



COMMERCIAL FLEET TIRE DIGEST

The authoritative guide to reducing commercial tire expenditures from Pressure Systems International, the manufacturer of the Meritor Tire Inflation System by PSI™

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Maximizing Tire Cost:Value Ratio

As the price of commercial tires continues to remain at all-time highs, fleet managers have the responsibility of reducing tire cost/mile through maximizing tire removal mileage, increasing retreadability, improving vehicle fuel economy, and eliminating tire related roadside service calls.

Tires can be purchased at many price points. The real tire cost is the total cost of ownership over multiple retreads. A specific tire model may have a high initial acquisition cost but that should not necessarily deter the fleet manager from making the purchase. This particular tire may average the highest number of retreads per casing as well as yielding great miles/32". This is why tire cost/mile over the entire casing lifecycle makes the most sense when choosing which steer, drive, and trailer tires should be purchased for your vehicles.

The two most important criteria to maximizing tire removal mileage are (1) maintaining proper tire pressure (based on the vehicle load) and (2) reducing/eliminating irregular wear. If irregular wear develops, tire removal mileage will drop significantly. When the tire is not being worn smoothly and evenly, fuel economy will also decline. If the tires have developed irregular wear such as "cupping" they tend to hop down the road, which not only leads to premature tire removal, but dramatically decreased fuel economy. Choosing the proper tire pressure is always based on the worst case load the tire will see in your service vocation or duty cycle. When the tire footprint is optimal based on the pressure and load, tire life is maximized to its fullest potential. Tires are designed to run at a wide range of pressures as the vehicle rolls down the highway.

Tire pressures typically increase 15% after about thirty minutes running fully loaded at 65 mph. Tire companies preach to never take air out of a hot tire; their tires are designed to take this pressure increase into account.

All of the tire companies and the Rubber Manufacturers Association (www.rma.org) publish load/inflation tables. For a given load and tire, the recommended pressure is listed. These tables are based on an ambient temperature of approximately 70 F.

Tire underinflation is always the most serious issue when it comes to tires. Everything is bad when tires run underinflated. The footprint becomes long and elongated, which in combination with the extra flexing of the tire sidewalls, leads to increased heat, more punctures, lower mileages, and reduced retreadability. Keeping the tire casing running cool is the secret to maximizing the number of rereads per casing. When the tire is running cool is also when the tire fuel economy is maximized. Heat is to tires what Kryptonite is to Superman.

Keeping both inside and outside dual tires running within five psi of each other will also help considerably in maximizing tire mileages. When the inside duals are running at 70 psi and the outside duals are at 100 psi it's the worst scenario for tires to develop irregular wear. The tire revolutions per mile change dramatically when a tire is at 70 psi versus 100 psi with the result being uneven and irregular wear.

It is always a good idea to work with your tire professionals to help to understand and to optimize your fleet tire program and keep cost/mile in check.

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Q&A PSI ANSWERS YOUR QUESTIONS

Q. My shop uses the standard stick-type pressure gauges to measure tire pressures. There always seems to be a big spread of results depending on which gauge is used. Any recommendations?

A. Regardless of manufacturer, brand new out of the box stick pressure gauges have an accuracy of only +/- 3 psi. Depending on which gauge is used, a tire with 100 psi can be measured to be 97 psi with gauge 1 and 103 with gauge 2. Best solution is to confirm gauge accuracy versus a master gauge on a frequent basis.