

Tire Challenges in the Summer

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It's been a hot summer over most of the USA. The Farmers' Almanac is predicting more record temperatures as the summer progresses. Heat is a tire's worst enemy, so alligators on the road increase dramatically. Alligators are dangerous and a serious road hazard if a vehicle drives over or attempts a slalom maneuver to avoid them as they contain woven steel belts that are heavy and can be sharp.

What causes a tire to get so hot that it will fail and blow out?

- Running with little or no air for an extended period of time
- High vehicle speeds
- Heavy and overloaded
- Slow leaking punctures in the tread area
- Leaking valves and valve cores
- Underinflated based on the load

When any tire gets too hot, it will eventually fail. The retread industry normally gets a bad reputation from the general public, because it is a common misconception that most of the detached tire treads on the highway are the result of a poor quality retread. However, studies including a 2008 NHTSA report show that they are just as likely to be from a new tire as from a retread. Today's retreads are state of the art and produced on amazing equipment. Holography, shearography and X-rays are used by the retread industry to determine casing integrity. Tire repairs are made to exacting standards. Tire casings are designed to handle multiple retreads. Retreading not only saves money but also reduces the demand for oil (it takes approximately 21 gallons to make a new truck tire, versus 7 gallons for a retread) and reduces the landfill requirements.

Tire temperatures can be compounded when mounting and running new tires in the summer months. That's because a new, deep lug tread tire running on the drive position may have 30/32" of initial tread depth and the more rubber the hotter the tire temperatures. This is the result of the working or flexing of the deeper treads, which creates heat. Mounting new

tires in the winter is always more desirable. Deep tread tires are historically better for traction in the inclement weather. By the time summer arrives six months later there is still plenty of tread depth with the added benefit of less heat buildup.

The worst possible scenario for any tire is the combination of running high speed, overloaded and underinflated. Tire rubber compounds begin degrading when the actual internal rubber temperature reaches about 200° F.

So, what can fleets do to ensure tires survive the hot summer season? It all comes down to regular tire inspections and taking advantage of your drivers. They are obliged to do a daily vehicle walk-around. Simply kicking and/or beating the tires with a baseball bat will not reveal anything conclusive. Checking tire pressures with a calibrated tire gauge is critical. Sure, it takes some time, you get dirty, it requires bending down and may also include removing the tire valve cap. But it is absolutely crucial to identifying low tires. Drivers and mechanics should also be trained in what we call "fingertip diagnostics". Running your hand across the tread surface will identify any uneven or irregular wear. Tire treads should be smooth and even. If cupping or depression or just plain irregular wear is found then the tire may have been run underinflated and should be replaced.

Trailer and dolly tires are usually the poorest tires when it comes to proper tire inflation. They are the most neglected tire position. As a result, a high percentage of the rubber on the road are these tires. Taking an active role in thoroughly inspecting ALL tires will help maximize treadwear, increase fuel economy, maximize casing retreadability and significantly reduce those costly tire-related roadside service calls and CSA violations.

Training drivers and mechanics on Tires-101 basics will go a long way in helping to identify tire issues prior to them getting too serious. Many fleets are great at training the new associates but it is important to have refresher classes on a regular basis to reinforce proper tire maintenance and repair.

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