

## Widebase Trailer Tires – Maximizing Mileage

The fire that caused widespread devastation in Northern California was started by a flat tire.



Read [article](#).

Widebase tires, or as many fleets and trailer OEMs incorrectly call “Super Single\*” tires, have been increasing in popularity in recent years. The two most popular widebase tire sizes used in the trailer industry are the 445/50R22.5 and 455/55R22.5 with the 445 being the most popular. The 455 size will support a higher load capacity and is used in very heavy applications.

\*Interesting trivia regarding the term “super single”: Super single is a Goodyear copyright that was first introduced years ago. Widebase tires is the proper terminology.

The advantages of using a single widebase tire to replace two dual tires include:

- Weight savings
- Fuel economy
- Inventory reduction / tires and wheels

**Weight Savings:** Widebase tires mounted on aluminum wheels can save up to 1000 pounds when mounted on drives and trailers, which can have a big impact to a fleet’s bottom line - most dramatically when additional load can be added.

**Fuel Economy:** Even though you are replacing two tires with one, the characteristics don’t translate on a 2:1 ratio. For example, two 11R22.5 duals have approximately 22” of rubber on the ground. A 445/50R22.5 has 445 mm of tread rubber which equates to 17.5” rubber. This is equivalent to 20% less rubber on the highway. Why is this important? For every revolution of a widebase tire, the tire is working “harder”. Therefore, maintaining proper tire inflation on widebase trailer tires is critical to maximizing mileage and reducing irregular wear. Wide base tires are more sensitive to underinflation issues compared to duals. These heavier, bigger tires will generate more heat running underinflated/fully loaded at high speeds for an extended period of time and the footprint will change leading to irregular wear and potential tire failures.

When using trailers equipped with widebase tires most fleets will run the popular automatic tire inflation systems because maintaining the recommended tire inflation ALL the time is so important.

In order to minimize irregular wear on trailer tires (both widebase and duals) be aware of the following;

- Malfunctioning ABS (localized wear and flat spots)
- Out of balance tire/wheel assemblies
- Improper bearing conditions may allow axle end movement leading to misalignment
- Drivers NOT waiting for the complete release of the trailer brakes before driving off
- Improper hub and brake drum conditions which create misalignment
  - Excessive bearing end play
  - Brake drum not seated correctly
  - Mounting faces of hub/drum/wheel not clean
- Trailer alignment
- Proper suspension system maintenance
- Some tire makes/models may be more susceptible to irregular wear

Another important issue with widebase tires is retreading. Over 85% of fleets retread their tires. The cost of a retread is typically one third to one half the value of a new tire. As a result, it is very important to take excellent care of your tire casings. Running tires underinflated is the biggest factor in reducing retreadability of the casing. The excessive heat generated by the additional flexing of the sidewalls in combination with the longer tire footprint (more rubber on the road when running underinflated) when the tire is running with low air pressure will significantly affect the ability of the casing to pass the retread process. Fleets report they can usually retread a widebase tire casing one time if air pressure has been properly maintained. Also, be aware that in the event of a blowout the rim is typically destroyed beyond repair, which can be very costly especially if it is an aluminum rim.

Always work with your tire professionals to determine if there are advantages of widebase tires for your fleet. TMC offers a recommended practice on this subject, RP251 (“Irregular wear of widebase tires used in trailer position”).

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