THE INFLATION SYSTEM

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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Measuring Tire Pressures - Issues & Pitfalls to Avoid

What is your fleet's tire pressure specification? What is the actual measured tire pressure? What was the ambient temperature when the tire pressure was checked? Was the pressure gauge used to check the tire pressure properly calibrated? Was the tire pressure measured when the vehicle just came off the highway? These are the types of questions that need to be asked, and answered, as part of a serious fleet tire program.

Many fleets choose one tire fleet specification regardless of wheel position. The idea is to make it simple for the mechanics and tire busters in the shop who will only need to recall one pressure specification. But, the flip side is that the recommended tire pressure specification should be based on the worst case load scenario depending on the specific axle. This will give the optimum tire footprint leading to the best possible removal mileage with minimal irregular wear. Many fleets do have different tire pressure specs for tires running on steer, drive, dollie, and trailer wheel positions and that is likely to give the best results. Installing pressure decals on each vehicle with these specifications will aid the drivers, mechanics, and road service providers in insuring that the tires are aired up to the fleet's recommended tire pressure.

Every tire manufacturer publishes a tire "load/inflation table" that is easily downloadable at their respective web sites. These tables give the recommended pressure for both single and dual tires at a full range of vehicle loads. The higher the load, the higher the tire pressure will be to support that load.

Every tire has a maximum load at a specific tire pressure molded into the tire sidewall. This, however, is NOT the recommended pressure for your operation. It is the heaviest load that the tire was designed to support at a specific tire pressure. As a fleet you cannot legally exceed these numbers.

The pressures listed in the load/inflation table are based on tires at an ambient temperature of 70° F. The rule of thumb is that every 10° F equals two psi. So what does that mean? If the fleet spec is 100 psi at 70° F and you are mounting a tire outside where it is currently only 20° F, you should inflate the tire to 90 psi. If the vehicle was brought back into the shop where the temperature is 70° F, the tire will jump back up to 100 psi within an hour.

Checking tire pressures with a calibrated air pressure gauge is a big issue these days. The common stick type gauges are just not very accurate. The spring stiffness changes with temperature affecting the pressure reading. In addition, you just hope that the plastic or metal stick with the numbers is positioned properly into the spring to begin with. Dropping a gauge a few times on hard concrete will make matters even worse.

The last important factoid is that you should never check a hot tire that just came off the highway. It takes many hours to cool back down to ambient temperature. Tires typically gain about 15% in pressure running fully loaded at 65 -70 mph. The issue is that you do not know how long the vehicle has been sitting in the yard prior to checking the tire pressure. And of course, if the sun was beating down on the right side tires, they will be at a higher pressure than the left side tires which are not in the sun.

Understanding the basics of tires and pressure will go a long way in developing a serious tire pressure management program.

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