Nolan Manufacturing
18868 S NC Hwy 109
Denton, NC 27239
Phone (336) 490 - 0086

NOLAN MANUFACTURING

2K – 14K Capacity Trailers (2022)

Manual & Safety Checklist

TRAILERS & TRACTOR ATTACHMENTS

Model & Safety Guide

Manufacture Notice:
This owners 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.

18868 S NC Hwy 109
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Manual Available Online:
www.NolanManufacturing.c

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Trailer Notice:

If you believe that your Nolan Manufacturing trailer has a defect that could cause injury or death, you should immediately inform the Nation Highway Traffic Safety Administration (NHTSA) in addition to notifying Nolan Manufacturing, Inc.

If the NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Nolan Manufacturing, Inc.

To contact NHTSA:

You may call the Vehicle Safety Hotline toll-free at:
1-888-327-4236 (TTY: 1-800-424-9153)

You may go to www.safercar.org

Or you may write to: Administrator NHTSA

1200 New Jersey Avenue S.E. Washington, DC 20590

2K - 14K Capacity

Trailer Manual

Single or Double Axle

2022

Introduction

Thank you for purchasing a Nolan Manufacturing trailer!

We hope that many years of towing adventures await you and your new trailer. Our experienced fabricators design each trailer to suit the needs of everyday homeowners and farmers alike. No matter your daily schedule, trust Nolan Manufacturing to get you and your haul to your destination safely!

This owners manual was developed by Nolan Manufacturing to provide new trailer owners with easy access to information regarding basic trailer practices. This manual contains helpful advice and various warnings regarding injury, death, and damage. Below are examples of these warnings:

Warning
This describes a hazard which might result in injury or death.
Caution
This describes a lesser hazard which might result in injury or death.
Note
This is useful information, or a warning of possible damage to equipment.

For future reference, record your trailer's uniquely identifying information here:

Trailer VIN#		
Tire TIN#	Forward Tire	Back Tire
Driver Side		
Passenger Side		
Spare Tire TIN#		

Safety Checklist: Before You Tow

Stay In The Know: Before getting on the road with your Nolan Manufacturing trailer, go over this checklist to ensure you are ready to get on the road safely!

__ Check tire pressure of both tow vehicle and trailer tires
__ Tighten lug nuts/bolts to correct torque on all tires
__ Close coupler securely, properly secure and adjust hitch, draw bar, etc.
__ Properly attach safety chains: Criss-crossed, connected
    __ Not touching the road with enough slack to make turns
__ Check that wiring also has enough slack and is properly connected
__ Ensure all running, brake, and hazard lights are working properly
    __ Check turn signals
__ ATTACH break-a-way to tow vehicle: THIS IS NOT A PARKING BRAKE
    __ Should not be connected to safety chains/ball mount
    __ If break-a-way switch is removed during hook up, plug it back in within a few seconds.
    __ Leaving it out sends full power through the braking system, this can overheat wiring/switch.
__ Ensure cargo is secure on and in tow vehicle/trailer
    __ Check the load distribution of the cargo, properly balanced:
    __ Front to Back and Side to Side
__ Retract FULLY: Trailer jack, and any tongue support/attached stabilizers
__ Test brakes of both tow vehicle and trailer
__ Check that you have good visibility with all mirrors
__ Check that you have wheel chocks and jack stands

Contact Nolan Manufacturing with questions and concerns before towing cargo to ensure safe travels!

General information contained in this document cannot cover all specific details necessary for the proper combination of every trailer and tow vehicle.

Your VIN

Your VIN number is located inside the forward half, left side (driver side) of the trailer tongue.

Since there is a lot to know about your new trailer, we will start with your VIN number. A VIN number is a unique number given to every trailer by Nolan Manufacturing. The configuration of VIN numbers is governed by federal regulations. Each number must identify the specific unit, model, and manufacture of each individual trailer.

You can also locate your VIN number on the Manufacturer's Certificate of Origin (MCO), or trailer title, you received when you purchased the trailer.

VIN refers to a Vehicle identification number, located in the upper left, top section of a trailer title, or MCO.

Missing VIN Number

If the VIN label is missing from your trailer, your MCO should include this information in the top left.

Without documentation, you may be able to locate a hidden VIN somewhere on the trailer.

Contact Nolan Manufacturing to locate a hidden VIN.

Further questioning requires the Department of Motor Vehicles or relevant office for direction on how to proceed. Each state has its own regulations governing how to claim lost, stolen, or otherwise unidentifiable trailer(s).

Trailer Warranty Registration

Registering your trailer with us online not only helps us keep you informed of potential recalls, but allows us to identify your trailer if warranty questions arise.

Register for free, visit us online: https://www.nolanmanufacturing.com/

- Navigate to "Register Trailer" Page
    - Click the box labeled "Form Here"
- This should open a new window to a form titled "Register a Trailer"
    - Enter First and Last Name in the appropriate boxes.
    - Enter a phone number we can reach you at.
    - Optional: Add an email for us to contact you.
    - Next you will need to input your trailer's VIN number.
        - If you are registering multiple trailers you will need to submit multiple forms.
    - Optional: Add the date you purchased your trailer to qualify for warranty.
    - Upload copy of invoice/receipt, proof of purchase required for registration.
    - Optional: Enter your Tire Identification Numbers for your trailer's tires.
    - Optional: Subscribe to mailing list for recall notifications.

Warning
Follow loading instructions as referred to in Section: Loading and Unloading
Failure to follow hook-up and maintenance instructions can cause injury or death.
Failure to follow warnings and considerations can VOID ALL warranties.

Things to Consider

Towing is a combination of controllable components; Including, but not limited to the driver, tow vehicle, and the trailer itself.

These components contribute to the towing experience and safety of the tow.

The driver is responsible for properly…

- Selecting the tow vehicle and trailer for each unique load
- Hitching the trailer properly
- Loading and securing cargo
- Operating the tow vehicle & combination:
    - Appropriate speed, steering, braking, signaling, etc.
    - Focused while driving, eliminate distractions

Choose a tow vehicle with proper brakes, tires, mirrors, hitches, etc. for the intended trailer.

Choose a trailer with proper components (brakes, tires, axles, lighting, etc.) for its intended use.

To ensure trailer operator safety and trailer longevity, practice the following…

- Speed when towing should NOT exceed 60 MPH
- Failure to avoid unsafe towing conditions can lead to damage or injury.
- Our trailers are rated appropriately, NEVER exceed the trailer's rating.
    - Tire failure, axle failure, and unsafe towing conditions can result.
- Routinely CHECK tire pressure:
    - Keep inflated to the pressure listed on the tire sidewall.
- After the first 100 miles, CHECK lug nut torque.
    - Re-torque as needed thereafter.
- MAINTAIN brake adjustment and lubrication on all axles.
    - According to the manufacturer's instructions.
- Failure to follow hook-up, maintenance instructions, or warnings:
    - Can lead to personal injury or death.
    - Can lead to equipment damage.

Capacities & G.V.W.R.

We build our trailers to meet NHTSA standards; Sufficiently balancing capacity in relation to Gross Vehicle Weight Rating (GVWR) per trailer.

GVWR the sum of the trailer weight and the cargo capacity.

As a formula, GVWR = Weight of Trailer + Cargo Capacity

In other words, GVWR is the total weight of the trailer when fully loaded.

Each component of a trailer must be "rated" above that weight, or be capable of withstanding that weight. If a component is not rated for the trailer load, that component has a high potential of failing.

Consider G.V.W.R. as a weakest link examination: The lowest rated component on the trailer, the component not equal to or greater than the GVWR, is that trailer's weakest link.

Remember to Consider

All vehicles capable of towing have a maximum rated towing capacity, locate the following statement on your vehicle's placard:

- "The combined weight of occupants and cargo should never exceed XXX lbs."

Trailer Model	GVWR
5'x8'	2,000 lbs.
5'x10'	2,000 lbs.
6'x10' (Standard or Mesh)	3,500 lbs.
6'x12' (Standard or Mesh)	3,500 lbs.
6'x14' (Standard or Mesh)	3,500 lbs.
6'x16' (Standard or Mesh)	7,000 lbs.
7'x16'	7,000 lbs.
7'x20	7,000 lbs. (7K), 10,000 lbs. (10K), 14,000 lbs. (14K)
7'x24'	10,000 lbs. (10K), 14,000 lbs. (14K)

Shipping weight information can be found on the Manufacturer's Certificate of Origin (MCO/trailer title), while cargo capacity is listed on the trailer's tire placard.

Trailer Tires

Warning
Improper tires can lead to injury, loss of vehicle stability and/or loss of control of the trailer.

Always make sure the tires are properly inflated to the inflation pressure listed on the sidewall and that the gross weight (of trailer & cargo) is within the trailer tires capacity.

- When sitting out of service for long periods of time or when often used at MAX Capacity:
    - Diligent tire inspection, inflation checks, and maintenance is required.
- Each trailer will clearly display the:
    - Appropriate tire size, wheel size, and inflation pressure on the VIN/Certification label, mounted on the left front of the trailer body/tongue.
    - All of your trailer tires should be the same type, size, and construction.
        - Find a similar label for your tow vehicle on the driver's door pillar.

- IMPORTANT: Lug nut torque MUST be routinely checked.
    - Especially true;
        - When you first pick up a new trailer
        - After a tire change.
    - Proper torquing is vital for correct wheel functioning
    - Check your owner's manual for the required torque specifications
        - Or contact Nolan Manufacturing

- Click here for NHTSA Tire Safety: Everything Ride On It
    - http://www.nhtsa.dot.gov/cars/rules/tiresafety/ridesonit/tires_index.html
    - https://www.nhtsa.gov/tires/safety-and-savings-ride-your-tires

WARNING: Death or serious injury can result.
Check lug nuts/bolts tightness before each tow. They are prone to loosen after first assembly. When driving on a remounted wheel, check lug nuts/bolts for tightness at the first 10, 25 and 50 miles of driving, and before each tow thereafter.
Metal creep between the wheel rim and lug nuts or bolts can cause rim to loosen Death or injury can occur if the wheel comes off, especially if in motion.

Tighten lug nuts/bolts in three stages to the final torque in order to prevent wheels from coming loose (Tighten each in the order shown in Figure 1.1)

Verify that wheel studs are free of contaminants such as paint or grease, which may result in inaccurate torque readings. Over-tightening will result in breaking the studs or permanently deforming the mounting stud holes in the wheels and will void the axle warranty.

See your axle manufacturer's manual or your dealer for wheel nut or bolt torque specifications.

Tire Inflation

Proper tire pressure of each trailer tire is labeled on the tire sidewall and this pressure should be maintained.

Note
Tire pressure must be checked while the tire is cold. Do not check tire pressure immediately after towing.

The load carrying capacity of trailer tires can be dramatically affected if the tires are inflated to less than the recommended level. Handling characteristics of the tow vehicle and trailer combination can be affected if the tires are inflated more than the recommended level.

Tires can lose 1 to 5 PSI per month. A trailer tire can suffer internal damage when operated while under-inflated, or with low tire pressure, leading to excessive heat build up.

As heat builds up during driving, the internal structure of the tire starts to break down. This compromises the strength of the tire and is why it is recommended to drive at moderate speeds. High speed towing, especially in hot conditions, degrades trailer tires significantly.

On average, a trailer tire can last about five years under normal use and maintenance conditions. After three years, however, consider replacing the trailer tires with new ones, even if the tires have adequate tread depth. Generally, it is best to have your tires inspected by a tire supplier to determine if your tires need to be replaced.

Generic Tires

Wheel Specifications

Size	Ply	Maximum Load (lb)	Pressure
ST205/75R15 LRC	6	1820	50PSI
ST225/75R15 LRD	8	2540	65PSI
ST235/80R16 LRE	10	3520	80PSI

This 3-digit number indicates the width (in millimeters) from the tire sidewall to other sidewall edge.

This 2-digit number gives the ratio of the tire's height to width, also known as the tires aspect ratio.

This 2-digit number gives the ratio of the tire's height to width, also known as the tires aspect ratio.

How to: Check Tire Load Index

Load Index = Z

(Cargo Capacity) x (# of Tires) = Z

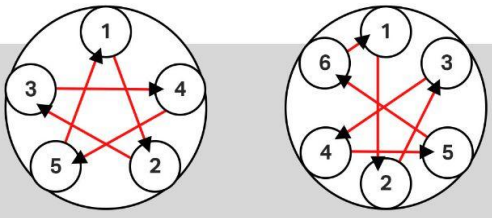
If Z ≥ GVWR of trailer, tires sufficient for load.

This is how many pounds a tire can safetly carry.

Figure 1.1

How to: Tighten Lug Nuts & Bots

Start at the top (#1)
Follow this pattern for
FIVE or SIX BOLT tires.



Drivers, especially when towing, should adhere by the posted speed limit on roads.

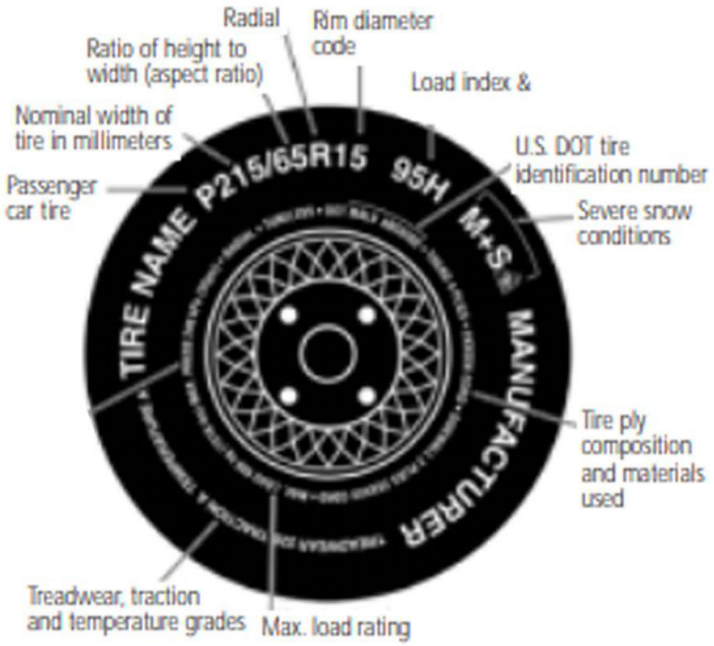
However, NEVER exceed the speed rating of the tow vehicle tires or the trailer tires;

Always drive according to whichever rating is lower.

Trailer tires commonly have tire speed ratings in the **65 – 75 mph** range.

NOTE:
Always use tires of the same size, load range, and construction on a trailer.
Mix-matched tires can lead to problems; overloading/overheating, or to tire failure.

Generic Tires: Continued



TIRE CARE

- Maintain proper inflation
- Avoid excessive loading
- Avoid roadway hazards
- Drive at appropriate speeds
- Routinely Inspect
- Lug nut torque checks

How To: Check "Cold" Tire

- Allow tires to sit for at least 3 hours.
- Check tire pressure as normal

Preventing Tire Damage

Slow down when going over a pothole or other object in the road.
Do not run over curbs or other foreign objects in the roadway.
Try not to strike the curb when parking.

- Check tire pressure reguarly (at least once a month), including the spare.
- Inspect tires for uneven wear patterns on tread, cracks, foreign objects, or other signs of wear or trauma.
- Make sure tire valves have valve caps.
- Check tire pressure before going on a long trip.
- Do not overload your vehicle. Check the tire information placard for maximum recommeneded load for vehicle.

Improper tires: Any tire that is not adequate to the capacity of the load or is under- or over-inflated due to inadequate tire pressue.
Tires are VITAL to proper trailer performance and longevity.

Breaking in a New Trailer

Jacking a Trailer

To perform many of the inspection and maintenance activities, you must jack the trailer.

Jacks stands lift and stabilize the trailer tongue, or front corners of the trailer;

- For lifting the trailer to connect/disconnect from tow vehicle
- To keep the trailer level while not attached to the tow vehicle

To stabilize the rear of the trailer when loading/unloading. When jacking and using jack stands, place them clear of wiring, brake lines, and suspension parts (springs, torsion bars, etc.). Place under the outer frame rail to which axles are attached.

WARNING: CRUSHING HAZARD
Never go under a trailer that is not properly placed/secured by jack stand(s) on firm/level ground. ● The tow vehicle and trailer could be inadvertently moved while a person is under the trailer. The tow vehicle engine must be off, ignition key removed, and have the parking brakes set before entering the area under the trailer.

- Park the trailer in a safe environment on level ground.
- Make sure the jacks are clear of:
    - Wiring, brake lines, and suspension parts;
        - Springs and torsion bars
- Do not use the trailer's axle for support.
- Do not touch the wiring or hydraulic tubing.
- NEVER crawl under a trailer that is not supported on both:
    - Properly placed/secured jack stands
    - Firm and level ground.
- If working on one side of the trailer:
    - Ensure wheel chocks are in place on the opposite side before jacking the trailer.
- If removing a tire:
    - Loosen the wheel nuts BEFORE the tire is off the ground.

Tongue Weight

The recommended percentage of total weight of a loaded trailer to be loaded on tongue is 10-15% for equipment trailers and 6-10% for landscape trailers.

A portion of the trailer load must be carried by the tow vehicle because the trailer tongue must exert a downward force on the hitch. This is because a proper amount of tongue weight is necessary for the tow vehicle to be able to maintain control of the tow vehicle/trailer system.

If there is not enough weight on the tongue, the trailer can become unstable at high speeds. Remember, the faster you go the more likely the trailer is to sway.

If there is too much weight on the tongue, the tow vehicle is prone to jack-knife. The tow vehicle's front wheels can be too lightly loaded and cause loss of steering control and traction.

Warning
Improper tongue weight/load distribution can result in loss of control of the trailer. Be sure to: • Distribute the load evenly, right and left. • Keep the center of gravity low. • Distribute the load front-to-rear to provide proper tongue weight.

Welds

To prevent severe damage to your trailer, inspect all of the welds for cracks or failure at least once a year.

All welds can crack or fail, especially if subjected to heavy loads or movement of improperly secured cargo. Any time you know or suspect your trailer has been subjected to potential damage, immediately inspect welds and fasteners. If a weld failure is detected, contact your dealer.

Warning
Do not attempt to repair a cracked or broken weld without proper skills or equipment. Improper weld repairs can lead to early failure of trailer structure, serious injury or death.
Broken or damaged welds can cause injury or damage to person(s), trailer, and contents. Inspect for, and repair all damaged parts at least once a year.

Loading and Unloading

Improperly loaded cargo causes many accidents and deaths, always consider the distribution of weight. Most of the total weight of the trailer and contents should be held by the trailer axle(s), but the remainder of the total weight should be carried by the tow vehicle hitch.

Towing stability depends on keeping the center of gravity as low as possible. Load heavy items on the floor and over axles. Maintain even side-to-side weight distribution and proper tongue weight when loading additional items. Total weight of trailer and contents must never exceed trailer GVWR.

Warning
Do not transport flammable, explosive, poisonous or other dangerous materials on your trailer. The exception is fuel in the tank of a vehicle or equipment being hauled.
Do not risk the lives of others by transporting people in a trailer, it is also illegal.

Loading Trailer

Warning: Couple the trailer to the tow vehicle.
Trailer must be coupled to the tow vehicle before loading the trailer.

1. Lower rear stabilizers (if equipped) or place blocking under rear of trailer so the cargo's weight does not raise the front of the trailer during loading.

Caution
Use a safe lifting procedure to avoid injury when handling ramps.

2. Equipment Trailer Ramps: Remove pin and lower ramps from closed position. Adjust ramp position to align with equipment tires or tracks.
   Landscape Trailer Ramps: Remove pins and carefully lower ramp door from closed position.

Warning
Stand to the side when lowering trailer ramps. Do not attempt to service counterbalance. Take trailer to your dealer for service.
Ramps are not rated for load bearing capacity. They will NOT support the load bearing capacity of the trailer.

3. Load cargo on trailer with approximately 60% of the cargo in the front half of the trailer.
4. Secure load to trailer using appropriate straps, chains, and tensioning devices. Refer to www.fmcsa.dot.gov for regulations regarding cargo securement rules.
5. Carefully raise ramp(s), latch and secure ramp pin(s) in the closed position.
6. Raise rear stabilizers (if equipped) or remove blocking under rear of trailer.

Unload Trailer

Warning: Couple the trailer to the tow vehicle.
Trailer must be coupled to the tow vehicle before unloading the trailer.

1. Park tow vehicle and trailer on a firm and level surface.
2. Lower rear stabilizers (if equipped) or place blocking under rear of trailer.
    a. This keeps the weight of the cargo from raising the front of the trailer.
3. Remove chains, straps and tensioning devices.
4. Equipment Trailer Ramps: Remove pin and lower ramps from closed position. Adjust ramp position to align with equipment tires or tracks.
   Landscape Trailer Ramps: Remove pins and carefully lower ramp door from closed position.

Warning
Stand to the side when lowering trailer ramps. Do not attempt to service counterbalance. Take trailer to your dealer for service.
Ramps are not rated for load bearing capacity. They will NOT support the load bearing capacity of the trailer.

5. Carefully unload cargo from trailer.
7. Carefully raise ramp(s), latch and secure ramp pin(s) in the closed position.
6. Raise rear stabilizers (if equipped) or remove blocking under rear of trailer.

Securing Cargo

Warning
Shifting cargo can result in loss of control of the trailer, and can lead to death or serious injury. Tie down all loads with proper sized fasteners, chains, straps, etc. Refer to www.fmcsa.dot.gov for regulations regarding cargo securement rules.

Coupling to Tow Vehicle

Warning
An improperly coupled trailer can result in death or serious injury. Do not move the trailer until: • Coupler is secured and locked to hitch • Safety chains are secured to tow vehicle • Breakaway switch is connected to tow vehicle • Trailer lights are connected and checked • Tires and wheels are checked • Load is secured to trailer • Trailer jack(s) are fully retracted • Trailer brakes are checked
Before coupling, inspect the hitch, ball, and coupler for wear, corrosion, and cracks.
Replace worn or damaged components immediately.
A loose hitch ball nut can result in uncoupling, leading to injury or death. Ensure the hitch ball is tight to the hitch before coupling the trailer.
A tongue jack can be damaged by overloading: Do not use tongue jack to raise a tow vehicle more than 1 inch.
Drop leg jacks may be spring loaded, meaning they may rapidly return to their raised position when released. Keep clear when releasing drop legs.

Our trailers are equipped with a ball hitch coupler, this connects to a ball that is located on or under the rear bumper of a tow vehicle. If your tow vehicle does not have a ball, you will not be able to tow a Nolan Manufacturing trailer without installing one.

We have utilized a ball hitch coupler that is suitable for the size and weight of the trailer. The load rating of the coupler and the necessary ball size are listed on the coupler.

You must provide a hitch and ball for your tow vehicle. The hitch and ball must meet or exceed the GVWR of the trailer.

Ball size and load rating (capacity) are marked on the ball; hitch capacity is marked on the hitch.

The hitch ball size must be the same as the coupler size. A hitch ball that is too small, too large, is underrated, or is loose or worn, can lead to trailer detaching from the tow vehicle.

Warning
Trailer detachment from a tow vehicle can lead to death, serious injury, and/or damage, follow the guidelines below to avoid detachment.

Before coupling:

- Wipe hitch ball clean, inspect visually and by feel for flat spots, cracks, or pits.
- Rock ball to make sure it is tight to the hitch.
    - Check visually that hitch ball nut is solid against lock washer and hitch frame.
- Wipe inside/outside of the coupler clean, inspect visually for cracks and deformations;
    - Feel the inside of the coupler for worn spots and pits.
- Be sure the coupler is tight to the tongue of the trailer.
    - All coupler fasteners must be visibly solid against the trailer frame.
- Raise the bottom surface of the coupler to be above the top of the hitch ball.

- Lubricate hitch ball and inside of coupler with thin layer of automotive bearing grease.
- Remove safety latch pin and open coupler locking mechanism.
    - In the open position, the coupler is able to drop fully onto the hitch ball.
- Slowly back up tow vehicle so that the hitch ball is near or aligned under the coupler.

Couple Trailer to Tow Vehicle:

- Lower trailer tongue until the coupler fully engages the hitch ball.
    - If coupler does not line up with the hitch ball, adjust the position of the tow vehicle.
- Close latch and engage the coupler locking mechanism.
    - In engaged position, the locking mechanism securely holds the coupler to the hitch ball.
- Insert the safety lock pin through the hole in the locking mechanism.
- Be sure the coupler is all the way on the hitch ball and locking mechanism is engaged.
    - Properly engaged locking mechanism allows coupler to raise the rear of the tow vehicle.
    - After the coupler is locked to the hitch, using the trailer jack:
        - Test to see that you can raise the rear of the tow vehicle by 1 inch.
- If coupler cannot be secured to hitch ball, DO NOT tow trailer.
    - Contact dealer for assistance.
- Lower trailer so that its entire tongue weight is held by the hitch.
    - Continue retracting the jack to its fully retracted position.
- Stand back: Fully retract jack drop leg (if applicable).

Connect Safety Chains

1. Visually inspect safety chains and hooks for wear/damage. Replace worn/damaged safety chains and hooks before towing.

Warning: Step 2

2. Safety chains must crisscross under the coupler.
    a. If the trailer uncouples, the safety chains should hold the tongue up above the road.
    b. Loop around a frame member of tow vehicle or to holes provided in the hitch system.
        i. With enough slack to allow for making turns.
    c. DO NOT attach them to an interchangeable part of the hitch assembly.
3. Attach hooks up from underneath the hole. Do not just drop into hole.
4. Provide enough slack in chains to permit tight turns, but not close to the road surface to drag.

Warning
Improper rigging of safety chains can result in loss of control of trailer and tow vehicle, leading to death or serious injury, if the trailer uncouples from the tow vehicle. Do not fasten chains to tow vehicle hitch unless hitch has holes/loops specifically for that purpose.

Connect Electrical Cable

1. Connect trailer lights to tow vehicle's electrical system using trailer electrical cable.
2. Check all lights for proper operation.
    a. Repair/replace non-working lights before towing.
3. Check electric brakes for proper operation using brake controller mounted in the cab.

Warning
Improper electrical connection between the tow vehicle and trailer will result in inoperable lights and electric brakes, and can lead to collision. Before each tow: • Check that all lights and turn signals work • Check that electric brakes work, operating the brake controller inside the tow vehicle (if applicable)

Attach Breakaway Brake Lanyard

If the coupler/hitch fails:

- A properly connected and working breakaway brake system will apply the trailer brakes.
- Safety chains will keep the tow vehicle attached.
- As trailer brakes are applied, the trailer/tow vehicle combination will come to a controlled stop.

Connect the lanyard to the tow vehicle:

a. Do NOT connect the lanyard to the safety chain, hitch ball or hitch ball assembly.

Warning
An ineffective breakaway brake system can result in a runaway trailer, leading to death or serious injury if the coupler fails. Test the function of the breakaway brake system before towing trailer. Do not tow trailer if the breakaway brake system is not working; have it serviced or repaired. Do not tow the trailer with the breakaway brake system ON because the brakes will overheat which can result in permanent brake failure.

Uncouple Trailer

Follow these steps to uncouple trailer from the tow vehicle:

1. Park the trailer on a firm, level surface
    a. Block trailer tires; Wheel chocks
2. Disconnect electrical connector
3. Disconnect breakaway brake switch lanyard
4. Disconnect safety chains from tow vehicle
5. Unlock the coupler and open it
6. Before extending jack:
    a. Make certain the ground surface below jack pad will support the tongue load.
7. Rotate jack handle to extend jack
    a. Transfer weight of the trailer tongue to the jack.
8. Raise the trailer coupler above the tow vehicle hitch.
9. Drive tow vehicle forward.

Trailer Maintenance

Regular trailer maintenance is required to not only ensure you and your tow make it to your destination safely, but also to extend your trailer's life.

Follow the guidelines provided to inspect, maintain and service your trailer regularly, ensuring safe and reliable operation. If you cannot, or are unsure of, how to perform the items listed here, contact your dealer or Nolan Manufacturing. Worn/broken trailer parts can cause loss of control or injury may result. After any accident or impact, always have a professional inspect your trailer.

The following are recommendations for minimum maintenance. Trailer usage, including cargo weight, mileage, and environmental factors may lead to more routine maintenance being required.

Best if conducted before each tow:

Item	Inspection/Service
Breakaway Brakes • Electric • Hydraulic	Check operation.
Breakaway Brake Battery	Fully charged, connections clean
Brakes • Electric or Surge	• Electric: Check operation. • Surge: Check operation and check master cylinder level
Shoes and Drums	Adjust as necessary
Safety Chains and Hooks	Check for wear, damage
Tires	• Check tire pressure when cold • Inflate as needed • Check for damage and worn tread
Wheels • Lug Nuts or • Bolts & Hub	• Check for tightness • Tighten. For new and remounted wheels, check torque after the first 10, 25, and 50 miles of driving and after any impact.

Monthly Inspection

Item	Inspection/Service
Lubrication	• Lubricate tilt deck pivot points (if equipped) • Lubricate hydraulic cylinder ends (if equipped)

Inspection and Service Every Year or 12,000 Miles

Item	Inspection/Service
Brakes, all types ● Shoes and Drums	● Check for scoring and wear ● Replace per manufacturer's specifications
Jack, Drop-leg (if equipped)	Grease gears at top
Structure ● Frame Members ● Welds ● Axles ● Doors, Ramps, and Gates	● Inspect all frame members, bolts and rivets. Repair or replace damaged, worn or broken parts. ● Inspect all welds. Repair as needed. ● Check to see if the trailer alignment is correct ● Inspect for damage, replace and repair as necessary. Grease or lubricate as necessary.
Wheels ● Wheel Bearings ● Rims	● Disassemble/inspect/assemble and repack. Replace promptly if immersed in water. ● Inspect for cracks and dents. Replace as needed.
Axles	Check trailer alignment

Make Regular Stops

After each 50 miles, or one hour of towing, stop and check the following items:

- Coupler secured.
- Safety chains are fastened and not dragging.
- Cargo secured.

Retighten Lugs at First 10, 25, and 50 Miles

Failure to perform retightening of lugs may result in a wheel coming loose. This can cause a crash leading to death or serious injury. Improper tightening of lug nuts/bolts voids the axle warranty.

Adjust Brake At First 200 Miles

Brake shoes and drums experience rapid initial wear. Adjust brakes after the first 200 miles of use and adjust them each 3,000 miles thereafter. Contact dealer to adjust brakes.

Accessories

Wheel Hubs and Bearings

Wheel Hubs: **Check the hubs every 2,000 miles**

- Trailer wheel hubs connect the trailer tires to the trailer axle, allowing them to spin.
    - During inspection, check for damage, corrosion or improper installation to avoid issues
        - Can lead to impaired steering or a broken axle.

Wheel Bearings:

- Trailer wheel bearings need regular maintenance.
- Located within the wheel hub, they reduce friction between the wheel and wheel assembly.
    - Remember to take the necessary time to open the wheel hub and inspect.
    - Loose, worn or damaged wheel bearings is the most common cause of grabbing brakes.
- To check your bearings, jack up the trailer and secure it on adequate capacity jack stands.
- Check wheels for side-to-side looseness:
    - Grip the tire firmly with both hands and shake.
    - If it feels loose or rattles, remove dust caps and check for low grease or a loose axle nut.
- Repack bearings every year or 12,000 miles
- Contact Nolan Manufacturing for replacement information.

Fenders

The widest point on your trailer determines the trailer's maximum width, this may be the fenders or tires.

In terms of Nolan Manufacturing landscape and equipment trailers, the max width will be found by measuring from fender to fender. This is because we have designed our trailers so that the tires do not extend beyond the fenders.

Always check the legal maximum widths allowed on the roads you intend to travel, federal highways/interstates allow a max vehicle width of 102" but many states, counties, and local roads have unique restrictions. The most common limit on non-federal roads is 96" maximum width.

Commonly Used Terms

Note: The government requires manufacturers to include "all non-technical" glossary terms.

For the sake of completeness, NATM has attempted to include all terms relating to the specified regulations.

Accessory weight: The combined weight (in excess of those standard items which may be replaced) of automatic transmission, power steering, power brakes, power windows, power seats, radio and heater, to the extent that items are available as factory-installed equipment (whether installed or not). 49CFR571.110 – S3

Bead: The part of the tire that is made of steel wires, wrapped or reinforced by ply cords and that is shaped to fit the rim. 49CFR571.139 – S3

Bead separation: This is the breakdown of the bond between components in the bead. 49CFR571.139 – S3

Bias ply tire: A pneumatic tire in which the ply cords that extend to the beads are laid at alternate angles substantially less than 90 degrees to the centerline of the tread. 49CFR571.139 – S3

Breakaway Battery: This battery supplies power to operate the trailer brakes if the trailer uncouples from the tow vehicle. Your trailer may use a hydraulic system battery to operate the breakaway brakes.

Breakaway Switch: This switch engages electric brakes if the trailer uncouples from the tow vehicle.

Carcass: The tire structure, except tread and sidewall rubber which, when inflated, bears the load. 49CFR571.139 – S3

Chunking: The breaking away of pieces of the treador sidewall. 49CFR571.139 – S3

Cold tire pressure: No definition given. 49CFR575.6(a)(4)(iii)

Cord: The strands forming the plies in the tire. 49CFR571.139 – S3

Cord separation: The parting of cords from adjacent rubber compounds. 49CFR571.139 – S3

Cracking: Any parting within the tread, sidewall, or inner liner of the tire extending to cord material. 49CFR571.139 – S3

Curb weight: The weight of a motor vehicle with standard equipment including the maximum capacity of fuel, oil, and coolant, and, if so equipped, air conditioning and additional weight optional engine. 49CFR571.110 – S3

Extra load tire: A tire designed to operate at higher loads and at higher inflation pressures than the corresponding standard tire. 49CFR571.139 – S3

Groove: The space between two adjacent tread ribs. 49CFR571.139 – S3

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. Actual weight determined by weighing each axle on a public scale, with the trailer attached to the towing vehicle. 49CFR571.3(a)

Gross Vehicle Weight Rating: The maximum weight of the fully loaded trailer, as published on the Certification / VIN label. Actual weight determined by weighing trailer on a public scale, without being attached to the towing vehicle. 49CFR571.3(a)

Inner liner: The layer(s) forming the inside surface of a tubeless tire that contains the inflating medium within the tire. 49CFR571.139 – S3

Inner liner separation: The parting of the inner liner from cord material in the carcass. 49CFR571.139 – S3

Light truck (LT) tire: A tire designated by its manufacturer as primarily intended for use on lightweight trucks or multipurpose passenger vehicles. 49CFR571.139 – S3

Load rating: The maximum load that a tire is rated to carry for a given inflation pressure. 49CFR571.139 – S3

Maximum load rating: The load rating for a tire at the maximum permissible inflation pressure for that tire. 49CFR571.139 – S3

Maximum permissible inflation pressure: The maximum cold inflation pressure to which a tire may be inflated. 49CFR571.139 – S3

Maximum loaded vehicle weight: The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight. 49CFR571.110 – S3

Measuring rim: The rim on which a tire is fitted for physical dimension requirements. 49CFR571.139 – S3

Non-pneumatic rim: A mechanical device which, when a non-pneumatic tire assembly incorporates a wheel, supports the tire, and attaches, either integrally or separable, to the wheel center member and upon which the tire is attached. 49CFR571.110 – S3

Non-pneumatic spare tire assembly: A non-pneumatic tire assembly intended for temporary use in place of one of the pneumatic tires and rims that are fitted to a passenger car in compliance with the requirements of this standard. 49CFR571.110 – S3

Non-pneumatic tire: A mechanical device which transmits, either directly or through a wheel or wheel center member, the vertical load and tractive forces from the roadway to the vehicle, generates the tractive forces that provide the directional control of the vehicle and does not rely on the containment of any gas or fluid for providing those functions. 49CFR571.110 – S3

Non-pneumatic tire assembly: A non-pneumatic tire, alone or in combination with a wheel or wheel center member, which can be mounted on a vehicle. 49CFR571.110 – S3

Normal occupant weight: This means 68 kilograms (150 lbs.) times the number of occupants specified in the second column of Table I. 49CFR571.110 – S3

Occupant distribution: The distribution of occupants in a vehicle as specified in the third column of Table I. 49CFR571.110 – S3

Open splice: Any parting at any junction of tread, sidewall, or inner liner that extends to cord material. 49CFR571.139 – S3

Outer diameter: The overall diameter of an inflated new tire. 49CFR571.139 – S3

Overall width: The linear distance between the exteriors of the sidewalls of an inflated tire, including elevations due to labeling, decorations, or protective bands or ribs. 49CFR571.139 – S3

Ply: A layer of rubber-coated parallel cords. 49CFR571.139 – S3

Ply separation: A parting of rubber compound between adjacent plies.49CFR571.139S3

Pneumatic tire: A mechanical device made of rubber, chemicals, fabric and steel or other materials, that, when mounted on an automotive wheel, provides the traction and contains the gas or fluid that sustains the load. 49CFR571.139 – S3

Production options weight: The combined weight of those installed regular production options weighing over 2.3 kilograms (5 lbs.) in excess of those standard items which they replace, not previously considered in curb weight or accessory weight, including heavy duty brakes, ride levelers, roof rack, heavy duty battery, and special trim. 49CFR571.110 – S3

Radial ply tire: A pneumatic tire in which the ply cords that extend to the beads are laid at substantially 90 degrees to the centerline of the tread. 49CFR571.139 – S3

Recommended inflation pressure: No definition given. 49CFR575.6(a)(4)(iii)

Reinforced tire: A tire designed to operate at higher loads and at higher inflation pressures than the corresponding standard tire. 49CFR571.139 – S3

Rim: A metal support for tire or tire and tube assembly upon which tire beads are seated. 49CFR571.109 – S3

Rim diameter: This means the nominal diameter of the bead seat. 49CFR571.110 – S3

Rim size designation: This means the rim diameter and width. 49CFR571.110 – S3

Rim type designation: This means the industry of manufacturer's designation for a rim by style or code. 49CFR571.110 – S3

Rim width: This means the nominal distance between rim flanges. 49CFR571.110 – S3

Section width: The linear distance between the exteriors of the sidewalls of an inflated tire, excluding elevations due to labeling, decoration, or protective bands.49CFR571.139 – S3

Sidewall: That portion of a tire between the tread and bead. 49CFR571.139 – S3

Sidewall separation: The parting of the rubber compound from the cord material in the sidewall. 49CFR571.139 – S3

Test rim: The rim on which a tire is fitted for testing, and may be any rim listed as appropriate for use with that tire. 49CFR571.139 – S3

Tread: That portion of a tire that comes into contact with the road. 49CFR571.139 – S3

Tread rib: A tread section running circumferentially around a tire. 49CFR571.139 – S3

Tread separation: Pulling away of the tread from the tire carcass. 49CFR571.139 – S3

Treadwear indicators (TWI): The projections within the principal grooves designed to give a visual indication of the degrees of wear of the tread. 49CFR571.139 – S3

Vehicle capacity weight: The rated cargo and luggage load plus 68 kilograms (150 lbs.) times the vehicle's designated seating capacity. 49CFR571.110 – S3

Vehicle maximum load on the tire: The load on an individual tire that is determined by distributing to each axle its share of the maximum loaded vehicle weight and dividing by two. 49CFR571.110 – S3

Vehicle normal load on the tire: The load on an individual tire that is determined by distributing to each axle its share of the curb weight, accessory weight, and normal occupant weight (distributed in accordance with Table I) and dividing by 2. 49CFR571.110 – S3

Wheel center member: In the case of a non-pneumatic tire assembly incorporating a wheel, a mechanical device which attaches, either integrally or separable, to the non-pneumatic rim and provides the connection between the non-pneumatic rim and the vehicle; or, in the case of a non[1]pneumatic tire assembly not incorporating a wheel, a mechanical device which attaches, either integrally or separable, to the non-pneumatic tire and provides the connection between tire and the vehicle. 49CFR571.110 – S3

Wheel-holding fixture: The fixture used to hold the wheel and tire assembly securely during testing. 49CFR571.139 – S3

Disclaimer

Nolan Manufacturing has prepared these documents for general guidance and reference for new and recurring trailer owners. These documents are not intended to provide legal advice and do not purport to summarize all relevant regulations or provide complete detail on the subjects referenced.

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State laws referenced in these compilations are under the jurisdiction of state legislature and agencies and are constantly subject to amendment and revision. The referenced state laws are those in effect as of 2017. The document user should refer to, consult, and comply with the most recent edition of the referenced laws, applicable in the jurisdictions where the trailers will primarily be operating. A trusted resource to track these laws is on the AAA website: http://drivinglaws.aaa.com

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Also, provided in this section is a link to the NHTSA website. Existing interpretations of NHTSA regulations and standards can be found here: http://isearch.nhtsa.gov/

A Note to Users:

The U.S. Department of Transportation's Code of Federal Regulations issued annually (in October) by the National Highway Traffic Safety Administration is available on the internet at http://www.gpo.gov/fdsys/pkg/CFR-2019-title49-vol6/content-detail.html

The Federal Register, published on a daily basis, also is available on the internet at: http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR

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