



COMMERCIAL FLEET TIRE DIGEST

*The authoritative guide to reducing commercial tire expenditures from
Pressure Systems International,
the global leader in Automatic Tire Inflation Systems*

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Increasing Tire Removal Miles & Improving Fuel Economy

If you are attending the TMC Annual Meeting and Exhibition in Atlanta next month, plan to attend the S2 Tire-Wheel session on Tuesday, March 6 at 4:45. Al Cohn will be moderating the popular Family Feud panel.

The goal of every good tire program is to maximize tire removal mileage and to maximize vehicle fuel economy. Tires play a major role in increasing vehicle fuel economy. The average price of a commercial truck tire is in the \$400-\$500 range depending on wheel position and tire make/model, therefore getting the most miles out of a tire casing is critical to reducing overall tire cost/mile.

Let's first take a look at ways to increase tire miles. Maintaining proper Inflation pressure is always at the top of this list. When the proper tire pressure is maintained for the life of the tire, the tire footprint is at the designed optimum width and length. The tire footprint is the key to keeping the tire from developing irregular and uneven wear patterns. Tires that generate cupping, high-low lug wear, depressed ribs and diagonal wear patterns lead to premature tire removals and significantly reduce tire removal mileages. Identifying the proper tire inflation pressure is also critical. The correct tire pressure is based on the heaviest load the tire will see in the real world. The corresponding cold tire pressure is then identified by using load/inflation tables published by all the tire companies. Cold tire pressure is based on an ambient temperature of 70° F.

Mismatched tire duals will also lead to early tire removals. Tire duals should be maintained within +/- 5 psi of each other to insure the tire revolutions per mile are as close as possible. When the outside dual is at 100 psi and the inside dual is down to 70 psi (due to some type of leak), the tire revolutions/mile will be significantly different. The 70-psi tire by trying to keep up with the 100-psi tire will start skipping, hopping and dragging as the vehicle runs down the highway. Irregular wear will develop quickly. Even after the situation is corrected, the irregular wear will continue to occur until the tire is changed out.

When replacing dual tires be sure the tire circumference of the two tires is as close

as possible because if they are not, the same issues occur as with dual tires that are running at different pressures.

Irregular trailer tire wear is very common as trailer tires are the most neglected. Automatic tire inflation systems have become the new norm for trailers and dollies. Air is automatically added to any trailer tire that is running at less than the control box pressure setting. Irregular wear is therefore, dramatically reduced and the result is increased tire miles with these systems. Fuel economy is also increased when tires are at the correct operating pressure.

Running tires down to the legal DOT minimum of 4/32" for steers and 2/32" for drive and trailer tires may lead to stone damage and cutting/tearing of the tire casing. It is important to protect your valuable tire casing to increase the probability of a successful retread. Many fleets only run their tires down to the 5-7/32" range in order to protect the casing.

Fuel efficient tires always have a price premium attached compared to the "regular" or baseline tire. The compounds used to keep a tire running as cool as possible typically cost more and these compounds are the secret to fuel efficient tires. In the case of drive tires, the baseline tire may have 32/32" of tread rubber compared to the fuel-efficient version that may come with a decreased 26 or 28/32". The lower tread depth tire generates less heat and will improve fuel economy. However, tire removal mileage will be reduced since the starting point is a shallower tread depth. In linehaul operations, each 32" of rubber can equate to 15,000 or more miles. The potential tradeoff of fuel efficient drive tires is less tire removal miles depending on the initial tread depth.

Work with your local tire professional to choose the best tire options for your fleet to optimize both tire removal miles and fuel economy.

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