

Triangle TR643

Triangle TR643 ST Radial Trailer Tire User Manual

Model: TR643 | Brand: Triangle

1. INTRODUCTION

This manual provides essential information for the safe and effective use of your Triangle TR643 ST Radial Trailer Tire. Please read these instructions carefully before installation and operation to ensure optimal performance and longevity of your tire. Proper installation, maintenance, and usage are crucial for safety and tire life.

2. PRODUCT OVERVIEW

The Triangle TR643 is a radial Special Trailer (ST) tire designed for use on trailers, not passenger vehicles. It features a robust construction suitable for carrying heavy loads and maintaining stability during towing. This tire is engineered for durability and reliable performance under various towing conditions.



Figure 1: Triangle TR643 ST Radial Trailer Tire. This image displays the tread pattern and sidewall of the TR643 tire, highlighting its robust design for trailer applications.

Key Features:

- **Radial Construction:** Provides a smoother ride and improved fuel efficiency compared to bias-ply tires.
- **Special Trailer (ST) Designation:** Specifically designed for trailer applications, offering enhanced load carrying capacity and stability.
- **Durable Tread Compound:** Engineered for extended tread life and resistance to wear.
- **Load Range F (12-Ply Equivalent):** Indicates a high load capacity suitable for heavy-duty trailers.

3. SPECIFICATIONS

The following table details the key specifications for the Triangle TR643 ST Radial Trailer Tire (Size ST235/80R16).

Specification	Value
Brand	Triangle
Size	ST235/80R16
Rim Size	16 Inches
Section Width	9.2 Millimeters (approx. 235mm)
Tire Aspect Ratio	80
Load Index	126
Speed Rating	N (up to 87 mph / 140 km/h)

Specification	Value
Item Dimensions (L x W x H)	30.8 x 9.2 x 30.8 inches
Item Weight	30 Pounds
Construction Type	Radial
Ply Rating	12-Ply (Load Range F)
UPC	645890716596
Manufacturer Part Number	10146530161

4. SETUP AND INSTALLATION

Proper installation is critical for the safety and performance of your trailer tires. It is highly recommended that tire mounting and balancing be performed by a qualified tire professional using appropriate equipment.

4.1 Pre-Installation Checks

- **Inspect Tire:** Before mounting, visually inspect the tire for any manufacturing defects or damage incurred during shipping.
- **Verify Rim Compatibility:** Ensure the rim size and type are compatible with the ST235/80R16 tire. The rim width must be within the tire manufacturer's recommended range.
- **Check Valve Stems:** Always install new valve stems when mounting new tires to prevent air leaks.

4.2 Mounting and Balancing

1. Clean the rim bead seats thoroughly to ensure a proper seal.
2. Lubricate the tire beads and rim flanges with an approved tire mounting lubricant.
3. Mount the tire onto the rim using a tire mounting machine, ensuring the tire beads are not damaged.
4. Inflate the tire slowly to the recommended seating pressure, ensuring both beads seat properly. **Do not exceed 40 psi (2.75 bar) to seat beads unless specified otherwise by the tire manufacturer.**
5. Balance the tire and wheel assembly using a dynamic wheel balancer to prevent vibrations and ensure even wear.

4.3 Wheel Installation and Torque

1. Place the mounted tire and wheel assembly onto the trailer hub.
2. Install lug nuts and hand-tighten them.
3. Using a torque wrench, tighten the lug nuts in a star pattern to the trailer manufacturer's specified torque values. Refer to your trailer's owner's manual for correct torque specifications.
4. After the first 50-100 miles of towing, re-check the lug nut torque to ensure they remain properly tightened.

5. OPERATING GUIDELINES

Adhering to proper operating guidelines will maximize tire life and ensure safe towing.

5.1 Tire Inflation Pressure

- Maintain the recommended cold inflation pressure as indicated on the tire sidewall or your trailer's

placard. For ST tires, this is typically the maximum pressure listed on the sidewall.

- Check tire pressure before each trip and when the tires are cold (have not been driven for at least three hours).
- Under-inflation can lead to excessive heat buildup, tire damage, and premature wear. Over-inflation can reduce traction and make the tire more susceptible to impact damage.

5.2 Load Capacity

- Never exceed the maximum load capacity specified on the tire sidewall or the trailer's Gross Vehicle Weight Rating (GVWR).
- Distribute the load evenly on the trailer to prevent uneven tire wear and maintain stability.

5.3 Speed Rating

- The Triangle TR643 has a speed rating of 'N', which corresponds to a maximum speed of 87 mph (140 km/h).
- It is recommended to operate trailer tires at speeds no greater than 65 mph (105 km/h) for optimal safety and tire longevity, especially when towing heavy loads or in hot weather.

6. MAINTENANCE

Regular maintenance extends the life of your tires and ensures safe operation.

6.1 Regular Inspections

- **Visual Check:** Before each trip, inspect tires for cuts, cracks, bulges, punctures, or any foreign objects embedded in the tread.
- **Tread Depth:** Check tread depth regularly. Replace tires when tread depth reaches 2/32 inch (1.6 mm) or when wear indicators are visible.
- **Sidewall Condition:** Look for signs of weathering, cracking, or damage to the sidewalls.

6.2 Tire Rotation

- Trailer tires can benefit from rotation to promote even wear, especially on multi-axle trailers. Consult a tire professional for recommended rotation patterns and intervals.

6.3 Storage

- When storing a trailer for extended periods, elevate the trailer to take weight off the tires, or move the trailer periodically to prevent flat spots.
- Store tires in a cool, dry place away from direct sunlight, ozone-producing equipment (e.g., electric motors), and chemicals.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your trailer tires.

Problem	Possible Cause	Solution
Uneven Tread Wear	Improper inflation, unbalanced wheels, misaligned axles, worn suspension components.	Check and adjust tire pressure. Have wheels balanced. Inspect trailer axles and suspension for alignment issues.

Problem	Possible Cause	Solution
Rapid Air Loss	Puncture, faulty valve stem, bead leak, damaged rim.	Inspect tire for punctures. Check valve stem for leaks. Have tire re-seated or rim inspected by a professional.
Sidewall Cracking/Weathering	Exposure to UV light, ozone, age, under-inflation.	Store trailer in shade or use tire covers. Maintain proper inflation. Consider tire replacement if cracking is severe.
Trailer Sway/Instability	Improper tire pressure, overloaded trailer, incorrect weight distribution, worn trailer components.	Verify correct tire pressure. Ensure load is within capacity and properly distributed. Inspect trailer hitch and suspension.

For any issues not covered here, or if you are unsure about a repair, consult a qualified tire professional.

8. WARRANTY AND SUPPORT

8.1 Warranty Information

According to the product information, this Triangle TR643 ST Radial Trailer Tire is sold with **No Warranty** from the manufacturer. Please verify any specific warranty terms with your retailer at the time of purchase.

8.2 Customer Support

For technical assistance, questions regarding tire performance, or concerns about your Triangle TR643 ST Radial Trailer Tire, please contact the retailer where the tire was purchased or the official Triangle Tires customer service department. Contact information can typically be found on the manufacturer's official website.