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Pre- & Post-Drive Procedures

Before approaching your vehicle to drive, it is important to get in the habit of planning your route. Weather, temporary road work areas, and traffic congested areas should be taken into consideration in order to choose the safest route to your destination. Collisions, vehicle break downs, etc. can create unexpected difficulties, but even these mishaps tend to occur more frequently on certain roadways. Keep your radio tuned to radio stations that transmit traffic reports. Plan your route logically. When driving to unfamiliar areas, plan the route using landmarks that are easily recognizable.

Then you can approach the vehicle with a clear mind and concentrate on the task at hand. This chapter will deal with the preliminary steps involved in setting out to drive your vehicle.



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AFTER COMPLETING THIS CHAPTER, THE STUDENT MUST BE ABLE TO UNDERSTAND THE IMPORTANCE OF AND RESPOND TO:

- the pre-drive safety inspection.
- the proper approach to the vehicle, as well as the adjustments necessary when preparing to drive.
- the starting of the vehicle, as well as the securing of the vehicle.



Pre-Drive Tasks

Despite the best efforts of the designers of motorized vehicles and the safety engineers involved, when you are seated in the driver's seat there are areas that are not visible.

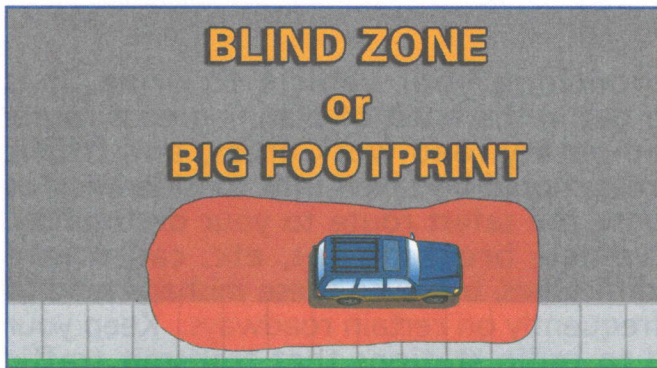
BLIND ZONE / BIG FOOTPRINT

The largest of these is referred to as the **blind**

zone or **big footprint** (see the illustration, top of Page 7.2). This is the area that the vehicle itself blocks the driver from seeing. Generally speaking, the wider, longer and taller the vehicle, the bigger the blind zone behind it. In addition, short drivers have a bigger blind zone.

Consumer Reports has been measuring and



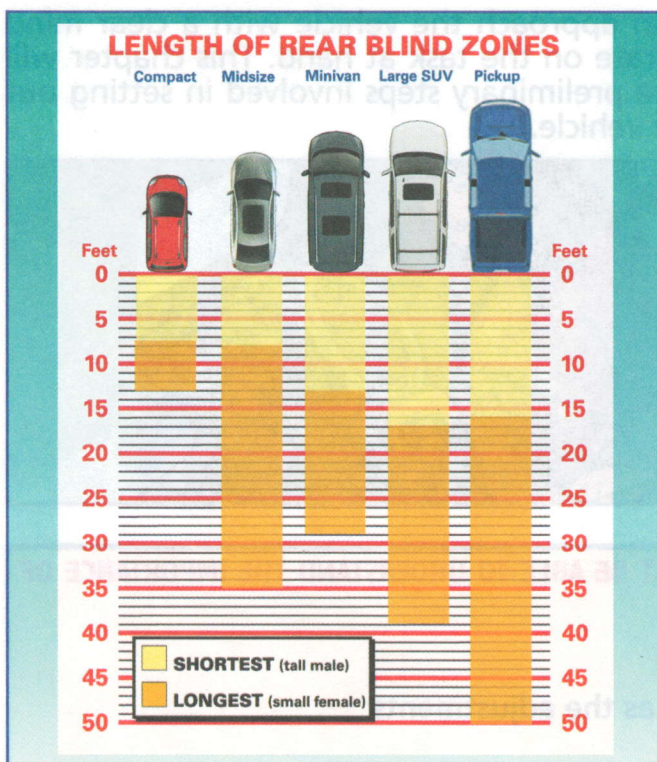


A federal law, signed by former President George Bush, mandates automakers compliance with rearward visibility by 2015. Automakers are using a mix of larger mirrors and rear windows, backup cameras (mandatory by 2018), and sensors. Do not rely solely on these devices.

Your best defense against backover incidents is to check behind your vehicle before and while backing up. If children are nearby, make sure you can see them while backing.

comparing the blind zones of popular models for many years (www.consumerreports.com). The results are illustrated in the chart below.

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APPROACH TO THE VEHICLE

As you walk towards your vehicle, begin to think like a driver; make sure that nothing is in the blind zone near the vehicle (see illustrations at the top of the opposite page).

- Make sure that your path of travel is clear of debris, children, animals, etc.
- Check under the vehicle for any possible fluid leaks.
- Visually check the inflation of the tires (be prepared to use a tire pressure gauge if a tire appears abnormal), and the position of the front wheels.
- Check the body of the vehicle for any damage caused by vandalism, hit and run, or theft.
- Verify that lights, turn signals and license plates are clean and clear.
- Check that the windows are clear and clean (especially the rear window), and that the wipers are not stuck to the windshield (heat or ice).

Most drivers are unaware of the size of the rear blind zone. The resulting problem is that people can be killed or seriously injured in **backover** incidents - see the **NHTSA** statistics below. A backover incident typically occurs when a car coming out of a driveway or parking space backs over a person because the driver did not see him/her. This problem can also occur, although more rarely, in front of the vehicle.

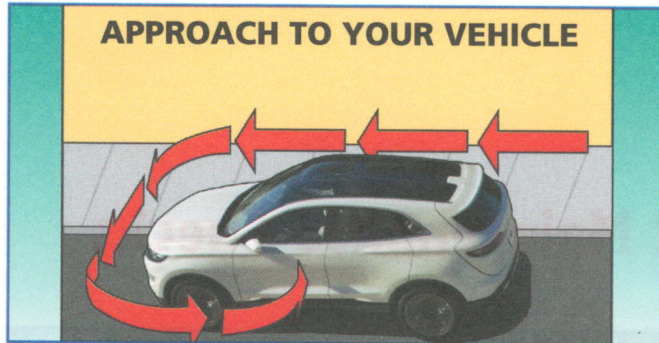
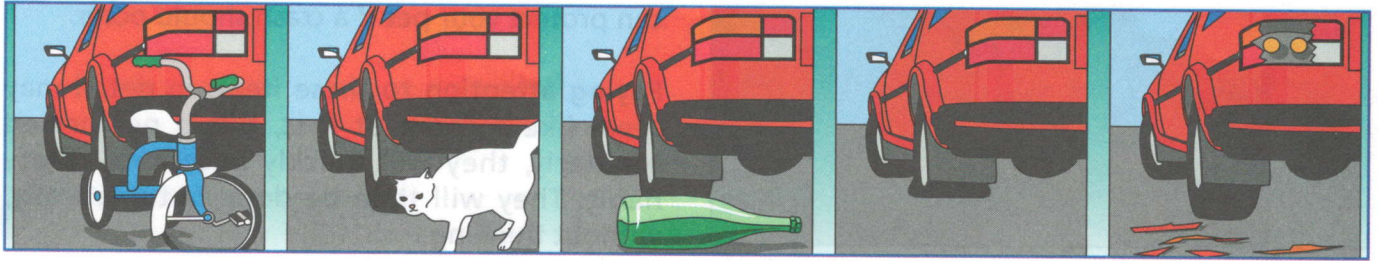
If your vehicle is parked at the curbside, approach the driver's door from the front of the vehicle, thereby facing the traffic and allowing you to check for other vehicles, bicycles, etc. before unlocking and opening the driver's door. If possible, enter by the passenger side door.

Statistics



The National Highway Traffic Safety Administration (NHTSA) estimates that there are **183 "backover fatalities" every year - 69 of which are children under 5 years of age.** Visit www.nhtsa.dot.gov/ for more info.



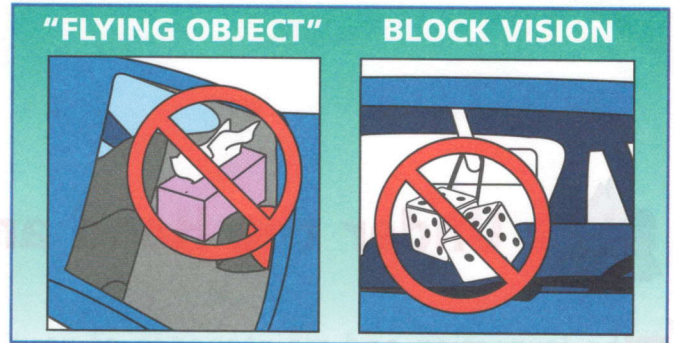


If your vehicle is parked in a parking lot, approach the vehicle from the rear. This will allow you to check the rear of the vehicle, as well as provide an increased awareness of pedestrians and objects in the area. Approach the driver's door with the key in hand, ready to unlock and enter your vehicle.

ENTERING THE VEHICLE

Once inside, close and lock the door quickly. The key (if you have one, new technology - **keyless entry - push-start**, see Chapter 8) can be inserted in the ignition switch while you make the remaining pre-driving checks. (Avoid mislaying it; free your hands.)

Make sure there are **no loose objects lying about** on the front or rear window ledges, the seats, the floor, hanging from the rear-view mirror, sun visors, etc. These loose objects may become "flying objects" in the event of sudden braking or a collision. Objects on the floor can roll under the pedals and prevent their proper operation. Other loose or hanging objects can create reflections and/or obscure the driver's vision.



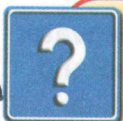
When transporting cargo or valuables, you should store these items in the trunk. This will prevent them from slipping off the seats and causing a distraction while driving. Moreover, they will be out of sight, where they cannot entice someone to break into your vehicle (when parked) or attempt to car-jack your vehicle (when stopped at a light or stop sign).

Extra care must be taken to secure the parcels in vehicles, particularly station wagons, hatchbacks, and other vehicles where the trunk area is open to the passenger compartment.

If carrying clothing on hangers, use the hook on the left rear side of the car. Never use the right one as the clothing will obstruct your view of the right blind spot. Make sure the windows are clean inside and out.

Transporting pets can be a problem. This can be solved by bringing someone along to control the animal with a leash, using a pet seat restraint, or using a pet carrying case. Besides preventing your pet from seat hopping (and disturbing or distracting you while driving), it

SAFETY TIPS



When you check the position of the front wheels, this will alert you to the direction the vehicle will move when placed in gear. You will be ready to input a steering correction to control the direction of travel.





can protect your pet if a crash should occur.

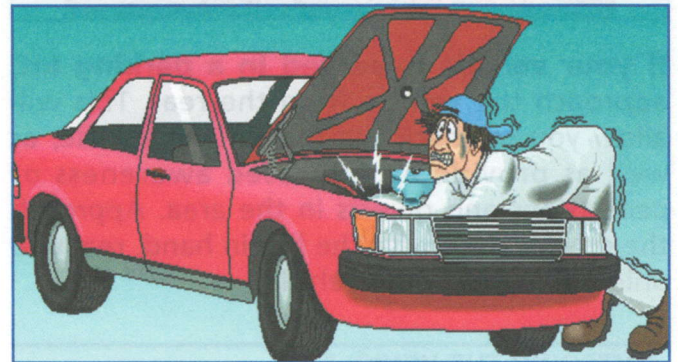
Paying attention to these items in detail may seem like a chore at first, but if performed regularly, they will quickly become a safety habit. They will then be done automatically, without thinking.

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7-B

Under the Hood and Maintenance Checks

The inspection and maintenance of your vehicle is vital to proper operation, avoidance of breakdowns, and keeping your vehicle roadworthy. In the long term, this will not only reduce operating expenses and extend the span of time that the vehicle may be utilized safely; but will also help retain the value (reduce depreciation) of your vehicle when you decide to trade or to sell it.



PRE-DRIVE INSPECTION

When approaching the vehicle, as already mentioned, check for fluid leaks, tire inflation or damage, and physical damage to the body or glass. If there are any abnormalities, identify (and rectify) the cause of the problem.

Should you spot a leak under the vehicle, identify whether it is coolant, brake fluid, air conditioner condensation, motor oil, transmission fluid, etc. Is it a problem that you can repair yourself? Will it cause a breakdown if not corrected immediately?

If you are not sure, do not take a chance; proceed to your service center and have a professional service technician check and repair the problem should immediate attention be recommended. Breakdowns on the roadway are much more costly than repairing a problem when your vehicle is driven to the service center (i.e. the towing charges, damaged parts, etc.).

UNDER THE HOOD CHECKS

On a regular basis (every time you drive is recommended by advanced driver training experts and commercial driver programs), you should check under the hood prior to driving. This is usually referred to as a "front end service check" by service technicians. The items to be checked are:

Engine coolant system

- Locate the coolant container (overflow reservoir, expansion tank) and check that the coolant registers above the cold mark. In the absence of a visible reservoir, **when the engine is cold**, remove the radiator cap and check the level in the radiator.
- Locate the hoses and check their condition (cracks, swelling, hardness).
- Locate the drive belt (V-belt) for the water pump. Check the belt for tension (should move slightly when pressed), as well as wear and tear (cracks, frays, splits).



Windshield washer system

- Locate the fluid reservoir and check that there is sufficient fluid.
- Check that the wiper blades are not stuck to the windshield. Verify the condition of the blades (wear and tear, appropriate to the season).

Fluid levels

- Locate the dipstick and check the engine oil level. It should register above the "low" (add) mark.
- Locate the brake fluid reservoir and check the level of the brake fluid.
- Locate the clutch fluid reservoir, if so equipped, and check the fluid level.
- Locate the transaxle/transmission dip stick and check the fluid level.
- Locate the power steering reservoir and check the fluid level.

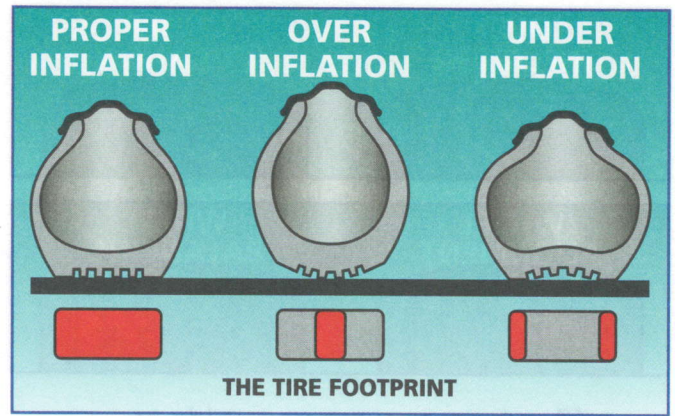
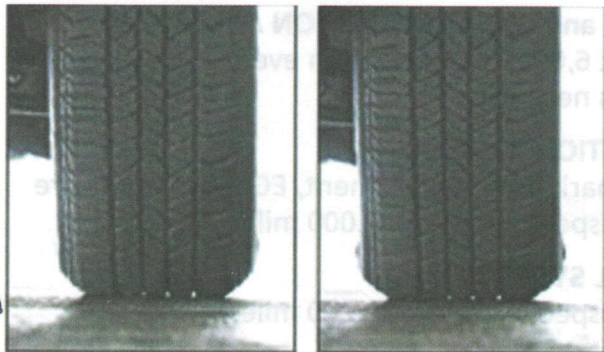
Drive Belts

- Locate all drive belts (some vehicles use only one) and check the tension and wear and tear (cracks, frays).

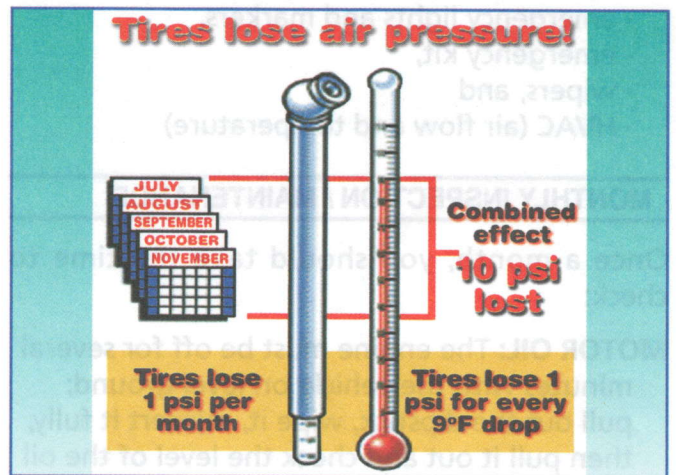
WEEKLY INSPECTION / MAINTENANCE

Once a week, you should take the time to **inspect your vehicle more completely**; this could be done at the same time as you wash the vehicle. The items are:

TIRE PRESSURE: use a tire gauge to check the pressure in each tire. **JUST A LOOK WON'T DO IT!** The tire on the right in the diagram below is actually 10 psi under-inflated (at 20 psi); the one on the left is properly inflated at 30 psi. **Your eyes can deceive you**, so rely on a good tire gauge for accuracy.



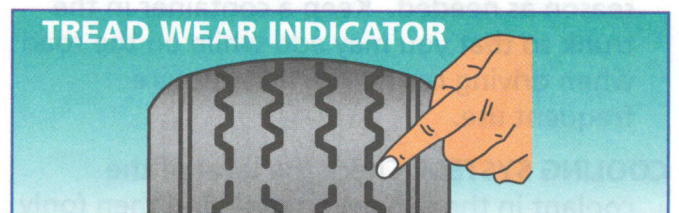
Note the pressure recommended on the tire sidewall (maximum), as well as in your owner's manual (smooth ride). Properly inflated tires produce the largest "footprint" with the pavement, therefore giving the best traction (the red "footprint" as shown in the diagrams above).

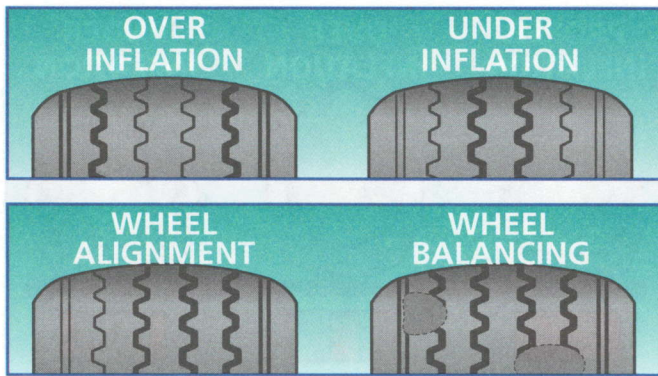


Tires can lose 1 psi per month under normal conditions. For every 9°F drop in temperature, the tires lose another psi of inflation pressure (see diagram above). They can also lose pressure due to hitting curbs, crossing potholes, etc. Checking inflation regularly is essential.

TIRE WEAR PATTERN:

- tread wear indicator showing,
- balding spots,





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- cuffing (uneven wear on outside or inside tread areas),
- worn tread (in middle or at side), and
- stone or metal fragments.

SAFETY AND COMMUNICATION

ACCESSORIES:

- lights and signals,
- emergency lights and markers,
- emergency kit,
- wipers, and
- HVAC (air flow and temperature)

MONTHLY INSPECTION / MAINTENANCE

Once a month, you should take the time to check:

MOTOR OIL: The engine must be off for several minutes with the vehicle on level ground; pull out the dipstick, wipe it, reinsert it fully, then pull it out and check the level of the oil slick on the gauge at the lower end.

Reinsert. Add oil of the correct grade if needed. Check the color; the oil may need to be replaced.

The oil and filter should be changed every 3,000 miles / 3 months (see owner's manual / some exceptions would be synthetic oil and the break in oil for a new engine) and the chassis lubricated every second oil change.

WIPER FLUID: Check the fluid level in the reservoir. Add fluid appropriate to the season as needed. Keep a container in the trunk so that you may add while on the road when driving conditions may require frequent use.

COOLING SYSTEM: Check the level of the coolant in the expansion tank and then (only

if the engine is cold) open the radiator cap and check the level in the radiator. Add anti-freeze as needed.

Check the hoses (softness and swelling, brittleness and cracking) and the drive belt (condition and tension).

The system requires major service - flushing and coolant replacement - every 30,000 miles or 24 months.

BRAKE SYSTEM: Check the brake fluid level in the master cylinder; add when necessary. The second time you add fluid, have the brakes checked for wear and possible replacement. Lubricate and adjust the parking brake cables every second oil change.

Check the operation (parking brake) every time you park by applying it and then EASING UP on the service brake while still in drive (vehicle should not move).

POWER STEERING: Check the fluid in the reservoir; add if low. Check the condition and tension of the power steering drive belt.

SIX MONTH INSPECTION / MAINTENANCE

FLUID LEVELS: Check the level and condition of the transmission fluid and differential fluid if so equipped (automatic- dip stick, engine running in Park; standard- access bolt on side of transmission, ask service technician)

SERVICE MANUAL PERIODIC SCHEDULE

A regular maintenance schedule is required to validate the manufacturer's warranty and to ensure that your vehicle is roadworthy. **Check the owner's manual for the specific requirements for your vehicle.** Some items are:

TIRE and WHEEL INSPECTION / ROTATION: at 6,000 miles and then every 15,000 miles, or as necessary.

IGNITION SYSTEM: spark plug replacement, EGR and plug wire inspection every 30,000 miles.

FUEL SYSTEM: inspection every 30,000 miles.





Driver Readiness Tasks

With respect to pre-driving habits, it is **"improper"** to get behind the wheel and drive without being ready to drive physically, emotionally, and having made the proper adjustments. You should develop a pattern for your vehicle that you follow every time. It may differ slightly from what is suggested here. Check your owner's manual.

A) Close and lock the doors:

To protect you against intruders (make sure passengers do likewise, if you do not have electric door locks).

To ensure lateral integrity of the passenger compartment (prevents the door from opening in a collision).

B) Insert key in the ignition switch:

(If you do not have **keyless entry/push start**.)

To free your hands.

To avoid mislaying the keys.

C) Secure loose objects:

To prevent obstruction of your field of vision.

To prevent reflections.

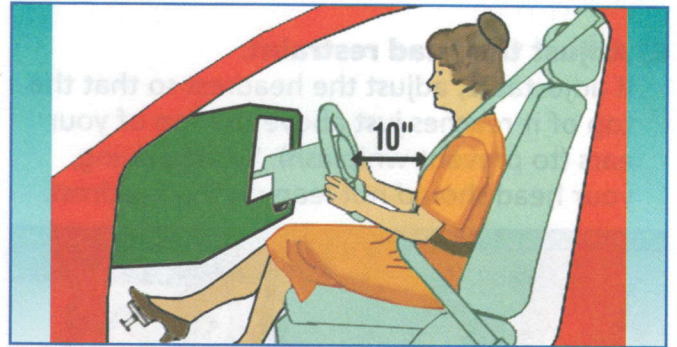
To ensure free use of the controls.

To prevent any "free flying objects".

D) Adjust your seat position:

Your seating position determines your ability to see properly, use the controls for the vehicle, and thereby effectively control the vehicle while driving. Seat yourself comfortably, making sure that your back and hips are firmly against the seat backrest.

The top of the steering wheel should be at shoulder height. Some cars have "tilt-steering columns" or electric seats; both are helpful. If your car is not so equipped, you may need a firm wedge-shaped cushion.



Hold the steering wheel with one hand while using the other to release the seat locking lever (depending on the location of the "adjustment lever," you may need to use either hand). Slide the seat forward or backwards until your right foot can comfortably reach the floor under the brake pedal (as if the brake pedal were depressed to the floor) with your right leg still slightly bent, not stretching. This will permit your right foot to control the brake and gas pedals comfortably, but with good pressure when needed. On a vehicle with a standard transmission, the left foot should fully depress the clutch pedal for this adjustment.

Your left foot should be positioned on the far left against the foot-rest or "**dead pedal**". If your car does not have an actual pedal, the floorboard will have a flat plasticized area on the far left. This should be used to brace yourself to maintain your balance (arms free to control steering). With a standard transmission, as soon as the clutch pedal is released, the left foot should rest on the dead pedal.

The backrest is also adjustable on most vehicles. Place your wrists on the steering wheel at 12 o'clock (think of the steering wheel as a clock). Adjust the backrest so that

SAFETY TIPS



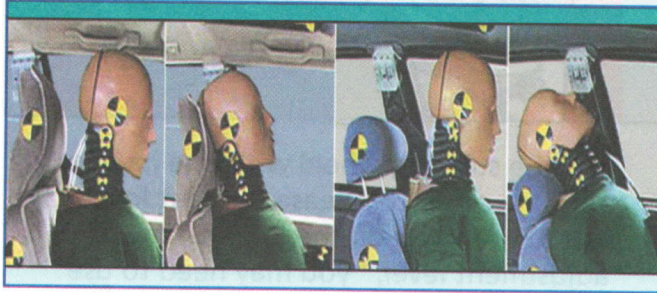
Special care should be taken with the seating position, as this will determine both your comfort and ability to properly control your vehicle. As a result of reported air bag injuries, a space of at least 10" from your chest to the steering wheel is recommended.



your elbows are slightly bent. Now lower your right hand to the 3 or 4 o'clock position and your left to 9 or 8 o'clock; due to the possibility of air bag inflation!)

E) Adjust the head restraint:

If adjustable, adjust the headrest so that the top of it reaches just above the top of your ears (to prevent whiplash). While driving, your head should not lean on the headrest.



the mirror showing a little of the side of your car. It will then reflect a view of the left rear. Use the remote control, or lower the window and grasp the mirror frame.



EXTERIOR RIGHT REAR-VIEW MIRROR: Turn your head and align the mirror with a little of the side of your car showing in the mirror.



Remember that this mirror (optional on some models) is convex and distorts distance.

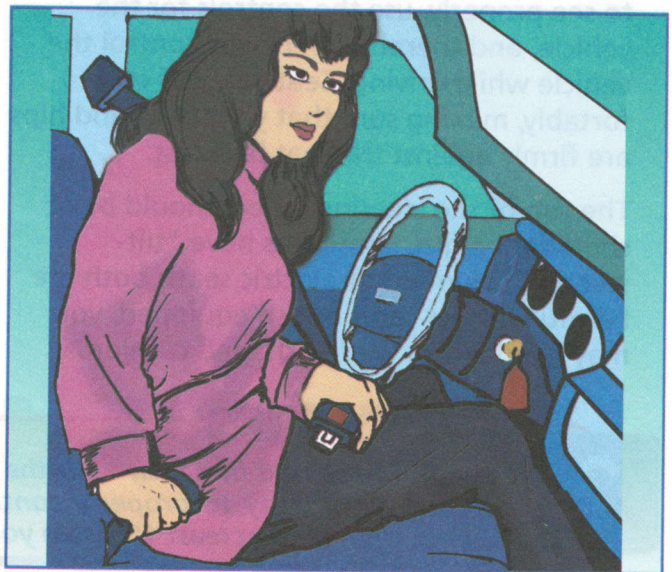
RECHECK ALL MIRRORS BEFORE PROCEEDING.

G) Ensure good ventilation (HVAC):

Adjust the climate controls to the preferred setting for the weather conditions. Lower the side window slightly (3/4 inch). Even with air conditioning, the danger of carbon monoxide (exhaust) accumulating in the passenger compartment requires that proper ventilation be maintained.

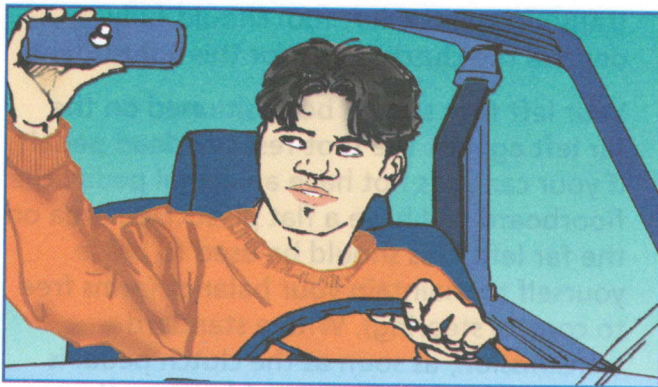
H) Fasten your seat belt:

Fasten your safety belt properly, and make sure that all passengers do likewise.



F) Adjustment of the mirrors:

Mirrors will be used to search behind your vehicle regularly (every 6-8 seconds), in reaction to traffic, and also prior to braking and all maneuvers. It is vital that they be adjusted so they can be used comfortably and easily as well as reflecting the largest view to the rear of your vehicle.



INTERIOR REAR-VIEW MIRROR: Without moving your head from the driving position, grasp the mirror by the frame and adjust its position so that you can see out the rear window, with the right edge of the mirror aligned with the right edge of the rear window. This reflects a clear view to the rear as well as to the right rear of your vehicle.

EXTERIOR LEFT REAR-VIEW MIRROR: Turn your head slightly from the driving position and align this mirror with the right edge of of



I) Driver's Compartment Drill

Review the location and operation of gauges and controls. Check that the parking brake is applied.

BLIND SPOTS

Before proceeding, you must understand a vital fact. With this mirror adjustment and a normal field of vision, there are two areas around your vehicle that you cannot see from the driver's seat. They are called "blind spots".

These are located to the left and right of your vehicle, just behind your normal field of vision. They extend behind the car on either side until the rear-view mirrors reflect the lanes beside your car. Trucks and large vehicles have extra blind spots (NO ZONES).

The **NHTSA (National Highway Traffic Safety Administration)** has studied a category of collisions that they call Lane Change/Merge (LCM) crashes. **They estimate there are 630,000 LCM crashes with 225 fatalities annually.**

- About **60% of the drivers involved did not see the other vehicle;**
- About **30% misjudged the position or speed of the other vehicle.**

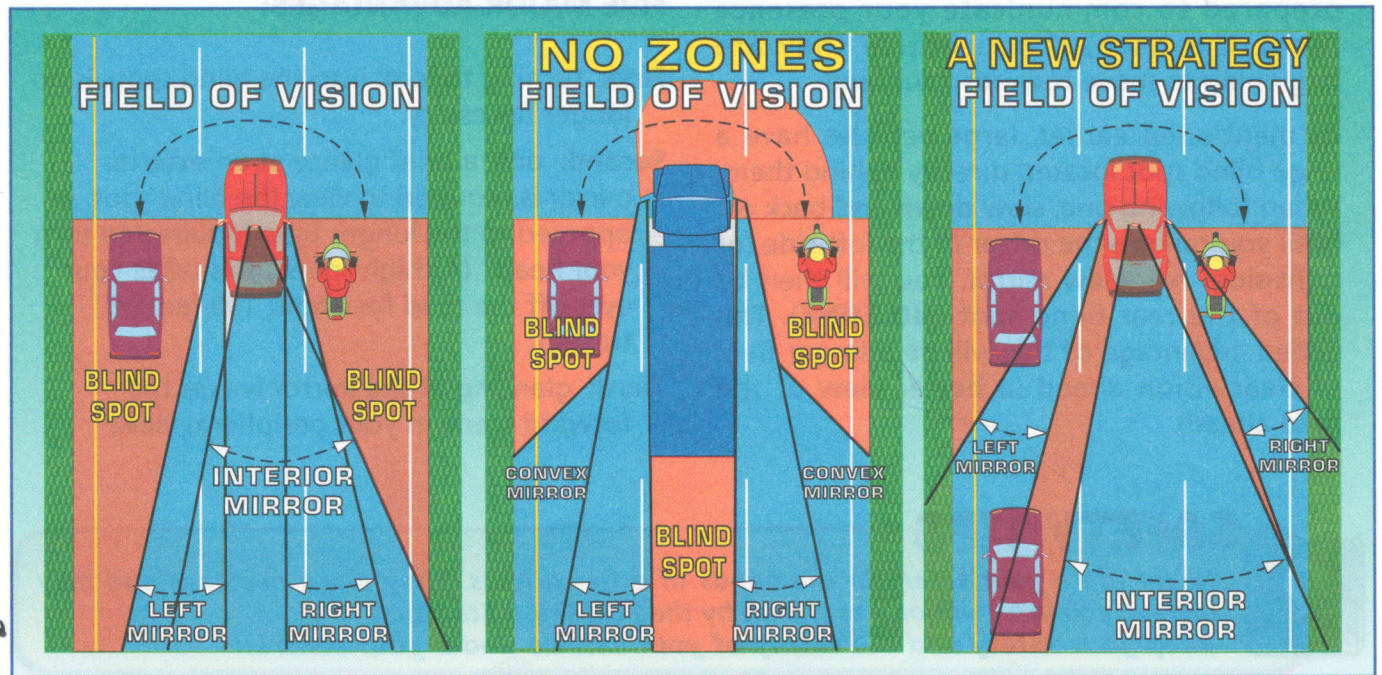
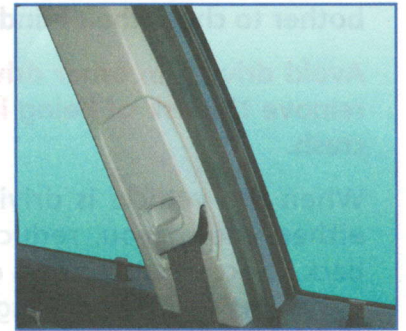
All **LCM** crashes cannot be blamed on the blind spots; but blind spots are extremely important. They are not well understood by the average driver, and some don't even know they exist, yet they are involved in every **LCM** maneuver.

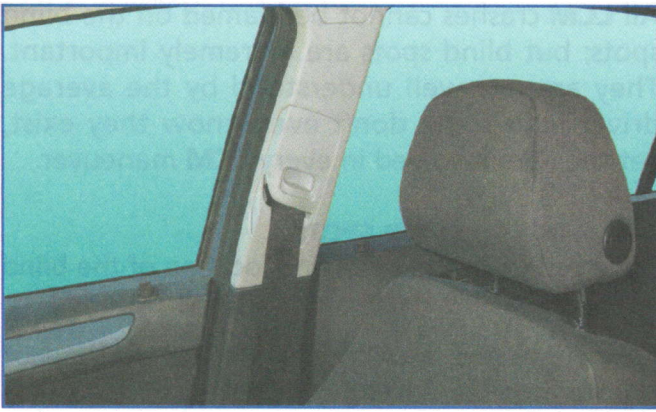
ADAPTING TO BLIND SPOTS

Once you realize the size and location of the blind spots, **there are two things you should learn:**

- A) Anytime you wish to change the position of your vehicle (change lanes, turn, etc.) **it is essential, after checking the mirrors, to glance at your blind spot** on the side where you wish to maneuver. **You should check despite the new vehicle blind spot detection technology.** If it does not alert you, glance to verify. If it warns of a vehicle, glance to see if it is a motorcycle, a car or a tractor trailer - you will have to adjust differently in order to perform the lane change later.

To check the left blind spot, turn your head until your chin reaches your left shoulder, glance out the side towards the rear.





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For the right blind spot, you should glance out the right side rear window (see above).

Practice until it feels natural to check either blind spot quickly and correctly.

B) If you have these two blind spots, all drivers and motorcyclists have them as well, and large vehicles also have a larger blind spot just behind them **How many drivers don't bother to check their blind spots?**

Avoid driving in other driver's blind spots to remove the risk of being involved in an LCM crash.

When the vehicle is driving in the lane on either side of you, reduce speed and drop back or accelerate to pass out of other's blind spots. As you pass through their blind spot, check the position of the front tire, and be prepared to communicate your presence (honk the horn) if you notice they are beginning to move towards your lane.

As mentioned earlier, large vehicles have a large blind spot located directly behind them. When following one, slow down and back off until you can see the driver in the left-side (or right-side) rear-view mirror. You will then be out of the rear blind spot (**NO ZONE**). The added advantage of this will be a larger field of clear vision ahead (a better view of the road ahead).

A NEW STRATEGY

Recently, an alternate approach to the problem of the blind spots and **LCM** crashes has been proposed. This proposal involves changing the setting of the two exterior mirrors in an attempt to reduce the size of the areas not visible in the mirrors.

Instead of adjusting the right and left exterior mirrors while still seeing the smallest portion possible of the side of your vehicle (as mentioned on Page 7.8), the concept is to rotate each exterior mirror outward by about 15 degrees from this setting (see Page 7.9).

For the driver's side mirror (left exterior mirror), this can be done by placing your head against the side window, and then adjusting the mirror to just see the side of your vehicle. For the passenger's side mirror (right exterior mirror), move your head to the centerline of your vehicle and then adjust the mirror to just see the right side of the vehicle.

The two outside mirrors are now rotated outward looking into the former blind spot areas. The result will be four mini blind spot areas; however none of these is large enough to hide a vehicle.

FIVE MAJOR ADVANTAGES:

First: turning to look into the blind spots is no longer necessary.

Second: only a brief glance at an exterior mirror is required to view the blind spot, as opposed to the longer time required to turn your head. (At high speed, this takes your eyes off the road for about 100 feet of travel.)

Third: glancing at the mirror leaves the forward scene in your peripheral view,

SAFETY TIPS



*Never place your safety in the hands of other drivers. They make mistakes and may involve you in a collision - as shown by the LCM Crash Statistics.
Keep your safety and the safety of your vehicle under your control!*



whereas turning your head completely eliminates the forward view.

Fourth: the blind spots can be easily included in your visual search pattern.

Fifth: at night, glare from the exterior mirrors is virtually eliminated. The reason for this is that the vehicle headlamps on either side are not visible in the mirrors until the vehicle moves into the blind spot. At that point, the beams of light are not aimed at the exterior mirrors.

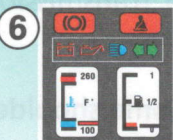
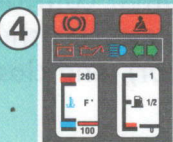
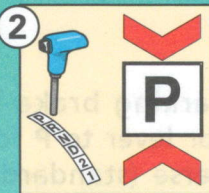
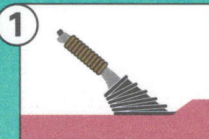
This setting for the mirrors is called the “**Blind Spot/Glare Elimination Setting**” or “**BGE Setting**”. You must understand that when you use this new strategy, the interior mirror is truly your primary mirror, and shows you the traffic to the rear, not including the blind spots. The exterior mirrors allow you to view only the blind spots on each side of your vehicle.

Remember, should you ever drive a vehicle where the rear window view is blocked, you must return the mirrors to the normal settings.



Starting Tasks

STARTING THE ENGINE: AUTOMATIC



Before starting any vehicle, you must have performed all the basics. The key is already in the ignition (except for **keyless entry**). Before proceeding, check that the parking brake is properly set (**1 or A**) and (for an automatic) the transmission is in (**P**) Park (**2**). Most newer vehicles must be in the (**P**) Park position for the key to have been removed in the first place. For a vehicle with a standard transmission, depress the clutch pedal (**B**), select “**N**” Neutral (**C**) and keep the pedal fully depressed while starting.

Normally if the engine is cold, press and release the accelerator pedal to reset the electronic command module (**ECM**).

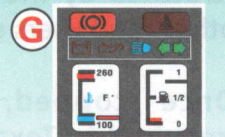
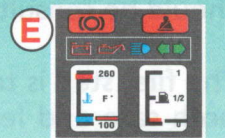
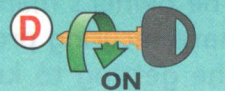
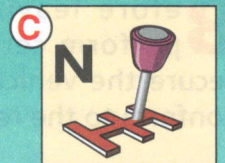
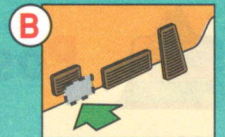
Turn the key in the ignition switch to the **ON** position (**3 or D**). Verify the gauges and the indicator lights. (Diesel engines: wait for the **GLOW PLUG** light to go off before proceeding.)

Turn the ignition switch to the **START** position (**5 or F**) (**Keyless Entry** - apply the brake pedal then press the **START** button) and listen to the sound of the engine; the moment the noise changes, release the switch (or button). (Check your owner’s manual as to the use of the gas pedal while starting.)

Never engage the starter for longer than **10 seconds**; *if the engine does not start, release the switch and wait 5 to 10 seconds*, then try again. (For a vehicle equipped with a standard transmission, release the clutch once it starts.)

With the engine running, recheck the indicator lights

STARTING: STANDARD



and gauges (**6 or G**). The lights should indicate normal operation (lights off). The gauges should start to register the normal operation of the engine. The brake light remains lit because the parking brake is still applied. (**Keyless Entry** may display alerts.)

You must now set or adjust all necessary accessories. If your vehicle is equipped with **Daytime Running Lights (DRL)**, they will come on when you release the parking brake. It is highly recommended to activate the headlights at all times when driving, if not **DRL** equipped.

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IN COLD WEATHER

Activate the parking lights (5-10 seconds) before starting to “prime” the electrical activity in the battery. (Check your owner’s manual.)

Keep the accelerator pedal slightly depressed while cranking the engine to facilitate starting. Allow the engine to warm up for 30 seconds to ensure oil circulation before starting off.



Post-Drive Tasks

Before leaving your vehicle, you must perform certain basic tasks. In order to secure the vehicle and its contents, as well as conform to the requirements of Texas laws.

The owner’s manual for your vehicle will often have securing procedures as an integral part of the getting to know your vehicle section, and should be consulted for specifics.

The first step is to select a parking space that is both safe and legal, as well as secure (vehicle will be visible, protected from break-ins). Stop your vehicle within the chosen space, leaving space on all sides to avoid being bumped or scratched by the doors of other vehicles when other road users enter or exit.

Once stopped, apply the parking brake (required in Texas), ease up, and re-apply the

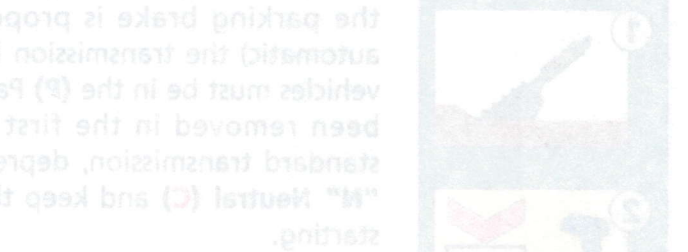
brake pedal (to check the parking brake is applied), then shift the selector lever to P for PARK (automatic) or first/reverse (standard). (Current owner’s manuals require that the parking brake be set prior to shifting to Park.)

A FLOODED ENGINE

The starter sounds normal, but the engine doesn’t start. The odor of gas permeates the passenger compartment. An excess of gasoline in the engine prevents combustion.

To start the engine, depress the gas pedal fully, and maintain this position even if the first attempt fails. Turn the ignition switch to “start” for 5 to 10 seconds; release if it does not start. Try again. As soon as it does start, ease up on the accelerator quickly.

This procedure will work on all gas engines (check the owner’s manual).



Release the brake pedal. Turn off any accessories that were in use, lights, comfort controls (new technology - all accessories shut off when you open the driver’s door), and close all windows.

Turn the ignition switch to the lock position (**keyless entry** - press the **Push-Start** button) and remove the key (required in Texas). In a vehicle equipped with a standard transmission or transaxle, release the clutch pedal.

Remove any occupant restraints. Some shoulder restraints operate when the door is opened.



Check the traffic by looking in the left mirror and blind spot. Use your right hand to unlock and open the driver's door; your body will be turned to check easily. Rear child safety door locks may need to be opened from the outside.

Exit carefully (where appropriate, on curb side). Lock the door (check all doors and that valuables inside are not visible). Walk toward the rear of your vehicle facing the traffic.

These precautions should also apply to any passengers exiting your vehicle.

SAFETY TIPS



In Texas, you must apply the parking brake, shift to Park (in gear for a standard), stop the engine, turn the ignition switch to lock, remove the key, and when standing on a grade, turn the front wheels to the curb or side of the roadway whenever you leave your motor vehicle unattended.

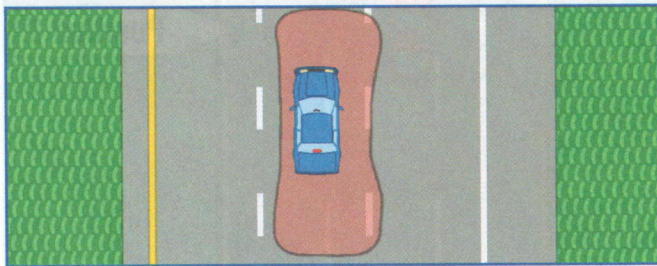


Space Areas

The vehicle operating space has areas that are both visible as well as hidden.

HIDDEN AREA

The central space area or blind zone is the area immediately under and around the vehicle that is not visible when you are seated in the driver's seat. The vehicle blocks your view. This area moves with the vehicle when in motion.

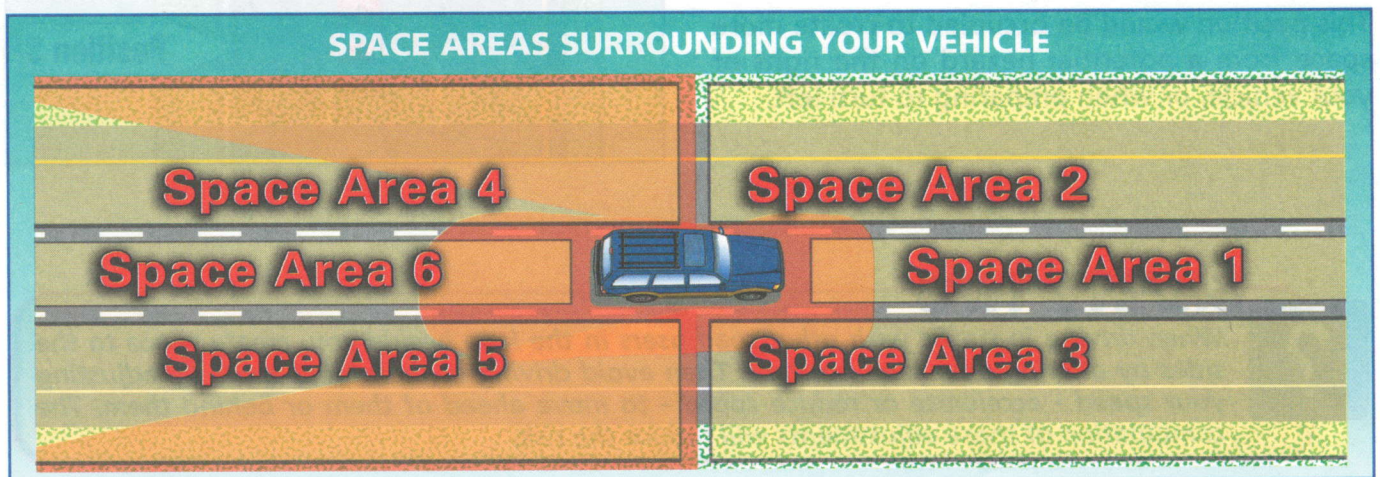


VISIBLE AREAS

The area around your vehicle that is visible can be subdivided into six areas for the purpose of managing space and risk reduction. They are:

- **Front** - area 1 in the diagram below,
- **Left Front** - area 2 in the diagram,
- **Right Front** - area 3 below,
- **Left Rear** - area 4 in the diagram,
- **Right Rear** - area 5 below, and
- **Rear** - area 6 in the diagram below.

It is imperative that you recognize that driving takes place in the future (targeting your path of travel) and the past (the view in the rear-view mirrors). It is critical not to try to look where the vehicle is because this area is not visible. To



assist in positioning your vehicle, the concept of reference points will be presented in Chapter 11-E.

LANE POSITION

A lane of traffic is wider than a passenger vehicle. With this thought in mind, you must realize that it is possible to occupy more than one position in any lane without encroaching on any of the lanes beside you.

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The advantage to this concept is that it affords the proactive driver the opportunity of leaving a greater distance (more space) on one side of the vehicle without changing lanes.

LANE POSITION 1

While driving, if you center your vehicle in your lane of travel, you are occupying **lane position 1** (lane center-position). In this position, you have approximately 2 to 3 feet on both sides of your vehicle (depending on the type of roadway).

This indicates that, in your judgment, there is no hazard on either side of your vehicle that requires you to adapt your space to minimize a potential risk.

LANE POSITION 2

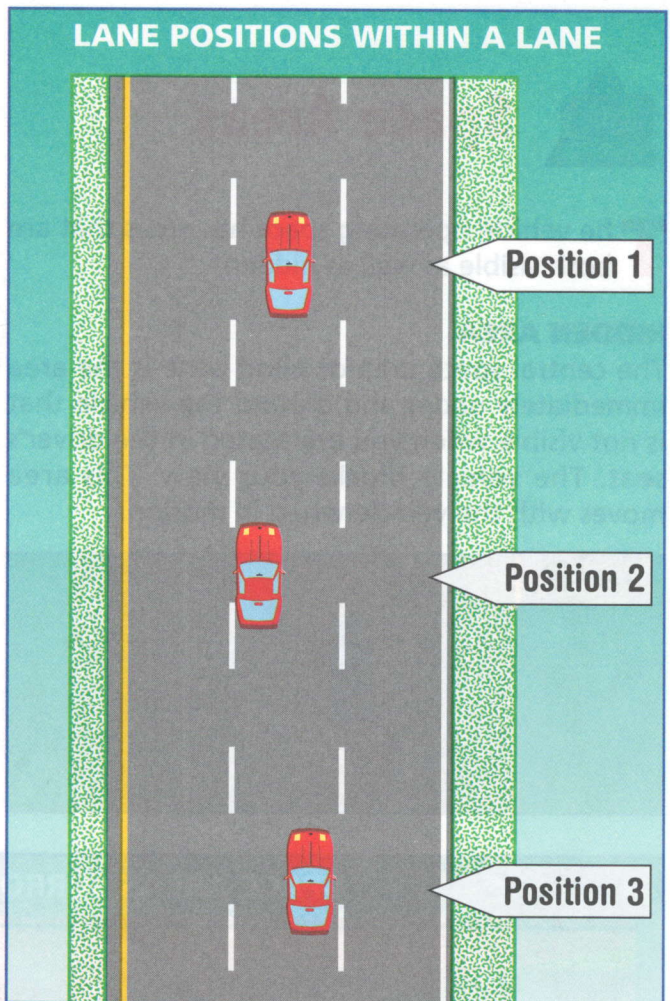
When you position your vehicle near the line on the left side of your lane, you are occupying **lane position 2** (lane left-position). In this lane position, you have approximately 4 to 6 feet of space to the right of your vehicle (contingent on road).

This position would be occupied to create more space from a potential hazard on the right of your vehicle, or when preparing to turn left.

LANE POSITION 3

Positioning your vehicle near the right edge of your lane or near the curb will leave approximately 4 to 6 feet on the left side of your vehicle (subject to the type of roadway). This is referred to as **lane position 3** (lane right-position).

In this lane position, you will maintain more space from a potential hazard on your left (oncoming traffic, potential danger in the lane to the left of your vehicle), or when preparing to turn right.



SAFETY TIPS



When driving in traffic with other road users in the lane beside you, create space to the sides by altering your lane position. Then avoid driving in their blind spots by adjusting your speed - accelerate or reduce speed - to move ahead of them or behind them. The combination of these adjustments will reduce the risk.

