severe frontal or near-frontal collisions for the driver's and right front passenger's frontal air bags, and only in moderate to severe side collisions for the driver's and right front passenger's side impact air bags.

## What will you see after an air bag inflates?

After an air bag inflates, it quickly deflates, so quickly that some people may not even realize the air bag

inflated. Some components of the air bag module -- the steering wheel hub for the driver's air bag, the instrument panel for the right front passenger's bag, the side of the seatback closest to the door for the driver and right front passenger's side impact air bags -- will be hot for a short time. The parts of the bag that come into contact with you may be warm, but not too hot to touch. There will be some smoke and dust coming from the vents in the deflated air bags. Air bag inflation doesn't prevent the driver from seeing or being able to steer the vehicle, nor does it stop people from leaving the vehicle.

### CAUTION:

**When an air bag inflates, there is 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 can't get out of the vehicle after an air bag inflates, then get fresh air by opening a window or a door.**

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

- Air bags are designed to inflate only once. After an air bag inflates, you'll need some new parts for your air bag system. If you don't get them, the air bag system won't be there to help protect you in another crash. A new system will include air bag modules and possibly other parts. The service manual for your vehicle covers the need to replace other parts.
- Your vehicle is equipped with a diagnostic module, which records information about the frontal air bag system. The module records information about the readiness of the system, when the sensors are activated and driver's safety belt usage at deployment.
- Let only qualified technicians work on your air bag systems. Improper service can mean that an air bag system won't work properly. See your dealer for service.

## **NOTICE:**

**If you damage the covering for the driver's or the right front passenger's air bag, or the air bag covering on the driver's and right front passenger's seatback, the bag may not work properly. You may have to replace the air bag module in the steering wheel, both the air bag module and the instrument panel for the right front passenger's air bag, or both the air bag module and seatback for the driver's and right front passenger's side impact air bag. Do not open or break the air bag coverings.**

If your vehicle ever gets into a lot of water -- such as water up to the carpeting or higher -- or if water enters your vehicle and soaks the carpet, the air bag controller can be soaked and ruined. If this ever happens, and then you start your vehicle, the damage could make the frontal and side impact air bags inflate and safety belt pretensioners activate, even if there's no crash. You would have to replace the air bags, all the sensors and related parts, parts of the safety belt system and parts of the driver and right front passenger's seatbacks. If your vehicle is ever in a flood, or if it's exposed to water that soaks the carpet, you can avoid needless repair costs by turning off the vehicle immediately. Don't let anyone start the vehicle, even to tow it, unless the battery cables are first disconnected.

### **Servicing Your Air Bag-Equipped Vehicle**

Air bags affect how your vehicle should be serviced. There are parts of the air bag systems in several places around your vehicle. Your dealer and the Prizm Service Manual have information about servicing your vehicle and the air bag systems. To purchase a service manual, see "Service and Owner Publications" in the Index.



### **CAUTION:**

**For up to 90 seconds after the ignition key is turned off and the battery disconnected, an air bag can still inflate during improper service. You can be injured if you are close to an air bag when it inflates. Avoid wires wrapped with yellow tape or yellow connectors. They are probably part of the air bag system. Be sure to follow proper service procedures, and make sure the person performing work for you is qualified to do so.**

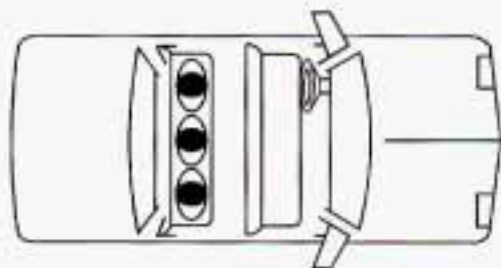
The air bag systems should be inspected by a qualified technician 10 years from the manufacture date on the Certification label. After 10 years from the manufacture date, have the systems inspected every 24 months. (The Certification label is located at the rear edge of the driver's door.)

## Rear Seat Passengers

It's very important for rear seat passengers to buckle up! Accident statistics show that unbelted people in the rear seat are hurt more often in crashes than those who are wearing safety belts.

Rear passengers who aren't safety belted can be thrown out of the vehicle in a crash. And they can strike others in the vehicle who are wearing safety belts.

### Rear Seat Passenger Positions



### Lap-Shoulder Belt

All three rear seating positions have lap-shoulder belts. Here's how to wear one properly.



1. Pick up the latch plate and pull the belt across you. Don't let it get twisted.

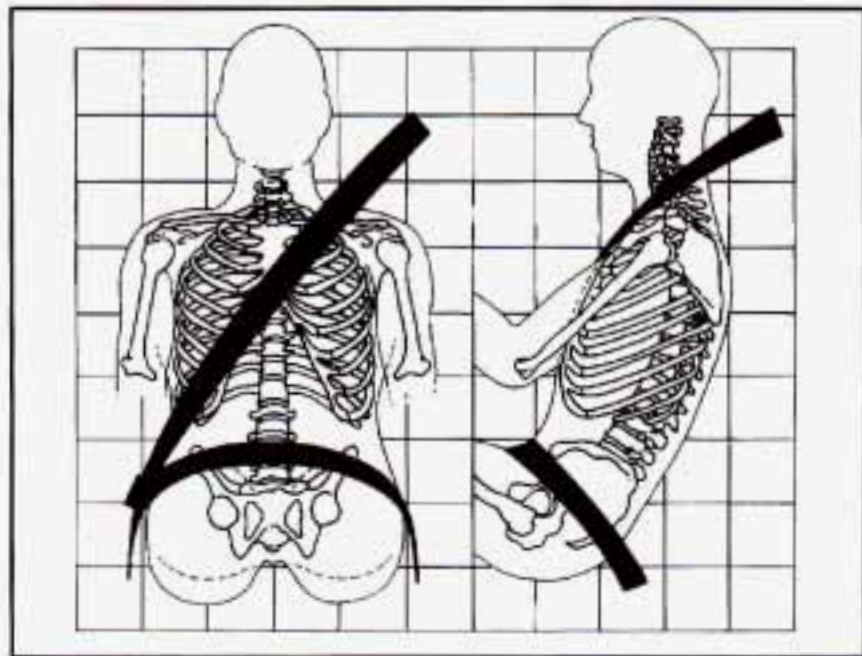
The shoulder belt may lock if you pull the belt across you very quickly. If this happens, let the belt go back slightly to unlock it. Then pull the belt across you more slowly.

2. Push the latch plate into the buckle until it clicks. Pull up on the latch plate to make sure it is secure.

When the shoulder belt is pulled out all the way, it will lock. If it does, let it go back all the way and start again. If the belt is not long enough, see “Safety Belt Extender” at the end of this section. Make sure the release button on the buckle is positioned so you would be able to unbuckle the safety belt quickly if you ever had to.



3. To make the lap part tight, pull down on the buckle end of the belt as you pull up on the shoulder part.



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'd be less likely to slide under the lap belt. If you slid under it, the belt would apply force at 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 safety belt locks if there's a sudden stop or a crash, or if you pull the belt very quickly out of the retractor.

**⚠ 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 against your body.**



To unlatch the belt, just push the button on the buckle.

## Children

Everyone in a vehicle needs protection! That includes infants and all children smaller than adult size. 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.

## Smaller Children and Babies

### CAUTION:

**Children who are up against, or very close to, an air bag when it inflates can be seriously injured or killed. This is true even though your vehicle has reduced-force frontal air bags. Air bags plus lap-shoulder belts offer the best protection for adults and older children, but not for young children and infants. Neither the vehicle's safety belt system nor its air bag 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.**



## **CAUTION:**

**Smaller children and babies should always be restrained in a child or infant restraint. The instructions for the restraint will say whether it is the right type and size for your child. A very young child's hip bones are so small that a regular belt might not stay low on the hips, as it should. Instead, the belt will likely be over the child's abdomen. In a crash, the belt would apply force right on the child's abdomen, which could cause serious or fatal injuries. So, be sure that any child small enough for one is always properly restrained in a child or infant restraint.**

Infants need complete support, including support for the head and neck. This is necessary because an 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 restraint settles into the restraint, so the crash forces can be distributed across the strongest part of the infant's body, the back and shoulders. A baby should be secured in an appropriate infant restraint. This is so important that many hospitals today won't release a newborn infant to its parents unless there is an infant restraint available for the baby's first trip in a motor vehicle.





**⚠ CAUTION:**

Never hold a baby in your arms while riding in a vehicle. A baby doesn't weigh much -- until a crash. During a crash a baby will become so heavy you can't hold it. For example, in a crash

**CAUTION: (Continued)**

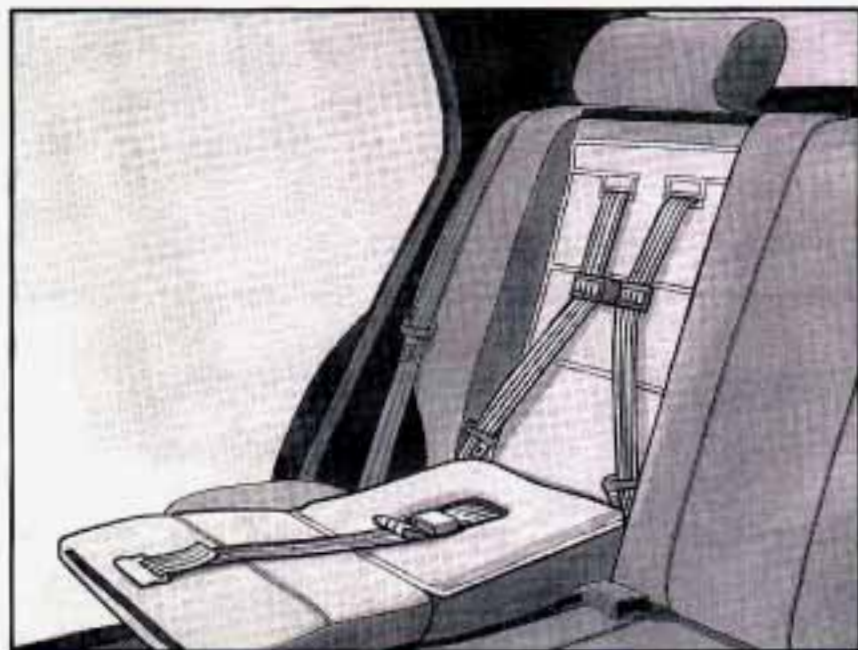
**CAUTION: (Continued)**

at only 25 mph (40 km/h), a 12-lb. (5.5 kg) baby will suddenly become a 240-lb. (110 kg) force on your arms. The baby would be almost impossible to hold.

Secure the baby in an infant restraint.



## Built-in Child Restraint (Option)



If your vehicle has this option, there's a built-in child restraint in the right rear seat position. This child restraint system conforms to all applicable Federal Motor Vehicle Safety Standards.

This child restraint is designed for use only by children who weigh between 22 and 66 pounds (10 and 30 kg) and whose height is between 33.5 and 50 inches (850 and 1270 mm) and who are capable of sitting upright alone.

The child should also be at least one year old. It is important to use a rear-facing infant restraint until the child is about a year old. A rear-facing restraint gives the infant's head, neck and body the support they would need in a crash. See "Child Restraints" later in this section for more information.

**Q:** What if the top of my child's shoulders is above the shoulder belt slots for the five-point child restraint harness system?

**A:** A child whose shoulders are above the shoulder belt slots for the five-point child restraint harness system shouldn't use this child restraint. Instead, the child should sit on the vehicle's seat cushion and use the vehicle's adult safety belts.

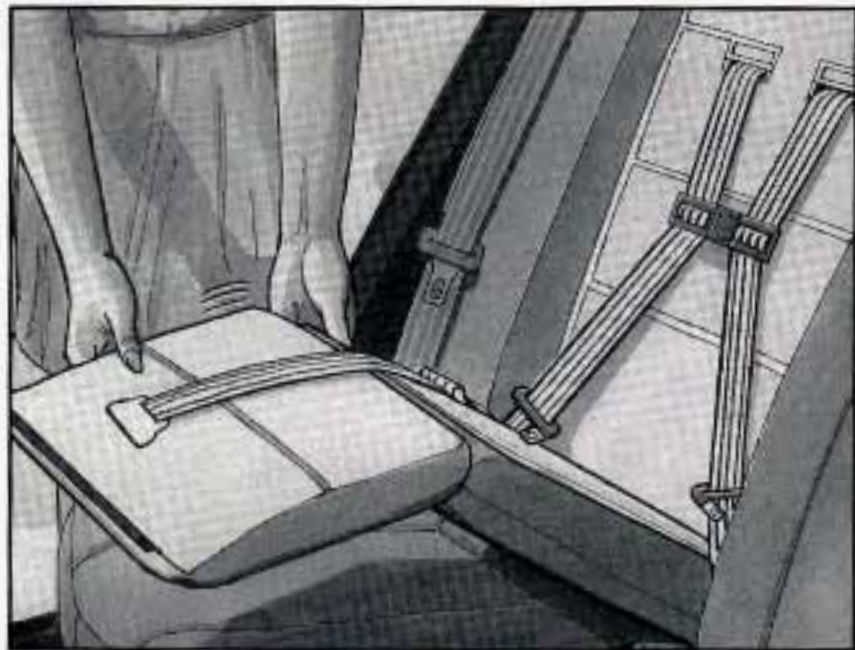
**⚠ CAUTION:**

**BEFORE YOU USE THIS CHILD RESTRAINT, BE SURE THE TOP OF THE CHILD'S SHOULDERS IS BELOW THE SLOTS THAT THE HARNESS GOES THROUGH. A CHILD WHOSE SHOULDERS ARE ABOVE THOSE SLOTS COULD BE INJURED DURING A SUDDEN STOP OR CRASH. IF THE TOP OF THE CHILD'S SHOULDERS IS ABOVE THE SLOTS, DON'T USE THIS CHILD RESTRAINT WHILE THE VEHICLE IS IN MOTION.**

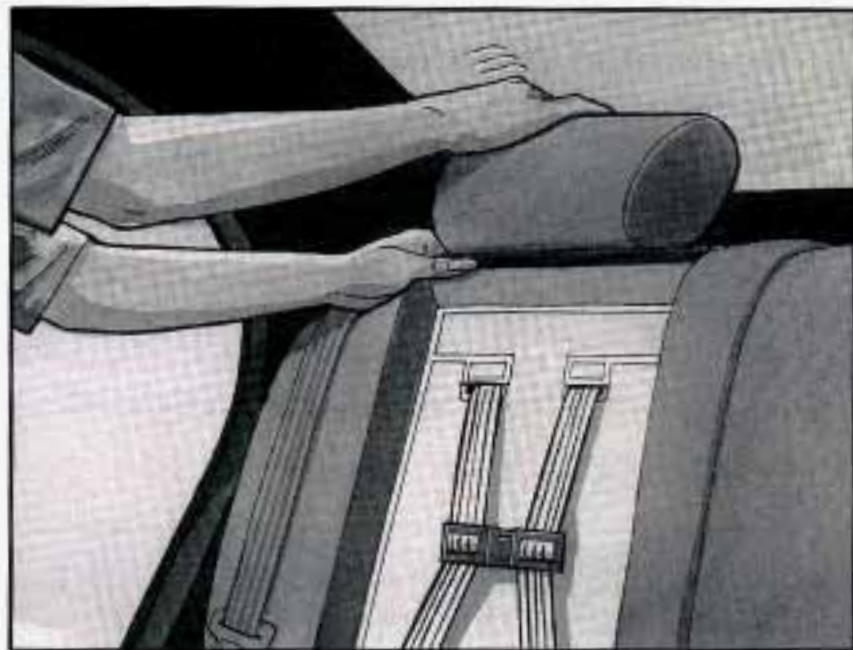
## Securing a Child in the Built-in Child Restraint



1. Remove the head restraint.



2. Pull the flap away from the fastener strip on the top of the seatback and lower the child restraint cushion.



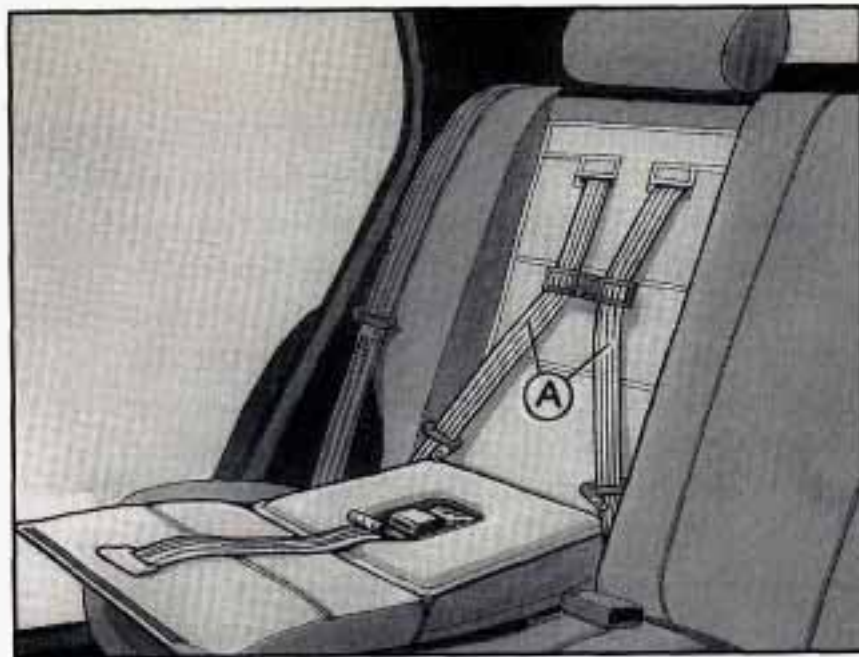
**⚠ CAUTION:**

**If a head restraint is not installed on the seatback properly, it could be thrown about the vehicle in a crash or sudden maneuver. People in the vehicle**  
**CAUTION: (Continued)**

**CAUTION: (Continued)**

**could be injured. Be sure the head restraint is properly installed when using the built-in child restraint.**

3. Install the head restraint so that the front side faces the rear of the vehicle. Lower the head restraint so that it touches the top of the seatback. Make sure there is no gap between the lower edge of the head restraint and the top of the seatback.



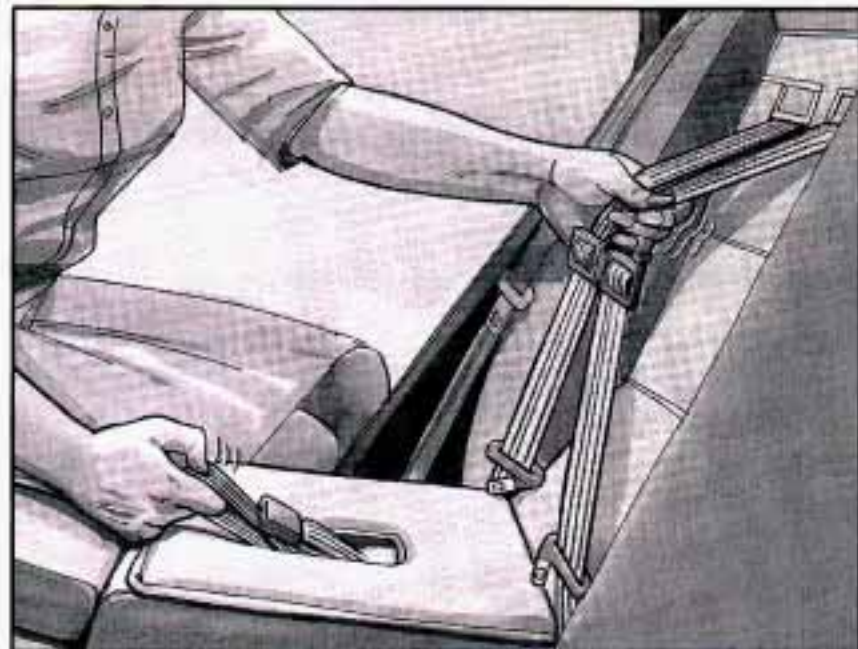
You'll be using the child restraint's harness (A) to secure your child. Don't use the vehicle's safety belts.

**⚠ CAUTION:**

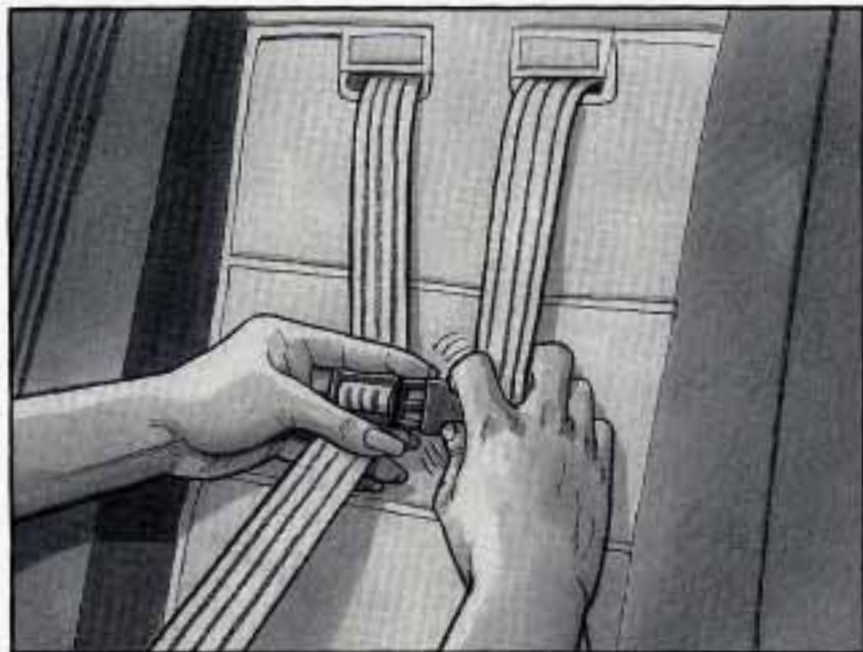
Using the vehicle's regular safety belts on a child seated on the child restraint cushion can cause serious injury to the child in a sudden stop or crash. If a child is the proper size for the built-in child restraint, secure the child using the child restraint's harness. But children who are too large for the built-in child restraint should sit on the vehicle's regular seat and use the vehicle's adult safety belts.

**WARNING! FAILURE TO FOLLOW THE MANUFACTURER'S INSTRUCTIONS ON THE USE OF THIS CHILD RESTRAINT SYSTEM CAN RESULT IN YOUR CHILD STRIKING THE VEHICLE'S INTERIOR DURING A SUDDEN STOP OR CRASH.**

**SNUGLY ADJUST THE BELTS PROVIDED WITH THIS CHILD RESTRAINT AROUND YOUR CHILD.**



4. Before placing the child in the child restraint, add slack to the shoulder harness. Pull the black shoulder harness release strap firmly. At the same time, pull both shoulder harness straps through the slots in the seatback as shown.



5. If the left and right halves of the shoulder harness clip are fastened together, separate them. Also, make sure the harness is not buckled.
6. Place the child on the child restraint cushion.
7. Select only one side of the harness. Place the harness over the child's shoulder.



8. Push the latch plate (B) into the buckle until it clicks.  
Be sure the buckle is free of any foreign objects that may prevent you from securing the latch plates. If you can't secure a latch plate, see your dealer for service before using the child restraint.
9. Place the other side of the harness over the child's shoulder.
10. Push the latch plate into the buckle until it clicks.



11. Pull up on both latch plates to make sure they are secure.



12. Now fasten the left and right halves of the shoulder harness clip together. The purpose of this clip is to help keep the harness positioned on the child's shoulders.



**⚠ CAUTION:**

An unfastened shoulder harness clip won't help keep the harness in place on the child's shoulders. If the harness isn't on the child's shoulders, it won't be able to restrain the child's upper body in a sudden stop or crash. The child could be seriously injured. Make sure the harness clip is properly fastened.



13. Pull the shoulder harness adjustment strap (C) firmly until the harness is snugly adjusted around the child. You should not be able to put more than two fingers between the harness and the child's chest.

Make sure the harness and buckle strap are not twisted.



14. Adjust the position of the harness on the child's shoulders by moving the clip up or down along the harness. On each side of the harness, the shoulder part should be centered on the child's shoulder. The harness should be away from the child's face and neck, but not falling from the child's shoulders.

## Removing the Child from the Built-in Child Restraint



1. Unfasten the shoulder harness clip.

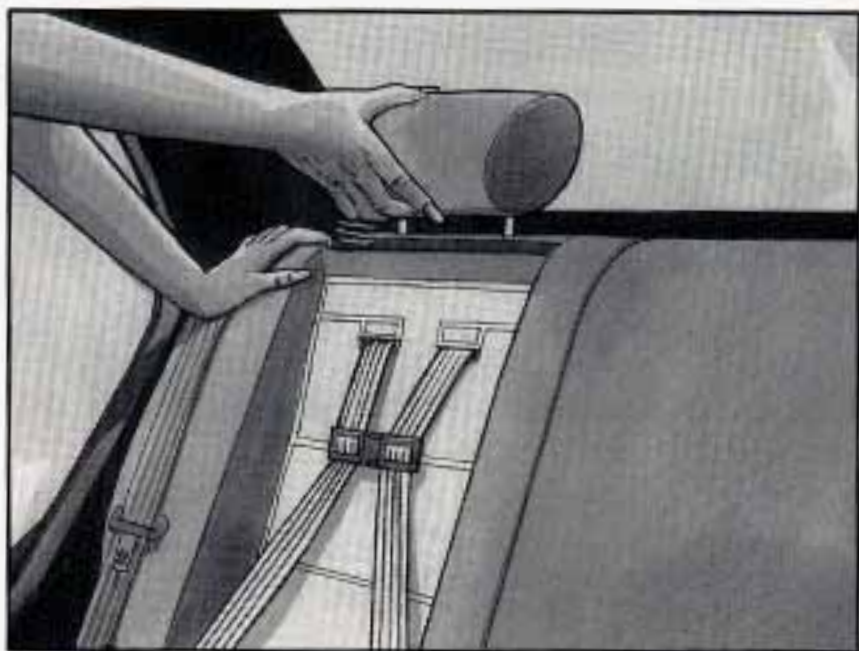


2. Unlatch the harness by pushing the button on the buckle.
3. Move both sides of the harness off the child's shoulders.
4. Remove the child from the child restraint cushion.

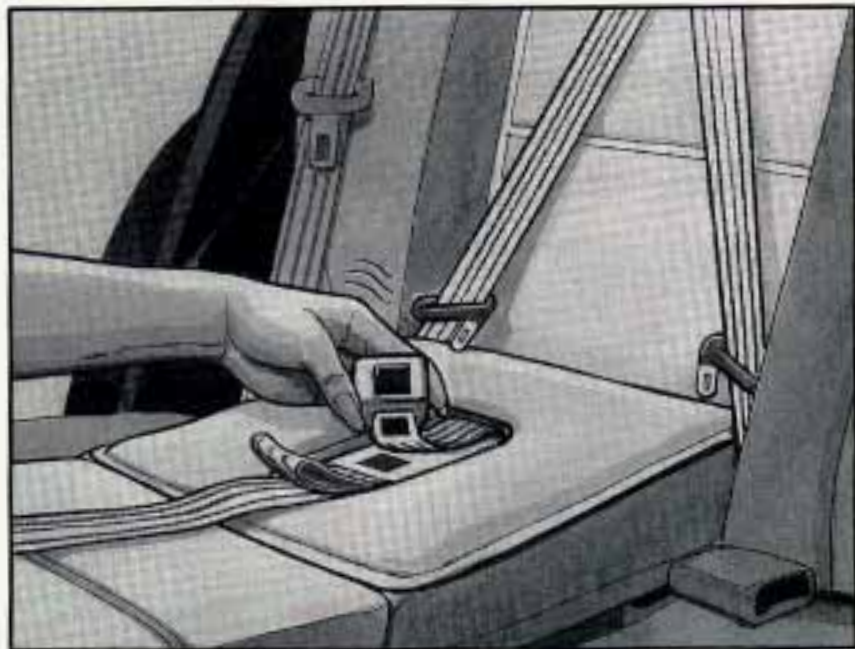
## Storing the Built-in Child Restraint

Always properly store the built-in child restraint before using the vehicle's lap-shoulder belt.

1. Fasten the harness clip.



2. Remove the head restraint.
3. Install the head restraint so that the front side faces the front of the vehicle. Don't push it all the way down, yet.



4. Using the fastener strip, attach the buckle strap to the child restraint cushion. Make sure the harness is unlatched and the buckle strap is flat on the cushion.



5. Fold the child restraint cushion up into the seatback. Make sure the harness adjustment strap is folded up in the seatback.



6. Attach the flap to the fastener strip on the top of the seatback.
7. Press the child restraint cushion firmly into the seatback.
8. Lower the head restraint.



## CAUTION:

**If a head restraint is not installed on the seatback properly, it could be thrown about the vehicle in a crash or sudden maneuver. People in the vehicle could be injured. Be sure the head restraint is properly installed when the built-in child restraint is stored.**

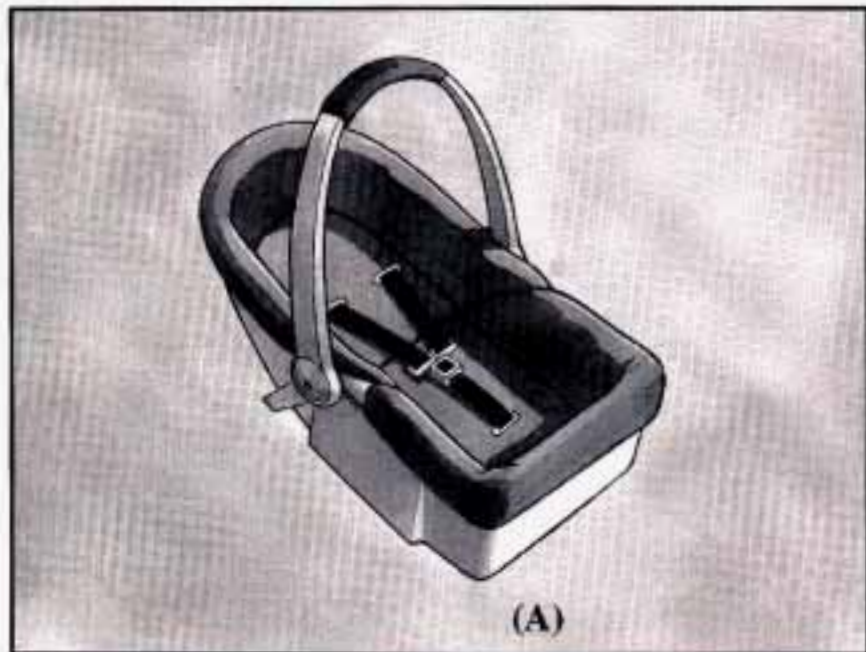
Just like the other restraint systems in your vehicle, your built-in child restraint needs to be periodically checked and may need to have parts replaced after a crash. See “Checking Your Restraint Systems” and “Replacing Seat and Restraint System Parts After a Crash” in the Index.

## Child Restraints

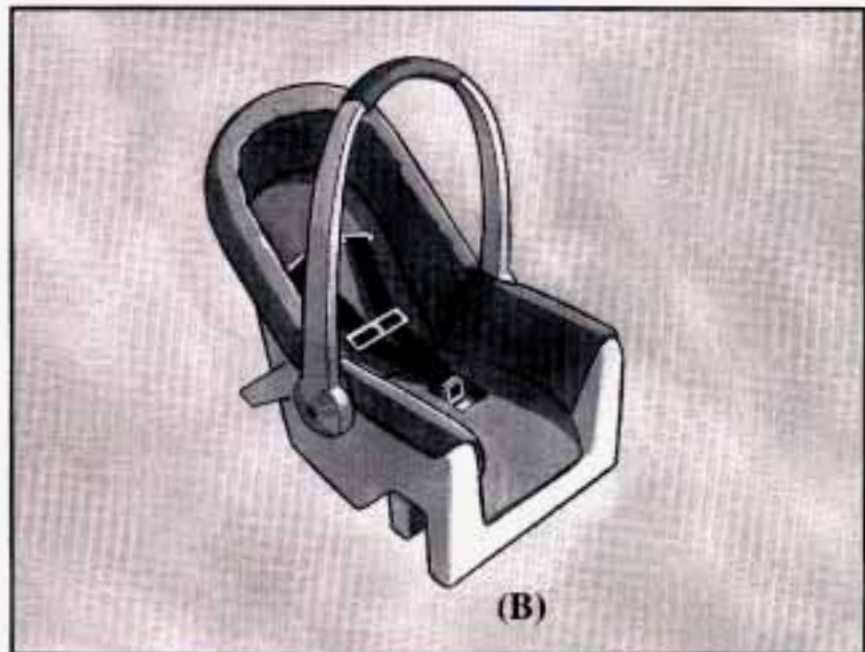
Every time infants and young children ride in vehicles, they should have protection provided by appropriate restraints.

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

**A:** Add-on child restraints are available in four basic types. When selecting a child restraint, take into consideration not only the child’s weight and size, but also whether or not the restraint will be compatible with the motor vehicle in which it will be used.



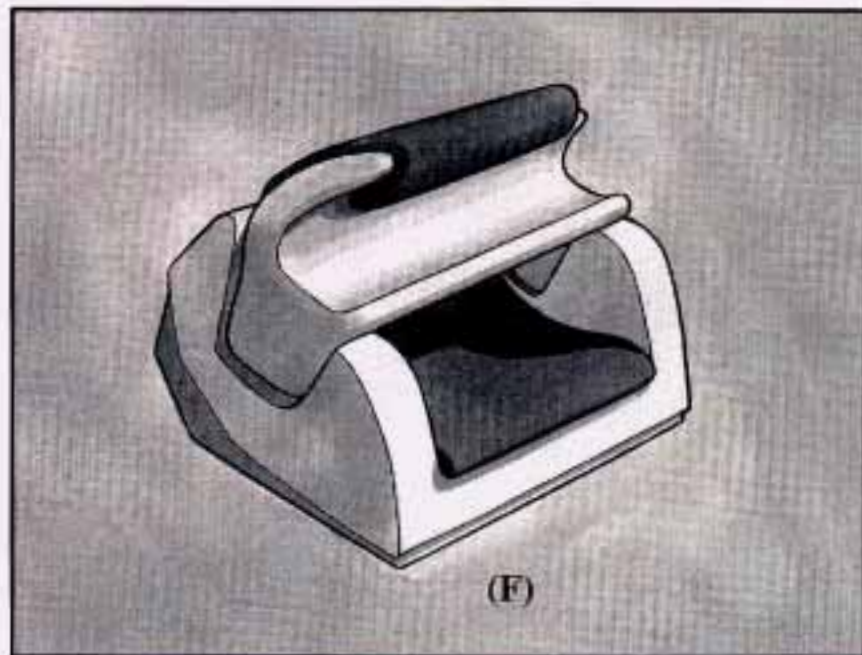
An infant car bed (A) is a special bed made for use in a motor vehicle. It's an infant restraint system designed to restrain or position a child on a continuous flat surface. With an infant car bed, make sure that the infant's head rests toward the center of the vehicle.



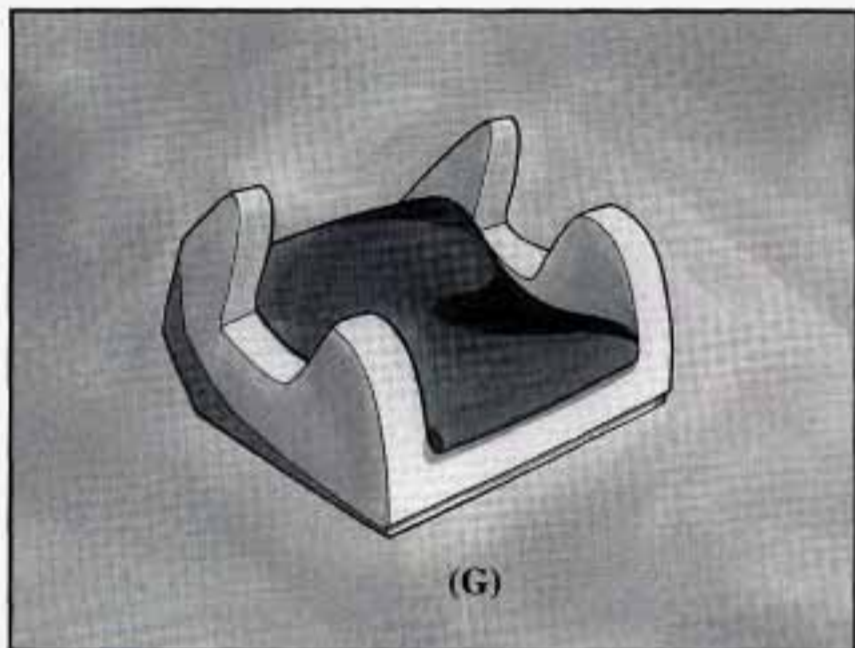
A rear-facing infant restraint (B) positions an infant to face the rear of the vehicle. Rear-facing infant restraints are designed for infants of up to about 20 lbs. (9 kg) and about one year of age. This type of restraint faces the rear so that the infant's head, neck and body can have the support they need in a crash. Some infant seats come in two parts -- the base stays secured in the vehicle and the seat part is removable.







A forward-facing child restraint (C-E) positions a child upright to face forward in the vehicle. These forward-facing restraints are designed to help protect children who are from 20 to 40 lbs. (9 to 18 kg) and about 26 to 40 inches (66 to 102 cm) in height, or up to around four years of age. One type, a convertible restraint, is designed to be used either as a rear-facing infant seat or a forward-facing child seat.



A booster seat (F, G) is designed for children who are about 40 to 60 lbs. (18 to 27 kg) and about four to eight years of age. It's designed to improve the fit of the vehicle's safety belt system. Booster seats with shields use lap-only belts; however, booster seats without shields use lap-shoulder belts. Booster seats can also help a child to see out the window.

When choosing a child restraint, be sure the child restraint is designed to be used in a vehicle. If it is, it will have a label saying that it meets Federal Motor Vehicle Safety Standards.

Then follow the instructions for the restraint. You may find these instructions on the restraint itself or in a booklet, or both. These restraints use the belt system in your vehicle, but the child also has to be secured within the restraint to help reduce the chance of personal injury. The instructions that come with the infant or child restraint will show you how to do that. Both the owner's manual and the child restraint instructions are important, so if either one of these is not available, obtain a replacement copy from the manufacturer.

## 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 at General Motors therefore recommend that you put your child restraint in the rear seat. *Never* put a rear-facing child restraint in the front passenger seat. Here's why:



### **CAUTION:**

**A child in a rear-facing child restraint can be seriously injured if the right front passenger's air bag inflates, even though your vehicle has reduced-force frontal air bags. This is because the back of a rear-facing child restraint would be very close to the inflating air bag. Always secure a rear-facing child restraint in the rear seat.**

**CAUTION: (Continued)**

### **CAUTION: (Continued)**

**You may secure a forward-facing child restraint in the right front seat, but before you do, always move the front passenger seat as far back as it will go. It's better to secure the child restraint in a rear seat.**

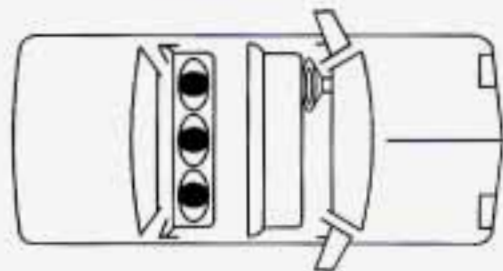
Wherever you install it, be sure to secure the child restraint properly.

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.

### **Top Strap**

Some child restraints have a top strap. Don't use a restraint like that in your vehicle because the top strap anchor cannot be installed properly. You shouldn't use this type of child restraint without anchoring the top strap.

## Securing a Child Restraint in a Rear Seat Position



You'll be using the lap-shoulder belt. See the earlier part about the top strap if the child restraint has one. 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.

1. Put the 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.

If the shoulder belt goes in front of the child's face or neck, put it behind the child restraint.



3. Buckle the belt. Make sure the release button is positioned so you would be able to unbuckle the safety belt quickly if you ever had to.



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



5. To tighten the belt, feed the shoulder belt back into the retractor while you push down on the child restraint. If you're 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. Push and pull the child restraint in different directions to be sure it is secure.

To remove the child restraint, just unbuckle the vehicle's safety belt and let it go back all the way. The safety belt will move freely again and be ready to work for an adult or larger child passenger.

## Securing a Child Restraint in the Right Front Seat Position



Your vehicle has a right front passenger air bag. *Never* put a rear-facing child restraint in this seat. Here's why:

### CAUTION:

**A child in a rear-facing child restraint can be seriously injured if the right front passenger's air bag inflates, even though your vehicle has reduced-force frontal air bags. This is because the back of a rear-facing child restraint would be very close to the inflating air bag. Always secure a rear-facing child restraint in the rear seat.**

You'll be using the lap-shoulder belt. See the earlier part about the top strap if the child restraint has one. 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.

1. Because your vehicle has a right front passenger air bag, always move the seat as far back as it will go before securing a forward-facing child restraint. (See "Seats" in the Index.)
2. Put the 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.

If the shoulder belt goes in front of the child's face or neck, put it behind the child restraint.



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

4. Buckle the belt. Make sure the release button is positioned so you would be able to unbuckle the safety belt quickly if you ever had to.



6. To tighten the belt, feed the shoulder belt back into the retractor while you push down on the 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.

To remove the child restraint, just unbuckle the vehicle's safety belt and let it go back all the way. The safety belt will move freely again and be ready to work for an adult or larger child passenger.

## Larger Children



Children who have outgrown child restraints should wear the vehicle's safety belts.



Accident statistics show that children are safer if they are restrained in the rear seat. But they need to use the safety belts properly.

- Children who aren't buckled up can be thrown out in a crash.
- Children who aren't buckled up can strike other people who are.



## CAUTION:

**Never do this.**

**Here two children are wearing the same belt. The belt can't 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.**

- Q:** What if a child is wearing a lap-shoulder belt, but the child is so small that the shoulder belt is very close to the child's face or neck?
- A:** If the child is sitting in a seat next to a window, move the child toward the center of the vehicle. If the child is sitting in the center rear seat passenger position, move the child toward the safety belt buckle. In either case, be sure that the shoulder belt still is on the child's shoulder, so that in a crash the child's upper body would have the restraint that belts provide.



**⚠ 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. If the child wears the belt in this way, in a crash the child might slide under the belt. The belt's force would then be applied right on the child's abdomen. That could cause serious or fatal injuries.**

The lap portion of the belt should be worn low and snug on the hips, just touching the child's thighs. This applies belt force to the child's pelvic bones in a crash.

## Safety Belt Extender

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

But if a safety belt isn't long enough to fasten, your dealer will order you an extender. It's free. When you go in to order it, take the heaviest coat you will wear, so the extender will be long enough for you. The extender will be just for you, and just for the seat in your vehicle that you choose. Don't let someone else use it, and use it only for the seat it is made to fit. To wear it, just attach it to the regular safety belt.

## Checking Your Restraint Systems

Now and then, make sure the safety belt reminder light and all your belts, buckles, latch plates, retractors and anchorages are working properly. If your vehicle has a built-in child restraint, also periodically make sure the harness straps, latch plates, buckle, clip and anchorages are working properly. Look for any other loose or

damaged safety belt and built-in child restraint system parts. If you see anything that might keep a safety belt or built-in child restraint 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.

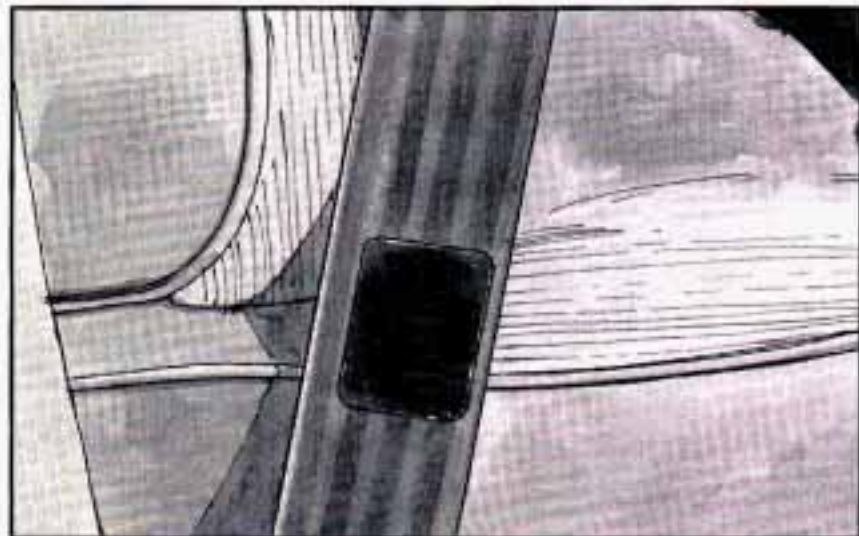
If your vehicle has the built-in child restraint, torn or frayed harness straps can rip apart under impact forces just like torn or frayed safety belts can. They may not protect a child in a crash. If a harness strap is torn or frayed, get a new harness right away.

Also look for any opened or broken air bag covers, and have them repaired or replaced. (See the part on the air bag system earlier in this section for air bag system maintenance information.)

## Replacing Restraint System Parts After a Crash

If you've had a crash, do you need new safety belts or built-in child restraint parts?

After a very minor collision, nothing may be necessary. But if the safety belts or built-in child restraint harness straps were stretched, as they would be if worn during a more severe crash, then you need new safety belts or harness straps.



If the frontal air bags inflate, you'll also need to replace the driver's and right front passenger's safety belt retractor assembly. Be sure to do so. Then the new retractor assembly will be there to help protect you in a collision.

If safety belts or built-in child restraint harness straps are cut or damaged, replace them. Collision damage also may mean you will need to have safety belt, built-in child restraint or seat parts repaired or replaced. New parts and repairs may be necessary even if the safety belt or built-in child restraint wasn't being used at the time of the collision.

If an air bag inflates, you'll need to replace air bag system parts. See the part on the air bag system earlier in this section.



 **NOTES**



## Section 2 Features and Controls

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Here you can learn about the many standard and optional features on your vehicle, and information on starting, shifting and braking. Also explained are the instrument panel and the warning systems that tell you if everything is working properly -- and what to do if you have a problem.

2-2	Keys	2-24	Running Your Engine While You're Parked (Automatic Transaxle)
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2-6	Keyless Entry System (If Equipped)	2-26	Horn
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## Keys

### CAUTION:

Leaving young children in a vehicle with the ignition key is dangerous for many reasons. A child or others could be badly injured or even killed.

They could operate power windows or other controls or even make the vehicle move. Don't leave the keys in a vehicle with young children.







Both keys are used for the ignition, the doors and all other locks.

When a new vehicle is delivered, the dealer removes the metal plate from the key ring and gives it to the first owner.

The metal plate has a code on it that tells your dealer or a qualified locksmith how to make extra keys. Keep the code in a safe place. If you lose your key, you'll be able to have a new one made easily using this code.

### **NOTICE:**

**Your vehicle has a number of features that can help prevent theft. However, you can have a lot of trouble getting into your vehicle if you ever lock your key inside. You may even have to damage your vehicle to get in. So be sure you have an extra key.**

## Door Locks

### CAUTION:

**Unlocked doors can be dangerous.**

**Passengers -- especially children -- can easily open the doors and fall out. When a door is locked, the inside handle won't open it.**

**Outsiders can easily enter through an unlocked door when you slow down or stop your vehicle.**

**This may not be so obvious: You increase the chance of being thrown out of the vehicle in a crash if the doors aren't locked. Wear safety belts properly, lock your doors, and you will be far better off whenever you drive your vehicle.**

There are several ways to lock and unlock your vehicle.

From the outside, use your key. To lock the door, turn the key toward the front of the car. If you have power door locks, all the doors will lock.

Insert the key in either front door and turn the key toward the rear of the car to unlock the door.

If your vehicle has power door locks, turn the key once to unlock the driver's door only. Turn the key back toward the center, then toward the rear again to unlock all the doors. Using the key in the passenger's door will unlock all the doors.



To lock the door from the inside, push down the button on the door.

To unlock the door, pull up on the button.

## Power Door Locks (Option)



The power door lock switch may be located either on the armrest on the door or in front of the inside door handle.

Push the power door lock switch on the driver's or passenger's door to lock or unlock all the doors at once.

## Rear Door Security Locks



Your vehicle is equipped with rear door security locks that help prevent passengers from opening the rear doors of your vehicle from the inside.

To use one of these locks:

1. Slide the lever on the inside of the door down.
2. Close the door.
3. Do the same thing to the other rear door lock.

The rear doors of your vehicle cannot be opened from the inside when this feature is in use.

If you want to open a rear door when the security lock is on:

1. Unlock the door from the inside.
2. Then open the door from the outside.

If you don't cancel the security lock feature, adults and older children who ride in the rear won't be able to open the rear door from the inside. You should let adults and older children know how these security locks work, and how to cancel the locks.

To cancel one of these locks:

1. Unlock the door from the inside and open the door from the outside.
2. Slide the lever up.
3. Do the same for the other rear door.

The rear door locks will now work normally.

## **Leaving Your Vehicle**

If you are leaving the vehicle, take your key, open your door and set the locks from inside. Then get out and close the door.

## **Keyless Entry System (If Equipped)**

If your vehicle has this option, you can lock and unlock your doors from about 3 feet (1 m) up to 30 feet (9 m) away using the remote keyless entry transmitter supplied with your vehicle.



Your keyless entry system operates on a radio frequency subject to Federal Communications Commission (FCC) Rules and with Industry Canada.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:  
(1) this device may not cause harmful interference, and  
(2) this device must accept any interference received, including interference that may cause undesired operation.

This device complies with RSS-210 of Industry Canada. Operation is subject to the following two conditions:  
(1) this device may not cause interference, and (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.

This system has a range of about 3 feet (1 m) up to 30 feet (9 m). At times you may notice a decrease in range. This is normal for any remote keyless entry 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 to determine if battery replacement is necessary. See the instructions that follow.
- 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.
- If you're still having trouble, see your dealer or a qualified technician for service.

## Operation

The following functions are available with the remote keyless entry system:

**LOCK:** All doors will automatically lock when the LOCK button on the transmitter is pressed. The taillamps will flash once, to confirm that the doors have locked. The interior lamps will stay on for two seconds after all of the doors are closed. The remote lock function will not work if the key is in the ignition.

**UNLOCK:** The driver's door will unlock automatically when the UNLOCK button on the transmitter is pressed. The taillamps will flash twice and the interior lamps will come on to confirm that the doors have unlocked. If the unlock button is pressed again within five seconds, all remaining doors will unlock. The interior lamps will stay on for 15 seconds or until the ignition is turned on. If unlock is pressed and no door is opened, the doors will lock automatically after 30 seconds.

## Matching Transmitter(s) To Your Vehicle

Each remote keyless entry transmitter is coded to prevent another transmitter from unlocking your vehicle. If a transmitter is lost or stolen, a replacement can be purchased through your dealer. Remember to bring any remaining transmitters with you when you go to your dealer. When the dealer matches the replacement transmitter to your vehicle, any remaining transmitters must also be matched. Once your dealer has coded the new transmitter, the lost transmitter will not unlock your vehicle. Each vehicle can have only four transmitters matched to it.

## Battery Replacement

Under normal use, the battery in your remote keyless entry transmitter should last about two years.

You can tell the battery is weak if the transmitter won't work at the normal range in any location. If you have to get close to your vehicle before the transmitter works, it's 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.**



For battery replacement, use one three volt, type CR2016, or equivalent battery.

To replace the battery:

1. Insert a coin into the notch near the keyring. Turn the coin to the left to separate the two halves of the transmitter.
2. Once the transmitter is separated, use a pencil eraser to remove the old battery. Do not use a metal object.
3. Replace the battery with the positive (+) side facing upward.
4. Snap the transmitter back together tightly to be sure no moisture can enter.

## Trunk



### CAUTION:

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

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

- **Make sure all windows are shut.**
- **Turn the fan on your heating or cooling system to its highest speed with the setting on VENT. That will force outside air into your vehicle. See "Comfort Controls" in the Index.**
- **If you have air outlets on or under the instrument panel, open them all the way. See "Engine Exhaust" in the Index.**

## Trunk Lock Release

To open the trunk lid, use your key and turn it to the right.

To close the lid, lower and press down on it. After closing the lid, try pulling it up to make sure it is closed.

## Remote Trunk Lock Release



Pull the lever on the floor near the driver's door to open the trunk lid from inside your vehicle.

## Theft

Vehicle theft is big business, especially in some cities. Although your vehicle has a number of theft-deterrent features, we know that nothing we put on it can make it impossible to steal. However, there are ways you can help.

### Key in the Ignition

If you leave your vehicle with the keys inside, it's an easy target for joy riders or professional thieves -- so don't do it.

When you park your vehicle and open the driver's door, you'll hear a tone reminding you to remove your key from the ignition and take it with you. Always do this. Your steering wheel will be locked, and so will your ignition. If you have an automatic transaxle, taking your key out also locks your transaxle. And remember to lock the doors.

### Parking at Night

Park in a lighted spot, close all windows and lock your vehicle. Remember to keep your valuables out of sight. Put them in a storage area, or take them with you.



## New Vehicle “Break-In”

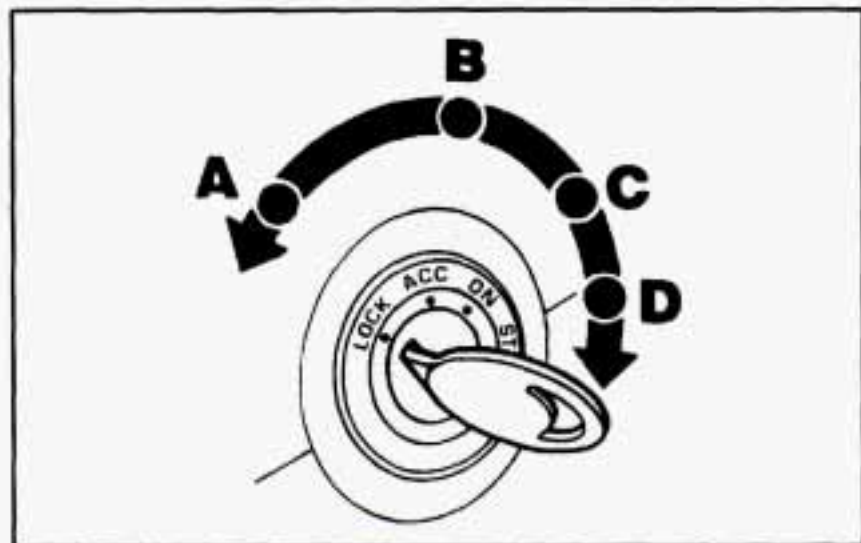
### NOTICE:

Your vehicle doesn't need an elaborate “break-in.” But it will perform better in the long run if you follow these guidelines:

- Don't drive at any one speed -- fast or slow -- for the first 500 miles (805 km). Don't make full-throttle starts.
- Avoid making hard stops for the first 200 miles (322 km) or so. During this time your new brake linings aren't yet broken in. Hard stops with new linings can mean premature wear and earlier replacement. Follow this breaking-in guideline every time you get new brake linings.
- Don't tow a trailer during break-in. See “Towing a Trailer” in the Index for more information.

## Ignition Switch

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



**LOCK (A):** This is the only position from which you can remove the key. This locks your steering wheel, ignition and automatic transaxle. Push in the ignition switch as you turn the it toward you.

If you have an automatic transaxle, the ignition switch can't be turned to LOCK unless the shift lever is in the PARK (P).

**ACC (ACCESSORY) (B):** In this position, you can operate some of your electrical power accessories (such as the radio, but not the ventilation fan). It unlocks the steering wheel and ignition. To move the key from ACC to LOCK, push in the key and then turn it to LOCK.

**ON (C):** The switch returns to this position after you start your engine and release the switch. The switch stays in the ON position when the engine is running. But even when the ignition is not running, you can use ON to operate your electrical power accessories (including the ventilation fan) and to display some warning and indicator lights.

**START (D):** This position starts the engine. When the engine starts, release the key. The ignition switch will return to ON for normal driving.

When the engine is not running, ACC and ON allow you to operate some of your electrical accessories.

A warning tone will sound if you open the driver's door when the ignition is in ACC or LOCK and the key is in the ignition.



## **CAUTION:**

**On manual transaxle vehicles, turning the key to LOCK and removing it will lock the steering column and result in a loss of ability to steer the vehicle. This could cause a collision. If you need to turn the engine off while the vehicle is moving, turn the key only to ACC. Don't push the key in while the vehicle is moving.**

## **NOTICE:**

**If your key seems stuck in LOCK and you can't turn it, be sure you are using the correct key; if so, is it all the way in? If it is, then turn the steering wheel left and right while you turn the key hard. But turn the key only with your hand. Using a tool to force it could break the key or the ignition switch. If none of this works, then your vehicle needs service.**

## Starting Your Engine

### Automatic Transaxle

Move your shift lever to PARK (P) or NEUTRAL (N). Your engine won't start in any other position -- that's a safety feature. To restart when you're already moving, use NEUTRAL (N) only.

#### **NOTICE:**

**Don't try to shift to PARK (P) if your Chevrolet is moving. If you do, you could damage the transaxle. Shift to PARK (P) only when your vehicle is stopped.**

### Manual Transaxle

The gear selector should be in NEUTRAL (N) and the parking brake engaged. Hold the clutch pedal to the floor and start the engine. Your vehicle won't start if the clutch pedal is not all the way down -- that's a safety feature.

## Starting Your 1.8 Liter Engine

1. Without pushing the accelerator pedal, turn your ignition key to START. When the engine starts, let go of the key. The idle speed will go down as your engine gets warm.

#### **NOTICE:**

**Holding your key in START for longer than 15 seconds at a time will cause your battery to be drained much sooner. And the excessive heat can damage your starter motor.**

2. If it doesn't start in three seconds, wait about 15 seconds and try again to start the engine by turning the ignition key to START. Wait about 15 seconds between each try to help avoid draining your battery or damaging your starter.

When your engine has run about 10 seconds to warm up, your vehicle is ready to be driven. Don't "race" your engine when it's cold.

If the weather is below freezing (32°F or 0°C), let the engine run for a few minutes to warm up.

3. If your engine still won't start (or starts but then stops), it could be flooded with too much gasoline. Try pushing your accelerator pedal all the way to the floor and holding it there as you hold the key in START for about three seconds. If the vehicle starts briefly but then stops again, do the same thing, but this time keep the pedal down for five or six seconds. This clears the extra gasoline from the engine.
4. If your engine stalls, restart it as explained earlier. If it stalls often, have the engine checked by your dealer as soon as possible.

## **NOTICE:**

**Your engine is designed to work with the electronics in your vehicle. If you add electrical parts or accessories, you could change the way the engine operates. Before adding electrical equipment, check with your dealer. If you don't, your engine might not perform properly.**

**If you ever have to have your vehicle towed, see the part of this manual that tells how to do it without damaging your vehicle. See "Towing Your Vehicle" in the Index.**

## **Automatic Transaxle Operation**



There are several different positions for your shift lever.

**PARK (P):** This locks your front wheels. It's the best position to use when you start your engine because your vehicle can't 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. Don't leave your vehicle when the engine is running unless you have to. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure your vehicle won't move, even when you're on fairly level ground, always set your parking brake and move the shift lever to PARK (P).**

**See "Shifting Into PARK (P)" in the Index. If you're pulling a trailer, see "Towing a Trailer" in the Index.**

Ensure the shift lever is fully in PARK (P) range before starting the engine. Your vehicle has a brake-transaxle shift interlock. You have to fully apply your regular brakes before you can shift from PARK (P) when the ignition key is in ON. If you cannot shift out of PARK (P), ease pressure on the shift lever -- push the shift lever all the way into PARK (P) and release the shift lever button as you maintain brake application. Then press the shift lever button and move the shift lever into the gear you wish. See "Shifting Out of PARK (P)" in the index.

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

## NOTICE:

**Shifting to REVERSE (R) while your vehicle is moving forward could damage your transaxle. 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 transaxle, see "Stuck: In Sand, Mud, Ice or Snow" in the Index.

**NEUTRAL (N):** In this position, your engine doesn't connect with the wheels. To restart when you're already moving, use NEUTRAL (N) only. Also, use NEUTRAL (N) when your vehicle is being towed.

 **CAUTION:**

**Shifting out of PARK (P) or NEUTRAL (N) while your engine is “racing” (running at high speed) is dangerous. Unless your foot is firmly on the brake pedal, your vehicle could move very rapidly. You could lose control and hit people or objects. Don't shift out of PARK (P) or NEUTRAL (N) while your engine is racing.**

**NOTICE:**

**Damage to your transaxle caused by shifting out of PARK (P) or NEUTRAL (N) with the engine racing isn't covered by your warranty.**

**DRIVE (D):** This position is for normal driving. If you need more power for passing, and you're:

- Going less than about 27 mph (43 km/h), push your accelerator pedal about halfway down.
- Going about 29 mph (47 km/h) or more, push your accelerator pedal all the way down.

You'll shift down to the next gear and have more power.

**SECOND (2):** This position gives you more power but lower fuel economy. You can use SECOND (2) on hills. It can help control your speed as you go down steep mountain roads, but then you would also want to use your brakes off and on.

**NOTICE:**

**Don't drive in SECOND (2) for more than 25 miles (40 km), or at speeds over 55 mph (88 km/h), or you can damage your transaxle. Use DRIVE (D) as much as possible.**

**Don't shift into SECOND (2) unless you are going slower than 58 mph (93 km/h), or you can damage your engine.**

**LOW (L):** This position gives you even more power (but lower fuel economy) than SECOND (2). You can use it on very steep hills, or in deep snow or mud. If the shift lever is put in LOW (L), the transaxle won't shift into low gear until the vehicle is going slowly enough.

### **NOTICE:**

**If your front wheels can't rotate, don't try to drive. This might happen if you were stuck in very deep sand or mud or were up against a solid object. You could damage your transaxle. Also, if you stop when going uphill, don't hold your vehicle there with only the accelerator pedal. This could overheat and damage the transaxle. Use your brakes to hold your vehicle in position on a hill.**

### **Overdrive (Option)**



If your automatic transaxle has OVERDRIVE, you can use it for better fuel economy. After starting your engine, always push in the OVERDRIVE button. Then select the gear you want and press the accelerator pedal.

Gradual starts give you the best fuel economy. Fast starts use the most fuel.

A light on the instrument panel will come on whenever you turn off OVERDRIVE. See "Overdrive Off Light" in the Index.

# Manual Transaxle Operation

## 5-Speed



This is your shift pattern. Here's how to operate your transaxle:

**FIRST (1):** Press the clutch pedal fully and shift into FIRST (1). Then, slowly let up on the clutch pedal as you press the accelerator pedal.

Keep your foot off the clutch pedal unless you are operating the clutch. Avoid excessive use of the clutch in a half-engaged condition, otherwise the clutch could slip or could cause problems by overheating.

You can shift into FIRST (1) when you're going less than 20 mph (32 km/h). If you've come to a complete stop and it's hard to shift into FIRST (1), put the shift lever in NEUTRAL (N) and let up on the clutch. Press the clutch pedal back down. Then shift into FIRST (1).

**SECOND (2):** Press the clutch pedal as you let up on the accelerator pedal and shift into SECOND (2). Then, slowly let up on the clutch pedal as you press the accelerator pedal.

**THIRD (3), FOURTH (4), FIFTH (5):** Shift into THIRD (3), FOURTH (4) and FIFTH (5) the same way you do for SECOND (2). Slowly let up on the clutch pedal as you press the accelerator pedal.

To stop, let up on the accelerator pedal and press the brake pedal. Just before the vehicle stops, press the clutch pedal and the brake pedal, and shift to NEUTRAL (N).



**NEUTRAL (N):** Use this position when you start or idle your engine.

**REVERSE (R):** To back up, press down the clutch pedal and shift into REVERSE (R). Let up on the clutch pedal slowly while pressing the accelerator pedal.

### **NOTICE:**

**Shift to REVERSE (R) only after your vehicle is stopped. Shifting to REVERSE (R) while your vehicle is moving could damage your transaxle.**

Also, use REVERSE (R) along with the parking brake for parking your vehicle.

## **Shift Speeds**



### **CAUTION:**

**If you skip more than one gear when you downshift, you could lose control of your vehicle. And you could injure yourself or others. Don't shift from FIFTH (5) to FIRST (1).**

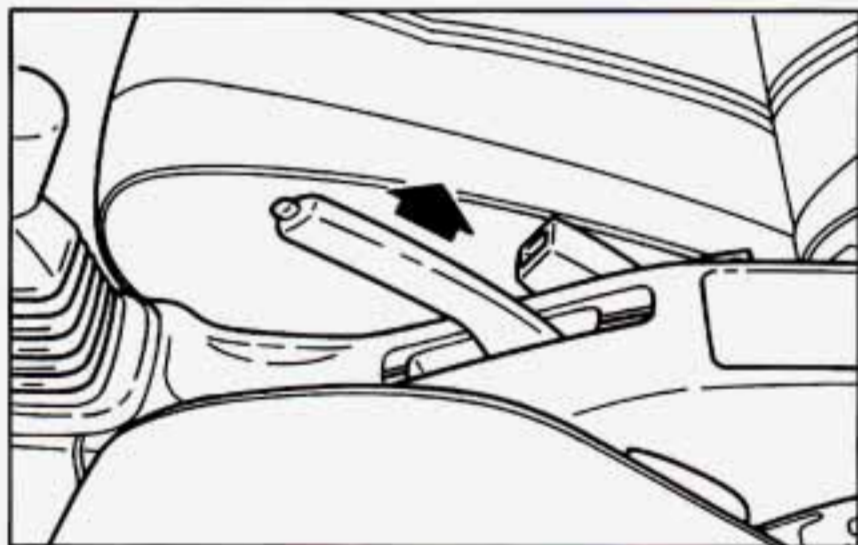
This chart shows when to shift to the next gear for the best fuel economy.

### **Manual Transaxle Recommended Shift Speeds**

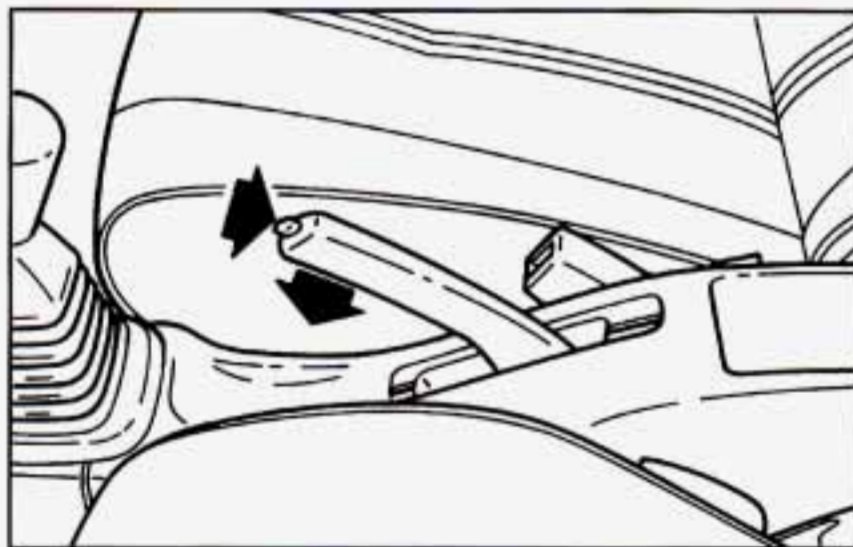
<b>ENGINE</b>	<b>1 to 2 or 2 to 1</b>	<b>2 to 3 or 3 to 2</b>	<b>3 to 4 or 4 to 3</b>	<b>4 to 5 or 5 to 4</b>
1.8L (Code 8)	15 mph (24 km/h)	23 mph (37 km/h)	40 mph (64 km/h)	45 mph (72 km/h)

If your speed drops below 20 mph (32 km/h), or if the engine is not running smoothly, you should downshift to the next lower gear. You may have to downshift two or more gears to keep the engine running smoothly or for good performance.

## Parking Brake



To set the parking brake, hold the brake pedal down and pull up on the parking brake lever. If the ignition is on, 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 lever all the way down.

## **NOTICE:**

**Driving with the parking brake on can cause your rear brakes to overheat. You may have to replace them, and you could also damage other parts of your vehicle.**

If you are towing a trailer, see “Towing a Trailer” in the Index.

## **Shifting Into PARK (P) (Automatic Transaxle Only)**

### **CAUTION:**

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

1. Hold the brake pedal down with your right foot and set the parking brake by pulling up on the parking brake lever.
2. Move the shift lever into PARK (P) as follows:



- Hold in the button on the shift lever.
  - Push the lever all the way toward the front of the vehicle.
3. Move the ignition key to LOCK.
  4. Remove the key and take it with you. If you can leave your vehicle with the key in your hand, your vehicle is in PARK (P).

## Leaving Your Vehicle With the Engine Running (Automatic Transaxle Only)

### CAUTION:

**It can be dangerous to leave your vehicle with the engine running. Your vehicle could move suddenly if the shift lever is not fully in PARK (P) with the parking brake firmly set. And, if you leave the vehicle with the engine running, it could overheat and even catch fire. You or others could be injured. Don't leave your vehicle with the engine running unless you have to.**

## Torque Lock (Automatic Transaxle)

If you are parking on a hill and you don't shift your transaxle into PARK (P) properly, the weight of the vehicle may put too much force on the parking pawl in the transaxle. 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)" in the Index.

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

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

## Shifting Out of PARK (P) (Automatic Transaxle)

Your vehicle has a Brake-Transaxle Shift Interlock (BTSI). You have to fully apply your regular brakes before you can shift from PARK (P) when the ignition is in the ON position. See "Automatic Transaxle Operation" in the Index.

If you cannot shift out of PARK (P), ease pressure on the shift lever -- push the shift lever all the way into PARK (P) and release the shift lever button as you maintain brake application. Then press the shift lever button and move the shift lever into the gear you wish.

If you ever hold the brake pedal down but still can't shift out of PARK (P), try this:

1. Carefully pry the shift lock override cover from the floor shift console using a flat-bladed tool.
2. Insert the end of the flat-bladed tool into the rectangular slot and press down firmly.
3. While maintaining brake application, move the shift lever into the drive gear you want.
4. Have the vehicle fixed as soon as possible.

### **Parking Your Vehicle (Manual Transaxle)**

Before you get out of your vehicle, put your manual transaxle in REVERSE (R) (if your vehicle is parked on a level surface or facing downhill), or put your manual transaxle in FIRST (1) (if your vehicle is parked facing uphill) and firmly apply the parking brake.

If you are towing a trailer, see "Towing a Trailer" in the Index.

### **Parking Over Things That Burn**



#### **⚠ CAUTION:**

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

## Engine Exhaust

### CAUTION:

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

You might have exhaust coming in if:

- Your exhaust system sounds strange or different.
- Your vehicle gets rusty underneath.
- Your vehicle was damaged in a collision.
- Your vehicle was damaged when driving over high points on the road or over road debris.
- Repairs weren't done correctly.
- Your vehicle or exhaust system had been modified improperly.

If you ever suspect exhaust is coming into your vehicle:

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

## Running Your Engine While You're Parked (Automatic Transaxle)

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

### CAUTION:

Idling the engine with the climate control system off could allow dangerous exhaust into your vehicle (see the earlier Caution under "Engine Exhaust").

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

Another closed-in place can be a blizzard. (See "Blizzard" in the Index.)

## 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. Don't leave your vehicle when the engine is running unless you have to. If you've left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure your vehicle won't move, even when you're on fairly level ground, always set your parking brake and move the shift lever to **PARK (P)**.

Follow the proper steps to be sure your vehicle won't move. See "Shifting Into **PARK (P)**" in the Index.

If you are parking on a hill and if you're pulling a trailer, also see "Towing a Trailer" in the Index.

## Windows

### Manual Windows

Use the window crank to open and close each window.

## Power Windows (Option)



With power windows, switches on the driver's door control each window when the ignition is on. Push down the front of the switch to lower a window and lift the front of the switch to raise a window.

The **AUTO** switch for the driver's window has an express-down feature. To use express-down, push the switch down all the way. Release the switch and the window will lower completely. Pull up on the switch lightly and release it to stop the window partway.

You can also open this window any amount by pushing the switch halfway down and releasing it when you want the window to stop.

Do not push the switch when the window is in the express-down mode.

There are individual controls near each window. Push down the front of the switch to lower a window and lift the front of the switch to raise a window.

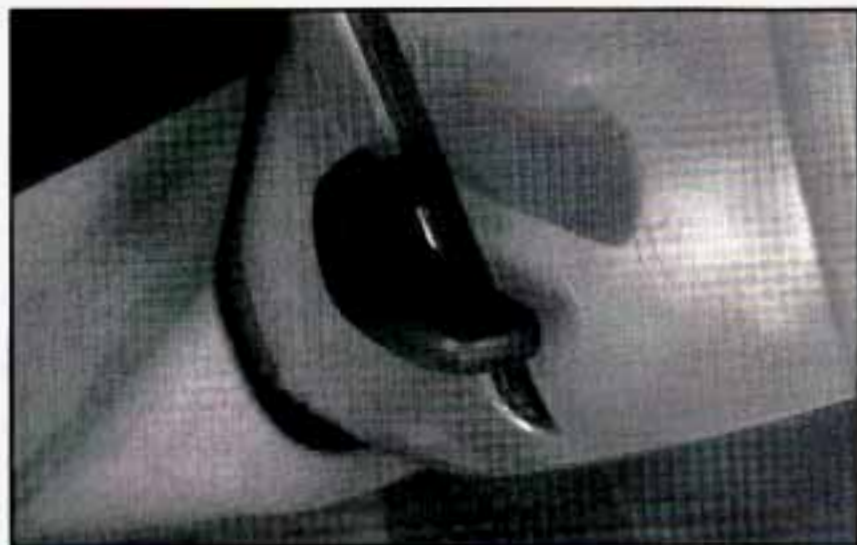
### **Lock-Out Switch**

Press the window lock switch to keep passengers from using their individual window switches. Press the switch again to unlock the windows.

### **Horn**

To sound the horn, press anywhere on the horn pad on your steering wheel.

### **Tilt Column (Option)**



A tilt steering column allows you to adjust the steering column before you drive.

To tilt the column, pull down on the lever. Move the steering wheel to a comfortable level, then move the lever upward to lock the column in place.



## Turn Signal/Multifunction Lever



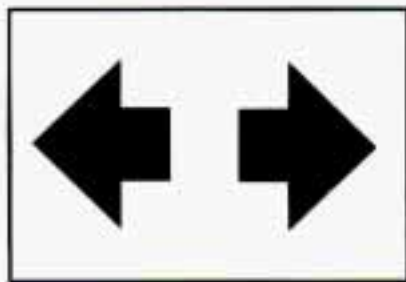
The lever on the left side of the steering column includes your:

- Turn Signal and Lane Change Indicator
- Headlamp High/Low Beam Changer
- Flash-to-Pass

### Turn Signal and Lane Change Indicator

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

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



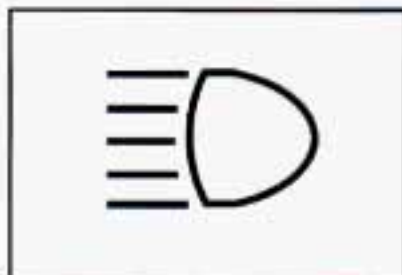
An arrow on the instrument panel will flash in the direction of the turn or lane change.

To signal a lane change, just raise or lower the lever until the arrow starts to flash. Hold it there until you complete your lane change. The lever will return by itself when you release it.

If you signal a turn or a lane change, and notice the arrow flashing rapidly, a signal bulb may be burned out and other drivers won't see your turn signal.

If a bulb is burned out, have it replaced to help avoid an accident. If the arrows don't go on at all when you signal a turn, check for burned-out bulbs and then check the fuse (see "Fuses and Circuit Breakers" in the Index).

## Headlamp High/Low Beam Changer



First, you must have the headlamps on. For high beams, push the turn signal lever away from you. When the high beams are on, this light on the instrument panel also will be on.

It will go off when you switch to the low beams. To switch back to low beams, pull the lever toward you.

## Flash-to-Pass

With the lever in the low beam position, pull the lever toward you to momentarily switch to high beams (to signal that you are going to pass). If you have the headlamps on when you release the lever, they will return to the low beams.

## Windshield Wiper/Washer Lever



The lever on the right side of the steering column controls the windshield wipers and washer.

Move the lever to the position you want:

**OFF:** The wipers are off.

**INT:** This position provides intermittent windshield wiper operation. In light rain or snow, you might want to use this position rather than continuous wiping. You can change the time between wipes by turning the INT TIME band. Turn the band forward or rearward for a longer or shorter delay intervals.

**LO:** The wipers will run continuously at low speed.

**HI:** The wipers will run continuously at high speed.

Be sure to clear ice and snow from the wiper blades before using them. If they're frozen to the windshield, carefully loosen or thaw them. If your blades do become damaged, get new blades or blade inserts.

Heavy snow or ice can overload your wipers. A circuit breaker will stop them until the motor cools. Clear away snow or ice to prevent an overload.

## Windshield Washer

Pull the end of the lever toward you to spray washer fluid on the windshield. The spray will continue until you release the lever. The wipers will run a few times. See "Windshield Washer Fluid" in the Index.



### **CAUTION:**

**In freezing weather, don't use your washer until the windshield is warmed. Otherwise the washer fluid can form ice on the windshield, blocking your vision.**

## Cruise Control (Option)



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

### CAUTION:

- Cruise control can be dangerous where you can't drive safely at a steady speed. So, don't 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 needless wheel spinning, and you could lose control. Don't use cruise control on slippery roads.

## Setting Cruise Control

### CAUTION:

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

1. Push the end of the cruise control lever. The CRUISE light on the instrument panel will come on.
2. Get up to the speed you want.
3. Push the lever down to SET/COAST and release it.
4. Take your foot off the accelerator pedal.

## **Resuming a Set Speed**

Suppose you set your cruise control at a desired speed and then you apply the brake. This, of course, shuts off the cruise control. But you don't need to reset it.

Unless you're going about 25 mph (40 km/h) or less or you slowed down to 10 mph (16 km/h) less than your preset speed, you can press the lever up to RES/ACC (Resume/Accelerate) for about half a second.

You'll go right back up to your chosen speed and stay there.

If your preset speed cancels out when it shouldn't, there may be a problem with your cruise control. See your dealer.

## **Increasing Speed While Using Cruise Control**

There are two ways to go to a higher speed:

- Use the accelerator pedal to get to the higher speed. Push the lever to SET/COAST and hold it for less than a second. Release the lever and the accelerator pedal. You'll now cruise at the higher speed.

- Move the cruise lever up to RES/ACC. Hold it there until you get up to the speed you want, and then release the lever. (To increase your speed in very small amounts, move the lever to RES/ACC for less than half a second and then release it. Each time you do this, your vehicle will go about 1 mph (1.6 km/h) faster.)

## **Reducing Speed While Using Cruise Control**

There are two ways to reduce your speed while using cruise control:

- Push the lever to SET/COAST until you reach the lower speed you want, then release it.
- To slow down in very small amounts, push the lever for less than half a second. Each time you do this, you'll go 1 mph (1.6 km/h) slower.

## **Passing Another Vehicle While Using Cruise Control**

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

## Using Cruise Control on Hills

How well your cruise control will work on hills depends upon your speed, load and the steepness of the hills. When going up steep hills, you may have to step on the accelerator pedal to maintain your speed. When going downhill, you may have to brake or shift to a lower gear to keep your speed down. Of course, applying the brake or downshifting to SECOND (2) or LOW (L) takes you out of cruise control. Many drivers find this to be too much trouble and don't use cruise control on steep hills.

## Ending Out of Cruise Control

There are several ways to turn off the cruise control:

- Step lightly on the brake pedal or push the clutch pedal, if you have a manual transaxle.
- Press the CRUISE ON-OFF button again or pull the lever toward you to cancel.

## Erasing Speed Memory

When you turn off the cruise control or the ignition, your cruise control set speed memory is erased.

## Exterior Lamps

### Headlamps



Turn the outside part of the lever to control the lamps. There are three positions for the lamp switch.

**OFF:** All lamps, except your Daytime Running Lamps (DRL), are off.

**CENTER:** At the middle position, the parking lamps, taillamps, license plate lamp and the instrument panel lights come on. The headlamps are off and DRL is on.

**☰☉:** The headlamps and all other operating lamps come on. DRL is off.

## Lamps On Reminder

If you turn the ignition to LOCK or ACC and leave the lamps on, you'll hear a tone when you open the driver's door.

## Daytime Running Lamps

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 your low-beam headlamps come on at a reduced brightness when the parking brake is released with the engine started, even with the lamp switch in the OFF position. They will not go off until the engine is turned off.

When you turn on the headlamp switch, your DRL will go out and your headlamps will come on. The other lamps that come on with your headlamps will also come on.

When you turn off the headlamp switch, the regular lamps will go off and your low-beam headlamps come on at the reduced brightness of DRL. DRL also comes on if you are only using the parking lamps.

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

## Automatic Light Control

Your vehicle is equipped with an automatic light sensor on top of the instrument panel, so be sure it is not covered which will cause the nighttime lights to be on continuously.

When it is dark enough outside, your ALC will turn on your low-beam headlamps at the normal brightness along with other lamps such as the taillamps, sidemarker, park lamps and instrument panel lights.

There is a 20-second delay in the transition between daytime and nighttime operation of the DRL and the ALC systems. If the light sensor senses a reduction in lighting that lasts longer than 20 seconds, it will activate the nighttime lamps. If you are driving through a parking garage, heavy overcast weather, a tunnel or fueling your vehicle in a low light area, the ALC will turn on your low-beam headlamps at a normal brightness along with the taillamps, sidemarker, park lamps and the instrument panel lights. The radio lights will be dimmer.

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

## Interior Lamps

### Instrument Panel Brightness Control



This knob controls the brightness of your instrument panel lights. Turn the knob to the right to brighten the lights or to the left to dim them.

### Dome Lamp



The dome lamp has a three-position switch.

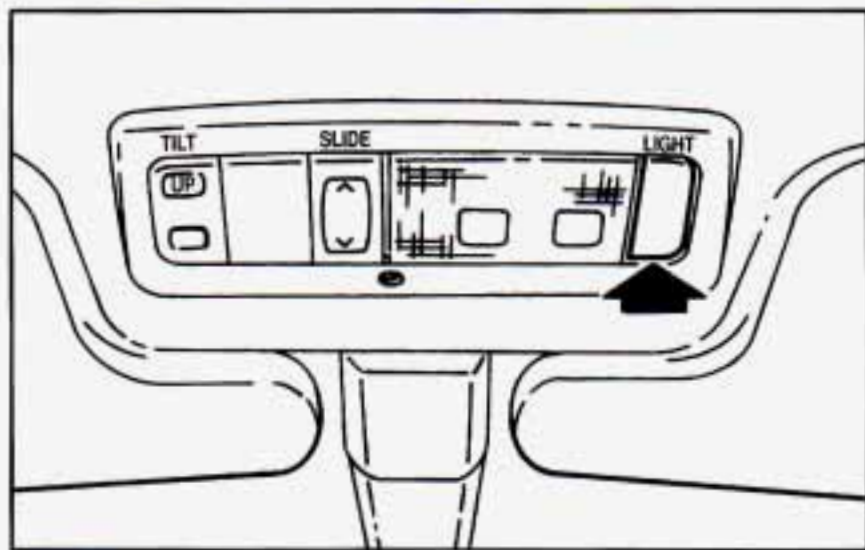
**ON:** The lamp comes on and stays on whether or not a door is open.

**OFF:** The lamp stays off even when a door is open.

**DOOR:** The lamp comes on when a door is open. After all of the doors are closed, the lamp will remain on for about 15 seconds and will then go out.



## Reading Lamp (If Equipped)



If you have a sunroof, you have a reading lamp near the sunroof switch. Press the switch to turn the lamp on and press it again to turn it off.

## Mirrors

### Inside Day/Night Rearview Mirror

An inside rearview mirror is attached to your roof. The mirror has a pivot so that you can adjust it up and down or side to side.

You can adjust the mirror for day or night driving. Pull the tab for night driving to reduce glare. Push the tab for daytime driving.

### Outside Manual Adjust Mirrors

Adjust these mirrors by rotating the lever to the left of your steering wheel so that you can just see the side of your vehicle when you are sitting in a comfortable driving position.

## Power Remote Control Mirrors (If Equipped)



The remote power mirror control is to the left of your steering wheel. To adjust either mirror, move the switch to L (left) or R (right). Then use the touch pad to adjust the mirror.

Once you have adjusted both mirrors, move the switch back to the center. This prevents moving the mirrors accidentally once you have adjusted them.

## Convex Outside Mirror

Your passenger's side mirror is convex. A convex mirror's surface is curved so you can see more from the driver's seat.



### **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.**

## **Storage Compartments**

### **Glove Box**

To open the glove box door, lift the latch. Always keep the glove box door closed while driving.

### **Door Storage Compartments**

The driver's door has a map/storage compartment. You will also have a storage compartment on the front passenger's door.

### **Instrument Panel Storage Compartment**

There is also a storage compartment located on the instrument panel below the instrument panel brightness control. Pull the top of the door toward you to open it.

## **Cupholders**

To open the cupholder, push and release the bar which is located below the audio system, then pull the cupholder out. With the cups removed, push it back in.

The cupholder cannot be used while using the ashtray.

The rear cupholder is located at the rear of the console storage area. To open the cupholder, pull on the top of the door.

### **Console Storage Area**

A small storage area is in the console between the seats. Sunglasses can be stored in the tray under the console lid.

## Ashtrays and Lighter

Pull the door to open the ashtray. To remove it, press down on the lock spring plate and pull the ashtray out.

### **NOTICE:**

**Don't put papers and other things that burn into your ashtray. If you do, cigarettes or other smoking materials could set them on fire, causing damage.**

When you are done using the ashtray, push it back to close it.

To use the lighter, push the lighter in all the way and let go. When it's ready, it will pop back by itself. If the engine is not running, the key must be in ACC to use the lighter.

### **NOTICE:**

**Don't hold a cigarette lighter in with your hand while it is heating. If you do, it won't be able to back away from the heating element when it's ready. That can make it overheat, damaging the lighter and the heating element.**

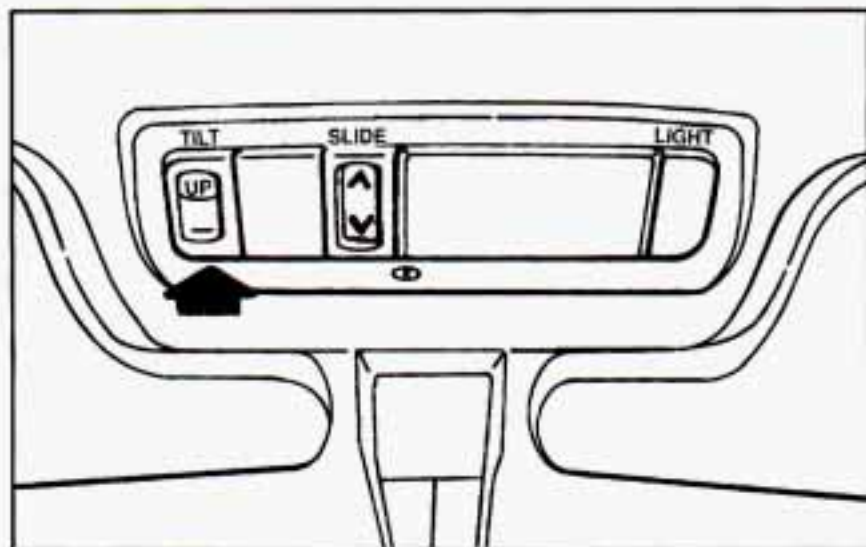
## Sun Visors

To block out glare, you can swing down the visors. You can also swing them to the side.

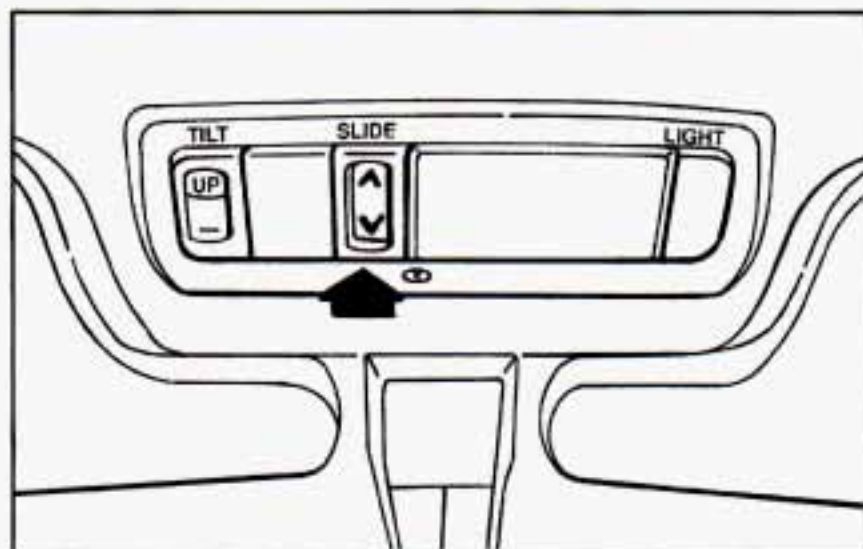
### **Visor Vanity Mirrors**

Swing down the sun visor. On the driver's side sun visor, slide the cover to expose the vanity mirror.

## Sunroof (Option)



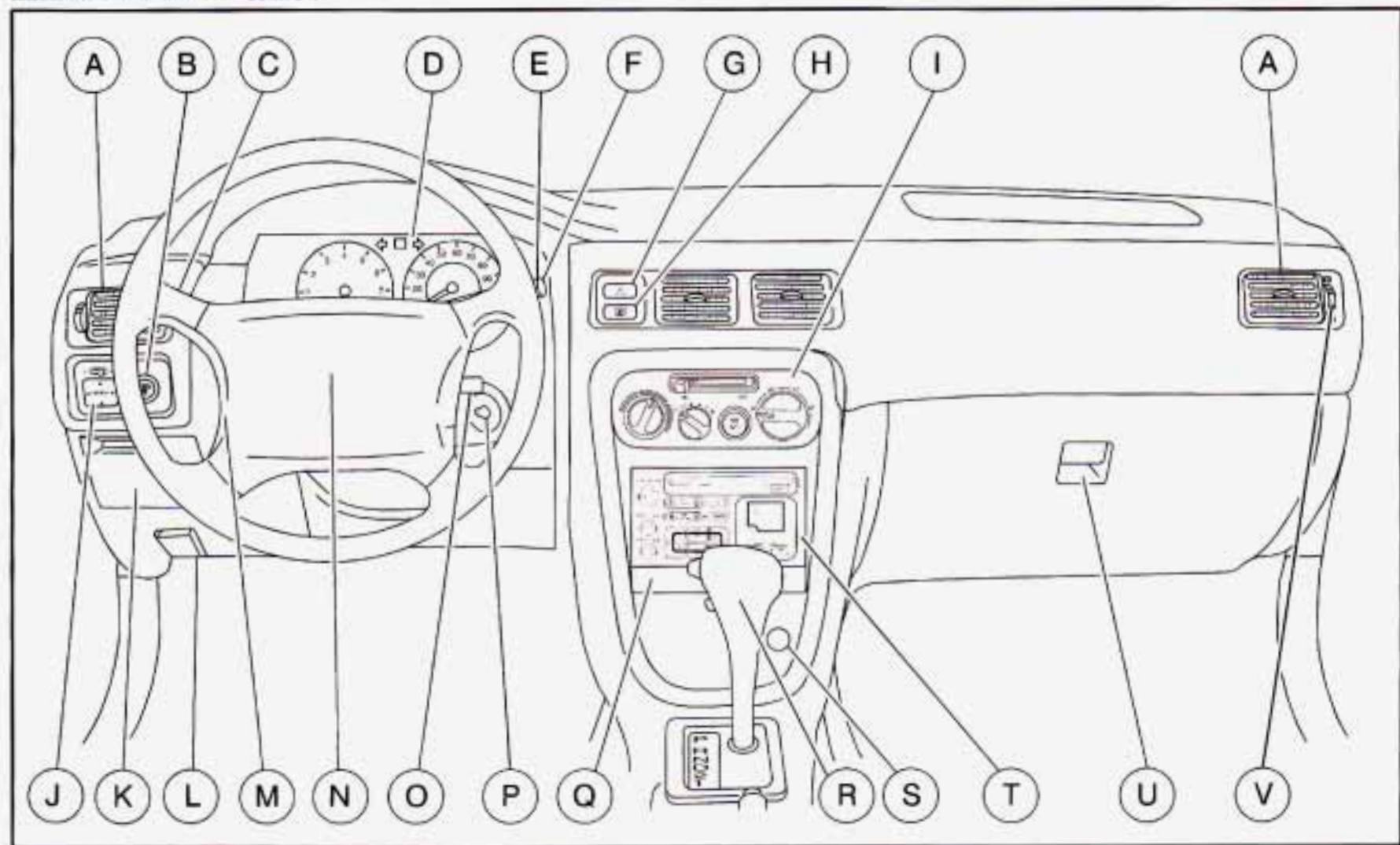
If you have a sunroof, you can tilt or open it. To tilt the sunroof, slide the sunshade rearward, then press the switch marked UP. Press the other end of the switch to lower the sunroof. Your ignition must be on for this switch to work.



To open the sunroof, push the SLIDE arrow that points to the rear of the vehicle. To close it, push the other arrow that points to the front of the vehicle. The sunroof will close partially and stop. Push the arrow again to close it completely. You can open the sunroof to any position.

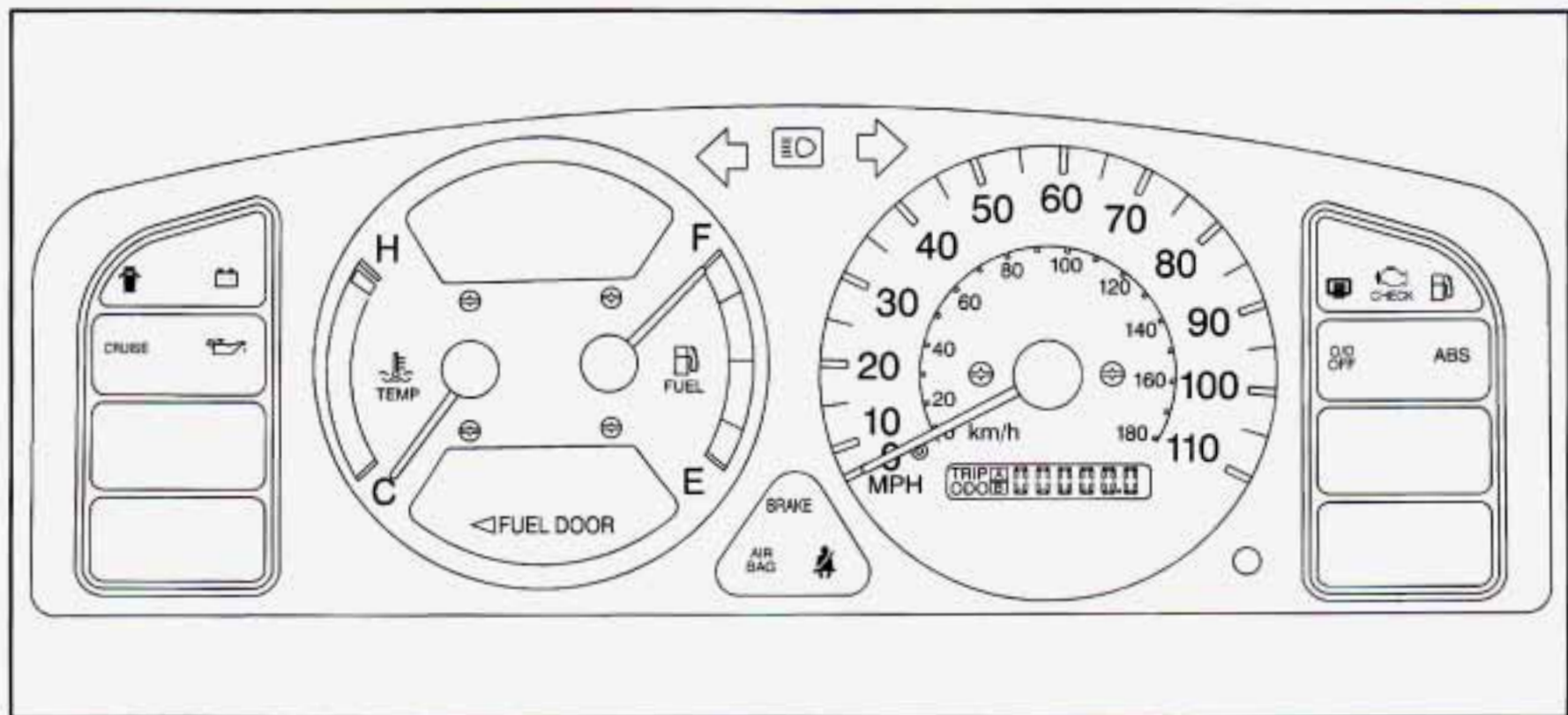
The sunshade will open when the sunroof is opened.

## Instrument Panel



- A. Air Outlets
- B. Brightness Control
- C. Turn Signal/Multifunction Lever
- D. Instrument Cluster
- E. Windshield Wiper Control
- F. Windshield Washer Button
- G. Hazard Warning Flashers
- H. Rear Window Defogger (Option)
- I. Comfort Control System
- J. Electric Mirror Control
- K. Storage Compartment and Fuse Panel Cover
- L. Hood Release
- M. Tilt Column Lever
- N. Horn
- O. Cruise Control
- P. Ignition Switch
- Q. Cupholder
- R. Shift Lever
- S. Cigarette Lighter
- T. Audio System
- U. Glove Box
- V. Vent (shut-off) Thumbwheel

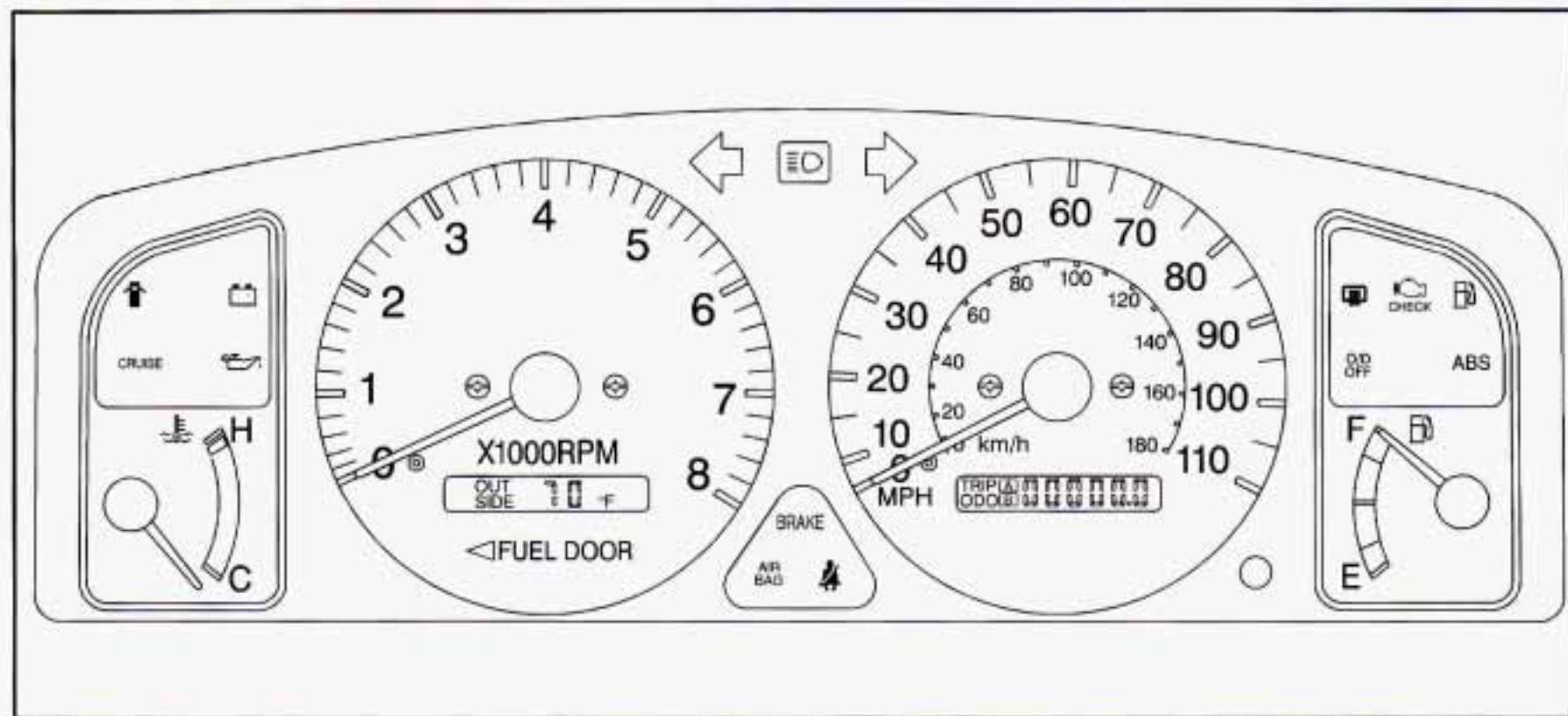
## Standard Cluster



Your instrument cluster is designed to let you know at a glance how your vehicle is running. You'll know how fast you're going, about how much fuel you have left in your fuel tank, and many other things you'll need to know to drive safely and economically.



## Optional Cluster



If you have the optional cluster, your instrument panel gives you additional information. This cluster includes a tachometer.

## Speedometer and Odometer

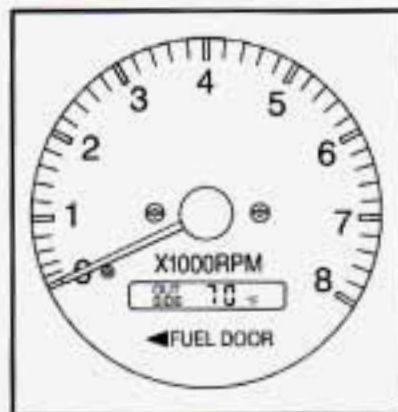
Your speedometer lets you see your speed in both miles per hour (mph) and kilometers per hour (km/h). Your odometer shows how far your vehicle has been driven, in miles.

### Trip Odometers

The trip odometers can tell you how far your vehicle has been driven since you last set the trip odometer to zero. The button located on the right side of the instrument panel cluster allows you to switch between the odometer and the two trip odometers. Press the button once to switch to TRIP A and again to switch to TRIP B. To return the display to the odometer reading press the trip odometer button again.

To reset the trip odometers to zero, press and hold the knob on the right side of the instrument panel.

## Tachometer



The tachometer shows engine speed in thousands of revolutions per minute (rpm).

### NOTICE:

**Do not operate the engine with the tachometer in the red area, or engine damage may occur.**

### Temperature Display (Option)

The outside air temperature is displayed within the tachometer face. The display will show the outside air temperature in Fahrenheit with a range from  $-22^{\circ}\text{F}$  to  $122^{\circ}\text{F}$ .

## Warning Lights, Gages and Indicators

This part 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 next few pages, some warning lights come on briefly when you start the engine just to let you know they're working. If you are familiar with this section, you should not be alarmed when this happens.

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's 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're a big help.

### Safety Belt Reminder Light

When the key is turned to ON or START, a tone will come on for about eight seconds to remind people to fasten their safety belts, unless the driver's safety belt is already buckled.



The safety belt light will also flash until the driver's belt is buckled.

If the driver's belt is already buckled, neither the tone nor the light will come on.

## Air Bag Readiness Light

There is an air bag readiness light on the instrument panel, which shows the words AIR BAG. The system checks the air bag's electrical system for malfunctions. The light tells you if there is an electrical problem. The system check includes the air bag sensors, the air bag modules, the wiring and the diagnostic module. For more information on the air bag system, see "Air Bag" in the Index.

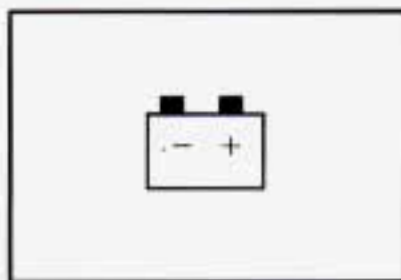


This light will come on for a few seconds when you start your engine. Then the light should go out. This means the system is ready.

If the air bag readiness light stays on after you start the engine or comes on when you are driving, your air bag system may not work properly. If the light comes on and flashes, your side impact air bag system or safety belt pretensioner system may not work properly. Have your vehicle serviced right away.

The air bag readiness light should come on for a few seconds when you turn the ignition key to ON. If the light doesn't come on then, have it fixed so it will be ready to warn you if there is a problem.

## Charging System Light



This light will come on briefly when you turn on the ignition, but the engine is not running, as a check to show you it is working. Then it should go out when the engine starts.

If it stays on, or comes on while you are driving, you may have a problem with the electrical charging system. It could indicate that you have a loose generator drive belt or another electrical problem. Have it checked right away. Driving while this light is on could drain your battery.

If you must drive a short distance with the charging system light on, be certain to turn off all your 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 isn't working, the other part can still work and stop you. For good braking, though, you need both parts working well.

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



**BRAKE**

This light should come on when you turn the key to START. If it doesn't come on then, have it fixed so it will be ready to warn you if there's a problem.

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, or if the anti-lock brake system warning light is flashing, have the vehicle towed for service. (See "Anti-Lock Brake System Warning Light" and "Towing Your Vehicle" in the Index.)



### **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 or if the anti-lock brake system warning light is flashing after you've pulled off the road and stopped carefully, have the vehicle towed for service.**

When the ignition is on, the brake system warning light will also come on when you set your parking brake. The light will stay on if your parking brake doesn't release fully. If it stays on after your parking brake is fully released, it means you have a brake problem.

## Anti-Lock Brake System Warning Light (Option)



ABS

With the anti-lock brake system, this light will come on when you start your engine and it will stay on for three seconds. That's normal.

If the light flashes when you're driving, you don't have anti-lock brakes and there could be a problem with your regular brakes. 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. Have the vehicle towed for service. (See "Towing Your Vehicle" in the Index.)

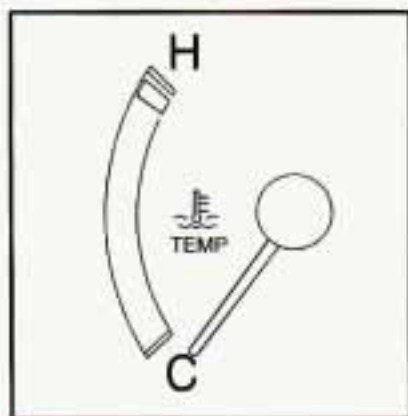
### CAUTION:

**Your regular brake system may not be working properly if the anti-lock brake system warning light is flashing. Driving with the anti-lock brake system warning light flashing can lead to an accident. After you've pulled off the road and stopped carefully, have the vehicle towed for service.**

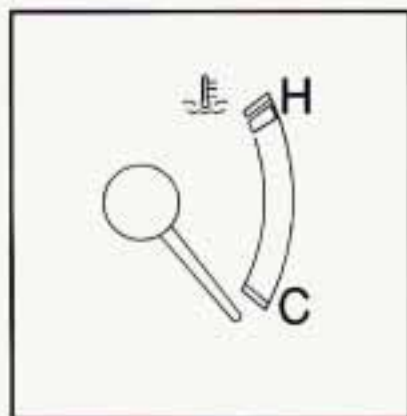
If the anti-lock brake system warning light stays on longer than normal after you've started your engine, turn the ignition off. Or, if the light comes on and stays on when you're driving, stop as soon as possible and turn the ignition off. Then start the engine again to reset the system. If the light still stays on, or comes on again while you're driving, your vehicle needs service. If the light is on but not flashing and the regular brake system warning light isn't on, you still have brakes, but you don't have anti-lock brakes.

The anti-lock brake system warning light should come on briefly when you turn the ignition key to ON. If the light doesn't come on then, have it fixed so it will be ready to warn you if there is a problem.

## Engine Coolant Temperature Gage



**Standard Cluster**



**Optional Cluster**

This gage shows the engine coolant temperature. If the gage pointer moves into the red area, your engine is too hot! It means that your engine coolant has overheated. If you have been operating your vehicle under normal driving conditions, you should pull off the road, stop your vehicle and turn off the engine as soon as possible.

In "Problems on the Road," this manual shows what to do. See "Engine Overheating" in the Index.

## Malfunction Indicator Lamp (Check Engine Light)



Your vehicle is equipped with a computer which monitors operation of the fuel, ignition and emission control systems.

This system is called OBD II (On-Board Diagnostics-Second Generation) and is intended to assure that emissions are at acceptable levels for the life of the vehicle, helping to produce a cleaner environment. The CHECK ENGINE light comes on to indicate that there is a problem and service is required. Malfunctions often will be indicated by the system before any problem is apparent. This may prevent more serious damage to your vehicle. This system is also designed to assist your service technician in correctly diagnosing any malfunction.

## NOTICE:

**If you keep driving your vehicle with this light on, after a while, your emission controls may not work as well, your fuel economy may not be as good and your engine may not run as smoothly. This could lead to costly repairs that may not be covered by your warranty.**

This light should come on, as a check to show you it is working, when the ignition is on and the engine is not running. If the light doesn't come on, have it repaired. This light will also come on during a malfunction in one of two ways:

- **Light Flashing** -- A misfire condition has been detected. A misfire increases vehicle emissions and may damage the emission control system on your vehicle. Dealer or qualified service center diagnosis and service may be required.
- **Light On Steady** -- An emission control system malfunction has been detected on your vehicle. Dealer or qualified service center diagnosis and service may be required.

### **If the Light Is Flashing**

The following may prevent more serious damage to your vehicle:

- Reducing vehicle speed.
- Avoiding hard accelerations.
- Avoiding steep uphill grades.
- If you are towing a trailer, reduce the amount of cargo being hauled as soon as it is possible.

If the light stops flashing and remains on steady, see "If the Light Is On Steady" following.

If the light continues to flash, when it is safe to do so, *stop the vehicle*. Find a safe place to park your vehicle. Turn the key off, wait at least 10 seconds and restart the engine. If the light remains on steady, see "If the Light Is On Steady" following. If the light is still flashing, follow the previous steps, and drive the vehicle to your dealer or qualified service center for service.



## **If the Light Is On Steady**

You may be able to correct the emission system malfunction by considering the following:

Did you recently put fuel into your vehicle?

If so, reinstall the fuel cap, making sure to fully install the cap. The diagnostic system can determine if the fuel cap has been left off or improperly installed. A loose or missing fuel cap will allow fuel to evaporate into the atmosphere. A few driving trips with the cap properly installed should turn the light off.

Did you just drive through a deep puddle of water?

If so, your electrical system may be wet. The condition will usually be corrected when the electrical system dries out. A few driving trips should turn the light off.

Are you low on fuel?

As your engine starts to run out of fuel, your engine may not run as efficiently as designed since small amounts of air are sucked into the fuel line causing a misfire. The system can detect this. Adding fuel should correct this condition. Make sure to install the fuel cap properly. It will take a few driving trips to turn the light off.

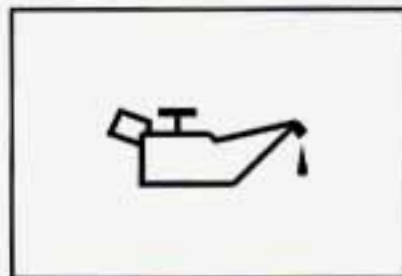
Have you recently changed brands of fuel?

If so, be sure to fuel your vehicle with quality fuel (see "Fuel" in the Index). Poor fuel quality will cause your engine not to run as efficiently as designed. You may notice this as stalling after start-up, stalling when you put the vehicle into gear, misfiring, hesitation on acceleration or stumbling on acceleration. (These conditions may go away once the engine is warmed up.) This will be detected by the system and cause the light to turn on.

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

If none of the above steps have made the light turn off, have your dealer or qualified service center check the vehicle. Your dealer has the proper test equipment and diagnostic tools to fix any mechanical or electrical problems that may have developed.

## Engine Oil Pressure Light



If you have a problem with your oil, this light may stay on after you start your engine or come on when you are driving.

This indicates that there is not enough oil pressure to keep your engine properly lubricated and cool.

The engine could be low on oil, or have some other oil related problem. Have it fixed right away.

The oil light could also come on in three other situations.

- When the ignition is on but the engine is not running, the light will come on as a test to show you it is working, but the light will go out when you turn the ignition to START. If it doesn't come on with the ignition on, you may have a problem with the fuse or bulb. Have it fixed right away.

- Sometimes when the engine is idling at a stop, the light may blink on and off. This is normal.
- If you make a hard stop, the light may come on for a moment. This is normal.



### CAUTION:

**Don't keep driving if the oil pressure is low. If you do, your engine can become so hot that it catches fire. You or others could be burned. Check your oil as soon as possible and have your vehicle serviced.**

### NOTICE:

**Damage to your engine from neglected oil problems can be costly and is not covered by your warranty.**

## Cruise Light (Option)



The CRUISE light comes on whenever you set your cruise control.

If this light flashes while using the cruise control, turn the cruise control off and then on.

If you cannot set the cruise control, or if the cruise control is cancelled, there may be a problem with your cruise control system. See your dealer for service.

## Overdrive Off Light



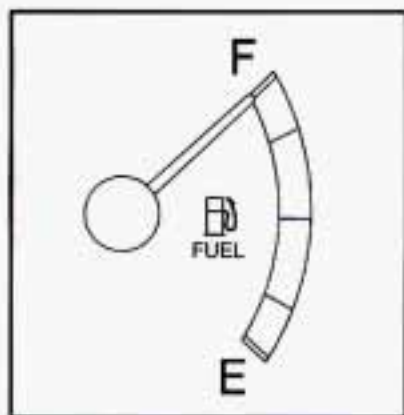
If you have an automatic transaxle with OVERDRIVE, this light appears on your instrument cluster. The light will come on whenever you turn off the OVERDRIVE. See "Overdrive" in the Index.

## Rear Window Defogger Light

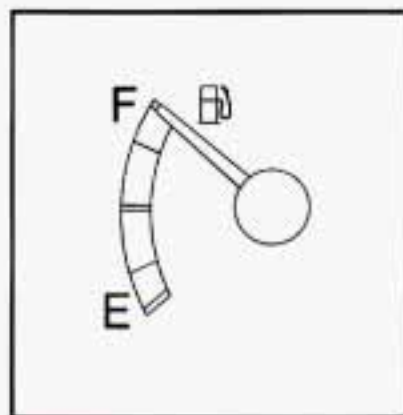


This light will come on whenever the rear window defogger is on. See "Rear Window Defogger" in the Index.

## Fuel Gage



**Standard Cluster**



**Optional Cluster**

Your fuel gage shows about how much fuel is in your tank. The fuel gage works only when the ignition switch is ON. When the gage first indicates E (EMPTY), you still have a little fuel left (about 1 or 2 gallons/3.8 L or 7.6 L) but you need to get more right away. When your vehicle is low on fuel the low fuel warning light will also come on to remind you to add fuel.

Here are five concerns some owners have had about the fuel gage. All these situations are normal and do not indicate that anything is wrong with the fuel gage.

- At the gas station, the fuel pump shuts off before the gage reads F (FULL).
- It takes the gage several minutes to read F (FULL) after filling the vehicle with fuel.
- It takes more (or less) fuel to fill up than the gage reads. For example, the gage reads half full, but it took more (or less) than half of the tank's capacity to fill it.
- The gage moves a little when you turn, stop or speed up.
- When you turn the engine off, the gage doesn't go back to E (EMPTY).

 **NOTES**

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## Section 3 Comfort Controls and Audio Systems

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In this section, you'll find out how to operate the comfort control and audio systems offered with your vehicle. Be sure to read about the particular systems supplied with your vehicle.

3-2	Comfort Controls	3-11	AM-FM Stereo with Compact Disc Player and Automatic Tone Control (If Equipped)
3-3	Air Conditioner Controls (Option)	3-14	Understanding Radio Reception
3-3	Heating	3-14	Tips About Your Audio System
3-4	Ventilation System	3-15	Care of Your Cassette Tape Player
3-5	Defogging and Defrosting	3-17	Care of Your Compact Discs
3-6	Audio Systems	3-17	Care of Your Compact Disc Player
3-6	Setting the Clock	3-17	Fixed Mast Antenna
3-6	AM-FM Stereo (If Equipped)		
3-8	AM-FM Stereo with Cassette Tape Player and Automatic Tone Control (If Equipped)		

## Comfort Controls


With this system, you can control the heating and ventilation in your vehicle. If you have the air conditioning option, you can also control cooling.


Your vehicle also has the flow-through ventilation system described later in this section.


## Climate Control System





### Airflow Knob

 **VENT:** This position directs the airflow through the instrument panel vents.

 **BI-LEVEL:** This position directs the airflow through the instrument panel vents and toward the floor.

 **FLOOR:** This position directs the airflow toward the floor.

 **DEFOG:** This position directs the airflow toward the floor and the windshield.

 **DEFROST:** This position directs the airflow to the windshield.

### Fan Knob


Turn the knob away from OFF to turn the system on. Turn the knob toward HI to increase the fan's speed.


### Temperature Knob

Turn the knob to change the temperature of the air flowing from the system. Turn the knob to the right to increase the temperature. Turn the knob to the left to decrease the temperature. The air temperature can't be less than the outside air temperature.



## Air Intake Lever

 **RECIRCULATE:** Choose this position to recirculate the inside air through the comfort control system.

 **CIRCULATE:** Choose this position to circulate outside air through the comfort control system.

## Air Conditioner Controls (Option)

The air conditioning system uses the same controls as described previously.

The function of each control is explained under “Climate Control System” in this part. The incoming air is cooled and dehumidified instead of being heated.

Push the A/C button to change your comfort control system from heating to air conditioning. A light will come on when the air conditioning is on. The A/C button can also control the humidity in your vehicle.

The air conditioner works best if you keep your windows closed. On very hot days, open the windows just long enough for the hot air to escape.

For normal cooling, push the A/C button and move the air intake lever to CIRCULATE for normal cooling. For

faster cooling, move the lever to RECIRCULATE. Then move the airflow knob to VENT and turn the temperature control knob to the left. Turn the fan knob to HI.

On days when it is raining or the humidity is high, follow these dehumidifying steps instead of the cooling directions. It will help clean windows that are cloudy with moisture.

Move the air intake lever to CIRCULATE and turn the airflow knob to DEFROST. Turn the fan knob to HI and adjust the temperature knob to a comfortable setting.

## Heating

For the quickest results, move the air intake lever to RECIRCULATE and the airflow knob to FLOOR. Turn the temperature knob to the right for warmer air and turn the fan knob toward HI. You should switch to CIRCULATE once in a while to avoid stale air and cloudy windows. To prevent cold air from blowing in, you may shut off the outer dash vents by using the thumbwheels.

## Bi-Level

You may want to use bi-level heating on cool, but sunny days. This setting directs outside air toward your body and warmer air toward your feet.

Move the air intake lever to CIRCULATE and turn the airflow knob to BI-LEVEL. Turn the temperature knob to the white area and the fan knob toward HI.

## Ventilation System

For mild outside temperatures, when very little heating is required, you can still direct outside air through your vehicle.

Move the air intake lever to CIRCULATE and turn the airflow knob to VENT. Turn the temperature knob to a comfortable setting and the fan knob toward HI.

Airflow through the side vents is normal in all airflow modes. To optimize the effectiveness of your system in FLOOR, DEFOG, or DEFROST modes, turn the outboard vent (shut-off) thumbwheels down to the closed position.

Your vehicle's flow-through ventilation system supplies outside air into the vehicle when it is moving. Outside air will also enter the vehicle when the heater or the air conditioning fan is running and the air intake lever is at CIRCULATE.



Adjust the direction of airflow by moving the louvered vents.

### Ventilation Tips

- Keep the hood and front air inlet free of ice, snow or any other obstruction (such as leaves). The heater and defroster will work far better, reducing the chance of fogging the inside of your windows.

- When you enter a vehicle in cold weather, move the fan lever toward HI for a few moments before driving off. This helps clear the intake ducts of snow and moisture, and reduces the chance of fogging the inside of your windows.
- Keep the air path under the front seats clear of objects. This helps air to circulate throughout your vehicle.
- Shut off outboard dash vents to keep cold air from blowing in.

## Defogging and Defrosting

Move the air intake lever to CIRCULATE and turn the airflow knob to DEFROST to direct air to the windshield vents. The air conditioner is automatically turned on. Turn the temperature knob to the right and the fan knob toward HI.

When the windshield is clear, turn down the fan speed.

To defog the windshield and side windows, turn the airflow knob to DEFROST.

## Rear Window Defogger (Option)



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

Press the switch to turn on the defogger. The defogger will stay on for about 15 minutes, then it will shut off automatically. You can also turn it off by pressing the switch again. Use it only when the engine is running. Make sure you turn the defogger off when the window is clear. Leaving the defogger on for a long time could cause the battery to run down, especially during stop-and-go driving. The defogger is not designed for drying water or melting snow.

Do not attach anything like a temporary vehicle license or a decal across the defogger grid on the rear window.

## NOTICE:

Don't use a razor blade or something else sharp on the inside of the rear window. If you do, you could cut or damage the warming grid, and the repairs wouldn't be covered by your warranty.

## Audio Systems

Your Delco Electronics audio system has been designed to operate easily and give years of listening pleasure. You will get the most enjoyment out of it if you acquaint yourself with it first. Find out what your Delco Electronics system can do and how to operate all its controls, to be sure you're getting the most out of the advanced engineering that went into it.

### Setting the Clock

Press and hold **RECALL (TIME SET)** to set the correct hour. At the same time, press and hold the **TUNE** left arrow (H) until the correct hour appears.

Press and hold **RECALL (TIME SET)** to set the correct minute. At the same time, press and hold the **TUNE** right arrow (M) until the correct minute appears.

## AM-FM Stereo (If Equipped)



### Playing the Radio

**PWR-VOLUME:** This knob turns the system on and off and controls the volume. To increase volume and turn the radio on, turn the knob to the right. Turn it to the left to decrease volume.

**RECALL:** Display the time with the ignition off by pressing this button. When the radio is playing, press this button to recall the station frequency.

## Finding a Station

**AM-FM:** Press this button to switch between AM and FM. The display shows your selection.

**TUNE:** Press the right or left arrows to go to a higher or lower station. Press and hold to continue tuning and release when you find your station. The display will show the frequency of each station tuned.

**SEEK:** Press the right or left arrow to go to the next higher or lower station and stay there.

**PUSHBUTTONS:** The six numbered pushbuttons let you return to your previously played stations. You can set up to 12 stations (six AM and six FM). Just:

1. Turn the radio on.
2. Press AM-FM to select the band.
3. Tune in the desired station.
4. Press one of the six pushbuttons for at least two seconds. The sound will mute and then return when the station is stored. Whenever you press that numbered button, the station you set will return.
5. Repeat the steps for each pushbutton.

## Setting the Tone

**BASS:** Press this knob lightly so it extends. Turn the knob to the right to increase bass and to the left to decrease bass.

**TREB:** Press this knob lightly so it extends. Turn the knob to the right to increase treble and to the left to decrease treble. If a station is weak or noisy, you may want to decrease the treble.

Push these knobs back into their stored positions when you're not using them.

## Adjusting the Speakers

**BAL:** Press this knob lightly so it extends. Then pull the knob all the way out. Turn the knob to the right for the right speakers and to the left for the left speakers. The middle position balances the sound between the speakers.

**FADE:** Press this knob lightly so it extends. Then pull the knob all the way out. Turn the knob to the right to adjust the sound to the rear speakers and to the left for the front speakers. The middle position balances the sound between the speakers.

Push these knobs back into their stored positions when you're not using them.

## AM-FM Stereo with Cassette Tape Player and Automatic Tone Control (If Equipped)



### Playing the Radio

**PWR-VOLUME:** This knob turns the system on and off and controls the volume. To increase volume and turn the radio on, turn the knob to the right. Turn it to the left to decrease volume.

**RECALL:** Display the time with the ignition off by pressing this button. When the radio is playing, press this button to recall the station frequency.

### Finding a Station

**AM-FM:** Press this button to switch between AM, FM1 and FM2. The display shows your selection.

**TUNE:** Press the right or left arrows to go to a higher or lower station. Press and hold to continue tuning and release when you find your station. The display will show the frequency of each station tuned.

**SEEK:** Press the right or left arrow to go to the next higher or lower station and stay there.

**PUSHBUTTONS:** The six numbered pushbuttons let you return to your previously played stations. You can set up to 18 stations (six AM, six FM1 and six FM2). Just:

1. Turn the radio on.
2. Press AM-FM to select the band.
3. Tune in the desired station.
4. Press one of the six pushbuttons for at least two seconds. The sound will mute and then return when the station is stored. Whenever you press that numbered button, the station you set will return.
5. Repeat the steps for each pushbutton.

## Setting the Tone

**BASS:** Press this knob lightly so it extends. Turn the knob to the right to increase bass and to the left to decrease bass.

**TREB:** Press this knob lightly so it extends. Turn the knob to the right to increase treble and to the left to decrease treble. If a station is weak or noisy, you may want to decrease the treble.

Push these knobs back into their stored positions when you're not using them.

**TONE:** Press this button to choose preset bass and treble equalization settings designed for ROCK, NEWS, POP, JAZZ and CLASSIC. ROCK will appear when you first press TONE. Each time you press it, another setting will appear on the display. If you press it one more time, after CLASSIC appears on the display, tone control will be back to the BASS and TREB knobs.

## Adjusting the Speakers

**BAL:** Press this knob lightly so it extends. Then pull the knob all the way out. Turn the knob to the right for the right speakers and to the left for the left speakers. The middle position balances the sound between the speakers.

**FADE:** Press this knob lightly so it extends. Then pull the knob all the way out. Turn the knob to the right to adjust the sound to the rear speakers and to the left for the front speakers. The middle position balances the sound between the speakers.

Push these knobs back into their stored positions when you're not using them.

## Playing a Cassette Tape

With the ignition and radio on, insert a cassette tape. The tape will begin playing as soon as it is inserted. Press EJECT or RECALL to load a tape with the ignition off. Then insert the cassette tape. A tape symbol is shown in the center of the graphic display whenever a tape is inserted. When a tape is active, the tape symbol will be accompanied by a direction arrow.

Your tape player is built to work best with tapes that are 30 to 45 minutes long on each side. Tapes longer than that are so thin they may not work well in this player.

The longer side with the tape visible should face to the right. If you hear nothing or hear just a garbled sound, it may not be in squarely. Press EJECT to remove the tape and start over.

While the tape is playing, use the VOLUME, FADE, BAL, TREB, BASS and TONE controls just as you do for the radio. The display will show an arrow to show which side of the tape is playing. When the down indicator arrow is lit, selections listed on the bottom side of the cassette are playing. When the up arrow is lit, selections listed on the top side of the cassette are playing.

**REV (TUNE):** Press the left arrows to reverse the tape rapidly. Press REV (TUNE) or TAPE to return to playing speed.

**FWD (TUNE):** Press the right arrows to advance rapidly to another part of the tape. Press FWD (TUNE) or TAPE to return to playing speed.

**PREV (SEEK):** Press the left arrow to go to the start of the current selection if more than eight seconds have played. If you hold the button or press it more than once, the player will continue moving back through the tape. Press the left arrow or TAPE to return to playing speed.

**NEXT (SEEK):** Press the right arrow to go to the start of the next selection if more than eight seconds have played. If you hold the button or press it more than once, the player will continue moving forward through the tape. Press the right arrow or TAPE to return to playing speed.

**□□ (2):** Press this button to reduce background noise from tapes encoded with Dolby NR.

Dolby Noise Reduction is manufactured under a license from Dolby Laboratories Licensing Corporation. Dolby and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

**MTL:** Your bias is set automatically. MTL will appear on your display when a metal or chrome tape is inserted.

**AM-FM:** Press this button to play the radio when a tape is playing.



**TAPE:** With a tape loaded in the player and the radio playing, press this button once to play the tape. To switch from the tape to the radio when the tape is playing, press the AM-FM button. Press this button to switch from one side of the tape to the other. Your cassette tape player can play continuously because the player has an auto-reverse feature.

**EJECT:** Press this button to remove the tape. The radio will play.

**CLEAN:** If this message appears on the display, the cassette tape player needs to be cleaned. It will still play tapes, but you should clean it as soon as possible to prevent damage to the tapes and player. See "Care of Your Cassette Tape Player" in the Index. After you clean the player, press and hold EJECT for five seconds to reset the CLEAN indicator. The radio will display --- to show the indicator was reset.

## AM-FM Stereo with Compact Disc Player and Automatic Tone Control (If Equipped)



### Playing the Radio

**PWR-VOLUME:** This knob turns the system on and off and controls the volume. To increase volume and turn the radio on, turn the knob to the right. Turn it to the left to decrease volume.

**RECALL:** Display the time with the ignition off by pressing this button. When the radio is playing, press this button to recall the station frequency.

## Finding a Station

**AM·FM:** Press this button to switch between AM, FM1 and FM2. The display shows your selection.

**TUNE:** Press the right or left arrows to go to a higher or lower station. Press and hold to continue tuning and release when you find your station. The display will show the frequency of each station tuned.

**SEEK:** Press the right or left arrow to go to the next higher or lower station and stay there.

**PUSHBUTTONS:** The six numbered pushbuttons let you return to your previously played stations. You can set up to 18 stations (six AM, six FM1 and six FM2). Just:

1. Turn the radio on.
2. Press AM·FM to select the band.
3. Tune in the desired station.
4. Press one of the six pushbuttons for at least two seconds. The sound will mute and then return when the station is stored. Whenever you press that numbered button, the station you set will return.
5. Repeat the steps for each pushbutton.

## Setting the Tone

**BASS:** Press this knob lightly so it extends. Turn the knob to the right to increase bass and to the left to decrease bass.

**TREB:** Press this knob lightly so it extends. Turn the knob to the right to increase treble and to the left to decrease treble. If a station is weak or noisy, you may want to decrease the treble.

Push these knobs back into their stored positions when you're not using them.

**TONE:** Press this button to choose preset bass and treble equalization settings designed for ROCK, NEWS, POP, JAZZ and CLASSIC. ROCK will appear when you first press TONE. Each time you press it, another setting will appear on the display. If you press it one more time, after CLASSIC appears on the display, tone control will be back to the BASS and TREB knobs.

## Adjusting the Speakers

**BAL:** Press this knob lightly so it extends. Then pull the knob all the way out. Turn the knob to the right for the right speakers and to the left for the left speakers. The middle position balances the sound between the speakers.

**FADE:** Press this knob lightly so it extends. Then pull the knob all the way out. Turn the knob to the right to adjust the sound to the rear speakers and to the left for the front speakers. The middle position balances the sound between the speakers.

Push these knobs back into their stored positions when you're not using them.

### Playing a Compact Disc

With the radio on, insert a disc into the CD slot, label side up. The player will pull it in. The disc should begin playing. A CD symbol is shown in the center of the graphic display whenever a disc is inserted.

Don't use the smaller discs (three-inch singles). They won't eject. Use full-size compact discs.

If you're driving on a very rough road or if it's very hot, the disc may not play and Err (error) may appear on the display. Press **RECALL** to take Err off the display. When things get back to normal, the disc should play. If the disc comes out, it could be that:

- The disc is upside down. The player will not pull the disc in.
- It is dirty, scratched or wet.
- It is very humid. (If so, wait about an hour and try again.)

While the CD is playing, use the **VOLUME**, **FADE**, **BAL.**, **TREB**, **BASS** and **TONE** controls just as you do for the radio. The CD player automatically begins playing again when it reaches the end of the disc.

A disc that has been ejected but is still sitting in the CD player will be pulled back into the player after approximately 30 seconds. This protects the disc and player from damage. The disc will not start playing. To remove the disc, press the **EJECT** button and remove the disc from the player.

**REV (TUNE):** Press and hold the left arrows to reverse rapidly within a track. Release it to resume playing.

**FWD (TUNE):** Press and hold the right arrows to advance rapidly within a track. Release it to resume playing.

**TRACK (SEEK):** Press the left arrow to go to the start of the current track if more than eight seconds have played. If you hold the button or press it more than once, the player will continue moving back through the disc. Press the right arrow to go to the start of the next track if more than eight seconds have played. If you hold the button or press it more than once, the player will continue moving forward through the disc.

**RAND (2):** Press this button to hear the tracks in random, rather than sequential, order. Press RAND or RPT again to turn off random play.

**RPT (5):** Press this button once to hear a selection over again. The current track will continue to repeat. Press RPT, AM-FM, RAND, or the TRACK (SEEK) right or left arrow to turn off repeated play.

**RECALL:** Press this button to see which track is playing. Press RECALL again, within five seconds, to see how long it has been playing (elapsed time). The track number also appears when the disc is inserted or you change the volume.

**AM-FM:** Press this button to play the radio when a disc is playing. The disc will stop but remain in the player.

**CD:** With a disc loaded in the player and the radio playing, press this button once to play the compact disc.

**EJECT:** Press this button to remove the disc. The radio will play. The disc will start at the first track when you reinsert it.

## Understanding Radio Reception

### AM

The range for most AM stations is greater than for FM, especially at night. The longer range, however, can cause stations to interfere with each other. AM can pick up noise from things like storms and power lines. Try reducing the treble to reduce this noise if you ever get it.

### FM Stereo

FM stereo will give you the best sound, but FM signals will reach only about 10 to 40 miles (16 to 65 km). Tall buildings or hills can interfere with FM signals, causing the sound to come and go.

## Tips About Your Audio System

Hearing damage from loud noise is almost undetectable until it is too late. Your hearing can adapt to higher volumes of sound. Sound that seems normal can be loud and harmful to your hearing. Take precautions by adjusting the volume control on your radio to a safe sound level before your hearing adapts to it.

To help avoid hearing loss or damage:

- Adjust the volume control to the lowest setting.
- Increase volume slowly until you hear comfortably and clearly.

## **NOTICE:**

**Before you add any sound equipment to your vehicle -- like a tape player, CB radio, mobile telephone or two-way radio -- be sure you can add what you want. If you can, it's very important to do it properly. Added sound equipment may interfere with the operation of your vehicle's engine, Delco Electronics radio or other systems, and even damage them. Your vehicle's systems may interfere with the operation of sound equipment that has been added improperly.**

**So, before adding sound equipment, check with your dealer and be sure to check Federal rules covering mobile radio and telephone units.**

A tape player that is not cleaned regularly can cause reduced sound quality, ruined cassettes or a damaged mechanism. Cassette tapes should be stored in their cases away from contaminants, direct sunlight and extreme heat. If they aren't, they may not operate properly or may cause failure of the tape player.

Your tape player should be cleaned regularly after every 50 hours of use. Your radio may display CLEAN to indicate that you have used your tape player for 50 hours without resetting the tape clean timer. If this message appears on the display, your cassette tape player needs to be cleaned. It will still play tapes, but you should clean it as soon as possible to prevent damage to your tapes and player. If you notice a reduction in sound quality, try a known good cassette to see if it is the tape or the tape player at fault. If this other cassette has no improvement in sound quality, clean the tape player.

The recommended cleaning method for your cassette tape player is the use of a scrubbing action, non-abrasive cleaning cassette with pads which scrub the tape head as the hubs of the cleaner cassette turn. The recommended cleaning cassette is available through your dealership (GM Part No. 12344789).

When using a scrubbing action, non-abrasive cleaning cassette, it is normal for the cassette to eject because your unit is equipped with a cut tape detection feature and a cleaning cassette may appear as a broken tape. To prevent the cleaning cassette from being ejected, use the following steps.

1. Turn the ignition to RUN or ACCESSORY.
2. Turn the radio off.
3. Press and hold the TAPE button for five seconds. The tape symbol on the display will flash for two seconds.
4. Insert the scrubbing action cleaning cassette.
5. Eject the cleaning cassette after the manufacturer's recommended cleaning time.

When the cleaning cassette has been ejected, the cut tape detection feature is active again.

You may also choose a non-scrubbing action, wet-type cleaner which uses a cassette with a fabric belt to clean the tape head. This type of cleaning cassette will not eject on its own. A non-scrubbing action cleaner may not clean as thoroughly as the scrubbing type cleaner. The use of a non-scrubbing action, dry-type cleaning cassette is not recommended.

After you clean the player, press and hold EJECT for five seconds to reset the CLEAN indicator. The radio will display --- to show the indicator was reset.

Cassettes are subject to wear and the sound quality may degrade over time. Always make sure the cassette tape is in good condition before you have your tape player serviced.

## **Care of Your Compact Discs**

Handle discs carefully. Store them in their original cases or other protective cases and away from direct sunlight and dust. If the surface of a disc is soiled, dampen a clean, soft cloth in a mild, neutral detergent solution and clean it, wiping from the center to the edge.

Be sure never to touch the signal surface when handling discs. Pick up discs by grasping the outer edges or the edge of the hole and the outer edge.

## **Care of Your Compact Disc Player**

The use of CD lens cleaner discs is not advised, due to the risk of contaminating the lens of the CD optics with lubricants internal to the CD mechanism.

## **Fixed Mast Antenna**

The fixed mast antenna can withstand most car washes without being damaged. If the mast should ever become slightly bent, you can straighten it out by hand. If the mast is badly bent, as it might be by vandals, you should replace it.

Check every once in a while to be sure the mast is still tightened to the rear quarter panel.

 **NOTES**





## Section 4 Your Driving and the Road

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Here you'll find information about driving on different kinds of roads and in varying weather conditions. We've also included many other useful tips on driving.

4-2	Defensive Driving	4-16	Driving in Rain and on Wet Roads
4-3	Drunken Driving	4-19	City Driving
4-6	Control of a Vehicle	4-20	Freeway Driving
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## Defensive Driving

The best advice anyone can give about driving is:  
Drive defensively.

Please start with a very important safety device in your Chevrolet: Buckle up. (See "Safety Belts" in the Index.)

Defensive driving really means "be ready for anything." On city streets, rural roads or freeways, it means "always expect the unexpected."

Assume that pedestrians or other drivers are going to be careless and make mistakes. Anticipate what they might do. Be ready for their mistakes.

Rear-end collisions are about the most preventable of accidents. Yet they are common. Allow enough following distance. It's the best defensive driving maneuver, in both city and rural driving. You never know when the vehicle in front of you is going to brake or turn suddenly.

Defensive driving requires that a driver concentrate on the driving task. Anything that distracts from the driving task -- such as concentrating on a cellular telephone call, reading, or reaching for something on the floor -- makes proper defensive driving more difficult and can even cause a collision, with resulting injury. Ask a passenger to help do things like this, or pull off the road in a safe place to do them yourself. These simple defensive driving techniques could save your life.

## Drunken Driving

Death and injury associated with drinking and driving is a national tragedy. It's the number one contributor to the highway death toll, claiming thousands of victims every year.

Alcohol affects four things that anyone needs to drive a vehicle:

- Judgment
- Muscular Coordination
- Vision
- Attentiveness.

Police records show that almost half 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, over 17,000 annual motor vehicle-related deaths have been associated with the use of alcohol, with more than 300,000 people injured.

Many adults -- by some estimates, nearly half the adult population -- choose never to drink alcohol, so they never drive after drinking. For persons under 21, it's 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 solve this highway safety problem is for people never to drink alcohol and then drive. But what if people do? How much is "too much" if the driver plans to drive? It's a lot less than many might think. Although it depends on each person and situation, here is some general information on the problem.

The Blood Alcohol Concentration (BAC) of someone who is drinking depends upon four things:

- The amount of alcohol consumed
- The drinker's body weight
- The amount of food that is consumed before and during drinking
- The length of time it has taken the drinker to consume the alcohol.

According to the American Medical Association, a 180-lb. (82 kg) person who drinks three 12-ounce (355 ml) bottles of beer in an hour will end up with a BAC of about 0.06 percent. The person would reach the same BAC by drinking three 4-ounce (120 ml) glasses of wine or three mixed drinks if each had 1-1/2 ounces (45 ml) of a liquor like whiskey, gin or vodka.



It's the amount of alcohol that counts. For example, if the same person drank three double martinis (3 ounces or 90 ml of liquor each) within an hour, the person's BAC would be close to 0.12 percent. A person who consumes food just before or during drinking will have a somewhat lower BAC level.

There is a gender difference, too. Women generally have a lower relative percentage of body water than men.

Since alcohol is carried in body water, this means that a woman generally will reach a higher BAC level than a man of her same body weight when each has the same number of drinks.

The law in many U.S. states sets the legal limit at a BAC of 0.10 percent. In a growing number of U.S. states, and throughout Canada, the limit is 0.08 percent. In some other countries, it's even lower. The BAC limit for all commercial drivers in the United States is 0.04 percent.

The BAC will be over 0.10 percent after three to six drinks (in one hour). Of course, as we've seen, it depends on how much alcohol is in the drinks, and how quickly the person drinks them.

But the ability to drive is affected well below a BAC of 0.10 percent. Research shows that the driving skills of many people are impaired at a BAC approaching 0.05 percent, and that the effects are worse at night. All drivers are impaired at BAC levels above 0.05 percent. Statistics show that the chance of being in a collision increases sharply for drivers who have a BAC of 0.05 percent or above. A driver with a BAC level of 0.06 percent has doubled his or her chance of having a collision. At a BAC level of 0.10 percent, the chance of this driver having a collision is 12 times greater; at a level of 0.15 percent, the chance is 25 times greater!

The body takes about an hour to rid itself of the alcohol in one drink. No amount of coffee or number of cold showers will speed that up. "I'll be careful" isn't the right answer. What if there's an emergency, a need to take sudden action, as when a child darts into the street? A person with even a moderate BAC might not be able to react quickly enough to avoid the collision.

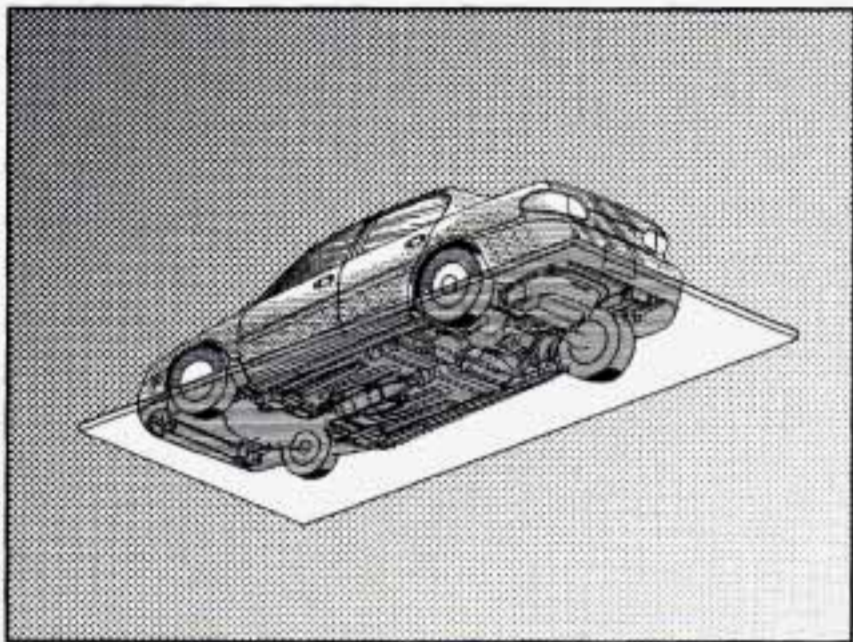
There's something else about drinking and driving that many people don't know. Medical research shows that alcohol in a person's system can make crash injuries worse, especially injuries to the brain, spinal cord or heart. This means that when anyone who has been drinking -- driver or passenger -- is in a crash, that person's chance of being killed or permanently disabled is higher than if the person had not been drinking.

 **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. Please don't drink and drive or ride with a driver who has been drinking. Ride home in a cab; or if you're with a group, designate a driver who will not drink.**

## Control of a Vehicle

You have three systems that make your vehicle go where you want it to go. They are the brakes, the steering and the accelerator. All three systems have to do their work at the places where the tires meet the road.



Sometimes, as when you're driving on snow or ice, it's easy to ask more of those control systems than the tires and road can provide. That means you can lose control of your vehicle.

## Braking

Braking action involves *perception time* and *reaction time*.

First, you have to decide to push on the brake pedal. That's *perception time*. Then you have to bring up your foot and do it. That's *reaction time*.

Average *reaction time* is about  $3/4$  of a second. But that's 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  $3/4$  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's pavement or gravel); the condition of the road (wet, dry, icy); tire tread; the condition of your 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. Your brakes may not have time to cool between hard stops. Your 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 engine ever stops while you're driving, brake normally but don't pump your brakes. If you do, the pedal may get harder to push down. If your engine stops, you will still have some power brake assist. But you will use it when you brake. Once the power assist is used up, it may take longer to stop and the brake pedal will be harder to push.

## **Anti-Lock Brakes (Option)**

Your vehicle may have anti-lock brakes (ABS). ABS is an advanced electronic braking system that will help prevent a braking skid.



If your vehicle has anti-lock brakes, this warning light on the instrument panel will come on briefly when you start your vehicle.

When you start your engine, or when you begin to drive away, your anti-lock brake system will check itself. You may hear a momentary motor or clicking noise while this test is going on, and you may even notice that your brake pedal moves or pulses a little. This is normal.

If there's a problem with the anti-lock brake system, the anti-lock brake system warning light will stay on or flash. See "Anti-Lock Brake System Warning Light" in the Index.



Here's how anti-lock works. Let's say the road is wet. You're driving safely. Suddenly an animal jumps out in front of you.

You slam on the brakes. Here's 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 front wheel and at both rear wheels.

The anti-lock system can change the brake pressure faster than any driver could. The computer is programmed to make the most of available tire and road conditions.



You can steer around the obstacle while braking hard.

As you brake, your computer keeps receiving updates on wheel speed and controls braking pressure accordingly.



Remember: Anti-lock doesn't 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 won't have time to apply your brakes if that vehicle suddenly slows or stops. Always leave enough room up ahead to stop, even though you have anti-lock brakes.

### **Using Anti-Lock**

Don't pump the brakes. Just hold the brake pedal down firmly and let anti-lock work for you. You may feel a slight brake pedal pulsation or notice some noise, but this is normal.

### **Braking in Emergencies**

At some time, nearly every driver gets into a situation that requires hard braking.

If you have anti-lock, you can steer and brake at the same time. However, if you don't have anti-lock, your first reaction -- to hit the brake pedal hard and hold it down -- may be the wrong thing to do. Your wheels can stop rolling. Once they do, the vehicle can't respond to your steering. Momentum will carry it in whatever direction it was headed when the wheels stopped rolling. That could be off the road, into the very thing you were trying to avoid, or into traffic.

If you don't have anti-lock, use a "squeeze" braking technique. This will give you maximum braking while maintaining steering control. You do this by pushing on the brake pedal with steadily increasing pressure.

In an emergency, you will probably want to squeeze the brakes hard without locking the wheels. If you hear or feel the wheels sliding, ease off the brake pedal. This will help you retain steering control. (If you *do* have anti-lock, it's different: see "Anti-Lock Brakes" in the Index.)

In many emergencies, steering can help you more than even the very best braking.

## Steering

### Power Steering

If you lose power steering assist because the engine stops or the system is not functioning, you can steer but it will take much more effort.

### Steering Tips

#### Driving on Curves

It's important to take curves at a reasonable speed.

A lot of the "driver lost control" accidents mentioned on the news happen on curves. Here's 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's no traction, inertia will keep the vehicle going in the same direction. If you've ever tried to steer a vehicle on wet ice, you'll understand this.

The traction you can get in a curve depends on the condition of your tires and the road surface, the angle at which the curve is banked, and your speed.

While you're in a curve, speed is the one factor you can control.

Suppose you're steering through a sharp curve. Then you suddenly apply the brakes. Both control systems -- steering and braking -- have to do their work where the tires meet the road. Unless you have four-wheel anti-lock brakes, adding the hard braking can demand too much of those places. You can lose control.

The same thing can happen if you're steering through a sharp curve and you suddenly accelerate. Those two control systems -- steering and acceleration -- can overwhelm those places where the tires meet the road and make you lose control.

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'll want to go slower.

If you need to reduce your speed as you approach a curve, do it before you enter the curve, while your 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 can't; there isn't room. That's the time for evasive action -- steering around the problem.

Your vehicle can perform very well in emergencies like these. First apply your brakes -- but, unless you have anti-lock, not enough to lock your wheels. (See "Braking in Emergencies" earlier in this section.) 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.

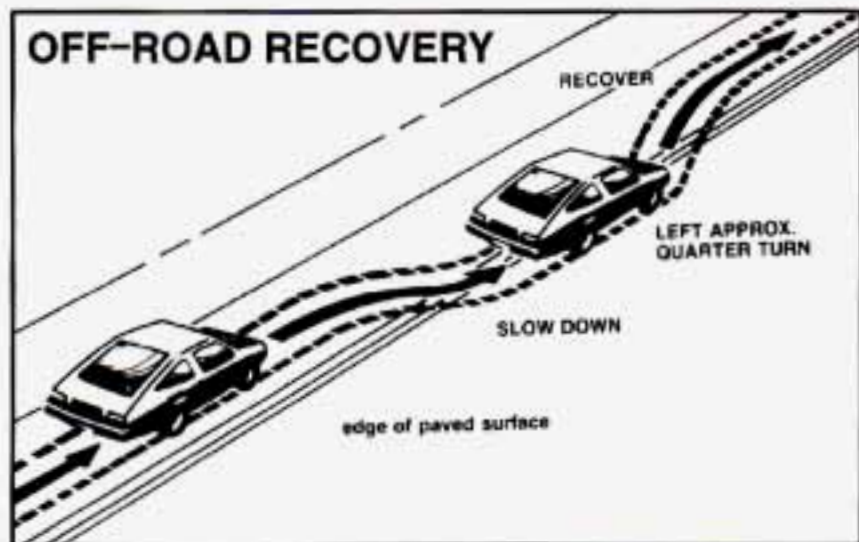


An emergency like this requires close attention and a quick decision. If you are holding the steering wheel at the recommended 9 and 3 o'clock positions, you can turn it a full 180 degrees very quickly without removing either hand. But you have to act fast, steer quickly, and just as quickly straighten 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 right wheels have dropped off the edge of a road onto the shoulder while you're 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 your steering wheel to go straight down the roadway.

## Passing

The driver of a vehicle about to pass another on a two-lane highway waits for just the right moment, accelerates, moves around the vehicle ahead, then goes back into the right lane again. A simple maneuver?

Not necessarily! Passing another vehicle on a two-lane highway is a potentially dangerous move, since the passing vehicle occupies the same lane as oncoming traffic for several seconds. A miscalculation, an error in judgment, or a brief surrender to frustration or anger can suddenly put the passing driver face to face with the worst of all traffic accidents -- the head-on collision.

So here are some tips for passing:

- "Drive ahead." Look down the road, to the sides and to crossroads for situations that might affect your passing patterns. If you have any doubt whatsoever about making a successful pass, wait for a better time.
- Watch for traffic signs, pavement markings and lines. If you can see a sign up ahead that might indicate a turn or an intersection, delay your pass. A broken center line usually indicates it's all right to pass (providing the road ahead is clear). Never cross a solid line on your side of the lane or a double solid line, even if the road seems empty of approaching traffic.

- Do not get too close to the vehicle you want to pass while you're awaiting an opportunity. For one thing, following too closely reduces your area of vision, especially if you're following a larger vehicle. Also, you won't have adequate space if the vehicle ahead suddenly slows or stops. Keep back a reasonable distance.
- When it looks like a chance to pass is coming up, start to accelerate but stay in the right lane and don't get too close. Time your move so you will be increasing speed as the time comes to move into the other lane. If the way is clear to pass, you will have a "running start" that more than makes up for the distance you would lose by dropping back. And if something happens to cause you to cancel your pass, you need only slow down and drop back again and wait for another opportunity.
- If other cars are lined up to pass a slow vehicle, wait your turn. But take care that someone isn't trying to pass you as you pull out to pass the slow vehicle. Remember to glance over your shoulder and check the blind spot.
- Check your mirrors, glance over your shoulder, and start your left lane change signal before moving out of the right lane to pass. When you are far enough

ahead of the passed vehicle to see its front in your inside mirror, activate your right lane change signal and move back into the right lane. (Remember that your right outside mirror is convex. The vehicle you just passed may seem to be farther away from you than it really is.)

- Try not to pass more than one vehicle at a time on two-lane roads. Reconsider before passing the next vehicle.
- Don't overtake a slowly moving vehicle too rapidly. Even though the brake lamps are not flashing, it may be slowing down or starting to turn.
- If you're being passed, make it easy for the following driver to get ahead of you. Perhaps you can ease a little to the right.

## Loss of Control

Let's review what driving experts say about what happens when the three control systems (brakes, steering and acceleration) don't have enough friction where the tires meet the road to do what the driver has asked.

In any emergency, don't 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, your wheels aren’t 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 and an acceleration skid are best handled by easing your foot off the accelerator pedal.

If your vehicle starts to slide, ease your foot off the accelerator pedal and quickly steer the way you want the vehicle to go. If you start steering quickly enough, your vehicle may straighten out. Always be ready for a second skid if it occurs.

Of course, traction is reduced when water, snow, ice, gravel or other material is on the road. For safety, you’ll 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 engine braking by shifting to a lower gear). 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.

If you have the anti-lock braking system, remember: It helps avoid only the braking skid. If you do not have anti-lock, then in a braking skid (where the wheels are no longer rolling), release enough pressure on the brakes to get the wheels rolling again. This restores steering control. Push the brake pedal down steadily when you have to stop suddenly. As long as the wheels are rolling, you will have steering control.

## Driving at Night



Night driving is more dangerous than day driving. One reason is that some drivers are likely to be impaired -- by alcohol or drugs, with night vision problems, or by fatigue.

Here are some tips on night driving.

- Drive defensively.
- Don't drink and drive.

- Adjust your inside rearview mirror to reduce the glare from headlamps behind you.
- Since you can't see as well, you may need to slow down and keep more space between you and other vehicles.
- Slow down, especially on higher speed roads. Your headlamps can light up only so much road ahead.
- In remote areas, watch for animals.
- If you're tired, pull off the road in a safe place and rest.

### Night Vision

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 may require at least twice as much light to see the same thing at night as a 20-year-old.

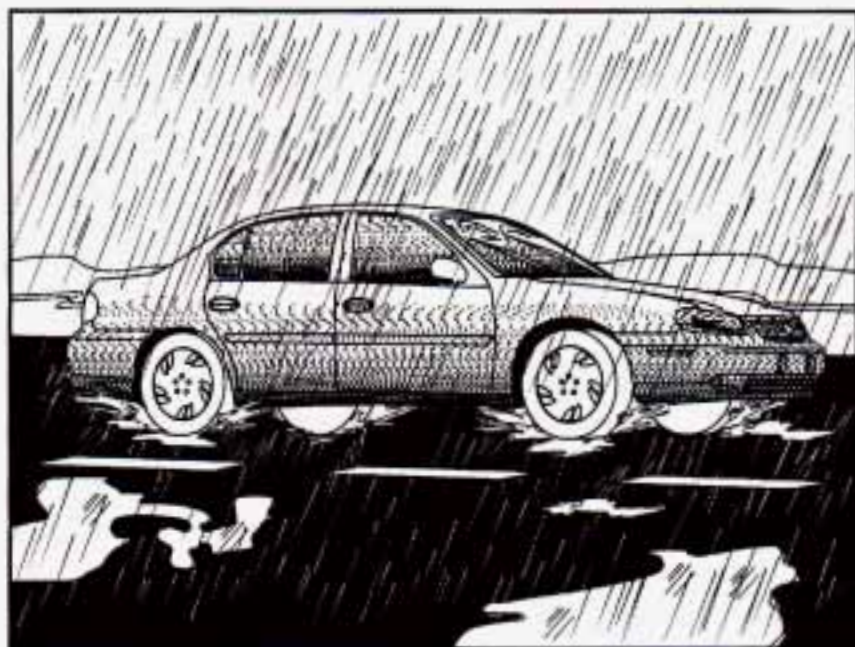
What you do in the daytime can also affect your night vision. For example, if you spend the day in bright sunshine you are wise to wear sunglasses. Your eyes will have less trouble adjusting to night. But if you're driving, don't wear sunglasses at night. They may cut down on glare from headlamps, but they also make a lot of things invisible.

You can be temporarily blinded by approaching headlamps. It can take a second or two, or even several seconds, for your eyes to readjust to the dark. When you are faced with severe glare (as from a driver who doesn't lower the high beams, or a vehicle with misaimed headlamps), slow down a little. Avoid staring directly into the approaching headlamps.

Keep your windshield and all the glass on your vehicle clean -- inside and out. Glare at night is made much worse by dirt on the glass. Even the inside of the glass can build up a film caused by dust. Dirty glass makes lights dazzle and flash more than clean glass would, making the pupils of your eyes contract repeatedly.

Remember that your headlamps light up far less of a roadway when you are in a turn or curve. Keep your eyes moving; that way, it's easier to pick out dimly lighted objects. Just as your headlamps should be checked regularly for proper aim, so should your eyes be examined regularly. Some drivers suffer from night blindness -- the inability to see in dim light -- and aren't even aware of it.

## Driving in Rain and on Wet Roads

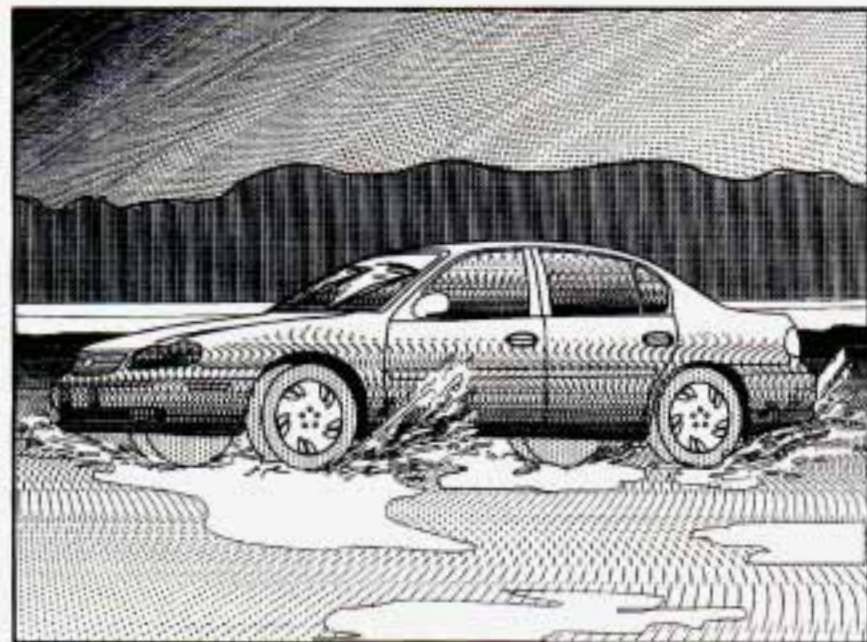


Rain and wet roads can mean driving trouble. On a wet road, you can't stop, accelerate or turn as well because your tire-to-road traction isn't as good as on dry roads. And, if your tires don't have much tread left, you'll get even less traction. It's always wise to go slower and be cautious if rain starts to fall while you are driving. The surface may get wet suddenly when your reflexes are tuned for driving on dry pavement.



The heavier the rain, the harder it is to see. Even if your windshield wiper blades are in good shape, a heavy rain can make it harder to see road signs and traffic signals, pavement markings, the edge of the road and even people walking.

It's wise to keep your windshield wiping equipment in good shape and keep your windshield washer tank filled with washer fluid. Replace your windshield wiper inserts when they show signs of streaking or missing areas on the windshield, or when strips of rubber start to separate from the inserts.



Driving too fast through large water puddles or even going through some car washes can cause problems, too. The water may affect your brakes. Try to avoid puddles. But if you can't, try to slow down before you hit them.

**⚠ CAUTION:**

**Wet brakes can cause accidents. They won't work as well in a quick stop and may cause pulling to one side. You could lose control of the vehicle.**

**After driving through a large puddle of water or a car wash, apply your brake pedal lightly until your brakes work normally.**

## Hydroplaning

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

Hydroplaning doesn't happen often. But it can if your tires do not have much tread or if the pressure in one or more is low. It can happen if a lot of water is standing on the road. If you can see reflections from trees, telephone poles or other vehicles, and raindrops "dimple" the water's surface, there could be hydroplaning.

Hydroplaning usually happens at higher speeds. There just isn't a hard and fast rule about hydroplaning. The best advice is to slow down when it is raining.

## Driving Through Deep Standing Water

### **NOTICE:**

**If you drive too quickly through deep puddles or standing water, water can come in through your engine's air intake and badly damage your engine. Never drive through water that is slightly lower than the underbody of your vehicle. If you can't avoid deep puddles or standing water, drive through them very slowly.**

## Some Other Rainy Weather Tips

- Besides slowing down, allow some extra following distance. And be especially careful when you pass another vehicle. Allow yourself more clear room ahead, and be prepared to have your view restricted by road spray.
- Have good tires with proper tread depth. (See "Tires" in the Index.)

## City Driving

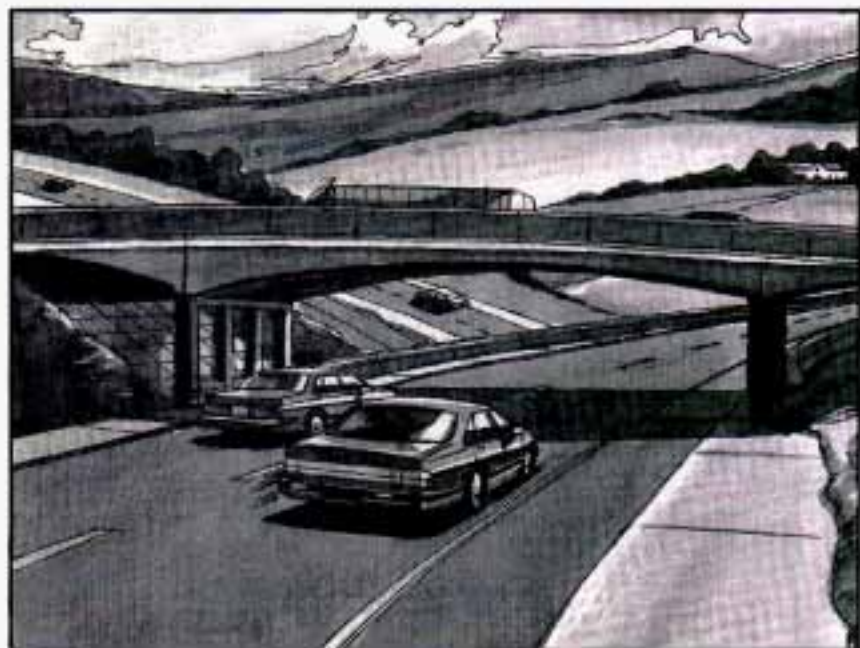


One of the biggest problems with city streets is the amount of traffic on them. You'll want to watch out for what the other drivers are doing and pay attention to traffic signals.

Here are ways to increase your safety in city driving:

- Know the best way to get to where you are going. Get a city map and plan your trip into an unknown part of the city just as you would for a cross-country trip.
- Try to use the freeways that rim and crisscross most large cities. You'll save time and energy. (See the next part, "Freeway Driving.")
- Treat a green light as a warning signal. A traffic light is there because the corner is busy enough to need it. When a light turns green, and just before you start to move, check both ways for vehicles that have not cleared the intersection or may be running the red light.

## Freeway Driving



Mile for mile, freeways (also called thruways, parkways, expressways, turnpikes or superhighways) are the safest of all roads. But they have their own special rules.

The most important advice on freeway driving is: Keep up with traffic and keep to the right. Drive at the same speed most of the other drivers are driving. Too-fast or too-slow driving breaks a smooth traffic flow. Treat the left lane on a freeway as a passing lane.

At the entrance, there is usually a ramp that leads to the freeway. If you have a clear view of the freeway as you drive along the entrance ramp, you should begin to check traffic. Try to determine where you expect to blend with the flow. Try to merge into the gap at close to the prevailing speed. Switch on your turn signal, check your mirrors and glance over your shoulder as often as necessary. Try to blend smoothly with the traffic flow.

Once you are on the freeway, adjust your speed to the posted limit or to the prevailing rate if it's slower. Stay in the right lane unless you want to pass.

Before changing lanes, check your mirrors. Then use your turn signal.

Just before you leave the lane, glance quickly over your shoulder to make sure there isn't another vehicle in your "blind" spot.

Once you are moving on the freeway, make certain you allow a reasonable following distance. Expect to move slightly slower at night.

When you want to leave the freeway, move to the proper lane well in advance. If you miss your exit, do not, under any circumstances, stop and back up. Drive on to the next exit.

The exit ramp can be curved, sometimes quite sharply.

The exit speed is usually posted.

Reduce your speed according to your speedometer, not to your sense of motion. After driving for any distance at higher speeds, you may tend to think you are going slower than you actually are.

## Before Leaving on a Long Trip

Make sure you're ready. Try to be well rested. If you must start when you're not fresh -- such as after a day's work -- don't plan to make too many miles that first part of the journey. Wear comfortable clothing and shoes you can easily drive in.

Is your vehicle ready for a long trip? If you keep it serviced and maintained, it's ready to go. If it needs service, have it done before starting out. Of course, you'll find experienced and able service experts in Chevrolet dealerships all across North America. They'll be ready and willing to help if you need it.

Here are some things you can check before a trip:

- *Windshield Washer Fluid:* Is the reservoir full? Are all windows clean inside and outside?
- *Wiper Blades:* Are they in good shape?
- *Fuel, Engine Oil, Other Fluids:* Have you checked all levels?

- *Lamps:* Are they all working? Are the lenses clean?
- *Tires:* They are vitally important to a safe, trouble-free trip. Is the tread good enough for long-distance driving? Are the tires all inflated to the recommended pressure?
- *Weather Forecasts:* What's the weather outlook along your route? Should you delay your trip a short time to avoid a major storm system?
- *Maps:* Do you have up-to-date maps?

## Highway Hypnosis

Is there actually such a condition as "highway hypnosis"? Or is it just plain falling asleep at the wheel? Call it highway hypnosis, lack of awareness, or whatever.

There is something about an easy stretch of road with the same scenery, along with the hum of the tires on the road, the drone of the engine, and the rush of the wind against the vehicle that can make you sleepy. Don't let it happen to you! If it does, your vehicle can leave the road in *less than a second*, and you could crash and be injured.

What can you do about highway hypnosis? First, be aware that it can happen.

Then here are some tips:

- Make sure your vehicle is well ventilated, with a comfortably cool interior.
- Keep your eyes moving. Scan the road ahead and to the sides. Check your rearview mirrors and your instruments frequently.
- If you get sleepy, pull off the road into a rest, service or parking area and take a nap, get some exercise, or both. For safety, treat drowsiness on the highway as an emergency.

## Hill and Mountain Roads



Driving on steep hills or mountains is different from driving in flat or rolling terrain.

If you drive regularly in steep country, or if you're planning to visit there, here are some tips that can make your trips safer and more enjoyable.

- Keep your vehicle in good shape. Check all fluid levels and also the brakes, tires, cooling system and transaxle. These parts can work hard on mountain roads.
- Know how to go down hills. The most important thing to know is this: let your engine do some of the slowing down. Shift to a lower gear when you go down a steep or long hill.

 **CAUTION:**

**If you don't shift down, your brakes could get so hot that they wouldn't work well. You would then have poor braking or even none going down a hill. You could crash. Shift down to let your engine assist your brakes on a steep downhill slope.**

 **CAUTION:**

**Coasting downhill in NEUTRAL (N) or with the ignition off is dangerous. Your brakes will have to do all the work of slowing down. They could get so hot that they wouldn't work well. You would then have poor braking or even none going down a hill. You could crash. Always have your engine running and your vehicle in gear when you go downhill.**

- Know how to go uphill. You may want to shift down to a lower gear. The lower gears help cool your engine and transaxle, and you can climb the hill better.
- Stay in your own lane when driving on two-lane roads in hills or mountains. Don't swing wide or cut across the center of the road. Drive at speeds that let you stay in your own lane.
- As you go over the top of a hill, be alert. There could be something in your lane, like a stalled car or an accident.
- You may see highway signs on mountains that warn of special problems. Examples are long grades, passing or no-passing zones, a falling rocks area or winding roads. Be alert to these and take appropriate action.

## Winter Driving



Here are some tips for winter driving:

- Have your vehicle in good shape for winter.
- You may want to put winter emergency supplies in your trunk.



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.



## Driving on Snow or Ice

Most of the time, those places where your tires meet the road probably have good traction.

However, if there is snow or ice between your tires and the road, you can have a very slippery situation. You'll have a lot less traction or "grip" and will need to be very careful.



What's 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 may offer the least traction of all. You can get wet ice when it's 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. Accelerate gently. Try not to break the fragile traction. If you accelerate too fast, the drive wheels will spin and polish the surface under the tires even more.

Unless you have the anti-lock braking system, you'll want to brake very gently, too. (If you do have anti-lock, see "Anti-Lock" in the Index. This system improves your vehicle's stability when you make a hard stop on a slippery road.) Whether you have the anti-lock braking system or not, you'll want to begin stopping sooner than you would on dry pavement. Without anti-lock brakes, if you feel your vehicle begin to slide, let up on the brakes a little. Push the brake pedal down steadily to get the most traction you can.

Remember, unless you have anti-lock, if you brake so hard that your wheels stop rolling, you'll just slide. Brake so your wheels always keep rolling and you can still steer.

- Whatever your braking system, allow greater following distance on any slippery road.
- Watch for slippery spots. The road might be fine until you hit a spot that's covered with ice. On an otherwise clear road, ice patches may appear in shaded areas where the sun can't reach: around clumps of trees, behind buildings or under bridges. Sometimes the surface of a curve or an overpass may 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're actually on the ice, and avoid sudden steering maneuvers.

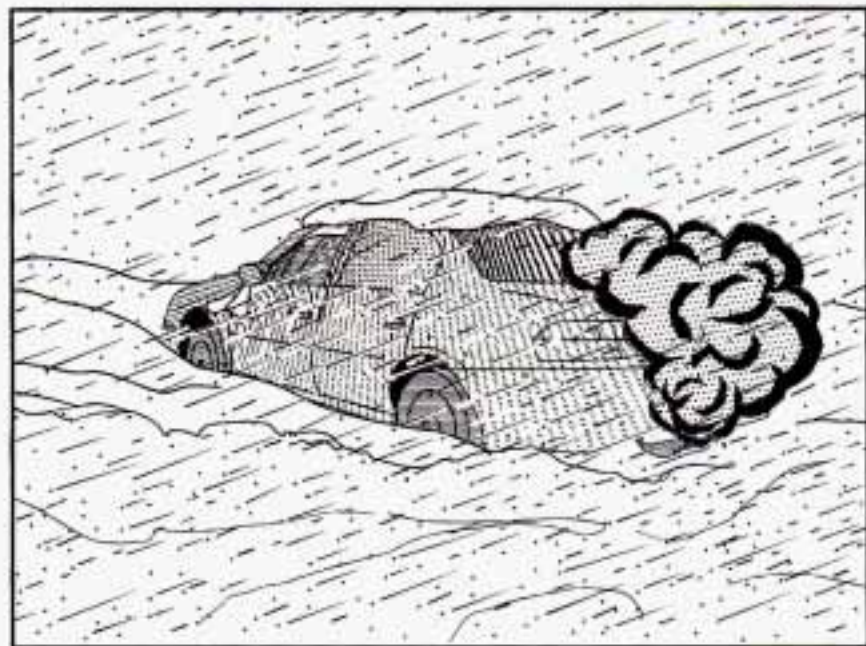
## If You're Caught in a Blizzard



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 your hazard flashers.

- Tie a red cloth to your vehicle to alert police that you've been stopped by the snow.
- Put on extra clothing or wrap a blanket around you. If you have no blankets or extra clothing, make body insulators from newspapers, burlap bags, rags, floor mats -- anything you can wrap around yourself or tuck under your clothing to keep warm.



You can run the engine to keep warm, but be careful.

## CAUTION:

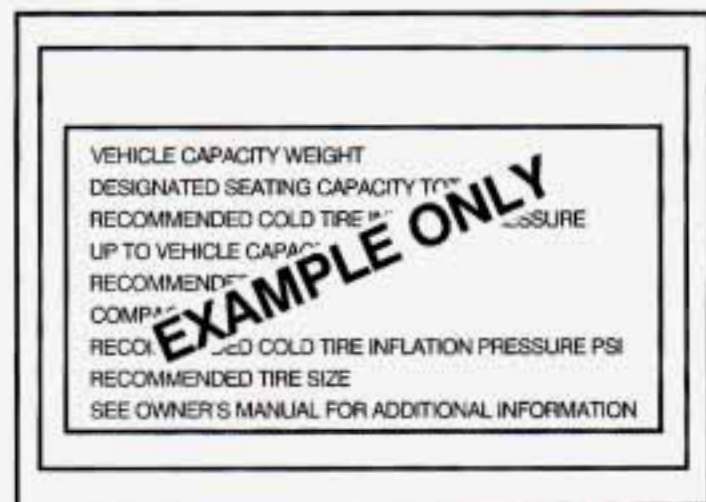
**Snow can trap exhaust gases under your vehicle. This can cause deadly CO (carbon monoxide) gas to get inside. CO could overcome you and kill you. You can't see it or smell it, so you might not know it is in your vehicle. Clear away snow from around the base of your vehicle, especially any that is blocking your exhaust pipe. And check around again from time to time to be sure snow doesn't collect there.**

**Open a window just a little on the side of the vehicle that's away from the wind. This will help keep CO out.**

Run your engine only as long as you must. This saves fuel. When you run the engine, make it go a little faster than just idle. That is, push the accelerator slightly. This uses less fuel for the heat that you get and it keeps the battery charged. You will need a well-charged battery to restart the vehicle, and possibly for signaling later on with your headlamps. Let the heater run for a while.

Then, shut the engine off and close the window almost all the way to preserve the heat. Start the engine again and repeat this only when you feel really uncomfortable from the cold. But do it as little as possible. Preserve the fuel as long as you can. To help keep warm, you can get out of the vehicle and do some fairly vigorous exercises every half hour or so until help comes.

## Loading Your Vehicle



Two labels on your vehicle show how much weight it may properly carry. The Tire-Loading Information label found in the glove compartment tells you the proper size, speed rating and recommended inflation pressures for the tires on your vehicle. It also gives you important information about the number of people that can be in your vehicle and the total weight that you can carry. This weight is called the Vehicle Capacity Weight and includes the weight of all occupants, cargo and all nonfactory-installed options.



The other label is the Certification label, found on the rear of the driver's door opening. It tells you the gross weight capacity of your vehicle, called the Gross Vehicle Weight Rating (GVWR). The GVWR includes the weight of the vehicle, all occupants, fuel and cargo. Never exceed the GVWR for your vehicle, or the Gross Axle Weight Rating (GAWR) for either the front or rear axle.

And, if you do have a heavy load, you should spread it out. Don't carry more than 125 lbs. (56.7 kilograms) in your trunk.

## CAUTION:

**Do not load your vehicle any heavier than the GVWR, or either the maximum front or rear GAWR. If you do, parts on your vehicle can break, or it can change the way your vehicle handles. These could cause you to lose control. Also, overloading can shorten the life of your vehicle.**

## NOTICE:

**Your warranty does not cover parts or components that fail because of overloading.**

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'll 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 trunk of your vehicle. In a trunk, put them as far forward as you can. 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.
- Don't leave an unsecured child restraint in your vehicle.
- When you carry something inside the vehicle, secure it whenever you can.
- Don't leave a seat folded down unless you need to.

## Towing a Trailer

 **CAUTION:**

If you don't use the correct equipment and drive properly, you can lose control when you pull a trailer. For example, if the trailer is too heavy, the brakes may not work well -- or even at all. You and your passengers could be seriously injured. You may also damage your vehicle; the resulting repairs would not be covered by your warranty. Pull a trailer only if you have followed all the steps in this section. Ask your dealer for advice and information about towing a trailer with your vehicle.

Your vehicle can tow a trailer if it is equipped with the proper trailer towing equipment. To identify what the vehicle trailering capacity is for your vehicle, you should read the information in “Weight of the Trailer” that appears later in this section. But trailering is different than just driving your vehicle by itself. Trailering means changes in handling, durability and fuel economy. Successful, safe trailering takes correct equipment, and it has to be used properly.

That’s the reason for this part. In it are many time-tested, important trailering tips and safety rules. Many of these are important for your safety and that of your passengers. So please read this section carefully before you pull a trailer.

Load-pulling components such as the engine, transaxle, wheel assemblies and tires are forced to work harder against the drag of the added weight. The engine is required to operate at relatively higher speeds and under greater loads, generating extra heat. What’s more, the trailer adds considerably to wind resistance, increasing the pulling requirements.

### **If You Do Decide To Pull A Trailer**

If you do, here are some important points:

- There are many different laws, including speed limit restrictions, having to do with trailering. Make sure

your rig will be legal, not only where you live but also where you’ll be driving. A good source for this information can be state or provincial police.

- Consider using a sway control. You can ask a hitch dealer about sway controls.
- Don’t tow a trailer at all during the first 1,000 miles (1 600 km) your new vehicle is driven. Your engine, axle or other parts could be damaged.
- Then, during the first 500 miles (800 km) that you tow a trailer, don’t drive over 50 mph (80 km/h) and don’t make starts at full throttle. This helps your engine and other parts of your vehicle wear in at the heavier loads.
- Obey speed limit restrictions when towing a trailer. Don’t drive faster than the maximum posted speed for trailers (or no more than 55 mph (90 km/h)) to save wear on your vehicle’s parts.

Three important considerations have to do with weight:

- the weight of the trailer,
- the weight of the trailer tongue
- and the total weight on your vehicle’s tires.

## Weight of the Trailer

How heavy can a trailer safely be?

It should never weigh more than 1,500 lbs. (680 kg). But even that can be too heavy.

It depends on how you plan to use your rig. For example, speed, altitude, road grades, outside temperature and how much your vehicle is used to pull a trailer are all important. And, it can also depend on any special equipment that you have on your vehicle.

You can ask your dealer for our trailering information or advice, or you can write us at:

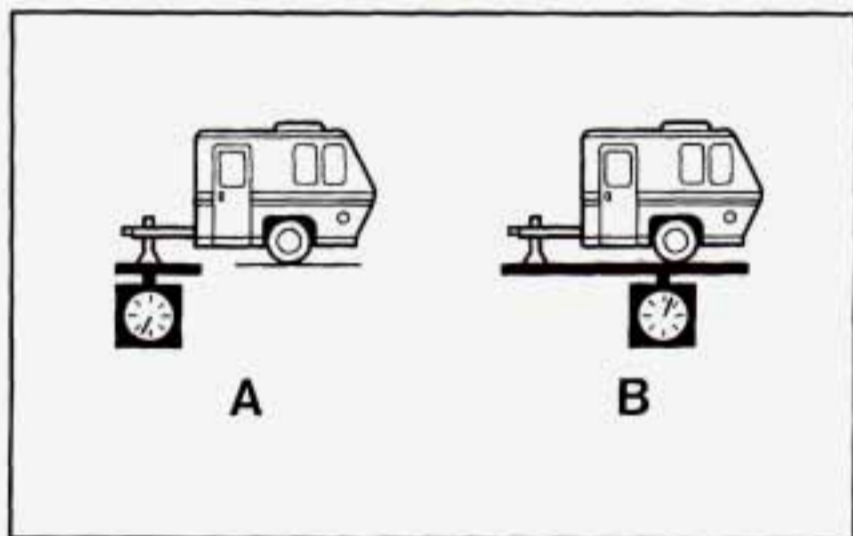
Customer Assistance Department  
Chevrolet Motor Division  
P.O. Box 7047  
Troy, MI 48007-7047

In Canada, write to:

General Motors of Canada Limited  
Customer Communication Centre  
1908 Colonel Sam Drive  
Oshawa, Ontario L1H 8P7

## Weight of the Trailer Tongue

The tongue load (A) of any trailer is an important weight to measure because it affects the total or gross weight of your vehicle. The Gross Vehicle Weight (GVW) includes the curb weight of the vehicle, any cargo you may carry in it, and the people who will be riding in the vehicle. And if you tow a trailer, you must add the tongue load to the GVW because your vehicle will be carrying that weight, too. See "Loading Your Vehicle" in the Index for more information about your vehicle's maximum load capacity.





If you're using a weight-carrying hitch, the trailer tongue (A) should weigh 10 percent of the total loaded trailer weight (B). If you have a weight-distributing hitch, the trailer tongue (A) should weigh 12 percent of the total loaded trailer weight (B).

After you've loaded your trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If they aren't, you may be able to get them right simply by moving some items around in the trailer.

### **Total Weight on Your Vehicle's Tires**

Be sure your vehicle's tires are inflated to the upper limit for cold tires. You'll find these numbers on the Tire-Loading Information label at the rear edge of the driver's door opening or see "Loading Your Vehicle" in the Index. Then be sure you don't go over the GVW limit for your vehicle, including the weight of the trailer tongue.

### **Hitches**

It's important to have the correct hitch equipment. Crosswinds, large trucks going by and rough roads are a few reasons why you'll need the right hitch. Here are some rules to follow:

- The rear bumper on your vehicle is not intended for hitches. Do not attach rental hitches or other bumper-type hitches to it. Use only a frame-mounted hitch that does not attach to the bumper.
- Will you have to make any holes in the body of your vehicle when you install a trailer hitch? If you do, then be sure to seal the holes later when you remove the hitch. If you don't seal them, deadly carbon monoxide (CO) from your exhaust can get into your vehicle (see "Carbon Monoxide" in the Index). Dirt and water can, too.

## Safety Chains

You should always attach chains between your vehicle and your trailer. Cross the safety chains under the tongue of the trailer so that the tongue will not drop to the road if it becomes separated from the hitch. Instructions about safety chains may be provided by the hitch manufacturer or by the trailer manufacturer. Follow the manufacturer's recommendation for attaching safety chains and do not attach them to the bumper. Always leave just enough slack so you can turn with your rig. And, never allow safety chains to drag on the ground.

## Trailer Brakes

Does your trailer have its own brakes? Be sure to read and follow the instructions for the trailer brakes so you'll be able to install, adjust and maintain them properly. If your vehicle has anti-lock brakes, don't try to tap into your vehicle's brake system. If you do, both brake systems won't work well or at all.

Even if your vehicle doesn't have anti-lock brakes, don't tap into your vehicle's brake system if the trailer's brake system will use more than 0.02 cubic inch (0.3 cc) of fluid from your vehicle's master cylinder. If it does, both braking systems won't work well. You could even lose your brakes.

- Will the trailer brake parts take 3,000 psi (20 650 kPa) of pressure? If not, the trailer brake system must not be used with your vehicle.
- If everything checks out this far, then make the brake fluid tap at the upper rear master cylinder port. But don't use copper tubing for this. If you do, it will bend and finally break off. Use steel brake tubing.

## Driving with a Trailer

Towing a trailer requires a certain amount of experience. Before setting out for the open road, you'll want to get to know your rig. Acquaint yourself with the feel of handling and braking with the added weight of the trailer. And always keep in mind that the vehicle you are driving is now a good deal longer and not nearly as responsive as your vehicle is by itself.

Before you start, check the trailer hitch and platform (and attachments), safety chains, electrical connector, lamps, tires and mirror adjustment. If the trailer has electric brakes, start your vehicle and trailer moving and then apply the trailer brake controller by hand to be sure the brakes are working. This lets you check your electrical connection at the same time.

During your trip, check occasionally to be sure that the load is secure, and that the lamps and any trailer brakes are still working.

## Following Distance

Stay at least twice as far behind the vehicle ahead as you would when driving your vehicle without a trailer. This can help you avoid situations that require heavy braking and sudden turns.

## Passing

You'll need more passing distance up ahead when you're towing a trailer. And, because you're a good deal longer, you'll need to go much farther beyond the passed vehicle before you can return to your lane.

## Backing Up

Hold the bottom of the steering wheel with one hand. Then, to move the trailer to the left, just move that hand to the left. To move the trailer to the right, move your hand to the right. Always back up slowly and, if possible, have someone guide you.

## Making Turns

### **NOTICE:**

**Making very sharp turns while trailering could cause the trailer to come in contact with the vehicle. Your vehicle could be damaged. Avoid making very sharp turns while trailering.**

When you're turning with a trailer, make wider turns than normal. Do this so your trailer won't strike soft shoulders, curbs, road signs, trees or other objects. Avoid jerky or sudden maneuvers. Signal well in advance.

## Turn Signals When Towing a Trailer

When you tow a trailer, your vehicle may need a different turn signal flasher and/or extra wiring. Check with your Chevrolet dealer. The green arrows on your instrument panel will flash whenever you signal a turn or lane change. Properly hooked up, the trailer lamps will also flash, telling other drivers you're about to turn, change lanes or stop.

When towing a trailer, the green arrows on your instrument panel will flash for turns even if the bulbs on the trailer are burned out. Thus, you may think drivers behind you are seeing your signal when they are not. It's important to check occasionally to be sure the trailer bulbs are still working.

## Driving On Grades

Reduce speed and shift to a lower gear *before* you start down a long or steep downgrade. If you don't shift down, you might have to use your brakes so much that they would get hot and no longer work well.

On a long uphill grade, shift down and reduce your speed to 45 mph (70 km/h) to reduce the possibility of engine and transaxle overheating.

If you are towing a trailer that weighs more than 1,000 lbs. (450 kg), and you have an automatic transaxle with overdrive, you may prefer to drive in DRIVE (D) rather than OVERDRIVE <sup>Ⓧ</sup> (or, as you need to, a lower gear). Or, if you have a manual transaxle with FIFTH (5), it's better not to use FIFTH (5). Just drive in FOURTH (4) (or, as you need to, a lower gear).

## Parking on Hills

You really should not park your vehicle, with a trailer attached, on a hill. If something goes wrong, your rig could start to move. People can be injured, and both your vehicle and the trailer can be damaged.

But if you ever have to park your rig on a hill, here's how to do it:

1. Apply your regular brakes, but don't shift into PARK (P) yet, or into gear for a manual transaxle.
2. Have someone place chocks under the trailer wheels.
3. When the wheel chocks are in place, release the regular brakes until the chocks absorb the load.
4. Reapply your regular brakes. Then apply your parking brake, and then shift to PARK (P), or REVERSE (R) for a manual transaxle.
5. Release the regular brakes.

## **When You Are Ready to Leave After Parking on a Hill**

1. Apply your regular brakes and hold the pedal down while you:
  - Start your engine;
  - Shift into a gear; and
  - Release the parking brake.
2. Let up on the brake pedal.
3. Drive slowly until the trailer is clear of the chocks.
4. Stop and have someone pick up and store the chocks.

## **Maintenance When Trailer Towing**

Your vehicle will need service more often when you're pulling a trailer. See the Maintenance Schedule for more on this. Things that are especially important in trailer operation are automatic transaxle fluid (don't overfill), engine oil, drive belt, cooling system and brake adjustment. Each of these is covered in this manual, and the Index will help you find them quickly. If you're trailering, it's a good idea to review these sections before you start your trip.

Check periodically to see that all hitch nuts and bolts are tight.

## **Engine Cooling When Trailer Towing**

Your cooling system may temporarily overheat during severe operating conditions. See "Engine Overheating" in the Index.





## Section 5 Problems on the Road

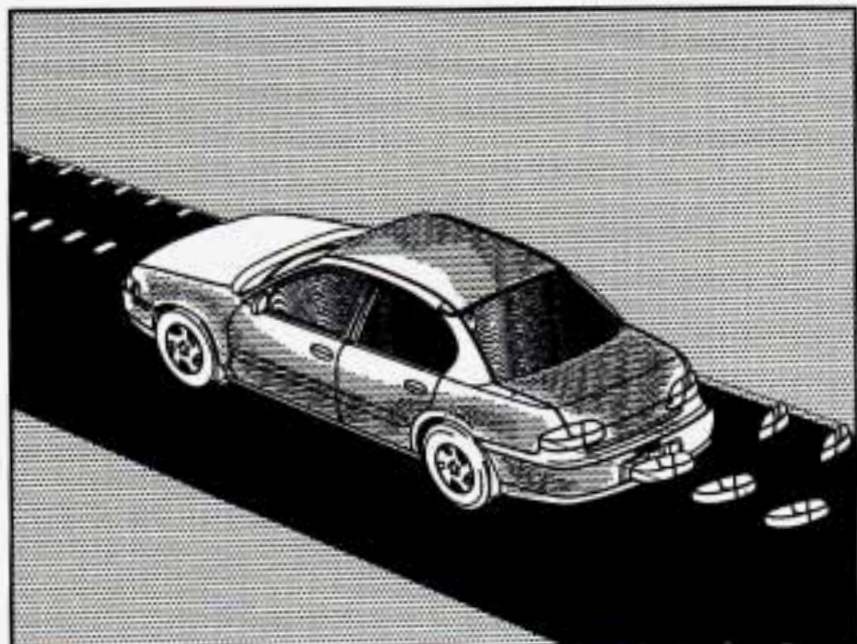
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Here you'll find what to do about some problems that can occur on the road.

5-2 Hazard Warning Flashers  
5-2 Other Warning Devices  
5-3 Jump Starting  
5-8 Towing Your Vehicle  
5-14 Engine Overheating

5-16 Cooling System  
5-23 If a Tire Goes Flat  
5-23 Changing a Flat Tire  
5-33 Compact Spare Tire  
5-34 If You're Stuck: In Sand, Mud, Ice or Snow

## Hazard Warning Flashers



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



Press the button on the center of instrument panel above the audio system to make your front and rear turn signal lamps flash on and off.

Your hazard warning flashers work no matter what position your key is in, and even if the key isn't in.

To turn off the flashers, press the button again.

When the hazard warning flashers are on, your turn signals won't work.

## Other Warning Devices

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



## Jump Starting

If your battery has run down, you may want to use another vehicle and some jumper cables to start your vehicle. But please follow the steps listed in this part to do it safely.

### CAUTION:

**Batteries can hurt you. They can be dangerous because:**

- They contain acid that can burn you.
- They contain gas that can explode or ignite.
- They contain enough electricity to burn you.

**If you don't follow these steps exactly, some or all of these things can hurt you.**

### NOTICE:

**Ignoring these steps could result in costly damage to your vehicle that wouldn't be covered by your warranty.**

**Trying to start your vehicle by pushing or pulling it won't work, and it could damage your vehicle.**

1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

### NOTICE:

**If the other system isn't a 12-volt system with a negative ground, both vehicles can be damaged.**

2. Get the vehicles close enough so the jumper cables can reach, but be sure the vehicles aren't touching each other. If they are, it could cause a ground connection you don't want. You wouldn't be able to start your vehicle, and the bad grounding could damage the electrical systems.
3. Turn off the ignition on both vehicles. Unplug unnecessary accessories plugged into the cigarette lighter. Turn off all lamps that aren't needed as well as radios. This will avoid sparks and help save both batteries. In addition, it could save your radio!

### **NOTICE:**

**If you leave your radio on, it could be badly damaged. The repairs wouldn't be covered by your warranty.**

4. Open the hoods and locate the batteries. Find the positive (+) and negative (-) terminals on each battery.



### **CAUTION:**

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

 **CAUTION:**

**Using a match near a battery can cause battery gas to explode. People have been hurt doing this, and some have been blinded. Use a flashlight if you need more light.**

**Be sure the battery has enough water. You don't need to add water to the ACDelco Freedom<sup>®</sup> battery installed in every new GM vehicle. But if a battery has filler caps, be sure the right amount of fluid is there. If it is low, add water to take care of that first. If you don't, explosive gas could be present.**

**Battery fluid contains acid that can burn you. Don't get it on you. If you accidentally get it in your eyes or on your skin, flush the place with water and get medical help immediately.**

5. Check that the jumper cables don't have loose or missing insulation. If they do, you could get a shock. The vehicles could be damaged, too.

Before you connect the cables, here are some basic things you should know. Positive (+) will go to positive (+) and negative (-) will go to a metal engine part. Don't connect positive (+) to negative (-) or you'll get a short that would damage the battery and maybe other parts, too.

 **CAUTION:**

**Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engine is running.**



6. Connect the red positive (+) cable to the positive (+) terminal of the vehicle with the dead battery. Use a remote positive (+) terminal if the vehicle has one.



7. Don't let the other end touch metal. Connect it to the positive (+) terminal of the good battery. Use a remote positive (+) terminal if the vehicle has one.

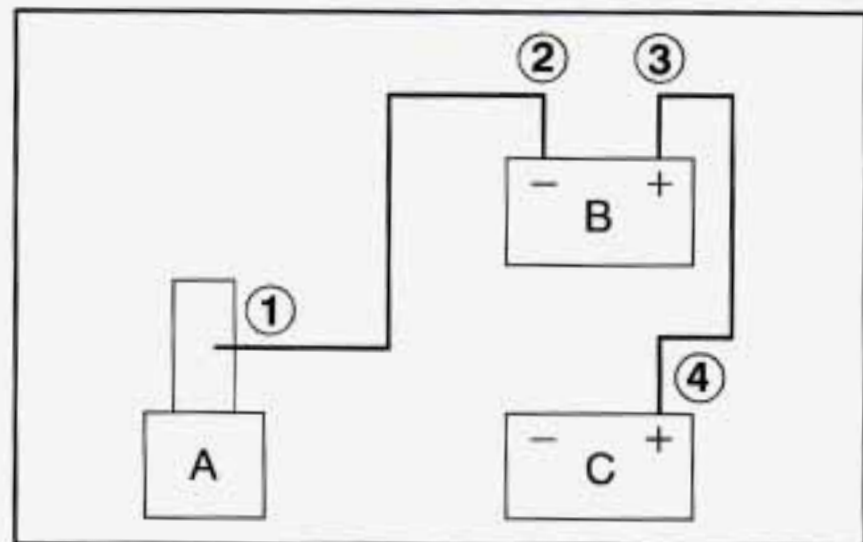


8. Now connect the black negative (-) cable to the good battery's negative (-) terminal. Don't let the other end touch anything until the next step.



- The other end of the negative (-) cable doesn't go to the dead battery. It goes to a heavy unpainted metal part on the engine of the vehicle with the dead battery. Attach the cable at least 18 inches (45 cm) away from the dead battery, but not near engine parts that move. The electrical connection is just as good there, but the chance of sparks getting back to the battery is much less.
- Now start the vehicle with the good battery and run the engine for a while.

- Try to start the vehicle with the dead battery. If it won't start after a few tries, it probably needs service.
- Remove the cables in reverse order to prevent electrical shorting. Take care that they don't touch each other or any other metal.



- A. Heavy Metal Engine Part
- B. Good Battery
- C. Dead Battery

## Towing Your Vehicle

Try to have a Chevrolet dealer or a professional towing service tow your vehicle. See "Roadside Assistance" in the Index.

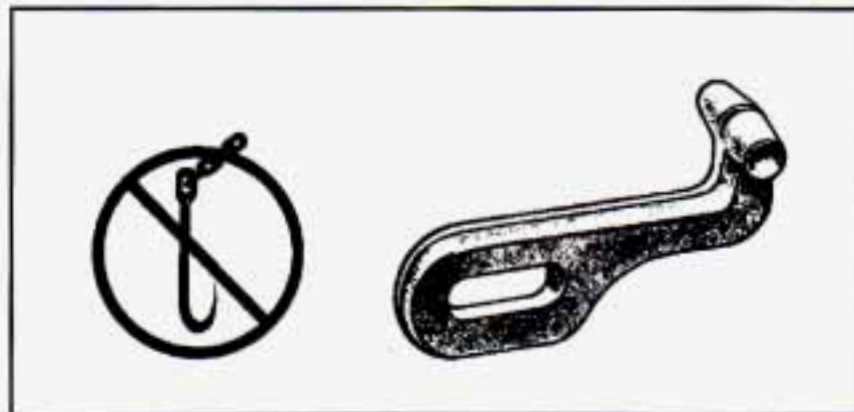
If your vehicle has been changed or modified since it was factory-new by adding aftermarket items like fog lamps, aero skirting, or special tires and wheels, these instructions and illustrations may not be correct.

Before you do anything, turn on the hazard warning flashers.

When you call, tell the towing service:

- That your vehicle cannot be towed from the front or rear with sling-type equipment.
- That your vehicle has front-wheel drive.
- The make, model and year of your vehicle.
- Whether you can still move the shift lever.
- If there was an accident, what was damaged.

When the towing service arrives, let the tow operator know that this manual contains detailed towing instructions and illustrations. The operator may want to see them.



### CAUTION:

To help avoid injury to you or others:

- Never let passengers ride in a vehicle that is being towed.
- Never tow faster than safe or posted speeds.
- Never tow with damaged parts not fully secured.
- Never get under your vehicle after it has been lifted by the tow truck.
- Always secure the vehicle on each side with separate safety chains when towing it.
- Never use J-hooks. Use T-hooks instead.

 **CAUTION:**

**A vehicle can fall from a car carrier if it isn't adequately secured. This can cause a collision, serious personal injury and vehicle damage. The vehicle should be tightly secured with chains or steel cables before it is transported.**

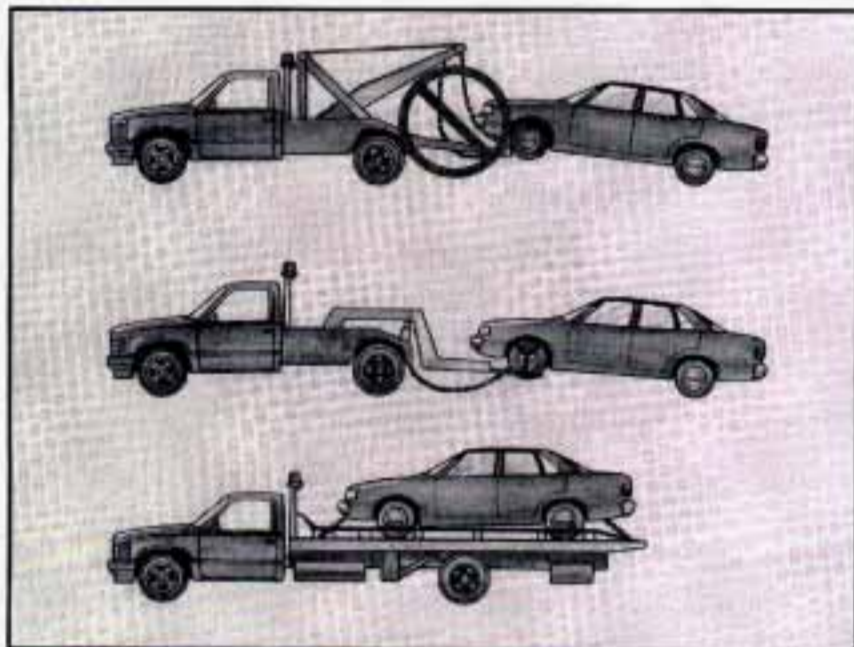
**Don't use substitutes (ropes, leather straps, canvas webbing, etc.) that can be cut by sharp edges underneath the towed vehicle. Always use T-hooks inserted in the T-hook slots. Never use J-hooks. They will damage drivetrain and suspension components.**

When your vehicle is being towed, have the ignition key turned to OFF. The steering wheel should be clamped in a straight-ahead position, with a clamping device designed for towing service. Do not use the vehicle's steering column lock for this. The transaxle should be in NEUTRAL (N) and the parking brake released.

Don't have your vehicle towed with the front wheels in contact with the ground if it has an automatic transaxle. If a vehicle with an automatic transaxle must be towed from the rear with wheel-lift equipment, the front wheels must be supported on a dolly.

If your vehicle has a manual transaxle, don't have it towed on the front wheels unless you must. If a vehicle with a manual transaxle must be towed on the front wheels, it is recommended that the front wheels be supported on a dolly. If you have a manual transaxle and dollies won't be used, turn the ignition key to ACC and put the transaxle in NEUTRAL (N).

## Front Towing



### **NOTICE:**

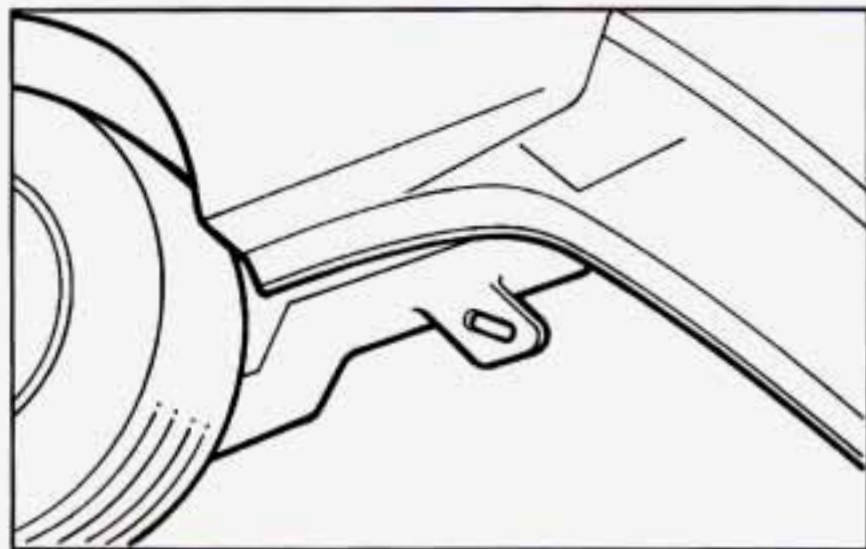
**Do not tow with sling-type equipment or fascia damage will occur.**

**Use wheel-lift or car-carrier equipment. Additional ramping may be required for car-carrier equipment. Use safety chains and wheel straps.**

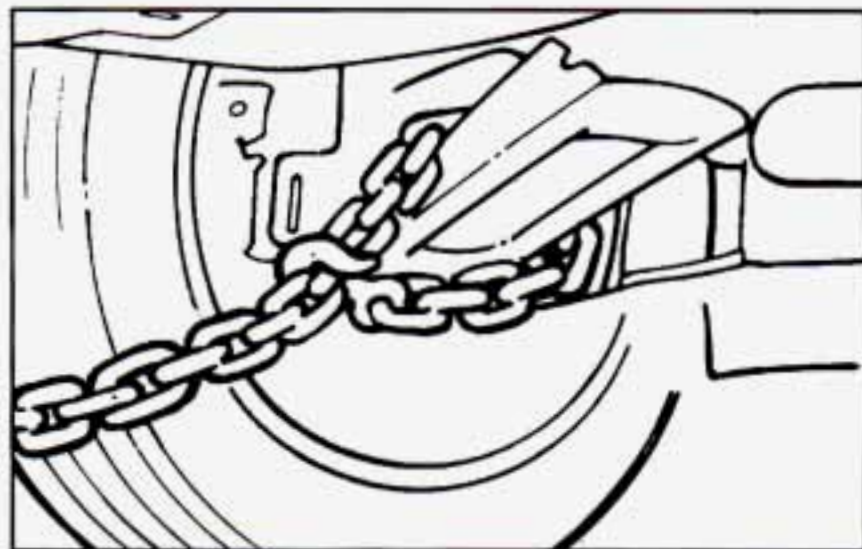
**Towing a vehicle over rough surfaces could damage a vehicle. Damage can occur from vehicle to ground or vehicle to wheel-lift equipment. To help avoid damage, raise the vehicle until adequate clearance is obtained between the ground and/or wheel-lift equipment.**

**Do not attach winch cables or J-hooks to suspension components when using car-carrier equipment. Always use T-hooks inserted in the T-hook slots.**



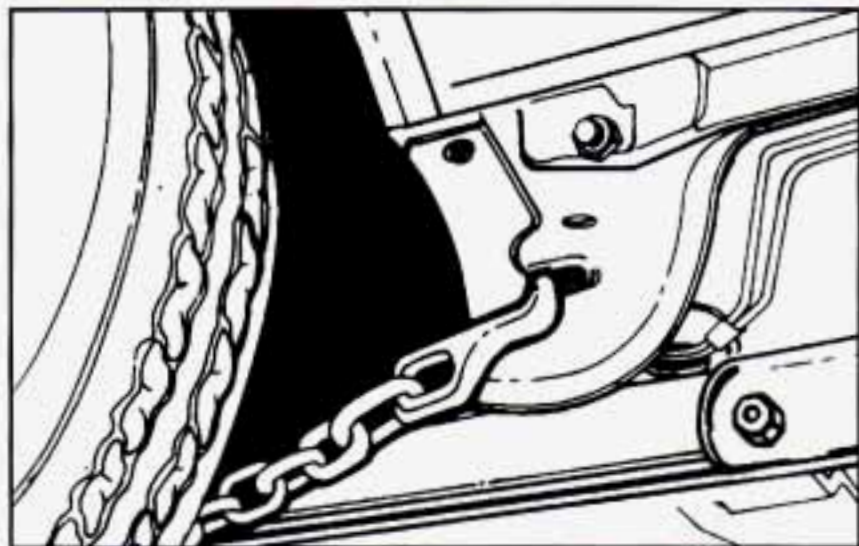


Attach T-hook chains to the slots in the frame brackets, just ahead of the front wheels, on both sides.

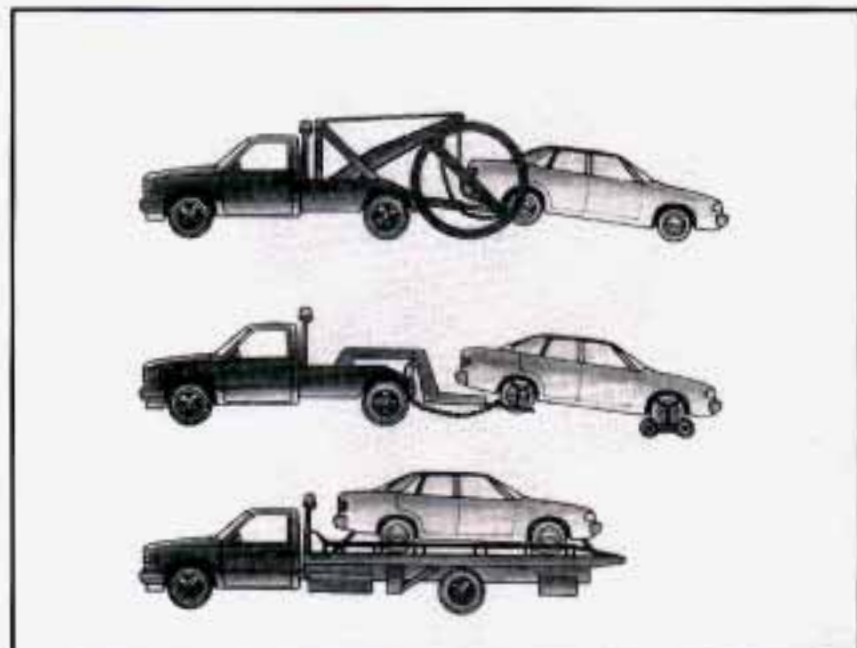


Attach a separate safety chain around the outboard end of each lower control arm.

## Rear Towing



Attach T-hook chains to slots in the bottom of the floor pan, just ahead of the rear wheels, on both sides.



### **NOTICE:**

**Do not tow with sling-type equipment or rear bumper valance will be damaged.**

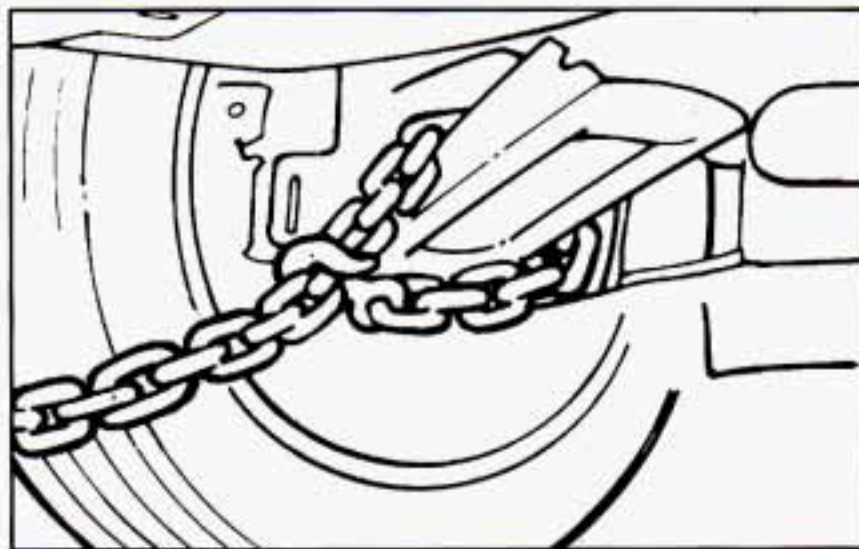
**NOTICE: (Continued)**

**NOTICE: (Continued)**

**Use wheel-lift or car-carrier equipment.  
Additional ramping may be required for  
car-carrier equipment.**

**Use safety chains and wheel straps.**

**Dollies are required under the front wheels or  
damage will occur.**



Attach a separate safety chain around the outboard end of each lower control arm.

## Engine Overheating

You will find a coolant temperature gage or a hot engine warning light on your instrument panel.

### If Steam Is Coming From Your Engine



### CAUTION:

Steam from an overheated engine can burn you badly, even if you just open the hood. Stay away from the engine if you see or hear steam coming from it. Just turn it off and get everyone away from the vehicle until it cools down. Wait until there is no sign of steam or coolant before you open the hood.

If you keep driving when your engine is overheated, the liquids in it can catch fire. You or others could be badly burned. Stop your engine if it overheats, and get out of the vehicle until the engine is cool.

### NOTICE:

If your engine catches fire because you keep driving with no coolant, your vehicle can be badly damaged. The costly repairs would not be covered by your warranty.

## If No Steam Is Coming From Your Engine

If you get the overheat warning but see or hear no steam, the problem may not be too serious. Sometimes the engine can get a little too hot when you:

- Climb a long hill on a hot day.
- Stop after high-speed driving.
- Idle for long periods in traffic.
- Tow a trailer.

If you get the overheat warning with no sign of steam, try this for a minute or so:

1. If you have an air conditioner, turn it off.
2. Turn on your heater to full hot at the highest fan speed and open the window as necessary.
3. If you're in a traffic jam, shift to NEUTRAL (N); otherwise, shift to the highest gear while driving -- DRIVE (D) for automatic transaxles.

If you no longer have the overheat warning, you can drive. Just to be safe, drive slower for about 10 minutes. If the warning doesn't come back on, you can drive normally.

If the warning continues, pull over, stop, and park your vehicle right away.

If there's still no sign of steam, you can idle the engine for two or three minutes while you're parked, to see if the warning stops. But then, if you still have the warning, *turn off the engine and get everyone out of the vehicle* until it cools down.

You may decide not to lift the hood but to get service help right away.

## Cooling System

When you decide it's safe to lift the hood, here's what you'll see:



- A. Electric Engine Cooling Fans
- B. Radiator Pressure Cap
- C. Coolant Recovery Tank

### CAUTION:

An electric engine cooling fan under the hood can start up even when the engine is not running and can injure you. Keep hands, clothing and tools away from any underhood electric fan.

If the coolant inside the coolant recovery tank is boiling, don't do anything else until it cools down.



The coolant level should be at or above FULL.

If it isn't, you may have a leak in the radiator hoses, heater hoses, radiator, water pump or somewhere else in the cooling system.

 **CAUTION:**

**Heater and radiator hoses, and other engine parts, can be very hot. Don't touch them. If you do, you can be burned.**

**Don't run the engine if there is a leak. If you run the engine, it could lose all coolant. That could cause an engine fire, and you could be burned. Get any leak fixed before you drive the vehicle.**

**NOTICE:**

**Engine damage from running your engine without coolant isn't covered by your warranty.**

If there seems to be no leak, with the engine on, check to see if the electric engine cooling fans are running. If the engine is overheating, both fans should be running. If they aren't, your vehicle needs service.

## How to Add Coolant to the Coolant Recovery Tank

If you haven't found a problem yet, but the coolant level isn't at **FULL**, add a 50/50 mixture of *clean water* (preferably distilled) and a proper coolant at the coolant recovery tank. (See "Engine Coolant" in the Index for more information about the proper coolant mixture.)

 **CAUTION:**

**Adding only plain water to your cooling system can be dangerous. Plain water, or some other liquid like alcohol, can boil before the proper coolant mixture will. Your vehicle's coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, your engine could get too hot but you wouldn't get the overheat warning. Your engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean water and a proper coolant.**

## NOTICE:

In cold weather, water can freeze and crack the engine, radiator, heater core and other parts. Use the recommended coolant and the proper coolant mixture.

## ⚠ CAUTION:

You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough. Don't spill coolant on a hot engine.



When the coolant in the coolant recovery tank is at FULL start your vehicle.

If the overheat warning continues, there's one more thing you can try. You can add the proper coolant mixture directly to the radiator, but be sure the cooling system is cool before you do it.



**⚠ CAUTION:**

**Steam and scalding liquids from a hot cooling system can blow out and burn you badly. They are under pressure, and if you turn the radiator pressure cap -- even a little -- they can come out at high speed. Never turn the cap when the cooling system, including the radiator pressure cap, is hot. Wait for the cooling system and radiator pressure cap to cool if you ever have to turn the pressure cap.**



## How to Add Coolant to the Radiator



1. You can remove the radiator pressure cap when the cooling system, including the radiator pressure cap and upper radiator hose, is no longer hot. Turn the pressure cap slowly counterclockwise until it first stops. (Don't press down while turning the pressure cap.)

If you hear a hiss, wait for that to stop. A hiss means there is still some pressure left.



2. Then keep turning the pressure cap, but now push down as you turn it. Remove the pressure cap.



3. Fill the radiator with the proper coolant mixture, up to the base of the filler neck. (See "Engine Coolant" in the Index for more information about the proper coolant mixture.)



4. Then fill the coolant recovery tank to FULL.
5. Put the cap back on the coolant recovery tank, but leave the radiator pressure cap off.



6. Start the engine and let it run until you can feel the upper radiator hose getting hot. Watch out for the engine cooling fans.
7. By this time, the coolant level inside the radiator filler neck may be lower. If the level is lower, add more of the proper coolant mixture through the filler neck until the level reaches the base of the filler neck.



8. Then replace the pressure cap. At any time during this procedure if coolant begins to flow out of the filler neck, reinstall the pressure cap. Be sure the arrows on the pressure cap line up like this.

## If a Tire Goes Flat

It's unusual for a tire to "blow out" while you're driving, especially if you maintain your tires properly. If air goes out of a tire, it's much more likely to leak out slowly. But if you should ever have a "blowout," here are a few tips about what to expect and what to do:

If a front tire fails, the flat tire will create a drag that pulls the vehicle toward that side. Take your foot off the accelerator pedal and grip the steering wheel firmly. Steer to maintain lane position, and then gently brake to a stop well out of the traffic lane.

A rear blowout, particularly on a curve, acts much like a skid and may require the same correction you'd use in a skid. In any rear blowout, remove your foot from the accelerator pedal. Get the vehicle under control by steering the way you want the vehicle to go. It may be very bumpy and noisy, but you can still steer. Gently brake to a stop -- well off the road if possible.

If a tire goes flat, the next part shows how to use your jacking equipment to change a flat tire safely.

## Changing a Flat Tire

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on your hazard warning flashers.

### CAUTION:

**Changing a tire can cause an injury. The vehicle can slip off the jack and roll over you or other people. You and they could be badly injured. Find a level place to change your tire. To help prevent the vehicle from moving:**

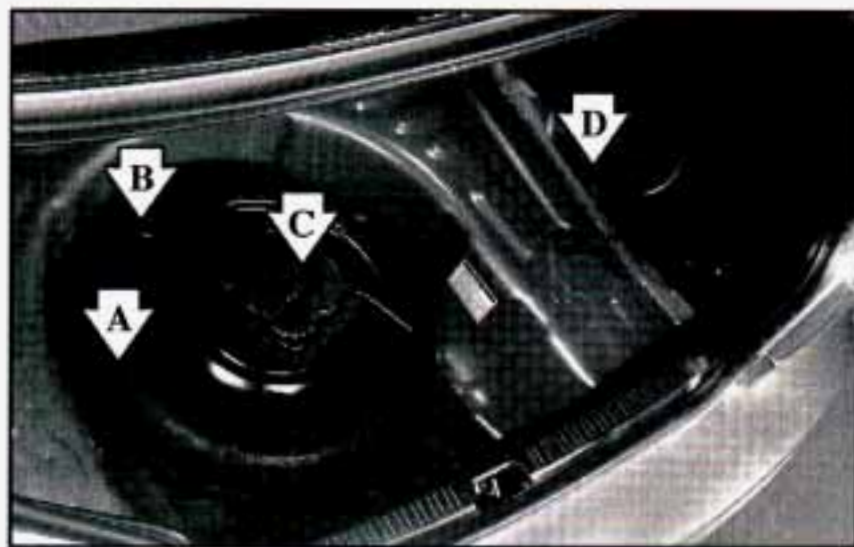
- 1. Set the parking brake firmly.**
- 2. Put an automatic transaxle shift lever in PARK (P), or shift a manual transaxle to FIRST (1) or REVERSE (R).**
- 3. Turn off the engine.**

**To be even more certain the vehicle won't move, you can put blocks at the front and rear of the tire farthest away from the one being changed. That would be the tire on the other side of the vehicle, at the opposite end.**



The following steps will tell you how to use the jack and change a tire.

## Removing the Spare Tire and Tools



A. Spare Tire

B. Jack Handle

C. Wheel Wrench

D. Jack

The equipment you'll need is in the trunk.

Lift the spare tire cover to gain access to the spare tire and tools. Remove the foam tray containing the jacking tools.

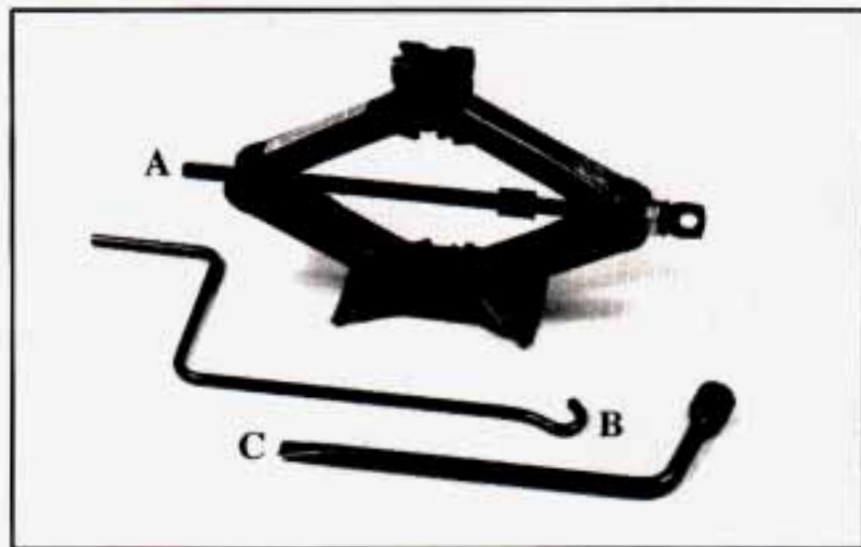
Turn the knob to the left and remove it.

Pull out the spare tire. See "Compact Spare Tire" later in this section for more information about the compact spare.

Remove the wheel wrench and jack handle from the foam tray.



The jack is on the right side of the trunk. Turn the jack screw to remove the jack from the clamps.



The tools you'll be using include the jack (A), jack handle (B) and wheel wrench (C).



Attach the jack handle to the jack. Turn the jack handle to the right to raise the lift head.



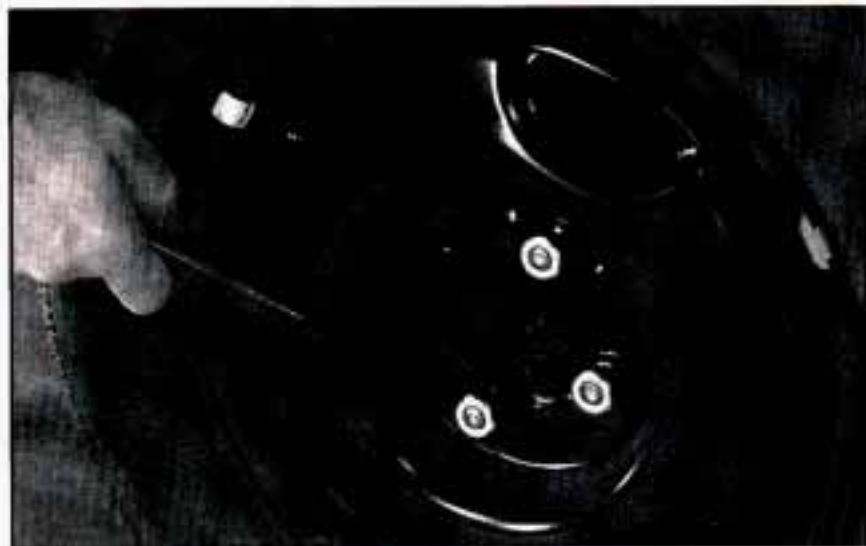
Remove the wheel cover, if your vehicle is equipped with one, by using the flat end of the wheel wrench. Pry along the edge of the wheel cover until it comes off. Be careful; the rim edges may be sharp. Don't try to remove it with your bare hands.



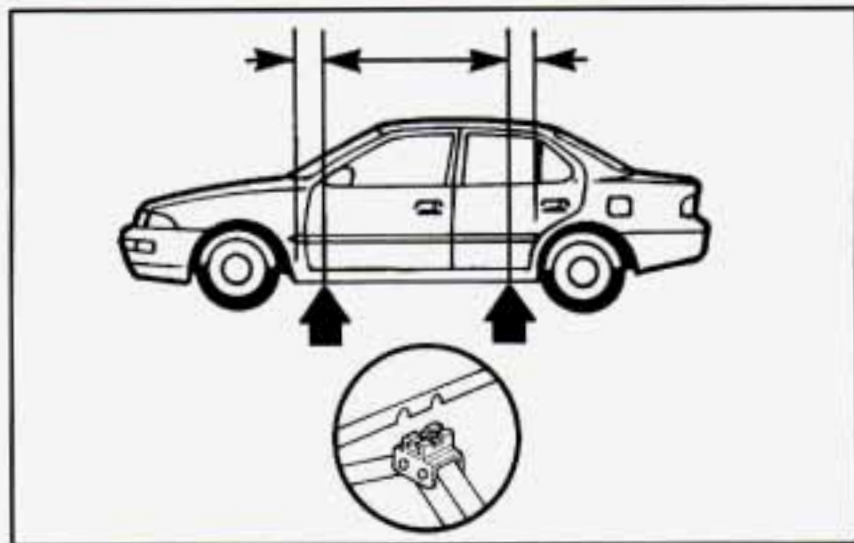


If your wheel has a center cover, insert the flat end of the wheel wrench into the slot to remove the center cap. Pry the cap off.

## Removing the Flat Tire and Installing the Spare Tire



1. Using the wheel wrench, loosen all the wheel nuts. Don't remove them yet.



2. Position the jack and raise the jack lift head until it fits firmly into the notches closest to the flat tire.

**⚠ CAUTION:**

Raising your vehicle with the jack improperly positioned can damage the vehicle and even make the vehicle fall. To help avoid personal injury and vehicle damage, be sure to fit the jack lift head into the proper location before raising the vehicle.

**⚠ CAUTION:**

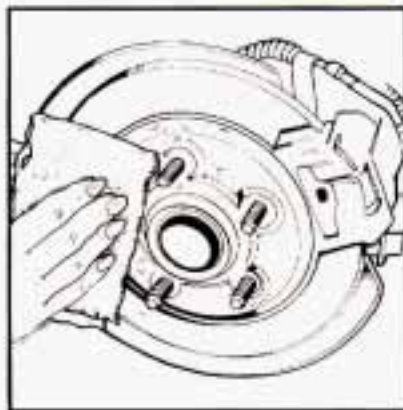
Getting under a vehicle when it is jacked up is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.



3. Raise the vehicle by rotating the jack handle to the right. Raise the vehicle far enough off the ground so there is enough room for the spare tire to fit.



4. Remove all the wheel nuts and take off the flat tire.



5. Remove any rust or dirt from the wheel bolts, mounting surfaces and spare wheel.

**⚠ CAUTION:**

**Rust or dirt on the wheel, or on the parts to which it is fastened, can make the wheel nuts become loose after a time. The wheel could come off and cause an accident. When you change a wheel, remove any rust or dirt from the 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:**

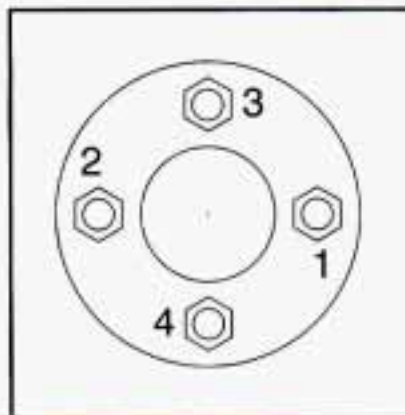
**Never use oil or grease on studs or nuts. If you do, the nuts might come loose. Your wheel could fall off, causing a serious accident.**



6. Replace the wheel nuts with the rounded end of the nuts toward the wheel. Tighten each nut by hand until the wheel is held against the hub.



7. Lower the vehicle by turning the jack handle to the left. Lower the jack completely.

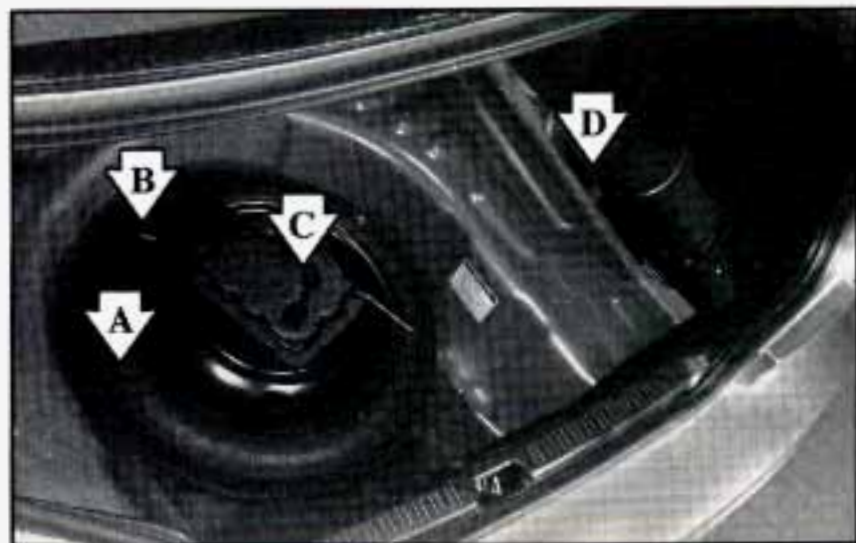


8. Tighten the wheel nuts firmly in a crisscross sequence as shown.

**⚠ CAUTION:**

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

**Stop somewhere as soon as you can and have the nuts tightened with a torque wrench to 100 lb-ft (140 N·m).**



A. Spare or Flat Tire

B. Jack Handle

C. Wheel Wrench

D. Jack

Replace the jack, jack handle, wheel wrench and flat or spare tire.

## Storing a Flat or Spare Tire and Tools

Although the compact spare tire was fully inflated when your vehicle was new, it can lose air after a time. Check the inflation pressure regularly. It should be 60 psi (420 kPa).

After installing the compact spare on your vehicle, you should stop as soon as possible and make sure your spare tire is correctly inflated. The compact spare is made to perform well at speeds up to 65 mph (105 km/h) for distances up to 3,000 miles (5 000 km), so you can finish your trip and have your full-size tire repaired or replaced where you want. Of course, it's best to replace your spare with a full-size tire as soon as you can. Your spare will last longer and be in good shape in case you need it again.

## **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.**

Don't try to put a wheel cover on your compact spare tire. It won't fit. Store the wheel cover in the trunk until you have the flat tire repaired or replaced.

## **NOTICE:**

**Wheel covers won't fit on your compact spare. If you try to put a wheel cover on your compact spare, you could damage the cover or the spare.**

## **Compact Spare Tire**



## **CAUTION:**

**Storing a jack, a tire or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store all these in the proper place.**

## **NOTICE:**

**When the compact spare is installed, don't take your vehicle through an automatic car wash with guide rails. The compact spare can get caught on the rails. That can damage the tire and wheel, and maybe other parts of your vehicle.**

Don't use your compact spare on other vehicles.

And don't mix your compact spare tire or wheel with other wheels or tires. They won't fit. Keep your spare tire and its wheel together.

## **NOTICE:**

**Tire chains won't fit your compact spare. Using them can damage your vehicle and can damage the chains too. Don't use tire chains on your compact spare.**

## **If You're Stuck: In Sand, Mud, Ice or Snow**

What you don't want to do when your vehicle is stuck is to spin your wheels too fast. The method known as "rocking" can help you get out when you're stuck, but you must use caution.



## **CAUTION:**

**If you let your tires spin at high speed, they can explode, and you or others could be injured. And, the transaxle or other parts of the vehicle can overheat. That could cause an engine compartment fire or other damage. When you're stuck, spin the wheels as little as possible. Don't spin the wheels above 35 mph (55 km/h) as shown on the speedometer.**



## NOTICE:

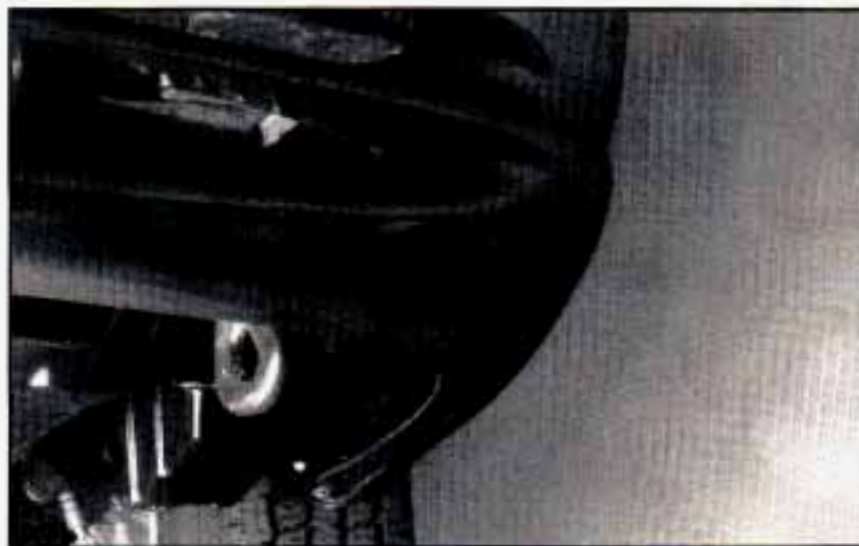
**Spinning your wheels can destroy parts of your vehicle as well as the tires. If you spin the wheels too fast while shifting your transaxle back and forth, you can destroy your transaxle.**

For information about using tire chains on your vehicle, see “Tire Chains” in the Index.

### Rocking Your Vehicle To Get It Out

First, turn your steering wheel left and right. That will clear the area around your front wheels. Then shift back and forth between REVERSE (R) and a forward gear (or with a manual transaxle, between FIRST (1) or SECOND (2) and REVERSE (R)), spinning the wheels as little as possible. Release the accelerator pedal while you shift, and press lightly on the accelerator pedal when the transaxle is in gear. If that doesn't get you out after a few tries, you may need to be towed out. Or, you can use your recovery hooks. If you do need to be towed out, see “Towing Your Vehicle” in the Index.

### Using the Recovery Hooks



Your vehicle is equipped with recovery hooks. The recovery hooks are provided at the front of your vehicle. They can only be used for pulling your vehicle out.



**⚠ CAUTION:**

The recovery hooks, when used, are under a lot of force. Always pull the vehicle straight out. Never pull on the hooks at a sideways angle. The hooks could break off and you or others could be injured from the chain or cable snapping back.

**NOTICE:**

Never use the recovery hooks to tow the vehicle. Your vehicle could be damaged and it would not be covered by warranty.



## Section 6 Service and Appearance Care

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Here you will find information about the care of your vehicle. This section begins with service and fuel information, and then it shows how to check important fluid and lubricant levels. There is also technical information about your vehicle, and a part devoted to its appearance care.

6-2	Service	6-28	Brakes
6-3	Fuel	6-32	Battery
6-5	Fuels in Foreign Countries	6-33	Bulb Replacement
6-6	Filling Your Tank	6-37	Tires
6-8	Filling a Portable Fuel Container	6-44	Appearance Care
6-9	Checking Things Under the Hood	6-45	Cleaning the Inside of Your Vehicle
6-12	Engine Oil	6-47	Cleaning the Built-in Child Restraint
6-16	Air Cleaner	6-47	Care of Safety Belts and Built-in Child Restraint Harness
6-18	Automatic Transaxle Fluid	6-48	Cleaning the Outside of Your Vehicle
6-21	Manual Transaxle Fluid	6-53	Vehicle Identification Number (VIN)
6-22	Hydraulic Clutch	6-53	Electrical System
6-23	Engine Coolant	6-58	Replacement Bulbs
6-25	Radiator Pressure Cap	6-59	Capacities and Specifications
6-25	Thermostat	6-60	Air Conditioning Refrigerants
6-26	Power Steering Fluid		
6-27	Windshield Washer Fluid		

## Service

Your dealer knows your vehicle best and wants you to be happy with it. We hope you'll go to your dealer for all your service needs. You'll get genuine GM parts and GM-trained and supported service people.

We hope you'll want to keep your GM vehicle all GM. Genuine GM parts have one of these marks:

***ACDelco***<sup>®</sup>

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Genuine



Parts



**Goodwrench**

## Doing Your Own Service Work

If you want to do some of your own service work, you'll want to use the proper Chevrolet Service Manual. It tells you much more about how to service your vehicle than this manual can. To order the proper service manual, see "Service and Owner Publications" in the Index.

Your vehicle has an air bag system. Before attempting to do your own service work, see "Servicing Your Air Bag-Equipped Vehicle" in the Index.

You should keep a record with all parts receipts and list the mileage and the date of any service work you perform. See "Maintenance Record" in the Index.



## **CAUTION:**

**You can be injured and your vehicle could be damaged if you try to do service work on a vehicle without knowing enough about it.**

- **Be sure you have sufficient knowledge, experience, the proper replacement parts and tools before you attempt any vehicle maintenance task.**
- **Be sure to use the proper nuts, bolts and other fasteners. “English” and “metric” fasteners can be easily confused. If you use the wrong fasteners, parts can later break or fall off. You could be hurt.**

## **Adding Equipment to the Outside of Your Vehicle**

Things you might add to the outside of your vehicle can affect the airflow around it. This may cause wind noise and affect windshield washer performance. Check with your dealer before adding equipment to the outside of your vehicle.

## **Fuel**

Use regular unleaded gasoline rated at 87 octane or higher. At a minimum, it should meet specifications ASTM D4814 in the United States and CGSB 3.5-M93 in Canada. Improved gasoline specifications have been developed by the American Automobile Manufacturers Association (AAMA) for better vehicle performance and engine protection. Gasolines meeting the AAMA specification could provide improved driveability and emission control system protection compared to other gasolines.

Be sure the posted octane is at least 87. If the octane is less than 87, you may get a heavy knocking noise when you drive. If it's bad enough, it can damage your engine.

If you're using fuel rated at 87 octane or higher and you hear heavy knocking, your engine needs service. But don't worry if you hear a little pinging noise when you're accelerating or driving up a hill. That's normal, and you don't have to buy a higher octane fuel to get rid of pinging. It's the heavy, constant knock that means you have a problem.

If your vehicle is certified to meet California Emission Standards (indicated on the underhood emission control label), it is designed to operate on fuels that meet California specifications. If such fuels are not available in states adopting California emissions standards, your vehicle will operate satisfactorily on fuels meeting federal specifications, but emission control system

performance may be affected. The malfunction indicator lamp on your instrument panel may turn on and/or your vehicle may fail a smog-check test. If this occurs, return to your authorized Chevrolet dealer for diagnosis to determine the cause of failure. In the event it is determined that the cause of the condition is the type of fuels used, repairs may not be covered by your warranty.

Some gasolines that are not reformulated for low emissions contain an octane-enhancing additive called methylcyclopentadienyl manganese tricarbonyl (MMT); ask your service station operator whether or not his fuel contains MMT. General Motors does not recommend the use of such gasolines. If fuels containing MMT are used, spark plug life may be reduced and your emission control system performance may be affected. The malfunction indicator lamp on your instrument panel may turn on. If this occurs, return to your authorized Chevrolet dealer for service.

To provide cleaner air, all gasolines in the United States are now required to contain additives that will help prevent deposits from forming in your engine and fuel system, allowing your emission control system to function properly. Therefore, you should not have to add anything to the fuel. In addition, gasolines containing oxygenates, such as ethers and ethanol, and reformulated gasolines may be available in your area to help clean the air. General Motors recommends that you use these gasolines if they comply with the specifications described earlier.

## **NOTICE:**

**Your vehicle was not designed for fuel that contains methanol. Don't use it. It can corrode metal parts in your fuel system and also damage plastic and rubber parts. That damage wouldn't be covered under your warranty.**

## **Fuels in Foreign Countries**

If you plan on driving in another country outside the United States or Canada, the proper fuel may be hard to find. Never use leaded gasoline or any other fuel not recommended in the previous text on fuel. Costly repairs caused by use of improper fuel wouldn't be covered by your warranty.

To check on fuel availability, ask an auto club, or contact a major oil company that does business in the country where you'll be driving.

You can also write us at the following address for advice. Just tell us where you're going and give your Vehicle Identification Number (VIN).

General Motors Overseas Distribution Corporation  
1908 Colonel Sam Drive  
Oshawa, Ontario L1H 8P7

## Filling Your Tank



## Remote Fuel Door Release Lever



The fuel door release lever is near the floor to the left of the driver's seat.

### CAUTION:

Gasoline vapor is highly flammable. It burns violently, and that can cause very bad injuries. Don't smoke if you're near gasoline or refueling your vehicle. Keep sparks, flames and smoking materials away from gasoline.



The cap is behind a hinged door on the driver's side of your vehicle.



While refueling, hang the cap inside the fuel door.

To remove the cap, turn it slowly to the left (counterclockwise).

**⚠ CAUTION:**

**If you get gasoline on yourself and then something ignites it, you could be badly burned. Gasoline can spray out on you if you open the fuel filler cap too quickly. This spray can happen if your tank is nearly full, and is more likely in hot weather. Open the fuel filler cap slowly and wait for any “hiss” noise to stop. Then unscrew the cap all the way.**

Be careful not to spill gasoline. Clean gasoline from painted surfaces as soon as possible. See “Cleaning the Outside of Your Vehicle” in the Index.

When you put the cap back on, turn it to the right (clockwise) until you hear a clicking sound. Make sure you fully install the cap. The diagnostic system can determine if the fuel cap has been left off or improperly installed. This would allow fuel to evaporate into the atmosphere. See “Malfunction Indicator Lamp” in the Index.

### **NOTICE:**

**If you need a new cap, be sure to get the right type. Your dealer can get one for you. If you get the wrong type, it may not fit properly. This may cause your malfunction indicator lamp to light and your fuel tank and emissions system may be damaged. See “Malfunction Indicator Lamp” in the Index.**

## **Filling a Portable Fuel Container**

### **CAUTION:**

**Never fill a portable fuel container while it is in your vehicle. Static electricity discharge from the container can ignite the gasoline vapor. You can be badly burned and your vehicle damaged if this occurs. To help avoid injury to you and others:**

- **Dispense gasoline only into approved containers.**
- **Do not fill a container while it is inside a vehicle, in a vehicle’s trunk, pickup bed or on any surface other than the ground.**
- **Bring the fill nozzle in contact with the inside of the fill opening before operating the nozzle. Contact should be maintained until the filling is complete.**
- **Don’t smoke while pumping gasoline.**

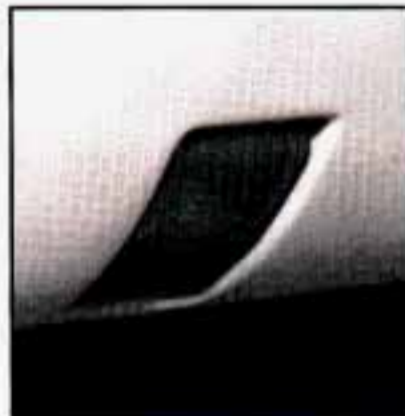
## Checking Things Under the Hood

### CAUTION:

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

### CAUTION:

Things that burn can get on hot engine parts and start a fire. These include liquids like gasoline, oil, coolant, brake fluid, windshield washer and other fluids, and plastic or rubber. You or others could be burned. Be careful not to drop or spill things that will burn onto a hot engine.



To open the hood, first pull the release handle inside the vehicle. It's on the bottom portion of the instrument panel to the left of the steering wheel.

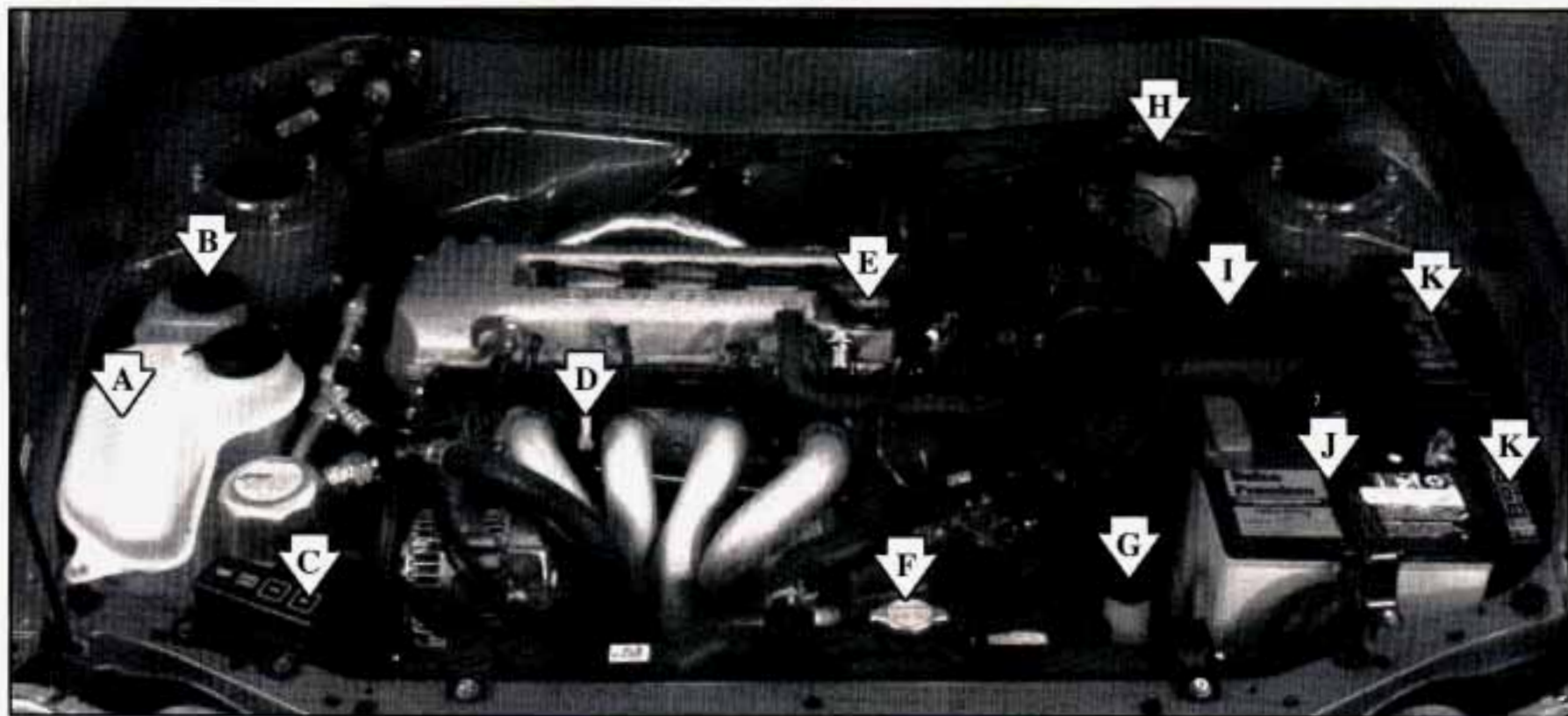


Then go to the front of the vehicle. Release the secondary hood release by pushing up on the lever near the middle of the hood.



Lift the hood, release the hood prop rod from its retainer and put the hood prop rod into the slot in the hood.

When you open the hood on a 1.8 L (Code 8) engine, you'll see:



A. Windshield Washer  
Fluid Reservoir

B. Power Steering Fluid Reservoir

C. Engine Compartment  
Fuse Block

D. Engine Oil Dipstick

E. Engine Oil Fill Cap

F. Radiator Pressure Cap

G. Engine Coolant Reservoir

H. Brake Fluid Reservoir

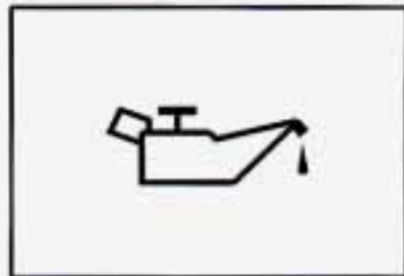
I. Air Cleaner

J. Battery

K. Engine Compartment  
Fuse Blocks

Before closing the hood, be sure all the filler caps are on properly.

## Engine Oil



If the engine oil pressure light on the instrument panel comes on, it means you need to check your engine oil level right away.

For more information, see “Engine Oil Pressure Light” in the Index. You should check your engine oil level regularly; this is an added reminder.

It’s a good idea to check your engine oil every time you get fuel. In order to get an accurate reading, the oil must be warm and the vehicle must be on level ground.



The engine oil dipstick is located in the center of the engine compartment. The dipstick handle is a yellow loop.

Turn off the engine and give the oil a few minutes to drain back into the oil pan. If you don’t, the oil dipstick might not show the actual level.

### Checking Engine Oil

Pull out the dipstick and clean it with a paper towel or cloth, then push it back in all the way. Remove it again, keeping the tip down, and check the level.



## When to Add Engine Oil

If the oil is at or below the lower mark, then you'll need to add at least one quart of oil. But you must use the right kind. This part explains what kind of oil to use. For crankcase capacity, see "Capacities and Specifications" in the Index.

### **NOTICE:**

**Don't add too much oil. If your engine has so much oil that the oil level gets above the upper mark that shows the proper operating range, your engine could be damaged.**



The engine oil fill cap is located in the center of the engine compartment.

Be sure to fill it enough to put the level somewhere in the proper operating range. Push the dipstick all the way back in when you're through.

## What Kind of Engine Oil to Use

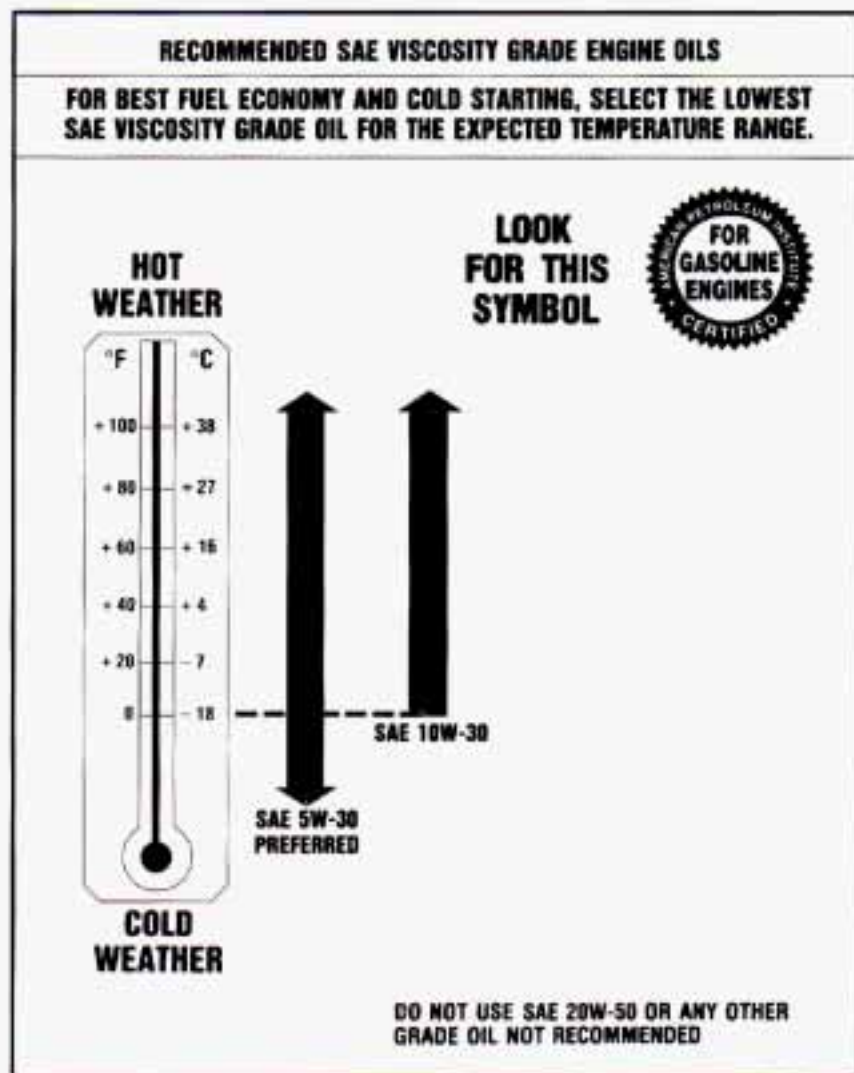
Oils recommended for your vehicle can be identified by looking for the “Starburst” symbol. This symbol indicates that the oil has been certified by the American Petroleum Institute (API). Do not use any oil which does not carry this Starburst symbol.



If you change your own oil, be sure you use oil that has the Starburst symbol on the front of the oil container.

If you have your oil changed for you, be sure the oil put into your engine is American Petroleum Institute certified for gasoline engines.

You should also use the proper viscosity oil for your vehicle, as shown in the following chart:





As shown in the chart, SAE 5W-30 is best for your vehicle. However, you can use SAE 10W-30 if it's going to be 0°F (-18°C) or above. These numbers on an oil container show its viscosity, or thickness. Do not use other viscosity oils, such as SAE 20W-50.

## **NOTICE:**

**Use only engine oil with the American Petroleum Institute Certified For Gasoline Engines “Starburst” symbol. Failure to use the recommended oil can result in engine damage not covered by your warranty.**

GM Goodwrench<sup>®</sup> oil meets all the requirements for your vehicle.

If you are in an area where the temperature falls below -20°F (-29°C), consider using either an SAE 5W-30 synthetic oil or an SAE 0W-30 oil. Both will provide easier cold starting and better protection for your engine at extremely low temperatures.

## **Engine Oil Additives**

Don't add anything to your oil. Your dealer is ready to advise if you think something should be added.

## **When to Change Engine Oil**

If any one of these is true for you, use the short trip/city maintenance schedule:

- Most trips are less than 5 to 10 miles (8 to 16 km). This is particularly important when outside temperatures are below freezing.
- Most trips include extensive idling (such as frequent driving in stop-and-go traffic).
- Most trips are through dusty areas.
- You frequently tow a trailer or use a carrier on top of your vehicle.
- The vehicle is used for delivery service, police, taxi or other commercial application.

Driving under these conditions causes engine oil to break down sooner. If any one of these is true for your vehicle, then you need to change your oil and filter every 3,000 miles (5 000 km) or 3 months -- whichever occurs first.

If none of them is true, use the long trip/highway maintenance schedule. Change the oil and filter every 7,500 miles (12 500 km) or 12 months -- whichever occurs first. Driving a vehicle with a fully warmed engine under highway conditions causes engine oil to break down slower.

### **What to Do with Used Oil**

Did you know that used engine oil contains certain elements that may be unhealthy for your skin and could even cause cancer? Don't let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly throw away clothing or rags containing used engine oil. (See the manufacturer's warnings about the use and disposal of oil products.)

Used oil can be a real threat to the environment. If you change your own oil, be sure to drain all free-flowing oil from the filter before disposal. Don't ever dispose of oil by putting it in the trash, pouring it on the ground, into sewers, or into streams or bodies of water. Instead, recycle it by taking it to a place that collects used oil. If you have a problem properly disposing of your used oil, ask your dealer, a service station or a local recycling center for help.

### **Air Cleaner**



The air cleaner and filter are on the driver's side of the engine compartment.

To check or replace the filter:



1. Release the two clips that hold the cover down.
2. Lift the cover off.
3. Pull out the air filter.
4. Install the new air filter.
5. Reverse steps 1 through 3 to reassemble the air cleaner assembly.

Refer to the Maintenance Schedule to determine when to replace the air filter.

See “Scheduled Maintenance Services” in the Index.

**⚠ CAUTION:**

**Operating the engine with the air cleaner off can cause you or others to be burned. The air cleaner not only cleans the air, it stops flame if the engine backfires. If it isn't there, and the engine backfires, you could be burned. Don't drive with it off, and be careful working on the engine with the air cleaner off.**

**NOTICE:**

**If the air cleaner is off, a backfire can cause a damaging engine fire. And, dirt can easily get into your engine, which will damage it. Always have the air cleaner in place when you're driving.**

## Automatic Transaxle Fluid

### When to Check and Change

A good time to check your automatic transaxle fluid level is when the engine oil is changed.

Change fluid in the transaxle and differential every 15,000 miles (25 000 km) if the vehicle is mainly driven under one or more of these conditions:

- In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
- In hilly or mountainous terrain.
- When doing frequent trailer towing.
- Uses such as found in taxi, police or delivery service.

If you do not use your vehicle under any of these conditions, check the fluid.

See “Scheduled Maintenance Services” in the Index.

### How to Check

Because this operation can be a little difficult, you may choose to have this done at your Chevrolet dealership Service Department.

If you do it yourself, be sure to follow all the instructions here, or you could get a false reading on the dipstick.

#### **NOTICE:**

**Too much or too little fluid can damage your transaxle. Too much can mean that some of the fluid could come out and fall on hot engine parts or exhaust system parts, starting a fire. Be sure to get an accurate reading if you check your transaxle fluid.**

Wait at least 30 minutes before checking the transaxle fluid level if you have been driving:

- When outside temperatures are above 90°F (32°C).
- At high speed for quite a while.
- In heavy traffic -- especially in hot weather.
- While pulling a trailer.

To get the right reading, the fluid should be at normal operating temperature, which is 180°F to 200°F (82°C to 93°C).

Get the vehicle warmed up by driving about 15 miles (24 km) when outside temperatures are above 50°F (10°C). If it's colder than 50°F (10°C), you may have to drive longer.

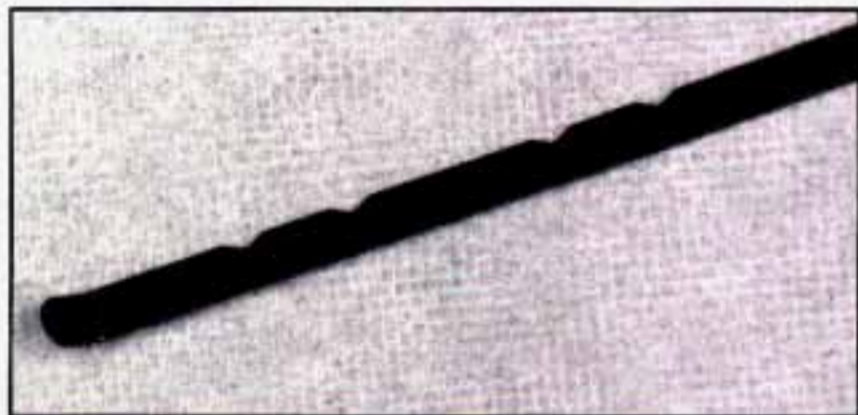
### Checking the Fluid Level

- Park your vehicle on a level place. Keep the engine running.
- With the parking brake applied, place the shift lever in PARK (P).
- With your foot on the brake pedal, move the shift lever through each gear range, pausing for about three seconds in each range. Then, position the shift lever in PARK (P).

- Let the engine run at idle for three to five minutes. Then, without shutting off the engine, follow these steps:



1. The automatic transaxle dipstick has an orange handle and is located near the coolant recovery tank. Release the tab and pull out the dipstick and wipe it with a clean rag or paper towel.
2. Push it back in all the way, wait three seconds and then pull it back out again.



3. Check both sides of the dipstick, and read the lower level. The fluid level must be between the two dimples in the hot range.
4. If the fluid level is in the acceptable range, push the dipstick back in all the way; then press the tab down to lock the dipstick in place.

## How to Add Fluid

Refer to the Maintenance Schedule to determine what kind of transaxle fluid to use. See “Recommended Fluids and Lubricants” in the Index.

If the fluid level is low, add only enough of the proper fluid to bring the level into the area between dimples on the dipstick.

1. Pull out the dipstick.
2. Using a long-neck funnel, add enough fluid at the dipstick hole to bring it to the proper level.

It doesn't take much fluid, generally less than one pint (0.5 L). *Don't overfill.*

## NOTICE:

**We recommend you use only fluid labeled DEXRON®-III, because fluid with that label is made especially for your automatic transaxle. Damage caused by fluid other than DEXRON-III is not covered by your new vehicle warranty.**

3. After adding fluid, recheck the fluid level as described under “How to Check.”
4. When the correct fluid level is obtained, push the dipstick back in all the way; then press the tab down to lock the dipstick in place.

## Manual Transaxle Fluid

### When to Check

A good time to have it checked is when the engine oil is changed. However, the fluid in your manual transaxle doesn't require changing.

### How to Check

Because this operation can be difficult, you may choose to have this done at your Chevrolet dealership Service Department.

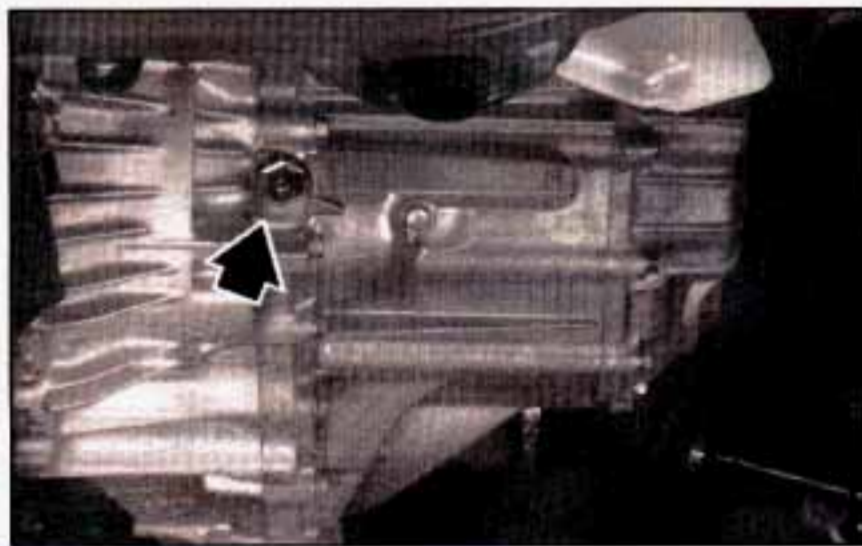
If you do it yourself, be sure to follow all the instructions here, or you could get a false reading.

#### **NOTICE:**

**Too much or too little fluid can damage your transaxle. Too much can mean that some of the fluid could come out and fall on hot engine parts or exhaust system parts, starting a fire. Be sure to get an accurate reading if you check your transaxle fluid.**

Check the fluid level only when your engine is off, the vehicle is parked on a level place and the transaxle is cool enough for you to rest your fingers on the transaxle case.

Then, follow these steps:



1. Remove the filler plug.
2. Check that the lubricant level is up to the bottom of the filler plug hole.

3. If the fluid level is good, install the plug and be sure it is fully seated. If the fluid level is low, add more fluid as described in the next steps.

## How to Add Fluid

Here's how to add fluid. Refer to the Maintenance Schedule to determine what kind of fluid to use. See "Recommended Fluids and Lubricants" in the Index.

1. Remove the filler plug.
2. Add fluid at the filler plug hole. Add only enough fluid to bring the fluid level up to the bottom of the filler plug hole.
3. Install the filler plug. Be sure the plug is fully seated.

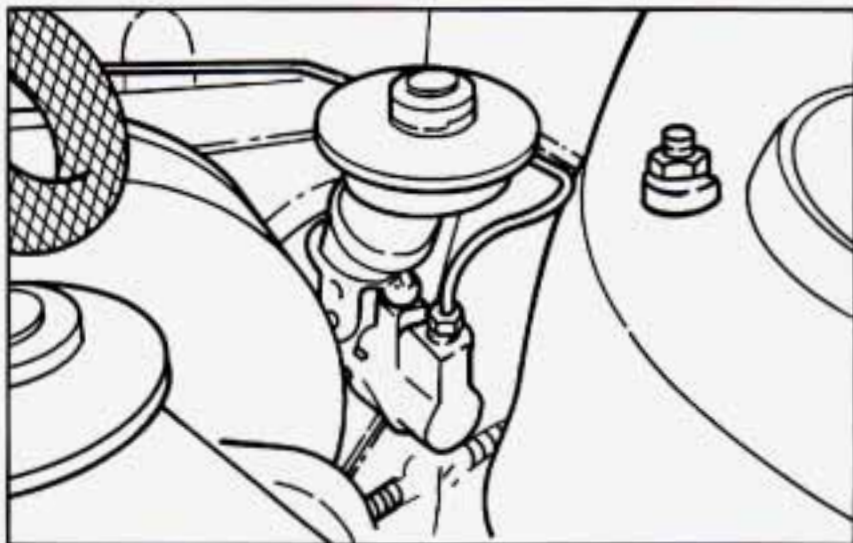
## Hydraulic Clutch

The hydraulic clutch linkage in your vehicle is self-adjusting. The clutch master cylinder reservoir is filled with hydraulic clutch fluid.

It isn't a good idea to "top off" your clutch fluid. Adding fluid won't correct a leak.

A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

## When to Check and What to Use



Refer to the Maintenance Schedule to determine how often you should check the fluid level in your clutch master cylinder reservoir and for the proper fluid. See "Owner Checks and Services" and "Recommended Fluids and Lubricants" in the Index.

## How to Check

Check to make sure that the fluid level is at the MIN mark. If the level is below the MIN mark, see the instructions on the reservoir cap.



## Engine Coolant

The following explains your cooling system and how to add coolant when it is low. If you have a problem with engine overheating, see “Engine Overheating” in the Index.

A 50/50 mixture of water and the proper coolant will:

- Give freezing protection down to  $-34^{\circ}\text{F}$  ( $-37^{\circ}\text{C}$ ).
- Give boiling protection up to  $265^{\circ}\text{F}$  ( $129^{\circ}\text{C}$ ).
- Protect against rust and corrosion.
- Help keep the proper engine temperature.
- Let the warning lights and gages work as they should.

## What to Use

Use a mixture of one-half *clean water* (preferably distilled) and one-half coolant that meets GM Specification 1825-M, which won't damage aluminum parts. You can also use a recycled coolant conforming to GM Specification 1825-M with a complete coolant flush and refill. If you use this mixture, you don't need to add anything else.



### CAUTION:

**Adding only plain water to your cooling system can be dangerous. Plain water, or some other liquid like alcohol, can boil before the proper coolant mixture will. Your vehicle's coolant warning system is set for the proper coolant mixture. With plain water or the wrong mixture, your engine could get too hot but you wouldn't get the overheat warning. Your engine could catch fire and you or others could be burned. Use a 50/50 mixture of clean water and the proper coolant.**

## NOTICE:

**If you use an improper coolant mixture, your engine could overheat and be badly damaged. The repair cost wouldn't be covered by your warranty. Too much water in the mixture can freeze and crack the engine, radiator, heater core and other parts.**

If you have to add coolant more than four times a year, have your dealer check your cooling system.

## NOTICE:

**If you use the proper coolant, you don't have to add extra inhibitors or additives which claim to improve the system. These can be harmful.**

## Checking Coolant



When your engine is cold, the coolant level should be at **LOW**, or a little higher. When your engine is warm, the level should be up to **FULL**, or a little higher.

## Adding Coolant

If you need more coolant, add the proper coolant mixture *at the coolant recovery tank*, but be careful not to spill it.

 **CAUTION:**

Turning the radiator pressure cap when the engine and radiator are hot can allow steam and scalding liquids to blow out and burn you badly. With the coolant recovery tank, you will almost never have to add coolant at the radiator. Never turn the radiator pressure cap -- even a little -- when the engine and radiator are hot.

 **CAUTION:**

You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol, and it will burn if the engine parts are hot enough. Don't spill coolant on a hot engine.

## Radiator Pressure Cap

**NOTICE:**

Your radiator cap is a 15 psi (105 kPa) pressure-type cap and must be tightly installed to prevent coolant loss and possible engine damage from overheating. Be sure the arrows on the cap line up with the overflow tube on the radiator filler neck.

## Thermostat

Engine coolant temperature is controlled by a thermostat in the engine coolant system. The thermostat stops the flow of coolant through the radiator until the coolant reaches a preset temperature.

When you replace your thermostat, a General Motors<sup>®</sup> thermostat is recommended.

## Power Steering Fluid



### How To Check Power Steering Fluid

You can check your fluid without taking the cap off. Just look at the reservoir.

- When the engine compartment is hot, the level should be between the **HOT** marks.
- When the engine compartment is cool, the level should be between the **COLD** marks.

## What to Use

To determine what kind of fluid to use, see "Recommended Fluids and Lubricants" in the Index.

### **NOTICE:**

**When adding power steering fluid or making a complete fluid change, always use the proper fluid. Failure to use the proper fluid can cause leaks and damage hoses and seals.**

## Windshield Washer Fluid

### What to Use

When you need windshield washer fluid, be sure to read the manufacturer's 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 Washer Fluid



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.**
- **Don't 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 doesn't clean as well as washer fluid.**
- **Fill your washer fluid tank only three-quarters full when it's very cold. This allows for expansion if freezing occurs, which could damage the tank if it is completely full.**
- **Don't use engine coolant (antifreeze) in your windshield washer. It can damage your washer system and paint.**

## **Brakes**

### **Brake Fluid**



Your brake master cylinder reservoir is here. It is filled with DOT-3 brake fluid.

There are only two reasons why the brake fluid level in the reservoir might go down. The first is that the brake fluid goes down to an acceptable level during normal brake lining wear. When new linings are put in, the fluid level goes back up. The other reason is that fluid is leaking out of the brake system. If it is, you should have your brake system fixed, since a leak means that sooner or later your brakes won't work well, or won't work at all.

So, it isn't a good idea to "top off" your brake fluid. Adding brake fluid won't correct a leak. If you add fluid when your linings are worn, then you'll have too much fluid when you get new brake linings. You should add (or remove) brake fluid, as necessary, only when work is done on the brake hydraulic system.

 **CAUTION:**

**If you have too much brake fluid, it can spill on the engine. The fluid will burn if the engine is hot enough. You or others could be burned, and your vehicle could be damaged. Add brake fluid only when work is done on the brake hydraulic system.**

When your brake fluid falls to a low level, your brake warning light will come on. See "Brake System Warning Light" in the Index.

## What to Add

When you do need brake fluid, use only DOT-3 brake fluid -- such as Delco Supreme 11<sup>®</sup> (GM Part No. 12377967). Use new brake fluid from a sealed container only.

Always clean the brake fluid reservoir cap and the area around the cap before removing it. This will help keep dirt from entering the reservoir.



### **CAUTION:**

**With the wrong kind of fluid in your brake system, your brakes may not work well, or they may not even work at all. This could cause a crash. Always use the proper brake fluid.**

### **NOTICE:**

- **Using the wrong fluid can badly damage brake system parts. For example, just a few drops of mineral-based oil, such as engine oil, in your brake system can damage brake system parts so badly that they'll have to be replaced. Don't let someone put in the wrong kind of fluid.**
- **If you spill brake fluid on your vehicle's painted surfaces, the paint finish can be damaged. Be careful not to spill brake fluid on your vehicle. If you do, wash it off immediately. See "Appearance Care" in the Index.**



## Brake Wear

Your vehicle has front disc brakes and rear drum 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 may 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 your brakes won't 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 may cause a brake squeal when the brakes are first applied or lightly applied. This does not mean something is wrong with your brakes.

Properly torqued wheel nuts are necessary to help prevent brake pulsation. When tires are rotated, inspect brake pads for wear and evenly torque wheel nuts in the proper sequence to GM specifications.

Your rear drum brakes don't have wear indicators, but if you ever hear a rear brake rubbing noise, have the rear brake linings inspected immediately. Also, the rear brake drums should be removed and inspected each time the tires are removed for rotation or changing. When you have the front brake pads replaced, have the rear brakes inspected, too.

Brake linings should always be replaced as complete axle sets.

See "Brake System Inspection" in Section 7 of this manual under Part C "Periodic Maintenance Inspections."

## Brake Pedal Travel

See your dealer if the brake pedal does not return to normal height, or if there is a rapid increase in pedal travel. This could be a sign of brake trouble.

## Brake Adjustment

Every time you make a moderate brake stop, your disc brakes adjust for wear. If you rarely make a moderate or heavier stop, then your brakes might not adjust correctly. If you drive in that way, then -- very carefully -- make a few moderate brake stops about every 1,000 miles (1 600 km), so your brakes will adjust properly.

## Replacing Brake System Parts

The braking system on a modern vehicle is complex. Its many parts have to be of top quality and work well together if the vehicle is to have really good braking. Your vehicle was designed and tested with top-quality GM brake parts. When you replace parts of your braking system -- for example, when your brake linings wear down and you have to have new ones put in -- be sure you get new approved GM replacement parts. If you don't, your brakes may no longer work properly. For example, if someone puts in brake linings that are wrong for your vehicle, the balance between your front and rear brakes can change -- for the worse. The braking performance you've come to expect can change in many other ways if someone puts in the wrong replacement brake parts.

## Battery

Every new Chevrolet has an ACDelco Freedom<sup>®</sup> battery. You never have to add water to one of these. When it's time for a new battery, we recommend an ACDelco Freedom battery. Get one that has the replacement number shown on the original battery's label.

## Vehicle Storage

If you're not going to drive your vehicle for 25 days or more, remove the black, negative (-) cable from the battery. This will help keep your battery from running down.



### **CAUTION:**

**Batteries have acid that can burn you and gas that can explode. You can be badly hurt if you aren't careful. See "Jump Starting" in the Index for tips on working around a battery without getting hurt.**

Contact your dealer to learn how to prepare your vehicle for longer storage periods.

## Bulb Replacement

See “Replacement Bulbs” in the Index to check the size and type of bulb you need to use.

### Halogen Bulbs

#### CAUTION:

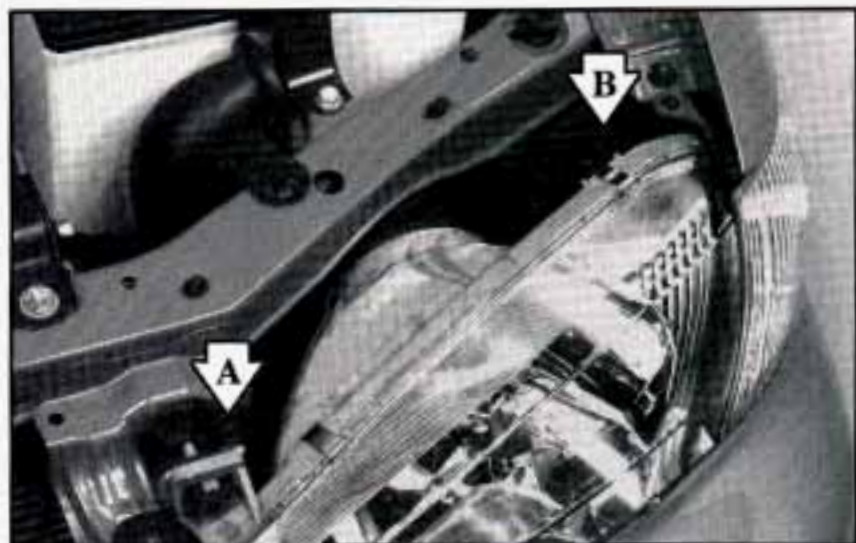
Halogen bulbs have pressurized gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Be sure to read and follow the instructions on the bulb package.

## Headlamps/Sidemarker/Turn Signal Lamps

1. Open the hood.



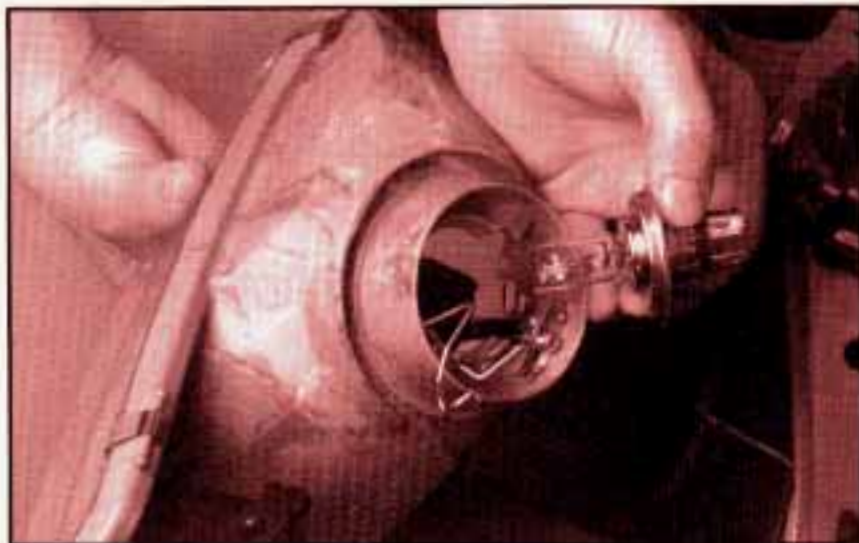
2. Remove the screw near the top outside of the headlamp assembly.



3. Remove the bolt (A) near the top inside of the headlamp assembly.
4. Remove the bolt (B) near the top outside of the headlamp assembly.
5. Remove the headlamp assembly by pulling up and out.
6. Remove the electrical connector from the back of the assembly.
7. Pry back the rubber covering from the back of the assembly.



8. Press down and move the metal retainer away from you and then lift the metal retainer to the right.



9. Pull the bulb socket out of the housing.



10. Remove the front sidemarker assembly by pulling forward.

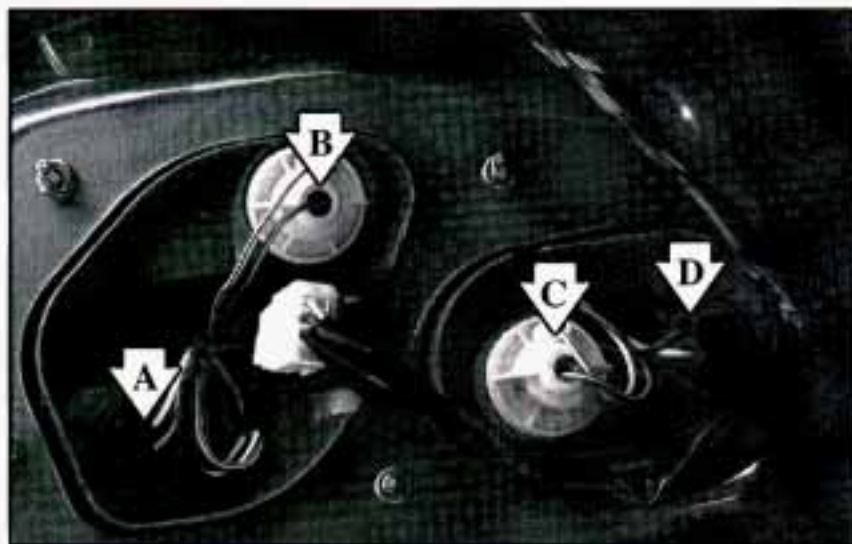
11. Turn the lamp socket to the left.



12. Push and turn to the left to remove the bulb.
13. Reverse the steps with a new bulb assembly.

## Rear Combination Lamps

The combination lamp assembly includes the taillamp/stoplamp, turn signal and sidemarker bulbs.



- |                      |                      |
|----------------------|----------------------|
| A. Back-Up Lamps     | C. Stoplamp/Taillamp |
| B. Turn Signal Lamps | D. Rear Sidemarker   |

To replace the rear combination lamps:

1. Open the trunk.
2. Remove the three plastic screws.
3. Pull back the access panel.
4. Turn the bulb socket to the left and pull it out.
5. To remove the tail/stop or turn signal lamps, turn the bulb socket in, to remove it from the housing. Then push in and turn the bulb to the left.
6. To remove the sidemarker socket, turn it to the left to remove the housing. Then pull the bulb straight out from the socket.
7. Reverse the steps to install a new bulb.

## Tires

Your new vehicle comes with high-quality tires made by a leading tire manufacturer. If you ever have questions about your tire warranty and where to obtain service, see your Chevrolet Warranty booklet for details.



## CAUTION:

Poorly maintained and improperly used tires are dangerous.

- **Overloading your tires can cause overheating as a result of too much friction. You could have an air-out and a serious accident. See “Loading Your Vehicle” in the Index.**
- **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 tires are cold.**
- **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 your tread is badly worn, or if your tires have been damaged, replace them.**

## Inflation -- Tire Pressure

The Tire-Loading Information label, which is in your glove compartment, shows the correct inflation pressures for your tires when they're cold. "Cold" means your vehicle has been sitting for at least three hours or driven no more than 1 mile (1.6 km).

### NOTICE:

**Don't let anyone tell you that underinflation or overinflation is all right. It's not. If your tires don't have enough air (underinflation), you can get the following:**

- Too much flexing
- Too much heat
- Tire overloading
- Bad wear
- Bad handling
- Bad fuel economy.

**NOTICE: (Continued)**

### NOTICE: (Continued)

**If your tires have too much air (overinflation), you can get the following:**

- Unusual wear
- Bad handling
- Rough ride
- Needless damage from road hazards.

### When to Check

Check your tires once a month or more.

Don't forget your compact spare tire. It should be at 60 psi (420 kPa).

### How to Check

Use a good quality pocket-type gage to check tire pressure. You can't tell if your tires are properly inflated simply by looking at them. Radial tires may look properly inflated even when they're underinflated.

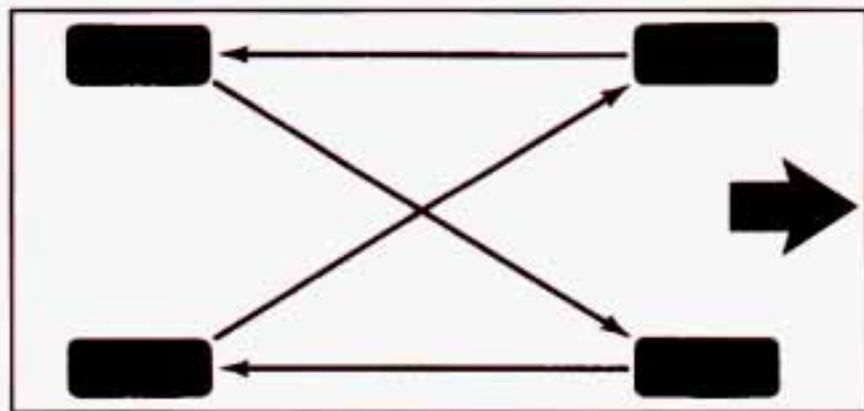
Be sure to put the valve caps back on the valve stems. They help prevent leaks by keeping out dirt and moisture.



## Tire Inspection and Rotation

Tires should be rotated every 6,000 to 8,000 miles (10 000 to 13 000 km). Any time you notice unusual wear, rotate your tires as soon as possible and check wheel alignment. Also check for damaged tires or wheels. See “When It’s Time for New Tires” and “Wheel Replacement” later in this section for more information.

The purpose of regular rotation is to achieve more uniform wear for all tires on the vehicle. The first rotation is the most important. See “Scheduled Maintenance Services” in the Index for scheduled rotation intervals.



When rotating your tires, always use the correct rotation pattern shown here.

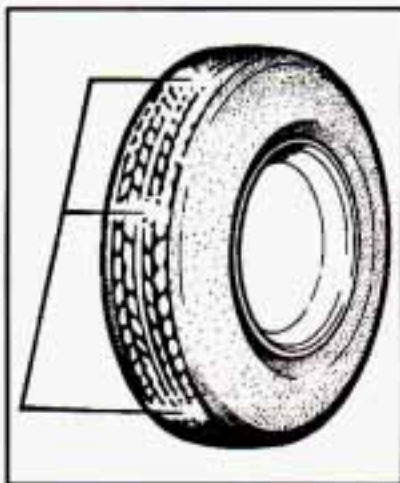
Don't include the compact spare tire in your tire rotation.

After the tires have been rotated, adjust the front and rear inflation pressures as shown on the Tire-Loading Information label. Make certain that all wheel nuts are properly tightened. See “Wheel Nut Torque” in the Index.

### 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 an accident. When you change a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, you can use a cloth or a paper towel to do this; but be sure to use a scraper or wire brush later, if you need to, to get all the rust or dirt off. (See “Changing a Flat Tire” in the Index.)**

## When It's Time for New Tires



One way to tell when it's time for new tires is to check the treadwear indicators, which will appear when your tires have only 1/16 inch (1.6 mm) or less of tread remaining.

You need a new tire 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 can't be repaired well because of the size or location of the damage.

## Buying New Tires

To find out what kind and size of tires you need, look at the Tire-Loading Information label.

Make sure the replacements are the same size, load range, speed rating and construction type (bias, bias-belted or radial) as your original tires.

### CAUTION:

**Mixing tires could cause you to lose control while driving. If you mix tires of different sizes or types (radial and bias-belted tires), the vehicle may not handle properly, and you could have a crash.**

**Using tires of different sizes may also cause damage to your vehicle. Be sure to use the same size and type tires on all wheels.**

**It's all right to drive with your compact spare, though. It was developed for use on your vehicle.**



## **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.**

### **Uniform Tire Quality Grading**

The following information relates to the system developed by the United States National Highway Traffic Safety Administration, 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 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 1/2) 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 -- A, B, C**

The traction grades, from highest to lowest, are A, B, and C, and they 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 braking (straight ahead) traction tests and does not include cornering (turning) traction.

## **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 wheels on your vehicle were aligned and balanced carefully at the factory to give you the longest tire life and best overall performance.

Scheduled wheel alignment and wheel balancing are not needed. However, if you notice unusual tire wear or your vehicle pulling one way or the other, the alignment may need to be reset. If you notice your vehicle vibrating when driving on a smooth road, your wheels may need to be rebalanced.

## **Wheel Replacement**

Replace any wheel that is bent, cracked, or badly rusted or corroded. If wheel nuts keep coming loose, the wheel, wheel bolts and wheel nuts should be replaced. If the wheel leaks air, replace it (except some aluminum wheels, which can sometimes be repaired). See your dealer if any of these conditions exist.

Your dealer 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 Chevrolet model.

 **CAUTION:**

Using the wrong replacement wheels, wheel bolts or wheel nuts on your vehicle can be dangerous. It could affect the braking and handling of your vehicle, make your tires lose air and make you lose control. You could have a collision in which you or others could be injured. Always use the correct wheel, wheel bolts and wheel nuts for replacement.

**NOTICE:**

The wrong wheel can also cause problems with bearing life, brake cooling, speedometer or odometer calibration, headlamp aim, bumper height, vehicle ground clearance and tire or tire chain clearance to the body and chassis.

See "Changing a Flat Tire" in the Index for more information.

Used Replacement Wheels

 **CAUTION:**

Putting a used wheel on your vehicle is dangerous. You can't know how it's been used or how far it's been driven. It could fail suddenly and cause an accident. If you have to replace a wheel, use a new GM original equipment wheel.

## Tire Chains

### **NOTICE:**

**Use tire chains only where legal and only when you must. Use only SAE Class "S" type chains that are the proper size for your tires. Install them on the front tires and tighten them as tightly as possible with the ends securely fastened. Drive slowly and follow the chain manufacturer's instructions. If you can hear the chains contacting your vehicle, stop and retighten them. If the contact continues, slow down until it stops. Driving too fast or spinning the wheels with chains on will damage your vehicle.**

## Appearance Care

Remember, cleaning products can be hazardous. Some are toxic. Others can burst into flame if you strike a match or get them on a hot part of the vehicle. Some are dangerous if you breathe their fumes in a closed space. When you use anything from a container to clean your vehicle, be sure to follow the manufacturer's warnings and instructions. And always open your doors or windows when you're cleaning the inside.

*Never* use these to clean your vehicle:

- Gasoline
- Benzene
- Naphtha
- Carbon Tetrachloride
- Acetone
- Paint Thinner
- Turpentine
- Lacquer Thinner
- Nail Polish Remover

They can all be hazardous -- some more than others -- and they can all damage your vehicle, too.

Don't use any of these unless this manual says you can. In many uses, these will damage your vehicle:

- Alcohol
- Laundry Soap
- Bleach
- Reducing Agents

## **Cleaning the Inside of Your Vehicle**

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.

Your dealer has two cleaners, Multi-Purpose Interior Cleaner and Capture Non-Solvent Dry Spot and Soil Remover. They will clean normal spots and stains very well. You can get GM-approved cleaning products from your dealer. (See "Appearance Care and Materials" in the Index.)

Here are some cleaning tips:

- Always read the instructions on the cleaner label.
- 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.
- If a ring forms after spot cleaning, clean the entire area immediately or it will set.

## **Using Multi-Purpose Interior Cleaner on Fabric**

1. Vacuum and brush the area to remove any loose dirt.
2. Always clean a whole trim panel or section. Mask surrounding trim along stitch or welt lines.
3. Mix powdered cleaner following the directions on the container label to form thick suds.
4. Use suds only and apply with a clean sponge. Don't saturate the material and don't rub it roughly.
5. As soon as you've cleaned the section, use a sponge to remove the suds.
6. Wipe cleaned area with a clean, damp towel or cloth.
7. Wipe with a clean cloth and let dry.

## Special Fabric Cleaning Problems

Stains caused by such things as catsup, coffee (black), egg, fruit, fruit juice, milk, soft drinks, vomit, urine and blood can be removed as follows:

1. Carefully scrape off excess stain, then sponge the soiled area with cool water.
2. If a stain remains, follow the multi-purpose interior cleaner instructions described earlier.
3. If an odor lingers after cleaning vomit or urine, treat the area with a water/baking soda solution: 1 teaspoon (5 ml) of baking soda to 1 cup (250 ml) of lukewarm water.
4. Let dry.

Stains caused by candy, ice cream, mayonnaise, chili sauce and unknown stains can be removed as follows:

1. Carefully scrape off excess stain.
2. First, clean with cool water and allow to dry completely.
3. If a stain remains, follow instructions for Multi-Purpose Interior Cleaner.

## Fabric Protection

Your vehicle has upholstery that has been treated with Scotchgard™ Fabric Protector, a 3M product. It protects fabrics by repelling oil and water, which are the carriers of most stains. Even with this protection, you still need to clean your upholstery often to keep it looking new.

Further information on cleaning is available by calling 1-800-433-3296 (in Minnesota, 1-800-642-6167).

## Cleaning Vinyl

Use warm water and a clean cloth.

- Rub with a clean, damp cloth to remove dirt. You may have to do it more than once.
- Things like tar, asphalt and shoe polish will stain if you don't get them off quickly. Use a clean cloth and a vinyl/leather cleaner. See your dealer for this product.

## Cleaning the Top of the Instrument Panel

Use only mild soap and water to clean the top surfaces of the instrument panel. Sprays containing silicones or waxes may cause annoying reflections in the windshield and even make it difficult to see through the windshield under certain conditions.



## Cleaning Interior Plastic Components

Use only a mild soap and water solution on a soft cloth or sponge. Commercial cleaners may affect the surface finish.

## Cleaning the Built-in Child Restraint

Your built-in child restraint may be cleaned with mild soap and lukewarm water. Don't use household cleaners. They may weaken the harness or damage plastic parts.

The built-in child restraint pad is attached to the child restraint cushion and seatback with fastener strips. You can remove the pad, machine wash it in cold water on a gentle cycle and tumble dry it on a low heat setting. Never bleach or iron the pad, and don't dry clean it.

## Care of Safety Belts and Built-in Child Restraint Harness

Keep the safety belts and the built-in child restraint harness clean and dry.



## CAUTION:

**Do not bleach or dye safety belts or the built-in child restraint harness. If you do, they may be severely weakened. In a crash, they might not be able to provide adequate protection. Clean the safety belts and the child restraint harness only with mild soap and lukewarm water.**

## Cleaning Glass Surfaces

Glass should be cleaned often. GM Glass Cleaner (GM Part No. 1050427) or a liquid household glass cleaner will remove normal tobacco smoke and dust films on interior glass.

Don't use abrasive cleaners on glass, because they may cause scratches. Avoid placing decals on the inside rear window, since they may have to be scraped off later. If abrasive cleaners are used on the inside of the rear window, an electric defogger element may be damaged. Any temporary license should not be attached across the defogger grid.

## **Cleaning the Outside of the Windshield and Wiper Blades**

If the windshield is not clear after using the windshield washer, or if the wiper blade chatters when running, wax, sap or other material may be on the blade or windshield.

Clean the outside of the windshield with GM Windshield Cleaner, Bon Ami<sup>®</sup> Powder (non-scratching glass cleaning powder), GM Part No. 1050011. The windshield is clean if beads do not form when you rinse it with water.

Grime from the windshield will stick to the wiper blades and affect their performance. Clean the blade by wiping vigorously with a cloth soaked in full-strength windshield washer solvent. Then rinse the blade with water.

Check the wiper blades and clean them as necessary; replace blades that look worn.

## **Weatherstrips**

Silicone grease on weatherstrips will make them last longer, seal better, and not stick or squeak.

Apply silicone grease with a clean cloth at least every six months. During very cold, damp weather more frequent application may be required. (See "Recommended Fluids and Lubricants" in the Index.)

## **Cleaning the Outside of Your Vehicle**

The paint finish on your vehicle provides beauty, depth of color, gloss retention and durability.

### **Washing Your Vehicle**

The best way to preserve your vehicle's finish is to keep it clean by washing it often with lukewarm or cold water.

Don't wash your vehicle in the direct rays of the sun. Don't use strong soaps or chemical detergents. Use liquid hand, dish or car washing (mild detergent) soaps. You can get GM-approved cleaning products from your dealer. (See "Appearance Care and Materials" in the Index.) Don't use cleaning agents that are petroleum based, or that contain acid or abrasives. All cleaning agents should be flushed promptly and not allowed to dry on the surface, or they could stain. Dry the finish with a soft, clean chamois or an all-cotton towel to avoid surface scratches and water spotting.

High pressure car washes may cause water to enter your vehicle.

### **Cleaning Exterior Lamps/Lenses**

Use lukewarm or cold water, a soft cloth and a liquid hand, dish or car washing (mild detergent) soap to clean exterior lamps and lenses. Follow instructions under "Washing Your Vehicle."

## Finish Care

Occasional waxing or mild polishing of your vehicle by hand may be necessary to remove residue from the paint finish. You can get GM-approved cleaning products from your dealer. (See “Appearance Care and Materials” in the Index.)

Your vehicle has a “basecoat/clearcoat” paint finish. The clearcoat gives more depth and gloss to the colored basecoat. Always use waxes and polishes that are non-abrasive and made for a basecoat/clearcoat paint finish.

### **NOTICE:**

**Machine compounding or aggressive polishing on a basecoat/clearcoat paint finish may dull the finish or leave swirl marks.**

Foreign materials such as calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings, chemicals from industrial chimneys, etc., can damage your vehicle’s finish if they remain on painted surfaces. Wash the vehicle as soon as possible. If

necessary, use non-abrasive cleaners that are marked safe for painted surfaces to remove foreign matter.

Exterior painted surfaces are subject to aging, weather and chemical fallout that can take their toll over a period of years. You can help to keep the paint finish looking new by keeping your vehicle garaged or covered whenever possible.

## Cleaning Aluminum Wheels (If Equipped)

Keep your 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.

The surface of these wheels is similar to the painted surface of your vehicle. Don’t use strong soaps, chemicals, abrasive polishes, abrasive cleaners or abrasive cleaning brushes on them because you could damage the surface.

Don’t take your vehicle through an automatic car wash that has silicon carbide tire cleaning brushes. These brushes can also damage the surface of these wheels.

## Cleaning Tires

To clean your tires, use a stiff brush with a tire cleaner.

### **NOTICE:**

**When applying a tire dressing always take care to wipe off any overspray or splash from all painted surfaces on the body or wheels of the vehicle. Petroleum-based products may damage the paint finish.**

## Sheet Metal Damage

If your vehicle is damaged and requires sheet metal repair or replacement, make sure the body repair shop applies anti-corrosion material to the parts repaired or replaced to restore corrosion protection.

## 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 a major repair expense.

Minor chips and scratches can be repaired with touch-up materials available from your dealer or other service outlets. Larger areas of finish damage can be corrected in your dealer's body and paint shop.

## **Underbody Maintenance**

Chemicals used for ice and snow removal and dust control can collect on the underbody. If these are not removed, accelerated corrosion (rust) can occur on the underbody parts such as fuel lines, frame, floor pan and exhaust system even though they have corrosion protection.

At least every spring, flush these materials from the underbody with plain water. Clean any areas where mud and other debris can collect. Dirt packed in closed areas of the frame should be loosened before being flushed. Your dealer or an underbody car washing system can do this for you.

## **Chemical Paint Spotting**

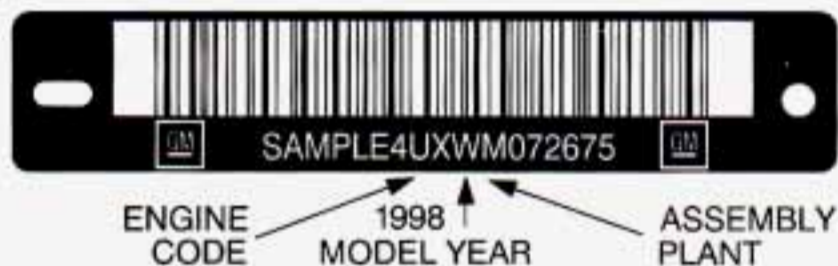
Some weather and atmospheric conditions can create a chemical fallout. Airborne pollutants can fall upon and attack painted surfaces on your vehicle. This damage can take two forms: blotchy, ringlet-shaped discolorations, and small irregular dark spots etched into the paint surface.

Although no defect in the paint job causes this, Chevrolet will repair, at no charge to the owner, the surfaces of new vehicles damaged by this fallout condition within 12 months or 12,000 miles (20 000 km) of purchase, whichever occurs first.

## Appearance Care Materials Chart

PART NUMBER	SIZE	DESCRIPTION	USAGE
994954	23 in. x 25 in.	Polishing Cloth – Wax Treated	Exterior polishing cloth
1050172	16 oz. (0.473 L)	Tar and Road Oil Remover	Removes tar, road oil and asphalt
1050173	16 oz. (0.473 L)	Chrome Cleaner and Polish	Use on chrome, stainless steel, nickel, copper and brass
1050174	16 oz. (0.473 L)	White Sidewall Tire Cleaner	Removes soil and black marks from whitewalls
1050214	32 oz. (0.946 L)	Vinyl Cleaner	Cleans vinyl tops, upholstery and convertible tops
1050427	23 oz. (0.680 L)	Glass Cleaner	Removes dirt, grime, smoke and fingerprints
1052870	16 oz. (0.473 L)	Wash Wax Concentrate	Cleans and lightly waxes
1052918**	8 oz. (0.237 L)	Armor All™ Protectant	Protects leather, wood, acrylics, Plexiglas™, plastic, rubber and vinyl
1052925	16 oz. (0.473 L)	Multi-Purpose Interior Cleaner	Cleans carpets, seats, interior trim, door panels and floor mats
1052929	16 oz. (0.473 L)	Wheel Cleaner	Spray on and rinse with water
1052930	8 oz. (0.237 L)	Capture Dry Spot Remover	Attracts, absorbs and removes soils
12345002	16 oz. (0.473 L)	Armor All™ Cleaner	Cleans and shines a variety of surface types
12345721	2.5 sq. ft.	Synthetic Chamois	Shines vehicle without scratching
12345725	12 oz. (0.354 L)	Silicone Tire Shine	Spray on tire shine
12377964	16 oz. (0.473 L)	Finish Enhancer	Removes dust, fingerprints and surface contaminants
12377966	16 oz. (0.473 L)	Cleaner Wax	Removes light scratches and oxidation and protects finish
12377984	16 oz. (0.473 L)	Surface Cleaner	Removes contaminants, blemishes and swirl marks
See your General Motors Parts Department for these products. See "Fluids and Lubricants" in the Index.			**Not recommended for use on instrument panel vinyl.

## 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's side. You can see it if you look through the windshield from outside your vehicle. The VIN also appears on the Vehicle Certification and Service Parts labels and the certificates of title and registration.

### Engine Identification

The 8th character in your VIN is the engine code. This code will help you identify your engine, specifications and replacement parts.

### Service Parts Identification Label

You'll find this label on the underside of your deck lid. It's very helpful if you ever need to order parts. On this label is:

- your VIN,

- the model designation,
- paint information and
- a list of all production options and special equipment.

Be sure that this label is not removed from the vehicle.

## Electrical System

### Add-On Electrical Equipment

#### NOTICE:

**Don't add anything electrical to your vehicle unless you check with your dealer first. Some electrical equipment can damage your vehicle and the damage wouldn't be covered by your warranty. Some add-on electrical equipment can keep other components from working as they should.**

Your vehicle has an air bag system. Before attempting to add anything electrical to your vehicle, see "Servicing Your Air Bag-Equipped Chevrolet" in the Index.

## **Headlamps Wiring**

The headlamp wiring is protected by a circuit breaker. An electrical overload will cause the lamps to go on and off, or in some cases to remain off. If this happens, have your headlamp wiring checked right away.

## **Windshield Wipers Fuses**

The windshield wiper motor is protected by a circuit breaker and a fuse. If the motor overheats due to heavy snow, etc., the wiper will stop until the motor cools. If the overload is caused by some electrical problem, and not snow, etc., be sure to get it fixed.

## **Power Windows and Other Power Options**

Circuit breakers protect the power windows and other power accessories. When the current load is too heavy, the circuit breaker opens and closes, protecting the circuit until the problem is fixed or goes away.

## **Fuses and Circuit Breakers**

The wiring circuits in your vehicle are protected from short circuits by fuses, circuit breakers and fusible thermal links in the wiring itself. This greatly reduces the chance of fires caused by electrical problems.

Look at the silver-colored band inside the fuse. If the band is broken or melted, replace the fuse. Be sure you replace a bad fuse with a new one of the correct size.

If you ever have a problem on the road and don't have a spare fuse, you can borrow one. Just pick some feature of your vehicle that you can get along without -- like the radio or air conditioner -- and use its fuse, if it is of the value you need. Replace it as soon as you can.

Before replacing a fuse, turn every electrical switch off.



## Instrument Panel Fuse Block (Driver's Side)

TURN	ECU-IG		ST	S-HTR
	IGN		D/L	
GAUGE		OBD	FOG	CIG
WIP	STOP			
*1	TAIL	ECU-B	*1 DEF I-UP/ M-HTR	

Your fuse block is located below the dimmer switch, behind the storage compartment cover.

To remove the storage compartment cover:

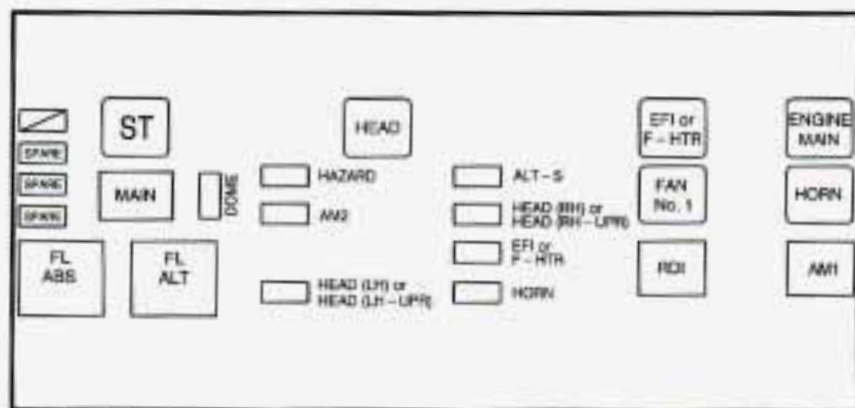
1. Open the storage compartment door.
2. Lift the storage compartment door cover up.

## Fuse Usage

TURN	Turn Signals
ECU-IG	ABS System, BTSI, Cruise Control, Cooling Fans
ST	Starting System
S-HTR	Not Used
IGN	Fuel Injection System, Charge Indicator, Air Bag System
D/L	Power Door Locks
GAUGE	RKE System, Sunroof, Power Windows, Rear Defogger, Warning Alarms, DRL, Gages, Heater, Generator, Backup Lamps
OBD	OBD II System
FOG	Not Used
CIG	Cigarette Lighter, Air Bags, Power Mirrors, BTSI, Radio
WIP	Windshield Wiper System
STOP	Stoplamps, BTSI
*1	DEF System, Fuel Injection System
TAIL	Exterior Lamps, Instrument Panel Dimming
ECU-B	Air Bag Indicator

## Engine Compartment Fuse/Relay Block (Driver's Side)

Most of your fuses are in the engine compartment fuse block. Some are in three electrical centers in your engine compartment. These electrical centers also have relays, circuit breakers and other electrical components. The larger electrical center in the engine compartment has a fuse puller located between the EFI and FAN relays. You can use the puller to remove any fuses.



This engine compartment fuse/relay block is located on the driver's side of the engine compartment near the air cleaner.

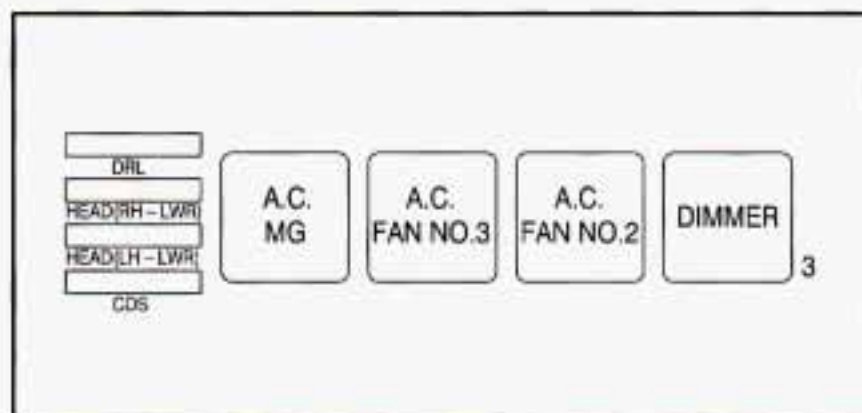
## Fuse/Relay Usage

FL ABS	ABS System
ST	Starting System (Relay)
MAIN	Starting System, Headlamps
FL ALT	Charging System, Cooling Fan
DOME	Sunroof, Dome Lamp, RKE System, Trunk Lamp, DRL, Radio, Warning Alarms
HEAD	Headlamp (Relay)
HAZARD	Hazard Lamps
AM2	Starting System, Accessories
HEAD (LH) or HEAD (LH-UPR)	Left Headlamp (High-Beam)
ALT-S	Charging System
HEAD (RH) or HEAD (RH-UPR)	Right Headlamp (High-Beam)
EFI or F-HTR	Fuel Injection System
HORN	Horn System
EFI or F-HTR	Fuel Injection System (Relay)
FAN No. 1	Cooling Fan (Relay)
RDI	Cooling Fan

## Fuse/Relay Usage

ENGINE MAIN	Main Engine (Relay)
HORN (Relay)	Horn System
AM1	Starting System, Air Bags

## Engine Compartment Fuse/Relay Block (Driver's Side)

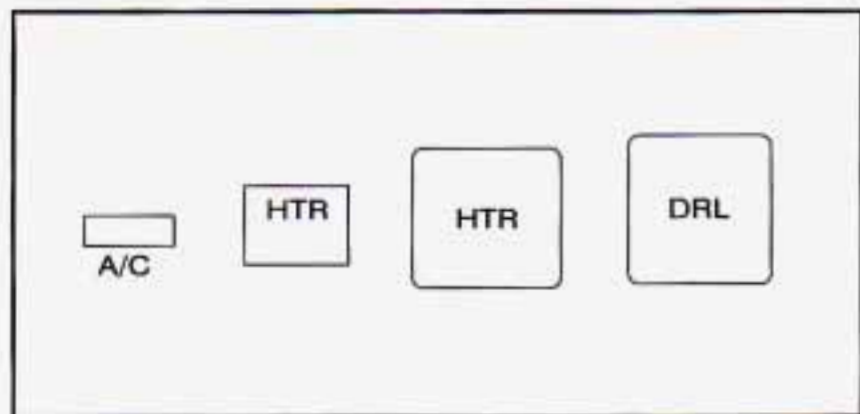


This engine compartment fuse/relay block is located on the driver's side of the engine compartment near the battery.

## Fuse/Relay Usage

DRL	DRL System
HEAD (RH-LWR)	Right Headlamps (Low-Beam)
HEAD (LH-LWR)	Left Headlamps (Low-Beam)
CDS	A/C Condenser Fan
AC MG	Air Conditioning System (Relay)
AC FAN NO.3	Air Conditioner Fan Relay #3
AC FAN NO.2	Air Conditioner Fan Relay #2
DIMMER	Instrument Panel Dimming (Relay)

## Engine Compartment Fuse/Relay Block (Passenger's Side)



This engine compartment fuse/relay block is located on the passenger's side of the engine compartment near the windshield washer fluid reservoir.

### Fuse/Relay Usage

A/C	Air Conditioning System
HTR	Heating System
HTR	Heating System (Relay)
DRL	DRL System (Relay)

## Replacement Bulbs

Application	Bulb Number
Headlamp High/Low Beam . . . . .	HB 2
Front Turn Signal/Sidemarkers . . . . .	1157NA
Stoplamp/Taillamp . . . . .	1157
Back-Up . . . . .	921
Rear Sidemarkers . . . . .	168
Rear Turn Signal . . . . .	1156

## Capacities and Specifications

### Engine

Type .....	L4
Compression Ratio .....	10.0:1
Firing Order .....	1-3-4-2
Fuel Delivery .....	Multi-Port Fuel Injection
Piston Displacement .....	109 CID (1.8L)
Valve Arrangement .....	Double Overhead Cam
Thermostat Temperature .....	167°F (76°C)

### Wheel Nuts

Wheel Nut Torque .....	100 lb-ft (140 N·m)
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## Capacities (Approximate)

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

Air Conditioning .....

See the refrigerant information label under the hood.

### Automatic Transmission

3-Speed .....

2.6 quarts (2.5 L) \*\*

4-Speed .....

3.3 quarts (3.1 L) \*\*

Differential (3-speed only) .....

1.5 quarts (1.4 L)

Manual Transaxle .....

2.0 quarts (1.9 L)\*\*

### Cooling System

Manual Transaxle .....

6.6 quarts (6.2 L)

Automatic Transaxle .....

6.4 quarts (6.1 L)

Engine Oil (Change w/ Filter\*) ...

3.9 quarts (3.7 L)

Fuel Tank .....

13.2 gallons (50 L)

\* When changing the oil filter, additional oil may be needed. Recheck the oil level after filling. See "Engine Oil" in the Index.

\*\* Recheck fluid level after filling. See "Automatic Transaxle Fluid" or "Manual Transaxle Fluid" in the Index.

## Vehicle Dimensions

Wheelbase	97.1 inches (247 cm)
Length	175.0 inches (445 cm)
Width	66.7 inches (169 cm)
Height	53.5 inches (136 cm)
Tread	
Front	57.9 inches (147 cm)
Rear	57.5 inches (146 cm)

## Air Conditioning Refrigerants

Not all air conditioning refrigerants are the same. If the air conditioning system in your vehicle needs refrigerant, be sure the proper refrigerant is used. If you're not sure, ask your dealer.

## Normal Maintenance Replacement Parts

Air Cleaner Filter	GM Part No. 94853522
Battery	35-60
Engine Oil Filter	GM Part No. 25014441
Fuel Filter	GM Part No. 94854620
PCV Valve	GM Part No. 94853556
Radiator Pressure Cap	15 psi (105 kPa)
Spark Plug*	
Denso K16TR11	0.043 inch (1.1 mm) gap
NGK BKR5EKB-11	0.043 inch (1.1 mm) gap

\*Your engine is fitted with twin ground electrode spark plugs. Use only twin ground electrode spark plugs for better engine performance.



## Section 7 Maintenance Schedule

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This section covers the maintenance required for your vehicle. Your vehicle needs these services to retain its safety, dependability and emission control performance.

7-2	Introduction	7-8	Short Trip/City Maintenance Schedule
7-4	Part A: Scheduled Maintenance Services	7-26	Long Trip/Highway Maintenance Schedule
7-5	Maintenance Schedule	7-37	Part B: Owner Checks and Services
7-5	Short Trip/City Definition	7-42	Part C: Periodic Maintenance Inspections
7-5	Short Trip/City Intervals	7-44	Part D: Recommended Fluids and Lubricants
7-6	Long Trip/Highway Definition	7-46	Part E: Maintenance Record
7-7	Long Trip/Highway Intervals		

**IMPORTANT:**  
KEEP ENGINE OIL  
AT THE PROPER  
LEVEL AND CHANGE AS  
RECOMMENDED



*Have you purchased the GM Protection Plan? The Plan supplements your new vehicle warranties. See your Warranty and Owner Assistance booklet, or your Chevrolet dealer for details.*

## **Introduction**

### **Your Vehicle and the Environment**

Proper vehicle maintenance not only helps to keep your vehicle in good working condition, but also helps the environment. All recommended maintenance procedures are important. Improper vehicle maintenance can even affect the quality of the air we breathe. Improper fluid levels or the wrong tire inflation can increase the level of emissions from your vehicle. To help protect our environment, and to keep your vehicle in good condition, please maintain your vehicle properly.



## How This Section is Organized

The remainder of this section is divided into five parts:

**“Part A: Scheduled Maintenance Services”** shows what to have done and how often. Some of these services can be complex, so unless you are technically qualified and have the necessary equipment, you should let your dealer’s service department or another qualified service center do these jobs.

### CAUTION:

**Performing maintenance work on a vehicle can be dangerous. In trying to do some jobs, you can be seriously injured. Do your own maintenance work only if you have the required know-how and the proper tools and equipment for the job. If you have any doubt, have a qualified technician do the work.**

If you are skilled enough to do some work on your vehicle, you will probably want to get the service information. See “Service and Owner Publications” in the Index.

**“Part B: Owner Checks and Services”** tells you what should be checked and when. It also explains what you can easily do to help keep your vehicle in good condition.

**“Part C: Periodic Maintenance Inspections”** explains important inspections that your dealer’s service department or another qualified service center should perform.

**“Part D: Recommended Fluids and Lubricants”** lists some recommended products to help keep your vehicle properly maintained. These products, or their equivalents, should be used whether you do the work yourself or have it done.

**“Part E: Maintenance Record”** provides a place for you to record the maintenance performed on your vehicle. Whenever any maintenance is performed, be sure to write it down in this part. This will help you determine when your next maintenance should be done. In addition, it is a good idea to keep your maintenance receipts. They may be needed to qualify your vehicle for warranty repairs.

## Part A: Scheduled Maintenance Services

### Using Your Maintenance Schedule

We at General Motors want to help you keep your vehicle in good working condition. But we don't know exactly how you'll drive it. You may drive very short distances only a few times a week. Or you may drive long distances all the time in very hot, dusty weather. You may use your vehicle in making deliveries. Or you may drive it to work, to do errands or in many other ways.

Because of all the different ways people use their vehicles, maintenance needs vary. You may even need more frequent checks and replacements than you'll find in the schedules in this section. So please read this section and note how you drive. If you have any questions on how to keep your vehicle in good condition, see your dealer.

This part tells you the maintenance services you should have done and when you should schedule them. If you go to your dealer for your service needs, you'll know that GM-trained and supported service people will perform the work using genuine GM parts.

The proper fluids and lubricants to use are listed in Part D. Make sure whoever services your vehicle uses these. All parts should be replaced and all necessary repairs done before you or anyone else drives the vehicle.

These schedules are for vehicles that:

- carry passengers and cargo within recommended limits. You will find these limits on your vehicle's Tire-Loading Information label. See "Loading Your Vehicle" in the Index.
- are driven on reasonable road surfaces within legal driving limits.
- use the recommended fuel. See "Fuel" in the Index.

### Selecting the Right Schedule

First you'll need to decide which of the two schedules is right for your vehicle. Here's how to decide which schedule to follow:

# Maintenance Schedule

## Short Trip/City Definition

Follow the Short Trip/City Maintenance Schedule if any one of these conditions is true for your vehicle:

- Most trips are less than 5 to 10 miles (8 to 16 km). This is particularly important when outside temperatures are below freezing.
- Most trips include extensive idling (such as frequent driving in stop-and-go traffic).
- Most trips are through dusty areas.
- You frequently tow a trailer or use a carrier on top of your vehicle.
- If the vehicle is used for delivery service, police, taxi or other commercial application.

*One of the reasons you should follow this schedule if you operate your vehicle under any of these conditions is that these conditions cause engine oil to break down sooner.*

## Short Trip/City Intervals

**Every 3,000 Miles (5 000 km):** Engine Oil and Filter Change (or 3 months, whichever occurs first).

**Every 6,000 Miles (10 000 km):** Chassis Lubrication (or 6 months, whichever occurs first). Tire Rotation. Air Cleaner Filter Inspection, if driving in dusty conditions.

**Every 15,000 Miles (25 000 km):** Automatic Transaxle Fluid Change (severe conditions only). Automatic Transaxle Fluid Check (normal conditions).

**Every 30,000 Miles (50 000 km):** Air Cleaner Filter Replacement. Spark Plug Replacement. Fuel Tank, Cap, Cap Gasket and Lines Inspection (or every 24 months, whichever occurs first). Manual Transaxle Fluid Change (severe conditions only) (or every 24 months, whichever occurs first). Cooling System Service (or every 24 months, whichever occurs first).

*(Continued)*

# Maintenance Schedule

## Short Trip/City Intervals

**Every 60,000 Miles (100 000 km):** Valve Clearance Inspection, adjust if necessary (or every 48 months, whichever occurs first).

**At 60,000 Miles (100 000 km) (Or 48 Months, Whichever Occurs First) -- Then Every 15,000 Miles (25 000 km) (Or 12 Months Whichever Occurs First):** Engine Accessory Drive Belt Inspection.

*These intervals only summarize maintenance services. Be sure to follow the complete maintenance schedule on the following pages.*

## Long Trip/Highway Definition

Follow this maintenance schedule *only* if none of the conditions from the Short Trip/City Maintenance Schedule is true. Do not use this schedule if the vehicle is used for trailer towing, driven in a dusty area or used off paved roads. Use the Short Trip/City schedule for these conditions.

*Driving a vehicle with a fully warmed engine under highway conditions causes engine oil to break down slower.*

# Maintenance Schedule

## Long Trip/Highway Intervals

**Every 7,500 Miles (12 500 km):** Engine Oil and Filter Change (or every 12 months, whichever occurs first). Chassis Lubrication (or every 12 months, whichever occurs first). Tire Rotation.

**Every 15,000 Miles (25 000 km):** Automatic Transaxle Fluid Change (severe conditions only). Automatic Transaxle Fluid Check (normal conditions).

**Every 30,000 Miles (50 000 km):** Spark Plug Replacement. Air Cleaner Filter Replacement. Fuel Tank, Cap, Cap Gasket and Lines Inspection (or every 24 months, whichever occurs first). Manual Transaxle Fluid Change (severe conditions only) (or every 24 months, whichever occurs first). Cooling System Service (or every 24 months, whichever occurs first).

## Long Trip/Highway Intervals

**Every 60,000 Miles (100 000 km):** Valve Clearance Inspection, adjust if necessary (or every 48 months, whichever occurs first).

**At 60,000 Miles (100 000 km) (or 48 Months, Whichever Occurs First) -- Then Every 15,000 Miles (25 000 km) (or 12 Months, Whichever Occurs First):** Engine Accessory Drive Belt Inspection.

*These intervals only summarize maintenance services. Be sure to follow the complete maintenance schedule on the following pages.*

## Short Trip/City Maintenance Schedule

The services shown in this schedule up to 100,000 miles (166 000 km) should be performed after 100,000 miles (166 000 km) at the same intervals.

See "Owner Checks and Services" and "Periodic Maintenance Inspections" following.

### Footnotes

† The U.S. Environmental Protection Agency or the California Air Resources Board has determined that the failure to perform this maintenance item will not nullify the emission warranty or limit recall liability prior to the completion of the vehicle's useful life. We, however, urge that all recommended maintenance services be performed at the indicated intervals and the maintenance be recorded.

# Lubricate the parking brake cable guides, underbody contact points and linkage.

+ A good time to check your brakes is during tire rotation. See "Brake System Inspection" under "Periodic Maintenance Inspections" in Part C of this schedule.

## Short Trip/City Maintenance Schedule

### ***3,000 Miles (5 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*

### ***6,000 Miles (10 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary.  
*An Emission Control Service. (See footnote †.)*

### ***9,000 Miles (15 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

## Short Trip/City Maintenance Schedule

### *12,000 Miles (20 000 km)*

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary.  
*An Emission Control Service.* (See footnote †.)

### *15,000 Miles (25 000 km)*

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Change automatic transaxle and differential fluid every 15,000 miles (25 000 km) if the vehicle is mainly driven under one or more of these conditions:
  - In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
  - In hilly or mountainous terrain.
  - When doing frequent trailer towing.
  - Uses such as found in taxi, police or delivery service.If you do not use your vehicle under any of these conditions, check the fluid.

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:



## Short Trip/City Maintenance Schedule

### ***18,000 Miles (30 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary.  
*An Emission Control Service.* (See footnote †.)

### ***21,000 Miles (35 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*

### ***24,000 Miles (40 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first).  
(See footnote #.)

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

*(Continued)*

## Short Trip/City Maintenance Schedule

### 24,000 Miles (40 000 km) (Continued)

- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary.  
*An Emission Control Service.* (See footnote †.)

### 27,000 Miles (45 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*

### 30,000 Miles (50 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first). (See footnote #.)
- Replace spark plugs. *An Emission Control Service.*
- Replace air cleaner filter (or every 24 months, whichever occurs first).  
*An Emission Control Service.*
- Inspect fuel tank, cap, cap gasket and lines for damage or leaks (or every 24 months, whichever occurs first). Replace parts as needed.  
*An Emission Control Service.* (See footnote †.)

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

## Short Trip/City Maintenance Schedule

- Rotate tires. See “Tire Inspection and Rotation” in the Index for proper rotation pattern and additional information. (See footnote +.)
- Drain, flush and refill cooling system (or every 24 months, whichever occurs first). See “Engine Coolant” in the Index for what to use. Inspect hoses. Clean radiator, condenser, pressure cap and neck. Pressure test cooling system and pressure cap.  
*An Emission Control Service.* (See footnote †.)
- Change manual transaxle fluid every 30,000 miles (50 000 km) only if your vehicle is used to tow a trailer.
- Change automatic transaxle and differential fluid every 15,000 miles (25 000 km) if the vehicle is mainly driven under one or more of these conditions:
  - In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
  - In hilly or mountainous terrain.
  - When doing frequent trailer towing.
  - Uses such as found in taxi, police or delivery service.If you do not use your vehicle under any of these conditions, check the fluid.

## Short Trip/City Maintenance Schedule

### ***33,000 Miles (55 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*

### ***36,000 Miles (60 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary.  
*An Emission Control Service.* (See footnote †.)

### ***39,000 Miles (65 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

## Short Trip/City Maintenance Schedule

### 42,000 Miles (70 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary.  
*An Emission Control Service.* (See footnote †.)

### 45,000 Miles (75 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Change automatic transaxle and differential fluid every 15,000 miles (25 000 km) if the vehicle is mainly driven under one or more of these conditions:
  - In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
  - In hilly or mountainous terrain.
  - When doing frequent trailer towing.
  - Uses such as found in taxi, police or delivery service.If you do not use your vehicle under any of these conditions, check the fluid.

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

## Short Trip/City Maintenance Schedule

### 48,000 Miles (80 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary.  
*An Emission Control Service.* (See footnote †.)

### 51,000 Miles (85 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*

### 54,000 Miles (90 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first).  
(See footnote #.)

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

## Short Trip/City Maintenance Schedule

- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary.  
*An Emission Control Service.* (See footnote †.)

### ***57,000 Miles (95 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*

### ***60,000 Miles (100 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first).  
(See footnote #.)
- Inspect engine accessory drive belts (or every 48 months, whichever occurs first).  
*An Emission Control Service.*
- Replace spark plugs.  
*An Emission Control Service.*

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

*(Continued)*

## Short Trip/City Maintenance Schedule

### *60,000 Miles (100 000 km) (Continued)*

- Replace air cleaner filter (or every 24 months, whichever occurs first).  
*An Emission Control Service.*
- Rotate tires. See “Tire Inspection and Rotation” in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect for tappet noise and engine vibration. Adjust valve clearance to factory specifications if necessary (or every 48 months, whichever occurs first).  
*An Emission Control Service.*
- Inspect fuel tank, cap, cap gasket and lines for damage or leaks (or every 24 months, whichever occurs first). Replace parts as needed.  
*An Emission Control Service. (See footnote †.)*
- Drain, flush and refill cooling system (or every 24 months, whichever occurs first). See “Engine Coolant” in the Index for what to use. Inspect hoses. Clean radiator, condenser, pressure cap and neck. Pressure test cooling system and pressure cap.  
*An Emission Control Service. (See footnote †.)*
- Change manual transaxle fluid every 30,000 miles (50 000 km) only if your vehicle is used to tow a trailer.



## Short Trip/City Maintenance Schedule

- Change automatic transaxle and differential fluid every 15,000 miles (25 000 km) if the vehicle is mainly driven under one or more of these conditions:
  - In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
  - In hilly or mountainous terrain.
  - When doing frequent trailer towing.
  - Uses such as found in taxi, police or delivery service.

If you do not use your vehicle under any of these conditions, check the fluid.

### ***63,000 Miles (105 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*

### ***66,000 Miles (110 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first).  
(See footnote #.)

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

*(Continued)*

## Short Trip/City Maintenance Schedule

### 66,000 Miles (110 000 km) (Continued)

- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary.  
*An Emission Control Service.* (See footnote †.)

### 69,000 Miles (115 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*

### 72,000 Miles (120 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first). (See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary.  
*An Emission Control Service.* (See footnote †.)

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

## Short Trip/City Maintenance Schedule

### 75,000 Miles (125 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Inspect engine accessory drive belts (or 12 months since last inspection).  
*An Emission Control Service.*
- Change automatic transaxle and differential fluid every 15,000 miles (25 000 km) if the vehicle is mainly driven under one or more of these conditions:
  - In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
  - In hilly or mountainous terrain.
  - When doing frequent trailer towing.
  - Uses such as found in taxi, police or delivery service.If you do not use your vehicle under any of these conditions, check the fluid.

### 78,000 Miles (130 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first).  
(See footnote #.)

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

*(Continued)*

## Short Trip/City Maintenance Schedule

### 78,000 Miles (130 000 km) (Continued)

- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary.  
*An Emission Control Service.* (See footnote †.)

### 81,000 Miles (135 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*

### 84,000 Miles (140 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first). (See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary.  
*An Emission Control Service.* (See footnote †.)

DATE	
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## Short Trip/City Maintenance Schedule

### ***87,000 Miles (145 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*

### ***90,000 Miles (150 000 km)***

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first).  
(See footnote #.)
- Inspect engine accessory drive belts (or every 12 months since last inspection).  
*An Emission Control Service.*
- Replace spark plugs.  
*An Emission Control Service.*
- Replace air cleaner filter (or every 24 months, whichever occurs first).  
*An Emission Control Service.*
- Inspect fuel tank, cap, cap gasket and lines for damage or leaks (or every 24 months, whichever occurs first). Replace parts as needed.  
*An Emission Control Service.* (See footnote †.)

*(Continued)*

<b>DATE</b>	
<b>ACTUAL MILEAGE</b>	<b>SERVICED BY:</b>

<b>DATE</b>	
<b>ACTUAL MILEAGE</b>	<b>SERVICED BY:</b>

## Short Trip/City Maintenance Schedule

### *90,000 Miles (150 000 km) (Continued)*

- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Drain, flush and refill cooling system (or every 24 months, whichever occurs first). See "Engine Coolant" in the Index for what to use. Inspect hoses. Clean radiator, condenser, pressure cap and neck. Pressure test cooling system and pressure cap.

*An Emission Control Service.* (See footnote †.)

- Change manual transaxle fluid every 30,000 miles (50 000 km) only if your vehicle is used to tow a trailer.
- Change automatic transaxle and differential fluid every 15,000 miles (25 000 km) if the vehicle is mainly driven under one or more of these conditions:
  - In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
  - In hilly or mountainous terrain.
  - When doing frequent trailer towing.
  - Uses such as found in taxi, police or delivery service.

If you do not use your vehicle under any of these conditions, check the fluid.

## Short Trip/City Maintenance Schedule

### 93,000 Miles (155 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*

### 96,000 Miles (160 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 6 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary.  
*An Emission Control Service.* (See footnote †.)

### 99,000 Miles (165 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).  
*An Emission Control Service.*

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

## Long Trip/Highway Maintenance Schedule

The services shown in this schedule up to 100,000 miles (166 000 km) should be performed after 100,000 miles (166 000 km) at the same intervals.

See “Owner Checks and Services” and “Periodic Maintenance Inspections” following.

### Footnotes

† The U.S. Environmental Protection Agency or the California Air Resources Board has determined that the failure to perform this maintenance item will not nullify the emission warranty or limit recall liability prior to the completion of the vehicle’s useful life. We, however, urge that all recommended maintenance services be performed at the indicated intervals and the maintenance be recorded.

# Lubricate the parking brake cable guides, underbody contact points and linkage.

+ A good time to check your brakes is during tire rotation. See “Brake System Inspection” under “Periodic Maintenance Inspections” in Part C of this schedule.



## Long Trip/Highway Maintenance Schedule

### 7,500 Miles (12 500 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 12 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)

### 15,000 Miles (25 000 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).  
*An Emission Control Service.*
  - Lubricate chassis components (or every 12 months, whichever occurs first).  
(See footnote #.)
  - Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
  - Change automatic transaxle and differential fluid every 15,000 miles (25 000 km) if the vehicle is mainly driven under one or more of these conditions:
    - In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
    - In hilly or mountainous terrain.
    - When doing frequent trailer towing.
    - Uses such as found in taxi, police or delivery service.
- If you do not use your vehicle under any of these conditions, check the fluid.

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

## Long Trip/Highway Maintenance Schedule

### 22,500 Miles (37 500 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 12 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)

DATE	
ACTUAL MILEAGE	SERVICED BY:

### 30,000 Miles (50 000 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 12 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Replace spark plugs.  
*An Emission Control Service.*
- Replace air cleaner filter (or every 24 months, whichever occurs first).  
*An Emission Control Service.*
- Inspect fuel tank, cap, cap gasket and lines for damage or leaks (or every 24 months, whichever occurs first). Replace parts as needed.  
*An Emission Control Service.* (See footnote †.)

DATE	
ACTUAL MILEAGE	SERVICED BY:

## Long Trip/Highway Maintenance Schedule

- Drain, flush and refill cooling system (or every 24 months, whichever occurs first). See "Engine Coolant" in the Index for what to use. Inspect hoses. Clean radiator, condenser, pressure cap and neck. Pressure test cooling system and pressure cap.

*An Emission Control Service.* (See footnote †.)

- Change manual transaxle fluid every 30,000 miles (50 000 km) only if your vehicle is used to tow a trailer.
- Change automatic transaxle and differential fluid every 15,000 miles (25 000 km) if the vehicle is mainly driven under one or more of these conditions:
  - In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
  - In hilly or mountainous terrain.
  - When doing frequent trailer towing.
  - Uses such as found in taxi, police or delivery service.

If you do not use your vehicle under any of these conditions, check the fluid.

## Long Trip/Highway Maintenance Schedule

### 37,500 Miles (62 500 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 12 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)

### 45,000 Miles (75 000 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 12 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Change automatic transaxle and differential fluid every 15,000 miles (25 000 km) if the vehicle is mainly driven under one or more of these conditions:
  - In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
  - In hilly or mountainous terrain.
  - When doing frequent trailer towing.
  - Uses such as found in taxi, police or delivery service.

If you do not use your vehicle under any of these conditions, check the fluid.

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

## Long Trip/Highway Maintenance Schedule

### 52,500 Miles (87 500 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 12 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)

### 60,000 Miles (100 000 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 12 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect engine accessory drive belts (or every 48 months, whichever occurs first).  
*An Emission Control Service.*
- Replace spark plugs.  
*An Emission Control Service.*
- Replace air cleaner filter (or every 24 months, whichever occurs first).  
*An Emission Control Service.*

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

*(Continued)*

## Long Trip/Highway Maintenance Schedule

### 60,000 Miles (100 000 km) (Continued)

- Inspect fuel tank, cap, cap gasket and lines for damage (or every 24 months, whichever occurs first). Replace parts as needed.  
*An Emission Control Service.* (See footnote †.)
- Inspect for tappet noise and engine vibration. Adjust valve clearance to factory specifications if necessary (or every 48 months, whichever occurs first).  
*An Emission Control Service.*
- Drain, flush and refill cooling system (or every 24 months, whichever occurs first). See "Engine Coolant" in the Index for what to use. Inspect hoses. Clean radiator, condenser, pressure cap and neck. Pressure test cooling system and pressure cap.  
*An Emission Control Service.* (See footnote †.)
- Change manual transaxle fluid every 30,000 miles (50 000 km) only if your vehicle is used to tow a trailer.
- Change automatic transaxle and differential fluid every 15,000 miles (25 000 km) if the vehicle is mainly driven under one or more of these conditions:
  - In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
  - In hilly or mountainous terrain.
  - When doing frequent trailer towing.
  - Uses such as found in taxi, police or delivery service.If you do not use your vehicle under any of these conditions, check the fluid.

## Long Trip/Highway Maintenance Schedule

### 67,500 Miles (112 500 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 12 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)

### 75,000 Miles (125 000 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 12 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)
- Inspect engine accessory drive belts (or 12 months since last inspection).  
*An Emission Control Service.*
- Change automatic transaxle and differential fluid every 15,000 miles (25 000 km) if the vehicle is mainly driven under one or more of these conditions:
  - In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.

DATE	
ACTUAL MILEAGE	SERVICED BY:

DATE	
ACTUAL MILEAGE	SERVICED BY:

(Continued)

## Long Trip/Highway Maintenance Schedule

### 75,000 Miles (125 000 km) (Continued)

- In hilly or mountainous terrain.
- When doing frequent trailer towing.
- Uses such as found in taxi, police or delivery service.

If you do not use your vehicle under any of these conditions, check the fluid.

### 82,500 Miles (137 500 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 12 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)

DATE	
ACTUAL MILEAGE	SERVICED BY:

### 90,000 Miles (150 000 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 12 months, whichever occurs first).  
(See footnote #.)
- Replace spark plugs. *An Emission Control Service.*
- Replace air cleaner filter (or every 24 months, whichever occurs first).  
*An Emission Control Service.*

DATE	
ACTUAL MILEAGE	SERVICED BY:



## Long Trip/Highway Maintenance Schedule

- Inspect fuel tank, cap, cap gasket and lines for damage or leaks (or every 24 months, whichever occurs first). Replace parts as needed.  
*An Emission Control Service.* (See footnote †.)
- Inspect engine accessory drive belts (or 12 months since last inspection).  
*An Emission Control Service.*
- Drain, flush and refill cooling system (or every 24 months, whichever occurs first). See "Engine Coolant" in the Index for what to use. Inspect hoses. Clean radiator, condenser, pressure cap and neck. Pressure test cooling system and pressure cap.  
*An Emission Control Service.* (See footnote †.)
- Change manual transaxle fluid every 30,000 miles (50 000 km) only if your vehicle is used to tow a trailer.
- Change automatic transaxle and differential fluid every 15,000 miles (25 000 km) if the vehicle is mainly driven under one or more of these conditions:
  - In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
  - In hilly or mountainous terrain.

*(Continued)*

## Long Trip/Highway Maintenance Schedule

### *90,000 Miles (150 000 km) (Continued)*

- When doing frequent trailer towing.
- Uses such as found in taxi, police or delivery service.

If you do not use your vehicle under any of these conditions, check the fluid.

- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)

### *97,500 Miles (162 500 km)*

- Change engine oil and filter (or every 12 months, whichever occurs first).  
*An Emission Control Service.*
- Lubricate chassis components (or every 12 months, whichever occurs first).  
(See footnote #.)
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. (See footnote +.)

DATE	
ACTUAL MILEAGE	SERVICED BY:

## **Part B: Owner Checks and Services**

Listed below are owner checks and services which should be performed at the intervals specified to help ensure the safety, dependability and emission control performance of your vehicle.

Be sure any necessary repairs are completed at once. Whenever any fluids or lubricants are added to your vehicle, make sure they are the proper ones, as shown in Part D.

### **At Each Fuel Fill**

*It is important for you or a service station attendant to perform these underhood checks at each fuel fill.*

#### **Engine Oil Level Check**

Check the engine oil level and add the proper oil if necessary. See "Engine Oil" in the Index for further details.

#### **Engine Coolant Level Check**

Check the engine coolant level and add the proper coolant mixture if necessary. See "Engine Coolant" in the Index for further details.

#### **Windshield Washer Fluid Level Check**

Check the windshield washer fluid level in the windshield washer tank and add the proper fluid if necessary. See "Windshield Washer Fluid" in the Index for further details.

#### **Hood Latch Operation Check**

Pull the primary hood latch release handle inside the vehicle. The secondary latch should keep the hood from opening all the way when the primary latch is released. Make sure the hood closes firmly. See "Hood Release" in the Index for further details.

### **At Least Once a Month**

#### **Tire Inflation Check**

Make sure tires are inflated to the correct pressures. See "Tires" in the Index for further details.

#### **Cassette Deck Service**

Clean cassette deck. Cleaning should be done every 50 hours of tape play. See "Audio Systems" in the Index for further details.

## **At Least Twice a Year**

### **Restraint System Check**

Make sure the safety belt reminder light and all your belts, buckles, latch plates, retractors and anchorages are working properly. If your vehicle has a built-in child restraint, also periodically make sure the harness straps, latch plates, buckle, clip, and anchorages are working properly. Look for any other loose or damaged safety belt and built-in child restraint system parts. If you see anything that might keep a safety belt or built-in child restraint system from doing its job, have it repaired. Have any torn or frayed safety belts or harness straps replaced.

Also look for any opened or broken air bag coverings, and have them repaired or replaced. The air bag system should be inspected by a qualified technician 10 years from the manufacture date on the Certification label. After 10 years from the manufacture date, have the system inspected every 24 months. (The Certification label is located on the rear edge of the driver's door.)

### **Wiper Blade Check**

Inspect wiper blades for wear or cracking. Replace blade inserts that appear worn or damaged or that streak or miss areas of the windshield. Also see "Wiper Blades, Cleaning" in the Index.

### **Fluid Level Check**

Check the power steering pump, hydraulic clutch and automatic or manual transaxle fluid levels and add as needed. See "Power Steering," "Hydraulic Clutch" and "Automatic Transaxle" or "Manual Transaxle" in the Index. Check for leaks. A fluid loss in these systems could indicate a problem. Have the system inspected and repaired at once.

## At Least Once a Year

### Key Lock Cylinders Service

Lubricate the key lock cylinders with the lubricant specified in Part D.

### Seat Operation Check

Make sure the head restraints stay in position and all seat latches lock. Check that the recliner holds by pushing and pulling the seatback while it is reclined.

### Body Lubrication Service

Lubricate all body door hinges. Also lubricate all hinges and latches, including those for the hood, secondary latches, rear compartment and any folding seat hardware. Part D tells you what to use. More frequent lubrication may be required when exposed to a corrosive environment.

## Starter Switch Check



**When you are doing this check, the vehicle could move suddenly. If it does, you or others could be injured. Follow the steps below.**

1. Before you start, be sure you have enough room around the vehicle.
2. Firmly apply both the parking brake (see “Parking Brake” in the Index if necessary) and the regular brake.  
NOTE: Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.
3. On automatic transaxle vehicles, try to start the engine in each gear. The starter should work only in PARK (P) or NEUTRAL (N). If the starter works in any other position, your vehicle needs service.  
On manual transaxle vehicles, put the shift lever in NEUTRAL (N), push the clutch down halfway and try to start the engine. The starter should work only when the clutch is pushed down all the way to the floor. If the starter works when the clutch isn't pushed all the way down, your vehicle needs service.

## Brake-Transaxle Shift Interlock (BTSI) Check (Automatic Transaxle)

### CAUTION:

**When you are doing this check, the vehicle could move suddenly. If it does, you or others could be injured. Follow the steps below.**

1. Before you start, be sure you have enough room around the vehicle. It should be parked on a level surface.
2. Firmly apply the parking brake (see “Parking Brake” in the Index if necessary).

**NOTE:** Be ready to apply the regular brake immediately if the vehicle begins to move.

3. With the engine off, turn the key to the ON position, but don't start the engine. Without applying the regular brake, try to move the shift lever out of PARK (P) with normal effort. If the shift lever moves out of PARK (P), your vehicle's BTSI needs service.

## Ignition Transaxle Lock Check

While parked, and with the parking brake set, try to turn the ignition key to LOCK in each shift lever position.

- With an automatic transaxle, the key should turn to LOCK only when the shift lever is in PARK (P).
- With a manual transaxle, the key should turn to LOCK only if you push the key in farther, while turning it towards LOCK.

## Parking Brake and Automatic Transaxle PARK (P) Mechanism Check

### CAUTION:

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

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

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

### Underbody Flushing Service

At least every spring, use plain water to flush any corrosive materials from the underbody. Take care to clean thoroughly any areas where mud and other debris can collect.

## **Part C: Periodic Maintenance Inspections**

Listed below are inspections and services which should be performed at least twice a year (for instance, each spring and fall). You should let your dealer's service department or other qualified service center do these jobs. Make sure any necessary repairs are completed at once.

Proper procedures to perform these services may be found in a service manual. See "Service and Owner Publications" in the Index.

### **Steering, Suspension and Front Drive Axle Boot and Seal Inspection**

Inspect the front and rear suspension and steering system for damaged, loose or missing parts, signs of wear or lack of lubrication. Inspect the power steering lines and hoses for proper hook-up, binding, leaks, cracks, chafing, etc. Clean and then inspect the drive axle boot seals for damage, tears or leakage. Replace seals if necessary.

### **Exhaust System Inspection**

Inspect the complete exhaust system. Inspect the body near the exhaust system. Look for broken, damaged, missing or out-of-position parts as well as open seams, holes, loose connections or other conditions which could cause a heat build-up in the floor pan or could let exhaust fumes into the vehicle. See "Engine Exhaust" in the Index.

### **Engine Cooling System Inspection**

Inspect the hoses and have them replaced if they are cracked, swollen or deteriorated. Inspect all pipes, fittings and clamps; replace as needed. Clean the outside of the radiator and air conditioning condenser. To help ensure proper operation, a pressure test of the cooling system and pressure cap is recommended at least once a year.



## **Throttle System Inspection**

Inspect the throttle system for interference or binding, and for damaged or missing parts. Replace parts as needed. Replace any components that have high effort or excessive wear. Do not lubricate accelerator and cruise control cables.

## **Brake System Inspection**

Inspect the complete system. Inspect brake lines and hoses for proper hook-up, binding, leaks, cracks, chafing, etc. Inspect disc brake pads for wear and rotors for surface condition. Also inspect drum brake linings for wear and cracks. Inspect other brake parts, including drums, wheel cylinders, calipers, parking brake, etc. Check parking brake adjustment. You may need to have your brakes inspected more often if your driving habits or conditions result in frequent braking.

## Part D: Recommended Fluids and Lubricants

NOTE: Fluids and lubricants identified below by name, part number or specification may be obtained from your dealer.

USAGE	FLUID/LUBRICANT
Engine Oil	Engine Oil with the American Petroleum Institute Certified For Gasoline Engines "Starburst" symbol of the proper viscosity. To determine the preferred viscosity for your vehicle's engine, see "Engine Oil" in the Index.
Engine Coolant	50/50 mixture of clean water (preferably distilled) and good quality Ethylene Glycol Base Coolant (GM Part No. 1052753 or equivalent) conforming to GM Specification 1825M or approved recycled coolant conforming to GM Specification 1825M. See "Engine Coolant" in the Index.

USAGE	FLUID/LUBRICANT
Hydraulic Brake System	Delco Supreme 11 <sup>®</sup> Brake Fluid (GM Part No. 12377967 or equivalent DOT-3 Brake Fluid).
Hydraulic Clutch System	Hydraulic Clutch Fluid (GM Part No. 12345347 or equivalent DOT-3 Brake Fluid).
Power Steering System	DEXRON <sup>®</sup> -III Automatic Transmission Fluid.
Manual Transaxle	GM Goodwrench Synthetic Manual Transmission Gear Oil (GM Part No. 12346190 - 1 quart) or equivalent SAE 75W-90 GL-4 Gear Oil.
Automatic Transaxle	DEXRON <sup>®</sup> -III Automatic Transmission Fluid.
Key Lock Cylinders	Multi-Purpose Lubricant, Superlube <sup>®</sup> (GM Part No. 12346241 or equivalent).

<b>USAGE</b>	<b>FLUID/LUBRICANT</b>
Manual Transaxle Shift Linkage	Chassis Lubricant (GM Part No. 12377985 or equivalent) or lubricant meeting requirements of NLGI # 2, Category LB or GC-LB.
Clutch Linkage Pivot Points	Chassis Lubricant (GM Part No. 12377985 or equivalent) or lubricant meeting requirements of NLGI # 2, Category LB or GC-LB.
Floor Shift Linkage	Lubriplate <sup>®</sup> Lubricant Aerosol (GM Part No. 12346293 or equivalent) or lubricant meeting requirements of NLGI # 2 Category LB or GC-LB.
Chassis Lubrication	Chassis Lubricant (GM Part No. 12377985 or equivalent) or lubricant meeting requirements of NLGI # 2, Category LB or GC-LB.

<b>USAGE</b>	<b>FLUID/LUBRICANT</b>
Windshield Washer Solvent	GM Optikleen <sup>®</sup> Washer Solvent (GM Part No. 1051515) or equivalent.
Hood Latch Assembly, Secondary Latch, Pivots, Spring Anchor and Release Pawl	Lubriplate <sup>®</sup> Lubricant Aerosol (GM Part No. 12346293 or equivalent) or lubricant meeting requirements of NLGI # 2, Category LB or GC-LB.
Hood and Door Hinges	Multi-Purpose Lubricant, Superlube <sup>®</sup> (GM Part No. 12346241 or equivalent).
Weatherstrip Conditioning	Dielectric Silicone Grease (GM Part No. 12345579 or equivalent).

## Part E: Maintenance Record

After the scheduled services are performed, record the date, odometer reading and who performed the service in the boxes provided after the maintenance interval.

Any additional information from "Owner Checks and Services" or "Periodic Maintenance" can be added on the following record pages. Also, you should retain all maintenance receipts. Your owner information portfolio is a convenient place to store them.

### Maintenance Record

DATE	ODOMETER READING	SERVICED BY	MAINTENANCE PERFORMED

## Maintenance Record

DATE	ODOMETER READING	SERVICED BY	MAINTENANCE PERFORMED

## Maintenance Record

DATE	ODOMETER READING	SERVICED BY	MAINTENANCE PERFORMED



## Section 8 Customer Assistance Information

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Here you will find out how to contact Chevrolet if you need assistance. This section also tells you how to obtain service publications and how to report any safety defects.

8-2	Customer Satisfaction Procedure	8-10	Warranty Information
8-4	Customer Assistance for Text Telephone (TTY) Users	8-10	Reporting Safety Defects to the United States Government
8-5	Chevrolet Roadside Assistance Program	8-11	Reporting Safety Defects to the Canadian Government
8-7	Canadian Roadside Assistance	8-11	Reporting Safety Defects to General Motors
8-8	Courtesy Transportation	8-11	Ordering Service and Owner Publications in Canada
8-9	GM Participation in an Alternative Dispute Resolution Program		

## Customer Satisfaction Procedure



Chevrolet dealers have the facilities, trained technicians and up-to-date information to promptly address any concerns you may have. However, if a concern has not been resolved to your complete satisfaction, take the following steps:

**STEP ONE** -- Discuss your concern with a member of dealership management. Normally, concerns can be quickly resolved at that level. If the matter has already been reviewed with the sales, service or parts manager, contact the owner of the dealership or the general manager.



**STEP TWO** -- If after contacting a member of dealership management, it appears your concern cannot be resolved by the dealership without further help, contact the Chevrolet Customer Assistance Center by calling 1-800-222-1020. In Canada, contact GM of Canada Customer Communication Centre in Oshawa by calling 1-800-263-3777 (English) or 1-800-263-7854 (French).

For help outside of the United States and Canada, call the following numbers as appropriate:

- In Mexico: (525) 625-3256
- In Puerto Rico: 1-800-496-9992 (English) or 1-800-496-9993 (Spanish)
- In the U.S. Virgin Islands: 1-800-496-9994
- In the Dominican Republic: 1-800-751-4135 (English) or 1-800-751-4136 (Spanish)
- In the Bahamas: 1-800-389-0009
- In Bermuda, Barbados, Antigua and the British Virgin Islands: 1-800-534-0122
- In all other Caribbean countries: (809) 763-1315
- In other overseas locations, call GM Overseas Distribution Corporation in Canada at: (905) 644-4112.

For prompt assistance, please have the following information available to give the Customer Assistance Representative:

- Your name, address, home and business telephone numbers
- Vehicle Identification Number (This is available from the vehicle registration or title, or the plate at the top left of the instrument panel and visible through the windshield.)
- Dealership name and location
- Vehicle delivery date and present mileage
- Nature of concern

We encourage you to call us so we can give your inquiry prompt attention. However, if you wish to write Chevrolet, address your inquiry to:

Chevrolet Motor Division  
Chevrolet Customer Assistance Center  
P.O. Box 7047  
Troy, MI 48007-7047

In Canada, write to:

General Motors of Canada Limited  
Customer Communication Centre, 163-005  
1908 Colonel Sam Drive  
Oshawa, Ontario L1H 8P7

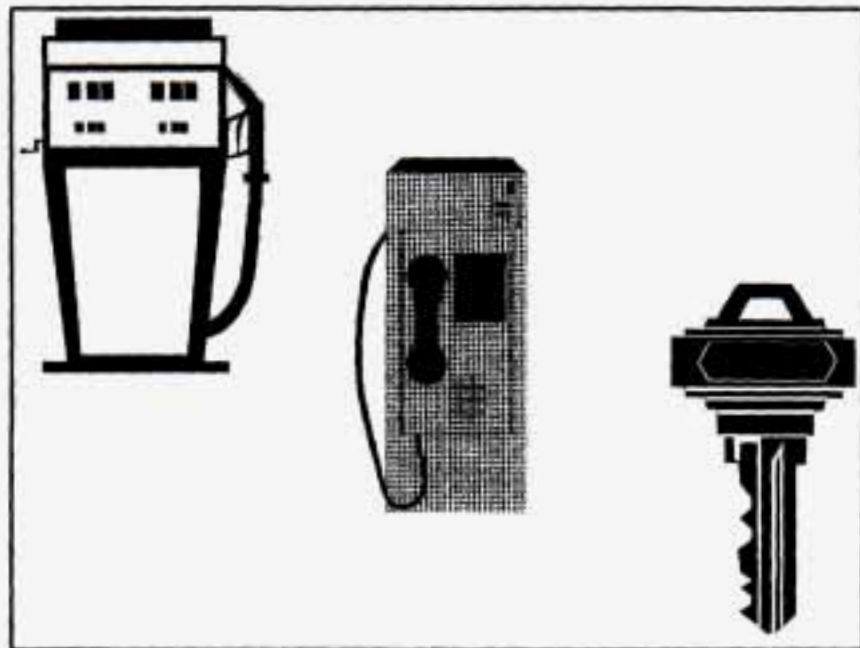
Refer to your Warranty and Owner Assistance Information booklet for addresses of GM Overseas offices.

When contacting Chevrolet, please remember that your concern will likely be resolved in the dealership, using the dealer's facilities, equipment and personnel. That is why we suggest you follow Step One first if you have a concern.

## **Customer Assistance for Text Telephone (TTY) Users**

To assist customers who are deaf, hard of hearing, or speech-impaired and who use Text Telephones (TTYs), Chevrolet has TTY equipment available at its Customer Assistance Center. Any TTY user can communicate with Chevrolet by dialing: 1-800-833-CHEV. (TTY users in Canada can dial 1-800-263-3830.)

## Chevrolet Roadside Assistance Program



To enhance Chevrolet's strong commitment to customer satisfaction, Chevrolet is excited to announce the establishment of the Chevrolet Roadside Assistance Center. As the owner of a 1998 Chevrolet, membership in Roadside Assistance is free.

Roadside Assistance is available 24 hours a day, 365 days a year, by calling 1-800-CHEV-USA (1-800-243-8872). This toll-free number will provide you over-the-phone roadside assistance with minor mechanical problems. If your problem cannot be resolved over the phone, our advisors have access to a nationwide network of dealer recommended service providers. Roadside membership is free, however some services may incur costs.

Roadside offers two levels of service to the customer, *Basic Care* and *Courtesy™ Care*:

- Toll-free number, 1-800-CHEV-USA
- Free towing for warranty repairs
- Basic over-the-phone technical advice
- Available dealer services at reasonable costs (i.e., wrecker services, locksmith/key service, glass repair, etc.)

ROADSIDE *Courtesy™ Care* PROVIDES:

- Roadside *Basic Care* services (as outlined previously)  
Plus:
- FREE Non-Warranty Towing (to the closest dealer from a legal roadway)
- FREE Locksmith/Key Service (when keys are lost on the road or locked inside)
- FREE Flat Tire Service (spare installed on the road)
- FREE Jump Start (at home or on the road)
- FREE Fuel Delivery (\$5 of fuel delivered on the road)

Chevrolet offers *Courtesy Transportation* for customers needing warranty service. *Courtesy Transportation* will be offered in conjunction with the coverage provided by the Bumper to Bumper New Vehicle Limited Warranty to eligible purchasers of 1998 Chevrolet passenger car and light duty trucks. (Please see your selling dealer for details.)

Note: *Courtesy Care* is available to retail and retail lease customers operating 1998 and newer Chevrolet vehicles for a period of 3 years/36,000 miles (60 000 km), whichever occurs first. All *Courtesy Care* services must be pre-arranged by Chevrolet Roadside or dealer Service Management.

*Basic Care* and *Courtesy Care* are not part of or included in the coverage provided by the New Vehicle Limited Warranty. Chevrolet reserves the right to modify or discontinue *Basic Care* and *Courtesy Care* at any time.

For complete program details, see your Chevrolet dealer to obtain a Roadside Assistance Center brochure.

The Roadside Assistance Center uses companies that will provide you with quality and priority service. When roadside services are required, our advisors will explain any payment obligations that may be incurred for utilizing outside services.

For prompt assistance when calling, please have the following available to give to the advisor:

- Vehicle Identification Number (VIN)
- License plate number
- Vehicle color
- Vehicle location
- Telephone number where you can be reached
- Vehicle mileage
- Description of problem

Please refer to the Roadside Assistance brochure inside your owner information portfolio for full program details.

## **Canadian Roadside Assistance**

Vehicles purchased in Canada have an extensive Roadside Assistance program accessible from anywhere in Canada or the United States. Please refer to the separate brochure provided by the dealer or call 1-800-268-6800 for emergency services.

## Courtesy Transportation

Chevrolet offers Courtesy Transportation for customers needing warranty service. Courtesy Transportation will be offered in conjunction with the coverage provided by the Bumper to Bumper New Vehicle Limited Warranty to retail purchasers of 1998 Chevrolet passenger cars and light duty trucks (please see your selling dealer for details).

Courtesy Transportation includes:

- One way shuttle ride for any warranty repair completed during the same day.
- Up to \$30 maximum daily vehicle rental allowance for any overnight warranty repair up to five days, OR
- Up to \$30 maximum daily cab, bus or other transportation allowance in lieu of rental for any overnight warranty repair up to five days, OR
- Up to \$10 daily fuel allowance for rides provided by another person (i.e., friend, neighbor, etc.) in lieu of rental for any overnight warranty repair up to five days.

Note: All Courtesy Transportation arrangements will be administered by your Chevrolet dealer service management. Claim amounts should reflect all actual costs.

- Chevrolet Courtesy Transportation is not part of the Bumper to Bumper New Vehicle Limited Warranty. Chevrolet reserves the right to make any changes or discontinue Courtesy Transportation at any time without notification.
- For additional program details, contact your Chevrolet dealer.

Some state insurance regulations make it impractical to rent vehicles to people under 21 years of age. If you are under 21 and have difficulty renting a vehicle, Chevrolet will reimburse up to \$30/day for documented transportation you receive.

For warranty repairs during the Complete Vehicle Coverage period in the New Vehicle Limited Warranty, interim transportation may be available under the Courtesy Transportation Program. Please consult your dealer for details. The Roadside Assistance program is available only in the United States and Canada.

**In Canada**, please consult your GM dealer for information on Courtesy Transportation.

## **GM Participation in an Alternative Dispute Resolution Program**

This program is available in all 50 states and the District of Columbia. Canadian owners refer to your Warranty and Owner Assistance Information booklet for information on the Canadian Motor Vehicle Arbitration Plan (CAMVAP). General Motors reserves the right to change eligibility limitations and/or to discontinue its participation in this program.

Both Chevrolet and your Chevrolet dealer are committed to making sure you are completely satisfied with your new vehicle. Our experience has shown that, if a situation arises where you feel your concern has not been adequately addressed, the Customer Satisfaction Procedure described earlier in this section is very successful.

There may be instances where an impartial third party can assist in arriving at a solution to a disagreement regarding vehicle repairs or interpretation of the New Vehicle Limited Warranty. To assist in resolving these disagreements, Chevrolet voluntarily participates in BBB AUTO LINE.

BBB AUTO LINE is an out-of-court program administered by the Better Business Bureau system to settle automotive disputes. This program is available free of charge to customers who currently own or lease a GM vehicle.

If you are not satisfied after following the Customer Satisfaction Procedure, you may contact the BBB using the toll-free telephone number, or write them at the following address:

**BBB AUTO LINE**  
Council of Better Business Bureaus, Inc.  
4200 Wilson Boulevard  
Suite 800  
Arlington, VA 22203-1804  
Telephone: 1-800-955-5100

To file a claim, you will be asked to provide your name and address, your Vehicle Identification Number (VIN) and a statement of the nature of your complaint. Eligibility is limited by vehicle age and mileage, and other factors.

We prefer you utilize the Customer Satisfaction Procedure before you resort to AUTO LINE, but you may contact the BBB at any time. The BBB will attempt to resolve the complaint serving as an intermediary. If this mediation is unsuccessful, an informal hearing will be scheduled where eligible customers may present their case to an impartial third-party arbitrator.

The arbitrator will make a decision which you may accept or reject. If you accept the decision, GM will be bound by that decision. The entire dispute resolution procedure should ordinarily take about 40 days from the time you file a claim until a decision is made.

Some state laws may require you to use this program before filing a claim with a state-run arbitration program or in the courts. For further information, contact the BBB at 1-800-955-5100 or the Chevrolet Customer Assistance Center at 1-800-222-1020.

## **Warranty Information**

Your vehicle comes with a separate warranty booklet that contains detailed warranty information.

## **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 or General Motors.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0123 in the Washington, D.C. area) or write to:

NHTSA, U.S. Department of Transportation  
Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from the Hotline.



## **REPORTING SAFETY DEFECTS TO THE CANADIAN GOVERNMENT**

If you live in Canada, and you believe that your vehicle has a safety defect, you should immediately notify Transport Canada, in addition to notifying General Motors of Canada Limited. You may write to:

Transport Canada  
Box 8880  
Ottawa, Ontario K1G 3J2

## **REPORTING SAFETY DEFECTS TO GENERAL MOTORS**

In addition to notifying NHTSA (or Transport Canada) in a situation like this, we certainly hope you'll notify us. Please call us at 1-800-222-1020 or write:

Chevrolet Motor Division  
Chevrolet Customer Assistance Center  
P.O. Box 7047  
Troy, MI 48007-7047

In Canada, please call us at 1-800-263-3777 (English) or 1-800-263-7854 (French). Or, write:

General Motors of Canada Limited  
Customer Communication Centre, 163-005  
1908 Colonel Sam Drive  
Oshawa, Ontario L1H 8P7

## **Ordering Service and Owner Publications in Canada**

Service manuals, owner's manuals and other service literature are available for purchase for all current and past model General Motors vehicles.

The toll-free telephone number for ordering information in Canada is 1-800-668-5539.

# 1998 CHEVROLET SERVICE PUBLICATIONS ORDERING INFORMATION

*The following publications covering the operation and servicing of your vehicle can be purchased by filling out the Service Publication Order Form in this book and mailing it in with your check, money order, or credit card information to Helm, Incorporated (address below.)*

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## REPLACEMENT BULBS

*Application*

*Number*

*Headlamp (High/Low Beam)*

HB2

*Sidemarkers*

*Front*  
*Rear*

1157NA  
168

*Stoplamp/Taillamp*

1157

*Turn Signal*

*Front*  
*Rear*

1157NA  
1156

*Back-Up*

921

## **CAPACITIES AND SPECIFICATIONS**

### **Engine Specifications**

**Displacement**

**109 cubic inches (1.8 L)**

**Firing Order**

**1-3-4-2**

**Type**

**I4 16V DOHC**

**Thermostat  
Temperature  
Specification**

**167° F (76° C)**



## CAPACITIES AND SPECIFICATIONS (CONTINUED)

### Capacities

#### Transmission

5 Speed Manual

2.0 qts. (1.9 L)

3 Speed Automatic

2.6 qts. (2.5 L)

4 Speed Automatic

3.3 qts. (3.1 L)

Crankcase (Engine Oil  
with Filter Change)

VIN Engine L4 Code 8

3.9 qts. (3.7 L)

Engine Cooling System

Manual Trans

6.6 qts. (6.2 L)

Auto Trans

6.4 qts. (6.1 L)

Fuel Tank

13.2 gal. (50 L)

### Vehicle Dimensions

Wheel Base

97.1 in. (247 cm)

Length

175.0 in. (445 cm)

Height

53.5 in. (136 cm)

Front Tread

57.9 in. (147 cm)

Rear Tread

57.5 in. (146 cm)

### Torque

Wheel Nut Torque

100 lb-ft (140 N•m)

**For a More Detailed Look at What's Under the Hood**  
See Page 6-9

**Tire Pressure**  
See Page 6-38

**Engine Oil**  
See Page 6-14

**Windshield Washer Fluid**  
See Page 6-27

**Spare Tire Pressure**  
See Page 5-33

**Engine Oil Dipstick**  
See Page 6-12

**Hood Release**  
See Page 6-9

**Cooling System**  
See Page 5-16

**Battery**  
The Delco Freedom battery needs no water.  
See Page 6-32

**Fuel**  
Use unleaded gas only.  
87 Octane or higher  
See Page 6-3

