Shop focus: Tire care and safety

Remembering *PARTS* can help you maintain tire safety, a crucial factor in safety on the road.

The Rubber Manufacturers Association (RMA) recommends setting aside a minimum of five minutes each month to perform these PART activities on passenger vehicles—checking Pressure, Alignment, Rotation, and Tread.

In fact, Story County Maintenance Supervisor Craig Kirk says that road workers should visually inspect their vehicle's tires every day. You can start with the RMA PART routine and add a Standard safety inspection to complete a *PARTS* tire safety inspection.

P = Pressure

- Supplement daily hammer-method pressure checks with regular inflation gauge checks.
- Check tire pressure when the tires are cool. If you have to drive to your air source, check the tires before you go and add only the amount of air needed to bring the tire up to specification.
- Check the pressure in all tires, including the spare.

The National Highway Traffic Safety Administration (NHTSA) requires that standard tire and loading information should be located on the driver's side doorjamb (also known as the B-pillar). See figure 1 for a sample placard. Use this information along with sidewall markings to determine pressure requirements for each tire.

Figure 2 shows an example of sidewall markings that give, for instance, information about the tire manufacturer, size, service rating, and Uniform Tire Quality Grading (UTQG) rating.

A = Alignment

- Notice if your vehicle pulls, vibrates, shimmies or makes noise, all signs that you may need to align your tires.
- Check tire balance. Out of balance tires contribute to uneven wear and misalignment.
- Schedule alignment at the first signs of tread wear.

R = Rotation

Check for wear and correct any mechanical problems (e.g., balance, alignment) before you rotate the tires.

T = Tread

Tread is the most important indicator of tire problems that can be related to pressure, alignment, and rotation. Frequently check tires for these signs of tread wear:

- Signs of damage or foreign objects.
- High or low spots, flat spots, or unusually smooth spots on the face of the tread.
- Wear bars across the width of the tread (indicates nearing the end of the tire's life).
- Excessive wear on both outer edges (indicates under-inflation).
- Excessive wear in the center of the tread (indicates over-inflation).
- Tread that shows cupping or dipping (may indicate worn suspension parts or a wheel imbalance).
- Saw-toothed or feathered tread edges (indicates wheel misalignment).

S = Standard safety inspection

Daily standard visual safety inspections—the pre-trip walk-around—are routine for trucks and other road maintenance vehicles.

- Check the wheel and the rim for damage.
- Check to see that the wheel and tire assembly is in roundness.
- Make sure the valve stem cover is in place.
- Check that all lug nuts are present and fully torqued.
- Check the hub oil seal.
- Make sure spacers or tire weights are not damaged or missing.

For more information

For more information about tires and tire safety, contact Craig Kirk at 515-382-7355, engineer@storycounty.com or Tom McDonald, Safety Circuit Rider, at 515-294-6384 or tmcdonal@iastate.edu

For more information about tire safety and tires, see

- NHTSA Final Rule: Tire Safety Information: www.nhtsa.dot.gov/cars/rules/rulings/TireSafety/TireSafety.html#secVII_A
- 4Crawler: www.4crawler.com/Diesel/Tires.shtml
- The Tire Rack: www.tirerack.com/tires/tiretech/tiretech.jsp
- Tire Safety: www.tiresafety.com ■

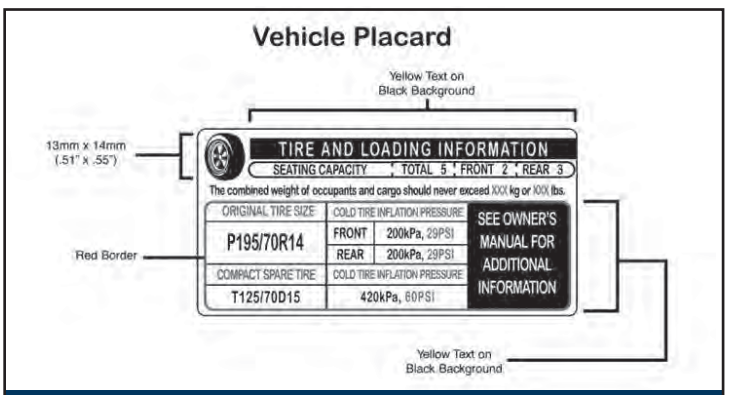

Figure 1. Standard NHTSA vehicle placard with tire and loading information.

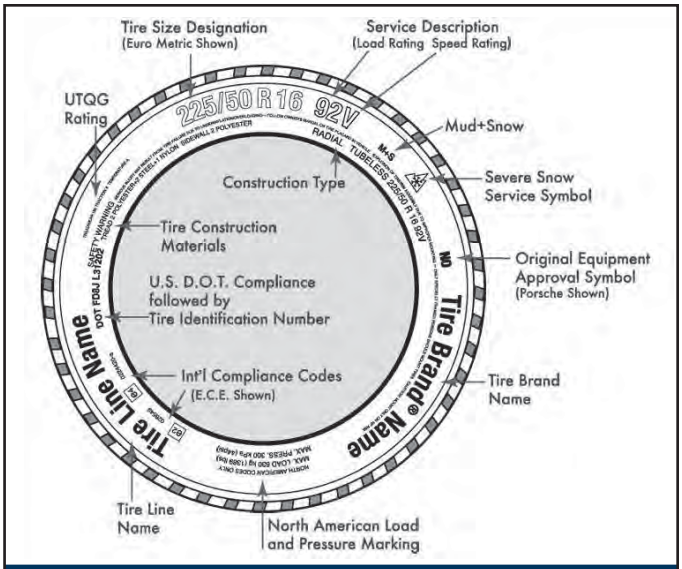

Figure 2. Example of sidewall markings. Image courtesy of Tire Rack.