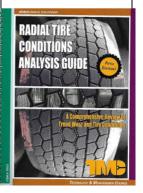


COMMERCIAL FLEET TIRE DIGEST

An authoritative guide from Pressure Systems International to help reduce costs, increase safety and improve operational efficiencies associated with tires.

VOLUME 13 ISSUE 3 Q4 2019

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Understanding Tire Irregular Wear

Every 5 years, the TMC of the American Trucking Associations updates their #1 best-selling maintenance publication, "Radial Tire Conditions Analysis Guide". It may not have made the New York Times bestsellers list, but thousands and thousands of copies have been distributed to trucking fleets, tire service providers, tire dealers, and truck/trailer distributors. Earlier this year, the 5th edition was published.

This comprehensive review of tread wear and tire conditions is the leading authority when it comes to commercial truck tire issues. Industry tire experts from 13 companies, including PSI, participated in this collaboration. The manual has many uses for anyone involved with truck tires. The introductory chapter provides an understanding of basic tire design/construction and nomenclature. More importantly, the manual will assist in answering the following tire questions:

- Is the tire serviceable?
- Is the tire repairable and/or retreadable?
- Is the tire issue warrantable?
- What are the operational and maintenance lessons to be learned/identified related to the tire condition?

The goal of every fleet is to have tires which when removed from service have smooth, even wear down to the fleets tread depth pull-point. In order to maximize tire life, fuel economy, traction and retreadability, tires must be running at the recommended tire pressure on vehicles with proper alignment.

When tires develop irregular wear and casing issues, tires will be removed prematurely from service and tire costs rise dra-

matically. Utilizing the radial tire manual will identify specific reasons for the causes of the irregular wear or casing failures.

If a trailer tire generates, for example, fast shoulder wear on only ONE shoulder (inside or outside shoulder), it is typically due to excessive camber which is an alignment related condition. Diagonal wear across the tread is also a common condition found on trailer tires. It can be repeating around the tread circumference in multiple locations. It is usually started as a brake skid. But can also be caused by too much bearing endplay, toe-out, improperly or worn out suspension components, assembly out of balance and/or mismatched duals.

A common crown area casing condition is stone drilling caused by stones trapped in the tread which penetrate the tread base and may even extend into the belt package. Utilizing the manual once again, stone drilling is found in the Casing Conditions section which is subdivided up into Bead Area, Sidewall Area, Crown Area (the largest section) and Tire Interior. Stone drilling is typically due to tread design and/or misapplication of the tire. A good example is running a line haul tire on gravel roads. Stone drilling is also magnified by running under and/or overinflated.

The manual also includes a section on improper/failed tire repairs. Tire repairs are very common but if not done properly can have serious repercussions. A good example is a vertical mid/upper sidewall bulge > 3/8". The cause is due to a repair unit that was too small, improperly installed, or the injury was not removed successfully during the repair process.

Mastering the Radial Tire Conditions Analysis guide will go a long way in understanding why tires are not running up to your expectations and what you can do to remedy the situation to ensure you have a first-class, low-cost tire program.

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