

## Tire Inspections

Cost per mile, tires are generally the most expensive maintenance item on your truck. Tires are also a key factor allowing the driver to maintain control of their vehicle. Any driver who has experienced a blowout, especially a steer tire, can attest to that.

The proper inspection and use of tires can save money and more importantly lives.

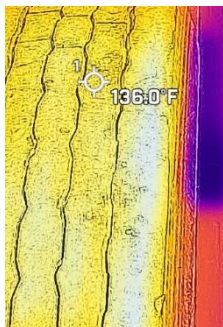
Tire Pressure should be checked with a gauge at the beginning of every driving shift.

- Tractor and trailer tires are rated at a maximum pressure of 120 PSI.
- Most recommend maintaining the pressure between 100 and 110 PSI.
- Damage can start at anything below 95 PSI.
- A tire is considered flat at anything below 60 PSI.
- Tire pressure can change with altitude and temperature
  - Tire pressure increases 1 PSI for every 10 degrees F

How does lower pressure cause damage to tires?

- When tires heat up, the chemical structure of the rubber can change, affecting their elasticity and durability. This alteration can lead to reduced grip and increased likelihood of blowouts, especially in extreme heat conditions.
- Heat can lead to accelerated wear and tear

Many inspection sites are now using infra-red technology that indicates the temperature of the tires while the truck is still moving. The example below shows the difference between two tires on the same truck driven the same distance.



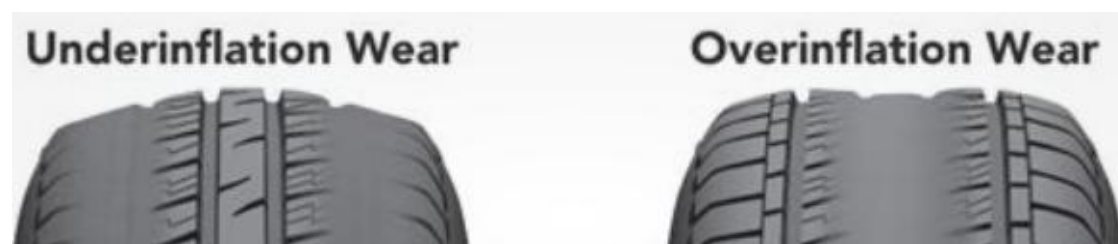
The tire on the left was at 79 PSI and was 14.5 degrees higher in temp than the tire on the right, after only 45 minutes of driving.

Both tires were on the same side of the tractor

The tire on the right was at 105 PSI



## Tire wear



## Tire Inspections

Mismatched Pressures can cause uneven wear and scalloping



Scalloping can also be increased by driving at high speeds



## Driving Speed

Every tire that is manufactured has a speed rating. The tire speed rating is the maximum mph a tire can maintain while functioning correctly. Almost every commercial tire has a speed rating of L – 75 MPH.

Tires generate heat as they roll down the highway. The faster the tire goes, the more heat it generates due to the friction between the tires and the road. As your tires heat up, tread separation and blowouts are more likely to occur. This can cause you to lose control, creating an unsafe scenario for you and other drivers.

Driving at speeds above 75 is illegal.

Driving at speeds near the maximum of 75 can cause premature damage.

When performing walkaround inspections during your shift, check the temperature difference of tires by waving hand above tires.

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Tread Depth, should be verified anytime it appears low.

Tread depth is a vital factor when it comes to control, traction and stopping distance.

Lower tread depths can increase stopping distance up to 200 feet.

The minimum tread depths for steer tires is 4/32, you will be placed Out of Service at 2/32

The minimum tread depth for all other tires is 2/32, you will be placed Out of Service at 1/32



As professional driver's it is our responsibility to assure our vehicle is in safe operating condition before driving. Tires are a large part of that responsibility. The following are best practices when it comes to performing tire inspections.

1. Always use a tire gauge to check tire pressures when beginning your shift or driving day.
2. During stops in which you have completed an hour or more of driving, wave your hand as close to the tire without touching them, to feel if there is a tire that is significantly hotter than the others. If so that tire is low on air.
3. Visually inspect each tire. when tread depth is visually low, verify with a tread depth gauge to assure you are within legal limits.
4. Using gloves to protect your hands, feel around the hidden spits of the tire to assure there is no separation in the side wall, or wire cord protruding the tire.

A commercial tire has a life span of 100,000 miles. At a cost of \$300 per tire (which is rather cheap), 18 tires amounts to 5.4 cents per mile. Every 10,000 miles you lose costs an addition 0.5 cents per mile. The same can be said for every 10,000 miles you exceed.