



Owner's
Manual
Hybrid

This manual contains safety information and instructions for your trailer. You must read this manual before loading or towing your trailer. You must follow all safety precautions and instructions.

Contact Information

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Made in Maine

Safety

Losing control of the trailer or the trailer tow vehicle can result in death or even serious injury. These are the most common causes for loss of control of the trailer and or the tow vehicle.

- Driving too fast for the conditions. Maximum driving speed while towing a trailer should be 60 MPH or 96 KM.
- Overloading the trailer.
- Loading trailer unevenly.
- Trailer improperly coupled to the hitch.
- Inadequate tow vehicle.
- Inadequate tow hitch.
- Not maintaining proper tire pressure
- Not checking or keeping the lug nuts tight.
- Not properly inspecting or maintaining the trailer structure

While this manual provides a variety of general trailer information it cannot cover all of the details necessary for proper combination of every trailer and tow vehicle. You must read, understand and follow the instructions in this manual as well as manual of the tow vehicle.

Our trailers are built with components produced by various manufacturers. Some of these particular items have separate instruction manual, if you would like a copy of that particular manual please contact that particular manufacturer. Their name will be outlined in that section.

Major Hazards

Driving too fast:

- During ideal road conditions, the maximum speed while safely towing a trailer is 60 MPH or 96 KM. If you drive too fast, trailer tires will overheat and could blowout. As speed increases, you are more likely to suddenly lose control. Never exceed 60 MPH or 96 KM while towing a trailer.

Failure to adjust while towing a trailer:

- When towing a trailer, you will have decreased acceleration, increased stopping distance, and an enlarged turning radius. What this means is you must make wider turns to keep from hitting obstructions, such as other vehicles, curbs and any other items on the inside corner. In addition, you will also need a longer distance to pass, due to slower acceleration, and an increased length.
- Always be alert during slippery conditions as you are more likely to be affected by slippery roads when driving a tow vehicle with a trailer.
- Be ready for the trailer to “sway”. Swaying is the trailer reacting to the air pressure wave caused by passing vehicles. Continued pulling of the trailer will provide a stabilizing force to correct the swaying. Do not apply the tow vehicle brakes to correct swaying.
- Check rearview mirrors frequently to observe traffic and trailer.
- Use lower gear when driving down steep or long slopes. Use the engine and transmission as a brake. Do not ride the brakes, as they can overheat and not operate properly.
- Be aware of your trailer’s height, especially when approaching roofed areas and around trees.

Trailer Not Properly Coupled to the Hitch:

- It is crucial that the trailer be coupled to the hitch with the safety chains properly attached. Uncoupling while towing may result in death or serious injury.
- Proper trailer hitch and ball selection are essential to safely towing your trailer. Be sure that the hitch size matches the coupler size. Our standard is 2 inch. Observe your hitch for wear, corrosion or cracks before coupling, replacing any damaged components. Be sure your hitch components are tight before coupling to tow vehicle.
- Do not move the trailer until: coupler is secured and locked to the proper ball size, with hitch pin installed to prevent unlock. Safety chains are secured to tow vehicle. Trailer jack is fully retracted.

- Do not tow until: Tires and wheels are checked. Trailer brakes are checked. Load is secured to the trailer. Trailer lights are connected and checked. Lug nuts are tightened.

Incorrect use of Safety Chains

- If your trailer comes loose for any reason, safety chains have been provided so that control can be maintained long enough to safely stop the tow vehicle. Improper rigging of safety chains can result in loss of control of the trailer and or tow vehicle, which may result in death or serious injury, if the trailer uncouples from the tow vehicle.
- Fasten chains to the frame of the tow vehicle. Do not fasten chains to any part of the hitch, unless the hitch has holes specifically designed for that purpose. If available, cross chains underneath hitch and coupler with enough slack to permit turning and to hold tongue up, if the trailer becomes loose.

Mismatch of Trailer and Hitch

- Use of the improper hitch with a load rating less than the load rating of the trailer can result in loss of control and may lead to death or serious injury.
- Use of a tow vehicle with a towing capacity less than the load rating of the trailer can result in loss of control and may lead to death or serious injury.
- Be sure your hitch and tow vehicle are rated for the Gross Vehicle Weight Rating (GVWR) of your trailer.

Unsafe Tires, Lug Nuts or Wheels

- Trailer tires and wheels are more likely to fail than car tires and wheels due to the fact that they carry a heavier load. It is important to inspect the trailer tires before each tow.
- If a tire has a bald spot, bulge, cut, is showing cords, or is cracked, replace the tire before towing. If a tire has uneven tread wear, take the trailer to your dealer for analysis. Tire imbalance, axle misalignment, incorrect inflation, overloading, or uneven loading the trailer can cause uneven tread wear.
- Tires with too little tread will not provide adequate tracking on wet roadways and can result in loss of control, leading to death or serious injury.
- Improper tire pressure causes an unstable trailer and can result in a tire blowout and loss of control. Before each tow please check your tire pressure, and check them while cold, also note that trailer tires will need to be inflated higher than passenger vehicle tires. Be sure tires are inflated to pressure indicated on sidewall before towing.
- Since trailer wheels and lug nuts are subjected to greater side loads than automobile wheels, they are more prone to loosen. Before each tow check to make sure they are tight.

Shifting Cargo

- Since the trailer "ride" can be bumpy and rough, you must secure your cargo so it does not shift while the trailer is being towed.
- If one of the doors opens, your cargo may be ejected onto the road, which could result in serious injury to death to other drivers. Use a linchpin, padlock, or lock the doors to prevent door latches from opening. Always secure door latch after closing.

Inappropriate Cargo

- Do not transport people inside the trailer, the transport of people puts their lives at risk and may be illegal.
- Do not transport flammable, explosive, poisonous, or other dangerous materials in your trailer.

Inoperable Brake, Lights or Mirrors

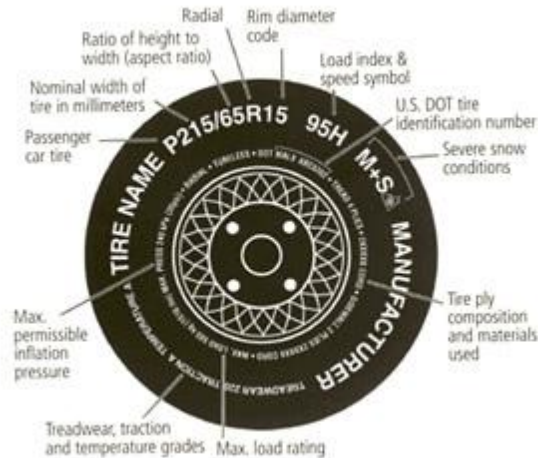
- Be sure that all of the lights on your trailer are functioning properly before towing your trailer. A four way electrical connector controls the lights. Check the trailer lights by having someone step on the tow vehicle's brake pedal while you look at the trailer lights. Do the same thing with turn signal lights. Improper electrical connection between the tow vehicle and the trailer will result in inoperable lights, which may lead to a collision. Before each tow verify that taillights, brake lights, and turn signals work.
- Standard side mirrors usually do not provide adequate visibility for viewing traffic to the sides and rear of the towed trailer. You must provide mirrors that allow you to safely observe approaching traffic.

Hazards from Modifying Your Trailer

- Altering your trailer can damage essential safety items. Even inserting a screw can damage an electrical component. Before any alterations are made please contact your dealer or Nitro Trailers. Trailer warranty will be null and void without prior written consent of Nitro Trailers.

Tires

- Federal law requires tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a tire identification number for safety standard certification and in case of a recall.



P

The "P" indicates the tire is for passenger vehicles.

Next number

This three-digit number gives the width in millimeters of the tire from sidewall edge to sidewall edge. In general, the higher the number, the wider the tire.

Next number

This two-digit number, known as the aspect ratio, gives the tire's ratio of height to width. Numbers of 70 or lower indicate a short sidewall for improved steering response and better overall handling on dry pavement.

R

The "R" stands for radial. Radial ply construction of tires has been the industry standard for the past 20 years.

Next number

This two-digit number is the wheel or rim diameter in inches. If you change your wheel size, you will have to purchase new tires to match the new wheel diameter.

Next number

This two- or three-digit number is the tire's load index. It is a measurement of how much weight each tire can support. You may find this information in your owner's manual. If not, contact a local tire dealer. Note: You may not find this information on all tires because it is not required by law.

M+S

The "M+S" or "M/S" indicates that the tire has some mud and snow capability. Most radial tires have these markings; hence, they have some mud and snow capability.

Speed Rating

The speed rating denotes the speed at which a tire is designed to be driven for extended periods of time. Please remember, no trailer is to be hauled at speeds exceeding 60MPH.

U.S. DOT Tire Identification Number

This begins with the letters "DOT" and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code where it was manufactured, and the last four numbers represent the week and year the tire was built. For example, the numbers 3197 means the 31st week of 1997. The other numbers are marketing codes used at the manufacturer's discretion. This information is used to contact consumers if a tire defect requires a recall.

Tire Ply Composition and Materials Used

The number of plies indicates the number of layers of rubber-coated fabric in the tire. In general, the greater the number of plies, the more weight a tire can support. Tire manufacturers also must indicate the materials in the tire, which include steel, nylon, polyester, and others.

Maximum Load Rating

This number indicates the maximum load in kilograms and pounds that can be carried by the tire.

Maximum Permissible Inflation Pressure

This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

Tread wear Number

This number indicates the tire's wear rate. The higher the tread wear number is, the longer it should take for the tread to wear down. For example, a tire graded 400 should last twice as long as a tire graded 200.

Traction Letter

This letter indicates a tire's ability to stop on wet pavement. A higher graded tire should allow you to stop your car on wet roads in a shorter distance than a tire with a lower grade. Traction is graded from highest to lowest as "AA", "A", "B", and "C".

Temperature Letter

This letter indicates a tire's resistance to heat. The temperature grade is for a tire that is inflated properly and not overloaded. Excessive speed, under inflation or excessive loading, either separately or in combination, can cause heat build-up and possible tire failure. From highest to lowest, a tire's resistance to heat is graded as "A", "B", or "C".

Certification Label

The Certification Label contains the following information for the use of your trailer, it is located on the front tongue of the trailer.

- **VIN:** Vehicle Identification Number.
- **GAWR:** (Gross Axle Weight Rating) The maximum weight that any axle can support, as published on the Certification/VIN label on the front left side of the trailer.
- **GVWR:** (Gross Vehicle Weight Rating) The maximum weight of the fully loaded trailer, as published on the Certification/VIN label.

Break In

Lug Nuts

- Retighten lug nuts after the first 10, 20, and 50 miles of use as during axle assembly

Brakes (If Equipped)

- Brakes experience an initial rapid wear and must be adjusted after 200 miles of use; to adjust your brakes please refer to your axle owner's manual. After your initial break in please adjust every 3000 miles. Also insure brake systems are working in unison with the tow vehicle. To test go to a large open area and test at safe operating speed. After break in test, perform every time you hook to trailer. Adjust internal vehicle brake controller and refer to their manual for more information.

Maintenance

You must inspect, maintain and service your trailer regularly to insure safe and reliable operation. If you are unable to perform the items listed here, have your dealer do them. For axle maintenance please refer to axle manual.

Before Each Use

Item	Inspection/Service
Lights	Check Operation
Break away Brakes (If Equipped)	Check Operation
Brakes	Check Operation
Shoes & Drums	Adjust
Coupler & Hitch Ball	Check for cracks, pits, flat spots. Replace W/ Ball of adequate GVW Rating. Grease Check Locking Device & Replace if Worn
Safety Chains	Check for wear & or damage
Tires	Check Tire Pressure (Cold) Inspect
Wheels (Lug Nuts, Bolts) & Hub	Check for Tightness Tighten

Every 6 Months/6000 Miles.

Item	Inspection/Service
Lights	Check Operation
Tires	Inspect tread and side walls thoroughly. Replace tires if treads are worn
Brakes	Check Wear
Coupler & Hitch Ball	Check for cracks, pits, flat spots. Replace W/ Ball of adequate GVW Rating. Grease Check Locking Device & Replace if Worn
Safety Chains	Check for wear & or damage
Tires	Check Tire Pressure (Cold) Inspect
Wheels (Lug Nuts, Bolts) & Hub	Check for Tightness Tighten

Each Year or 12,000 Miles

Item	Inspection/Service
Axle	Grease
Lights	Check Operation
Brakes	Dealer Inspection
Coupler & Hitch Ball	Check for cracks, pits, flat spots. Replace W/ Ball of adequate GVW Rating. Grease Check Locking Device & Replace if Worn
Safety Chains	Check for wear & or damage
Structure	Inspect all frame members, bolts Replace or replace and damaged or broken parts Inspect all welds
Wheels (Lug Nuts, Bolts) & Hub	Check for Tightness Inspect rims and tires for dents and or cracks
Axle Attachment Bolts	Check by Dealer

Wheel Bearings

To inspect wheel bears, jack trailer and check the wheels for side to side looseness. If the wheels are loose and or spin with a wobble the bearings must be serviced or replaced. Please refer to the axle owner's manual.

Grease



Bearings should be lubricated every 12 months or 12,000 miles, whichever occurs first. Refer to your axle manual for recommended grease type.

To grease axle, remove the rubber plug pictured above, place a standard grease gun nozzle onto the grease fitting making sure the gun is seated properly onto the fitting. Pump grease while rotating the wheel. The old grease will begin to flow back out to the cap and around the nozzle. Stop when you begin to see new grease showing. Wipe off excess and install rubber plug.

Operation

Rear Access Door



Your trailer is equipped with a large rear access door, to enter undo the latches on the left and right sides and the door will come down, use caution as the door is large and heavy.

Item #1 indicates RH Latch, flip lock point and raise handle upward to latch, please note to also do LH Latch side labeled as item #3 in the picture, use caution while unlatching as after sitting for a period of time these may be hard to push, proper lubrication will help with this . This will also work as a place to apply a pin or lock as to not allow outside access to your trailer.

Item # 2 indicates your license plate holder, please be sure to properly display your plate.

Item # 4 & 5 are LED brake and turn signal lights, please verify operation of these lights before each tow.

Item # 6, 7, & 8 are marker lights please verify operation of these before each tow.

Interior



The interior of your trailer, has two working functions, the light on the interior labeled with an arrow allows you to see the front of the trailer as to not run into the front of it. To turn on reach in through front access door and turn switch to the on position. The other is the side door access latch; this allows you exit the trailer through the side door. You can also lock the side access door from the inside by flipping the red lever labeled "Lock". Talk with your dealer about the best tie down system for your application, many of our trailers come with no down system or are ordered from the dealer for particular applications.

Side Access Door



The Side of your trailer is equipped with a lockable side access door, please use caution while entering as if the trailer is not attached to a vehicle it may drop in the rear and the front to lift causing damage to items around or injury.

Item #1 side access door, to open pull latch and step up into trailer. The side door is lockable.

Item #2 & #3 holder and holder latch work together, to leave your door open for a period of time, lock item #3 into Item #2.

Item #4 & #5 are side marker lights, be sure to inspect them before tow to ensure they operate properly.

Front Access Door



The Front of your trailer is equipped with many important items.

#1, front access panel, please use this to access the interior, to turn on lights and check your cargo without dropping rear door.

#2, front access door latches, both are lockable, to open twist each and pull up, please be sure these are fastened before tow or damage will occur.

#3 & #4, marker lights be sure to insure both are operational before tow.

#4,5,6,7, Inspect tow hitch before tow, our standard is a 2" coupler, lock safety chains to the frame of tow vehicle. Plug in and verify light, be sure to hook to the 4 pin connector, if your vehicle does not have a 4 way connector, talk to your dealer about a convertor. When completed you can then crank up the jack, pull the pin and flip up.



The inside of your trailer may be equipped with an adjustable tie down system called slide track

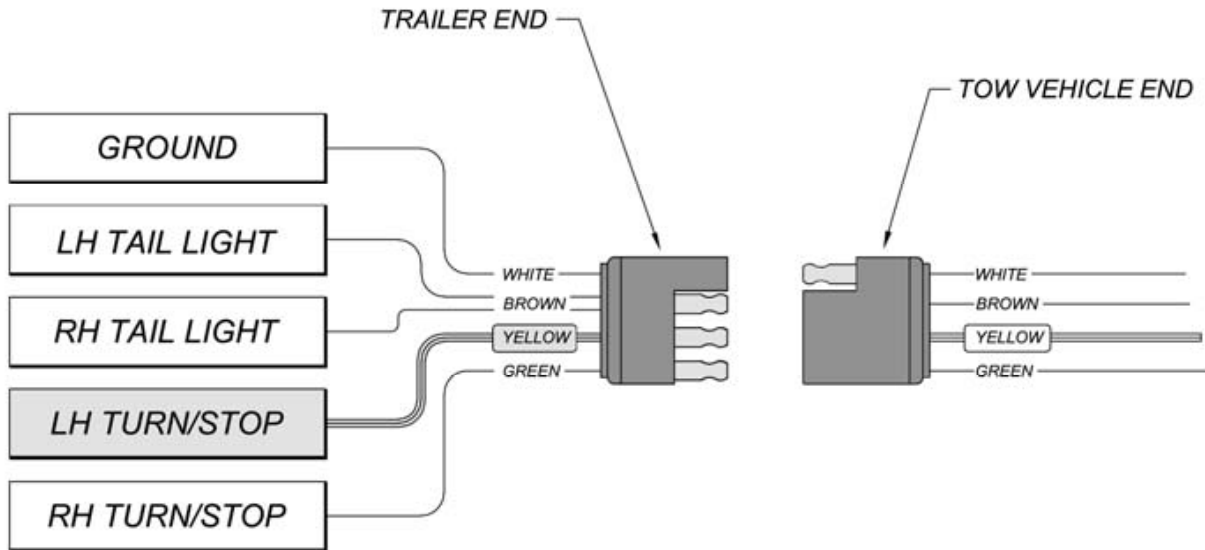


To adjust simply loosen the two bolts and slide forward or back to desired position.

Thank You

From all of us at Nitro Trailer Thank You for choosing us for all of your trailer needs.

Wiring Schematic



From all of us at Nitro we would like to thank you for choosing us, if you have any concerns, comments, questions, please contact us using page 2 of this owner's manual, or consult your dealer.

