



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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What To Do With Your Tire Data

In the May 25 issue of Transport Topics there was a great article by Mindy Long on Tire Pressure Management, if you missed it, go to <http://www.ttnews.com/articles/printopt.aspx?storyid=21976>

Every fleet wants to have the very best tire program. The goal is to maximize tire life, fuel economy, minimize tire related roadside service calls, and maximize the number of retreads. It is not an easy task because it takes generating serious tire performance data which unfortunately takes a significant amount of time and a lot of manual labor.

Even tracking tire mileage is difficult. The easy method is to record the odometer or hubometer reading when the tire is applied and again when the tire comes out of service. You also need to record the tread depth at the lowest spot on the tire. If your removal specification is 6/32" of remaining rubber and a tire is removed at 8/32" or 10/32", the mileage calculation would be misleading. It would be impossible to always hit the exact remaining tread depth spec. Therefore, only looking at final removal miles will not tell the fleet manager the entire story. You also need to look at treadwear measured in miles/32".

As an example, if a steer tire starts out at 20/32", is taken out of service at 120,000 miles with 8/32" of rubber, $\text{miles}/32" = 120,000/12 (20/32"-8/32") = 10,000 \text{ miles}/32"$. Tires running on the steer axle will have different miles/32 versus tires running on either the drive or trailer positions. Tires on the first drive axle will have a different wear rate versus tires on the second drive axle because when a vehicle turns, the pivot point is the first drive axle, which means that the tires on the second drive axle tend to scrub and have a faster wear rate. The more turning a tractor does the bigger the difference in miles/32" between the tires on the first drive versus the second drive axle. It is very important to compare apples to apples (tire/axle position) when reviewing miles/32" tire data.

Since 90% of fleets run retreads, retread miles/32" data is generated the same way as new tires. But when you go to analyze the data, you'll want to keep the results

separate from new tire performance. Another piece of the puzzle is retreadability. You can only measure retreadability by keeping track of how many times a casing is retreaded. This requires working very closely with the shop that does your retreading. If your goal is two retreads per tire casing and you discover that you are only averaging 1.5 retreads for your trailer tires, you need to start analyzing why. Is it a specific tire design or type? Is it because your tire inflation pressures are running 10% too low? Is it because your loads are too high or you are running too fast? Lots of questions and it takes time and much data to reach the proper conclusions.

Measuring fuel economy is really tough for even the most experienced fleet manager: Tractors are not always married to the same trailer, loads vary, drivers vary, tires vary, and routes vary. To calculate the effect that tires have on fuel economy, you need to keep track of miles/gallon for each individual vehicle and have a really large sample size to nullify all the variables that come into play. Tracking three or four tractor trailers will not tell you anything conclusive when it comes to the effect that tires play in the fuel economy equation.

Keeping track of tire related roadside service calls is probably the easiest to follow, but it is difficult to analyze without good, solid data. Why did the tire have a downtime to begin with: Did it hit the curb, did it run with little or no air for an extended period of time, or is it running over every nail on the back roads? Again, this takes serious data to answer these questions, but you need to know the answers so you can design the best possible tire program for your fleet.

Tires are the second highest maintenance cost next to fuel, so it is clearly worth the effort to capture the appropriate data and make good, solid, business decisions. The worst scenario is to make tire decisions based on perceptions. You must look at real data from a large enough sample size.

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