

KNOW YOUR TIRE'S SPEED RATING & CAPACITY

BY CLINT LANCASTER, CMFGE
TECHNICAL DIRECTOR, NATM AND CO-AUTHOR OF THE TRAILER HANDBOOK

Truck and passenger tires have different speed ratings, which may be marked on the side of the tire. This rating reflects the speed at which a tire is designed to be driven for extended periods of time and commonly exceeds 99 mph (see inset). This is not the case for trailer tires. Trailer tires, noted as ST tires (i.e. ST205/75D15C), have a speed rating between 62 and 68 mph. With highway speeds in many states above 60 mph, and most drivers traveling at speeds easily above 70 mph, it is important that we remind trailer users to maintain lower speeds when towing. The governing body that establishes dimensions and specification is the Tire & Rim Association (TRA). The TRA speed rating is not generally noted on the tire itself; however, all "ST" tires are rated at this same speed.

Other factors can also affect the performance of the trailer tire such as inflation rate and load weight. Reduced tire inflation reduces the load carrying capacity creating the opportunity to be overloaded, even at normal operating conditions. This, with the possibility the trailer may already be overloaded (beyond its normal operating condition), only compounds the problems. We find vehicle overload conditions when consumers and end-users do not properly distribute the payload or cargo on their trailer. Many manufacturers account for load transfer to the tow vehicle when establishing their Gross Vehicle Weight Rating (GVWR). Depending on the type of vehicle, this can be anywhere from 10 percent to 25 percent. For example, on a 10,000 lb GVWR trailer, the expected load transfer to the tow vehicle may be 1,000 to 2,500 lbs In this case, the trailer tires may

continued on page 28

Passenger Tire Speed Ratings

Letter Rating	Speed Rating
Q	99 mph
R	106 mph
S	112 mph
T	118 mph
U	124 mph
H	130 mph
V	149 mph

Trailer Tires

only have a load capacity of 7,500 to 9,000 lbs (including the weight of the trailer). If not loaded properly with this transfer to the tow vehicle, the tires, and even the complete running gear, could be overloaded.

Failure of a trailer tire at high speeds can be devastating, and possibly deadly, but avoidable. Communicate tire safety to your consumers and end-users. Provide as much tire safety information as possible and use decals or warning labels on your trailers. NATM provides Tire Safety Information that is available as a stand-alone document or as part of the Model Users Manual available to NATM trailer manufacturing members.

You may obtain copies of "Tire Safety – Everything Rides On It" from NHTSA by calling (202) 366-0910 and requesting DOT HS 809 361. Or, it can be ordered online at www.nhtsa.dot.gov/people/outreach/media/catalog, order Item #12P0016. Also, NHTSA has recently launched a tire inflation awareness campaign. You can find information on that program at www.nhtsadot.gov.

Whether you are a manufacturer, dealer or the end-user, you need to know your tire speed rating, as well as understanding your trailer, tire capacity and the cargo load. Your diligence will assist you and others in having a safe towing experience.

For more information on trailer and towing safety, obtain Clint Lancaster and Dick Klein's book "The Trailer Handbook: A Guide to Trailers and Towing Safety" at www.natm.com or Amazon.com.

-Clint Lancaster

NATM tire safety information is written for consumers and includes:

- Steps for Determining Correct Load Limit for Trailers
- Steps for Determining Correct Load Limit for Tow Vehicles
- Glossary of Tire Terminology, including "cold inflation pressure," "maximum inflation pressure," "recommended inflation pressure," and other non-technical terms
- Information from the NHTSA brochure entitled "Tire Safety – Everything Rides On It"

NATM's Tire Safety Information which includes NHTSA's Tire Safety brochure describes:

- Tire labeling, including a description and explanation of each marking on the tires, and information about the DOT Tire Identification Number (TIN)
- Recommended tire inflation pressure, including a description and explanation of:
 - Cold inflation pressure
 - Vehicle Placard and location on the vehicle
 - Adverse safety consequences of under-inflation (including tire failure)
 - Measuring and adjusting air pressure for proper inflation
- Tire Care, including maintenance and safety practices
- Vehicle load limits, including a description and explanation of the following items:
 - Locating and understanding the load limit information, total load capacity, and cargo capacity.
 - Calculating total and cargo capacities with varying seating configurations including quantitative examples showing / illustrating how the vehicle's cargo and luggage capacity decreases as combined number and size of occupants increases. This item is also discussed in Section 3.
- Determining compatibility of tire and vehicle load capabilities.
- Adverse safety consequences of overloading on handling and stopping on tires.