



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™*

VOLUME 2 ISSUE 11

NOVEMBER/DECEMBER 2008

Tires & Inflation Pressure



Happy Holidays
from everyone at
PSI and

Commercial Fleet
Tire Digest.

May you and your
family have a
joyous holiday
season.

One of the most common questions regarding commercial truck tires is: "What air pressure should I be running in my tires?"

The basic fact is that air is what carries the load; but the dilemma is that truck tires see a wide range of loads varying dramatically between heavy and light. Diminishing loads during the course of a single day are also very common. For instance, delivery trucks and fuel tankers start heavy and by the end of the day they are empty. A fleet must base their tire specification on the heaviest load expected.

In the past, many fleets chose a single inflation pressure for steer, drive, and trailer tires because it was easy for the guys in the shop. In actuality, there should be three (3) different air pressure specifications for steer, drive, and trailer tires; and that spec must be based on the worst case load scenario for each tire position. It is preferable to be at a higher PSI than to be too low, because underinflated tires can lead to premature tire removals due to a variety of reasons which we have discussed in previous Tire Digest issues.

A fleet may know that they are running 80,000 lbs GVW, but to determine the proper tire inflation pressure, you must know the worst case load for each wheel position.

Using the same portable weigh scales that law enforcement uses is one way to determine that number.

The result will let you know the recommended PSI based on specific wheel position. Load/inflation tables can be found on all tire manufacturers websites. You will only need to know the tire size, load range, and worst case load weight to find the recommended air pressure. The air pressure listed on these load/inflation tables is based on checking tire pressure at ambient conditions of 70° F. In the following examples, adjustments are made for different ambient air temperatures:

If you check tire pressure when it is 0° F outside, you need to make an adjustment based on a rule of thumb that for every 10° F difference, air pressure should be adjusted + or - 2 PSI. So for this example, measured tire air pressure should be 14 PSI LOWER than shown on load/inflation tables (-70°/10 or -7 x 2 PSI = -14 PSI).

If ambient temperature is 100° F when you check tire pressure, you will need the measured air pressure to be 6 PSI HIGHER (+30/10 or +3 x 2 PSI = +6 PSI)

Bottom line: You need to do a little homework to understand if your tires are over or underinflated based on the ambient air temperature.

Tire Position/Worse Case Load Example

Tire Size: 295/75R22.5 Load Range: G
Ambient Temperature when
checking tire pressure: 20° F
Worst Case Load Scenario:

Tire Position	LOAD/ Tire	Total Axle Load
Steer Tire	6175 lbs.	12,350 lbs.
Drive Tire	4885 lbs.	19,540 lbs.
Trailer Tire	4885 lbs.	19,540 lbs.

Load/Inflation Example Tire Worst Case Load/Position Tire Pressure Checked at 20° F

Tire Position	Worst Case Load for Each Tire	PSI from Tire Infl Table	Adjust for Temperature	Correct PSI at 20° F
Steer Tire	6175 lbs.	110 PSI	-50F from 70F adjust -10 PSI	100 PSI
Drive (Dual)	4885 lbs.	80 PSI	-50F from 70F adjust -10 PSI	70 PSI
Trailer	4885 lbs. Same as Drive	80 PSI	-50F from 70F adjust -10 PSI	70 PSI

Visit us On-line

For current and back
issues of

Commercial Fleet Tire Digest

And to subscribe or
submit your
inquiries to be
answered here, go to

**www.
psitiredigest
.com**