

5 Common Questions



SOME QUESTIONS SEEM TO COME UP OVER AND OVER AGAIN. WHEN IT COMES TO YOUR SAFETY, YOU NEED TO KNOW THE BASICS ABOUT WHERE THE RUBBER MEETS THE ROAD. WE TURNED TO OUR FRIENDS AT TIRE RACK TO GET THE FACTS.



1. When should I replace tires and how can I read and decipher the manufacture dates?

Every tire's week and year of manufacture are indicated in the DOT Tire Identification Number. The DOT TIN can be found branded on the sidewall of the tire. It begins with the letters "DOT" and will be followed by 8 to 13 characters. The last 4 digits of the full DOT TIN represent the week and year the tire was manufactured, with 2 numbers for the week and 2 for the year. For example, "0220" would mean the tire was manufactured in the second week of 2020. Regulations only require the full DOT TIN, including the date code, be branded on one side of the tire. If you see "DOT" and what looks like an incomplete code on one sidewall, flip the tire over and look at the other side. When a tire needs to be replaced is a topic of much debate. Many variables affect the chronological age at which a tire should be removed from service. How the tire was stored before it was sold to the consumer and maintained during its service life affect a tire's life. Because of this, a tire manufacturer will often not go on the record stating a calendar age for a tire's useful service life.

Tire Rack's stance is that tires should be replaced either 10 years from the date of manufacture or 6 years from the date they are put into service, whichever comes first.

Being put into service means the moment the tire is installed on the wheel and inflated, even if it does not see road use (such as a spare tire). This is, of course, barring the existence of any other conditions that would warrant a tire's removal from service:

- The tire's remaining tread depth reaching 2/32.
- Structural cracking of the rubber.
- Damage of a non-repairable nature.

With tires that see infrequent use like trailer tires, they will often age out before they wear out. Tires should always be inspected and checked for proper inflation pressure before use.

2. How do I convert old tire sizes to new tire sizes?

Depending on the sizing system used when the tire was manufactured, there may not be a good rule of thumb or step-by-step process to follow to make the conversion. We have a helpful chart on our website and on the Vintage Camper Trailers blog. It provides the conversion for many vintage sizing systems. For something like a 6.50R15, the 6.50 indicates the nominal section width of the tire in inches, and the 15 is the wheel diameter, also in inches. Since modern tire sizing typically uses millimeters for the section width, we need to convert 6.50 inches to millimeters, so $6.50 \times 25.4 =$ approximately 165mm. When the aspect ratio is not listed, like in 6.50R15, it is assumed to be 82,

meaning the sidewall height is 82% of the tire's section width. Modern tires use aspect ratios in increments of 5, so the closest current size to a 6.50R15 is 165/80R15. As you can see by the discrepancy between our chart and how the math works out, the conversion is very much an approximation, not an exact science. If your travel trailer has a tight fitment without much room for variance in tire size, it would be best to take some measurements and give us a call before pulling the trigger so we can help ensure you get a tire that fits.

3. Can I run automotive tires on my trailer?

The most important job of a tire is to carry the load asked of it, and "Special Trailer" (ST) tires utilize robust construction that allows them to be rated with a higher load-carrying capacity than passenger car tires of the same nominal size. You will notice the load index, located in the service description following the tire size, is appreciably higher on an ST-metric tire than a P-metric or a Euro-metric tire of the same size. Additionally, ST-metric tires are specifically engineered for the specialized task of trailer use. They are designed to be used on a non-driven axle, so they do not need to convert a vehicle's power into

TIRE SIZE CONVERSION CHART

1949 to 1964	1965 to 1970	1970 to 1980	1960 to Present	1980 to Present	EURO-METRIC or P-METRIC			
NUMERIC	ALPHA NUMERIC*	ALPHA NUMERIC*	EURO-METRIC	P-METRIC	70-series	65-series	60-series	50-series
"90-" to "80"-series	78-to 50-series	"82"-series	80-, 75-series	70-series	185/70R15	195/65R15	205/60R15	225/50R15
6.00-15	B	165R15	P165/80R15	185/70R15	205/60R15	215/60R15	225/50R15	225/50R15
6.50-15	6.85-15	C	175R15	195/70R15	205/65R15	215/60R15	225/50R15	225/50R15
		D						
	7.35-15	E	185R15	P195/75R15	205/70R15	215/65R15	225/60R15	225/60R15
6.70-15	7.75-15	F	195R15	P205/75R15	215/70R15	225/60R15	235/60R15	235/60R15
	8.15-15							
7.10-15		G	205R15	P215/75R15	225/70R15	235/65R15	245/60R15	265/50R15
	8.25-15							
	8.45-15							
7.60-15		H	215R15	P225/75R15	235/70R15	255/60R15	275/50R15	275/50R15

* When replacing Alpha Numeric tires with Euro-metric or P-metric tires, look for the Euro-metric or P-metric size listed in the equivalent aspect ratio. For example, when replacing a FR78-14, you would look up the appropriate 75-series size, the 205/75R14. If replacing a FR70-14, you would look up the appropriate 70-series size, the 215/70R14. If replacing a FR60-14, you would look up the appropriate 60-series size, the 235/60R14.

- Listing in chart does not imply complete interchangeability.
- When changing tire sizes, dimensional clearances must be checked.

forward momentum. They are intended to be “followers,” being pulled behind another vehicle. Because they are not expected to turn, their construction and tread pattern can focus on tracking straight ahead to help eliminate sway and instability. Trailer tires are typically more robust than their passenger-car counterparts, helping them to survive curb strikes, potholes, the shear forces from pivoting during turns, and other trailer-specific scenarios. Essentially, for trailer use, an ST-metric tire is the right tool for the job, the tool that is designed for that exact purpose.

Ply ratings date back to the days of bias-ply tires, when a 10-ply tire actually had 10 plies in the sidewall. With modern materials and construction methods, tires don't need that many physical plies to achieve the same load-carrying capacity. The ply rating is still listed on the sidewall, so while it's part of the conversation, it's something of a throwback to days past.

“107/102N” is the service description, which includes the load index – “107/102” and the speed rating – “N.” Being an index, the numbers 107 and 102 each correspond to a different maximum load. 107 indicates a load-carrying capacity of 2,150 pounds, and 102 indicates 1,870 pounds. There are

two maximum loads for this single size because it varies based on whether the tires are used in a single or dual configuration. If used singly, the tires are rated to carry more load, so the 107 is the load-carrying capacity for a single configuration. 102 for a dually.

4. What do the Ratings/Capacities/Loads mean? The load-carrying capacity of any tire can be found in two ways. First, the maximum load is branded on the sidewall of every tire. It is typically in a very small font, but it can be located with some care. The other option is to find the load index, which will be branded in a much larger font. The load index is part of the service description, which follows the tire size—for example, ST205/75R15 107/102N.

Modern ST (and LT and High Flotation) tires use a load range. A Load Range E (LRE) tire has a 10-ply rating, but if you look at the construction, you'll see it likely has 2 or possibly 3 plies in the sidewall.

At the most basic level, a tire's maximum load-carrying capacity is determined by the amount of air it can contain. That's determined by the size of the air chamber (defined by the tire's physical size) and the

number of air molecules (pressure) you can get inside the chamber, commonly expressed as pounds per square inch in the U.S. The higher the load range (or ply rating) allows for greater maximum inflation pressure, which provides a higher maximum load-carrying capacity. Since it's the air inside the tire that actually carries the load. The more robust construction of a higher load range tire allows it to contain more pounds per square inch in the same physical space.

5. Is it essential for any tire to be balanced, whether it is on the vehicle or the trailer? An imbalance in the rotating assembly can lead to irregular wear that will necessitate the tire to be removed from service prematurely. In addition to eliminating any possible vibration experienced by the load in the trailer, balancing will help ensure you receive the maximum service life from your tires. For inflation pressure, if your trailer has a placard indicating the proper inflation pressure for the appropriate-size tires, that is what you should follow. If there is no placard, we recommend running your ST-metric tires at the maximum cold inflation pressure indicated on the sidewall.

Still have questions? Call Tire Rack directly at (888) 981-3953

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