Important tire maintenance tips for commercial vehicles

For many fleets operating commercial vehicles, one area that does not always get the attention it deserves is tire maintenance. A good tire inspection and maintenance program can reduce tire costs, improve fuel efficiency, and benefit your safety program. Here are three important tire maintenance tips to consider.

1. Tire pressure

Tire experts agree that up to 80 percent of all tire failures occur because of improper air pressure, and more specifically, underinflation. Underinflated tires generate more heat as they expand and contract while rolling down the road. Elevated temperatures cause tire damage and eventually lead to tire failure. Most of the tire debris and "gators" along the nation's roadways are the result of these types of failures.

Maintaining optimum tire pressure can save you money and prevent accidents. Tire failures due to improper air pressure require you to replace tires earlier than expected, adding to maintenance costs. Tire failures increase roadside repair costs and cause service delays.

Underinflated tires create more resistance, negatively affecting your fuel economy. In fact, one tire underinflated by 15 percent can reduce fuel economy by 2.5 percent. Sudden tire failures also have the potential to cause accidents. They can cause you to lose control of your vehicle and they create a hazard for other motorists. If one of your tires ruptures and damages another vehicle, you could be liable.

To prevent underinflation, check tire pressure regularly, preferably before driving the vehicle, since air pressure can increase by as much as 15 psi once tires heat up. Industry experts recommend checking tire pressure at least weekly. Thumping tires with a club or hammer, or kicking them, is not an effective way to measure air pressure. An air pressure gauge is the only reliable way to determine tire pressure. Check the gauge periodically to ensure that it is calibrated properly. Since you probably won't be able to see tire damage caused by underinflation, keeping your tires inflated to the recommended pressure is the best way to protect against tire damage and premature failure.

2. Tire inspection

The Federal Motor Carrier Safety Regulations (FMCSR) require that tread depth on steering axle tires have a depth of 4/32 of an inch and 2/32 of an inch on drive axle and trailer tires. These are minimum requirements.

To help ensure optimum performance, tires may need to be replaced before tread depth reaches these minimum requirements. Federal and state motor carrier safety regulations require that the driver inspect tires and wheels as part of a daily vehicle inspection. Tread depth and wear should be checked, along with air pressure.

Daily tire inspections should include both a visual and physical examination to identify improper wear or damage, such as punctures, cuts or bulges. Irregular wear might be a sign that your tires are not aligned or inflated properly. If these conditions continue uncorrected, your tires may need to be retired early or they might fail unexpectedly.

3. Tire age

Tire age plays an important role in tire safety. That's because the rubber that makes up a tire degrades over time, whether the tire is used or not. News reports have examined the growing concern over tire aging and the potential that aging tires can fail suddenly. Generally, industry experts agree that a tire's useful life span ranges between six and 10 years, depending on how it is used.

If you have vehicles in your fleet that have older tires (i.e., spare trailers), check the age of those tires. As a safety precaution, old tires, even if they appear to be in good condition, might warrant replacement. When purchasing tires, make sure you are buying new tires, not tires that have been stored in a warehouse for several years.

A tire's age can be determined by looking at the DOT code located on the sidewall of the tire. The three- or four-digit number that follows the letters "DOT" identifies the tire's manufacture date.

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Tires manufactured before 2000 have their production date identified by the last three digits in the DOT string. For example, if the last three digits are 408, the tire was manufactured in the 40th week of 1998. Tires manufactured after 2000 are identified by the last four digits of the number. For example, if the last four digits are 1008, then the tire originated during the 10th week of 2008.

Think maintenance, think savings

Maintaining proper tire inflation, having a rigorous tire inspection process, and replacing old and worn tires are three important practices that can help keep your vehicles operating safely and save you money. Tires are among a fleet operation's biggest maintenance expenses. That alone is an incentive to look closely at ways to improve your tire maintenance program.

If you factor in the potential that poor tire maintenance can lead to preventable accidents that can cost you thousands of dollars in deductibles and downtime, the incentive is even greater.

TIRE CHECKLIST

- √ **Check tire pressure at least weekly using an air pressure gauge.**
- √ **Check the pressure before driving the vehicle, since air pressure can increase by as much as 15 psi once tires heat up.**
- √ **If federal and state motor carrier safety regulations apply to your organization, ensure that drivers inspect tires and wheels visually and physically as part of a daily vehicle inspection.**
- √ **Consider replacing older tires, even if they appear to be in good condition, as rubber degrades over time.**
- √ **Be sure any tires you buy are new — not tires that have been stored in a warehouse for several years.**

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