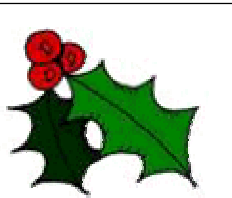


*The authoritative guide to reducing commercial tire expenditures from  
Pressure Systems International,  
the manufacturer of the Meritor Tire Inflation System by PSI™*

VOLUME 1 ISSUE 1

NOVEMBER/DECEMBER 2006

## Tires and Inflation Pressure



**Happy Holidays**  
from everyone at  
PSI and

Commercial Fleet  
Tire Digest.

May you and your  
family have a  
joyous holiday  
season.

Next to fuel, tires have been and will continue to be the #1 maintenance issue facing fleets today. Each issue of The Commercial Vehicle Tire Digest will address a topic that will help you control these costs.

Our inaugural issue focuses on a tire's worst enemy – Heat. Tires are designed to run at a given load at a specified pressure; air is what carries the vehicle load (see picture 1) so it's important to get this right.

When you run underinflated, the stresses in the tire increase dramatically and this additional stress will cause the rubber temperature to increase. As the tire gets hotter, the rubber will begin to soften, degrade. The result is that treadwear will increase and reduce your tire removal miles.

Only bad results occur when tires are run underinflated:

- Irregular tire wear develops leading to premature removals

- Tire footprint becomes longer which leads to more rubber on the road, when combined with additional heat because of running underinflated, results in more tread area punctures.

- Casing durability (retreadability) decreases because the additional heat will adversely affect the rubber properties

- Fuel economy drops significantly because of the increase heat

So why not simply overinflate your tires? Unfortunately, this just causes a whole new set of issues:

- Tire traction decreases significantly because the tire footprint becomes very small

- Vehicle will tend to "bounce" up and down the highway which creates very

unhappy drivers as well as irregular tire wear

- Fast centerline tire wear

The only way to maximize mileage, increase retreadability and maximize fuel economy is to consistently run at the recommended air pressure per the tire load/inflation tables published by the tire industry. It is important that you base it on your worst case axle load scenario. If you know the worst case load per tire you can choose the proper air pressure to maximize tire performance. However in many cases, choosing a single air pressure specification for ALL your tires, while easy for your tire guys to remember, may not necessarily maximize your fleet's tire performance. Individual vehicles or even unique axle positions, depending upon the load being carried, may need differing air pressure settings.

**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**

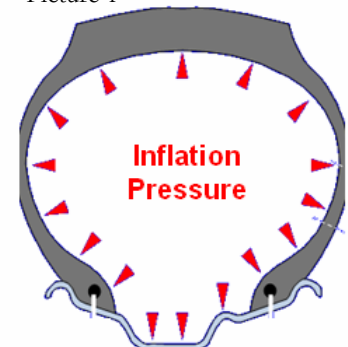
## Q & A PSI ANSWERS YOUR QUESTIONS

Why do tires lose air over time?

- Osmosis of air through the tire casing will cost you 1 - 2 PSI per month
- Tread area punctures (typically slow leakers)
- Leaking valve core
- Tread and/or Sidewall impact breaks

All of these conditions are beyond your control and that is why tires will continue to be an issue with commercial trucking fleets.

Picture 1



"Air is what carries the load"