



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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Tires and Your Fleet's Bottom Line

A spiral bound copy of Volume II of the **Commercial Fleet Tire Digest** is now available.

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Tires are the #1 maintenance cost for today's trucking fleets, and they continue to escalate in pricing primarily because of the oil based raw materials, natural rubber, and steel used in their manufacture. When you take into account that there are 18 or more tires on a typical tractor-trailer, fleets have a major investment. Maintaining proper tire pressure can minimize this cost.

The recommended tire inflation pressure specification is based on the worst case load that the tire will see in actual service. Each tire position, steer, drive, and trailer may have different inflation pressure specifications. Running all tires to one air pressure specification can result in a less-than-optimal tire footprint, which can lead to early tire removal due to irregular wear and reduced fuel economy.

It is important to understand that ALL drive tires should have the same air pressure specification. The same goes for ALL trailer tires. You do not want to have different air pressures on the first drive axle versus the second drive axle. It is also important to match tire circumferences as closely as possible. A smaller overall diameter tire will make more revolutions than a large OD tire which leads to scrubbing and fast/irregular tire wear.

Even after tires are inflated to the optimal air pressure, they still need to be periodically checked because they will lose air over time. There are three primary reasons for this:

1. Slow leaking punctures in the tread area is the number one reason why tires lose air. A nail in the tread can lead to tires losing several psi per day & in just a few days; the tire will be significantly underinflated.

2. Osmosis will also lead to air loss over time. Just like a balloon, a tire/wheel assembly will lose air by just sitting. Depending on the specific tire make/model, tires will lose one to two psi per month (and sometimes as much as three or four psi). Although it doesn't sound like very much, consider that a tire that started with 100 psi will be down in the low to mid 80 psi range in a year with this slow loss of air pressure.

3. A tire will lose air due to leaking valve stems. In cold weather, checking a tire pressure may even cause the valve core to stick leading to further air loss.

Tires should be checked with a calibrated air pressure gauge on a regular basis depending on specific service vocation. The more off-road activity, the more frequent should be the pressure checks.

Trailer tires are typically the most neglected wheel position. Inside dual tires are notorious for being significantly underinflated because those inside tires are difficult to access and require time/effort to maintain the proper inflation pressure. If that inside dual tire is at 70 psi and the outside dual tire at 100 psi (a very common scenario), this will lead to even worse fuel economy since the inside tire is making more revolutions than the outside tires and causing significant scrubbing of the tread rubber. Irregular wear will also be generated which also will result in reduced fuel economy.

The best solution to maintaining the proper inflation pressure in your trailer tires all the time is to use an automatic tire inflation system (ATIS). With these systems air is added automatically whenever the tire is below the inflation specification.

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Q&A PSI ANSWERS YOUR QUESTIONS

Q. When is a tire considered flat?

A. The industry consensus is when a tire is 20% below the fleet's tire inflation specification, that tire is considered flat and must be removed and inspected. There is a reason why a tire is 20% underinflated. You should work with your tire professional if you have any question about the integrity of a suspect tire.