



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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Why the Fuss about Underinflated Tires?

To read Jim Park's blog about under inflation, go to http://truckinginfo.com/on-the-road/detail.asp?news_id=75672&news_category_id=124

Have you ever tried to ride your bicycle on the park trail and it becomes harder and harder to pedal even on the straight-away? When you put your grandkids in the red wagon and it requires a lot of effort turning in circles around the driveway, do you ever think about why it is so difficult to pull the wagon? A recent article found in Jim Park's blog on Truckinginfo.com (web site of Heavy Duty Trucking magazine) spoke about Jim's motorcycle with a tire pressure of only 10 psi (spec was 28 psi). The motorcycle barely rolled down the driveway and it labored in first gear. Could one low tire cause him such grief? The answer was a loud yes. After inflating the tire back to 28 psi, he could not believe the improvement in how the motorcycle drove down the road. Tim Miller from Goodyear in the same blog was quoted as saying "driving on soft (low) tires was like walking bare-foot on a beach with deep sand, pushing the shifting sand aside with your foot requires energy & that is why your legs get tired".

The increase in tire rolling resistance is directly correlated with lower fuel economy. As diesel prices hover in the \$4.00 per gallon range, even a one or two percent drop in fuel economy due to underinflated tires will have a serious impact on your tire budget.

The only time an underinflated tire is a good thing is when you need a lot of traction. The load/inch is distributed over a greater area because of the longer tire footprint. As an example, when military vehicles are running in the hot, sandy desert, the tire pressure is lowered to get much needed traction. The only caveat is that when the pressure is lowered, you can no longer be driving at high speeds because of the extra heat generated by sidewall flexing.

Maintaining your tire pressures at the correct specified pressure all the time is the key to maximizing removal mileage and fuel economy. Manual tire pressure checks with a calibrated pressure gauge is one option but you can check your tires in the morning and then run over a nail ten minutes after you pull out of the terminal, lowering pressure immediately. The best option for those neglected trailer tires which typically have the worst air pressure is to use a tire inflation system which adds air automatically when the tires drop below the pressure set in the control box.

Working with your tire professional is key to implementing a serious tire inflation program for your fleet.

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When tires are run underinflated, the tire rolling resistance increases significantly because there is a lot more rubber on the road. A truck tire footprint increases 18% in length when underinflated 30%. That increase in rolling resistance is why those low bicycle, wagon, and motorcycle tires were all so difficult to navigate with underinflated tires.

Q&A PSI ANSWERS YOUR QUESTIONS

Q. I recently purchased new tires that were built overseas. I noticed that several of the tires had the "DOT" letters molded into the tire sidewall but there was no actual number following the DOT letters. What should I do?

A. Any tire that is run in this country must have a DOT number molded into the tire sidewall by law. Not all countries require such a stamping. Our guess is that the tires you have purchased were not intended to be exported into the United States. You should return those tires back to your point of purchase.