

## Trailer Tires & Inflation Pressure



Happy Holidays  
from  
PSI  
and  
Commercial  
Fleet Tire Digest.

Commercial fleets have a difficult decision to make when deciding what tire pressure specification is the best for their operation. In the past, it was very common for fleets to simply choose one tire pressure for all their tires regardless whether the tire was run on the steer, drive, or trailer position. This made the life of the mechanics and tire buster's job easy because they only had to recall one number. If there were three different tire pressure specs or more, then it made for confusion and errors. It is important to understand that air carries the load and the minimum proper tire inflation should always be based on the worst case tire load scenario. Tire/Load inflation charts which are available on tire company websites show the maximum load at a given tire pressure for every size tire. You do need to be careful reading these charts since the maximum load for each tire size is listed for running that tire as a single and a different load when the tire is run as a dual position.

Fleets often set trailer pressure specs at the higher range of the recommended pressure as listed on the tire/load inflation charts to allow for loss of air that is likely to develop on trailer tires over time. Trailers, unlike tractors, may not come back to the shop for months and months. Over time, tires are going to lose air due to osmosis through the casing and slow leaking tread area punctures. Sometimes the valve core will leak and also lead to loss in air pressure

As an example, a review of the load/inflation tables for the popular 295/75R22.5 Load Range G tire as a dual shows that the maximum load that size tire can handle at 100 psi would be 5,260 pounds. If you multiply by four 295/75R22.5 tires @ 100 psi across the axle the total max axle load calculates to 21,040 pounds. However, typical 53' van trailers are equipped with 17,000 lb axles

unless they have a 10' spread and then the axles are rated at 20,000 pounds. A fully loaded 17,000 pound trailer axle equates to an individual dual tire load of 4,250 pounds. Using the load/inflation tables, a load of 4,250 pounds requires only 75 psi. We know of not even a single fleet that is running 75 psi. The most common pressure specs for fleets is 85 – 110 psi

By setting the specified tire pressure higher, it allows for the loss of air between maintenance checks and higher tire pressures will improve vehicle fuel economy, which is the goal of most fleets today. The payback in increasing vehicle fuel economy even 2% by keeping the tires properly inflated to your fleet's specification ALL the time is the goal of every fleet. Higher pressures will keep the tire running cool which will significantly help maximize the casing retreadability.

Automatic tire inflation systems are so popular among fleets today because with them trailer tires will constantly maintain the fleet specified pressure. Trailer tires are always the most neglected on a tractor-trailer. Inside duals are historically worse for proper tire inflation because they are just not checked very frequently. It requires bending down, getting dirty, and reaching your arm between the wheel hand holes to measure a tire pressure. With automatic tire inflation systems, if the tires don't get checked they'll still continue to run at the fleet's preferred tire pressure resulting in long life and tires that look good. Minimizing irregular wear will lead to improved fuel economy because the tire is smooth and even. And of course expensive and costly tire related roadside service calls are significantly reduced and/or eliminated. Even with multiple tire punctures, the automatic tire inflation systems will still maintain the proper tire inflation spec as the vehicle is running down the highway.

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