



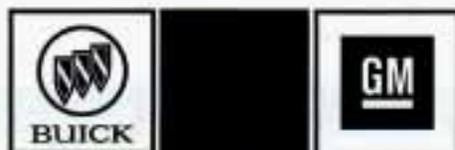
BUICK[®]

ROADMASTER



The 1996 Buick Roadmaster Owner's Manual

Seats and Restraint Systems	1-1
This section tells you how to use your seats and safety belts properly. It also explains "SRS" system.	
Features and Controls	2-1
This section explains how to start and operate your Buick.	
Comfort Controls and Audio Systems	3-1
This section tells you how to adjust the ventilation and comfort controls and how to operate your audio system.	
Your Driving and the Road	4-1
Here you'll find helpful information and tips about the road and how to drive under different conditions.	
Problems on the Road	5-1
This section tells you what to do if you have a problem while driving, such as a flat tire or overheated engine, etc.	
Service and Appearance Care	6-1
Here the manual tells you how to keep your Buick running properly and looking good.	
Maintenance Schedule	7-1
This section tells you when to perform vehicle maintenance and what fluids and lubricants to use.	
Customer Assistance Information	8-1
This section tells you how to contact Buick for assistance and how to get service publications. It also gives you information on "Reporting Safety Defects" on page 8-7.	
Index	9-1
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 Buick Motor Division whenever it appears in this manual.

Please keep this manual in your Buick, 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.

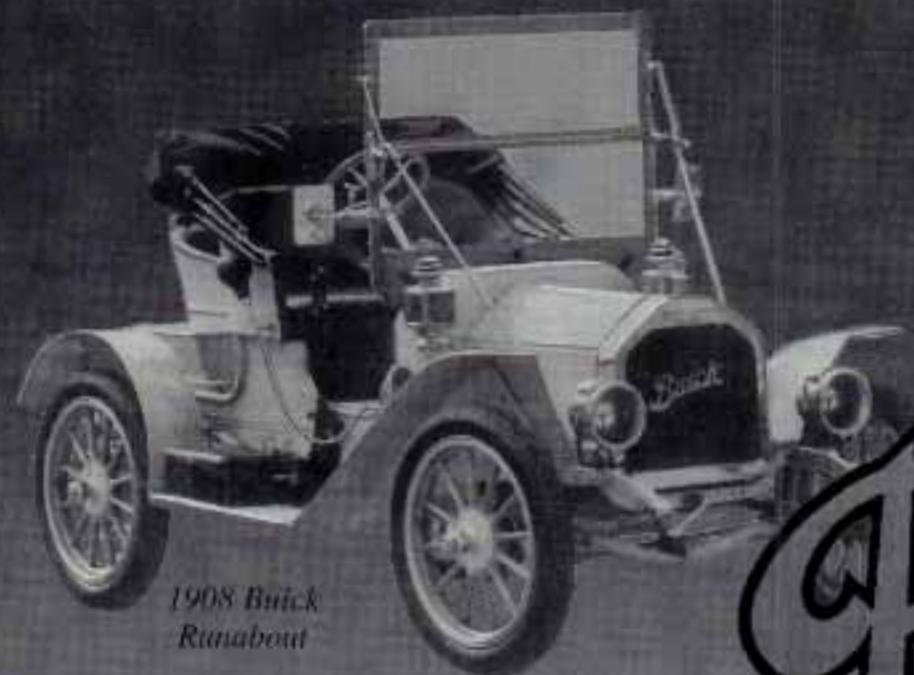


We support voluntary technician certification.

For Canadian Owners Who Prefer a French Language Manual:

Aux propriétaires canadiens: Vous pouvez vous procurer un exemplaire de ce guide en français chez votre concessionnaire ou au:

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Mississauga, Ontario L5T 1C7



*1908 Buick
Runabout*

*Buick Motor Division
provides one of the most dramatic
and important chapters in the history
of the American automobile*

Buick



David Dunbar Buick



Walter Marr and Thomas Buick

Buick's chief engineer, Walter L. Marr (left), and Thomas D. Buick, son of founder David Dunbar Buick, drove the first Flint Buick in a successful Flint-Detroit round trip in July 1904.

David Buick was building gasoline engines by 1899, and Marr, his engineer, apparently built the first auto to be called a Buick in 1900. However, Buick traditionally dates its beginnings to 1903. That was the year the company was reorganized, refinanced and moved from Detroit to Flint. Buick has always been a product innovator. Buick engineers developed the

"valve-in-head" engine, a light, powerful and reliable engine which would eventually influence the entire automotive industry.

William C. Durant was instrumental in promoting Buicks across the country using his Durant-Dort Carriage Co. outlets and salespeople as the nucleus of a giant distribution system. He knew the Buick as a "self-seller." If automobiles could be this good, he thought, maybe it was time to switch from the horse and buggy business to automobiles.



William C. (Billy) Durant

At the 1905 New York Auto Show, Durant took orders for 1,000 Buicks before the company had built 40. On Buick's success, Durant created a holding company, September 16, 1908. He called it General Motors.

Durant also created a racing team that won 500 racing trophies in 1909 and 1910, including successes at Indianapolis two years before the Indy 500 began.

The success of Buick engines was visible not only on the race track, but in endurance tests across the country and around the world. Buick was the only car to complete a 1,000-mile Chicago-to-New York race in 1906. And a Buick was the first car to travel across South America, driven from Buenos Aires, Argentina, over the Andes to Santiago, Chile in 1914.



1911 Model 21 Touring Car on Buick's Test Hill

Buick drew plenty of attention because it could climb hills and run through mud like no other car. Buick's endurance and reliability were world famous.

During World War I, Buick built Liberty aircraft engines as well as Red Cross ambulances so successfully that one Buick ambulance was awarded the Croix de Guerre by the French government.

As a builder of premier automobiles, Buick was hard hit by the Great Depression. However, new General Manager Harlow H. Curtice created popular new models including the Special and the Roadmaster. Buick sales soon flourished.



First Buick Factory

In World War II, Buick built aircraft engines, tanks and other military hardware. This post-war period brought great styling and engineering changes which resulted in increased sales. The torque converter automatic transmission, Dynaflow, was introduced in the 1948 Roadmaster. Buick's famous "portholes" came along in 1949.



1949 Roadmaster

A high-compression V-8 engine was introduced in 1953. And Buick's famous vertical pillar "toothy" grille, (introduced in 1942), became more massive in the post-war era.



1953 Skylark

Motor Trend magazine named the 1962 Buick Special "Car of the Year." The first production V-6 engine was used in the Special.



1962 Buick Special

Built inside the walls of the old buildings in Buick's former Flint complex, which formed the cornerstone of General Motors, Buick City is a state-of-the-art assembly facility with more than 200 robots and other high-tech equipment. It was completed in the fall of 1985.

Buicks are, and will continue to be, premium American motorcars with smooth power, high performance, rich detail and comfortable accommodation.



Ed Mertz, General Manager, Buick Motor Division

Our mission is simple:

"Buick will provide Premium American Motorcars backed with services that exceed our customers' expectations, throughout the purchase, ownership, service and repurchase experience."

Buicks are SUBSTANTIAL.

Buicks are DISTINCTIVE.

Buicks are POWERFUL.

Buicks are MATURE.

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 the back of the manual. It's an alphabetical list of all that'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

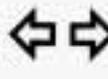


These symbols have to do with your lights:

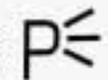
MASTER
LIGHTING
SWITCH



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

Here you'll find information about the seats in your Buick 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.

Seats and Seat Controls

This section tells you about the seats -- how to adjust them, and also about reclining front seatbacks, raising and lowering wagon rear seats, and head restraints.

Manual Seat

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.



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

Power Seat (Option)



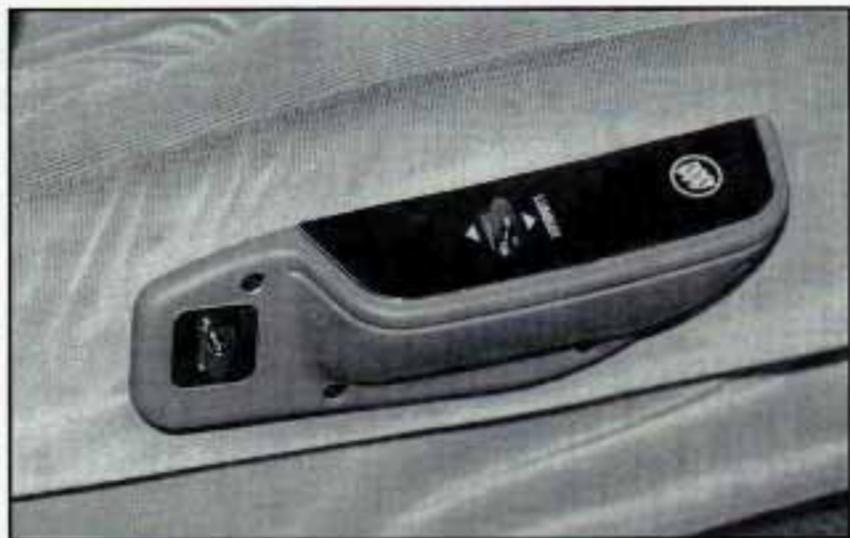
The power seat controls are located on the armrest.

Raise the front of the seat by pressing the left side of the front switch. Press the right side of this switch to lower the front of the seat.

Move the seat forward or back by pressing and holding FWD or BACK. Raise the seat by pressing and holding UP. Press and hold DN to lower the seat.

Press and hold the left side of the rear switch to raise the rear of the seat. Press and hold the right side of this switch to lower the rear of the seat.

Power Lumbar (Option)



Press the LUMBAR switch forward to increase lumbar support. Press it rearward to decrease lumbar support.

Memory Seat (Option)



To program the memory seat:

1. Make sure the vehicle is in PARK (P).
2. Adjust the driver's seat the way you want it.
3. Press the SET button.
4. Press the left or right side of the MEMORY control and your seating position is programmed.

When your Roadmaster is in PARK (P), press the same side of the MEMORY control to recall the seat setting. Program the memory seat for an additional driver following the preceding steps, but press the other side of the memory control.

The EXIT button allows you to get out of your vehicle more easily.

If you select the wrong side of the MEMORY control or the EXIT button, you can cancel it by pressing any of the power seat switches.

Heated Seats (Option)

If your vehicle has this feature, the switch is near the LUMBAR control. It has two warming positions: HI and LO. Move the switch to OFF to turn this feature off.

Power Recliner (Option)

This switch is on the side of the seat. Press this switch rearward to move the seatback down to a reclined position. Press it forward to move the seatback to an upright position.

Reclining Front Seatbacks



To adjust the seatback, lift the lever on the outer side of the seat and move the seatback to where you want it. Release the lever to lock the seatback. Pull up on the lever and the seat will go to an 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.

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.

On some models, the head restraints tilt forward and rearward also.

Wagon Folding Seatbacks

The second and third seats of your station wagon have seatbacks that can be folded down to provide more cargo space.

Second Seatback

To fold the seatback down:

1. Press the knob next to the seatback on the passenger side.



2. Pull the seatback forward and push it down.

To raise the seatback:

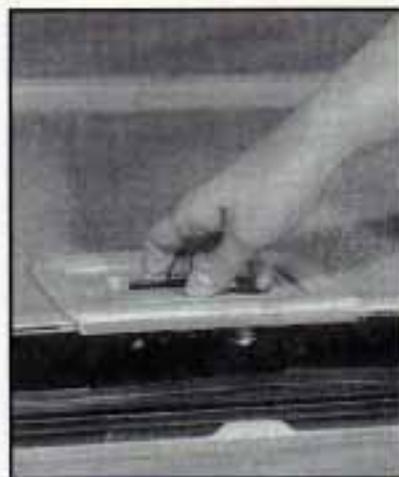
1. Pull the seatback up and push it back to lock it into place.
2. Push and pull the top of the seatback to be sure it is locked in position.

Third Seatback

The third seat is folded flat in the tailgate area of your station wagon.

To raise the seatback:

1. Open the tailgate.



2. Lift the storage compartment lid and fold it back so that it lies flat.



3. Pull the seat release handle in the lower right corner of the storage compartment. The seatback is now unlocked.

4. Pull the seatback up and push it back into place.
5. Push and pull the top of the seatback to be sure it is locked into position.

To lower the seatback:

1. Pull the seat release handle to unlock the seatback.



2. Pull the seatback down using the assist strap, then push down on it to lock it into place.

3. Fold the storage lid down. Make sure it is secure.

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 Supplemental Restraint System (SRS), or 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.



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.*

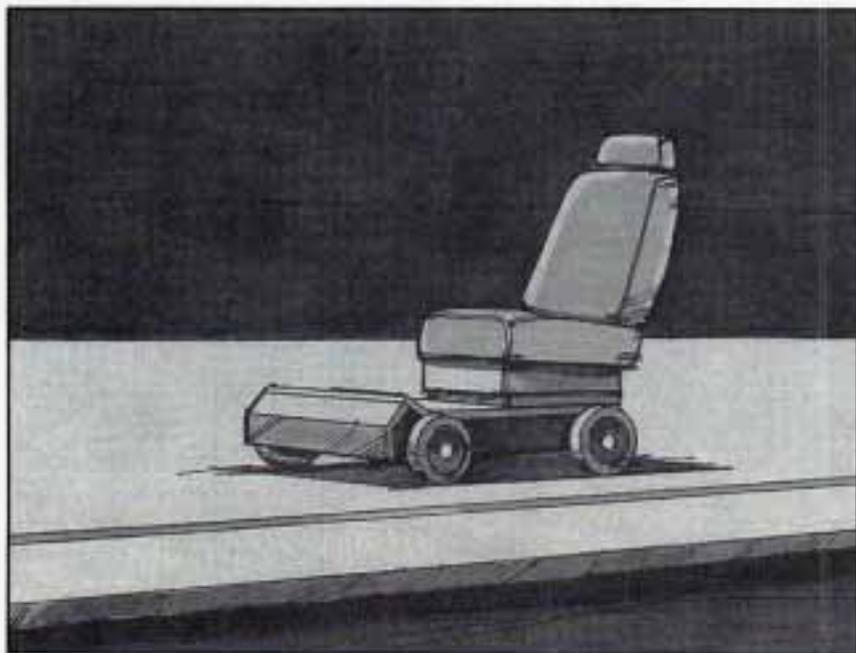
You never know if you'll be in a crash. If you do have a crash, you don't know if it will be a bad one.

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.

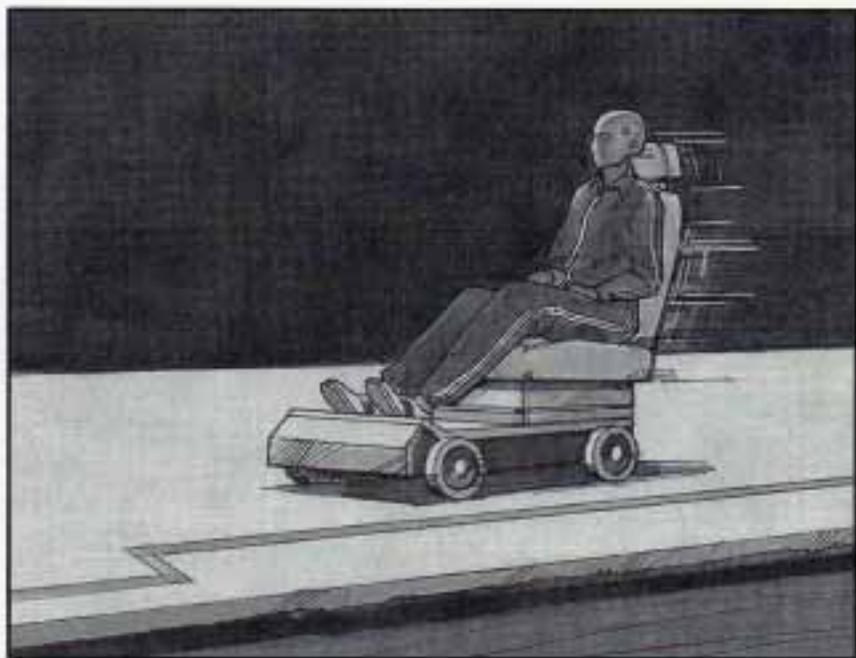
After more than 25 years of safety belts in vehicles, the facts are clear. In most crashes buckling up does matter ... a lot!

Why Safety Belts Work

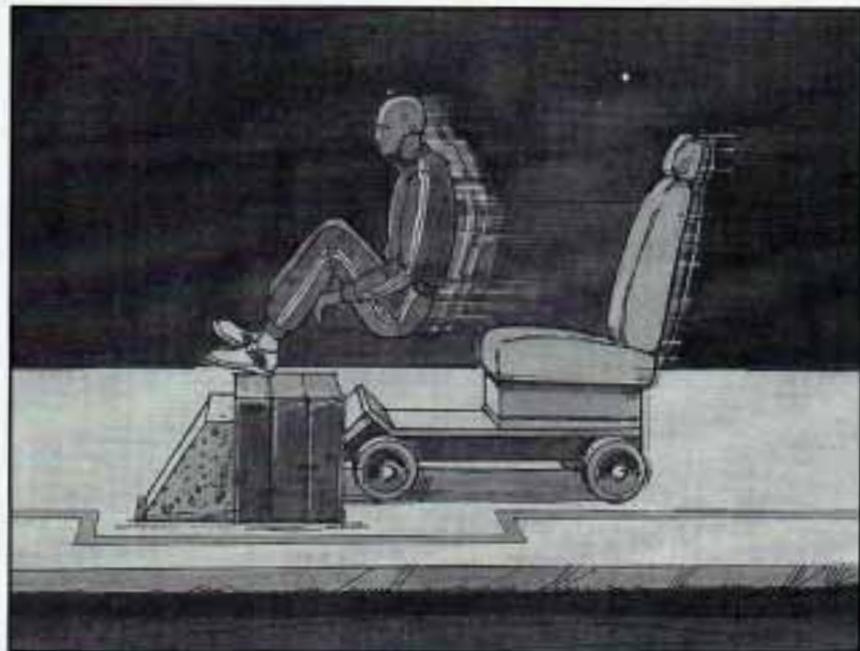
When you ride in or on anything, you go as fast as it goes.



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



Put someone on it.



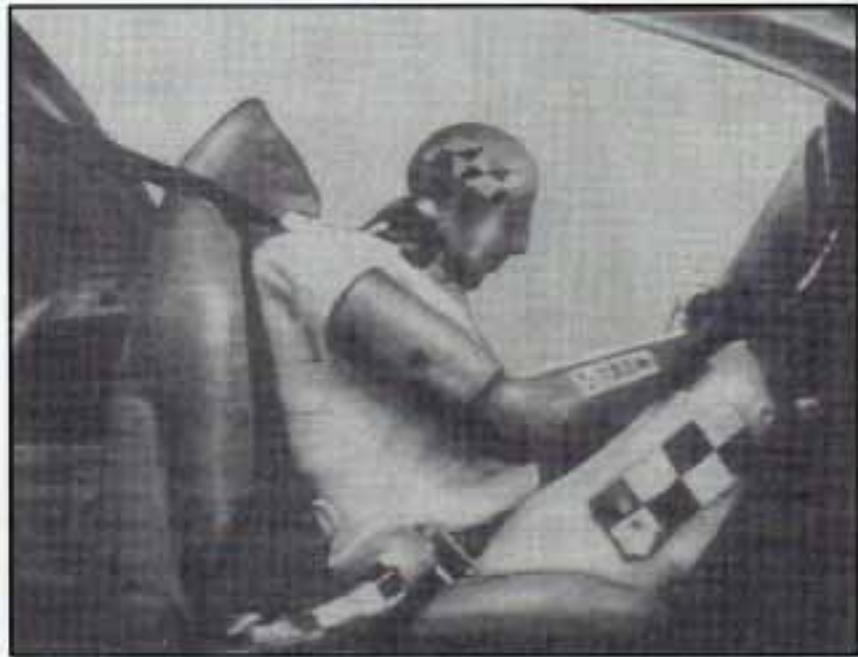
Get it up to speed. Then stop the vehicle. The rider doesn't stop.



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 Buick, 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.



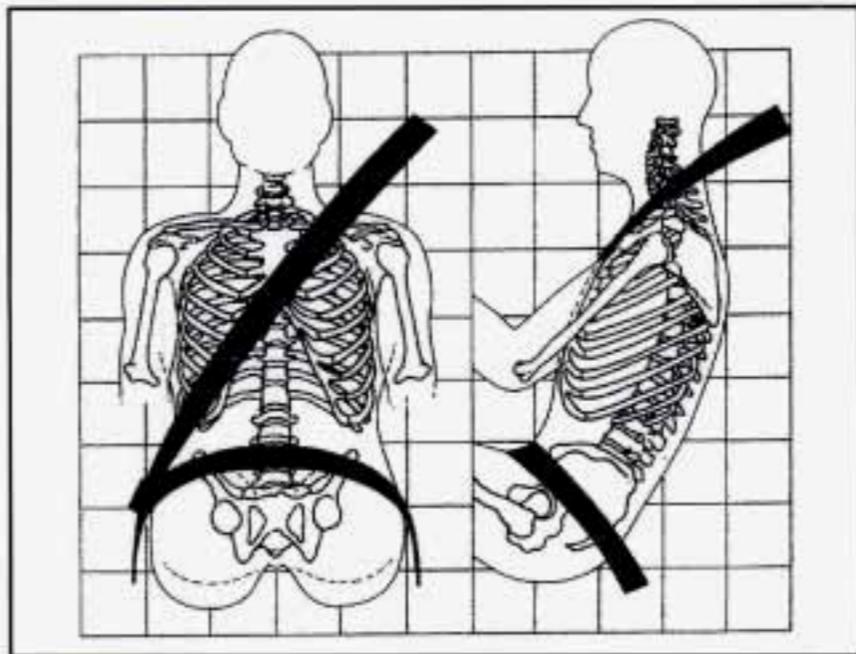
If the belt stops before it reaches the buckle, tilt the latch plate and keep pulling until you can buckle the belt.

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.



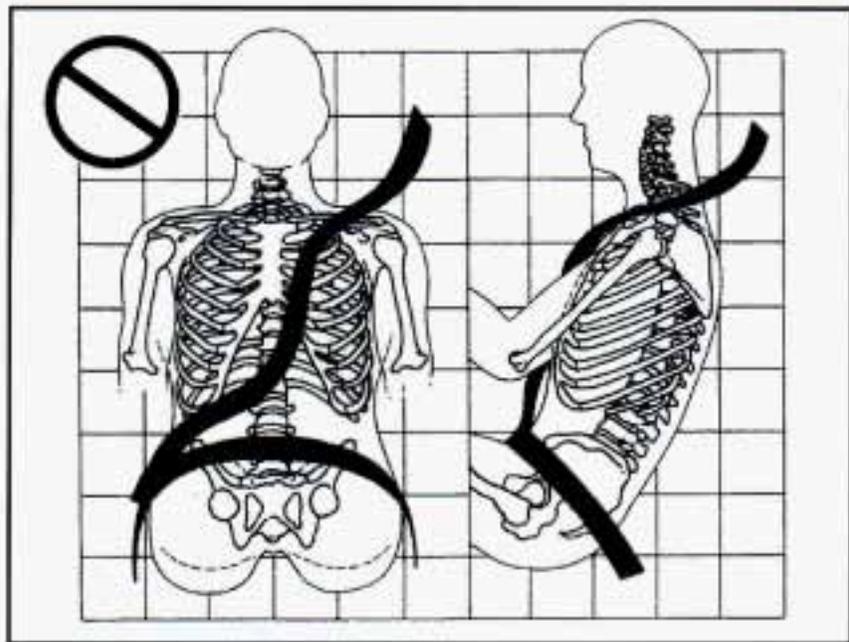
5. To make the lap part tight, pull down on the buckle end of the belt as you pull up on the shoulder belt.



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.

Q: What's wrong with this?

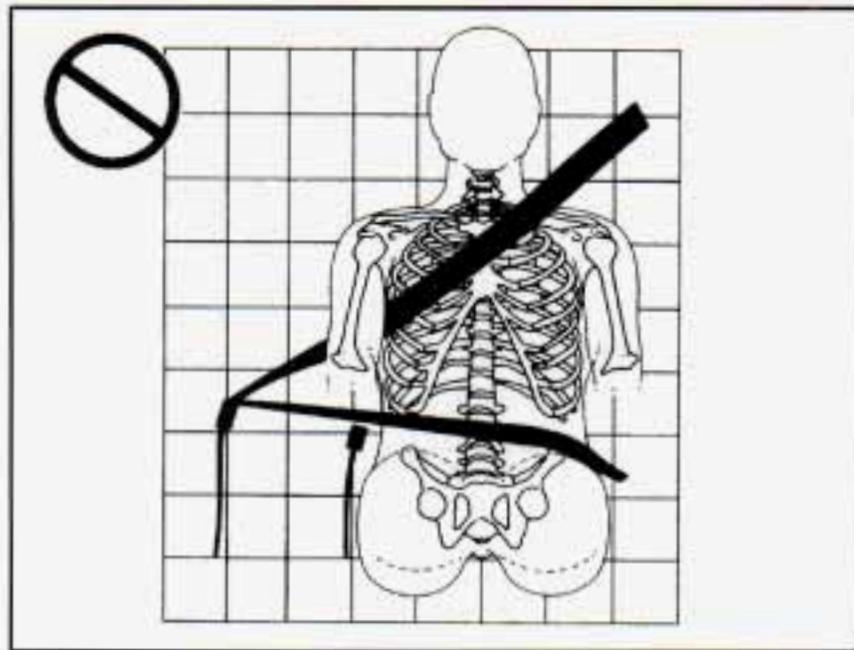


A: The shoulder belt is too loose. It won't give nearly as much protection this way.

⚠ CAUTION:

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

Q: What's wrong with this?

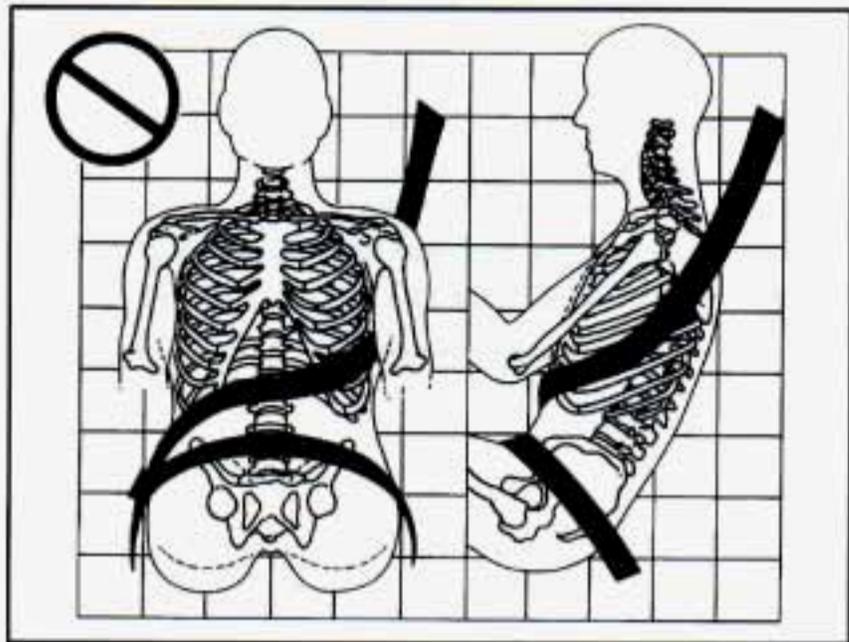


⚠ CAUTION:

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.

A: The belt is buckled in the wrong place.

Q: What's wrong with this?

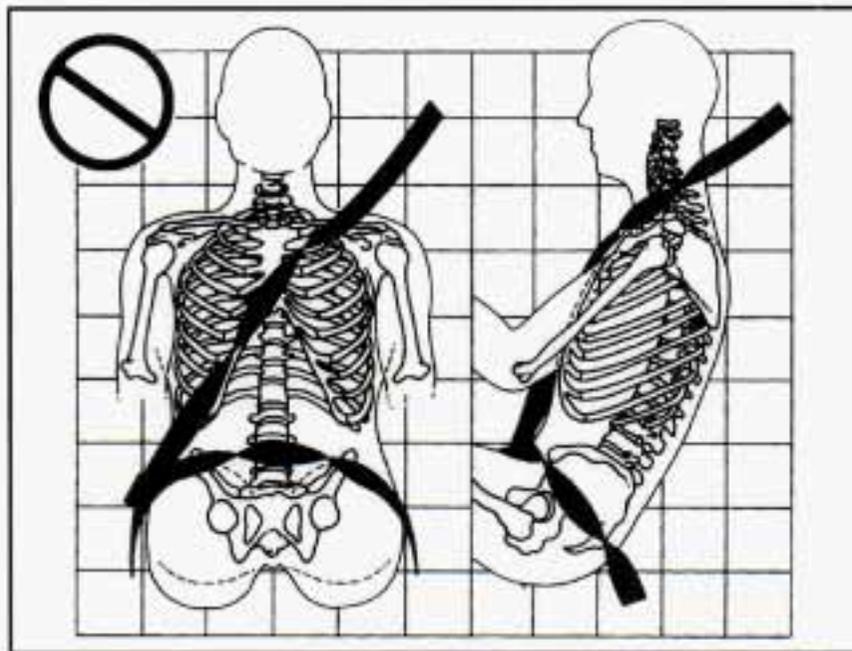


A: The shoulder belt is worn under the arm. It should be worn over the shoulder at all times.

⚠ 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.

Supplemental Restraint System (SRS)

This part explains the Supplemental Restraint System (SRS) or air bag system.

Your Buick has two air bags -- one air bag for the driver and another air bag for the right front passenger.

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

CAUTION:

You can be severely injured or killed in a crash if you aren't wearing your safety belt -- even if you have an air bag. Wearing your safety belt during a crash helps reduce your chance of hitting things inside the vehicle or being ejected from it. The air bag is only a "supplemental restraint." That is, it works with safety belts but doesn't replace them.

CAUTION: (Continued)

CAUTION: (Continued)

Air bags 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. Everyone in your vehicle, including the driver, should wear a safety belt properly -- whether or not there's an air bag for that person.

 **CAUTION:**

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. Safety belts help keep you in position for an air bag inflation in a crash. Always wear your safety belt, even with an air bag. The driver should sit as far back as possible while still maintaining control of the vehicle.

 **CAUTION:**

An inflating air bag can seriously injure small children. Always secure children properly in your vehicle. To read how, see the part of this manual called "Children" and the caution label on 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's electrical system for malfunctions. The light tells you if there is an electrical problem. See "Air Bag Readiness Light" in the Index for more information.

How the Air Bag System Works



Where is the air bag?

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



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



CAUTION:

Don't put anything on, or attach anything to, the steering wheel or instrument panel. Also, don't put anything (such as pets or objects) between any occupant and the steering wheel or instrument panel. If something is between an occupant and an air bag, it could affect the performance of the air bag -- or worse, it could cause injury.

When should an air bag inflate?

The air bag is designed to inflate in moderate to severe frontal or near-frontal crashes. The air bag will 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 9 to 15 mph (14 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 air bag is not designed to inflate in rollovers, side impacts or rear impacts, because inflation would not help the occupant.

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. Inflation is determined by the angle of the impact and the vehicle's deceleration. Vehicle damage is only one indication of this.

What makes an air bag inflate?

In a frontal or near-frontal impact of sufficient severity, the air bag sensing system detects that the vehicle is suddenly stopping as a result of a crash. The sensing system triggers a chemical reaction of the sodium azide sealed in the inflator. The reaction produces nitrogen gas, which inflates the air bag. The inflator, air bag and related hardware are all part of the air bag modules packed inside the steering wheel and in the instrument panel in front of the right front passenger.

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. 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 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. 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.

What will you see after an air bag inflates?

After the air bag inflates, it quickly deflates. This occurs so quickly that some people may not even realize the air bag inflated. Some components of the air bag module in the steering wheel hub for the driver's air bag, or the instrument panel for the right front passenger's bag, will be hot for a short time. The part of the bag that comes into contact with you may be warm, but it will never be too hot to touch. There will be some smoke and dust coming from vents in the deflated air bags. Air bag inflation will not prevent the driver from seeing or from being able to steer the vehicle, nor will 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 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.

- The air bags are designed to inflate only once. After they inflate, 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 crash sensing and diagnostic module, which records information about the 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 system. Improper service can mean that your air bag system won't work properly. See your dealer for service.

NOTICE:

If you damage the cover for the driver's or the right front passenger's air bag, they may not work properly. You may have to replace the air bag module in the steering wheel or both the air bag module and the instrument panel for the right front passenger's air bag. Do not open or break the air bag covers.

Servicing Your Air Bag-Equipped Buick

Air bags affect how your Buick should be serviced. There are parts of the air bag system in several places around your vehicle. You don't want the system to inflate while someone is working on your vehicle. Your Buick dealer and the Roadmaster Service Manual have information about servicing your vehicle and the air bag system. To purchase a service manual, see "Service and Owner Publications" in the Index.



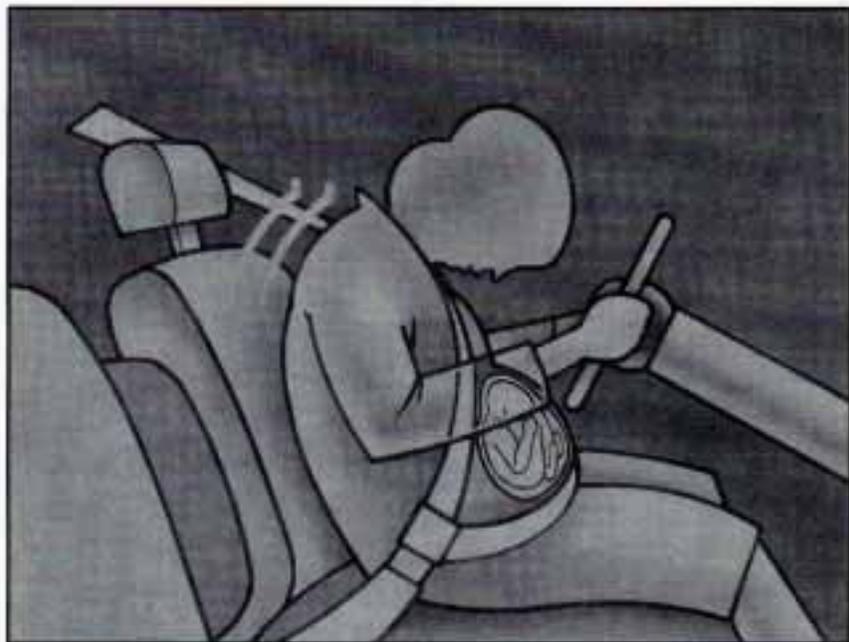
CAUTION:

For up to 10 seconds after the ignition key is turned off and the battery is 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 system does not need regular maintenance.

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.



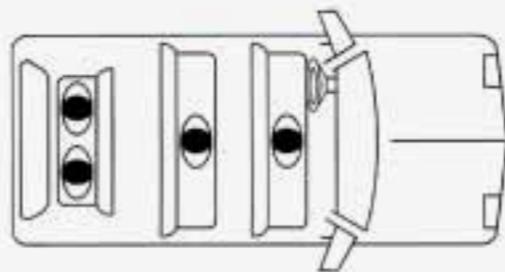
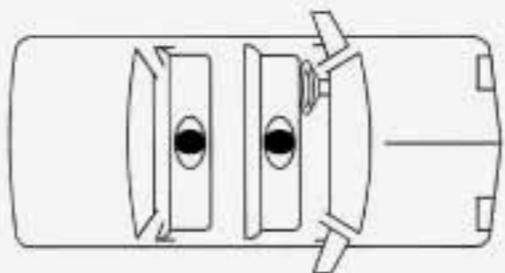
A pregnant woman should wear a lap-shoulder belt, and the lap portion should be worn as low as possible, below the rounding, throughout the pregnancy.

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

The right front passenger's safety belt works the same way as the driver's safety belt. See "Driver Position," earlier in this section.

Center Passenger Position and Any Station Wagon Third Seat Passenger Position

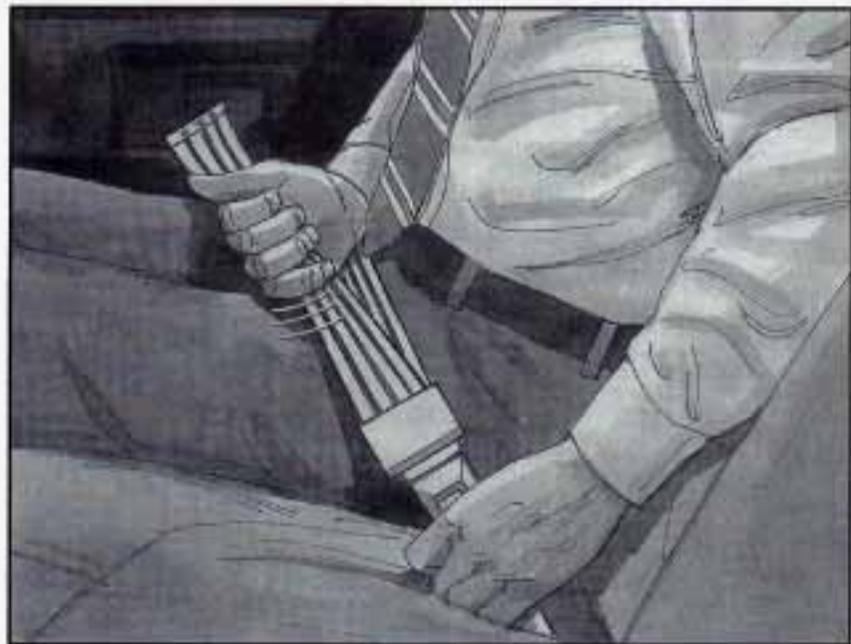


Lap Belt

If your vehicle has a front split seat and a rear bench seat, someone can sit in the center positions.



When you sit in a center seating position or in a station wagon third seat, you have a lap safety belt, which has no retractor. To make the belt longer, tilt the latch plate and pull it along the belt.



To make the belt shorter, pull its free end as shown until the belt is snug.

Buckle, position and release it the same way as the lap part of a lap-shoulder belt. If the belt isn't long enough, see "Safety Belt Extender" at the end of this section.

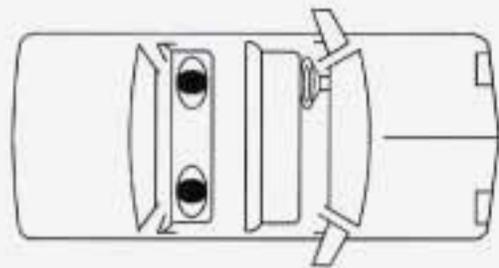
Make sure the release button on the buckle is positioned so you would be able to unbuckle the safety belt quickly if you ever had to.

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 Outside Passenger Positions



Lap-Shoulder Belt

The positions next to the windows 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.



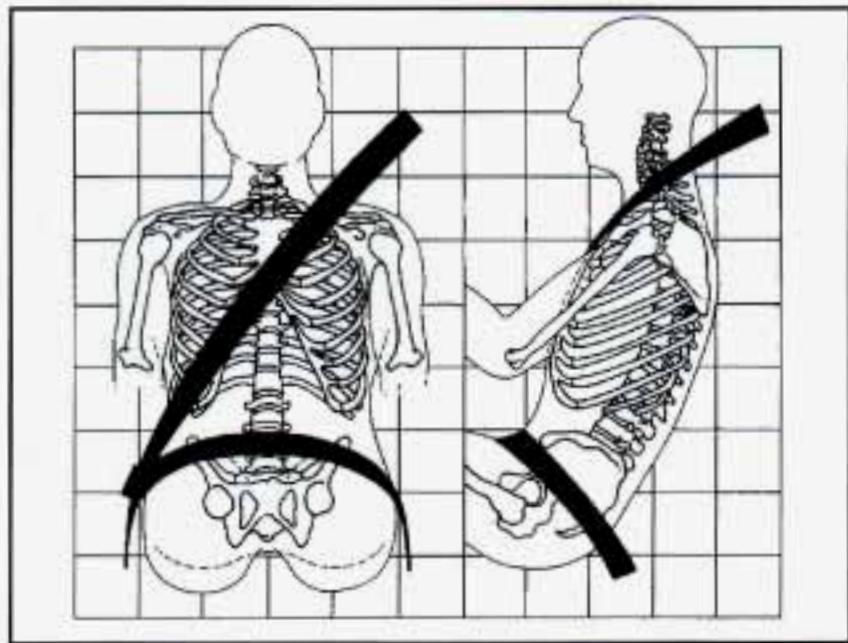
If the belt stops before it reaches the buckle, tilt the latch plate and keep pulling until you can buckle it.

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

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. 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:

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.



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.

⚠ 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)



Child Restraints

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.

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. 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 may, however, secure a forward-facing child restraint in the right front seat. Before you secure a forward-facing child restraint, always move the front passenger seat as far back as it will go. Or, secure the child restraint in the rear seat.

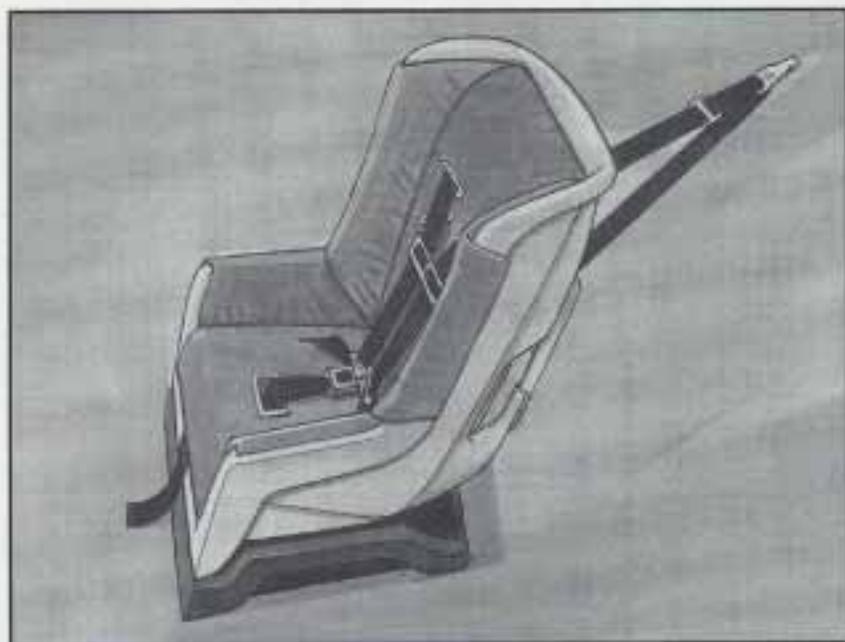
⚠ CAUTION:

A child in a child restraint in the center front seat can be badly injured by the right front passenger air bag if it inflates. Never secure a child restraint in the center front seat. It's always better to secure a child restraint in the rear seat. You may, however, secure a forward-facing child restraint in the right front passenger seat, but only with the seat moved all the way back.

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



If your child restraint has a top strap, it should be anchored. If you need to have an anchor installed, you can ask your Buick dealer to put it in for you. If you want to install an anchor yourself, your dealer can tell you how to do it.

If you want to use a child restraint with a top strap in the second seat of a station wagon, have your dealer install a combination anchor-tether belt to which the top strap can be hooked.

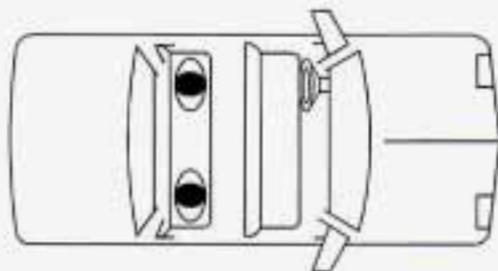
For cars first sold in Canada, child restraints with a top strap must be anchored according to Canadian law.

For sedans first sold in Canada, your dealer can obtain the hardware kit and install it for you, or you may install it yourself using the instructions provided in the kit.

Use the tether hardware kit available from the dealer. The hardware and installation instructions were specifically designed for this vehicle.

Station wagons first sold in Canada already have a combination anchor-tether belt installed for each position on the second seat. These belts are attached to the anchors for the third seat safety belts. The child restraint top strap should be hooked to one of these combination anchor-tether belts.

Securing a Child Restraint in a Rear Outside Seat Position



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

1. Put the restraint on the seat. Follow the instructions for the child restraint.
2. Secure the child in the child restraint as the instructions say.
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.



Tilt the latch plate to adjust the belt if needed.

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



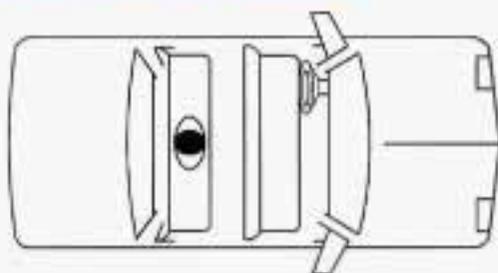
4. Buckle the belt. Make sure the release button is positioned so you would be able to unbuckle the safety belt quickly if you ever had to.



5. To tighten the belt, pull up on the shoulder belt while you push down on the child restraint.
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 Center Rear Seat Position



You'll be using the lap belt.

CAUTION:

A child in a child restraint in the center front seat can be badly injured by the right front passenger air bag if it inflates. Never secure a child restraint in the center front seat. It's always better to secure a child restraint in the rear seat. You may, however, secure a forward-facing child restraint in the right front passenger seat, but only with the seat moved all the way back.

See the earlier part about the top strap if the child restraint has one.



1. Make the belt as long as possible by tilting the latch plate and pulling it along the belt.
2. Put the restraint on the seat. Follow the instructions for the child restraint.
3. Secure the child in the child restraint as the instructions say.
4. Run the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

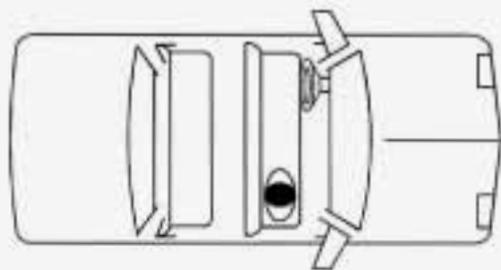


5. Buckle the belt. Make sure the release button is positioned so you would be able to unbuckle the safety belt quickly if you ever had to.
6. To tighten the belt, pull its free end while you push down on the child restraint.

7. Push and pull the child restraint in different directions to be sure it is secure. If it isn't, secure the restraint in a different place in the vehicle and contact the child restraint maker for their advice about how to attach the child restraint properly.

To remove the child restraint, just unbuckle the vehicle's safety belt. It will 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. 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.

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. Follow the instructions for the child restraint.
3. Secure the child in the child restraint as the instructions say.
4. 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.



Tilt the latch plate to adjust the belt if needed.

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



5. 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, pull up on the shoulder belt while you push down on the child restraint.
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.

If you have the choice, a child should sit next to a window so the child can wear a lap-shoulder belt and get the additional restraint a shoulder belt can provide.

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: Move the child toward the center of the vehicle, but 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. If the child is so small that the shoulder belt is still very close to the child's face or neck, you might want to place the child in the center seat position, the one that has only a lap belt.



⚠ 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.

Wherever the child sits, 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. Look for any other loose or damaged safety belt system parts. If you see anything that might keep a safety belt system from doing its job, have it repaired.

Torn or frayed safety belts may not protect you in a crash. They can rip apart under impact forces. If a belt is torn or frayed, get a new one right away.

Also look for any opened or broken air bag covers, and have them repaired or replaced. (The air bag system does not need regular maintenance.)

Replacing Restraint System Parts After a Crash

If you've had a crash, do you need new belts?

After a very minor collision, nothing may be necessary. But if the belts were stretched, as they would be if worn during a more severe crash, then you need new belts.



If you ever see a label on the driver's or the right front passenger's safety belt that says to replace the belt, be sure to do so. Then the new belt will be there to help protect you in a collision. You would see this label on the belt near the door opening.

If belts are cut or damaged, replace them. Collision damage also may mean you will need to have safety belt or seat parts repaired or replaced. New parts and repairs may be necessary even if the belt 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.



Section 2 Features and Controls

Here you can learn about the many standard and optional features on your Buick, 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.

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.





The square key is for the ignition only. It has a bar code attached. Your dealer or qualified locksmith can make extra ignition keys by reading the bar code tag.



The oval key is for the doors and all other locks. Your door key has a plug. When a new Buick is delivered, the dealer removes the plug from the key, and gives it to the first owner. Each plug has a code on it that tells your dealer or a qualified locksmith how to make extra keys.

There are 15 alternative ignition PASS-Key[®] II blanks to help discourage theft. Keep the bar code tag and the door key plug in a safe place. If you lose your keys, you will be able to have new ones made easily using the plug or number on the bar code tag.

NOTICE:

Your Buick has a number of new features that can help prevent theft. But you can have a lot of trouble getting into your vehicle if you ever lock your keys inside. You may even have to damage your vehicle to get in. So be sure you have extra keys.

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 door key or Keyless Entry System, if you have this option.



To lock the door from the inside, slide the lock control down.

To unlock the door, slide the lock control up.

Power Door Locks

Press the power door lock switch to lock or unlock all the doors at once.

Programmable Automatic Door Locks (Option)

If you have automatic door locks, close your doors, turn on the ignition and move your shift lever out of PARK (P). All the doors will lock. If someone needs to get out while you're in a drive position, have that person use the manual or power lock. If you have your foot on the brake, the door(s) will lock automatically.

When you stop and move your shift lever into PARK (P), your doors will unlock.

You can have the automatic door lock feature programmed to remain locked after you shift into PARK (P). See your Buick dealer if you want the automatic door locks reprogrammed.

Rear Door Security Lock



Your Buick 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. Move the lever to the engaged position.
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 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 or 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 the rear door lock:

1. Unlock the door from the inside and open the door from the outside.
2. Move the lever down.
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 keys, open your door and set the locks from inside. Then get out and close the door.

Remote Keyless Entry System (Option)



If your Buick has this option, you can lock and unlock your doors or unlock your trunk or tailgate from up to 30 feet (9 m) using the key chain transmitter supplied with your vehicle.

Your Remote Keyless Entry system operates on a radio frequency subject to Federal Communications Commission (FCC) Rules.

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.

Should interference to this system occur, try this:

- Check to determine if battery replacement is necessary. See the instructions on battery replacement.
- Check the distance. You may be too far from your vehicle. This product has a maximum range.
- Check the location. Other vehicles or objects may be blocking the signal.
- See your Buick dealer or a qualified technician for service.

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

Operation

The driver's door will unlock when UNLOCK is pressed. Press it again quickly and all the doors will unlock. The door courtesy lamps will also come on. All doors will lock when DOOR is pressed. The trunk or tailgate will unlock when the opened trunk symbol is pressed, but only when the transmission is in PARK (P).

Matching Transmitter(s) To Your Vehicle

Each key chain 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 the new transmitter is coded, the lost transmitter will not unlock your vehicle. Each vehicle can have only two transmitters matched to it.

Battery Replacement

Under normal use, the batteries in your key chain transmitter should last about two years.

You can tell the batteries are 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 batteries.

For battery replacement, use two Duracell[®] batteries, type DL-2016, or a similar type.

To replace the batteries:



1. If your transmitter has a screw, remove the screw from the back cover. If there is no screw, carefully pry off the cover by inserting a dime (or similar object) in the slot between the covers and twisting.
2. Lift off the front cover, bottom half first.
3. Remove and replace the batteries. Put them in as indicated by the directions under the batteries.
4. Replace the front cover. Make sure the cover is on tightly, so water won't get in. Replace the screw in the back cover, if there is one. If there is no screw, snap together.
5. Check the operation of the transmitter.

Trunk

CAUTION:

It can be dangerous to drive with the trunk lid 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 lid open or if electrical wiring or other cable connections must pass through the seal between the body and the trunk lid:

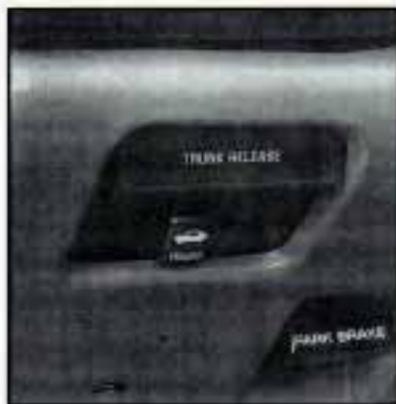
- Make sure all windows are shut.
- Turn the fan on your heating or cooling system to its highest speed with the setting on VENT. That will force outside air into your vehicle. See "Comfort Controls" in the Index.
- If you have air outlets on or under the instrument panel, open them all the way. See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

Remote Trunk Release



The security switch in the glove box must be ON for the TRUNK button to work.

When the trunk security switch is turned OFF, the trunk can only be opened with the key or the optional Remote Keyless Entry system.



The TRUNK button is to the left of the steering column. Press it to open the trunk from inside your vehicle.

Tailgate

CAUTION:

It can be dangerous to drive with the tailgate or rear window 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 tailgate or rear window open or if electrical wiring or other cable connections must pass through the seal between the body and the tailgate or rear window:

- 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.

Tailgate Operation (Wagon)

The tailgate can be opened like a regular door or like a drop-gate.

The tailgate and tailgate window must first be unlocked. The tailgate is unlocked by using the power door lock controls, the oval key in the lock or the optional Remote Keyless Entry system.



Once the tailgate has been unlocked, you can unlatch the tailgate window by pushing the key cylinder button all the way in. Then raise the window.



To open the tailgate like a regular door, pull up on the handle that is near the end of the tailgate, on the passenger side.



To open it like a drop-gate, just reach inside and pull up on the handle that is located near the center of the tailgate. Lower the tailgate all the way down.

If the tailgate on your vehicle does not open as a drop-gate, it may not be fully latched as a door. Your GATE AJAR light will be on if the tailgate isn't completely closed as a door.

The tailgate is designed not to open as a drop-gate when it is already open as a door. Also, the tailgate will not open as a door when it is already open as a drop-gate. Check to see if the tailgate is unlocked, then open and close it as a door until the lower latch closes, and the GATE AJAR light goes out.

You can lock the tailgate by inserting the oval key in the lock and turning it clockwise or pressing down on the lock control near the passenger end of the tailgate. To close the window, pull it down against the tailgate and press firmly until it latches.

Remote Tailgate Release (Wagon)



Press the top of the REAR WINDOW switch to unlock the rear window only when the vehicle is in PARK (P) or NEUTRAL (N). You can also unlock the rear window by using the oval key in the lock near the window. This also unlocks the tailgate.

Trunk Lid Automatic Pull-Down Feature (Option)

CAUTION:

Your car may have an automatic pull-down feature that helps close the trunk electronically. Your fingers can be trapped under the trunk lid as it goes down. Your fingers could be injured, and you would need someone to help you free them. Keep your fingers away from the trunk lid as you close it and as it is going down.

Theft

Vehicle theft is big business, especially in some cities. Although your Buick 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 Buick and open the driver's door, you'll hear a chime 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 and transmission. 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.

Parking Lots

If you park in a lot where someone will be watching your vehicle, it's best to lock it up and take your keys. But what if you have to leave your ignition key? What if you have to leave something valuable in your vehicle?

- Put your valuables in a storage area, like your trunk or glove box.
- Lock the glove box.
- Lock all the doors except the driver's.
- Then take the door key with you.

PASS-Key[®] II



Your vehicle is equipped with the PASS-Key II (Personalized Automotive Security System) theft-deterrent system. PASS-Key II is a passive theft-deterrent system. It works when you insert or remove the key from the ignition.

PASS-Key II uses a resistor pellet in the ignition key that matches a decoder in your vehicle.

When the PASS-Key II system senses that someone is using the wrong key, it shuts down the vehicle's starter and fuel systems. For about three minutes, the starter won't work and fuel won't go to the engine. If someone tries to start your vehicle again or uses another key during this time, the vehicle will not start. This discourages someone from randomly trying different keys with different resistor pellets in an attempt to make a match.

The ignition key must be clean and dry before it's inserted in the ignition or the engine may not start. If the engine does not start and the PASS KEY light comes on, the key may be dirty or wet. Turn the ignition off.

Clean and dry the key. Wait about three minutes and try again. The PASS KEY light may remain on during this time. If the starter still won't work, and the key appears to be clean and dry, wait about three minutes and try another ignition key. At this time, you may also want to check the fuse (see "Fuses and Circuit Breakers" in the Index). If the starter won't work with the other key, your vehicle needs service. If your vehicle does start, the first ignition key may be faulty. See your Buick dealer or a locksmith who can service the PASS-Key II.

If you accidentally use a key that has a damaged or missing resistor pellet, the starter won't work and the PASS KEY light will come on. But you don't have to wait three minutes before trying another ignition key.

See your Buick dealer or a locksmith who can service the PASS-Key II to have a new key made.

If you're ever driving and the PASS KEY light comes on and stays on, you will be able to restart your engine if you turn it off. Your PASS-Key II system, however, is not working properly and must be serviced by your Buick dealer. Your vehicle is not protected by the PASS-Key II system.

If you lose or damage a PASS-Key II ignition key, see your Buick dealer or a locksmith who can service PASS-Key II to have a new key made.

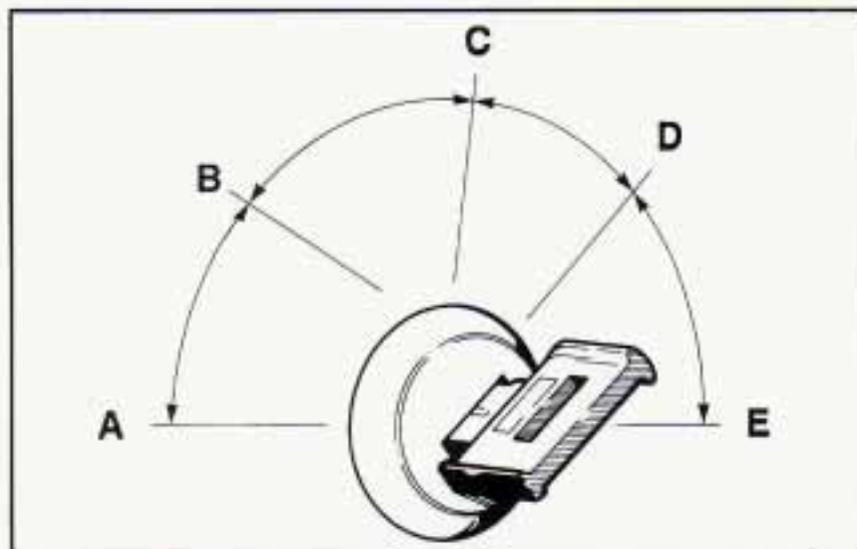
New Vehicle "Break-In"

NOTICE:

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

- **Keep your speed at 55 mph (88 km/h) or less for the first 500 miles (804 km).**
- **Don't drive at any one speed -- fast or slow -- for the first 500 miles (804 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 ignition key in the ignition switch, you can turn the switch to five different positions.

ACCESSORY (A): This position lets you use things like the radio and the windshield wipers when the engine is off. To use the ACCESSORY position, push in the key and turn it toward you. Your steering wheel will remain locked, just as it was before you inserted the key.

LOCK (B): Before you put the key in, your ignition will be in the LOCK position. This is the only position

in which you can remove the key. This position locks your ignition, steering wheel and transmission. It's a theft-deterrent feature.

OFF (C): This position unlocks the steering wheel, ignition and transmission but doesn't send electrical power to any accessories. Turn the key to the OFF position if you must have your vehicle in motion while the engine is off.

RUN (D): This is the position for driving.

START (E): This key position starts your engine.

Note that even if the engine is not running, the positions ACCESSORY and RUN allow you to operate your electrical accessories, such as the radio and ventilation fan.

NOTICE:

If your key seems stuck in LOCK and you can't turn it, be sure it is 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

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 Buick is moving. If you do, you could damage the transmission. Shift to PARK (P) only when your vehicle is stopped.

Starting Your 5.7 Liter LT1 Engine

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

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 within 10 seconds, push the accelerator pedal all the way to the floor, while you hold the ignition key in START. When the engine starts, let go of the key and let up on the accelerator pedal. Wait about 15 seconds between each try to help avoid draining your battery.

When starting your engine in very cold weather (below 0°F or -18°C), do this:

1. With your foot off the accelerator pedal, turn the ignition key to START and hold it there. When the engine starts, let go of the key. Use the accelerator pedal to maintain engine speed, if you have to, until your engine has run for a while.

2. 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.

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.

Engine Coolant Heater (Option)

In very cold weather, 0°F (-18°C) or colder, the engine coolant heater can help. You'll get easier starting and better fuel economy during engine warm-up. Usually, the coolant heater should be plugged in a minimum of four hours prior to starting your vehicle.

To Use the Coolant Heater

1. Turn off the engine.
2. Open the hood and unwrap the electrical cord.
3. Plug it into a normal, grounded 110-volt AC outlet.

CAUTION:

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

4. After you've used the coolant heater, be sure to store the cord as it was before to keep it away from moving engine parts. If you don't, it could be damaged.

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

Automatic Transmission Operation



There are several different positions for your shift lever.

PARK (P): This locks your transmission drive shaft. 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 Buick has a brake-transmission shift interlock. You have to fully *apply* your regular

brakes *before* you can shift from PARK (P) when the ignition key is in the RUN position. If you cannot shift out of PARK (P), ease pressure on the shift lever -- push the shift lever all the way into PARK (P) as you maintain brake application. Then move the shift lever into the gear you wish. See "Shifting Out of PARK (P)" in this section.

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

NOTICE:

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

To rock your vehicle back and forth to get out of snow, ice or sand without damaging your transmission, see "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 transmission caused by shifting out of PARK (P) or NEUTRAL (N) with the engine racing isn't covered by your warranty.

AUTOMATIC OVERDRIVE (O): This position is for normal driving. If you need more power for passing, and you're:

- Going less than about 35 mph (55 km/h), push your accelerator pedal about halfway down.
- Going about 35 mph (55 km/h) or more, push the accelerator all the way down.

The transmission will shift down to the next gear.

THIRD (3): This position is also used for normal driving, however it offers more power and lower fuel economy than AUTOMATIC OVERDRIVE (O).

Here are some times you might choose THIRD (3) instead of AUTOMATIC OVERDRIVE (O):

- When driving on hilly, winding roads
- When towing a trailer, so there is less shifting between gears
- When going down a steep hill

SECOND (2): This position gives you more power and 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.

FIRST (1): 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 **FIRST (1)**, the transmission won't shift into first gear until the vehicle is going slowly enough.

NOTICE:

If your rear 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 transmission. Also, if you stop when going uphill, don't hold your vehicle there with only the accelerator pedal. This could overheat and damage the transmission. Use your brakes or shift into **PARK (P) to hold your vehicle in position on a hill.**

Limited-Slip Rear Axle (Option)

If you have this feature, your rear axle can give you additional traction on snow, mud, ice, sand or gravel. It works like a standard axle most of the time, but when one of the rear wheels has no traction and the other does, the limited-slip feature will allow the wheel with traction to move the vehicle.

Parking Brake



To set the parking brake, hold the regular brake pedal down with your right foot. Push down the parking brake pedal with your left foot. If the ignition is on, the brake system warning light will come on.



To release the parking brake, hold the regular brake pedal down. Pull the PARK BRAKE release lever.

Shifting Into PARK (P)



CAUTION:

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

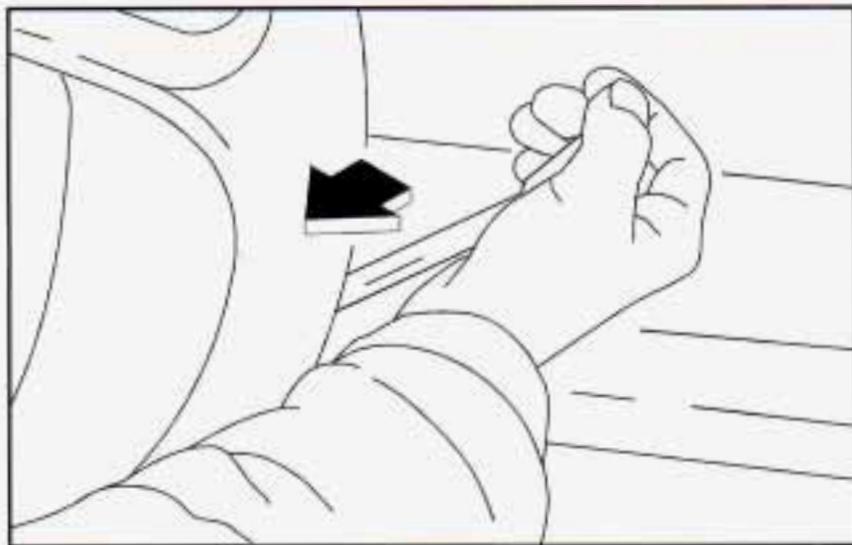
1. Hold the brake pedal down with your right foot and set the parking brake.

NOTICE:

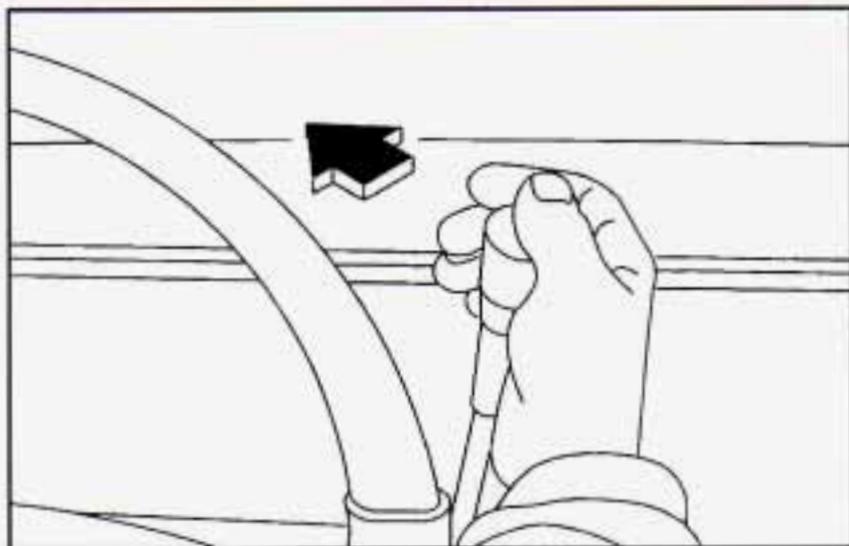
Driving with the parking brake on can cause your rear brakes to overheat. You may have to replace them, and you could also damage other parts of your vehicle.

If you are towing a trailer and are parking on any hill, see "Towing a Trailer" in the Index. That section explains what to do first to keep the trailer from moving.

2. Move the shift lever into PARK (P) position like this:



- Pull the lever toward you.



- Move the lever up as far as it will go.
3. Turn the ignition key to LOCK.
 4. Remove the key and take it with you. If you can leave your vehicle with the ignition key in your hand, your vehicle is in PARK (P).

Leaving Your Vehicle With the Engine Running

CAUTION:

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

If you have to leave your vehicle with the engine running, be sure your vehicle is in PARK (P) and your parking brake is firmly set before you leave it. After you've moved the shift lever into the PARK (P) position, hold the regular brake pedal down. Then, see if you can move the shift lever away from PARK (P) without first pulling it toward you. If you can, it means that the shift lever wasn't fully locked into PARK (P).

Torque Lock

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

Shifting Out of PARK (P)

Your Buick has a brake-transmission shift interlock. You have to fully *apply* your regular brakes *before* you can shift from PARK (P) when the ignition is in the RUN position. See "Automatic Transmission 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) as you maintain brake application. Then move the shift lever into the gear you want. If you ever hold the brake pedal down but still can't shift out of PARK (P), try this:

1. Turn the key to the OFF position.
2. Apply and hold the brake until the end of Step 4.
3. Shift to NEUTRAL (N).
4. Start the engine and then shift to the drive gear you want.
5. Have the vehicle fixed as soon as you can.

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

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 air system control 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

Power Windows

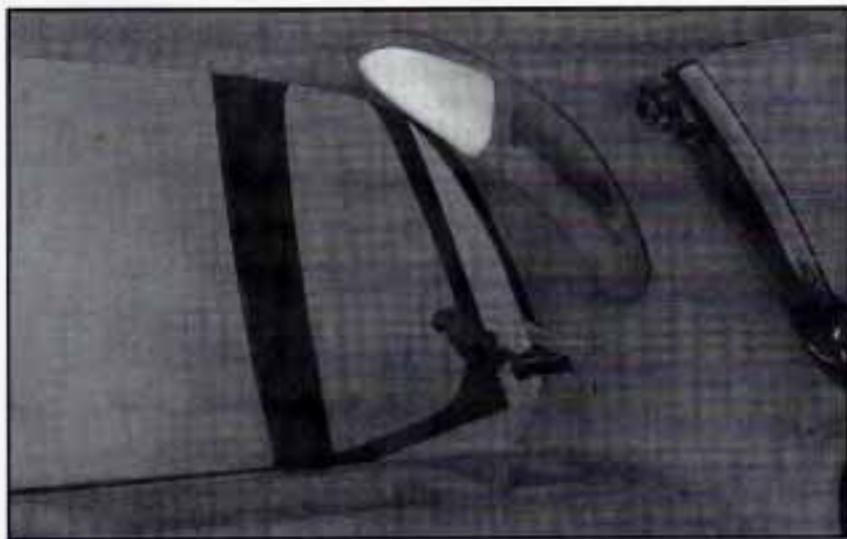


The power windows controls are on the driver's armrest. They control each of the four windows. To open a window, move the switch toward DN. To close it, move the switch toward UP.

The switch for the driver's window has an express-down feature. Pull the AUTO switch back all the way. Once engaged, release it and the window will lower all the way. To stop the window from lowering, press the switch forward. To raise the window, press the switch forward.

There are individual switches near each window. The driver has a lock out switch. Press LOCK to disable the power window switches. This will prevent passengers from opening and closing the windows. The driver can still control all of the windows with the switch in the locked position. Press UNLOCK to restore normal operation to all passenger window switches.

Wagon Rear Vent Windows



In the rear area, there is a vent window on each side of the vehicle.

To open, lift the latch and push out. To close, pull in and back on the latch.

Horn

To sound the horn, press the pad with the horn symbol on either side of the steering wheel.

Tilt Wheel

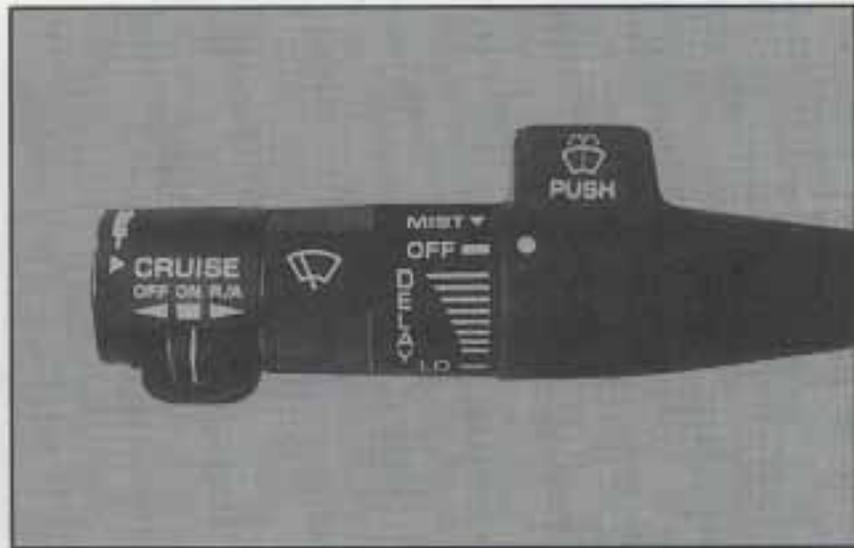


A tilt steering wheel allows you to adjust the steering wheel before you drive.

You can also raise it to the highest level to give your legs more room when you exit and enter the vehicle.

To tilt the wheel, hold the steering wheel and pull the lever toward you. Move the steering wheel to a comfortable level, then release the lever to lock the wheel in place.

Turn Signal/Multifunction Lever



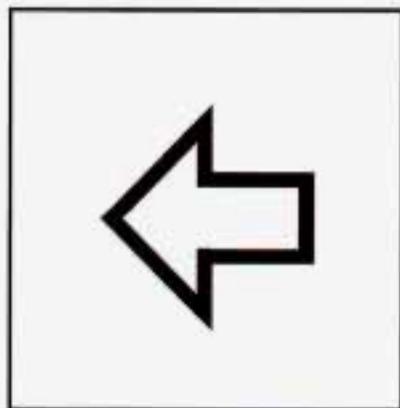
The lever on the left side of the steering column includes your:

- Turn Signal and Lane Change Indicator
- Headlamp High/Low Beam Changer
- Windshield Wipers
- Windshield Washer
- Cruise Control (Option)

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.

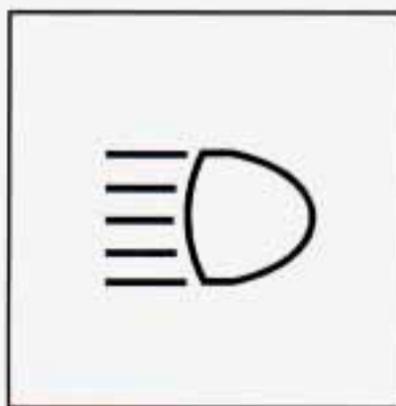
As you signal a turn or a lane change, if the arrows don't flash but just stay on, a signal bulb may be burned out and other drivers won't see your turn signal.

If a bulb is burned out, replace it 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 check the fuse (see "Fuses and Circuit Breakers" in the Index).

If you have a trailer towing option with added wiring for the trailer lamps, a different turn signal flasher is used. With this flasher installed, the signal indicator will flash even if a turn signal bulb is burned out. Check the front and rear turn signal lamps regularly to make sure they are working.

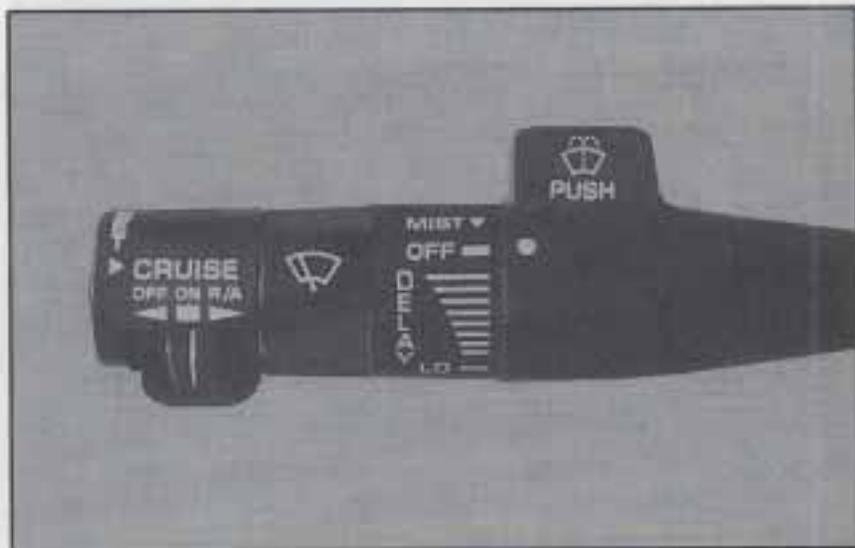
A chime will sound if your turn signal remains on after having driven 1/2 mile (0.8 km), to remind you to turn off your signal.

Headlamp High/Low Beam Changer



To change the headlamps from low beam to high or high to low, pull the turn signal lever all the way toward you. Then release it. When the high beams are on, this light on the instrument panel will also be on.

Windshield Wipers



You control the windshield wipers by turning the band with the wiper symbol on it.

For a single wiping cycle, turn the band to MIST. Hold it there until the wipers start, then let go. The wipers will stop after one cycle. If you want more cycles, hold the band on MIST longer.

You can set the wiper speed for a long or short delay between wipes. This can be very useful in light rain or snow. Turn the band to choose the delay time. The closer to LO, the shorter the delay.

For steady wiping at low speed, turn the band away from you to the LO position. For high-speed wiping, turn the band further, to HI. To stop the wipers, move the band to OFF.

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

Windshield Washer

At the top of the multifunction lever there's a paddle with the word PUSH on it. To spray washer fluid on the windshield, push the paddle. Spraying will continue as long as the paddle is held. The wipers will clear the window and then either stop or return to your preset speed.

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.

Wagon Rear Window Washer/Wiper



Press the top of the REAR WIPER-WASH switch to turn on the rear wiper. Press the bottom of the switch to turn it off.

To spray windshield washer fluid on the rear window, press the top of the switch until the rear wiper turns on. Then press the top of the switch further. Washer fluid will start to spray after a couple of seconds and continue as long as you hold the switch. When you release the switch, the wiper will remain on until you turn it off by pressing the bottom of the switch.

The rear window washer fluid comes from the windshield washer reservoir.

Cruise Control



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

When you apply your brakes, the cruise control shuts off.



CAUTION:

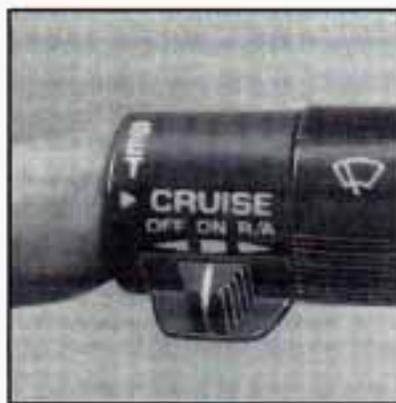
- Cruise control can be dangerous where you can't drive safely at a steady speed. So, don't use your cruise control on winding roads or in heavy traffic.
- Cruise control can be dangerous on slippery roads. On such roads, fast changes in tire traction can cause needless wheel spinning, and you could 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. Move the cruise control switch to ON.
2. Get up to the speed you want.



3. Push in the SET button at the end of the lever 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.



Once you're going about 25 mph (40 km/h) or more, you can move the cruise control switch from ON to R/A (Resume/Accelerate) for about half a second.

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

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. Press the button at the end of the lever, then release the button and the accelerator pedal. You'll now cruise at the higher speed.

- Move the CRUISE switch from ON to R/A. Hold it there until you get up to the speed you want, then release the switch. To increase your speed in very small amounts, move the switch to R/A 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:

- Press in the button at the end of the lever until you reach the lower speed you want, then release it.
- To slow down in very small amounts, press the button 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 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 Cruise Control

There are two ways to turn off the cruise control:

- Step lightly on the brake pedal.
- Move the CRUISE switch to OFF.

Erasing Speed Memory

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

Lamps

The LIGHTS knob controls these lamps:



- Headlamps
- Taillamps
- Parking Lamps
- License Lamps
- Sidemarkers Lamps
- Instrument Panel Lights
- Interior Courtesy Lamps

Pull the knob toward you, to the first setting to turn on the parking lamps. Pull the knob toward you, to the second setting to turn on the headlamps.

By rotating the knob, you can make the instrument panel lights bright or dim and turn the courtesy lamps on or off.

Lamps On Reminder

If the lamp switch is left on, you'll hear a warning tone when you turn off the ignition. You can disable the tone on vehicles without Daytime Running Lamps or twilight sentinel by turning the instrument panel brightness all the way down.

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.

A light sensor on top of the instrument panel makes the DRL work, so be sure it isn't covered.

The DRL system will make your low-beam headlamps come on at reduced brightness in daylight when:

- the ignition is on,
- the headlamp switch is off, and
- the parking brake is released.

When the DRL are on, only your low-beam headlamps will be on. The taillamps, sidemarkers and other lamps won't be on. Your instrument panel won't be lit up either.

When it's dark enough outside, your low-beam headlamps will change to full brightness. The other lamps that come on with your headlamps will also come on.

When it's bright enough outside, the regular lamps will go off, and your low-beam headlamps change to reduced brightness of DRL.

To idle your vehicle with the DRL off, apply your parking brake before turning on the ignition. Once you release the parking brake, the DRL cannot be turned off as long as the ignition is on.

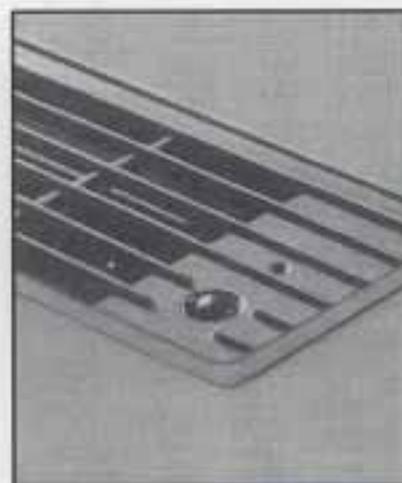
As with any vehicle, you should turn on the regular headlamp system when you need it.

Twilight Sentinel (Option)

The twilight sentinel control below your LIGHTS switch turns your headlamps on and off automatically by sensing how dark it is outside.

To operate it, leave the LIGHTS switch off and move the twilight sentinel control to any position but off. (The off position is when the white dot on the switch is rotated all the way to the left.)

If you move the control all the way to the right, your lamps will remain on for three minutes after you turn the ignition off. If you move the control toward the left, the lamps will go off quickly when you turn the ignition off. You can change this delay time from one second to four minutes. When the twilight sentinel is turned off, use your LIGHTS switch to operate the headlamps.



The twilight sentinel works with the light sensor on top of your instrument panel. Don't cover it up. If you do, it will read "dark" and your lamps will come on.

Interior Lamps

Delayed Illuminated Entry Without Keyless Entry System

When you open the door, the interior courtesy lamps will turn on. These lamps will go off automatically after about 40 seconds, or when the ignition is turned on. They make it easy for you to enter and leave the vehicle. You also can turn these lamps on by rotating the LIGHTS switch all the way to the left.

Delayed Illuminated Entry With the Keyless Entry System

As long as the doors are closed and the ignition is off:

- If you press the UNLOCK button on the Keyless Entry transmitter, the interior lamps will come on for about 30 seconds or until you start your engine.
- If you press the DOOR button on the Keyless Entry transmitter, the interior lamps will come on for about two seconds.

Front Reading Lamps

Front seat reading lamps are turned on by pressing the switches located on the rearview mirror.

Rear Reading Lamps

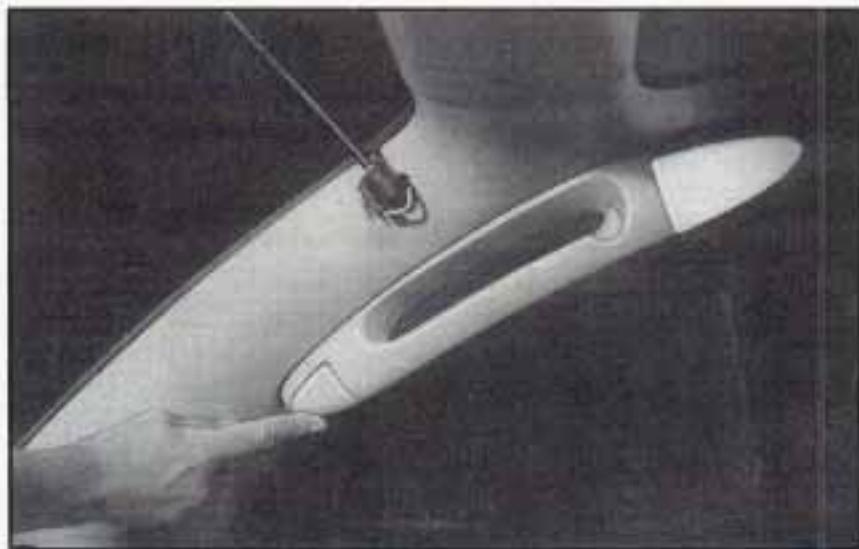


These courtesy lamps turn on when you open the doors.

To turn on the reading lamps when the doors are closed, press the top of the switch. Press the bottom of the switch to turn them off.

Wagon Rear Compartment Lamps

There are lamps on the assist handles in the rear area of the station wagon. Press the switch to turn them on or off.



These lamps come on when the tailgate is opened as a door. They turn off when the tailgate is completely closed.

Mirrors

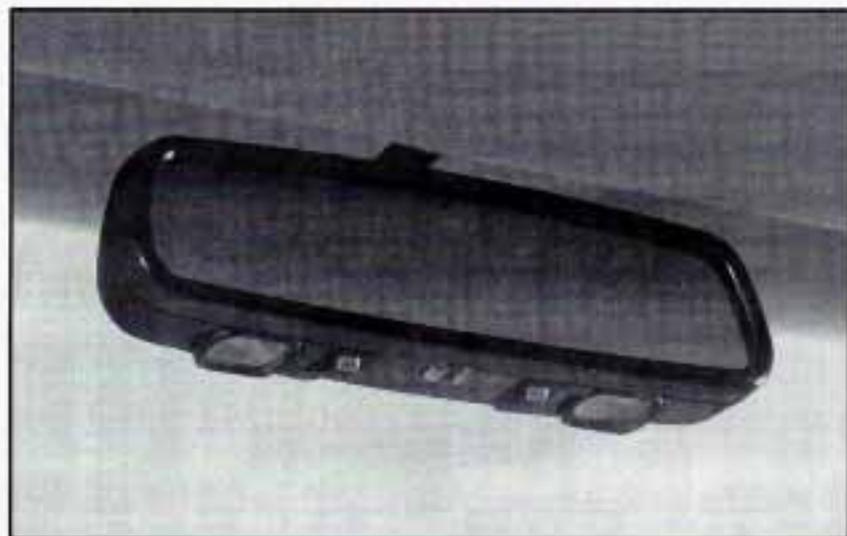
Inside Day/Night Rearview Mirror



When you are sitting in a comfortable driving position, adjust the mirror so you can see clearly behind your vehicle. The mirror has pivots so that you can move 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. Press the tab for daytime driving.

Electrochromic Mirror (Option)



Your Buick may have an automatic inside mirror. During the day it works like a regular mirror, but at night it adjusts for the glare of headlamps behind you. The mirror delays before switching from day to night mode. This change may take a few seconds. This delay prevents rapid changing of the mirror as you drive under lights and through traffic.

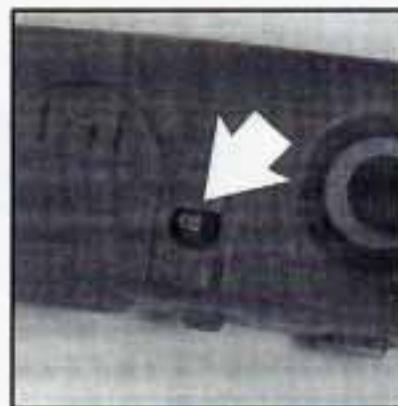
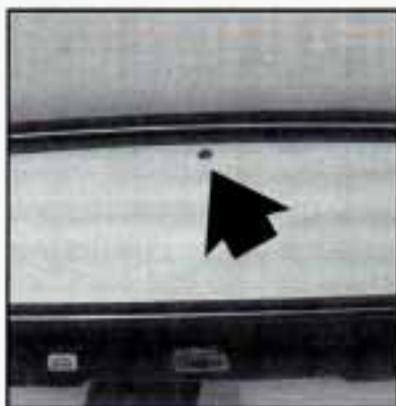
On/Off Switch

Press the switch located at the base of the mirror to turn on the auto-dimming feature. Press it again to turn off.

Reverse Gear Day Mode

When the shift lever is placed in REVERSE (R), the mirror changes to the daytime mode for a bright image in the mirror as you back up.

Cleaning Photocells



Use a cotton swab and glass cleaner to clean the front and rear photocells that make the electrochromic mirror work.

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.

Heated Outside Rearview Mirrors (Option)

The outside mirrors are heated when you activate the rear window defogger.

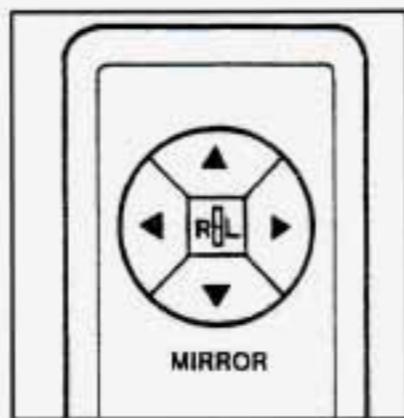
Foldaway Outside Mirrors

Manual

To adjust the driver's side outside mirror, rotate the knob located on the driver's door. The passenger's side

outside mirror must be adjusted manually. Adjust each mirror so you can just see the side of your vehicle.

Power (Option)



If your Buick has optional power mirrors, the mirror control is located on the driver's door. Move the center switch to choose either side mirror. Press any of the four arrows to move the mirror in the desired direction.

Adjust each mirror so you can just see the side of your vehicle and the area behind your vehicle.

Storage Compartments

Each of the side doors has a storage compartment.

You also have storage pockets behind the front seats.

Glove Box

To open the glove box, pull the latch toward you. Use the door key to lock and unlock the glove box.

Front Storage Armrest (Option)



The front armrest opens into a storage area with a coinholder and slots for cassettes and compact discs. You can fold out the cupholders and close the compartment lid.

Wagon Locked Storage Compartment

This compartment is on the inside panel at the rear of the vehicle, on the driver's side. Use the oval key to lock and unlock this door.



Turn the key to the right to unlock. The key cannot be removed in this position.

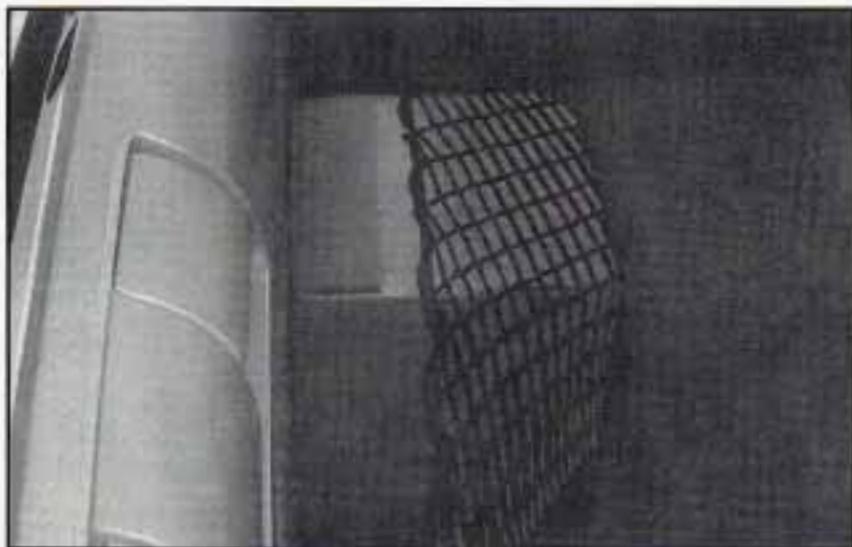
To close and lock, lift up and push in on the door. Turn the key to left, back to the original position and remove.

There are also storage bins in the rear area.

Convenience Net (Wagon)

CAUTION:

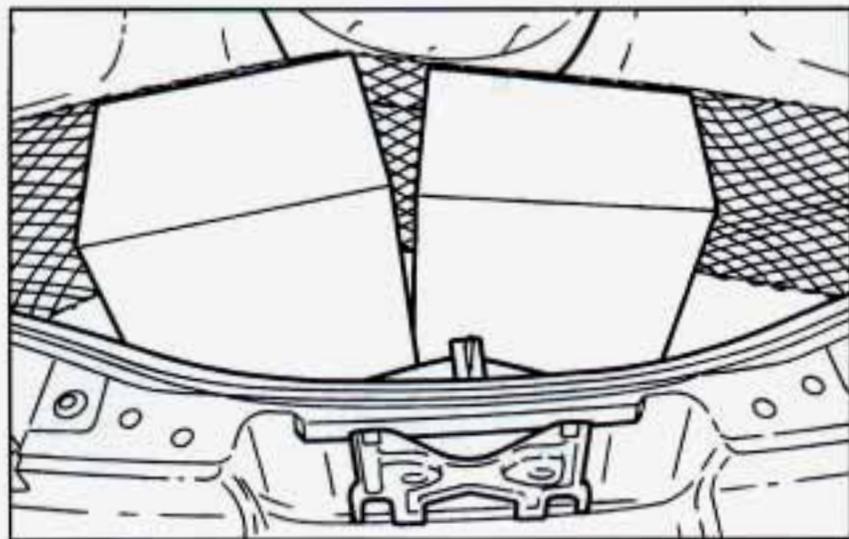
If the wagon has a rear facing third seat, items stored in the net could injure occupants seated there in the event of a crash, or the net could slow their exit afterward. Unhook the net and store it when passengers will ride in the rear facing seat.



A convenience net is provided for the rear of your wagon to help keep small loads, like grocery bags, from falling over during sharp turns or quick stops and starts.

The net is not for larger, heavier loads. Store such loads under the load floor, or on the load floor as far forward as you can. Keep the rear load floor flat when you use the net.

Convenience Net (Sedan)

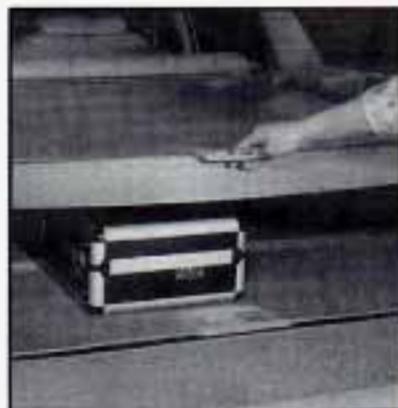


Your vehicle has a convenience net. You'll see it just inside the back wall of the trunk.

Put small loads, like grocery bags, behind the net. It can help keep them from falling over during sharp turns or quick starts and stops. The net isn't for larger, heavier loads. Store them in the trunk as far forward as you can.

You can unhook the net so that it will lie flat when you're not using it.

Cargo Cover Or Roll-Up Cargo Cover



The cargo cover allows hidden storage in the rear area of your vehicle. The cover is mounted behind the second seat.

To use the cargo cover:

1. Pull the cargo cover by the center handle all the way to the tailgate.
2. Put the hooks of the handle into the slots on the rear pillar trim.

To return the cover:

1. Pull on the handle, pulling the cover up and out of the slots.
2. Gently let the cover roll back to the front. Be careful not to let go of the cover before it is fully retracted, as it could be damaged.

To carry larger items, the cargo cover can be removed and the second seat folded down. To do this:

1. Grasp one end of the cargo cover and push it toward the opposite end.
2. Slide it out of the bracket. Store the rolled cover on the floor behind the front seat.

 **CAUTION:**

An improperly stored cargo cover could be thrown about the vehicle during a collision or sudden maneuver. You or others could be injured. If you remove the cover, always store it properly. When you put it back, always be sure that it is securely reattached.

To install the cargo cover:

1. Make sure the handle is on top.
2. Stand at one side and grasp one end of the roller.
3. Place the opposite end into the mounting bracket on the far side.
4. Push the roller toward the inserted end to shorten it and slide the near end into the slot of the bracket near you. It should snap into place.
5. Pull on each end of the cover to be sure it is locked in place. The cover can be left rolled up when not needed.

Luggage Carrier (Option)

CAUTION:

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

You have a luggage carrier and can load things on top of your vehicle. The luggage carrier has slats and side rails attached to the roof, sliding cross rails and places to use for tying things down. These let you load some things on top of your vehicle, so long as they are not wider or longer than the luggage carrier.



NOTICE:

Loading cargo that weighs more than 200 lbs. (90 kg) on the luggage carrier may damage your vehicle.

When you carry cargo on the luggage carrier of a proper size and weight, put it on the slats, as far forward as you can, and distribute the load evenly along the slats. Then slide the cross rail up against the rear of the load, to help keep it from moving. You can then tie it down.

Don't exceed the maximum vehicle capacity when loading your Buick. For more information on vehicle capacity and loading, see "Loading Your Vehicle" in the Index.

To prevent damage or loss of cargo as you're driving, check now and then to make sure the luggage carrier and cargo are still securely fastened.

Adjusting the Crossbar



1. Loosen the knob at each end of the crossbar.
2. Position the crossbar by sliding it on the track.
3. Attach commercial carriers as recommended by their manufacturer.
4. Tighten the knob to secure the crossbar in place.

Ashtrays and Cigarette Lighter

The front center ashtray may be lifted out for cleaning.

The rear ashtrays are located on the door armrests. Lift the cover and pull up on a rear ashtray to remove it for cleaning.

NOTICE:

Don't put papers or other flammable things into your ashtrays. Hot cigarettes or other smoking materials could ignite them, causing a damaging fire.

The cigarette lighter is near the front center ashtray. To use the lighter, push it in all the way and let go. When it's ready, it will pop back by itself.

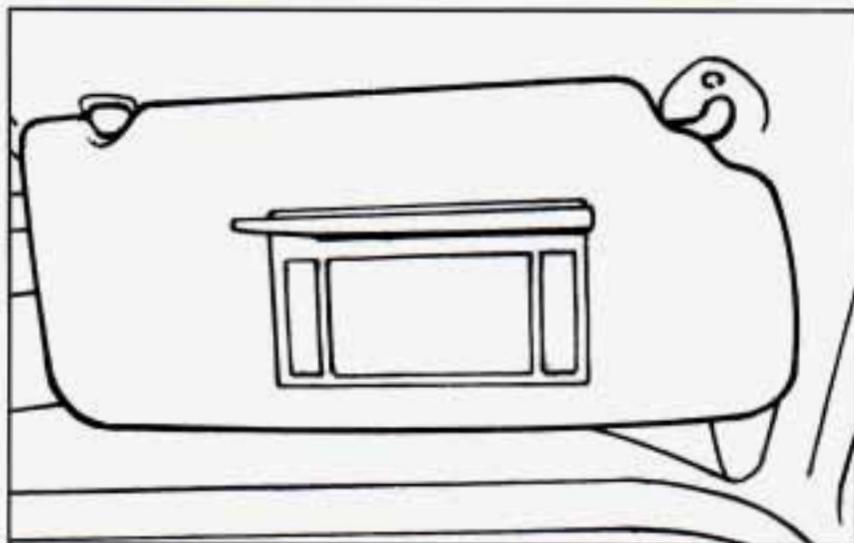
NOTICE:

If you hold a cigarette lighter in with your hand while it is heating, 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. If the visors swing too easily, tighten the screws on the rear of the visors.

Visor Vanity Mirror (Option)

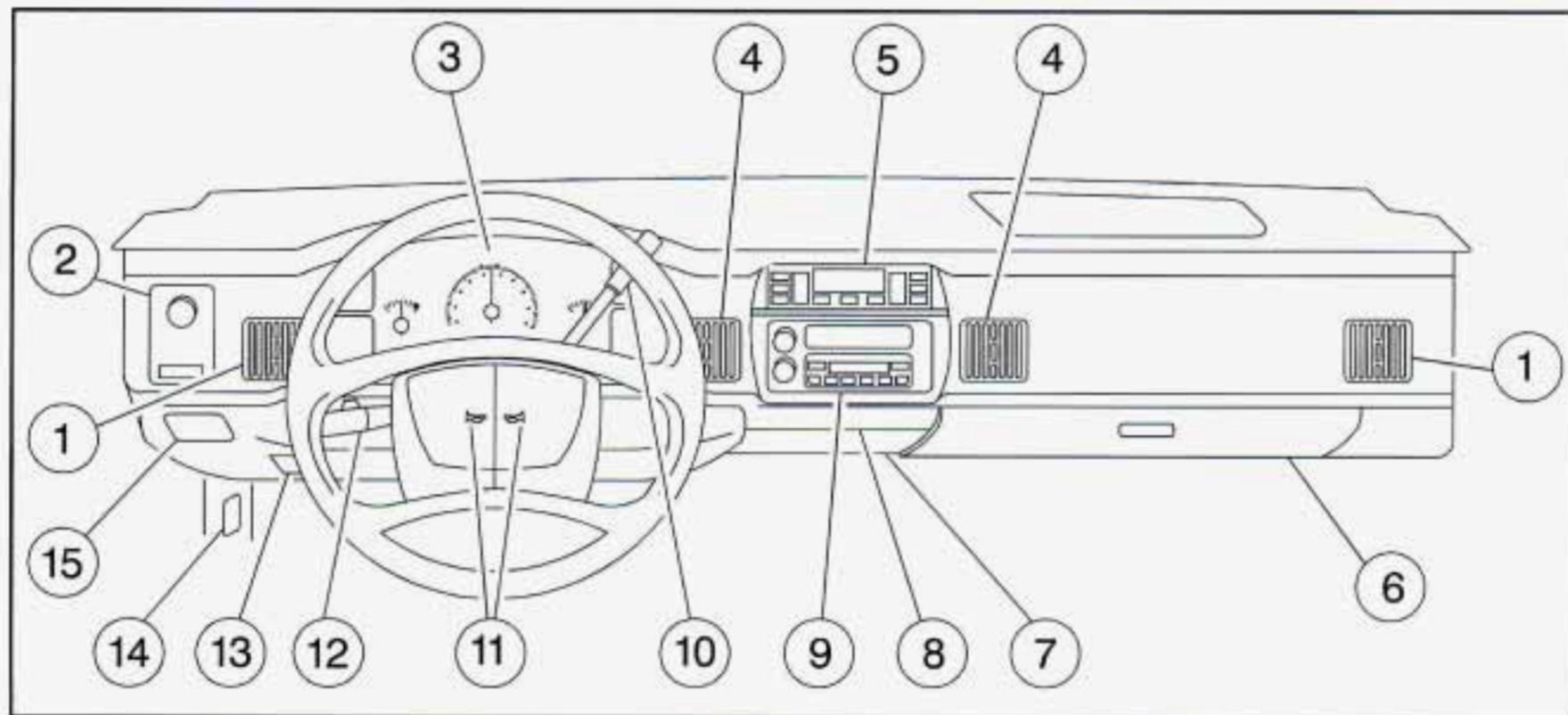


The lighted visor vanity mirror lights up when the mirror cover is opened. Closing the mirror cover turns off the lamps.

Wagon Vista Cover

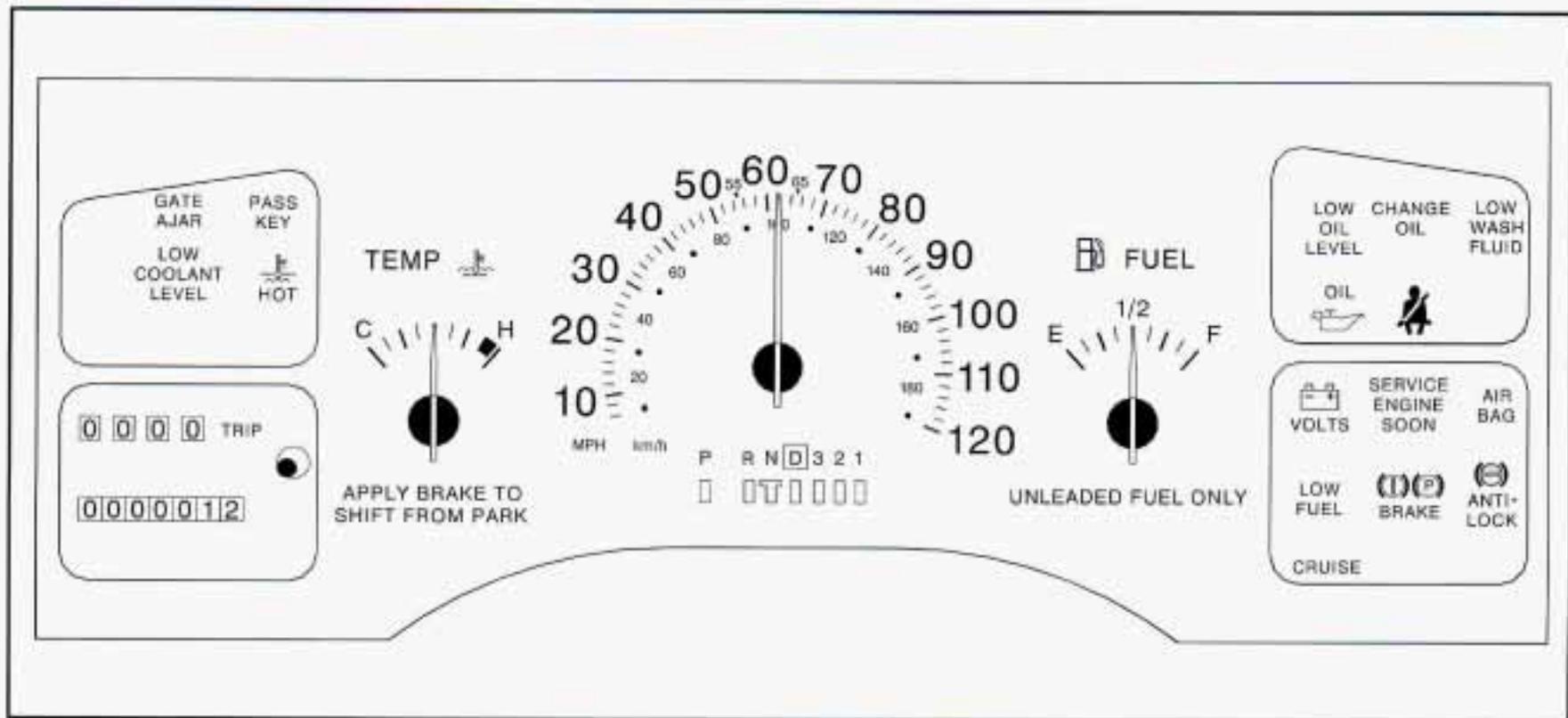
Two sunshades above the second seat block out sun rays for second seat passengers.

Instrument Panel



1. Side Vents
2. Main Lamp Control
3. Instrument Cluster
4. Center Vents
5. Comfort Controls
6. Glove Box
7. Ashtray and Cigarette Lighter
8. Convenience Tray
9. Audio System
10. Transmission Shift Lever
11. Horn Symbols
12. Multifunction Lever
13. Parking Brake Release
14. Hood Release
15. Rear Wiper/Washer and Rear Window Release (Wagon)

Instrument Panel Cluster



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

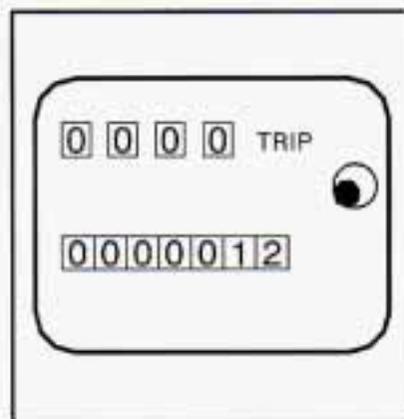
Speedometer and Odometer

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

Your Buick has a tamper-resistant odometer. If you can see very noticeable bright silver lines between the numbers, someone has probably tried to turn it back. The numbers may not be accurate.

You may wonder what happens if a vehicle has to have a new odometer installed. The new one should be set to the same reading as the old one. If that is not possible, then it's set at zero, and a label on the driver's door must show the old reading and when the new one was installed.

Trip Odometer



A trip odometer can tell you how many miles you have driven since you last set it to zero. To reset it, press the button.

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 RUN or START, a chime 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 come on and stay on until the driver's belt is buckled.

Air Bag Readiness Light

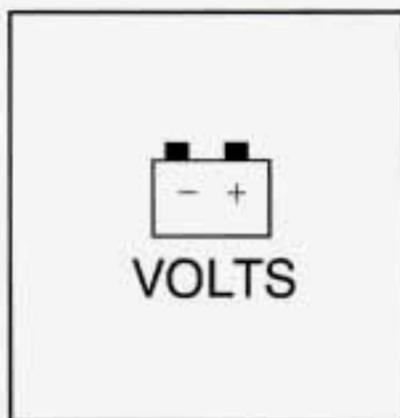
There is an air bag readiness light on the instrument panel, which shows AIR BAG. The system checks the air bag's electrical system for malfunctions. The light tells you if there is an electrical problem. The system check includes the air bag sensors, the air bag modules, the wiring and the crash sensing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



You will see this light flash for a few seconds when you turn your ignition to RUN or START. Then the light should go out. This means the system is ready.

If the air bag readiness light doesn't come on when you start your vehicle, or stays on, or comes on when you are driving, your air bag system may not work properly. Have your vehicle serviced right away.

Battery Light



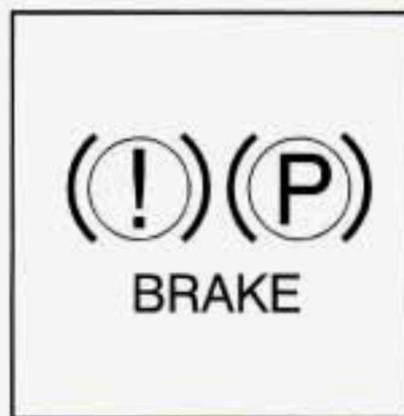
When you turn the key to RUN or START, this light will come on briefly, to show that your alternator and battery charging systems are working.

If the light stays on, your vehicle needs service and you should take your Buick to the dealer at once. To save your battery until you get there, turn off all accessories and set your air system to OFF.

Brake System Warning Light

Your Buick'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 could be a brake problem. Have your brake system inspected right away.



This light should come on when you turn the ignition 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, have the vehicle towed for service. (See "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 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



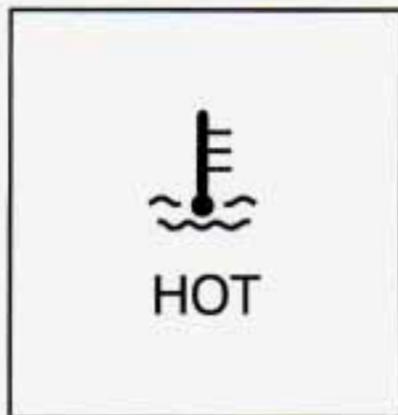
With the anti-lock brake system, this light will come on when you start your engine and may stay on for several seconds. That's normal.

If the light stays on, turn the ignition off. Or, if the light comes 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 Buick needs service. If the regular brake system warning light isn't on, you still have brakes, but you don't have anti-lock brakes. If the regular brake system warning light is also on, you don't have anti-lock brakes and there's a problem with your regular brakes. See "Brake System Warning Light" earlier in this part.

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

The anti-lock brake system warning light may also come on when you are driving with a compact spare tire. If this happens, the light means you won't have anti-lock until you replace the compact spare with a full-size tire. If the warning light stays on after you replace the compact spare with a full-size tire, or if it comes on again when you're driving, your Buick needs service.

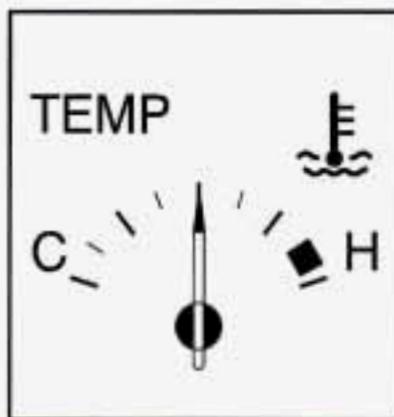
Engine Coolant Temperature Warning Light



This light comes on as a bulb check when you start your engine. This light tells you 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 the engine off as soon as possible. In "Problems on the Road," this manual shows you what to do. See "Engine Overheating" in the Index.

Engine Coolant Temperature Gage



This gage shows the engine coolant temperature. If the gage pointer moves into the red area, your engine is too hot!

That reading means the same thing as the warning light. It means that your engine coolant has overheated. If you have been operating your vehicle under normal driving conditions, you should pull off the road, stop your vehicle and turn off the engine as soon as possible. See "Engine Overheating" in the Index.

Low Coolant Warning Light



If you have this light and it comes on, the system is low on coolant and the engine may overheat.

Malfunction Indicator Lamp (Service Engine Soon Light)



Canada



Domestic

Your Buick 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. (In Canada, OBD II is replaced by Enhanced Diagnostics.) The SERVICE ENGINE SOON 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, which 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 is 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:

- Reduce vehicle speed.
- Avoid hard accelerations.
- Avoid steep uphill grades.
- If 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*. Put your vehicle in PARK (P). 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 just 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. This will allow fuel to evaporate into the atmosphere. A few driving trips 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.

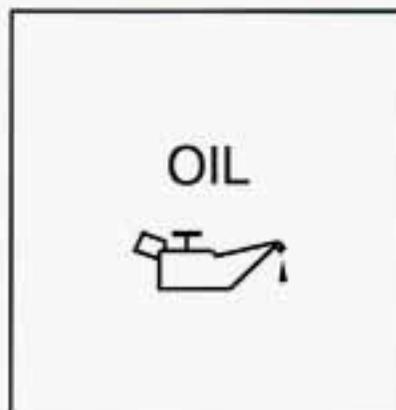
Have you recently changed brands of fuel?

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 this condition, 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



This light tells you if there could be a problem with your engine oil pressure.

There are three times this light can come on briefly, which is normal and doesn't show a problem. They are:

- The light comes on when you turn your key to RUN or START. That's just a check to be sure the light works. If this light doesn't come on, be sure to have it fixed so it will be there to warn you if something goes wrong.
- If you're idling at a stop sign, the light may blink on and then off.
- If you make a hard stop, the light may come on for a moment.

But, when this light comes on and stays on, it means oil isn't going through your engine properly. You could be low on oil, or you might have some other oil problem.

 **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.

Low Oil Level Light



LOW
OIL
LEV

The LOW OIL LEV light should come on briefly while you are starting your engine. If the light doesn't come on, have your vehicle serviced, so it will be ready to warn you if there's a problem.

If the light stays on, your engine oil level should be checked. Check your oil level (be sure your vehicle is on a level surface), and bring the engine oil up to the proper level, if necessary. See "Engine Oil" in the Index.

Change Oil Indicator



The CHANGE OIL light should come on briefly as a bulb check when you start the engine. If the light doesn't come on, have it serviced.

If the CHANGE OIL light comes on and stays on for 20 seconds after you start the engine, have the oil changed. The light may indicate to change the oil sooner than suggested in your maintenance schedule, depending on your driving patterns. The light is activated by the Engine Oil Life Monitor System which determines the condition of the oil but doesn't sense heavy dust in the air or check the oil level. Therefore, you should change your oil at the intervals recommended in your

maintenance schedule or when the CHANGE OIL light comes on, whichever comes first. See "Engine Oil" in the Index.

After changing the engine oil, the system must be reset. With the ignition key in the RUN position but the engine off, fully push and release the accelerator pedal three times within five seconds. If the CHANGE OIL light flashes two times, the system is reset. However, if the light comes on and stays on for five seconds, it did not reset. You'll need to reset the system again.

Cruise Control Light



This light comes on when you set cruise control.

Low Washer Fluid Light



LOW
WASH
FLUID

This light will come on as a bulb check when you start the engine. If this light comes on and stays on, it means you're low on washer fluid. Add fluid. See "Windshield Washer Fluid" in the Index.

Pass Key Light



PASS
KEY

If the engine does not start and this light comes on, the key may be dirty or wet.

Wagon Gate Ajar Light

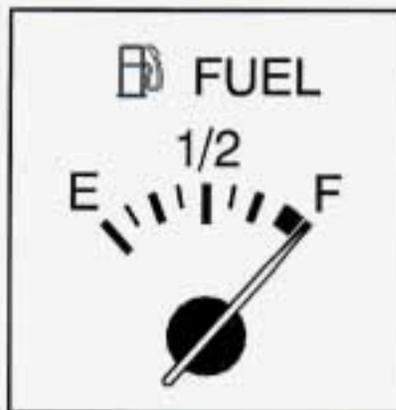


GATE
AJAR

This light should come on when the tailgate is opened as a door. It will stay on until the tailgate has been fully closed. It does *not* come on when the tailgate has been opened as a drop-gate.

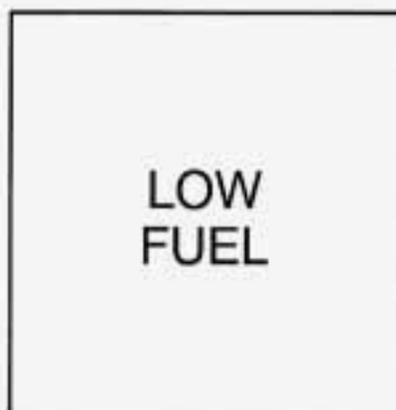
If this light comes on and stays on while driving, you will be able to restart your vehicle if you turn it off. However, your vehicle will not be protected by the PASS-Key II feature. See "PASS-Key[®] II" in the Index.

Fuel Gage



Your fuel gage shows how much fuel is in your tank. It works only when the engine is on. When the indicator nears EMPTY (E), you still have a little fuel left. You need to get more right away.

Low Fuel Light



This light comes on briefly as a bulb check when you start your engine. If this light comes on and stays on, you should get more fuel soon.

The following situations are normal and do not indicate a fuel gage malfunction.

- At the gas station, the gas pump shuts off before the gage reads FULL (F).
- It takes more (or less) gas to fill up than the gage indicated. For example, the gage may have indicated half full, but it took more -- or less -- than half of the tank's capacity to fill it.
- The gage may move when you turn a corner, speed up or stop your vehicle.
- When you turn the engine off, the gage doesn't go all the way back to EMPTY (E).



Section 3 Comfort Controls and Audio Systems

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

Comfort Controls

With this system, you can control the heating, air conditioning and ventilation in your Chevrolet. Your vehicle also has a flow-through ventilation system described later in this section.

Standard Climate Control System



Fan Control

The fan control selects the force of air you want. Slide the lever to the right to increase fan speed and slide the lever to the left to decrease fan speed.

Temperature Control

Slide the temperature control between COOL and WARM to change the temperature of the air coming through your air outlets.

Heating

When outside temperatures are cold, sliding the temperature control to WARM will send heated air through the heater outlets, and some through the defrost outlet.

Air Conditioning

On very hot days, open the windows long enough to let hot inside air escape. This reduces the amount of work your air conditioner's compressor will have to do, which should help fuel economy. Press A/C to turn on the air conditioning.

RECIRC: This setting provides maximum cooling by recirculating the air inside your vehicle. The airflow comes from the upper outlets.

MIDDLE: Pressing this button directs the air through the upper outlets.

BLEND: This setting directs the airflow to the upper outlets and the heater outlets.

FLOOR: Pressing this button directs all the airflow to the heater outlets.

Electronic Climate Control (Option)



System Controls

TEMP: To choose the temperature you want maintained inside the vehicle, use this button.

Pressing the TEMP button only once with the exterior temperature displayed will not change the set temperature.

From the AUTO mode, pressing the temperature to 90°F (33°C) will automatically allow the system to select the high fan speed and FLOOR mode.

From the AUTO mode, pressing the temperature to 60°F (16°C) will automatically allow the system to select the high fan speed and MIDDLE mode to recirculate air.

AUTO: When the system is set for automatic, air will come from the heater outlets, the upper outlets or both. Fan speed will vary (unless an arrow on the FAN button has been pressed) as the system gets to and maintains the temperature setting you have selected.

The selected temperature, the fan speed and AUTO will appear on the display.

In cold weather, the system will delay turning on the fan to avoid blowing cold air. The length of the delay depends on engine coolant temperature, outside temperature and time since the engine was last started. Pressing an arrow on the FAN button will override this delay and turn on the fan.

MIDDLE: Pressing this button directs the air through the upper outlets.

BLEND: This setting directs the airflow to the upper outlets and the heater outlets.

FLOOR: Pressing this setting directs all airflow to the heater outlets.

VENT: Use this setting when you don't want to cool the air coming into your vehicle. The airflow will come from the upper outlets.

OFF: When the system is off, the ventilation allows air to flow through the heater outlets while the vehicle is moving.

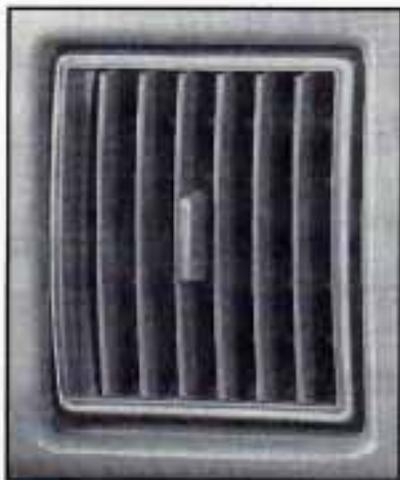
The exterior temperature will show in the display area.

Fan Speeds

The speed of the fan is controlled automatically if you have the fan on AUTO. However, you can control the fan speed with the FAN button.

The fan speed will go lower or higher with every press of the button until the lowest or highest speed is reached.

Ventilation System



Adjust the direction of airflow by moving the louvered vents.

Fresh air from outside your vehicle flows through your Buick when the vehicle is moving. When the vehicle is not moving, you can get outside air to flow through by selecting any air choice, except the rear window defogger (and any fan speed if you have the manual climate control system).

For mild outside temperatures, when little heating or cooling is needed, press the A/C button on the manual system to deactivate the air conditioner. RECIRC, DEFOG and DEFROST must also be off. Air will flow through the heater outlets. Adjust the temperature control lever to a comfortable level.

The automatic system will recirculate the air inside the vehicle for maximum air conditioning performance if the inside of the vehicle is hot. The automatic system will return to circulating outside air once the vehicle interior has cooled down.

Defogging and Defrosting

 **DEFROST:** This setting directs the airflow to the defrost outlet and some to the heater outlet. Use defrost when you want to remove fog or ice from the windshield. Fan speed will be controlled automatically, or you can choose another speed by pressing the FAN button.

DEFOG: This setting directs the airflow to the defrost outlet to keep the windshield clear and to the heater outlet for passenger comfort.

Rear Window Defogger

 **REAR DEFOG:** Press this button to get fog or ice off your rear window. After 10 minutes, the rear window defogger will go off by itself, or pressing the button again during the heating cycle will shut it off. If you need additional warming time, press the button again.

If you have the heated outside rearview mirrors option, the mirrors will be warmed when the rear defogger is on.

Do not attach anything like a temporary vehicle license or 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[®] 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 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 HRS until the correct hour appears.
Press and hold MIN until the correct minute appears.

You may set the clock with the ignition off if you press RECALL first and follow the same procedure described above.

AM-FM Stereo with Cassette Tape Player



Playing the Radio

VOLUME: Turn this knob to turn the system on and off. Turn it clockwise to increase the volume. Turn it counterclockwise to decrease the volume.

RECALL: Press the upper knob briefly to recall the station being played or the clock display. To change what is normally shown on the display (station or time), press the knob until you see the display you want, then hold the knob until the display flashes. If you press the knob when the ignition is off, the clock will show for a few seconds.

Finding a Station

AM-FM: Press the lower knob to select AM, FM1 or FM2. The display shows your selection.

TUNE: Turn the lower knob to choose radio stations.

SEEK: Press the forward or backward arrow to go to the next higher or lower station. The sound will be muted while seeking.

SCAN: Press one of the SEEK arrows for two seconds and SCAN will appear on the display. Use SCAN to listen to stations for a few seconds. The radio will go to a station, stop for a few seconds, then go on to the next station. Press one of the SEEK arrows again to stop scanning. The sound will be muted while scanning.

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

1. Press AM-FM to select the band.
2. Find the station you want by using TUNE or SEEK.
3. Press and hold one of the six numbered buttons.
4. The sound will mute. When it returns, release the button. Whenever you press that numbered button, the station you set will return.

P SCAN: Press this button to listen to each of your preset stations for a few seconds. The radio will go to the first preset station, stop for a few seconds, then go on to the next preset station. Press P SCAN again to stop scanning. If a preset station has weak reception, the radio will not stop at the preset station.

Setting the Tone

BASS: Press this knob lightly so it extends. Turn the knob to increase or decrease bass. The middle position is a detent.

TREB: Press this button lightly so it extends. Turn the knob to increase or decrease treble. The middle position is a detent.

Push the knobs back in when you are not using them.

Adjusting the Speakers

BAL: Turn the control behind the upper knob to move the sound to the left or right speakers. The middle position is a detent and balances the speakers.

FADE: Turn the control behind the lower knob to move the sound to the front or rear speakers. The middle position is a detent and balances the speakers.

Playing a Cassette Tape

The longer side with the tape visible should face to the right. If the ignition is on, but the radio is off, the tape will begin playing. If you hear nothing or hear a garbled sound, the tape 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 and BASS controls just as you do for the radio. Other controls may have different functions when a tape is inserted. The display will show an arrow to show which side of the tape is playing.

If you want to insert a tape when the ignition or radio is off, first press EJECT or RECALL. Note that the cassette tape adapter kits for portable compact disc players may not work in your cassette player. These adapters can cause an error message on the display, and the adapter cassette could be ejected.

Your tape bias is set automatically.

SEEK: Press the forward or backward arrow to search for the next or previous selection on the tape. Your tape must have at least three seconds of silence between each selection for SEEK to work. The sound will be muted while seeking.

◀◀ (3): Press this button to reverse the tape rapidly. Press it again to return to playing speed. The radio will play while the tape reverses.

▶▶ (4): Press this button to advance quickly to another part of the tape. Press the button again to return to playing speed. The radio will play while the tape advances.

SIDE (5): Press this button to change the side of the tape that is playing.

◻◻ (6): Press this button to reduce background noise. The display will show either OFF or ON for a few seconds when you press the button.

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.

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

CLN: This message may appear on the display. If it does, 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. 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 CLN indicator. The radio will display --- to show the indicator was reset.

AM-FM Stereo with Cassette Tape Player and Automatic Tone Control (Option)



Playing the Radio

VOLUME: Press this knob to turn the system on and off. Turn it clockwise to increase the volume. Turn it counterclockwise to decrease the volume.

RECALL: Press this button briefly to recall the station being played or the clock display. To change what is normally shown on the display (station or time), press this button until you see the display you want, then hold the button until the display flashes. If you press the button when the ignition is off, the clock will show for a few seconds.

Finding a Station

AM-FM: Press this button to select AM, FM1 or FM2. The display shows your selection.

TUNE: Press the up or down arrow to choose radio stations.

SEEK: Press the up or down arrows to go to the next higher or lower station. The sound will be muted while seeking.

SCAN: Press one of the SEEK arrows for two seconds and SCAN will appear on the display. Use SCAN to listen to stations for a few seconds. The radio will go to a station, stop for a few seconds, then go on to the next station. Press one of the SEEK buttons again to stop scanning. The sound will be muted while scanning.

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

1. Press AM-FM to select the band.
2. Find the station you want by using TUNE or SEEK.
3. Press TONE to select the setting you prefer.
4. Press and hold one of the six numbered buttons.
5. The sound will mute. When it returns, release the button. Whenever you press that numbered button, the station you set will return and the TONE you selected will be automatically selected for that button.

P SCAN: Press this button to listen to each of your preset stations for a few seconds. The radio will go to the first preset station, stop for a few seconds, then go on to the next preset station. Press P SCAN again to stop scanning. If a preset station has weak reception, the radio will not stop at the preset station.

AUTO SET: Press this button and the system will seek and set the 12 strongest FM or the 6 strongest AM stations on your preset buttons. To return to the stations you manually set, press AUTO SET again.

Setting the Tone

BASS: Press this knob lightly so it extends. Turn the knob to increase or decrease bass. The middle position is a detent.

TREB: Press this knob lightly so it extends. Turn the knob to increase or decrease treble. The middle position is a detent.

Push the knobs back in when you are not using them.

TONE: This feature allows you to choose preset treble and bass equalization settings designed for classical, pop, rock, jazz, talk and country/western stations. CLASS will appear on the display when you first press TONE. Each time you press it, another setting will appear on the display. Press it again after C & W appears and MANUAL will appear. Tone control will return to the TREB and BASS knobs. Also, if you use the TREB and BASS knobs, control will return to them and MANUAL will appear.

Adjusting the Speakers

BAL: Press this knob lightly so it extends. Turn the knob to move the sound to the left or right speakers. The middle position is a detent and balances the speakers.

FADE: Turn the knob to move the sound to the front or rear speakers. The middle position is a detent and balances the speakers.

Push the knobs back in when you are not using them.

Playing a Cassette Tape

The longer side with the tape visible should face to the right. If the ignition is on, but the radio is off, the tape will begin playing. If you hear nothing or hear a garbled sound, the tape 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 and BASS controls just as you do for the radio. Other controls may have different functions when a tape is inserted. The display will show an arrow to show which side of the tape is playing.

If you want to insert a tape when the ignition or radio is off, first press EJECT or RECALL. Note that the cassette tape adapter kits for portable compact disc players may not work in your cassette player. These

adapters can cause an error message on the display, and the adapter cassette could be ejected.

Your tape bias is set automatically.

PREV (1): Press this button to search for the previous selection on the tape. Your tape must have at least three seconds of silence between each selection for PREV to work. The sound will be muted while seeking.

NEXT (2): Press this button to search for the next selection on the tape. Your tape must have at least three seconds of silence between each selection for NEXT to work. The sound will be muted while seeking.

The SEEK up and down arrows will also find the previous and next selections on the tape.

◀◀ (3): Press this button to reverse the tape rapidly. Press it again to return to playing speed. The radio will play while the tape reverses.

▶▶ (4): Press this button to advance quickly to another part of the tape. Press the button again to return to playing speed. The radio will play while the tape advances.

SIDE (5): Press this button to change the side of the tape that is playing.

DD (6): Press this button to reduce background noise. The double-D symbol will appear on the display.

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

SOURCE: Press this button to change to the tape function when the radio is on. TAPE with an arrow will appear on the display when the tape is active.

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

CLN: This message may appear on the display. If it does, 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. 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 CLN indicator. The radio will display --- to show the indicator was reset.

AM-FM Stereo with Cassette Tape and Compact Disc Players and Automatic Tone Control (Option)



Playing the Radio

VOLUME: Press this knob to turn the system on and off. Turn it clockwise to increase the volume. Turn it counterclockwise to decrease the volume.

RECALL: Press this button briefly to recall the station being played or the clock display. To change what is normally shown on the display (station or time), press the button until you see the display you want, then hold the button until the display flashes. If you press the button when the ignition is off, the clock will show for a few seconds.

Finding a Station

AM-FM: Press this button to select AM, FM1 or FM2. The display shows your selection.

TUNE: Press the up or down arrow to choose radio stations.

SEEK: Press the up or down arrows to go to the next higher or lower station. The sound will be muted while seeking.

SCAN: Press one of the SEEK arrows for two seconds and SCAN will appear on the display. Use SCAN to listen to stations for a few seconds. The radio will go to a station, stop for a few seconds, then go on to the next station. Press one of the SEEK arrows again to stop scanning. The sound will be muted while scanning.

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

1. Press AM-FM to select the band.
2. Find the station you want by using TUNE or SEEK.
3. Press TONE to select the setting you prefer.
4. Press and hold one of the six numbered buttons.
5. The sound will mute. When it returns, release the button. Whenever you press that numbered button, the station you set will return and the TONE you selected will be automatically selected for that button.

P SCAN: Press this button to listen to each of your preset stations for a few seconds. The radio will go to the first preset station, stop for a few seconds, then go on to the next preset station. Press P SCAN again to stop scanning. If a preset station has weak reception, the radio will not stop at the preset station.

AUTO PRESET: Press this button and the system will seek and set the 12 strongest FM or the 6 strongest AM stations on your preset buttons. To return to the stations you manually set, press AUTO PRESET again.

Setting the Tone

BASS: Press this knob lightly so it extends. Turn the knob to increase or decrease bass.

TREB: Press this knob lightly so it extends. Turn the knob to increase or decrease treble.

Push the knobs back in when you are not using them.

TONE: This feature allows you to choose preset treble and bass equalization settings designed for classical, pop, rock, jazz, talk and country/western stations.

CLASS will appear on the display when you first press TONE. Each time you press it, another setting will appear on the display. Press it again after C & W appears and MANUAL will appear. Tone control will return to the TREB and BASS knobs. Also, if you use the TREB and BASS knobs, control will return to them and MANUAL will appear.

Adjusting the Speakers

BAL: Press this knob lightly so it extends. Turn the knob to move the sound to the left or right speakers. Use the middle position to balance these speakers.

FADE: Press this button lightly so it extends. Turn the knob to move the sound to the front or rear speakers. Use the middle position to balance these speakers.

Push the knobs back in when you are not using them.

Playing a Cassette Tape

The longer side with the tape visible should face to the right. If the ignition is on, but the radio is off, the tape will begin playing. If you hear nothing or hear a garbled sound the tape 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 and BASS controls just as you do for the radio. Other controls may have different functions when a tape is inserted. The display will show an arrow to show which side of the tape is playing.

If you want to insert a tape when the ignition or radio is off, first press EJECT or RECALL. Note that the cassette tape adapter kits for portable compact disc players may not work in your cassette player. These adapters can cause an error message on the display, and the adapter cassette could be ejected.

Your tape bias is set automatically.

PREV (1): Press this button to search for the previous selection on the tape. Your tape must have at least three seconds of silence between each selection for PREV to work. The sound will be muted while seeking.

NEXT (2): Press this button to search for the next selection on the tape. Your tape must have at least three seconds of silence between each selection for NEXT to work. The sound will be muted while seeking.

The SEEK down and up arrows will also find the previous and next selections on the tape.

◀◀ (3): Press this button to reverse the tape rapidly. Press it again to return to playing speed. The radio will play while the tape reverses.

▶▶ (4): Press this button to advance quickly to another part of the tape. Press the button again to return to playing speed. The radio will play while the tape advances.

SIDE (5): Press this button to change the side of the tape that is playing.

SOURCE: Press this button to change to the tape or disc function when the radio is on. If both a tape and a disc are installed, the system will first go to tape play;

TAPE will appear on the display. If SOURCE is pressed again, the system will go to disc play; CD will appear on the display.

EJECT: The system has two EJECT buttons. Press the button near the CD slot to remove a disc. Press the button near the tape slot to remove a tape. The radio will play.

CLN: This message may appear on the display. If it does, 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. 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 CLN indicator. The radio will display --- to show the indicator was reset.

Your cassette tape player automatically reduces background noise from tapes encoded with Dolby NR. You may turn Dolby off by pressing the number six preset.

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Playing a Compact Disc

Insert a disc partway into the slot, label side up. The player will pull it in. The disc should begin playing.

If you're driving on a very rough road or if it's very hot, the disc may not play and an error code may appear on the display. Press **RECALL** to take the error code 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.
- It is dirty, scratched or wet.
- It is very humid. (If so, wait about an hour and try again.)

RECALL: Press this button to see which track is playing. Press it again within five seconds to see how long it has been playing. To change what is normally shown on the display (track or elapsed time), press the button until you see the display you want, then hold the button until the display flashes.

PREV (1): Press this button 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. The sound will be muted while seeking.

NEXT (2): Press this button to go to the next track. If you hold the button or press it more than once, the player will continue moving forward through the disc. The sound will be muted while seeking.

The **SEEK** down and up arrows will also find the previous and next selections on the disc.

◀◀ (3): Press and hold this button to return to a passage quickly. You will hear sound.

▶▶ (4): Press and hold this button to advance to a passage quickly. You will hear sound.

RAND (6): Press this button to hear the tracks in random, rather than sequential, order.

AM-FM: Press this button to play the radio when a disc is in the player.

If you turn off the ignition or radio with a disc in the player, it will stay in the player. When you turn on the ignition or system, the disc will start playing where it stopped, if it was the last-selected audio source.

SOURCE: Press this button to change to the disc function when the radio is on. When a disc is inserted, the disc will play until you press **AM-FM**. Then the disc will stop playing and the radio will play. Press **SOURCE** again to play a disc again. **CD PLAY** will show on the display.

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

Theft-Deterrent Feature

THEFTLOCK™ is designed to discourage theft of your radio. It works by using a secret code to disable all radio functions whenever battery power is removed.

If THEFTLOCK is active, the THEFTLOCK indicator will flash when the ignition is OFF.

The THEFTLOCK feature for the radio may be used or ignored. If ignored, the system plays normally and the radio is not protected by the feature. If THEFTLOCK is activated, your radio will not operate if stolen.

When THEFTLOCK is activated, the radio will display LOC to indicate a locked condition anytime battery power is removed. If your battery loses power for any reason, you must unlock the radio with the secret code before it will operate.

Activating the Theft-Deterrent Feature

The instructions which follow explain how to enter your secret code to activate the THEFTLOCK system. It is recommended that you read through all nine steps before starting the procedure.

NOTE: If you allow more than 15 seconds to elapse between any steps, the radio automatically reverts to time and you must start the procedure over at Step 4.

1. Write down any three or four-digit number from 000 to 1999 and keep it in a safe place separate from the vehicle.
2. Turn the ignition to the ACCESSORY or RUN position.
3. Turn the radio off.
4. Press the 1 and 4 buttons together. Hold them down until --- shows on the display. Next you will use the secret code number which you have written down.
5. Press MIN and 000 will appear on the display.
6. Press MIN again to make the last two digits agree with your code.
7. Press HRS to make the first one or two digits agree with your code.
8. Press AM-FM after you have confirmed that the code matches the secret code you have written down. The display will show REP to let you know that you need to repeat Steps 5 through 7 to confirm your secret code.
9. Press AM-FM and this time the display will show SEC to let you know that your radio is secure.

Unlocking the Theft-Deterrent Feature After a Power Loss

Enter your secret code as follows; pause no more than 15 seconds between steps:

1. LOC appears when the ignition is on.
2. Press MIN and 000 will appear on the display.
3. Press MIN again to make the last two digits agree with your code.
4. Press HRS to make the first one or two digits agree with your code.
5. Press AM-FM after you have confirmed that the code matches the secret code you have written down. The display will show SEC, indicating the radio is now operable and secure.

If you enter the wrong code eight times, INOP will appear on the display. You will have to wait an hour with the ignition on before you can try again. When you try again, you will only have three chances to enter the correct code before INOP appears.

If you lose or forget your code, contact your dealer.

Disabling the Theft-Deterrent Feature

Enter your secret code as follows; pause no more than 15 seconds between steps:

1. Turn the ignition to the ACCESSORY or RUN position.
2. Turn the radio off.
3. Press the 1 and 4 buttons together. Hold them down until SEC shows on the display.
4. Press MIN and 000 will appear on the display.
5. Press MIN again to make the last two digits agree with your code.
6. Press HRS to make the first one or two digits agree with your code.
7. Press AM-FM after you have confirmed that the code matches the secret code you have written down. The display will show ---, indicating that the radio is no longer secured.

If the code entered is incorrect, SEC will appear on the display. The radio will remain secured until the correct code is entered.

When battery power is given to a secured radio, the radio won't turn on and LOC will appear on the display.

Understanding Radio Reception

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.

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.

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 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.

Care of Your Cassette Tape Player

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 CLN to indicate that you have used your tape player for 50 hours without resetting the tape clean timer. If you notice a reduction in sound quality, try a known good cassette to see if the tape or the tape player is at fault. If this other cassette has no improvement in sound quality, clean the tape player.

Cleaning may be done with a scrubbing action, non-abrasive cleaning cassette with pads which scrub the tape head as the hubs of the cleaner cassette turn. It is normal for the cassette to eject while cleaning because your unit is equipped with a cut tape feature. To temporarily override this feature (for one insertion), turn the radio off and press and hold TAPE AUX until the tape symbol flashes on the display, then insert the cassette again. Insert the cassette at least three times to ensure thorough cleaning. A scrubbing action cleaning cassette is available through your Buick dealer.

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. It may not clean as thoroughly as the scrubbing type cleaner.

Cassettes are subject to wear and the sound quality may degrade over time. Always make sure that 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.

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 fender.

Power Antenna Mast Care

Your power antenna will look its best and work well if it's cleaned from time to time. To clean the antenna mast:

1. Turn on the ignition and radio to raise the antenna.
2. Dampen a clean cloth with mineral spirits or equivalent solvent.
3. Wipe the cloth over the mast sections, removing any dirt.
4. Wipe dry with a clean cloth.
5. Make the antenna go up and down by turning the radio or ignition off and on.
6. Repeat if necessary.

NOTICE:

Don't lubricate the power antenna. Lubrication could damage it.

NOTICE:

Before entering an automatic car wash, turn off your radio to make the power antenna go down. This will prevent the mast from possibly getting damaged. If the antenna does not go down when you turn the radio off, it may be damaged or need to be cleaned. In either case, lower the antenna by hand by carefully pressing the antenna down.

If the mast portion of your antenna is damaged, you can easily replace it. See your dealer for a replacement kit and follow the instructions in the kit.



Section 4 Your Driving and the Road



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.

Defensive Driving

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

Please start with a very important safety device in your Buick: 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.

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, some 18,000 annual motor vehicle-related deaths have been associated with the use of alcohol, with more than 300,000 people injured.

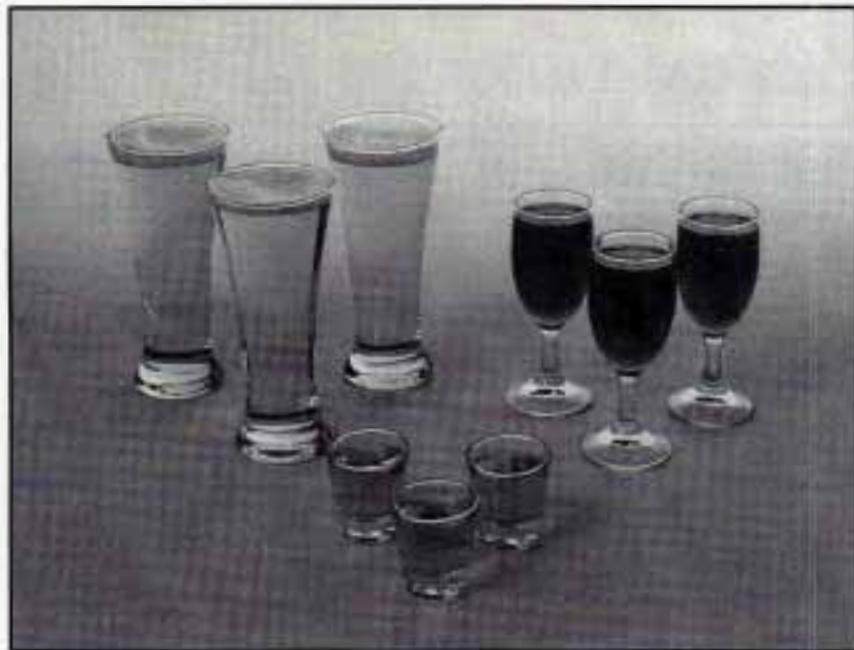
Many adults -- by some estimates, nearly half the adult population -- choose never to drink alcohol, so they never drive after drinking. For persons under 21, it's against the law in every U.S. state to drink alcohol. There are good medical, psychological and developmental reasons for these laws.

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; and the condition of your brakes.

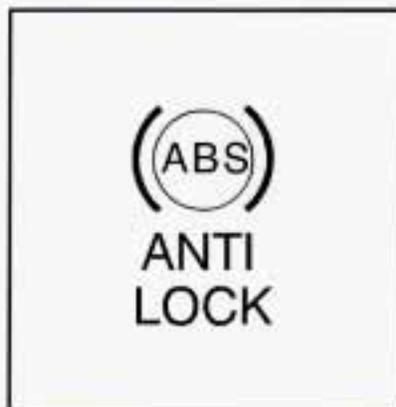
Avoid needless heavy braking. Some people drive in spurts -- heavy acceleration followed by heavy braking -- rather than keeping pace with traffic. This is a mistake. Your brakes may not have time to cool between hard stops. Your brakes will wear out much faster if you do a lot of heavy braking. If you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

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

When you start your engine and 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 a little. This is normal.



If there's a problem with the anti-lock brake system, this warning light will stay on. 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 the 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 and let anti-lock work for you. You may hear the anti-lock pump or motor operate, and feel the brake pedal pulsate, but this is normal.

Braking in Emergencies

Use your anti-lock braking system when you need to. With anti-lock, you can steer and brake at the same time. 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 accelerate. Both control systems -- steering and acceleration -- have to do their work where the tires meet the road. Adding the sudden acceleration can demand too much of those places. You can lose control.

What should you do if this ever happens? Ease up on the accelerator pedal, steer the vehicle the way you want it to go, and slow down.

Speed limit signs near curves warn that you should adjust your speed. Of course, the posted speeds are based on good weather and road conditions. Under less favorable conditions you'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 Buick can perform very well in emergencies like these. First apply your brakes. (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.

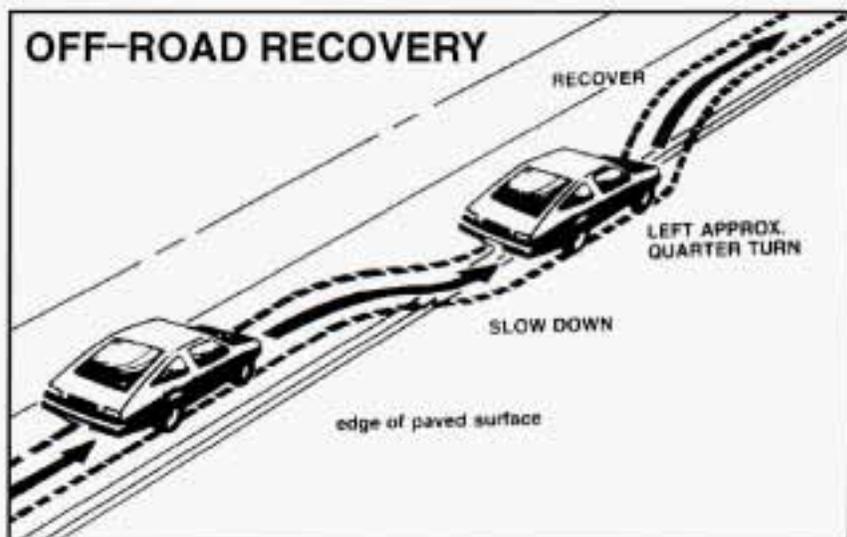


An emergency like this requires close attention and a quick decision. If you are holding the steering wheel at the recommended 9 and 3 o'clock positions, you can turn it a full 180 degrees very quickly without removing either hand. But you have to act fast, steer quickly, and just as quickly straighten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

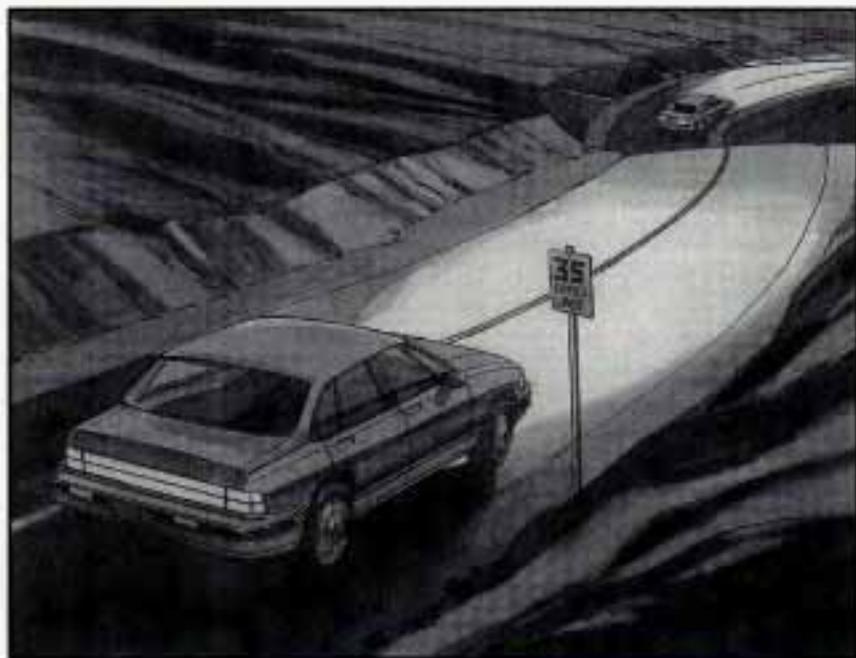
If your vehicle starts to slide, ease your foot off the accelerator pedal and quickly steer the way you want the vehicle to go. If you start steering quickly enough, your vehicle may straighten out. Always be ready for a second skid if it occurs.

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.

Remember: Any anti-lock brake system (ABS) helps avoid only the braking skid.

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 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 haven't 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

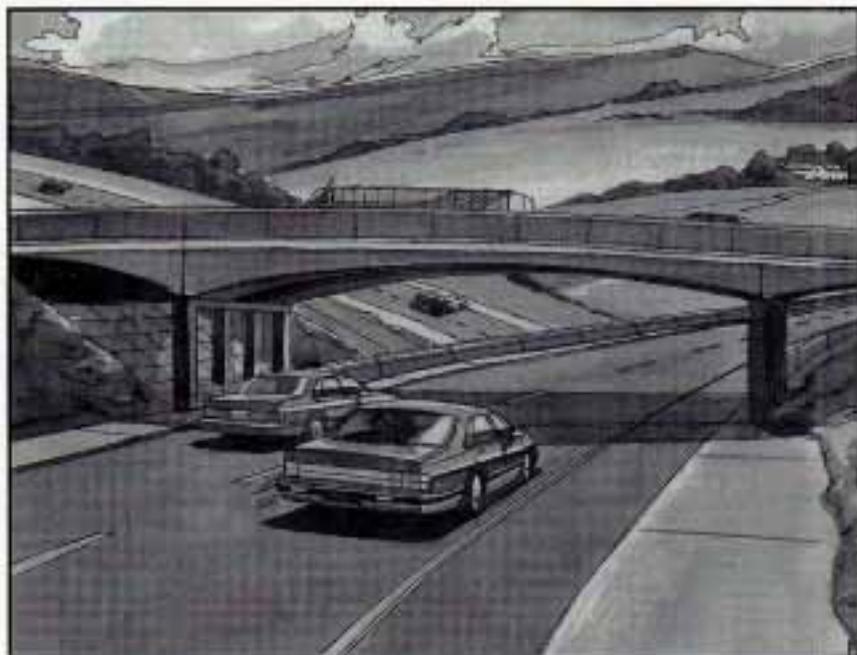


One of the biggest problems with city streets is the amount of traffic on them. You'll want to watch out for what the other drivers are doing and pay attention to traffic signals.

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 Buick 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.

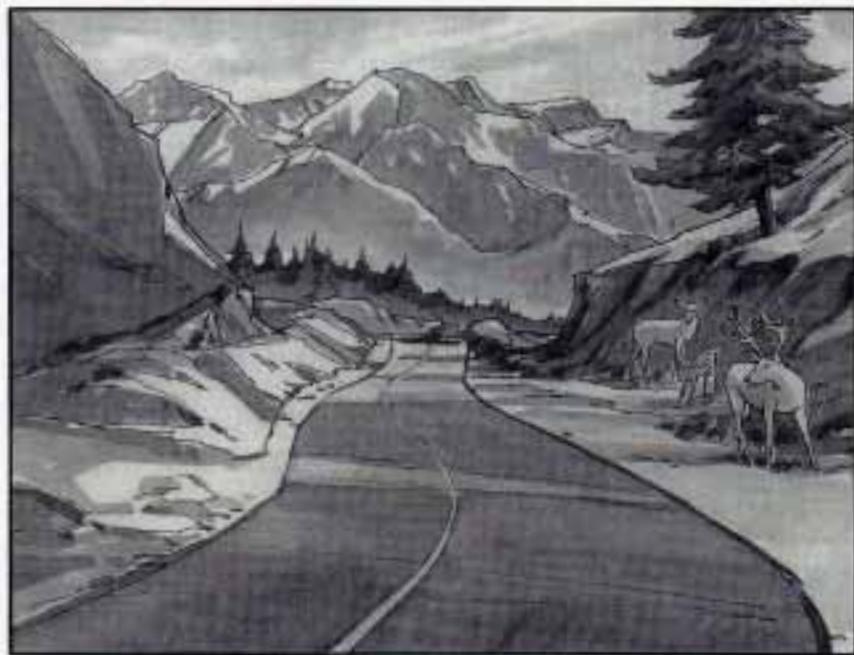
There is something about an easy stretch of road with the same scenery, along with the hum of the tires on the road, the drone of the engine, and the rush of the wind against the vehicle that can make you sleepy. Don't let it happen to you! If it does, your vehicle can leave the road in *less than a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

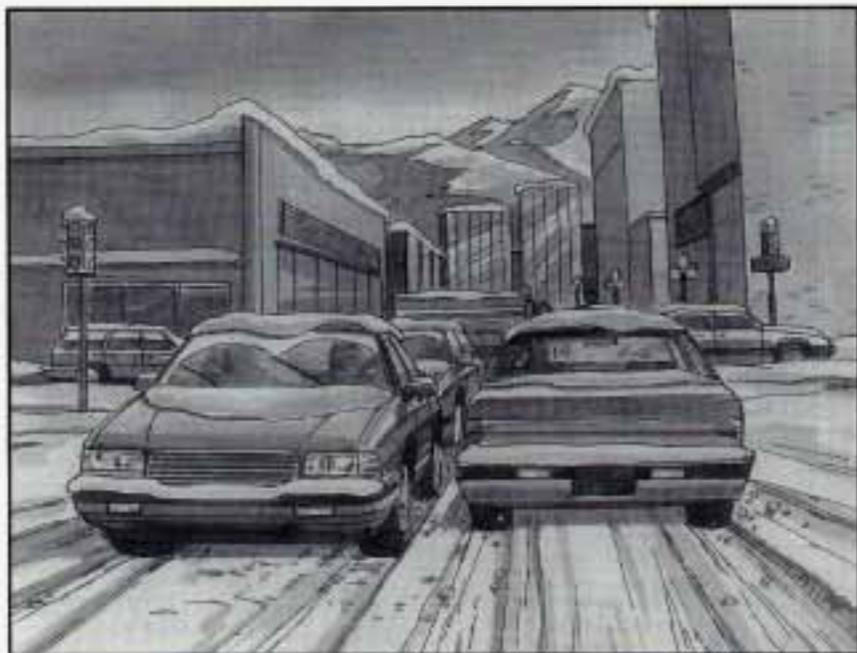
If you don't shift down, your brakes could get so hot that they wouldn't work well. You would then have poor braking or even none going down a hill. You could crash. Shift down to let your engine assist your brakes on a steep downhill slope.

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 transmission, 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 Buick in good shape for winter.
- You may want to put winter emergency supplies in your vehicle.



Include an ice scraper, a small brush or broom, a supply of windshield washer fluid, a rag, some winter outer clothing, a small shovel, a flashlight, a red cloth and a couple of reflective warning triangles. And, if you will be driving under severe conditions, include a small bag of sand, a piece of old carpet or a couple of burlap bags to help provide traction. Be sure you properly secure these items in your vehicle.

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.



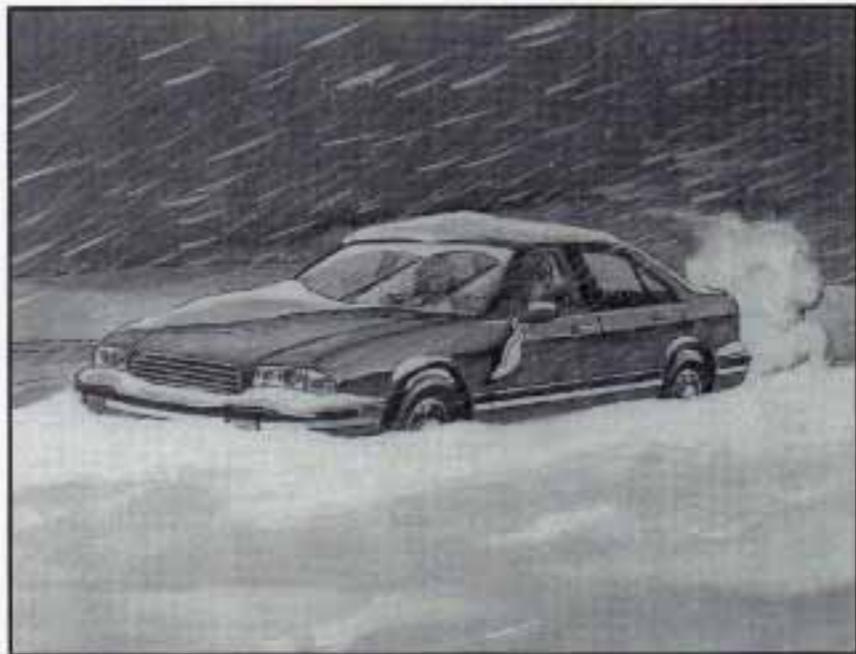
What's the worst time for this? "Wet ice." Very cold snow or ice can be slick and hard to drive on. But wet ice can be even more trouble because it may offer the least traction of all. You can get wet ice when it's about freezing (32°F; 0°C) and freezing rain begins to fall. Try to avoid driving on wet 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.

Your anti-lock brakes improve your vehicle's stability when you make a hard stop on a slippery road. Even though you have the anti-lock braking system, you'll want to begin stopping sooner than you would on dry pavement. See "Anti-Lock" in the Index.

- 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.



MFD BY GENERAL MOTORS CORP
DATE GVWR GAWR FRT GAWR RR

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY, BUMPER, AND THEFT PREVENTION STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

The other label is the Certification label, found on the rear edge of the driver's door. It tells you the gross weight capacity of your vehicle, called the GVWR (Gross Vehicle Weight Rating). 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 300 lbs. (135 kilograms) in the rear area of your wagon or 200 lbs. (90 kg) in the trunk of your sedan.



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 or rear area 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.

 **CAUTION:**

If you overload your station wagon, you could damage parts of the vehicle and/or affect vehicle handling. Either of these could cause you to lose control of the vehicle and you could be injured. Never carry more weight than shown on the Certification label under "Gross Vehicle Weight Rating (GVWR)" or "Gross Axle Weight Rating (GAWR)."

When loading your wagon:

1. Fold the second and third seats down.
2. Balance your load from side to side and position it so that most of the weight is forward of the rear axle. You can help protect the load floor area and avoid damage to the folding seats by placing plywood or similar protection under your load.
3. Make sure there are either three people in the front seat or a total of 450 lbs. (205 kg).
4. If loaded to the maximum weight, or near it, weigh the wagon and its load to find the exact weight and help decide how to position the load. You can go to a vehicle weigh station to do this.

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. Pull a trailer only if you have followed all the steps in this section. Ask your Buick dealer for advice and information about towing a trailer with your vehicle.

NOTICE:

Pulling a trailer improperly can damage your vehicle and result in costly repairs not covered by your warranty. To pull a trailer correctly, follow the advice in this part.

Your vehicle can tow a trailer if it is equipped with proper 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.

Your Buick is a passenger vehicle. Trailer towing can change the way your vehicle performs on the road. The loads and forces created when trailering subject the vehicle to significant levels of stress.

Load-pulling components such as the engine, transmission, rear axle, wheel assemblies and tires are forced to work harder against the drag of the added weight. The engine is required to operate at relatively higher speeds and under greater loads, generating extra heat. What's more, the trailer adds considerably to wind resistance, increasing the pulling requirements.

If You Do Decide To Pull A Trailer

If you do, here are some important points:

- There are many different laws, including speed limit restrictions, having to do with trailering. Make sure your rig will be legal, not only where you live but also where you'll be driving. A good source for this information can be state or provincial police.
- You should always use a weight distributing (equalizing) hitch if your trailer will weigh more than 3,000 lbs. (1 362 kg). Consider using sway control if your loaded trailer will weigh 3,000 lbs. (1 362 kg) or more. You can ask a hitch dealer about sway controls.
- Consider using a sway control if your trailer will weigh 2,000 lbs. (900 kg) or less. You should always use a sway control if your trailer will weigh more than 2,000 lbs. (900 kg). You can ask a hitch dealer about sway controls.
- Trailers that weigh more than 1,000 lbs. (454 kg) should be equipped with trailer brakes.
- Surge brakes may be used on some trailers (e.g., boat trailers). However, surge brakes do not work well with most sway control devices. Do not use sway control devices on trailers equipped with surge brakes.
- 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. Avoid continuous operation in mountainous areas that have grades greater than two percent for longer than 5 miles (8 km).
- Change axle lubricant annually or every 7,500 miles (12 500 km) of trailer towing, whichever occurs first.

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 2,000 lbs. (900 kg), unless you have the optional 5,000 lbs. (2 250 kg) trailer towing package. But even that can be too heavy.

It also 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:

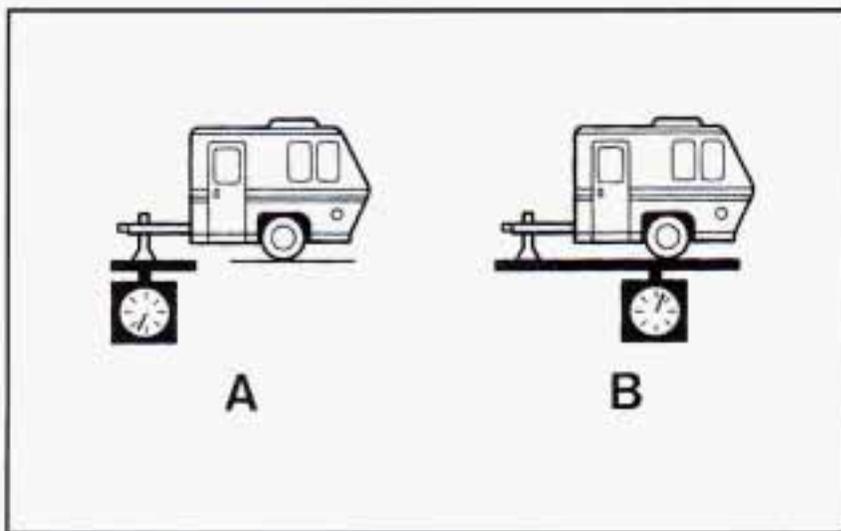
Buick Motor Division
Customer Assistance Center
902 E. Hamilton Avenue
Flint, MI 48550

In Canada, write to:

General Motors of Canada Limited
Customer Assistance Center
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 capacity weight of your vehicle. The capacity weight 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 will tow a trailer, you must subtract the tongue load from your vehicle's capacity weight 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 "dead-weight" hitch, the trailer tongue (A) should weigh 10% of the total loaded trailer weight (B). If you have a "weight-distributing" hitch, the trailer tongue (A) should weigh 12% 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 recommended pressure for cold tires. You'll find these numbers on the Certification label at the rear edge of the driver's door 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:

- If you'll be pulling a trailer that, when loaded, will weigh more than 2,000 lbs. (900 kg), be sure to use a properly mounted, weight-distributing hitch and sway control of the proper size. This equipment is very important for proper vehicle loading and good handling when you're driving.
- 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.
- The bumpers on your vehicle are not intended for hitches. Do not attach rental hitches or other bumper-type hitches to them. Use only a frame-mounted hitch that does not attach to the bumper.

Using A Weight-Carrying Trailer Hitch

(Recommended for loaded trailers weighing less than 3,000 lbs. or 1 362 kg.)

- The trailer tongue should weigh 10 percent of the total trailer load (maximum 300 lbs. or 136 kg) or as specified by the trailer manufacturer to minimize sway.
- Trailers that weigh more than 1,000 lbs. (454 kg) should be equipped with trailer brakes.
- Consider using sway control if your loaded trailer will weigh 3,000 lbs. (1 362 kg) or more.

Trailer Hitching Procedure Using A Weight-Distributing (Equalizing) Hitch

(Recommended for loaded trailers weighing 3,000 lbs. to 7,000 lbs. or 1 362 kg to 3 178 kg.)

Using a weight-distributing hitch without disabling the Electronic Level Control (ELC) system may defeat the purpose of the weight-distributing hitch. Also, your rear tires may become overloaded. A weight-distributing hitch should spread the load to all axles. If you use a weight-distributing hitch, always disable the ELC by following the proper steps.

Your vehicle is equipped with an Electronic Level Control (ELC) feature. When hooking up a trailer using a weight-distributing hitch, always use the following procedure:

- Place the vehicle on a level surface without the trailer hitched. With the ignition off, and all doors closed, allow the vehicle to level automatically.
- Disable the Electronic Level Control (ELC) by pulling the LEVEL CTRL fuse from the underhood electrical center located on the passenger-side wheel housing in the engine compartment. Remove the cover to gain access.
- Attach the trailer to the vehicle. The trailer tongue should weigh 12 percent of the total loaded trailer weight.
- Level the vehicle with the load-leveling spring bars (equalizers).
- Leave the fuse out while towing your trailer.

Once you have completed towing your trailer, be sure to reinstall the Electronic Level Control (ELC) fuse.

In Addition

- Use at least one friction sway control if your trailer is over 2,000 lbs. (900 kg) loaded weight, and consider using one for trailers under 2,000 lbs. (900 kg).
- Trailers that weigh more than 1,000 lbs. (454 kg) should be equipped with trailer brakes.
- Surge brakes work with most weight-distributing hitches as long as all the equipment is properly installed. Check with the hitch manufacturer for advice and installation instructions.

Safety Chains

You should always attach chains between your vehicle and your trailer. Cross the safety chains under the tongue of the trailer so that the tongue will not drop to the road if it becomes separated from the hitch. Instructions about safety chains may be provided by the hitch manufacturer or by the trailer manufacturer. Follow the manufacturer's recommendation for attaching safety chains and do not attach them to the bumper. Always leave just enough slack so you can turn with your rig. And, never allow safety chains to drag on the ground.

Trailer Brakes

If your trailer weighs more than 1,000 lbs. (450 kg) when loaded, then it needs its own brakes -- and they must be adequate. Be sure to read and follow the instructions for the trailer brakes so you'll be able to install, adjust and maintain them properly.

Because you have anti-lock brakes, do not try to tap into your vehicle's brake system. If you do, both brake systems won't work well, or at all.

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 Buick dealer.

The arrows on your instrument panel will flash whenever you signal a turn or lane change. Properly hooked up, the trailer lamps will also flash, telling other drivers you're about to turn, change lanes or stop.

When towing a trailer, the arrows on your instrument panel will flash for turns even if the bulbs on the trailer are burned out. Thus, you may think drivers behind you are seeing your signal when they are not. It'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 around 45 mph (70 km/h) to reduce the possibility of engine and transmission overheating.

If you are towing a trailer that weighs more than 2,000 lbs. (900 kg), you should drive in THIRD (3) instead of AUTOMATIC OVERDRIVE (®) or, as you need to, a lower gear. This will help your transmission.

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.
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 the regular brakes. Then apply your parking brake, and then shift to PARK (P).
5. Release the regular brakes.

When You Are Ready to Leave After Parking on a Hill

1. Apply your regular brakes and hold the pedal down while you:
 - Start your engine;
 - Shift into a gear; and
 - Release the parking brake.
2. Let up on the brake pedal.
3. Drive slowly until the trailer is clear of the chocks.
4. Stop and have someone pick up and store the chocks.

Engine Cooling When Trailering

Your cooling system may temporarily overheat during severe operating conditions such as:

- Climbing grades steeper than four percent at temperatures above 90°F (32°C) with a loaded vehicle and trailer.
- Stopping after high-speed driving.
- Idling for long periods in stop-and-go traffic.

If the TEMP warning light comes on, pull to the side of the road as soon as it is safe to do so. When the vehicle is at a complete stop, shift the transmission selector to PARK (P) and allow the engine to idle. If your Electronic Climate Control system is on, shut it off. Do not turn off the engine or increase engine speed above a normal idle. Within two or three minutes, the system should cool sufficiently, and you can turn on the Electronic Climate Control. At that time, resume driving at a reduced speed. Return to normal driving after 10 minutes if the TEMP warning light is not displayed.

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 transmission fluid (don't overfill), engine oil, axle lubricant, belts, 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.



Section 5 Problems on the Road

Here you'll find what to do about some problems that can occur on the road.

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 in 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, pull out on the button.

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 Buick. But please use the following steps to do it safely.

NOTICE:

Ignoring these steps could result in costly damage to your vehicle that wouldn't be covered by your warranty.

Trying to start your Buick by pushing or pulling it won't work, and it could damage your vehicle.

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.

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 Buick, 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:**

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 Delco Freedom[®] 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 negative (-) or 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 engines are running.



6. Connect the red positive (+) cable to the positive (+) terminal of the vehicle with the dead battery.



8. Now connect the black negative (-) cable to the good battery's negative (-) terminal.



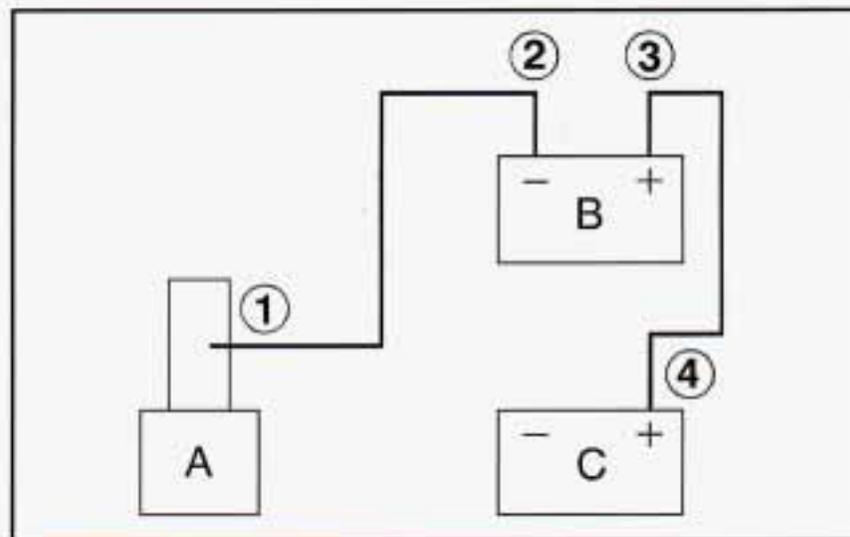
7. Don't let the other end touch metal. Connect it to the positive (+) terminal of the good battery.

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.



9. 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.
10. Now start the vehicle with the good battery and run the engine for a while.
11. Try to start the vehicle with the dead battery.
If it won't start after a few tries, it probably needs service.

12. 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 Buick dealer or a professional towing service tow your Roadmaster. They can provide the right equipment and know how to tow your vehicle without damage. See "Roadside Assistance" in the Index.

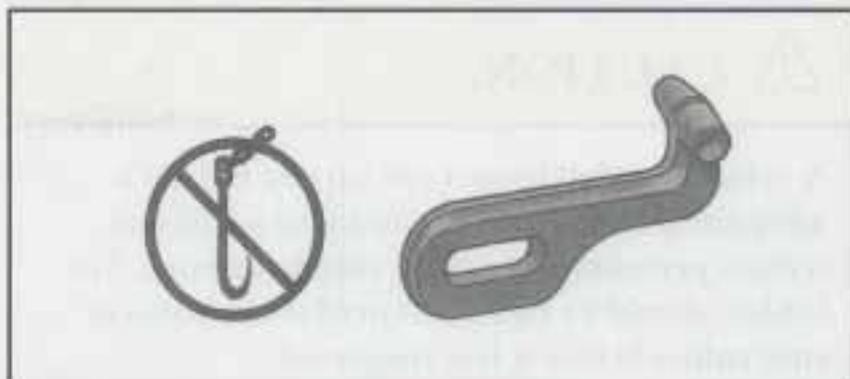
If your vehicle has been changed or modified since it was factory new by adding aftermarket items like fog lamps, aero skirting, or special tires and wheels, these instructions and illustrations may not be correct.

Before you do anything, turn on the hazard warning flashers.

When you call, tell the towing service:

- That your vehicle has rear-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:

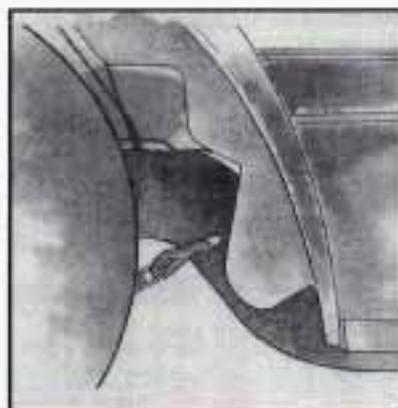
A vehicle can fall from a car carrier if it isn't adequately secured. This can cause a collision, serious personal injury and vehicle damage. The vehicle should be tightly secured with chains or steel cables before it is transported.

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 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 transmission should be in NEUTRAL (N) and the parking brake released.

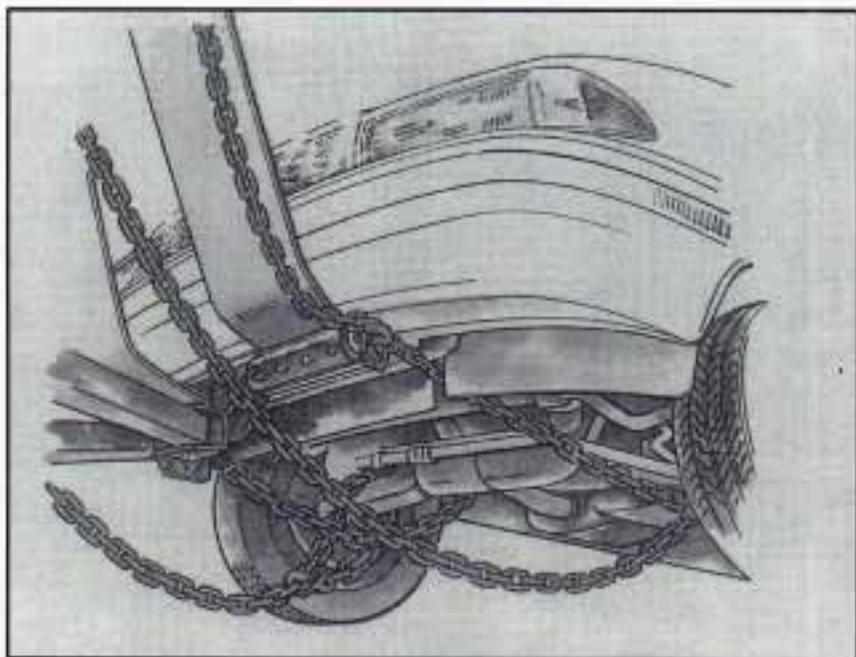
Front Towing

Tow Limits -- 35 mph (55 km/h), 50 miles (80 km)

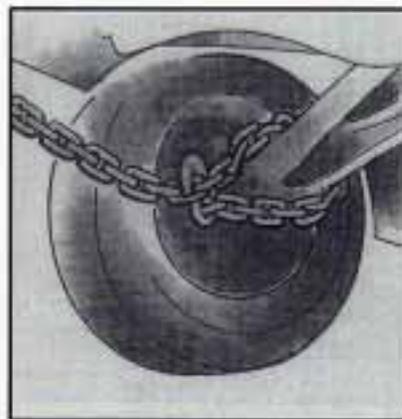


Attach T-hook chains on both sides, in the slotted holes in the side of the frame rails, behind the front wheels.

These slots are to be used when using sling type equipment or when loading and securing to car carrier equipment.

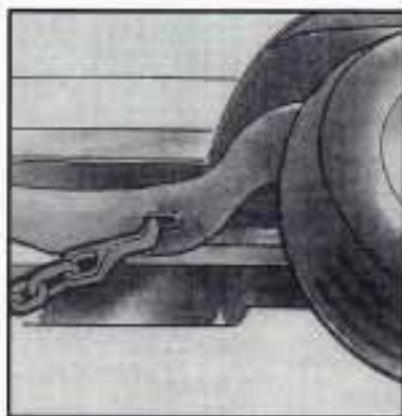


Position the sling crossbar just behind the rear edge of the front fascia.



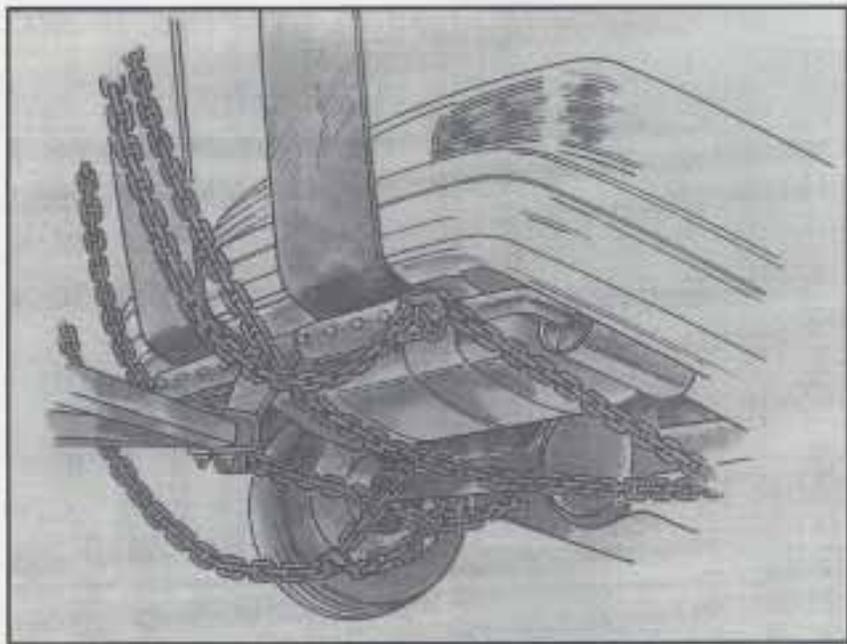
Attach a separate safety chain around the outboard end of each lower control arm.

Rear Towing



Attach T-hook chains to the slots in the frame rails just ahead of the rear wheels on both sides.

These slots are to be used when using sling type equipment or when loading and securing to car carrier equipment.



Position the lower sling crossbar directly under the rear fascia.



Attach a separate safety chain to each side of the axle inboard of the spring.

Engine Overheating

You will find a coolant temperature gage and the warning light about a hot engine on your instrument panel. You will also find a low coolant 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 opening 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. Turn off your air conditioner.
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 -- AUTOMATIC OVERDRIVE (Ⓢ) or THIRD (3).

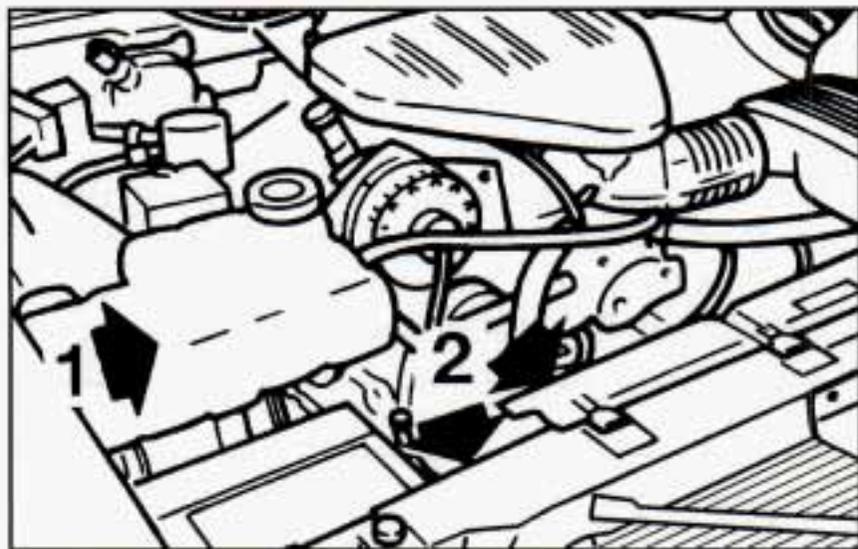
If you no longer have the overheat warning, you can drive. Just to be safe, drive slower for about 10 minutes. If the warning doesn't come back on, you can drive normally.

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.

When you decide it's safe to lift the hood, here's what you'll see:

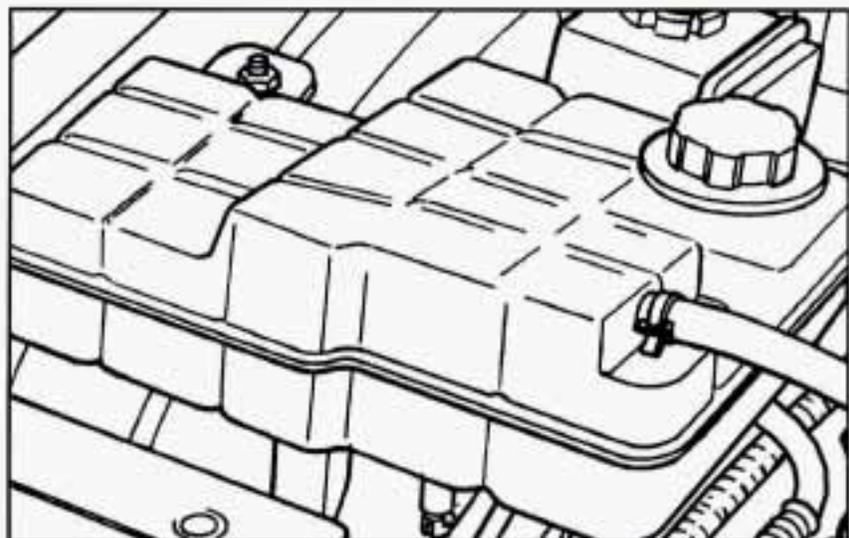


1. Coolant Surge Tank
2. Electric Engine Fans or Mechanical Fan and Electric Fan

⚠ CAUTION:

An electric 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 surge tank is boiling, don't do anything else until it cools down.



The coolant level should be at or above FULL COLD. 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 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 Surge Tank

If you haven't found a problem yet, but the coolant level isn't at FULL COLD, add a 50/50 mixture of *clean water* (preferably distilled) and DEX-COOL™ antifreeze at the coolant surge tank, but be sure the cooling system, including the coolant surge tank pressure cap, is cool before you do it. (See "Engine Coolant" in the Index for more information.)

CAUTION:

Steam and scalding liquids from a hot cooling system can blow out and burn you badly. They are under pressure, and if you turn the coolant surge tank pressure cap -- even a little -- they can come out at high speed. Never turn the cap when the cooling system, including the coolant surge tank pressure cap, is hot. Wait for the cooling system and coolant surge tank pressure cap to cool if you ever have to turn the pressure cap.



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 mix will. Your vehicle's coolant warning system is set for the proper coolant mix. With

CAUTION: (Continued)

CAUTION: (Continued)

plain water or the wrong mix, 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 mix of clean water and DEX-COOL™ antifreeze.

NOTICE:

In cold weather, water can freeze and crack the engine, radiator, heater core and other parts. So use the recommended coolant.

⚠ CAUTION:

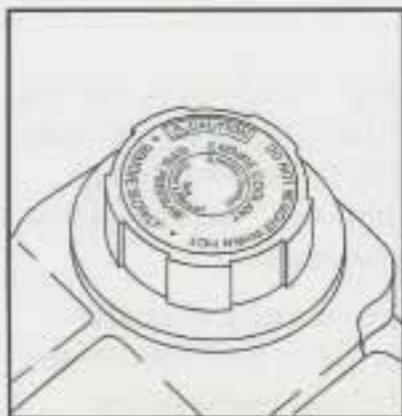
You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough. Don't spill coolant on a hot engine.



1. You can remove the coolant surge tank pressure cap when the cooling system, including the coolant surge tank pressure cap and upper radiator hose, is no longer hot.

Turn the pressure cap slowly about one-quarter turn to the left and then stop.

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 slowly, and remove it.

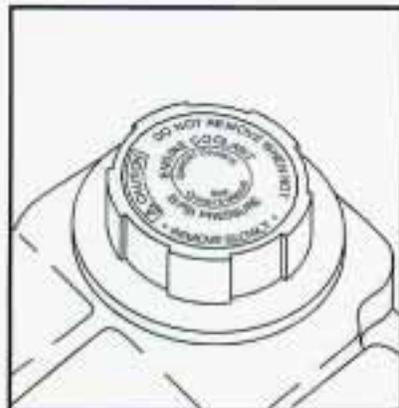


3. Then fill the coolant surge tank with the proper mix, up to **FULL COLD**.



4. With the coolant surge tank pressure cap off, start the engine and let it run until you can feel the upper radiator hose getting hot. Watch out for the engine fans.

By this time, the coolant level inside the coolant surge tank may be lower. If the level is lower, add more of the proper mix to the coolant surge tank until the level reaches **FULL COLD**.



5. Then replace the pressure cap. Be sure the pressure cap is tight.

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 the shift lever in PARK (P).**
- 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.



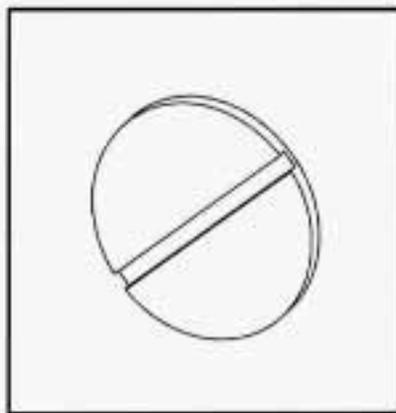
The following steps will tell you how to use the jack and change a tire.

Removing the Spare Tire and Tools



The equipment you'll need is in the trunk if you have a sedan. Turn the wing nut on the screw counterclockwise to remove it. Remove the wheel wrench, spare tire and the jack from the trunk.

The equipment for the wagon is in the rear storage compartment.

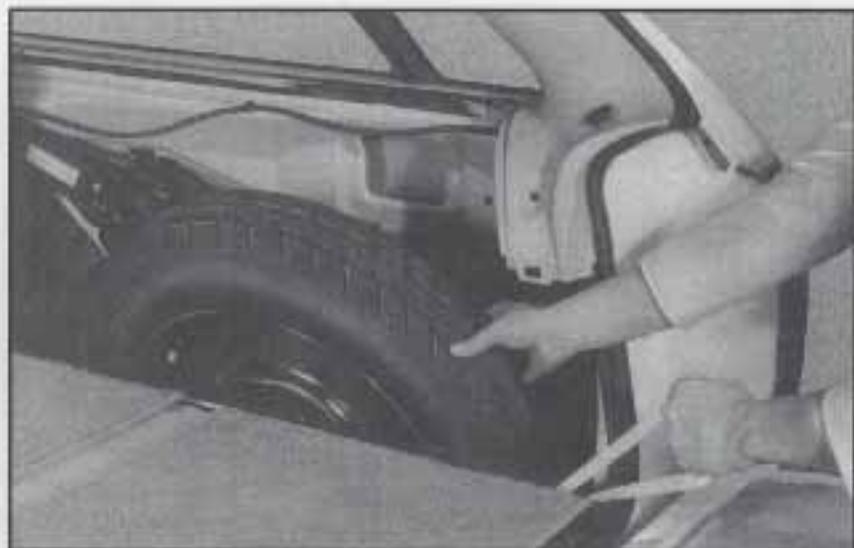
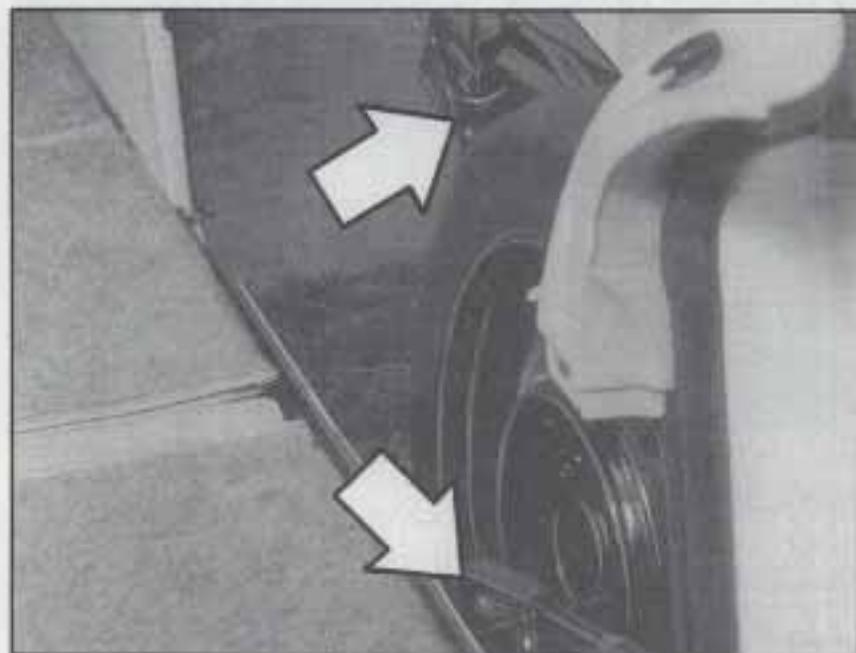


To access the equipment in your wagon, turn the slotted release button located on the rear edge of the cover.

After you have changed the flat tire and have replaced the equipment, be sure to align the slotted release button and turn it to secure the trim panel.

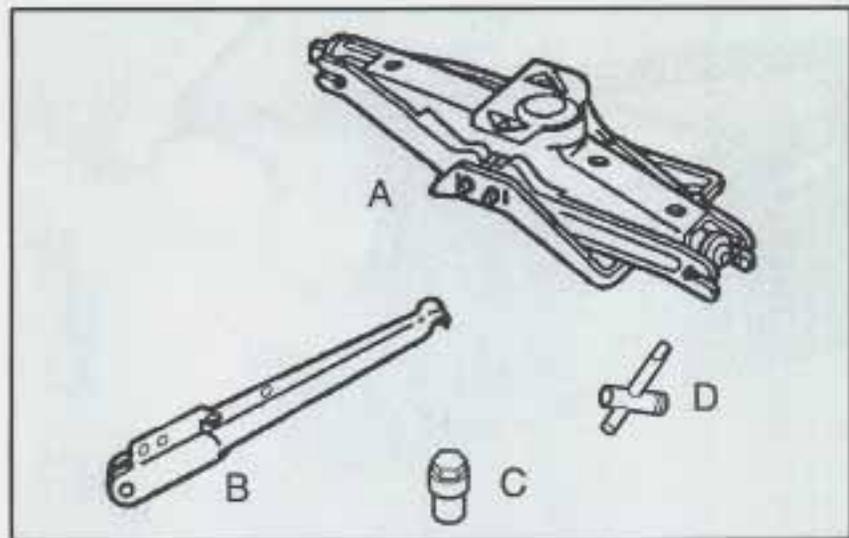
Remove the cover by pulling it away from the window and then sliding it toward the rear, lifting it up and out of the lower track. The wagon tire changing equipment can now be removed.

To remove the spare tire, unscrew and remove the wing nut from the retaining bolt.



Using the tire lift strap, pull the tire out of the storage well.

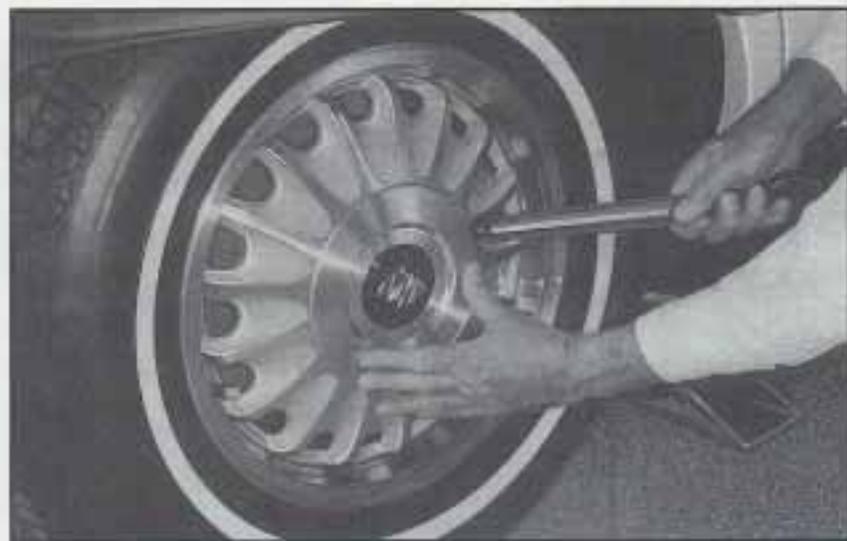
To remove the jack, unscrew the wing bolt from the jack retainer. Remove the jack by sliding it forward.



The tools you'll be using include the jack (A), wheel wrench (B), socket (C) and wheel cover key (D).

Your Buick has a wheel cover that must be removed to access the wheel nuts. Refer to the instructions for the correct wheel cover removal.

If your vehicle has an aluminum wheel cover, it must be removed by carefully prying at the outside edge with the flat end of the wheel wrench.



Remove this wheel cover by carefully prying off the center of the cover with the flat end of the wheel wrench.

If your vehicle has wire wheel covers, remove the center of the wheel cover by using the wire wheel locking key wrench.

Put the flat end into the notch and carefully pry off the small cover.

Remove the lock nut by inserting the key wrench into the hole in the center of the wheel cover and turn it counterclockwise to loosen the lock nut completely. The wheel cover can be removed by hand -- do not pry it 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.



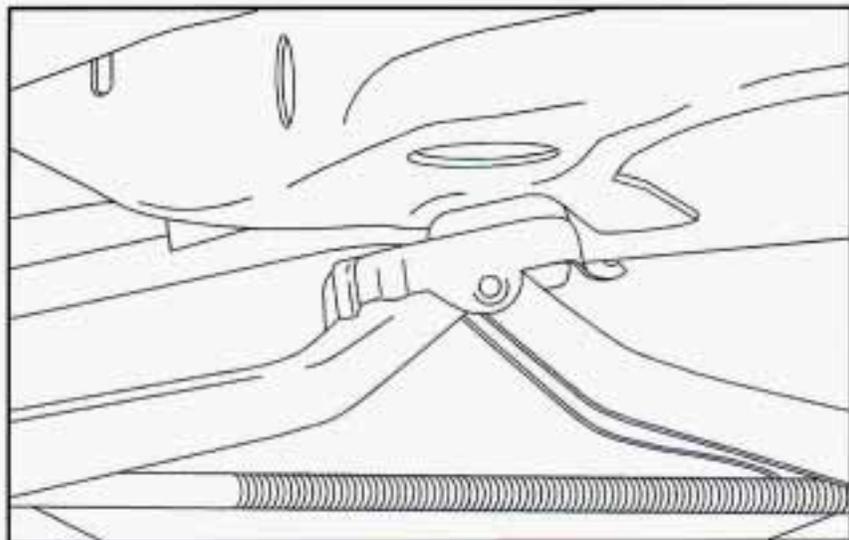
2. Attach the wheel wrench to the bolt at the end of the jack. Rotate the wheel wrench clockwise to slightly raise the lift head.

CAUTION:

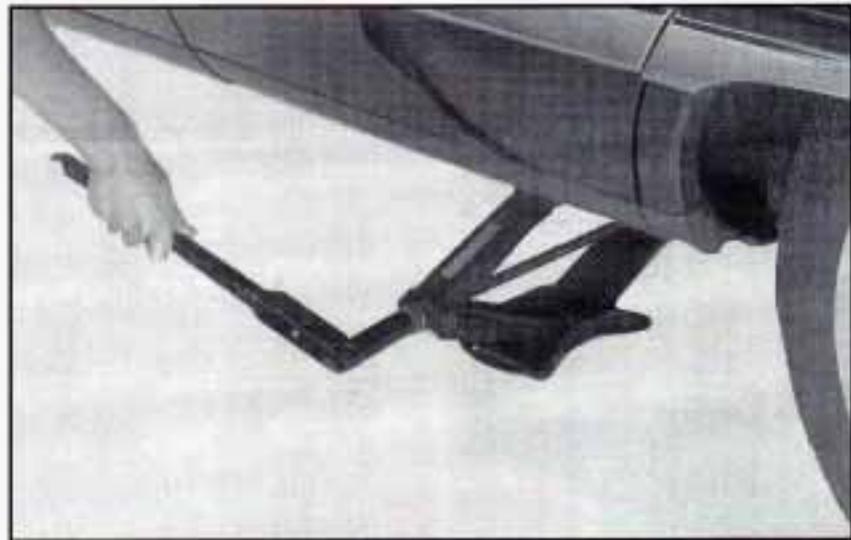
Getting under a vehicle when it is jacked up is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.

NOTICE:

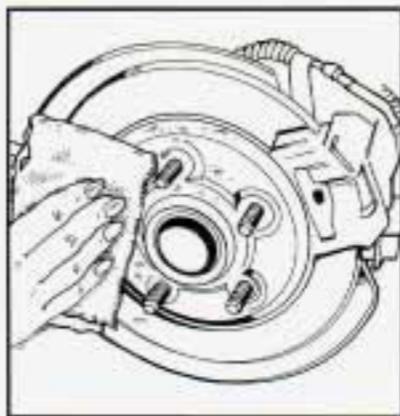
Raising your vehicle with the jack improperly positioned will damage the vehicle or may allow the vehicle to fall off the jack. Be sure to fit the jack lift head into the proper location before raising your vehicle.



3. Position the jack under the vehicle, near the flat tire. There are two holes in the frame near each of the wheels. Raise the jack so the lift head fits into the large circular hole.



4. Raise the vehicle by rotating the wheel wrench clockwise. Raise the vehicle far enough off the ground so there is enough room for the spare tire to fit.
5. Remove all the wheel nuts and take off the flat tire.



6. 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.

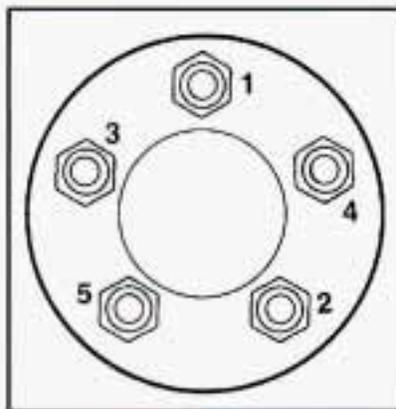
⚠ CAUTION:

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.



7. 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.

8. Lower the vehicle by rotating the wheel wrench counterclockwise. Lower the vehicle completely.



9. Tighten the wheel nuts firmly in a criss-cross 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).

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 or rear area until you have the flat tire repaired or replaced.

NOTICE:

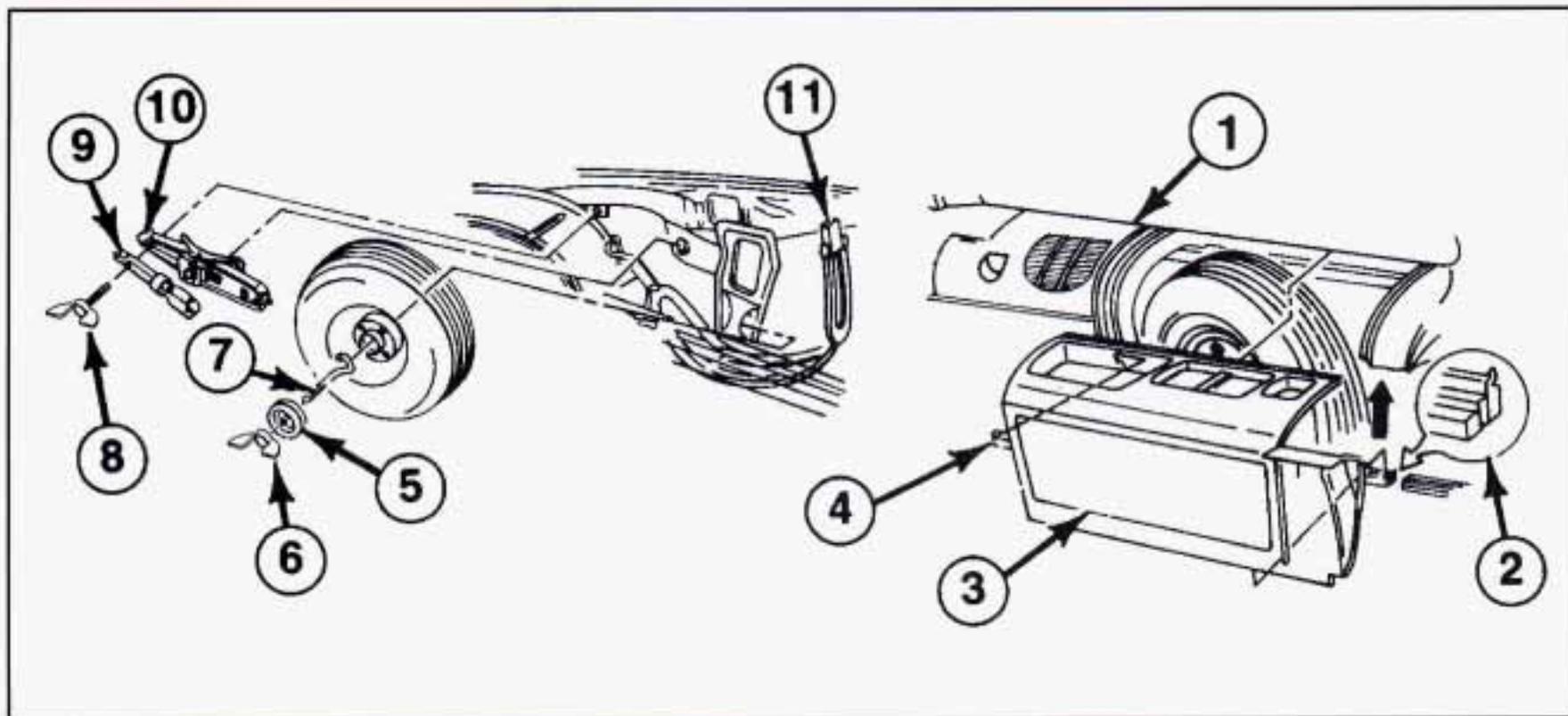
Wheel covers won't fit on your compact spare. If you try to put a wheel cover on your compact spare, you could damage the cover or the spare.

Storing a Flat or Spare Tire and Tools



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.



- 1. Pillar Trim Panel
- 2. Floor Channel
- 3. Cover
- 4. Clip

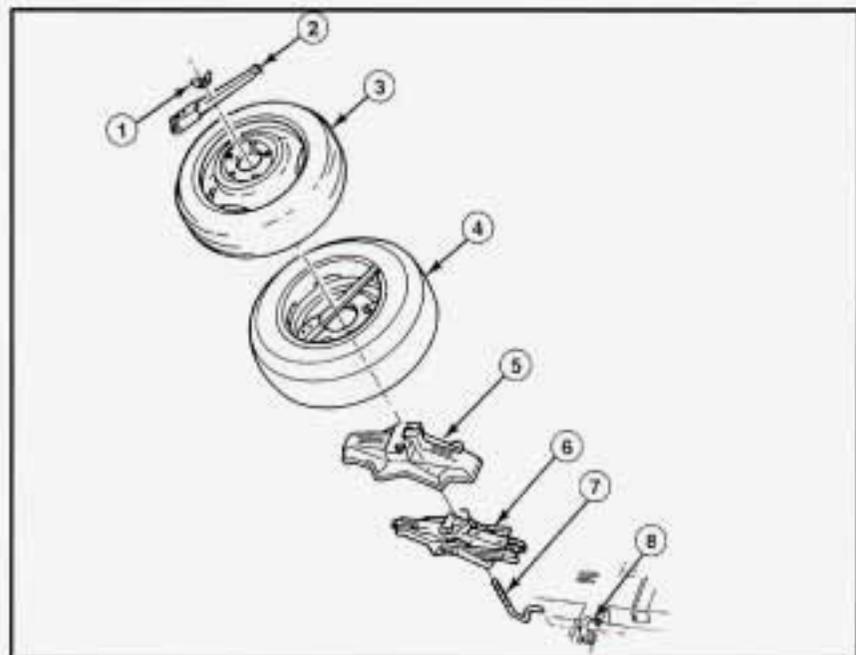
- 5. Disc
- 6. Wing Nut
- 7. Bolt
- 8. Wing Bolt

- 9. Wrench
- 10. Jack
- 11. Lift Strap

On the station wagon, slide the back of the jack base into the retainer in the storage area. Put the wing bolt through the hole in the wrench, then through the hole in the jack. Tighten the wing bolt into the fastener in the storage area. Put the flat or spare into the storage well with the valve stem pointed toward you. Insert the hook end of the bolt through the wheel and into the retainer in the well. Put the disc onto the bolt, then tighten the wing nut on the bolt. Attach the tire lift strap to its retainer.

To replace the trim cover, put the lower edge of the cover into the floor track. Slide the cover toward the front of the vehicle, making sure the front tab goes behind the edge. Insert the rear edge of the cover into the track, adjusting it to fit over the weatherstrip. Snap the front edge of the cover into place. Align the slotted button at the rear edge of the cover and turn it to secure the trim panel.

On the sedan, replace the jack, flat or spare tire, and wheel wrench and tighten the wing nut on the screw.



1. Wing Nut
2. Wrench
3. Compact Spare
4. Full-Size Spare or Flat Tire
5. Jack Cover (If Provided)
6. Jack
7. Screw (Hold-down)
8. Floor Bracket

Compact Spare Tire (If So Equipped)

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 posted speed limits 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.

Your anti-lock brake system warning light may come on when you are driving with a compact spare. See "Anti-Lock Brake System Warning Light" in the Index.

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 transmission 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 transmission back and forth, you can destroy your transmission.

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, spinning the wheels as little as possible. Release the accelerator pedal while you shift, and press lightly on the accelerator pedal when the transmission is in gear. If that doesn't get you out after a few tries, you may need to be towed out. If you do need to be towed out, see "Towing Your Vehicle" in the Index.



Section 6 Service and Appearance Care

Here you will find information about the care of your Buick. 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.

Service

Your Buick 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:



Doing Your Own Service Work

If you want to do some of your own service work, you'll want to get the proper Buick Service Manual. It tells you much more about how to service your Buick 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 Buick" 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, and 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.**

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 still 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 tune-up 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 Buick 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.

In Canada, some gasolines contain an octane enhancing additive called MMT. If such fuels are used, your emission control system performance may be affected. The malfunction indicator lamp on your instrument panel may also turn on. If this occurs, return to your authorized Buick dealer for service.

To provide cleaner air, all gasolines 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
North American Export Sales (NAES)
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

Filling Your Tank

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 sedan gas cap is behind the rear license plate.



The wagon gas cap is behind a hinged door on the driver's side of your vehicle. While refueling, hang the cap inside the fuel door.

To take off 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 Buick” in the Index.

When you put the cap back on, turn it to the right until you hear at least three clicks. 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 or have proper venting, and your fuel tank and emissions system might be damaged.

Checking Things Under the Hood

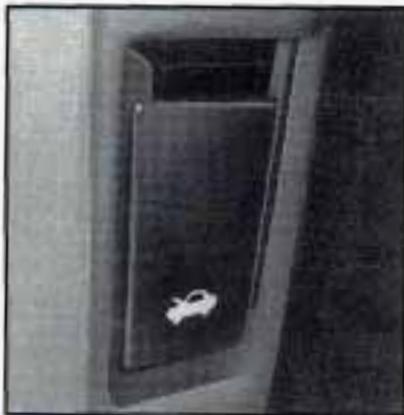
CAUTION:

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.

Hood Release

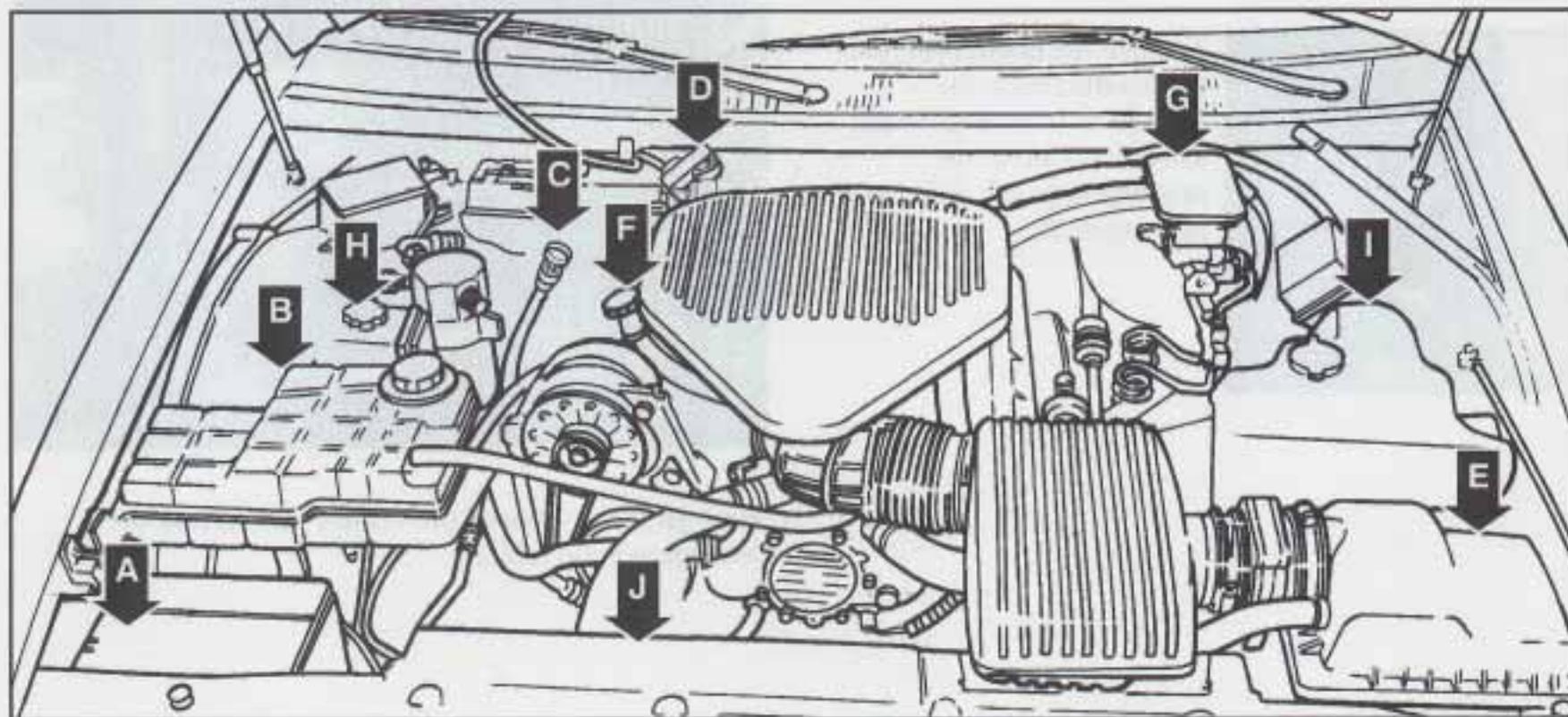


To open the hood, first pull the handle inside the vehicle. It is located on the lower left side of the instrument panel, next to the parking brake.



Then go to the front of the vehicle and release the secondary hood release.

When you lift the hood, you will see these items:



A. Battery

B. Coolant Surge Tank

C. Engine Oil Dipstick

D. Automatic Transmission Dipstick

E. Air Cleaner

F. Engine Oil Fill Cap

G. Brake Fluid Reservoir

H. Power Steering Fluid Reservoir

I. Windshield Washer Reservoir

J. Engine Fans

Before closing the hood, be sure all the filler caps are on properly. Then just pull the hood down and close it firmly.

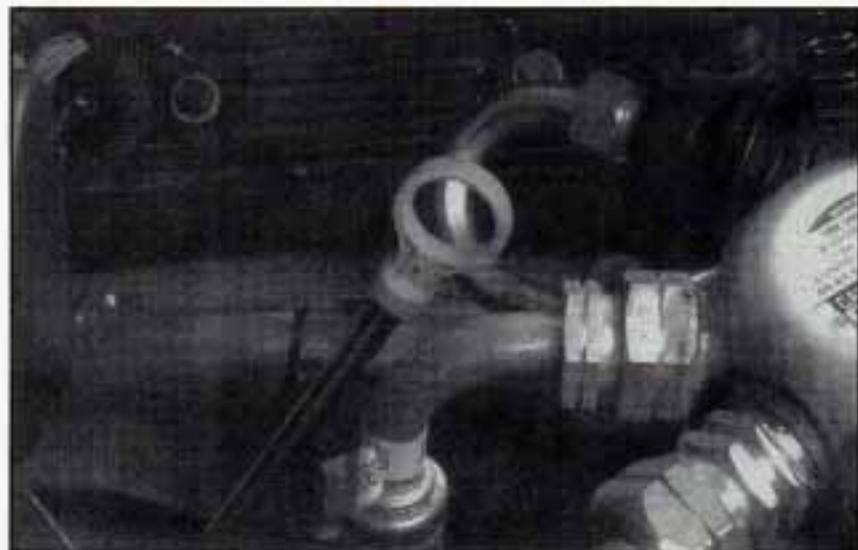
Engine Oil

LOW
OIL
LEVEL

If the LOW OIL LEVEL light on the instrument panel comes on, it means you need to check your engine oil level right away.

For more information, see in the Index. You should check your engine oil level regularly; this is an added reminder.

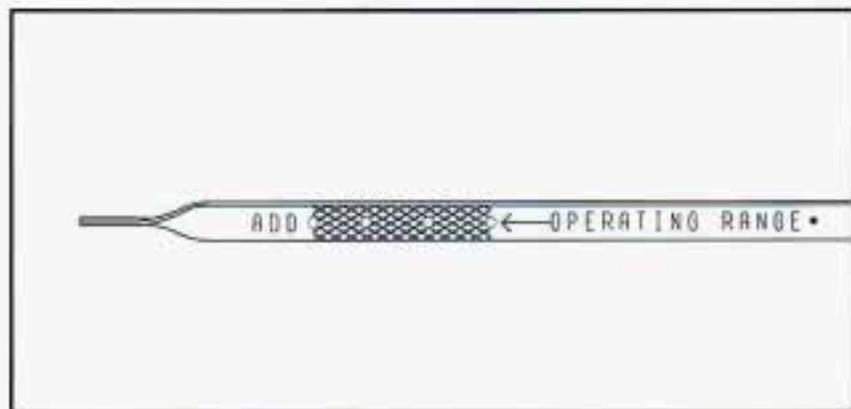
It's a good idea to check your engine oil every time you get fuel. In order to get an accurate reading, the oil must be warm and the vehicle must be on level ground.



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 Oil

If the oil is at or below the ADD line, then you'll need to add some 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 cross-hatched area that shows the proper operating range, your engine could be damaged.

Just 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 Oil to Use

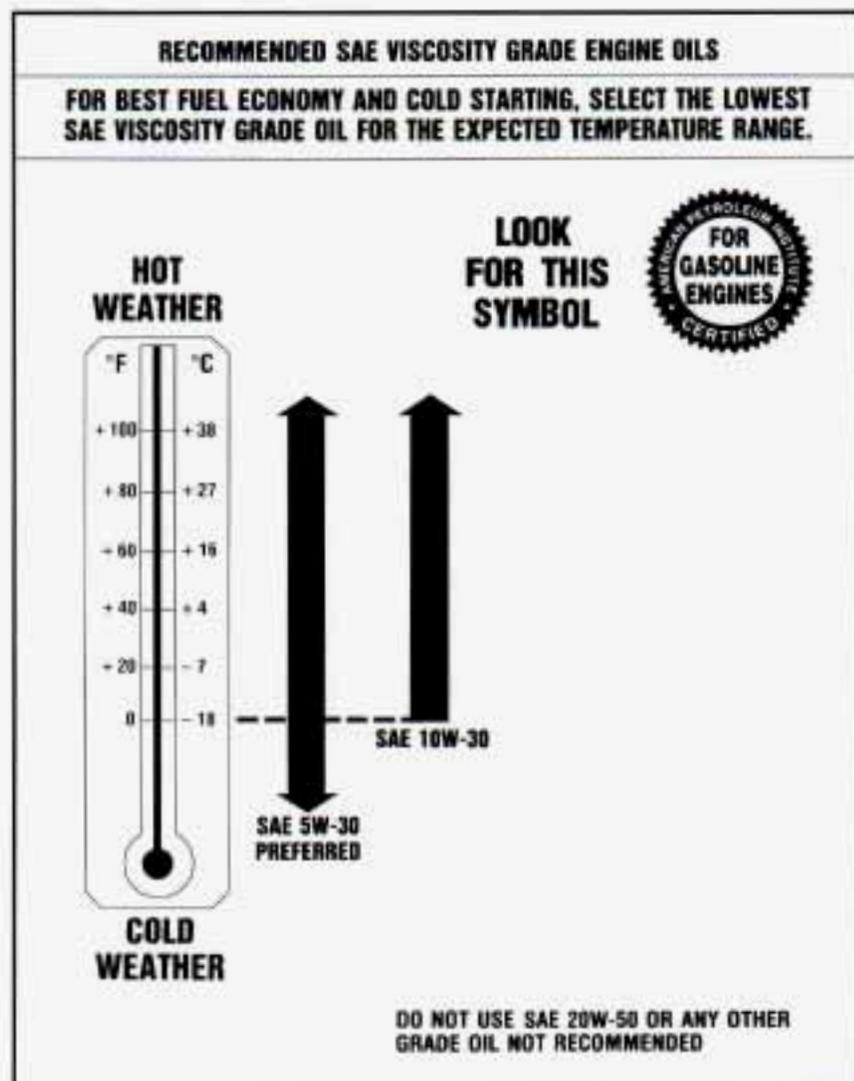
Oils recommended for your vehicle can be identified by looking for the "Starburst" symbol. This symbol indicates that the oil has been certified by the American Petroleum Institute (API). Do not use any oil which does not carry this Starburst symbol.



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[®] oil meets all the requirements for your vehicle.

Engine Oil Additives

Don't add anything to your oil. Your Buick dealer is ready to advise if you think something should be added.

When to Change Engine Oil

See if any one of these is true for you:

- 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. (See “Change Oil Light” in the Index.)

If none of them is true, 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.

See “Change Oil Light” in the Index for more information on when to change the oil.

What to Do with Used Oil

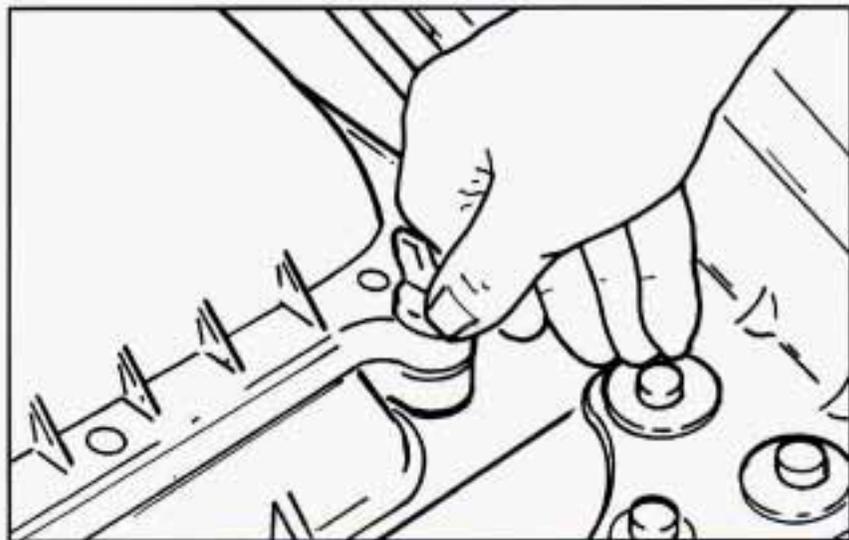
Did you know that used engine oil contains certain elements that may be unhealthy for your skin and could even cause cancer? Don't let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly throw away clothing or rags containing 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.

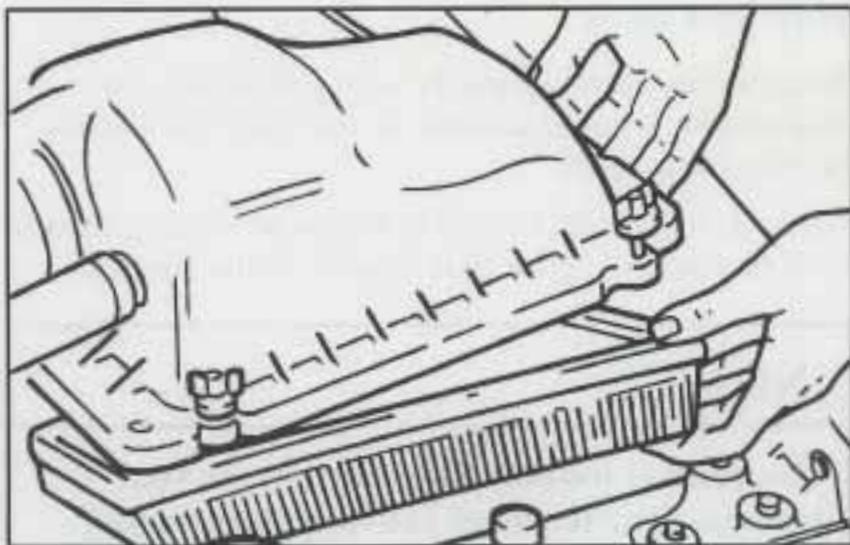
Air Cleaner



The air cleaner is located on the driver's side of the engine compartment.



To check or replace the filter, loosen the wing nuts and lift up the cover.



Remove the air filter. Be sure to inspect both sides of the filter and replace it if necessary. Close the cover and properly secure the wing nuts.

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 Transmission Fluid

When to Check and Change

A good time to check your automatic transmission fluid level is when the engine oil is changed.

Change both the fluid and filter every 50,000 miles (83 000 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, the fluid and filter do not require changing.

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 Buick 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 transmission. 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 transmission fluid.

Wait at least 30 minutes before checking the transmission 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).

Checking Transmission Fluid Hot

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), drive the vehicle in DRIVE (D) until the engine temperature gage moves and then remains steady for 10 minutes. Then follow the hot check procedures.

Checking Transmission Fluid Cold

A cold check is made after the vehicle has been sitting for eight hours or more with the engine off and is used only as a reference. Let the engine run at idle for five minutes if outside temperatures are 50°F (10°C) or more. If it's colder than 50°F (10°C), you may have to idle the engine longer. Should the fluid level be low during a cold check, you *must* perform a hot check before adding fluid. This will give you a more accurate reading of the fluid level.

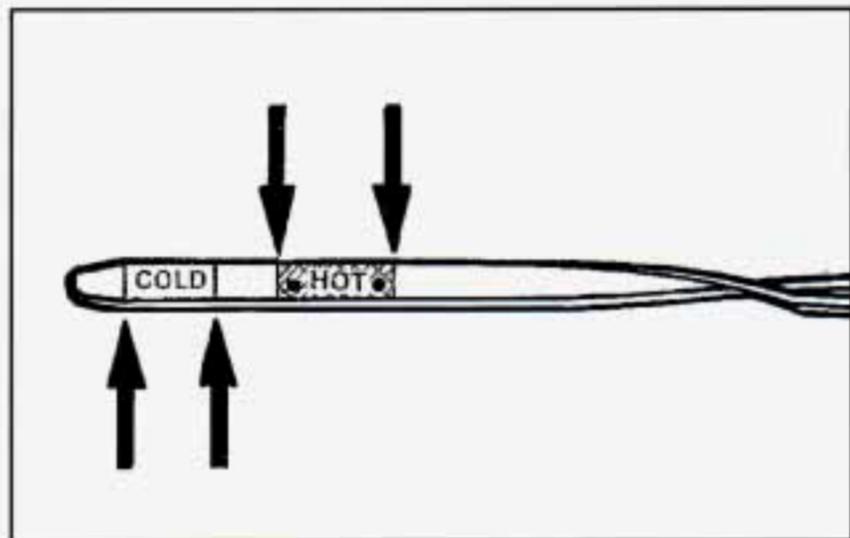
Checking the Fluid Hot or Cold

- 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 minutes or more.

Then, without shutting off the engine, follow these steps:



1. Flip the handle up and then 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 in the COLD area for a cold check or in the HOT area or cross-hatched area for a hot check.
4. If the fluid level is in the acceptable range, push the dipstick back in all the way; then flip the handle down to lock the dipstick in place.

How to Add Fluid

Refer to the Maintenance Schedule to determine what kind of transmission fluid to use. See “Recommended Fluids and Lubricants” in the Index.

Add fluid only after checking the transmission fluid HOT. (A COLD check is used only as a reference.) If the fluid level is low, add only enough of the proper fluid to bring the level up to the HOT area for a hot check. It doesn't take much fluid, generally less than a pint (0.5 L). *Don't overfill.* We recommend you use only fluid labeled DEXRON[®]-III, because fluid with that label is made especially for your automatic transmission. Damage caused by fluid other than DEXRON[®]-III is not covered by your new vehicle warranty.

- After adding fluid, recheck the fluid level as described under “How to Check.”
- When the correct fluid level is obtained, push the dipstick back in all the way; then flip the handle down to lock the dipstick in place.

Rear Axle

When to Check and Change Lubricant

Refer to the Maintenance Schedule to determine how often to check the lubricant and when to change it. See “Scheduled Maintenance Services” in the Index.

How to Check Lubricant

If the level is below the bottom of the filler plug hole, you'll need to add some lubricant. Add enough lubricant to raise the level to the bottom of the filler plug hole.

What to Use

Standard Differential

Use Axle Lubricant (GM Part No. 1052271) or SAE 80W-90 GL-5 gear lubricant.

Limited-Slip Differential

To add lubricant when the level is low, use Axle Lubricant (GM Part No. 1052271). To completely refill after draining, add 4 ounces (118 ml) of Limited-Slip Differential Lubricant Additive (GM Part No. 1052358). Then fill to the bottom of the filler plug hole with Axle Lubricant (GM Part No. 1052271).

Engine Coolant

The cooling system in your vehicle is filled with new DEX-COOL™ (orange-colored, silicate-free) engine coolant. This coolant is designed to remain in your vehicle for 5 years or 100,000 miles (166 000 km), whichever occurs first.

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 for your Chevrolet will:

- Give freezing protection down to -34°F (-37°C).
- Give boiling protection up to 265°F (129°C).
- Protect against rust and corrosion.
- Help keep the proper engine temperature.
- Let the warning lights and gages work as they should.

NOTICE:

When adding coolant it is important that you use DEX-COOL™ (orange-colored, silicate-free) coolant meeting GM Specification 6277M.

If *silicated* coolant is added to the system, premature engine, heater core or radiator corrosion may result. In addition, the engine coolant will require change sooner -- at 30,000 miles (50 000 km) or 24 months, whichever occurs first.

What to Use

Use a mixture of one-half *clean water* (preferably distilled) and one-half DEX-COOL™ (orange-colored, silicate-free) antifreeze that meets GM Specification 6277M, which won't damage aluminum parts. Use GM Engine Coolant Supplement (sealer) (GM Part No. 3634621) with any complete coolant change. 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 mix will. Your vehicle's coolant warning system is set for the proper coolant mix. With plain water or the wrong mix, 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 mix of clean water and DEX-COOL™ (orange-colored, silicate-free) antifreeze.

NOTICE:

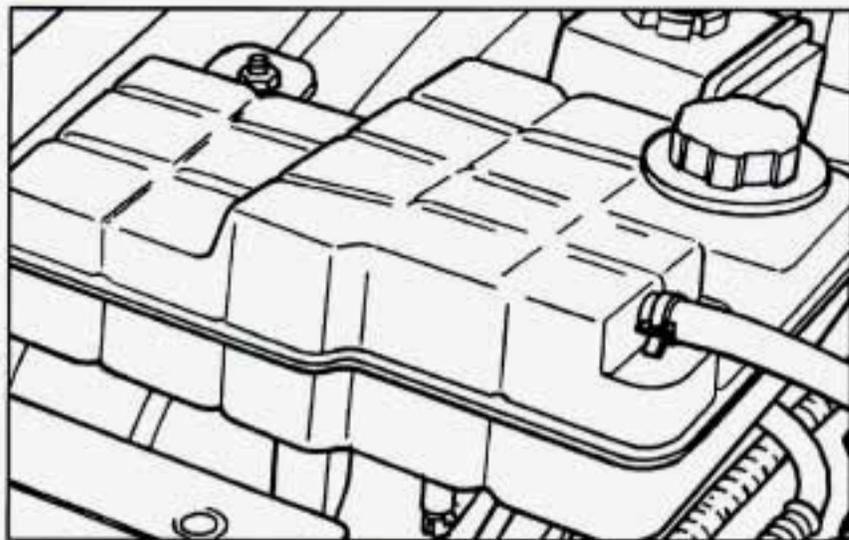
If you use an improper coolant mix, your engine could overheat and be badly damaged. The repair cost wouldn't be covered by your warranty. Too much water in the mix can freeze and crack the engine, radiator, heater core and other parts.

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



The surge tank is in the engine compartment, directly behind the battery.



CAUTION:

Turning the surge tank pressure cap when the engine and radiator are hot can allow steam and scalding liquids to blow out and burn you badly. Never turn the surge tank pressure cap -- even a little -- when the engine and radiator are hot.

When your engine is cold, the coolant level should be at the FULL COLD mark.

LOW
COOLANT
LEVEL

If this light comes on, it means you're low on engine coolant.

See "Low Coolant Light" in the Index.

Adding Coolant

If you need more coolant, add the proper mix *at the surge tank*, but only when the engine is cool.



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 replacing the pressure cap, make sure it is tight.

Surge Tank Pressure Cap

NOTICE:

The surge tank 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.

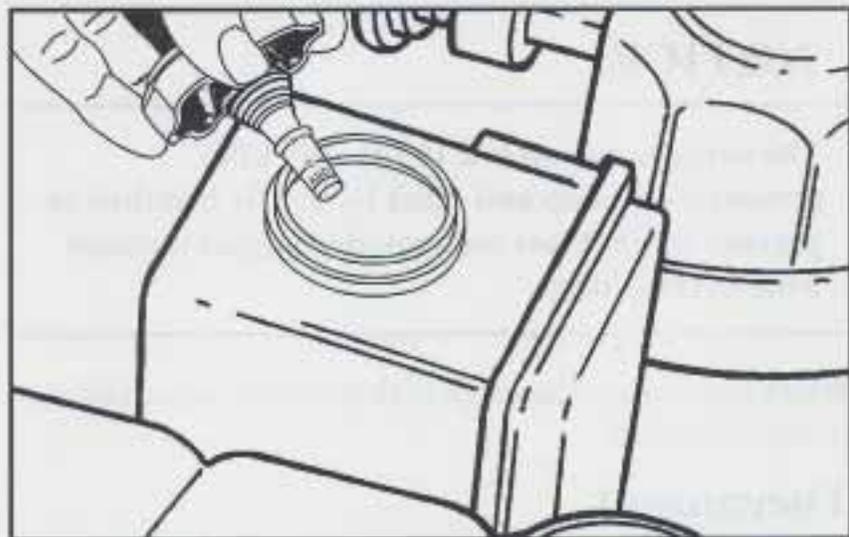
When you replace the surge tank pressure cap, a GM cap is recommended.

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, an AC[®] thermostat is recommended.

Power Steering Fluid



The power steering cap is to the left of the engine fan when you are facing the engine.

When to Check Power Steering Fluid

It is not necessary to regularly check power steering fluid unless you suspect there is a leak in the system or you hear an unusual noise. A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

How To Check Power Steering Fluid

When the engine compartment is cool, unscrew the cap and wipe the dipstick with a clean rag. Replace the cap and completely tighten it. Then remove the cap again and look at the fluid level on the dipstick.

The level should be at the C mark. If necessary, add only enough fluid to bring the level up to this mark.

What to Use

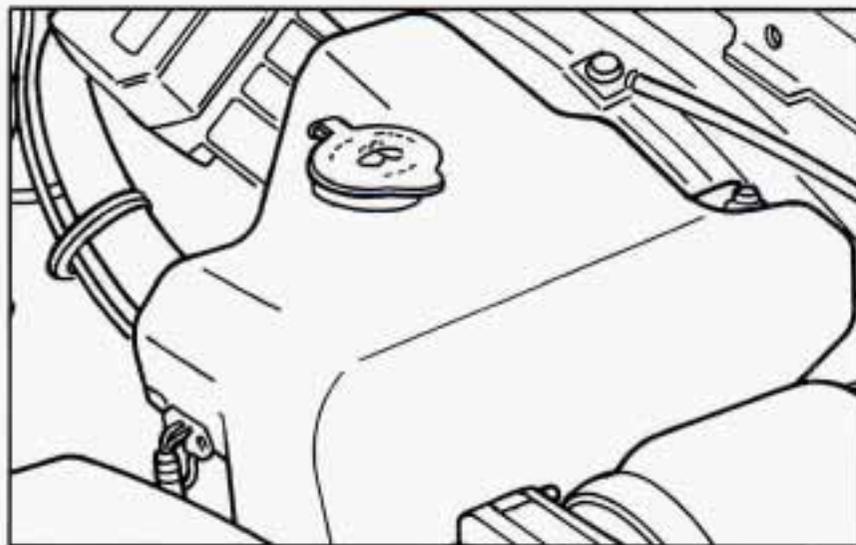
Refer to the Maintenance Schedule to determine what kind of fluid to use. See “Recommended Fluids and Lubricants” in the Index. Always use the proper fluid. Failure to use the proper fluid can cause leaks and damage hoses and seals.

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



The windshield washer reservoir is located on the driver's side of the engine compartment.

Open the cap labeled WASHER FLUID ONLY.
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, which could damage the tank if it is completely full.**
- **Don't use radiator 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.

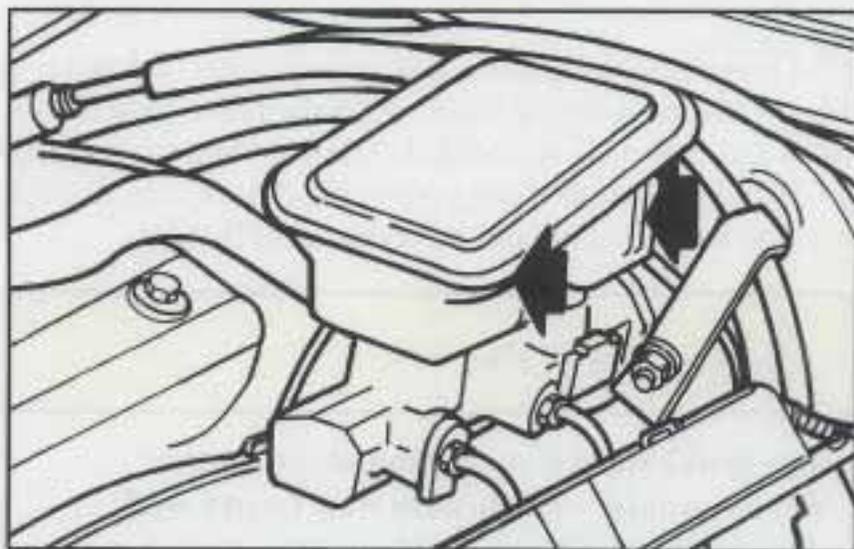


CAUTION:

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.

Refer to the Maintenance Schedule to determine when to check your brake fluid. See "Periodic Maintenance Inspections" in the Index.

Checking Brake Fluid



You can check the brake fluid without taking off the cap. Just look at the windows on the brake fluid reservoir. The fluid levels should be above MIN. If they aren't, have your brake system checked to see if there is a leak.

After work is done on the brake hydraulic system, make sure the levels are above MIN and below the top of each window.

What to Add

When you do need brake fluid, use only DOT-3 brake fluid -- such as Delco Supreme 11[®] (GM Part No. 1052535). Use new brake fluid from a sealed container only, and always clean the brake fluid reservoir cap before removing it.

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 Buick 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 sooner or later 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.

Free movement of brake calipers and properly torqued wheel nuts are necessary to help prevent brake pulsation. When tires are rotated, inspect brake calipers for movement, 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. 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 brakes replaced, have the rear brakes inspected, too.

Brake linings should always be replaced as complete axle sets.

Brake Pedal Travel

See your dealer if the brake pedal does not return to normal height, or if there is a rapid increase in pedal travel. This could be a sign 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.

If your brake pedal goes down farther than normal, your rear drum brakes may need adjustment. Adjust them by backing up and firmly applying the brakes a few times.

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. Vehicles we design and test have top-quality GM brake parts in them, as your Buick does when it is new. 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 genuine 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 Buick has a Delco Freedom[®] battery. You never have to add water to one of these. When it's time for a new battery, we recommend a Delco 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, take off 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.

Also, for your audio system, see "Theft-Deterrent Feature" in the Index.

Bulb Replacement

For the proper type of replacement bulbs, see "Replacement Bulbs" in the Index.

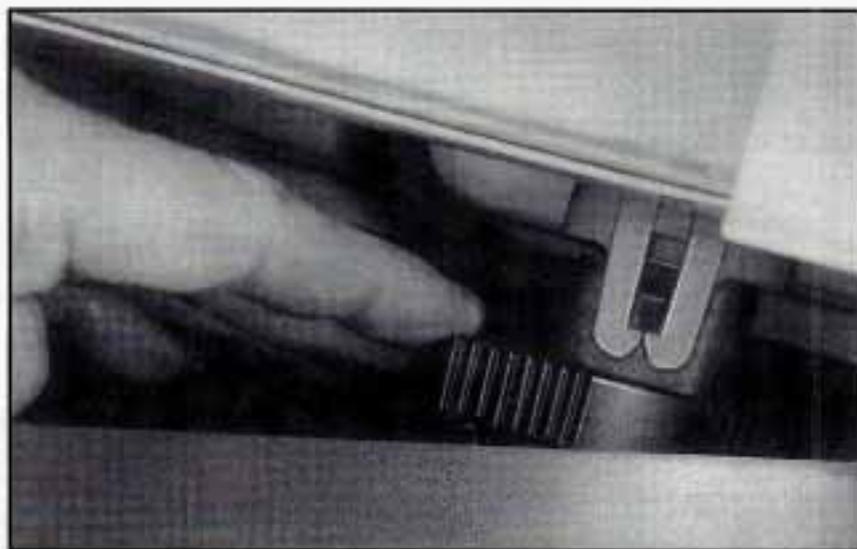
Halogen Bulbs

CAUTION:

Halogen bulbs have pressurized gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Take special care when handling and disposing of halogen bulbs.

Headlamps

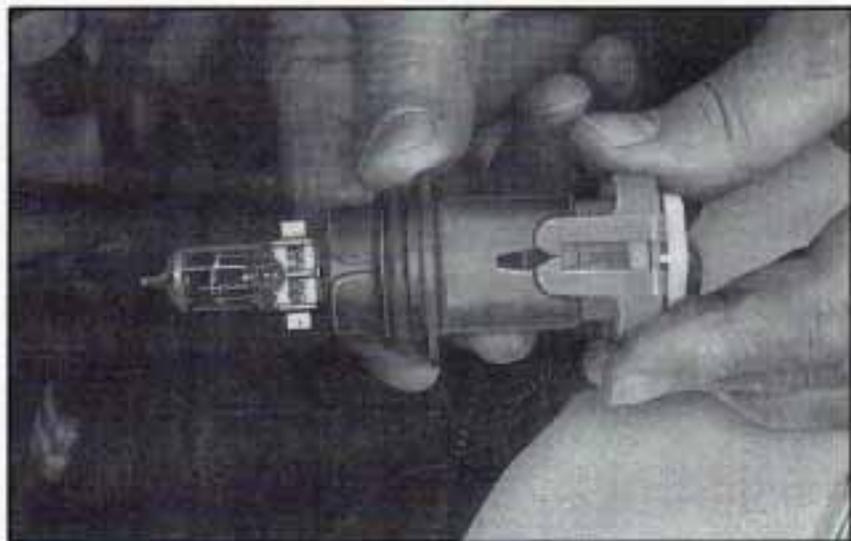
1. To replace the headlamp bulbs, locate the headlamp bulb retainer directly behind the headlamps.



2. Turn the headlamp bulb retainer a quarter-turn counterclockwise.



3. Gently pull the headlamp bulb assembly straight out from the access area.



4. Remove the electrical connector from the bulb by lifting the lock tab and pulling it away from the plastic base.
5. To reinstall the headlamp bulb assembly, attach the electrical connector to the plastic base -- making sure the lock tab is over the lock. Put the small tab into the small notch in the lamp. Put the retainer on and turn it slightly clockwise to lock it into place.

Do not touch the glass portion of the new halogen bulb! The oil from your fingers will shorten the life of your new halogen bulb.

Parking/Turn Signal and Cornering Lamp

1. Open the hood.



2. Remove the screw from the bracket.
3. Remove the lamp assembly by pulling forward.

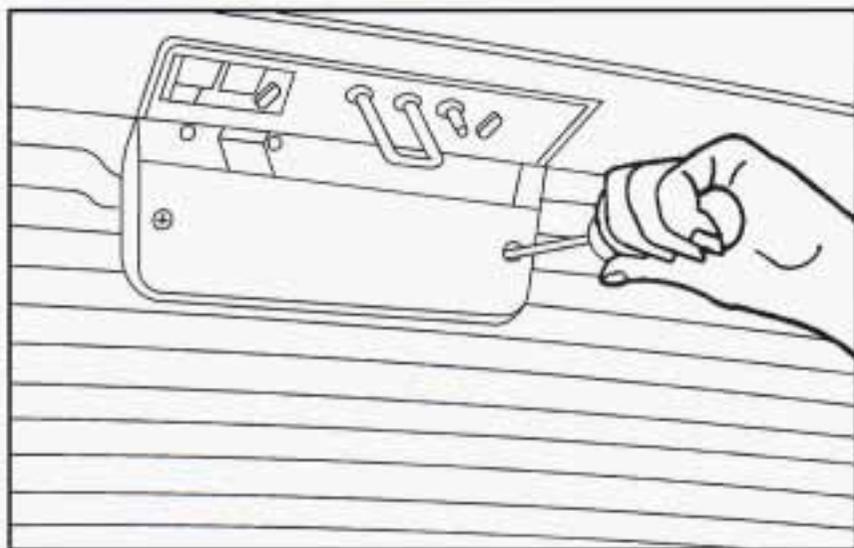
4. Remove the electrical connectors from the lamp assembly.
5. Remove the bulb from the electrical connectors.
6. Reverse the steps with a new bulb.

Center High-Mounted Stoplamp (Sedan)

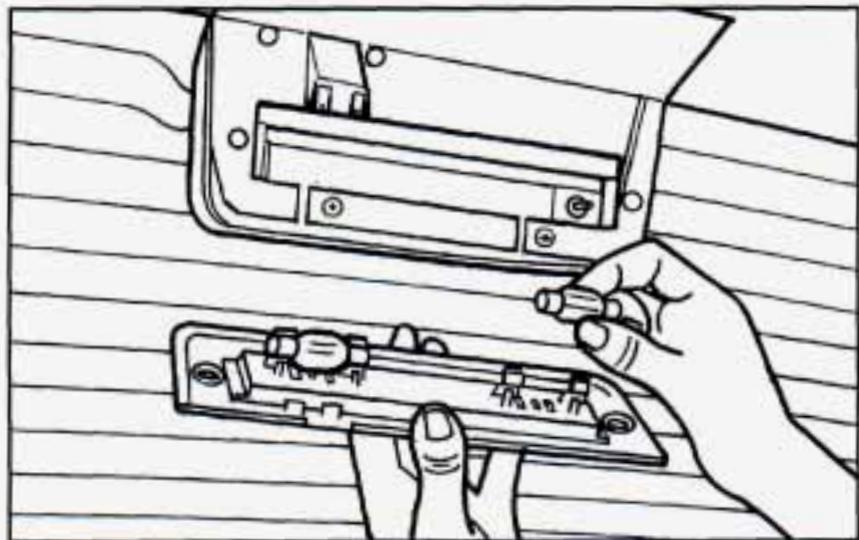
1. Unclip the stoplamp cover from the rear window and stoplamp assembly.
2. Turn the socket counterclockwise and remove from the stoplamp assembly.
3. Push the bulb gently into the socket and turn counterclockwise to remove.
4. Reverse the steps with a new bulb.

Center High-Mounted Stoplamp (Wagon)

1. Open the tailgate window.
2. Remove the two screws.



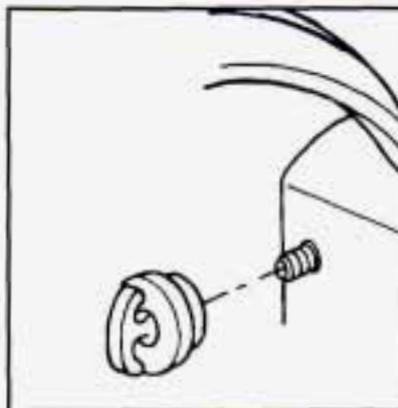
3. Bring down the bulb assembly.



4. Pull the bulb out of its retainer.
5. Reverse the steps with a new bulb.

Taillamp (Sedan)

1. Open the trunk.



2. Remove the nut from the trunk trim assembly.

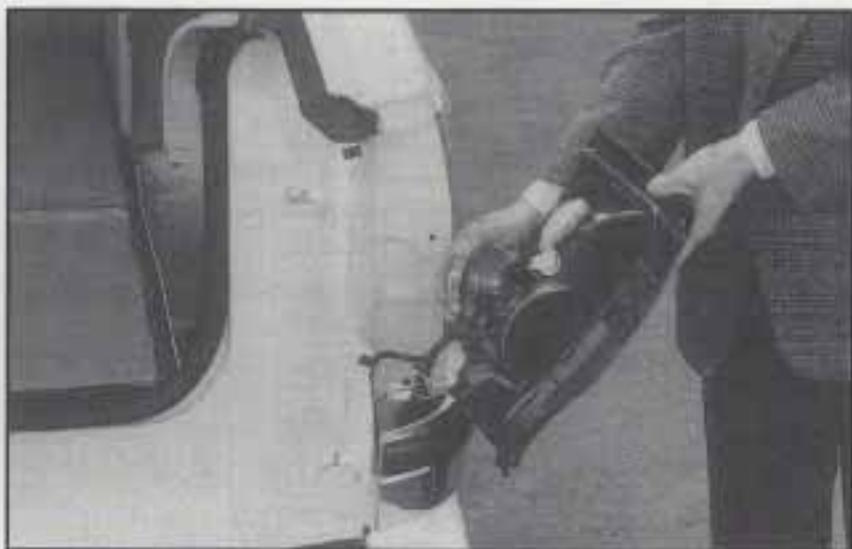
3. Pull the taillamp assembly away from the body.
4. Disconnect the electrical connectors from the taillamp assembly.
5. Remove the bulb.
6. Reverse the steps with a new bulb.

Taillamp (Wagon)



1. Remove the two Phillips[®] head screws.
2. For the passenger's side taillamp, remove the housing that covers the spare tire. To do this, turn the slotted release button located on the rear edge of the cover. Then pull the cover away from the window, slide it toward the rear and lift it up and out of the lower track. For the driver's side taillamp, remove the trim panel.
3. Unscrew the wing nut.

4. From outside the vehicle, carefully pull the taillamp assembly away from the body.

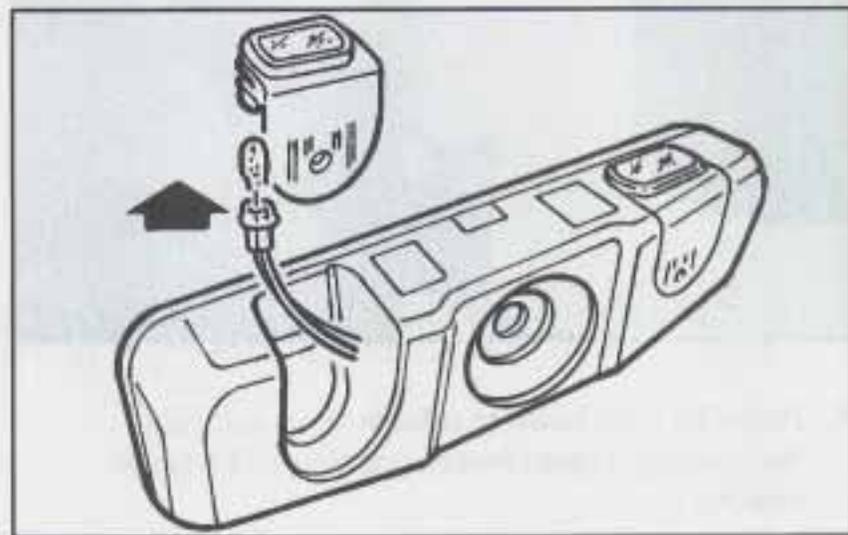


5. Press the bulb housing release lever and turn the housing a quarter-turn counterclockwise to remove it.
6. To remove the bulb, push it in and rotate it counterclockwise.
7. Reverse all the steps to reassemble the taillamp housing.

Front Reading Lamp

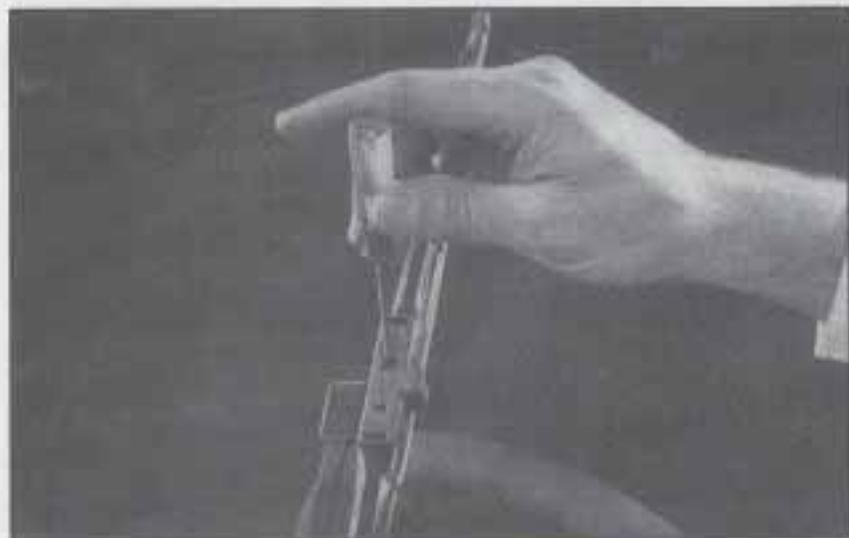
The front reading lamps are part of the rearview mirror.

1. Remove the screw and pry the housing from the mirror assembly.
2. Remove the socket from the housing.



3. Pull the bulb from the socket.
4. Reverse the steps with a new bulb.

Wiper Blade Replacement



It's a good idea to clean or replace the wiper blade assembly every six months. For the proper windshield wiper blade length and type, see "Replacement Parts" later in this section. To remove the wiper blade assembly:

1. Position the windshield wipers on the windshield in the "mid" wipe position. To do this, turn the ignition key to ACCESSORY and turn the wipers on. Then with the door open, turn the ignition key to OFF.

2. Insert the tip of a small screwdriver in to the slot as shown and gently press down to release the wiper blade from the arm.
3. To install the wiper blade, align the wiper arm pin with the hole on the wiper blade assembly and snap it into place. Return the wipers to their normal position.

Tires

We don't make tires. Your new Buick 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 Buick 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.**

CAUTION: (Continued)

CAUTION: (Continued)

- **Underinflated tires pose the same danger as overloaded tires. The resulting accident could cause serious injury. Check all tires frequently to maintain the recommended pressure. Tire pressure should be checked when your 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 on the rear edge of the driver's door, 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. Also, check the tire pressure of the spare tire.

If you have a compact spare tire, it should be at 60 psi (420 kPa).

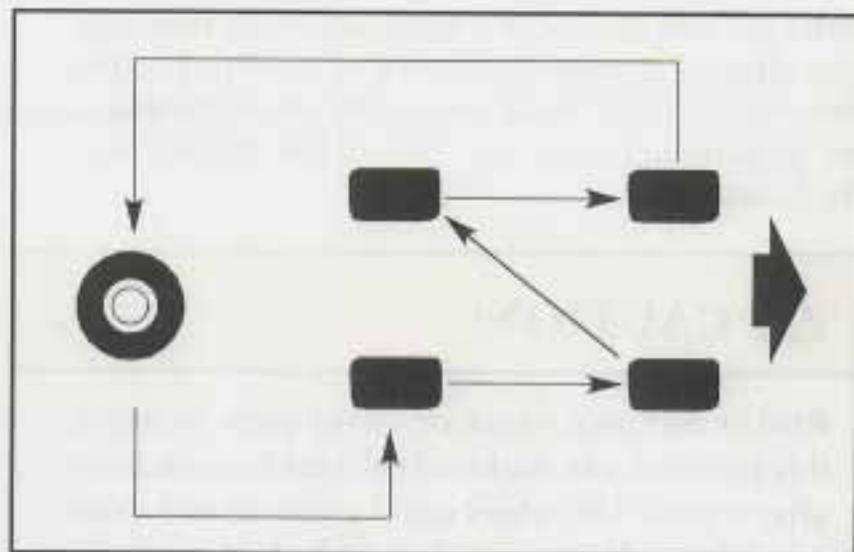
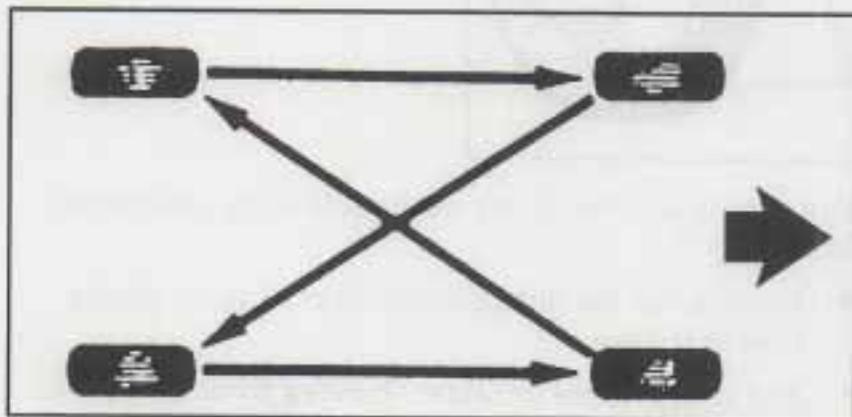
How to Check

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 inspected every 6,000 to 8,000 miles (10 000 to 13 000 km) for any signs of unusual wear. If unusual wear is present, 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 one of the correct rotation patterns shown here.

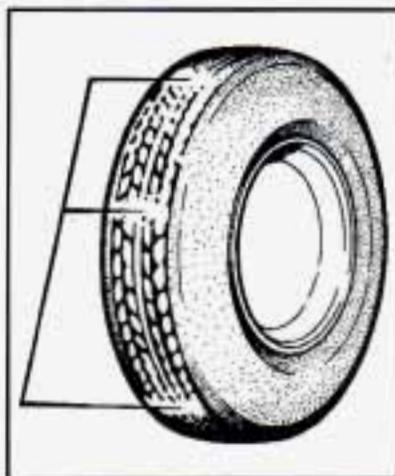
If your vehicle has a compact spare tire, don’t include it in your tire rotation.

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.

The tires installed on your vehicle when it was new had a Tire Performance Criteria Specification (TPC Spec) number on each tire's sidewall. When you get new tires, get ones with that same TPC Spec number. That way your vehicle will continue to have tires that are designed to give proper endurance, handling, speed rating, traction, ride and other things during normal service on your vehicle. If your tires have an all-season tread design, the TPC number will be followed by an "MS" (for mud and snow).

If you ever replace your tires with those not having a TPC Spec number, make sure they 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 four wheels.

It's all right to drive with your compact spare (if you have one). It was developed for use 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 (straightahead) 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.

In most cases, you will not need to have your wheels aligned again. 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 Buick 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 Buick 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 many miles 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 rear 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 Buick, 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 Buick

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

Your Buick dealer has two GM cleaners, a solvent-type spot lifter and a foam-type powdered cleaner. They will clean normal spots and stains very well. Do not use them on vinyl or leather.

Here are some cleaning tips:

- Always read the instructions on the cleaner label.
- Clean up stains as soon as you can -- before they set.
- Use a clean cloth or sponge, and change to a clean area often. A soft brush may be used if stains are stubborn.
- Use solvent-type cleaners in a well-ventilated area only. If you use them, don't saturate the stained area.
- If a ring forms after spot cleaning, clean the entire area immediately or it will set.

Using Foam-Type 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 Multi-Purpose Powdered Cleaner following the directions on the container label.
4. Use suds only and apply with a clean sponge.
5. Don't saturate the material.
6. Don't rub it roughly.
7. As soon as you've cleaned the section, use a sponge to remove the suds.
8. Rinse the section with a clean, wet sponge.
9. Wipe off what's left with a slightly damp paper towel or cloth.
10. Then dry it immediately with a blow dryer.
11. Wipe with a clean cloth.

Using Solvent-Type Cleaner on Fabric

First, see if you have to use solvent-type cleaner at all. Some spots and stains will clean off better with just water and mild soap.

If you need to use a solvent:

- Gently scrape excess soil from the trim material with a clean, dull knife or scraper. Use very little cleaner, light pressure and clean cloths (preferably cheesecloth). Cleaning should start at the outside of the stain, “feathering” toward the center. Keep changing to a clean section of the cloth.
- When you clean a stain from fabric, immediately dry the area with a blow dryer to help prevent a cleaning ring.

Special Cleaning Problems

Greasy or Oily Stains

Stains caused by grease, oil, butter, margarine, shoe polish, coffee with cream, chewing gum, cosmetic creams, vegetable oils, wax crayon, tar and asphalt can be removed as follows:

1. Carefully scrape off excess stain.
2. Follow the solvent-type instructions described earlier.
3. Shoe polish, wax crayon, tar and asphalt will stain if left on a vehicle’s seat fabric. They should be removed as soon as possible. Be careful, because the cleaner will dissolve them and may cause them to spread.

Non-Greasy Stains

Stains caused by catsup, coffee (black), egg, fruit, fruit juice, milk, soft drinks, wine, 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 foam-type 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. If needed, clean lightly with solvent-type cleaner.

Combination Stains

Stains caused by candy, ice cream, mayonnaise, chili sauce and unknown stains can be removed as follows:

- Carefully scrape off excess stain, then clean with cool water and allow to dry.
- If a stain remains, clean it with solvent-type cleaner.

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 GM Vinyl/Leather Cleaner or equivalent product.

Cleaning Leather

Use a soft cloth with lukewarm water and a mild soap or saddle soap.

- For stubborn stains, use a GM Vinyl/Leather Cleaner or equivalent product.
- *Never* use oils, varnishes, solvent-based or abrasive cleaners, furniture polish or shoe polish on leather.
- Soiled leather should be cleaned immediately. If dirt is allowed to work into the finish, it can harm the leather.

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.

Care of Safety Belts

Keep belts clean and dry.

CAUTION:

Do not bleach or dye safety belts. If you do, it may severely weaken them. In a crash, they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.

Glass

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.

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, Backglass and Wiper Blades

If the windshield is not clear after using the windshield washer, or if the wiper blade chatters when running, wax or other material may be on the blade or windshield.

Clean the outside of the windshield with GM Windshield Cleaner, Bon-Ami Powder[®] (GM Part No. 1050011). The windshield is clean if beads do not form when you rinse it with water.

Clean the blade by wiping vigorously with a cloth soaked in full-strength windshield washer solvent. Then rinse the blade with water.

Wiper blades should be checked on a regular basis and replaced when 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 Buick

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. 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 a 100% cotton towel to avoid surface scratches and water spotting.

High pressure car washes may cause water to enter your vehicle.

Finish Care

Occasional waxing or mild polishing of your Buick 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 Buick 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 Buick garaged or covered whenever possible.

Aluminum Wheels (If So 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.

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, Buick 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
1050004	2.75 sq. ft.	Chamois	Shines vehicle without scratching
1050172	16 oz. (0.473 L)	Tar and Road Oil Remover	Also removes old waxes and polishes
1050173	16 oz. (0.473 L)	Chrome Cleaner and Polish	Removes rust and corrosion
1050174	16 oz. (0.473 L)	White Sidewall Tire Cleaner	Removes soil and black marks
1050201	16 oz. (0.473 L)	Magic Mirror Cleaner Polish	Exterior cleaner and polish
1050214	32 oz. (0.946 L)	Vinyl and Leather Cleaner	Spot and stain removal
1050427	23 oz. (0.680 L)	Glass Cleaner	Cleans grease, grime and smoke film
1050429	6 lbs. (2.72 kg)	Multi-Purpose Powdered Cleaner	Cleans vinyl, cloth, tires and mats
1051398*	8 oz. (0.237 L)	Spot Lifter	For cloth
1051515	32 oz. (0.946 L)	Optikleen	Windshield washer solvent and antifreeze
1052870	16 oz. (0.473 L)	Wash and Wax Concentrate	Exterior wash
1052918**	8 oz. (0.237 L)	Armor All™ Protector	Protects vinyl, leather and rubber
1052929	16 oz. (0.473 L)	Wheel Cleaner	Spray on wheel cleaner
1052930	8 oz. (0.237 L)	Capture Dry Spot Remover	Attracts and absorbs soils
12345002**	16 oz. (0.473 L)	Armor All™ Cleaner	Cleans vinyl, leather and rubber
12345725	12 oz. (0.354 L)	Silicone Tire Shine	Shines tires
See your General Motors Parts Department for these products. See "Fluids and Lubricants" in the Index.		* Not recommended for pigskin suede leather. **Not recommended for use on instrument panel vinyl.	

Vehicle Identification Number (VIN)



This is the legal identifier for your Buick. 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 eighth 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 rear compartment storage lid in the wagon. On the sedan, the label is located on the trunk 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 Buick 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 Buick, see "Servicing Your Air Bag-Equipped Buick" in the Index.

Headlamps

The headlamp wiring is protected by an internal 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

The windshield wiper motor is protected by an internal 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, 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 a combination of fuses, circuit breakers and fusible thermal links. This greatly reduces the chance of fires caused by electrical problems.

Look at the silver-colored band inside the fuse. If the band is broken or melted, replace the fuse. Be sure you replace a bad fuse with a new one of the identical size and rating.

If you ever have a problem on the road and don't have a spare fuse, you can borrow one of that has the same amperage. Just pick some feature of your vehicle that you can get along without -- like the radio or cigarette lighter -- and use its fuse, if it is the correct amperage. Replace it as soon as you can.

There are two fuse blocks in your vehicle: the instrument panel fuse block and the engine compartment fuse block.

Instrument Panel Fuse Block



To gain access to this fuse block, remove the cover on the driver's side of the instrument panel. Make sure to insert the tabs first when replacing the cover.

FUSE USAGE CHART										
1	X	2	X	3	X	4	X	5	X	CIRCUIT BREAKERS
6	X	7	SEC	8	RR WPR	9	RADIO	10	WIPER	
11	IP ROC	12	TSIG	13	CH BODY 4	14	PASS KEY*	15	AIR BAG	
16	CRUISE	17	HVAC BLD	18	YES	19	X	20	AC DR	2 PWR WDO
21	SEC	22	SEC	23	X	24	CHNK	25	X	
26	SEC	27	TRK LP	28	DIG/DLC	29	RR REL	30	RADIO	3 PWR SEAT
31	EXT LPS	32	HDRNS	33	CLUS CH	34	PASS KEY*	35	OTIS/PWR LK	4 RR DEFOG
36	TRK PWR/H	37	STOP/HZD	38	HVAC AOD	39	PWR LK	40	HTD SEAT	
41	TWO LPS	42	INT DM	43	RR TLPS	44	HTD MR	45	SEC	5 X
FOR MORE INFORMATION, SEE OWNER'S MANUAL										
PRINTED IN U.S.A. * SEC ACCRY ** RR WIPER/WASHER										

Fuse	Usage
7	Not Used
8	Rear Window Wiper
9	Radio
10	Windshield Wiper/Washer Switch
11	Rear Defog Relay, Air Bag System, Headlamp Switch, I/P Cluster, Rear Defog Switch

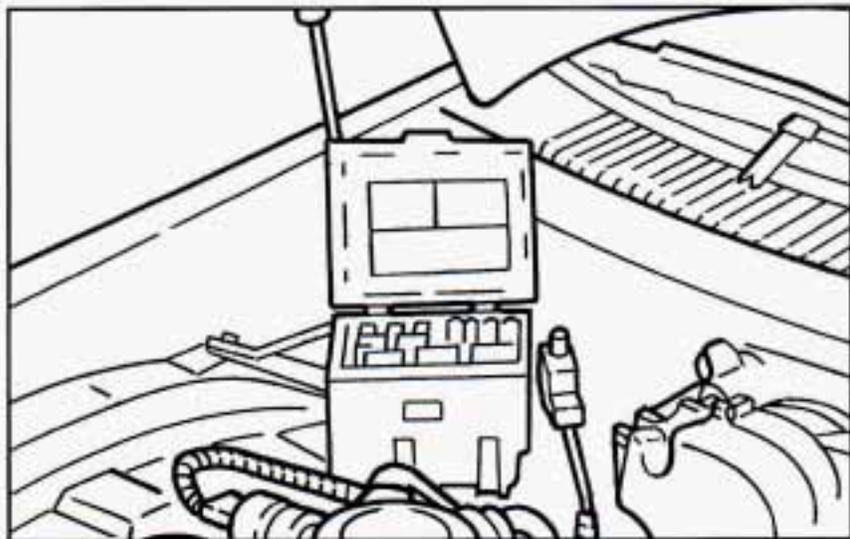
Fuse	Usage
12	Turn Signal Lamp Flasher, Back-up Lamp/Transmission Position Sensor (PNP) Switch, Shift Interlock (BTSI)
13	Inside Rearview Mirror, Warning Alarm, Stoplamp Switch, Headlamp Auto Control Module, Daytime Running Lamp Control Module, Remote Control Door Lock Receiver, Automatic Level Control Sensor
14	Theft-Deterrent Module
15	Air Bag System
16	Cruise Control Module, Cruise Control Switch, Cruise Control Release Switch
17	Heater and A/C Control, Low Blower Module Relay
18	Power Steering Control Module, Heated Seats Control
20	Electric Actuator, Vacuum Electric Solenoid, Heater and A/C Control, Instrument Cluster, Daytime Running Lamps

Fuse	Usage	Fuse	Usage
21	Not Used	32	Horn Relay
22	Not Used	33	Warning Alarm, I/P Compartment Lamp Switch, I/P Compartment Lamp, I/P Cluster, Heater and A/C Control
24	Air Bag System, Theft-Deterrent Relay	34	Theft-Deterrent Module
26	Not Used	35	Courtesy Lamp Relay, Front Door Lock Switches, Front Door Courtesy Lamps, Rear Door Courtesy Lamps, Outside Remote Control Rearview Mirror Switch, Inside Rearview Mirror, Sunshade Illuminated Mirrors, I/P Door Lamps, Roof Rail Courtesy Lamps
27	Auto Level Control Sensor, Rear Compartment Courtesy Lamp, Mercury Switch	36	Rear Window Wiper Motor, Rear Compartment Lid Pull-Down Actuator
28	Cigarette Lighter, Diagnostic Link Connector	37	Stoplamp Switch, Hazard Lamp Flasher
29	Remote Control Door Lock Receiver, Liftgate Wiper Latch Switch, Rear Glass Release Switch, Rear Compartment Lid Release Switch, Rear Glass Release Relay, Rear Compartment Release Relay	38	Blower Motor Control Module
30	Radio	39	Power Door Lock Relay
31	Headlamp Switch, Headlamp Auto Control Module, Daytime Running Lamps Control Module		

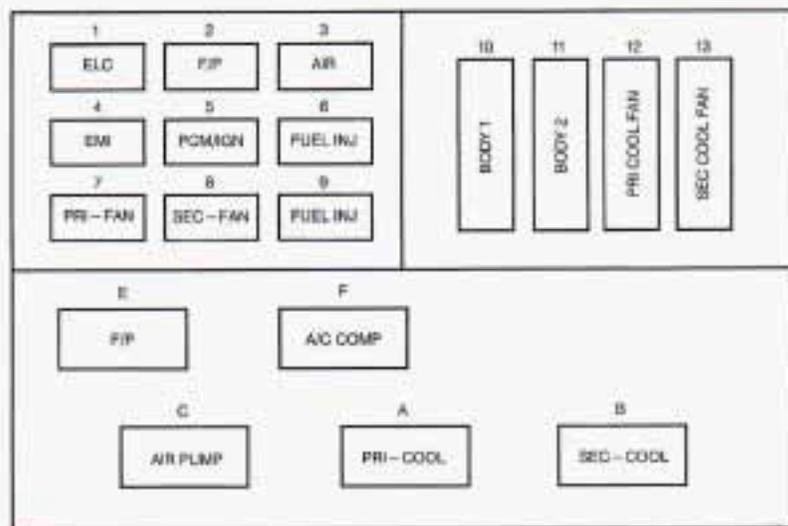
Fuse	Usage
40	Heated Seat Controls
41	Turn Signal Switch, Sidemarkers Lamps, Turn/Parking Lamps
42	Heater and A/C Control, Headlamp Switch, Instrument Cluster, Radio
43	Opera Lamps, License Lamp, Marker Lamps, Inboard Taillamps, Outboard Tail/Turn Stoplamps, Inboard Tail/Turn Stoplamps
44	Heated Power Mirrors
45	Not Used

Circuit Breaker	Usage
1	Power Antenna Relay, Power Seats
2	Master Power Window Switch, Power Window Lockout Switch, Power Window Control Module
3	Driver's and Passenger's Power Seat Switches, LH and RH Recline Switches, LH and RH Lumbar Switches
4	Rear Window Defog Switch, Rear Window Defog Relay

Engine Compartment Fuse Block



Lift the hood and open the cover to gain access to this fuse block.



Fuse	Usage
1	Auto Level Control Air Compressor
2	Fuel Pump Relay, PCM
3	Secondary Air Pump Relay, Underhood Lamp

Fuse	Usage	Relay	Usage
4	Mass Air Flow Sensor, Secondary Air Pump Relay, EGR Solenoid, Evaporative Emission Solenoid, Oxygen Sensors, Automatic Transmission	A	Primary Cooling Fan
		B	Secondary Cooling Fan
		C	Air Pump
		E	Fuel Pump
		F	Air Conditioning Compressor
5	PCM, Ignition Coil, Electronic Brake Control Module		
6	Fuel Injector Cylinders One, Four, Six, Seven		
7	Primary Cooling Fan, A/C Compressor Relay		
8	Generator, Secondary Cooling Fan		
9	Fuel Injector Cylinders Two, Three, Five, Eight		

Replacement Bulbs

Application	Number
Ashtray	194*
Back-up	2057*
Cornering	2057
Courtesy	168*
Front Parking/Turn	2057
Glove Box	194*
Headlamp	9004
High-Mounted Stop	
(Sedan)	1141
(Wagon)	577
Instrument Panel	194*
License	194*
Luggage Compartment	920*
Reading	192
Rear Body Pillar Assist Handle	194*
Roof Rail Courtesy	192*
Front Sidemarker	
(Sedan)	194*
(Wagon)	24
Rear Sidemarker	
(Sedan)	2057
(Wagon)	194

Application	Number
Tail/Stop/Turn	2057
Underhood	561*

* For service information on these bulbs, contact your Buick dealer service department.

Capacities and Specifications

Engine Code P (LT1)

Type	V8
Piston Displacement	5.7 L
Power (Ac. to SAE J1349)	260 (bhp) @ 5000 rpm
Firing Order	1-8-4-3-6-5-7-2
Thermostat Temperature	180°F (82°C)

Replacement Parts

Air Cleaner	AC 1096C
Fuel Filter	10253745
Engine Oil Filter	PF52
PCV Valve	CV895C
Spark Plug	AC 41-943 (0.050 inch Gap)
Thermostat	12555290
Wiper Blade, Left/Right Hand	10283603 (22")
Wiper Blade, Rear	22101870 (17")

Tire, Pressure, Sizes

See Tire Certification Information Label on driver's door.

Wheel Nuts

Wheel Nut Torque 100 lb-ft (140 N·m)

Capacities (Approximate)

Air Conditioning (R-134a) 1.75 lbs. (0.79 kg)

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 Buick dealer.

Automatic Transmission

Drain and Refill* 10.0 pints (4.7 L)

Overhaul 22.4 pints (10.6 L)

Cooling System 16.4 quarts (15.5 L)

Heavy Duty Cooling 16.9 quarts (15.9 L)

Crankcase (with Filter)** 5.0 quarts (4.7 L)

Fuel Tank (Sedan) 23 gallons (87 L)

Fuel Tank (Wagon) 21 gallons (79 L)

Rear Axle Lubricant 4.3 pints (2.0 L)

* Recheck the fluid level after filling. See "Automatic Transmission Fluid" in the Index.

** Recheck the oil level after filling. See "Engine Oil" in the Index.

Estate Wagon Dimensions (Approximate)

Overall

Length 218 inches (554 cm)

Width 80 inches (203 cm)

Height 60 inches (152 cm)

Wheelbase 116 inches (295 cm)

Front Tread 62 inches (158 cm)

Rear Tread 64 inches (163 cm)

Roadmaster Sedan Dimensions

(Approximate)

Overall

Length 216 inches (549 cm)

Width 78 inches (199 cm)

Height 56 inches (142 cm)

Wheelbase 116 inches (295 cm)

Front Tread 62 inches (156 cm)

Rear Tread 61 inches (155 cm)



Section 7 Maintenance Schedule

**IMPORTANT:
KEEP ENGINE OIL
AT THE PROPER
LEVEL AND CHANGE AS
RECOMMENDED**

This section covers the maintenance required for your Buick. Your vehicle needs these services to retain its safety, dependability and emission control performance.



***Protection
Plan***

Have you purchased the GM Protection Plan? The Plan supplements your new vehicle warranties. See your Warranty and Owner Assistance booklet, or your Buick 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 GM publishes. See “Service and Owner Publications” in the Index.

“Part B: Owner Checks and Services” tells you what should be checked whenever you stop for fuel. 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 Buick dealer’s service department or another qualified service center should perform.

“Part D: Recommended Fluids and Lubricants” lists some products GM recommends 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 GM 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 Buick 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).

Short Trip/City Intervals

At 6,000 Miles (10 000 km) -- Then Every 12,000 Miles (20 000 km): Tire Rotation.

Every 6,000 Miles (10 000 km) of Trailering: Rear Axle Fluid Change (Vehicles Towing Trailers).

At the First 6,000 Miles (10 000 km): Rear Axle Fluid Change (Limited-Slip Differential).

Every 15,000 Miles (25 000 km): Air Cleaner Filter Inspection, if driving in dusty conditions. Front Wheel Bearing Repack (or at each brake relining, whichever occurs first).

Every 30,000 Miles (50 000 km): Air Cleaner Filter Replacement. Fuel Tank, Cap and Lines Inspection.

Every 50,000 Miles (83 000 km): Automatic Transmission Service (severe conditions only).

Every 60,000 Miles (100 000 km): Engine Accessory Drive Belt Inspection.

Every 100,000 Miles (166 000 km): Cooling System Service (or every 60 months, whichever occurs first). Spark Plug Wire Inspection. Spark Plug Replacement.

These intervals only summarize maintenance services. Be sure to follow the complete maintenance schedule on the following pages.

Maintenance Schedule

Long Trip/Highway Definition

Follow this maintenance schedule *only* if none of the conditions from the Short Trip/City Maintenance Schedule is true.

Driving a vehicle with a fully warmed engine under highway conditions causes engine oil to break down slower.

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).

At the First 7,500 Miles (12 500 km): Rear Axle Fluid Change (Limited-Slip Differential).

At 7,500 Miles (12 500 km) -- Then Every 15,000 Miles (25 000 km): Tire Rotation.

Every 30,000 Miles (50 000 km): Air Cleaner Filter Replacement. Fuel Tank, Cap and Lines Inspection. Front Wheel Bearing Repack (or at each brake relining, whichever occurs first).

Every 50,000 Miles (83 000 km): Automatic Transmission Service (severe conditions only).

Every 60,000 Miles (100 000 km): Engine Accessory Drive Belt Inspection.

Every 100,000 Miles (166 000 km): Cooling System Service (or every 60 months, whichever occurs first). Spark Plug Wire Inspection. Spark Plug Replacement.

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.

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.

* Your vehicle has an Engine Oil Life Monitor. This monitor will show you when to change the oil -- usually between 3,000 miles (5 000 km) and 7,500 miles (12 500 km) since your last oil change. Under severe conditions, the indicator may come on before 3,000 miles (5 000 km). Never drive your vehicle more than 7,500 miles (12 500 km) or 12 months, (whichever occurs first), without an oil change.

The system won't detect dust in the oil. So if you drive in a dusty area be sure to change your oil every 3,000 miles (5 000 km) or sooner if the CHANGE OIL light comes on. Remember to reset the Oil Life Monitor when the oil has been changed. For more information, see "Engine Oil Life Monitor" in the Index.

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 the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).

DATE	ACTUAL MILEAGE	SERVICED BY:

(Continued)

Short Trip/City Maintenance Schedule

6,000 Miles (10 000 km) (Continued)

- Rotate tires. See “Tire Inspection and Rotation” in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.
- Change the rear axle gear lubricant if vehicle is used to pull a trailer or has limited-slip differential.

DATE	ACTUAL MILEAGE	SERVICED BY:

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:

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 the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.

DATE	ACTUAL MILEAGE	SERVICED BY:

15,000 Miles (25 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary. *An Emission Control Service. †*
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).

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 the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.

DATE	ACTUAL MILEAGE	SERVICED BY:

21,000 Miles (35 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **

DATE	ACTUAL MILEAGE	SERVICED BY:

Short Trip/City Maintenance Schedule

24,000 Miles (40 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.

DATE	ACTUAL MILEAGE	SERVICED BY:

27,000 Miles (45 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **

DATE	ACTUAL MILEAGE	SERVICED BY:

Short Trip/City Maintenance Schedule

30,000 Miles (50 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).

- Replace air cleaner filter.
An Emission Control Service.
- Inspect fuel tank, cap and lines for damage or leaks. Inspect fuel cap gasket for any damage. Replace parts as needed.
An Emission Control Service. †
- Rotate tires. See “Tire Inspection and Rotation” in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.

DATE	ACTUAL MILEAGE	SERVICED BY:

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. **

DATE	ACTUAL MILEAGE	SERVICED BY:

36,000 Miles (60 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.

DATE	ACTUAL MILEAGE	SERVICED BY:

Short Trip/City Maintenance Schedule

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:

42,000 Miles (70 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.

DATE	ACTUAL MILEAGE	SERVICED BY:

Short Trip/City Maintenance Schedule

45,000 Miles (75 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary. *An Emission Control Service. †*

DATE	ACTUAL MILEAGE	SERVICED BY:

48,000 Miles (80 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.

DATE	ACTUAL MILEAGE	SERVICED BY:

Short Trip/City Maintenance Schedule

50,000 Miles (83 000 km)

- Change automatic transmission fluid and filter if the vehicle is mainly driven under one or more of these conditions:
- In heavy city traffic where the outside temperature regularly reaches 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, the fluid and filter do not require changing.

DATE	ACTUAL MILEAGE	SERVICED BY:

51,000 Miles (85 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **

DATE	ACTUAL MILEAGE	SERVICED BY:

Short Trip/City Maintenance Schedule

54,000 Miles (90 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.

DATE	ACTUAL MILEAGE	SERVICED BY:

57,000 Miles (95 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **

DATE	ACTUAL MILEAGE	SERVICED BY:

Short Trip/City Maintenance Schedule

60,000 Miles (100 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.**
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.
- Inspect engine accessory drive belt.

- Replace air cleaner filter.
An Emission Control Service.
- Inspect fuel tank, cap and lines for damage or leaks. Inspect fuel cap gasket for any damage. Replace parts as needed.
An Emission Control Service.†

DATE	ACTUAL MILEAGE	SERVICED BY:

Short Trip/City Maintenance Schedule

63,000 Miles (105 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **

DATE	ACTUAL MILEAGE	SERVICED BY:

66,000 Miles (110 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.

DATE	ACTUAL MILEAGE	SERVICED BY:

Short Trip/City Maintenance Schedule

69,000 Miles (115 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **

DATE	ACTUAL MILEAGE	SERVICED BY:

72,000 Miles (120 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.

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. **
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary. *An Emission Control Service. †*

DATE	ACTUAL MILEAGE	SERVICED BY:

78,000 Miles (130 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.

DATE	ACTUAL MILEAGE	SERVICED BY:

Short Trip/City Maintenance Schedule

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 the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.

DATE	ACTUAL MILEAGE	SERVICED BY:

DATE	ACTUAL MILEAGE	SERVICED BY:

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 the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.

DATE	ACTUAL MILEAGE	SERVICED BY:

(Continued)

Short Trip/City Maintenance Schedule

90,000 Miles (150 000 km) (Continued)

- Replace air cleaner filter.
An Emission Control Service.
- Inspect fuel tank, cap and lines for damage or leaks. Inspect fuel cap gasket for any damage. Replace parts as needed.
An Emission Control Service. †
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.

DATE	ACTUAL MILEAGE	SERVICED BY:

93,000 Miles (155 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **

DATE	ACTUAL MILEAGE	SERVICED BY:

Short Trip/City Maintenance Schedule

96,000 Miles (160 000 km)

- Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 6 months, whichever occurs first).
- Change the rear axle gear lubricant if vehicle is used to pull a trailer.

DATE	ACTUAL MILEAGE	SERVICED BY:

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:

Short Trip/City Maintenance Schedule

100,000 Miles (166 000 km)

- Drain, flush and refill cooling system (or every 60 months since last service, 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. †
- Inspect spark plug wires.
An Emission Control Service.
- Replace spark plugs.
An Emission Control Service.

- Change automatic transmission fluid and filter if the vehicle is mainly driven under one or more of these conditions:
 - In heavy city traffic where the outside temperature regularly reaches 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, the fluid and filter do not require changing.

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.

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.

* Your vehicle has an Engine Oil Life Monitor. This monitor will show you when to change the oil -- usually between 3,000 miles (5 000 km) and 7,500 miles (12 500 km) since your last oil change. Under severe conditions, the indicator may come on before 3,000 miles (5 000 km). Never drive your vehicle more than 7,500 miles (12 500 km) or 12 months, (whichever occurs first), without an oil change.

The system won't detect dust in the oil. So if you drive in a dusty area, be sure to change your oil every 3,000 miles (5 000 km) or sooner if the CHANGE OIL light comes on. Remember to reset the Oil Life Monitor when the oil has been changed. For more information, see "Engine Oil Life Monitor" in the Index.

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 the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 12 months, whichever occurs first).
- Change the rear axle gear lubricant if the vehicle has limited-slip differential.
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.

DATE	ACTUAL MILEAGE	SERVICED BY:

15,000 Miles (25 000 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 12 months, whichever occurs first).

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 the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 12 months, whichever occurs first).
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.

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 the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 12 months, whichever occurs first).
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).

(Continued)

Long Trip/Highway Maintenance Schedule

30,000 Miles (50 000 km) (Continued)

- Replace air cleaner filter.
An Emission Control Service.
- Inspect fuel tank, cap and lines for damage or leaks. Inspect fuel cap gasket for any damage. Replace parts as needed.
An Emission Control Service. †

DATE	ACTUAL MILEAGE	SERVICED BY:

37,500 Miles (62 500 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 12 months, whichever occurs first).
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.

DATE	ACTUAL MILEAGE	SERVICED BY:

Long Trip/Highway Maintenance Schedule

45,000 Miles (75 000 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 12 months, whichever occurs first).

DATE	ACTUAL MILEAGE	SERVICED BY:

50,000 Miles (83 000 km)

- Change automatic transmission fluid and filter if the vehicle is mainly driven under one or more of these conditions:
 - In heavy city traffic where the outside temperature regularly reaches 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, the fluid and filter do not require changing.

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 the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 12 months, whichever occurs first).
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.

DATE	ACTUAL MILEAGE	SERVICED BY:

60,000 Miles (100 000 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 12 months, whichever occurs first).
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).
- Inspect engine accessory drive belt.

Long Trip/Highway Maintenance Schedule

- Replace air cleaner filter.
An Emission Control Service.
- Inspect fuel tank, cap and lines for damage or leaks. Inspect fuel cap gasket for any damage. Replace parts as needed.
An Emission Control Service. †

DATE	ACTUAL MILEAGE	SERVICED BY:

67,500 Miles (112 500 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 12 months, whichever occurs first).
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.

DATE	ACTUAL MILEAGE	SERVICED BY:

Long Trip/Highway Maintenance Schedule

75,000 Miles (125 000 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 12 months, whichever occurs first).

DATE	ACTUAL MILEAGE	SERVICED BY:

82,500 Miles (137 500 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 12 months, whichever occurs first).
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.

DATE	ACTUAL MILEAGE	SERVICED BY:

Long Trip/Highway Maintenance Schedule

90,000 Miles (150 000 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 12 months, whichever occurs first).
- Clean and repack the front wheel bearings (or at each brake relining, whichever occurs first).

- Replace air cleaner filter.
An Emission Control Service.
- Inspect fuel tank, cap and lines for damage or leaks. Inspect fuel cap gasket for any damage. Replace parts as needed.
An Emission Control Service. †

DATE	ACTUAL MILEAGE	SERVICED BY:

Long Trip/Highway Maintenance Schedule

97,500 Miles (162 500 km)

- Change engine oil and filter (or every 12 months, whichever occurs first).
*An Emission Control Service. **
- Lubricate the suspension, steering linkage, parking brake guides, underbody contact points and linkage (or every 12 months, whichever occurs first).
- Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information. During tire rotation, check brake calipers for freedom of movement and lubricate if required.

100,000 Miles (166 000 km)

- Drain, flush and refill cooling system (or every 60 months since last service, whichever occurs first). See "Engine Coolant" in the Index for what to use. Inspect hoses. Clean radiator, condenser, pressure cap and neck. Pressure test the cooling system and pressure cap.
An Emission Control Service. †
- Inspect spark plug wires.
An Emission Control Service.
- Replace spark plugs.
An Emission Control Service.

DATE	ACTUAL MILEAGE	SERVICED BY:

Long Trip/Highway Maintenance Schedule

- Change automatic transmission fluid and filter if the vehicle is mainly driven under one or more of these conditions:
 - In heavy city traffic where the outside temperature regularly reaches 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, the fluid and filter do not require changing.

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 mix 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.

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.

Power Antenna Service

Clean power antenna mast. 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. Look for any other loose or damaged safety belt system parts. If you see anything that might keep a safety belt system from doing its job, have it repaired. Have any torn or frayed safety belts replaced.

Also look for any opened or broken air bag covers, and have them repaired or replaced. (The air bag system does not need regular maintenance.)

Automatic Transmission Check

Check the transmission fluid level; add if needed. See “Automatic Transmission” in the Index. A fluid loss may indicate a problem. Check the system and repair if needed.

At Least Once a Year

Key Lock Cylinders Service

Lubricate the key lock cylinders with the lubricant specified in Part D.

Body Lubrication Service

Lubricate all hinges and latches, including those for the body doors, hood, glove box door and console door. Part D tells you what to use. More frequent lubrication may be required when exposed to a corrosive environment.

Starter Switch Check

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.
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. 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.

Brake-Transmission Shift Interlock (BTSI) Check

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 RUN 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.

Steering Column Lock Check

While parked, and with the parking brake set, try to turn the key to LOCK in each shift lever position.

- The key should turn to LOCK only when the shift lever is in PARK (P).
- The key should come out only in LOCK.

Parking Brake and Automatic Transmission PARK (P) Mechanism Check

 **CAUTION:**

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

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

- To check the parking brake: With the engine running and transmission in NEUTRAL (N), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.
- To check the PARK (P) mechanism's holding ability: 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 GM dealership'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 Buick Service Manual. See "Service and Owner Publications" in the Index.

Steering and Suspension 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.

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.

Radiator and Heater Hose Inspection

Inspect the hoses and have them replaced if they are cracked, swollen or deteriorated. Inspect all pipes, fittings and clamps; replace as needed.

Throttle Linkage Inspection

Inspect the throttle linkage for interference or binding, and for damage or missing parts. Replace parts as needed. Replace any cables that have high effort or excessive wear. Do not lubricate accelerator and cruise control cables.

Rear Axle Service

Check the gear lubricant level in the rear axle and add if needed. See “Rear Axle” in the Index. A fluid loss may indicate a problem. Check the axle and repair it if needed.

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, 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 GM 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 GM Goodwrench [®] DEX-COOL [™] or Havoline [®] DEX-COOL [™] (orange-colored, silicate-free) antifreeze conforming to GM Specification 6277M. See "Engine Coolant" in the Index.

USAGE	FLUID/LUBRICANT
Coolant Supplement Sealer	GM Part No. 3634621 or equivalent with a complete flush and refill.
Hydraulic Brake System	Delco Supreme 11 [®] Brake Fluid (GM Part No. 1052535 or equivalent DOT-3 brake fluid).
Parking Brake Cable Guides	Chassis lubricant (GM Part No. 1052497 or equivalent) or lubricant meeting requirements of NLGI Grade 2, Category LB or GC-LB.
Power Steering System	GM Power Steering Fluid (GM Part No. 1052884 - 1 pt., 1050017 - 1 qt., or equivalent).
Automatic Transmission	DEXRON [®] -III Automatic Transmission Fluid.
Key Lock Cylinders	Multi-Purpose Lubricant, Superlube [®] (GM Part No. 12346241 or equivalent).

USAGE	FLUID/LUBRICANT
Chassis Lubrication	Chassis lubricant (GM Part No. 1052497 or equivalent) or lubricant meeting requirements of NLGI Grade 2, Category LB or GC-LB.
Front Wheel Bearings	Wheel bearing lubricant meeting requirements of NLGI Grade 2, Category GC or GC-LB (GM Part No. 1051344 or equivalent).
Rear Axle (Standard Differential)	Axle Lubricant (GM Part No. 1052271) or SAE 80W-90 GL-5 Gear Lubricant.
Rear Axle (Limited-Slip Differential)	Axle Lubricant (GM Part No. 1052271) and 4 ounces (118 ml) of Limited-Slip Differential Lubricant Additive (GM Part No. 1052358 or equivalent) where required. See "Rear Axle" in the Index.
Windshield Washer Solvent	GM Optikleen [®] Washer Solvent (GM Part No. 1051515) or equivalent.

USAGE	FLUID/LUBRICANT
Hood Latch Assembly, Pivots, Spring Anchor and Release Pawl	Grease, High Temperature -- Water Spray Resistant (GM Part No. 12345996 or equivalent).
Hood and Door Hinges, Tailgate Hinges, Rear Compartment Lid Hinges, Fuel Door Hinge, Rear Folding Seat	Multi-purpose lubricant, Superlube [®] (GM Part No. 12346241 or equivalent).
Weatherstrip Conditioning	Dielectric Silicone Grease (GM Part No. 12345579 or equivalent).

See "Replacement Parts" in the Index for recommended replacement filters, valves and spark plugs.

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



Section 8 Customer Assistance Information

Here you will find out how to contact Buick if you need assistance. This section also tells you how to obtain service publications and how to report any safety defects.

This section includes information on:

- The Customer Satisfaction Procedure
- Customer Assistance for Text Telephone (TTY) Users
- Roadside Assistance
- Courtesy Transportation
- BBB Auto Line -- Alternative Dispute Resolution Program
- Reporting Safety Defects
- Service and Owner Publications

Customer Satisfaction Procedure



Your satisfaction and goodwill are important to your dealer and Buick. Normally, any concern you may have

with your vehicle can be handled by your selling or servicing dealer. Your dealer has the facility, trained technicians, special tools and up-to-date information to promptly address any issue which may arise. Buick has empowered its dealers to make decisions and repair vehicles, and they are eager to resolve your concern to your complete satisfaction. If your concern has not been resolved to your satisfaction, take the following steps:

STEP ONE -- Discuss your concern with a member of dealer 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 Buick Customer Assistance Center by calling 1-800-521-7300. In Canada, contact GM of Canada Customer Assistance Center 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: 1-809-763-1315
- In other overseas locations, call GM North American Export Sales in Canada at 1-905-644-4112

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 Buick, write to:

Buick Motor Division
Customer Assistance Center
902 E. Hamilton Avenue
Flint, MI, 48550

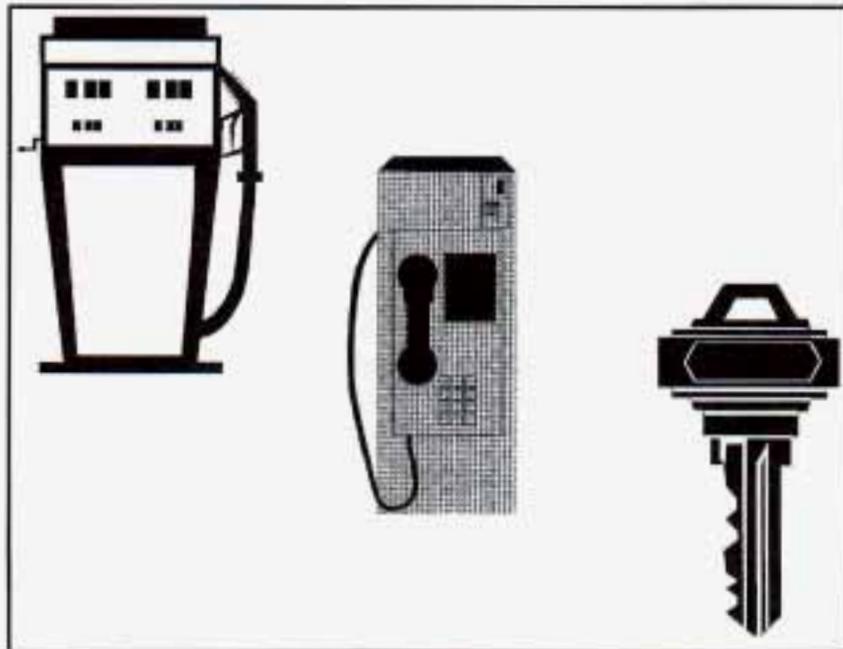
Refer to your Warranty and Owner Assistance Information booklet for addresses of Canadian and GM Overseas offices.

When contacting Buick, 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), Buick has TTY equipment available at its Customer Assistance Center. Any TTY user can communicate with Buick by dialing: 1-800-83-BUICK. (TTY users in Canada can dial 1-800-263-3830.)

Roadside Assistance



Buick Motor Division is proud to offer Buick Premium Roadside Assistance to customers for vehicles covered under the 36 month/36,000 mile (60 000 km) new car warranty (whichever occurs first).

Our commitment to Buick owners has always included superior service through our network of 3,000 Buick dealers. Buick Roadside Premium Assistance provides an extra measure of convenience and security.

Buick Premium Roadside Assistance:

- Provides owners with access to minor repairs or towing for disabled vehicles.
- Takes the anxiety out of uncertain situations by providing easy access to service professionals trained to work with Buick owners, 24 hours a day, 365 days a year, including weekends and holidays.

For details on Buick Premium Roadside Assistance, please consult your Buick Premium Roadside Assistance owner booklet included with your owner's manual. For needed assistance, call the Buick Premium Roadside Assistance toll-free hotline: 1-800-252-1112.

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

To Buick Motor Division, Quality Means Service -- and service means "keeping you on the road."

Included with your 1996 Buick new car warranty (36 month/36,000 miles (60 000 km), whichever occurs first), is Courtesy Transportation, a program which will provide Buick retail customers with:

- Reimbursement toward a loaner vehicle, courtesy of Buick Motor Division, for up to five days for vehicles requiring overnight warranty repairs. Also, reimbursement up to \$30 a day (five days maximum) may be available for the cost of a rental car, bus or even a cab.
- A free one-way shuttle ride up to 10 miles from the dealership is available for customers whose vehicles require same-day warranty repairs.

Courtesy Transportation is Buick's way of extending the Premium Service you've come to expect from Buick and its 3,000 dealers. Please review the Courtesy Transportation glove box card contained in your vehicle, or consult your Buick dealer for details.

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, Buick will reimburse you up to \$30/day for any documented transportation you receive. Please consult your dealer for details.

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 Courtesy Transportation program is available only in the United States and Canada.

GM Participation in BBB AUTO LINE -- Alternative Dispute Resolution Program*

*This program may not be available in all states, depending on state law. Canadian owners refer to your Warranty and Owner Assistance Information booklet. General Motors reserves the right to change eligibility limitations and/or to discontinue its participation in this program.

Both Buick and your Buick 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, Buick voluntarily participates in BBB AUTO LINE.

BBB AUTO LINE is an out-of-court program administered by the Better Business Bureau system to settle disputes between customers and automobile manufacturers. 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
4200 Wilson Boulevard
Suite 800
Arlington, VA 22203
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 between you and Buick. 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 Buick Customer Assistance Center at 1-800-955-7300.

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

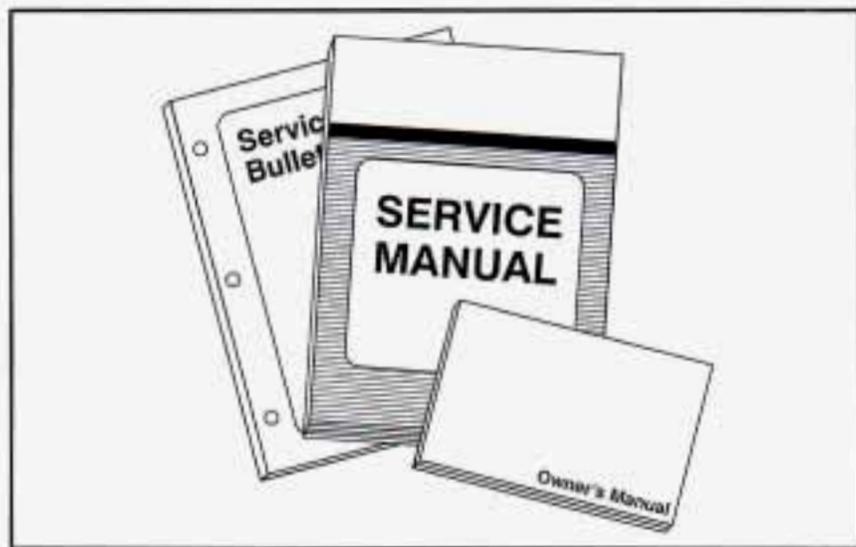
In addition to notifying NHTSA (or Transport Canada) in a situation like this, we certainly hope you'll notify us. Please call us at 1-800-521-7300, or write:

Buick Motor Division
Customer Assistance Center
902 E. Hamilton Avenue
Flint, MI 48550

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 Assistance Center
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

Service and Owner Publications



Service manuals, service bulletins, owner's manuals and other service literature are available for purchase for all current and many past model General Motors vehicles.

Toll-free telephone numbers for ordering information:

United States 1-800-551-4123

Canada 1-800-668-5539

Service Manuals

Service manuals contain diagnostic and repair information for all chassis and body systems. They may be useful for owners who wish to get a greater understanding of their vehicle. They are also useful for owners with the appropriate skill level or training who wish to perform "do-it-yourself" service. These are authentic General Motors service manuals meant for professional, qualified technicians.

Service Bulletins

Service bulletins covering various subjects are regularly sent to all General Motors dealerships. GM monitors product performance in the field. When service methods are found which promote better service on GM vehicles, bulletins are created to help the technician perform better service. Service bulletins may involve any number of vehicles. Some will describe inexpensive service; others will describe expensive service. Some will advise of new or unexpected conditions, and others may help avoid future costly repairs. Service bulletins are meant for qualified technicians. In some cases bulletins refer to service manuals, specialized tools, equipment and safety procedures necessary to service the vehicle. Since these bulletins are issued throughout the model year and beyond, an index is required and published quarterly to help identify specific bulletins. Subscriptions are available. You can order an index at the toll-free numbers listed previously, or ask a GM dealer to see an index or individual bulletin.

Owner Publications

Owner's manuals, warranty folders and various owner assistance booklets provide owners with general operation and maintenance information.



Section 9 Index

- A**ir Bag
- How Does it Restrain 1-24
 - How it Works 1-22
 - Location 1-22
 - Readiness Light 1-21, 2-55
 - Servicing 1-25
 - What Makes it Inflate 1-23
 - What Will You See After it Inflates 1-24
 - When Should it Inflate 1-23
- Air Cleaner 6-14
- Air Conditioning 3-2
- Alignment and Balance, Tire 6-43
- Aluminum Wheels, Cleaning 6-51
- Antenna, Fixed 3-20
- Antenna, Power 3-21
- Antifreeze 6-20
- Anti-Lock
- Brake System Warning Light 2-57, 4-6
 - Brakes 4-6
- Anti-Theft, Radio 3-17
- Appearance Care 6-45
- Appearance Care Materials 6-53
- Arbitration Program 8-6
- Armrest, Front Storage 2-42
- Ashtrays 2-48
- Audio Systems 3-5
- Automatic
- Door Locks 2-4
 - Overdrive 2-20
 - Pull-Down Feature 2-12
- Automatic Transmission
- Check 7-39
 - Fluid 6-16
 - Operation 2-18
 - Park Mechanism Check 7-41
 - Shifting 2-18
- Axle, Limited-Slip Rear 2-21
- Axle, Rear 6-19
- B**attery 6-30
- Jump Starting 5-2
 - Light 2-55
 - Replacement, Remote Keyless Entry 2-7
- BBB Auto Line 8-6
- Better Business Bureau Mediation 8-6

Brake			
Adjustment	6-29	Check Engine Light	2-59
Fluid	6-26	Checking Your Restraint Systems	1-44
Master Cylinder	6-26	Chemical Paint Spotting	6-52
Parking	2-21	Child Restraints	1-33
Pedal Travel	6-29	Securing in a Rear Outside Seat Position	1-35
Replacing System Parts	6-29	Securing in the Center Rear Seat Position	1-37
System Warning Light	2-56	Securing in the Right Front Seat Position	1-39
Trailer	4-35	Top Strap	1-34
Transmission Shift Interlock Check	7-40	Where to Put	1-33
Wear	6-28	Cigarette Lighter	2-48
Brakes, Anti-Lock	4-6	Circuit Breakers and Fuses	6-56
Braking	4-5	Cleaner, Air	6-14
Braking in Emergencies	4-8	Cleaning	
Break-In, New Vehicle	2-14	Aluminum Wheels	6-51
BTSI Check	7-40	Fabric	6-46
Bulb Replacement	6-30	Glass	6-49
		Inside of Your Buick	6-46
		Instrument Panel	6-48
		Leather	6-48
		Outside of Your Buick	6-50
		Special Problems	6-47
		Stains	6-46
		Tires	6-51
		Vinyl	6-48
		Weatherstrips	6-49
		Wheels	6-51
		Windshield and Wiper Blades	6-49
Canadian Roadside Assistance	8-4	Climate Control System, Electronic	3-2
Capacities and Specifications	6-62	Climate Control System, Standard	3-1
Carbon Monoxide	2-26, 4-26, 4-33,	Clock, Setting the	3-5
Cargo Cover	2-44	Comfort Controls	3-1
Cassette Deck Service	7-39	Compact Disc Care	3-20
Cassette Tape Player	3-6, 3-9, 3-12	Compact Disc Player	3-12
Cassette Tape Player Care	3-20	Compact Spare Tire	5-30
CD Player Theft-Deterrent Feature	3-17		
Center High-Mounted Stoplamp	6-33		
Center Passenger Position	1-27		
Certification Label	4-28		
Chains, Safety	4-35		
Chains, Tire	6-45		
Change Oil Light	2-64		
Changing a Flat Tire	5-19		

Control of a Vehicle	4-5
Convenience Net	2-43, 2-44
Convex Outside Mirror	2-41
Coolant	6-20
Heater, Engine	2-17
Surge Tank	5-15
Cooling System	5-13
Courtesy Transportation	8-5
Cruise Control	2-33
Cruise Control Light	2-64
Customer Assistance for Text Telephone Users	8-3
Customer Assistance Information	8-1
Customer Satisfaction Procedure	8-1

D amage, Finish	6-52
Damage, Sheet Metal	6-51
Daytime Running Lamps	2-36
Dead Battery	5-2
Defects, Reporting Safety	8-7
Defensive Driving	4-1
Defogger, Rear Window	3-5
Defogging	3-4
Defrosting	3-4
Dimensions, Vehicle	6-63
Dolby® B Noise Reduction	3-12
Programmable Automatic Locks	2-4
Door, Locks	2-3
Driving	
City	4-18
Defensive	4-1
Drunken	4-2
Freeway	4-19

In a Blizzard	4-25
In Foreign Countries	6-4
In the Rain	4-15
Night	4-13
On Curves	4-8
On Grades While Towing a Trailer	4-37
On Hill and Mountain Roads	4-21
On Snow and Ice	4-24
Wet Roads	4-15
Winter	4-23
With a Trailer	4-35
Drunken Driving	4-2

E lectrical Equipment, Adding	6-55
Electrical System	6-55
Electrochromic Day/Night Rearview Mirror	2-40
Electronic Climate Control	3-2
Engine	6-8
Coolant	6-20
Coolant Heater	2-17
Coolant Level Check	7-38
Coolant Temperature Gage	2-58
Coolant Temperature Warning Light	2-58
Cooling System	6-63
Exhaust	2-26
Fuse Block	6-60
Identification	6-54
Oil Level Check	7-38
Overheating	5-11
Running While Parked	2-26
Specifications	6-62
Starting Your	2-16

Engine Oil	6-9
Adding	6-10
Additives	6-12
Checking	6-10
Pressure Light	2-62
Used	6-13
When to Change	6-12
Ethanol	6-3
Exhaust, Engine	2-26
Express-Down Window	2-28

F abric Cleaning	6-46
Filling Your Tank	6-4
Filter, Air	6-14
Finish Care	6-50
Finish Damage	6-52
First Gear, Automatic Transmission	2-21
Flashers, Hazard Warning	5-1
Flat Tire, Changing	5-19
Fluid Capacities	6-63
Fluids and Lubricants	7-44
Foldaway Outside Mirror	2-41
Foreign Countries, Fuel	6-4
French Language Manual	ii
Front Reading Lamp	6-36
Front Towing	5-8
Fuel	6-2
Filling Your Tank	6-4
Gage	2-66
In Foreign Countries	6-4
Fuses and Circuit Breakers	6-56

G ages	
Engine Coolant Temperature	2-58
Fuel	2-66
GAWR	4-28
Gear Positions, Automatic Transmission	2-18
Glove Box	2-41
Gross Axle Weight Rating	4-28
Gross Vehicle Weight Rating	4-28
Guide en Français	ii
GVWR	4-28

H alogen Bulbs	6-30
Hazard Warning Flashers	5-1
Head Restraints	1-5
Headlamps	2-36
Bulb Replacement	6-31
High/Low Beam Changer	2-30
On Reminder	2-36
Wiring	6-55
Hearing Impaired, Customer Assistance	8-3
Heated Outside Mirror	2-41
Heating	3-1
High-Beam Headlamps	2-30
Highway Hypnosis	4-21
Hill and Mountain Roads	4-21
Hitches, Trailer	4-33
Hood	
Checking Things Under	6-6
Release	6-7
Horn	2-28
Hydroplaning	4-17

Ignition Positions	2-15	Tire-Loading Information	4-27
Illuminated Entry	2-38	Vehicle Identification Number	6-54
Inflation, Tire	6-37	Lamps	2-36
Inside Day/Night Rearview Mirror	2-39	Interior	2-38
Inspections		On Reminder	2-36
Brake System	7-43	Leaving Your Vehicle	2-5
Exhaust Systems	7-42	Leaving Your Vehicle with the Engine Running	2-24
Radiator and Heater Hose	7-42	Light Sensor, Twilight Sentinel	2-37
Rear Axle	7-43	Lighter	2-48
Steering	7-42	Lights	
Suspension	7-42	Air Bag Readiness	1-21, 2-55
Throttle Linkage	7-43	Anti-Lock Brake System Warning	2-57, 4-6
Instrument Panel	2-50	Battery	2-55
Brightness Control	2-36	Brake System Warning	2-56
Cleaning	6-48	Change Oil	2-64
Cluster	2-52	Check Engine	2-59
Fuse Block	6-56	Cruise Control	2-64
Interior Lamps	2-38	Engine Coolant Temperature Warning	2-58
		Engine Oil Pressure Light	2-62
		Interior	2-38
		Low Coolant Warning	2-59
J ack, Tire	5-19	Low Fuel	2-66
Jump Starting	5-2	Low Oil Level	2-63
		Low Washer	2-65
		Pass Key	2-65
		Service Engine Soon	2-59
		Wagon Gate Ajar	2-65
K ey Lock Cylinders Service	7-39	Loading Information, Station Wagon	4-29
Keys	2-1	Loading Your Vehicle	4-27
L abels			
Certification	4-28		
Service Parts Identification	6-54		

Locks	
Cylinders	7-39
Door	2-3
Key Lock Cylinder Service	7-39
Power Door	2-3
Programmable Automatic	2-4
Rear Door Security	2-4
Steering Column Lock Check	7-41
Window	2-28
Low Coolant Warning Light	2-59
Low Fuel Light	2-66
Low Oil Level Light	2-63
Low Washer Light	2-65
Lubricants and Fluids	7-44
Lubrication Service, Body	7-39
Luggage Carrier	2-46
Fuses	6-55

M aintenance, Normal Replacement Parts	6-62
Maintenance Record	7-46
Maintenance Schedule	7-1
Long Trip/Highway Definition	7-5
Long Trip/Highway Intervals	7-5, 7-27
Owner Checks and Services	7-38
Periodic Maintenance Inspections	7-42
Recommended Fluids and Lubricants	7-44
Scheduled Maintenance Services	7-3
Short Trip/City Definition	7-4
Short Trip/City Intervals	7-4, 7-6
Maintenance, Underbody	6-52
Maintenance When Trailer Towing	4-38
Malfunction Indicator Lamp	2-59
Methanol	6-3

Mirrors	2-39
Convex Outside	2-41
Electrochromic Day/Night Rearview	2-40
Foldaway Outside	2-41
Heated Outside	2-41
Inside Day/Night Rearview	2-39
Power Remote Control	2-41
Visor Vanity	2-49
MMT	6-3
Mountain Roads	4-21
Multifunction Lever	2-29

N et, Convenience	2-43, 2-44
Neutral, Automatic Transmission	2-20
New Vehicle "Break-In"	2-14
Night Vision	4-14

O dometer	2-53
Odometer, Trip	2-53
Off-Road Recovery	4-10
Oil, Engine	6-9
Overdrive, Automatic Transmission	2-20
Overheating Engine	5-11
Owner Checks and Services	7-38
Owner Publications, Ordering	8-10

P aint Spotting, Chemical	6-52
P ark	
Automatic Transmission	2-18
Shifting Into	2-22
Shifting Out of	2-25

Parking			
At Night	2-12		
Brake	2-21		
Brake Mechanism Check	7-41		
Lots	2-12		
Over Things That Burn	2-25		
With a Trailer	4-37		
Parking Lamp Bulb Replacement	6-32		
Pass Key Light	2-65		
Passing	4-11		
PASS-Key® II	2-13		
Periodic Maintenance Inspections	7-42		
Power			
Antenna Mast Care	3-21		
Antenna Service	7-39		
Door Locks	2-3		
Remote Control Mirror	2-41		
Steering	4-8		
Steering Fluid	6-24		
Windows	2-27		
Power Seat	1-2		
Lumbar Controls	1-2		
Memory Function	1-3		
Recliner	1-3		
Pregnancy, Use of Safety Belts	1-26		
Problems on the Road	5-1		
Publications, Service and Owner	8-9		
Pull-Down Feature, Automatic	2-12		
R adiator	5-16		
Radio Reception	3-19		
Radios	3-5		
Rain, Driving In	4-15		
Reading Lamps	2-38, 2-39		
Rear			
Axle	6-19		
Door Security Locks	2-4		
Outside Seat Position	1-28		
Seat Passengers	1-28		
Towing	5-9		
Window Defogger	3-5		
Windshield Washer	2-32		
Rearview Mirror	2-39		
Electrochromic Day/Night	2-40		
Inside Day/Night	2-39		
Remote			
Keyless Entry	2-5		
Trunk Release	2-8		
Replacement, Bulbs	6-62		
Replacement, Parts	6-62		
Replacement, Wheel	6-43		
Reporting Safety Defects	8-7		
Restraints			
Checking	1-44		
Child	1-33		
Head	1-5		
Replacing Parts After a Crash	1-45		
System Check	7-39		
Reverse, Automatic Transmission	2-19		
Right Front Passenger Position	1-26		
Roadside Assistance	8-4		
Roadside Assistance, Canadian	8-4		
Rocking Your Vehicle	5-31		
Roof Luggage Rack	2-46		
Rotation, Tires	6-39		

Safety Belts	1-8	Manual	1-1
Adults	1-13	Restraint Systems	1-1
Care	6-49	Seat Controls	1-1
Center Passenger Position	1-27	Securing a Child Restraint	1-33
Children	1-31	Second Gear, Automatic Transmission	2-20
Driver Position	1-13	Service	6-1
Extender	1-44	Bulletins, Ordering	8-10
How to Wear Properly	1-13	Engine Soon Light	2-59
Incorrect Usage	1-16, 1-42, 1-43	Manuals, Ordering	8-9
Lap Belt	1-27	Parts Identification Label	6-54
Lap-Shoulder	1-13, 1-28	Publications, Ordering	8-9
Larger Children	1-41	Work, Doing Your Own	6-1
Questions and Answers	1-12	Service and Appearance Care	6-1
Rear Seat Outside Passenger Positions	1-28	Sheet Metal Damage	6-51
Rear Seat Passengers	1-28	Shift Lever	2-18
Reminder Light	1-8, 2-54	Shifting	
Replacing After a Crash	1-45	Automatic Transmission	2-18
Right Front Passenger Position	1-26	Into Park	2-22
Smaller Children and Babies	1-31	Out of Park	2-25
Station Wagon Third Seat	1-27	Signaling Turns	2-30
Use During Pregnancy	1-26	Skidding	4-12
Why They Work	1-9	Spare Tire, Compact	5-30
Safety Chains	4-35	Specifications and Capacities	6-62
Safety Defects, Reporting	8-7	Specifications, Engine	6-62
Safety Warnings and Symbols	viii	Speech Impaired, Customer Assistance	8-3
Scheduled Maintenance Services	7-3	Speedometer	2-53
Seatback		SRS	1-20
Reclining Front	1-4	Stains, Cleaning	6-46
Wagon Folding	1-5	Starter Switch Check	7-40
Seats		Starting Your Engine	2-16
Heated	1-3	Steam	5-11

Steering	4-8	Changing a Flat	5-19
Column Lock Check	7-41	Cleaning	6-51
In Emergencies	4-9	Compact Spare	5-30
Power	4-8	Inflation	6-37
Tips	4-8	Inflation Check	7-38
Wheel, Tilt	2-29	Inspection and Rotation	6-39
Storage Compartments	2-41	Loading	4-27
Storage, Locked	2-42	Pressure	6-37
Storage, Vehicle	6-30	Temperature	6-43
Storing a Flat or Spare Tire and Tools	5-27	Traction	6-42
Stuck: In Sand, Mud, Ice or Snow	5-31	Treadwear	6-42
Sun Visors	2-49	Uniform Quality Grading	6-42
Supplemental Restraint System	1-20	Wheel Replacement	6-43
Surge Tank, Coolant	5-15	When It's Time for New	6-40
Surge Tank Pressure Cap	6-23	Top Strap	1-34
Symbols, Vehicle	x	Torque Lock	2-24
System Controls, Climate Control System	3-2	Torque, Wheel Nut	6-63
T ailgate	2-9	Towing a Trailer	4-30
Tailgate, Remote Release	2-11	Towing Your Vehicle	5-7
Taillamp Bulb Replacement	6-34	Trailer	
Tape Player Care	3-20	Brakes	4-35
Theft	2-12	Driving on Grades	4-37
Theft-Deterrent Feature, CD Player	3-17	Driving with	4-35
THEFTLOCK™	3-17	Engine Cooling When Towing	4-38
Thermostat	6-23	Hitches	4-33
Third Gear, Automatic Transmission	2-20	Maintenance When Towing	4-38
Tilt Steering Wheel	2-29	Parking on Hills	4-37
Time, Setting the	3-5	Safety Chains	4-35
Tire-Loading Information Label	4-27	Tongue Weight	4-32
Tires		Total Weight on Tires	4-33
Alignment and Balance	6-43	Towing	4-30
Buying New	6-41	Turn Signals	4-36
Chains	6-45	Weight	4-32

Transmitters, Remote Keyless Entry	2-5
Transportation, Courtesy	8-5
Trip Odometer	2-53
Trunk	2-8
Automatic Pull-Down Feature	2-12
Release, Remote	2-8
TTY Users	8-3
Turn Signal and Lane Change Indicator	2-30
Turn Signal Lamp Bulb Replacement	6-32
Turn Signal/Multifunction Lever	2-29
Twilight Sentinel	2-37

U nderbody Flushing Service	7-41
Underbody Maintenance	6-52

V ehicle	
Control	4-5
Damage Warnings	ix
Dimensions	6-63
Identification Number	6-54
Loading	4-27
Storage	6-30
Ventilation System	3-4
Visor Vanity Mirrors	2-49
Visors, Sun	2-49
Vista Cover, Wagon	2-49

W agon Gate Ajar Light	2-65
Warning Devices	5-2
Warning Lights, Gages and Indicators	2-54
Washer Fluid, Windshield	6-25
Washing Your Vehicle	6-50
Weatherstrips	6-49
Wheel	
Alignment	6-43
Nut Torque	6-63
Replacement	6-43
Window Lock	2-28
Windows	2-27
Express-Down	2-28
Power	2-27
Wagon Rear Vent	2-28
Windshield Washer	2-32
Fluid	2-32, 6-25
Fluid Level Check	7-38
Rear	2-32
Windshield Wiper	2-31
Rear	2-32
Blade Replacement	6-36
Fuses	6-55
Winter Driving	4-23
Wiring, Headlamp	6-55
Wrecker Towing	5-7

