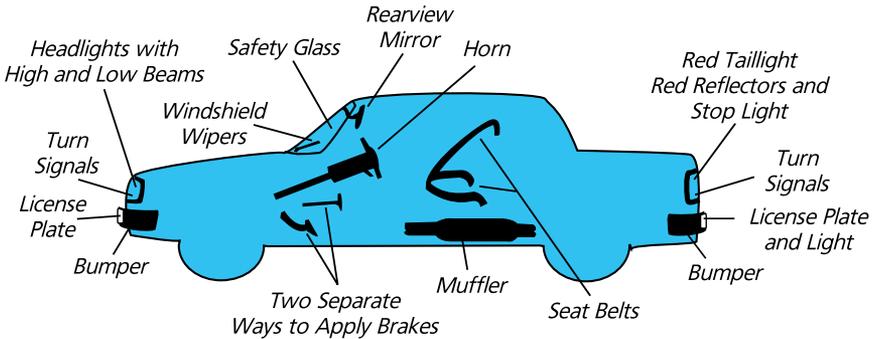


# Chapter 2 Your Vehicle

## Your Vehicle

### Your Car Must Have This Equipment



Before driving any motor vehicle on public roads, make sure it is fully equipped and in good mechanical condition.

Become familiar with your vehicle. Read the operator's manual and know how to use all the equipment. Routinely check the lights, windshield wipers, horn, and tires to be sure they are in working order. Make sure you understand the functions of the gauges and warning indicators.

Upon entering the vehicle, check your seat and mirrors to see if they require adjustments. Make sure passengers are seated in positions that do not obstruct your view or prevent you from driving normally. Adjust and buckle your seat belt and make sure all of your passengers do so.

## Vehicle Requirements

### Brakes

All cars and trucks must have at least two separate brake systems, such as the foot brake and the parking/emergency brake.

### Bumpers

All private passenger vehicles must have front and rear bumpers. Pickup trucks and vans must have front bumpers and either rear bumpers or reflectors.

### Horn

Your motor vehicle must have a working horn. Bells, sirens, and whistles are not horns and may be used only by emergency vehicles. Use your horn when it is necessary to avoid a crash. Don't honk unnecessarily. Avoid honking for purposes such as announcing your arrival.

## Headlights and Taillights

All motor vehicles, with the exception of motorcycles, must have two white headlights that work on high and low beam, and red taillights that illuminate when the brake pedal is pressed.

When set on high beam, headlights must make objects visible on the road ahead from at least 350 feet away.

Replace damaged headlights. A cracked lens allows moisture and dust to accumulate inside the lamp, resulting in loss of illumination and increased glare for other motorists.

Clean your headlights as often as you clean your windshield. Dirty headlights can reduce light output by as much as 75 percent.

Have your headlights inspected at least once a year to make sure they are aimed properly. Some headlamps require an adapter or special settings. Refer to your operator's manual for more information.

Some vehicles have reduced-power headlights, called daytime running lamps, which turn on automatically when you drive during the daytime. These lights make your vehicle easier for others to see. Taillights and parking lights do not turn on automatically.

Your headlights must be turned on at sunset and used until sunrise. They must also be used during weather conditions that include rain, snow, hail, sleet, or fog and any time you cannot clearly see the road ahead for a distance of at least 500 feet.

## License Plate Light

A white light bulb must illuminate the rear license plate to make it visible at night.

## Turn Signals

All turn signal lights must be in working order. You must use turn signals if your vehicle width, or the width of a load you are carrying, prevents drivers behind you from seeing your hand and arm signals.

## Prohibited Lights

Blue lights, flashing lights, and strobe lamps serve special purposes. They are not for use by non-authorized vehicles.

Only snowplows, other road maintenance equipment, and authorized emergency vehicles may be equipped with blue lights. Only authorized emergency vehicles, school buses, road maintenance equipment, tow trucks, service vehicles, and farm equipment may be equipped with flashing lights. Only school buses, snow removal equipment, and rural mail carrier vehicles may be equipped with strobe lamps.

## Mufflers

All motor vehicles must be equipped with mufflers that keep the vehicle from making sudden or prolonged loud noises, particularly sharp popping or crackling sounds. Check the muffler regularly for carbon monoxide leaks.

## Rearview Mirrors

All passenger vehicles must be equipped with rearview mirrors. Vehicles such as rental moving trucks, which are not designed to allow a view

through a rear window, must be equipped with an additional side mirror.

Pickup trucks, which are often used for hauling purposes, must also be equipped with an additional side mirror. The side mirror will provide the driver with a clear view when transported materials obstruct sight through the rearview mirror.

## Seat Belts and Airbags

Be sure that seat belts are clean and in good condition, so they are available to all vehicle occupants. In Minnesota, motor vehicles must be equipped with seat belts, and use of seat belts is mandatory.

Airbags are intended to work with seat belts to prevent injuries. They are not designed to keep occupants from being ejected.

Keep dashboards free of debris or clutter. When airbags suddenly inflate, objects on the dashboard can become dangerous projectiles.

Read your operator's manual before driving a vehicle equipped with airbags.

## Tires

Tires must be able to carry your vehicle's weight and grip the surface of the road properly. Inspect tires regularly for cuts, cracks, uneven wear, bald spots, bulges, and punctures. Carry a good spare tire and check its pressure often. Tires do not have as much traction on gravel or dirt roads as they do on concrete or asphalt roads.

Tires have been known to lose up to 1 psi (pounds per square inch) every month. Check your tire pressure often and never drive with under-inflated tires.

- The vehicle's recommended tire pressure is located on a sticker inside the driver's door of your vehicle or in the owner's manual.
- Check your tires before you've driven or at least three hours after you've driven your vehicle.
- Insert a pressure gauge into the valve stem on your tire. The gauge will show a measured psi.
- Compare the measured psi to the psi found on the sticker inside the driver's door or in the owner's manual. **DO NOT** compare to the psi on your tire's sidewall.
- If the measured psi is above the number, let air out until it matches. If below, add air until it reaches the proper number.

Check your tires often for wear and damage problems. A tire is illegal if the tread is less than one-sixteenth of an inch deep. An easy way to check for wear is by using the penny test.

- Take a penny and hold Abraham Lincoln's body between your thumb and forefinger.
- Select a point on your tire where the tread appears the lowest and place Lincoln's head into one of the grooves.
- If any part of Lincoln's head is covered by the tread, you're driving with the legal and safe amount of tread. If your tread gets below that, your vehicle's ability to grip the road in adverse conditions is greatly reduced.

## Windshield and Windows

Your view through windshields and windows must not be obstructed by cracks, discoloration, steam, frost, ice, or snow when you are driving. Objects may not be suspended between the driver and the windshield.

Labels and stickers or other devices permitted by state law may be placed on your windshield. These include state and national park stickers, official safety inspection stickers, and EZpass electronic toll-collection devices.

Global positioning and other navigation systems may be mounted or located near the bottommost portion of the windshield.

Driver feedback and safety-monitoring equipment may be mounted immediately behind, slightly above or slightly below the rearview mirror.

Windshields may not be made of, covered by, or treated with any material that makes the glass more reflective or reduces the amount of light that travels through it.

Any window tint material applied to the side or rear windows after August 1, 1985, must be marked to show the percentage of light that is transmitted and the percentage of reflection it creates. If it transmits less than 50 percent, or reflects more than 20 percent of available light, it may be used only on the rear window of a pickup truck, or on the rear and side windows of a van (behind the driver's seat), limousine, or vehicle used by a funeral home.

## Windshield Wipers and Window Defrosters

A motor vehicle with a glass windshield must be equipped with wipers in good working condition. Window defrosters are necessary to keep the windows and the windshield clear of steam and frost.

## Wheel Guards or Fenders

Passenger vehicles must be equipped with fenders or other wheel guards to prevent water, dirt, and other material from being picked up and thrown into the air by the tires.

## Fuel Efficient Techniques

### Keep Your Car in Good Operating Condition

- Keep your engine properly tuned.
- Keep tires properly inflated.
- Use the recommended grade of motor oil.

### Drive Efficiently

- Plan and combine errands into one trip.
- Drive sensibly; avoid aggressive driving such as speeding, rapid acceleration and braking.
- Observe the speed limit.
- Remove excess weight; avoid keeping unnecessary heavy items in your vehicle.
- Use cruise control on the highway.
- Use overdrive gears.
- Take public transportation, use car pools, ride share, bike or walk whenever possible.