



# 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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## Radial Truck Tires – Did You Know?

Today's radial truck tires are an engineering marvel. Depending on the specific make and model, a radial truck tire can have 15 different components. Each component (tread, sidewall, bead) is comprised of 10 - 15 different ingredients. There are different types of rubbers, carbon black, resins, accelerators, curatives, and even wires. Each compound is like making a cake; because if you change one ingredient the properties of that compound can change dramatically. Tire designers and those formulating compounds work together to design and develop the best tire for a specific application and wheel position. Thanks to computer modeling techniques such as finite element analysis, tire designers can make minor changes and determine in a very short time what effect those changes will have on tire performance.

The most popular line-haul tire size is the 295/75R22.5. A typical line-haul fleet averages about 10,000 miles per month or 120,000 miles per year. A 295/75R22.5 steer or trailer tire will rotate approximately 515 revolutions per mile. This might not sound like very much until you multiply 515 by 120,000 miles per year. In one (1) year, that tire tread will be pressed against the pavement 61.8 million times! To survive that many yearly revolutions, the tires must always be properly inflated.

As you probably know, air is what carries the load and recommended tire pressures are based on your worst case load scenario. What happens if you run overloaded?

The graph shows that if you run just 10% overloaded, tire removal miles will drop a dramatic 20%. Twenty percent overloaded would reduce your tire life by 30%. The data assumes that you are NOT running at over the recommended tire speed rating. What happens if you do run at speeds greater than what the tire manufacturers recommend? Running faster will generate more heat and excess heat always reduces tire performance. Tire mileages will decrease even faster as speed increases.

If your tire air pressures are less than specification, your tires are underinflated and now there are additional consequences as the following graph demonstrates:

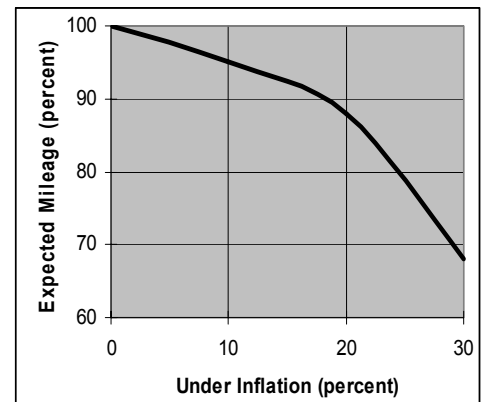


Chart courtesy of TMC RP-235

The graph reveals that running your tires 10% underinflated will cost you 10% in removal miles. And if those inside duals that have not been checked for the last year are down 30% in PSI, mileage will have been reduced over 30%.

It's pretty clear that running your tires at recommended load, inflation, and speed will allow your tires to get maximum mileage, maximum retreadability, and result in the lowest cost per mile. Additional cost advantages result from achieving the best fuel economy.

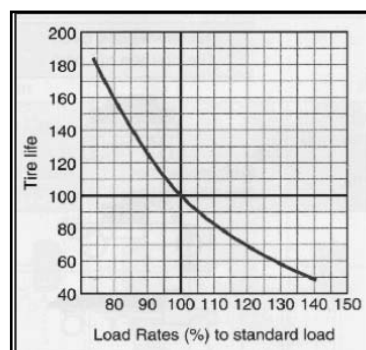
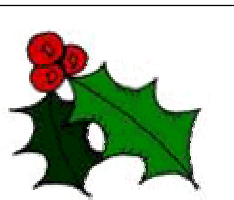


Chart courtesy of TMC RP-235



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