OWNER'S MANUAL

TEXAS PRIDE™

Texas Pride Trailers

MODEL: Trailers

June 2020

Part Number: 140179

⚠WARNING

This User's 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.

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1. GENERAL SAFETY INFORMATION

1.1 SAFETY ALERT SYMBOLS AND SIGNAL WORDS

An Owner's Manual that provides general trailer information cannot cover all of the specific details necessary for the proper combination of every trailer, tow vehicle and hitch. Therefore, read, understand and follow the instructions given by the tow vehicle and trailer hitch manufacturers, as well as the instructions in this manual.

Trailers are built with components produced by various manufacturers. Some of these items have separate instruction manuals. If this manual indicates to read another manual and that manual is not available, call Texas Pride Trailers at (936) 348-7555 for a free copy.

⚠ This safety alert symbol denotes safety information in this manual.

The level of risk is indicated by the following signal words.

⚠DANGER DANGER - Immediate hazards which WILL result in severe personal injury or death if the warning is ignored.

⚠WARNING WARNING - Hazards or unsafe practices which COULD result in severe personal injury or death if the warning is ignored.

⚠CAUTION CAUTION - Hazards or unsafe practices which could result in minor or moderate injury if the warning is ignored.

⚠NOTICE NOTICE - Practices that could result in damage to the trailer or other property.

1.2 MAJOR HAZARDS

Loss of control of the trailer/tow vehicle combination can result in death or serious injury. The most common causes for loss of control of the trailer are:

- Improper sizing of the trailer for the tow vehicle, or vice versa.
- Excessive Speed: Driving too fast for the conditions.
- Failure to adjust driving behavior when towing a trailer.
- Overloading and/or improper weight distribution.
- Improper or mis-coupling of the trailer to the hitch.
- Improper braking and steering under sway conditions.
- Not maintaining proper tire pressure.
- Not keeping lug nuts tight.

1.2.1 Improper Sizing of the Trailer to the Tow Vehicle

Trailers that weigh too much for the towing vehicle can cause stability problems, which can lead to death or serious injury. Furthermore, the additional strain put on the engine and drive-train may lead to serious tow vehicle maintenance problems. For these reasons the maximum towing capacity of the towing vehicle should never be exceeded. The towing capacity of the tow vehicle, in terms of maximum Gross Trailer Weight (GTW) and maximum Gross Combined Weight Rating (GCWR) can be found in the tow vehicle's owners manual.

Do not use a hitch with a load rating less than the load rating of the trailer. Loss of control and will lead to death or serious injury.

Do not use a tow vehicle with a towing capacity less than the load rating of the trailer. Loss of control, and will lead to death or serious injury.

Do not use a hitch or tow vehicle that are rated below the Gross Vehicle Weight Rating (GVWR) of the trailer. Loss of control, and will lead to death or serious injury.

1.2.2 Driving Too Fast

With ideal road conditions, the maximum recommended speed for safely towing a trailer is 60 mph. If driving too fast, the trailer is more likely to sway, thus increasing the possibility for loss of control. Also tires may overheat, thus increasing the possibility of a blowout.

Driving too fast for conditions can result in loss of control and cause death or serious injury. Decrease speed as road, weather and lighting conditions deteriorate.

1.2.3 Failure to Adjust to Driving Behavior When Towing a Trailer

When towing a trailer, expect decreased acceleration, increased stopping distance, and increased turning radius (which means making wider turns to keep from hitting curbs, vehicles, and anything else that is on the inside corner). The trailer will change the handling characteristics of the towing vehicle, making it more sensitive to steering inputs and more likely to be pushed around in windy conditions or when being passed by large vehicles. Towing a trailer requires a longer distance to pass, due to slower acceleration and increased length.

With these in mind:

- Be alert for slippery conditions. Slippery road conditions increase the chance of an accident when driving a tow vehicle with a trailer.
- Anticipate the trailer "swaying". Swaying can be caused by excessive steering, wind gusts, roadway edges, or by the trailer's reaction to the pressure wave created by passing trucks and buses.
- When encountering trailer sway, decrease speed and steer as little as possible in order to stay on the road. Use small "trim-like" steering adjustments. Do not attempt to steer out of the sway; this will only make it worse. Also, do not apply the tow vehicle brakes to correct the trailer swaying. Application of the trailer brakes alone will tend to straighten out the combination, especially when going downhill.
- Check rear view mirrors frequently to observe trailer and traffic.
- Use lower gear when driving down steep or long grades. Use the engine and transmission as a brake. Do not ride the brakes, as they can overheat and become ineffective.
- Be aware of the trailer height, especially when approaching bridges, roofed areas and around trees.

1.2.4 Trailer Not Properly Coupled to the Hitch

It is critical that the trailer be securely coupled to the hitch ball, and that the safety chains and emergency breakaway brake cable are correctly attached. Uncoupling may result in death or serious injury.

Proper selection and condition of the coupler and hitch are essential to safely towing the trailer. A loss of coupling may result in serious injury or death.

- Be sure the hitch load rating is equal to or greater than the load rating of the coupler.
- Be sure the hitch size matches the coupler size.
- Inspect the hitch for wear, corrosion and cracks before coupling. Replace worn, corroded or cracked hitch components.

Be sure that the hitch components are tight before coupling the trailer to the tow vehicle.

WARNING An improperly coupled trailer can result in death or serious injury.

Do not move the trailer until:

- The coupler is secured and locked to the hitch.
- The safety chains are secured to the tow vehicle; and
- The trailer jack(s) are fully retraced.

Do not tow the trailer on the road until:

- Tires and wheels are checked;
- The trailer brakes are checked;
- The breakaway switch is connected to the tow vehicle;
- The load is secured to the trailer
- The trailer lights are connected and checked.

1.2.5 Proper Use of Safety Chains

If the trailer comes loose from the hitch, safety chains are provided so control of the trailer can still be maintained.

WARNING Improper rigging of the safety chains could cause the trailer to uncouple from the tow vehicle. This could result in loss of control of the trailer and tow vehicle which could lead to serious injury or death.

- Fasten chains to frame of tow vehicle. Do not fasten chains to any part of the hitch unless the hitch has holes or loops specifically for that purpose.
- Cross chains underneath hitch and coupler with enough slack to permit turning while still holding the tongue up if the trailer becomes loose.

1.2.6 Proper Connection of Breakaway Brake

If equipped with brakes, the trailer will be equipped with a breakaway brake system that can apply the brakes on the trailer if it becomes loose from the hitch ball. A separate set of instructions for the breakaway brake is included with the trailer. The breakaway system, including battery, must be in good condition and properly rigged to be effective. See 3.3.5

WARNING An ineffective or inoperative breakaway brake system can result in a runaway trailer, leading to death or serious injury if the coupler or hitch fails.

The breakaway cable must be connected to the tow vehicle, NOT to any part of the hitch. Before towing the trailer, test the function of the breakaway brake system. If the system is not working, do not tow the trailer. Have it serviced or repaired.

1.2.7 Matching Trailer and Hitch

DANGER Do not use a hitch with a load rating less than the load rating of the trailer. Loss of control and will lead to death or serious injury.

DANGER Do not use a tow vehicle with a towing capacity less than the load rating of the trailer. Loss of control, and will lead to death or serious injury.

DANGER Do not use a hitch or tow vehicle that are rated below the Gross Vehicle Weight Rating (GVWR) of the trailer. Loss of control, and will lead to death or serious injury.

1.2.8 Worn Tires, Loose Wheels and Lug Nuts

Inspect the trailer tires before each tow. If a tire has a bald spot, bulge, cut, cracks or is showing any cords, replace the tire before towing. If the tire has uneven tread wear, take the trailer to the dealer service center for diagnosis. Uneven tread wear can be caused by tire imbalance, axle misalignment or incorrect inflation. Tires with too little tread will not provide adequate frictional forces on wet roadways and can result in loss of control, which could lead to death or serious injury. Check tire pressure before each tow. Improper tire pressure causes increased tire wear and may reduce trailer stability which can result in a tire blowout or possible loss of control. Proper tire pressure is located on the Certification/VIN label and should be check when tires are cold. Allow 3 hours cool-down after driving as much as 1 mile at 40 mph before checking tire pressure.

WARNING Improper tire pressure can result in a blowout and loss of control, which can lead to death or serious injury.
Be sure tires are inflated to pressure indicated on Certification/VIN label before towing trailer. See 2.1
The tightness of the lug nuts is very important in keeping the wheels properly seated to the hub. Before each tow, check to make sure they are tight.

WARNING Metal creep between the wheel rim and lug nuts will cause rim to loosen and could result in a wheel coming off, which could lead to death or serious injury. Torque lug nuts before each tow.

The proper torque for lug nuts is listed in Section 7.2.9.2 in the “Inspection and Service Instructions” chapter of this manual. Use a torque wrench to torque the lug nuts with a crisscross star pattern shown in Section 7.2.9.2.

⚠WARNING Lug nuts are prone to loosen after initial installation, which can lead to serious injury or death. Check lug nuts for tightness on a new trailer or when wheels have been remounted after the first 10, 25 and 50 miles of driving.

⚠WARNING Improper lug nut torque can cause a wheel to separate from the trailer, which can lead to death or serious injury. Check lug nuts before each tow.

1.2.9 Improper Loading

The total weight of the load put in or on the trailer, plus the empty weight of the trailer itself must not exceed the trailer's Gross Vehicle Weight Rating (GVWR). Load the trailer such that the load on any axle does not exceed the Gross Axle Weight Rating (GAWR). If the trailer is equipped with a Tire and Loading Information Placard, mounted next to the Certification/VIN label, the cargo capacity weight stated on that placard is only a close estimation. The GVWR and GAWR is located on the Certification/VIN label.

⚠WARNING An overloaded trailer can result in loss of control of the trailer, which could lead to death or serious injury.

Do not exceed the trailer Gross Vehicle Weight Rating (GVWR) or the Gross Axle Weight Rating (GAWR).

Do not load a trailer so that the weight on any tire exceeds its rating.

1.2.10 Unsafe Load Distribution

Improper front/rear load distribution can lead to poor trailer sway or poor tow vehicle handling. Poor trailer sway stability results from tongue weights that are too low, and poor tow vehicle stability results from tongue weights that are too high. Refer to "Loading the Trailer" chapter for more information.

In the tongue weight table, the second column shows the rule of thumb percentage of total weight of the trailer plus its cargo (Gross Trailer Weight, or GTW) that should appear on the tongue of the trailer. For example, a trailer with a gooseneck hitch, with a loaded weight of 12,000 pounds, should have 20-25% of 12,000 pounds (2400-3000 lbs) on the gooseneck. A dump trailer will have the proper distribution if the load is **evenly distributed** in the dump bed. For non-flowable (discrete) loads, locate the load such as to provide the proper weight on the tongue.

After loading, check that none of the axles are over loaded.

Uneven left/right distribution can cause tire, wheel, axle, or structural failure. Be sure trailer is evenly loaded left/right. Towing stability also depends on keeping the center of gravity as low as possible.

Tongue Weight as a Percentage of Loaded Trailer Weight	
Type of Hitch	Percentage
Ball Hitch (or Bumper Hitch)	10-15% for large trailers 6-10% for smaller utility and cargo trailers 4-6% for boat trailers
Gooseneck Hitch	20-25%
Fifth Wheel Hitch	

The numbers quoted above are for example purposes only and should be tailored to the specific trailer. For questions regarding the actual percent of tongue weight for the trailer, check with the manufacturer.

⚠WARNING Improper tongue weight (load distribution) can result in loss of control of the trailer, which could lead to death or serious injury. Make certain that tongue weight is within the allowable range.
Be sure to:

- Distribute load front-to-rear to provide proper tongue weight
- Distribute the load evenly right and left to avoid tire overload
- Keep the center of gravity low

1.2.11 Shifting Cargo

⚠WARNING Shifting Cargo can result in loss of control of the trailer, which could lead to death or serious injury. Tie down all loads with proper sized fasteners, ropes, straps, etc.

⚠WARNING If the door opens, cargo may be ejected onto the road resulting in death or serious injury to other drivers. Always secure the door latch after closing. Place a linchpin in the catch.

1.2.12 Inappropriate Cargo

If the trailer is designed for specific cargo, only carry that cargo in the trailer. A utility trailer must not be used to carry certain items such as people, hazardous substances, or flammable substances.

⚠WARNING Do not transport people inside the trailer, even if it has living quarters. The transport of people puts their lives at risk and may be illegal.

⚠WARNING Do not transport flammable, explosive, poisonous or other dangerous materials in the trailer.

1.2.13 Inoperable Brake, Lights or Mirrors

Electric brakes and lights on a trailer are controlled via a connection to the tow vehicle (generally a multi-pin connector). If the trailer has electric brakes, the tow vehicle will have an electric controller that sends power to the trailer brakes. Before towing the trailer, check that the trailer brakes are working by manually operating the electric brake controller in the cab while towing the trailer at less than 5 mph

⚠WARNING Improper electrical connection between the tow vehicle and the trailer will result in inoperable lights and electric brakes and can lead to collision.

Before each tow:

- Check that the tail lights, brake lights and turn signals work
- Check that the electric brakes work by operating the brake controller inside the tow vehicle.

If the trailer has hydraulic (surge) brakes, pull the emergency breakaway brake lanyard to check the operation of the surge mechanism. Adjust rearview mirrors to allow observation of approaching traffic.

1.2.14 Hazards from Modifying the Trailer

Before making any alteration to the trailer, contact the dealer or Texas Pride Trailers at 936-245-8208 and describe the alteration. Alteration of the trailer must only be performed by qualified technicians that are familiar with the systems installed on the trailer.

1.2.15 Hazards for Dump and Tilt Bed Trailers

⚠NOTICE With a fully loaded trailer, keep travel time to a minimum to extend trailer suspension and tire life. Unnecessary travel with a fully loaded trailer will greatly decrease suspension and tire life.

A dump trailer is specifically designed for dumping hauled cargo. The major hazards associated with these trailers are:

- Overloading
- Improper weight distribution, both side to side and front to back
- Getting under a raised dump bed or tilt deck
- Not using, or improperly using, the body prop
- Altering hydraulic components
- Altering dump or tilt bed controls
- Not dumping from a solid and level foundation
- Not fully opening rear doors when dumping
- Jerking the trailer, or hydraulics to loosen the load

1.2.16 Body Prop Use

The body prop supplied as part of the trailer is to be used only when the dump body is empty. The purpose of the body prop is a back-up to the hydraulic system and will hold the empty dump body in a raised position while performing maintenance on the hoist, trailer body or trailer.

1. Raise the unloaded dump bed.
2. Raise the body prop.
3. Using the remote hydraulic control lower the dump bed so the body prop engages the receiver.

Stored Body Prop

Raised Body Prop

Body Prop Receiver

- DO NOT use the body prop to support a loaded dump body.
- DO NOT perform maintenance under a raised dump body without first blocking the empty dump bed up with the body prop.

⚠DANGER

- Risk of death by crushing
- Dump body can drop unexpectedly
- Never go under a raised dump body
- Use body-prop for maintenance

⚠DANGER

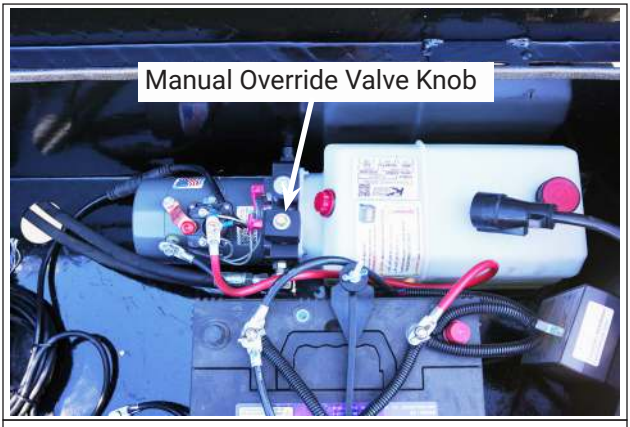
- Make sure dump body is empty

DO NOT manipulate the body-prop if a person is near the control

1.2.17 Dump and Tilt Bed Hydraulic Pump Failure

DANGER Do not allow anyone under the bed or deck when this procedure is performed.
Mechanical or power failure of the hydraulic power unit when the dump or powered tilt bed is in the raised position could occure.
To lower the dump bed or tilt deck turn the override valve knob on the hydraulic power unit counterclockwise to open the valve which allows the bed or tilt deck to safety lower to the full down position. When the bed or deck is fully down, close the valve by turning it clockwise.

NOTICE Observe fluid level in the reservoir; in some cases it could overflow.



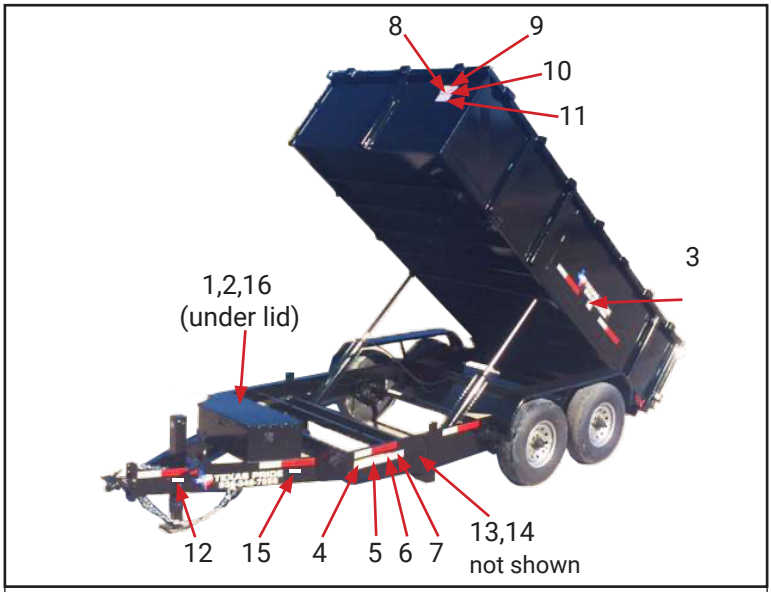
Override Valve in Equipment Box


Turn Override Valve Knob

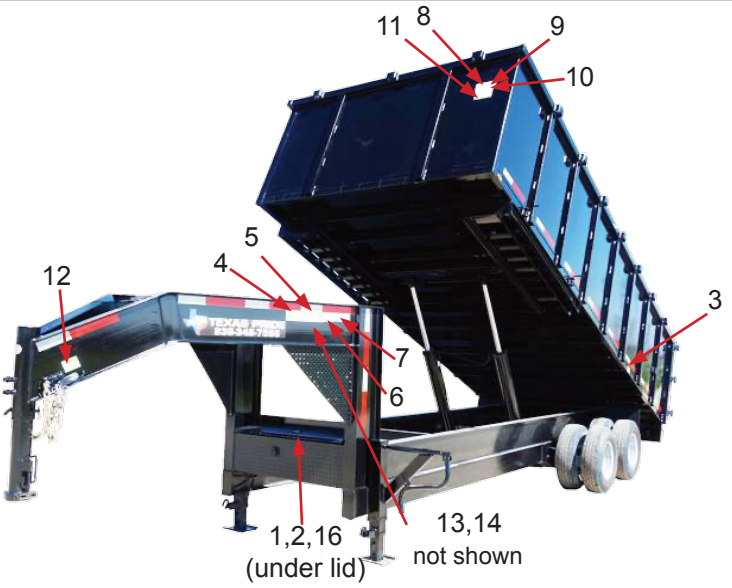
1.2.18 Safety Warning Signs

The trailer has safety warning sines located as shown in the following figures. No model specific figure is shown, use the figure that matches closest to the model of the trailer.

All of the signs shown must be on the trailer and must be legible. If any signs are missing or cannot be read, call Texas Pride Trailers at 936-245-8208 for replacement signs.



Safety Decals and Locations



Safety Decals and Locations

1. Warning-Towing Checklist TGI-060

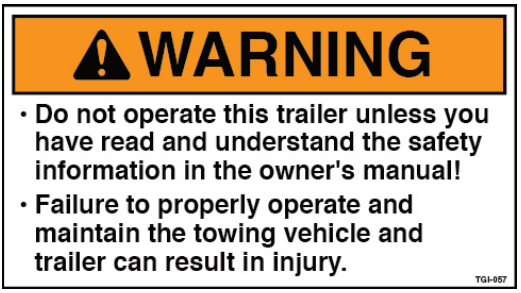
⚠ WARNING

Check following point each time before towing trailer.

- ✔ Make sure all parts, bolts and nuts are tight.
- ✔ Secure load to trailer - check tilt and tie down mechanisms - use extra rope as a safety measure.
- ✔ Check tire air pressure when tire is cold.
- ✔ Repack wheel bearings once a year, preferable in the Fall before storing trailers.
- ✔ Make sure you are not exceeding trailer capacity.
- ✔ Make sure the coupler is securely latched to the hitch ball.
  Check each time you stop & leave trailer.
- ✔ Cross safety chains under tongue and secure to towing vehicle.
  If equipped, hook up break-away brake chain with slack to permit cornering.
- ✔ Make sure the trailer electrical connector is properly connected and all lights are operating.
- ✔ Check brake operation.
- ✔ Make sure the jack is raised to its highest position.
- ✔ Make sure all gates and latches are secured.

TGI-060

2. Warning-Read Manual TGI-057



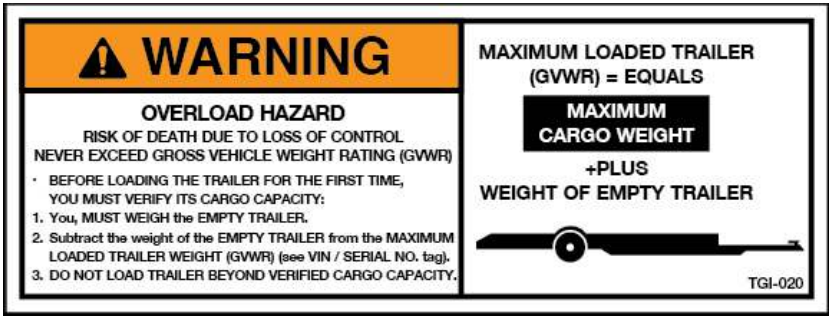
3. Warning-Read Manual TGI-057

4. Caution-Check Trailer TGI-016

5. Warning-Danger, Warning, Caution TGI-017

6. Warning-Check Wheel Lugs TGI-064

7. Warning-Overload Hazard TGI-020



8. Caution-Secure Door TGI-055

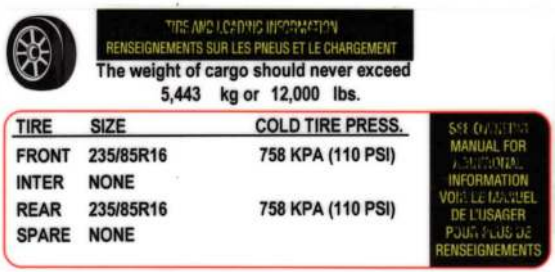
9. Danger-Heavy Door TGI-059

10. Warning-Stand Clear TGI-047

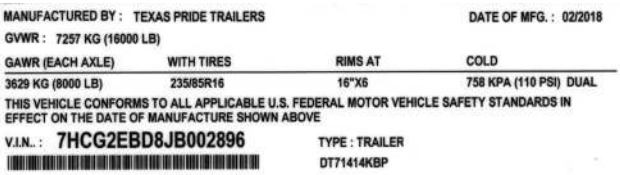
11. Danger-Raised Body TGI-029

12. Caution-Safety Breakaway UT0005

13. Tire and Loading Information



14. VIN/Certification



15. Warning-Check Tire Pressure

16. Caution-Maintain Battery Charge
(See section 1.2.17)

1.2.19 Reporting Safety Defects

If it is believed that the trailer has a defect which could cause a crash, injury or death, notify the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Texas Pride Trailers.

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

To contact NHTSA, call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to http://www.safercar.gov; or write to: Administrator, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. Obtain other information about motor vehicle safety from http://www.safercar.gov.

1.2.20 Trailer Towing Guide

Driving a vehicle with a trailer in tow is vastly different from driving the same vehicle without a trailer in tow. Acceleration, maneuverability and braking are all diminished with a trailer in tow. It takes longer to get up to speed, needs more room to turn and pass, and more distance to stop when towing a trailer. If towing a bumper hitch trailer, be careful not to allow the trailer to turn too much because it will hit the rear of the tow vehicle.

1.3 SAFE TRAILER TOWING GUIDELINES

- Recheck the load tie downs to make sure the load will not shift during towing.
- Before towing, check coupling, safety chain, safety brake, tires, wheels and lights.
- Check the lug nuts or bolts for tightness.
- Check coupler tightness after towing 50 miles.
- Adjust the brake controller to engage the trailer brakes before the tow vehicle brakes. Follow the instructions given with the brake controller.
- Use mirrors to verify that room is available to change lanes or pull into traffic.
- Use turn signals well in advance.
- Allow plenty of stopping space for the trailer and tow vehicle.
- Do not drive so fast that the trailer begins to sway due to speed. Generally never drive faster than 60 mph.
- Allow plenty of room for passing. Passing distance with a trailer is 4 times the passing distance without a trailer.
- Shift an automatic transmission into lower gear for city driving.
- Use lower gears for climbing and descending grades.
- Do not ride the brakes while descending grades, they may get so hot that they stop working.
- Don't use full throttle when climbing a hill. Instead build speed on the approach.
- Slow for bumps in the road.
- Do not brake while in a curve, slow down before entering a curve.
- Do not apply the tow vehicle brakes to correct extreme trailer swaying. Instead, apply the trailer brakes with the hand controller.
- Make regular stops each hour to confirm that:
    - The coupler is secure to hitch and locked
    - Electrical connections are made
    - Appropriate slack in the safety chains
    - Appropriate slack in the breakaway switch pull-pin cable
    - Tires are not visibly low on tire pressure
    - Cargo is secure

2. TIRE SAFETY INFORMATION

This portion of the User's Manual contains tire safety information as required by 49CFR575.6.

Section 2.1 contains "Steps for Determining Correct Load Limit-Trailer"

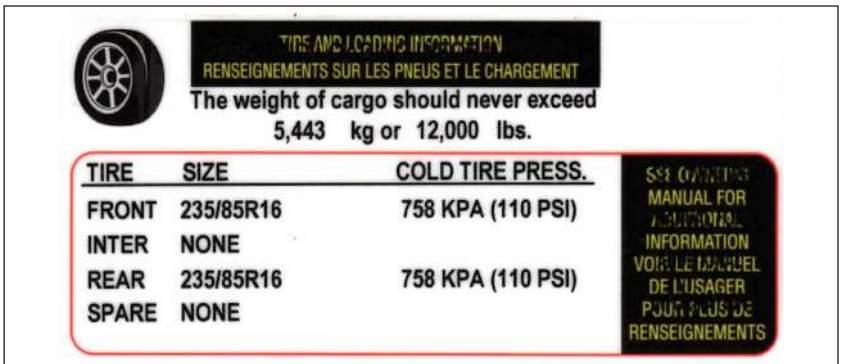
Section 2.2 contains "Steps for Determining Correct Load Limit-Tow Vehicle"

Section 2.3 contains "Glossary of Tire Terminology," including "cold inflation pressure," "maximum inflation pressure," "recommended inflation pressure," and other terms

Section 2.4 contains information from the NHTSA brochure entitled "Tire Safety-Everything Rides On It." This brochure describes the following items:

- Tire labeling, including a description and explanation of each marking on the tire, and information about the DOT Tire Identification Number(TIN).
- Recommended tire inflation pressure, including a description and explanation of:
  A. Cold inflation pressure
  B. Vehicle Placard and location on the vehicle
  C. Adverse safety consequences on under inflation
  D. Measuring and adjusting air pressure for proper inflation
- Tire Care, including maintenance and safety practices
- Vehicle Load limits, including a description and explanation of:
  A. Locating and understanding the load limit information, total load capacity, and cargo capacity.
  B. Calculating total and cargo capacities with varying seating configurations. This is also discussed in section 3.
  C. Determining compatibility of tire and vehicle load capabilities.
  D. Adverse safety consequences of overloading on handling and stopping on tires.

2.1 STEPS FOR DETERMINING CORRECT LOAD LIMIT-TRAILER



Tire and Loading Information Label

2.1.1 Trailers 10,000 Pounds GVWR or Less

1. Locate the statement, "The weight of cargo should never exceed xxx kg or xxx lbs," on the trailers placard. See Tire and Loading Information Label.
2. This figure equals the available amount of cargo load capacity.
3. Determine the weight of cargo being loaded on the trailer. That weight may not exceed the available cargo load capacity.

NOTE: The following calculations in Sections 2.1.2 and 2.2 are not required by the government. For the purpose of completeness, NATM has included these statements.

2.1.2 Trailers Over 10,000 Pounds GVWR

NOTE: These trailers are not required to have a tire information placard on the vehicle.

1. Determine the empty weight of the trailer by weighing it at a public scale or other means.
2. Locate the GVWR (Gross Vehicle Weight Rating) of the trailer from the trailer's VIN label.
3. Subtract the empty weight of the trailer from the GVWR stated on the label. That weight is the maximum available cargo capacity of the trailer and may not be exceeded.

2.2 STEPS FOR DETERMINING CORRECT LOAD LIMIT-TOW VEHICLE

1. Locate the statement "The combined weight of occupants and cargo should never exceed xxx lbs," on the tow vehicle's placard.
2. Determine the combined weight of the driver and passengers.
3. Subtract the combined weight of the driver and passengers from xxx kg or xxx lbs.
4. The resulting number equals the amount of available cargo and luggage capacity.
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage capacity from step 4.
6. If vehicle is towing a trailer, load from the trailer will be transferred to the vehicle. Consult the tow vehicle's manual to determine how this weight transfer reduces the available cargo and luggage capacity of the vehicle.

2.3 GLOSSARY OF TERMINOLOGY

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 these items are available as factory-installed equipment.

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.
Bead separation - This is the breakdown of the bond between components of the bead.
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.
Carcass - The tire structure, except tread and sidewall rubber which bears the load.
Chunking - The breaking away of pieces of the tread or sidewall.
Cold Inflation Pressure - The pressure in the tire before driving.
Cord - The strands forming the plies in the tire.
Cord separation - The parting of the chords from adjacent rubber compounds.
Cracking - Any parting within the tread, sidewall, or inner liner of the tire extending to the cord material.
CT - A pneumatic tire with an inverted flange tire and rim system in which the rim is designed with rim flanges pointed radially inward and the tire is designed to fit on the underside of the rim in a manner that encloses the rim flanges inside the air cavity of the tire.
Curb Weight - The weight of a motor vehicle with standard equipment including the maximum capacity of fuel, oil, coolant, air conditioning and additional weight of optional engine.
Extra load tire - A tire designed to operate at higher loads and at higher inflation pressure than a standard tire.
Groove - The space between 2 adjacent tread ribs.
Inner liner - The layer(s) forming the inside surface of a tubeless tire that contains the inflating medium within the tire.
Intended outboard sidewall - The sidewall that contains a white-wall, bears white lettering or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same molding on the other sidewall of the tire or the outward facing sidewall of an asymmetrical tire that has a particular side that must always face outward when mounted on a vehicle.
Light truck tire - A tire designed as primarily intended for use on light-weight trucks or multipurpose passenger vehicles.
Load rating - The maximum load that a tire is rated to carry for a given inflation pressure.
Maximum load rating - The load rating for a tire at the maximum permissible inflation pressure for that tire.
Maximum permissible inflation pressure - The maximum cold inflation pressure to which a tire may be inflated.
Maximum loaded vehicle weight - The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight.
Measuring rim - The rim on which a tire is fitted for dimension requirements.

Non-pneumatic rim - A mechanical device which, when a non-pneumatic tire assembly incorporates a wheel, supports the tire, and attaches to the wheel center member and upon which the tire is attached.
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.
Non-pneumatic tire - A mechanical device which transmits 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.
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.
Normal occupant weight - This means 38 kg (150lbs) times the number of occupants specified in the second column of table I of 49CFR571.110.
Occupant distribution - The distribution of occupants in a vehicle as specified in the third column of table I 49CFR571.110.
Open slice - Any parting at any junction of tread, sidewall, or inner liner that extends to cord material.
Outer diameter - The overall diameter of a new inflated tire.
Overall width - The linear distance between the exteriors of the side walls of an inflated tire, including elevations due to labeling, decorations, or protective bands or ribs.
Ply - A layer of rubber-coated parallel chords.
Ply separation - A parting of rubber compound between adjacent plies.
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 suspends the load.
Production options weight - The combined weight of those installed regular production options weighing over 2.3 kg (5lbs) 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.
Radial ply tire - A pneumatic tire in which the ply chords that extend to the beads are laid at substantially 90 degrees to the centerline of the tread.
Recommended inflation pressure - This is the inflation pressure provided by the vehicle manufacturer on the Tire Information label and on the VIN tag.
Reinforced tire - A tire designed to operate at higher loads and at a higher inflation pressure than the corresponding standard tire.
Rim - A metal support for a tire or a tire and tube assembly upon which the beads are seated.

Rim diameter - This means the nominal diameter of the bead seat.
Rim size designation - This means the rim diameter and width.
Rim type designation - This means the industry of manufacturer's designation for a rim by style or code.
Rim width - This means the nominal distance between rim flanges.
Section width - The linear distance between the exteriors of the sidewalls of an inflated tire, excluding elevations due to labeling, decoration, or protective bands.
Sidewall - That portion of a tire between the tread and bead.
Sidewall separation - The parting of the rubber compound from the cord material in the sidewall.
Special trailer (ST) tire - The ST is an indication the tire is for trailer use
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.
Tread - That portion of a tire that comes into contact with the road.
Tread rib - A tread section running circumferentially around a tire.
Tread separation - Pulling away of the tread from the tire carcass.
Treadwear Indicators - The projections within the principal grooves designed to give a visual indication of the degrees of wear of the tread.
Vehicle capacity weight - The rated cargo and luggage load plus 38 kg (150lbs) times the vehicles designated seating capacity.
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 it by two.
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 and dividing it by two.
Weather side - The surface area of the rim not covered by the inflated tire.
Wheel center member - In the case of a non-pneumatic tire assembly incorporating a wheel, a mechanical device which attaches to the non-pneumatic rim and provides the connection between the non-pneumatic rim and the vehicle, or in the case of a non-pneumatic tire assembly not incorporating a wheel, a mechanical device which attaches to the non-pneumatic tire and provides the connection between tire and the vehicle.
Wheel-holding fixture - The fixture used to hold the wheel and tire assembly securely during testing.

2.4 TIRE SAFETY-EVERYTHING RIDES ON IT

The National Highway Traffic Safety Administration has published a brochure (DOT HS 809 361) that discusses all aspects of tire safety. This brochure is reproduced in part below. It can be obtained and downloaded from NHTSA, free of charge from the following website: http://www.nhtsa.dot.gov/cars/rules/TireSafety/ridesonit/tires index.html.

Studies of tire safety show that maintaining the proper tire pressure, observing tire and vehicle load limits, avoiding road hazards, and inspecting the tires for cuts, slashes, and other irregularities are the most important things to avoid tire failure, such as tread separation or blowout flat tires. The actions along with other care and maintenance activities, can also:

- Improve vehicle handling
- Avoid breakdowns and accidents
- Improve fuel economy
- Increase tire life

This booklet presents a comprehensive overview of tire safety, including information on the following topics.

- Basic tire maintenance
- Uniform tire quality grading system
- Tire safety tips

Use this information to make tire safety a regular part of vehicle maintenance routine. Recognize that the time spent is minimal compared with the inconvenience and safety consequences of a flat tire or other tire failure.

2.4.1 Safety First-Basic Tire Maintenance

Properly maintained tires improve steering, stopping, traction and load carrying capability of the vehicle. Under inflated tires and overloaded vehicles are a major cause of tire failure. To avoid flat tires and other types of tire failure, maintain proper tire pressure, observe tire and vehicle load limits, avoid road hazards, and regularly inspect tires.

2.4.2 Finding the Vehicle's Recommended Tire Pressure and Load Limits

Tire information placards and vehicle certification labels contain information on tires and load limits. These labels indicate the vehicle manufacturer's information including:

- Recommended tire size
- Recommended tire inflation pressure
- Vehicle capacity weight
- Front and rear gross axle weight ratings

2.4.3 Understanding Tire Pressure and Load Limits

Tire inflation pressure is the level of air in the tire that provides it with load carrying capacity and affects the overall performance of the vehicle. The tire inflation pressure is a number that indicates the amount of air pressure-measured in pounds per square inch(psi)-a tire requires to be properly inflated. Manufacturers of passenger vehicles and light

trucks determine this number based on the vehicle's design load limit, which is the greatest amount of weight a vehicle can safely carry and the vehicle's tire size. The proper tire pressure for the vehicle is referred to as the "recommended cold inflation pressure". Because tires are designed to be used on more than one type of vehicle, tire manufacturers list the "maximum permissible inflation pressure" on the tire sidewall. This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

2.4.4 Checking Tire Pressure

It is important to check the vehicle's tire pressure at least once a month for the following reasons:

- Tires may naturally lose air over time
- Tire can lose air suddenly if driven over a pothole of other object or striking the curb while parking
- With radial tires, it is usually not possible to determine under-inflation by visual inspection

The recommended tire inflation pressure that vehicle manufacturers provide reflects the proper psi when the tire is cold. A cold tire is one that has not been driven on for at least three hours. While driving tires get warmer, causing the air pressure in them to increase. Therefore, to get an accurate tire pressure reading, measure tire pressure when the tires are cold or compensate for the extra pressure in warm tires.

2.4.5 Steps for Maintaining Proper Tire Pressure

1. Locate the recommended tire pressure on the tire information placard, VIN label or owners manual.
2. Record the pressure of all tires.
3. If the tire pressure is too high in any of the tires slowly release air by gently pressing on the tire valve stem with the edge of the tire gauge.
4. If the tire pressure is too low, note the difference between the measured tire pressure and the correct tire pressure.
5. Add air pressure to each tire that is under inflated.
6. Check all tires to make sure that they have the proper air pressure.

2.4.6 Tire Size

To maintain tire safety, purchase new tires that are the same size as the vehicle's original tires or another size recommended by the manufacturer. Locate this information on the tire information placard, owners manual or the sidewall of the tire.

2.4.7 Tire Tread

The tire tread provides gripping action and traction that prevents a vehicle from slipping or sliding. In general, tires are not safe and should be replaced when the tread is worn down to 1/16 of an inch. Tires have built in tread wear indicators that indicate it is time to replace the tires. These indicators are raised sections spaced intermittently in the bottom of the tread grooves. When they appear even with the outside of the tread, it is time to replace the tires. Another method for checking tread depth is to place a penny in the tread with Lincoln's head upside down and facing you. If the top of Lincoln's head shows, tires should be replaced

2.4.8 Tire Balance and Wheel Alignment

To avoid vibration or shaking of the vehicle when a tire rotates, the tire must be properly balanced. This balance is achieved by positioning weights on the wheel to counter balance heavy spots on the wheel-tire assembly. A wheel alignment adjusts the angles of the wheels so that they are positioned correctly relative to the vehicle's frame. This adjustment maximizes tire life. These adjustments should be performed by a qualified technician.

2.4.9 Tire Repair

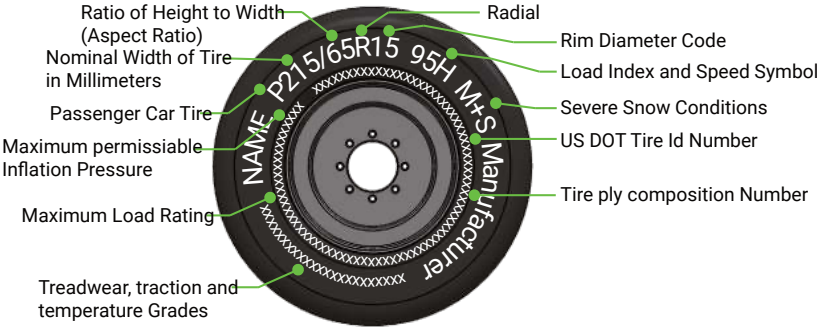
The proper repair of a punctured tire requires a plug for the hole and a patch for the area inside the tire that surrounds the puncture hole. Punctures through the tread can be repaired if they are not too large, but punctures to the sidewall should not be repaired. Tires must be removed from the rim to be properly inspected before being plugged and patched.

2.4.10 Tire Fundamentals

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.

2.4.11 Information on Passenger Vehicle Tires

Please refer to the diagram below.



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 larger 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 wheel size is changed , 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. The owners manual may contain this information,. Note: the law does not require this information on tires.

M+S

The M+S or M/S indicates that the tire has 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. The rating range is from 99 miles per hour to 186 miles per hour. These ratings are listed on the following chart.

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
W	168* mph
Y	186* mph

*For tires with a maximum speed capability over 149 mph, tire manufacturers sometimes use the letters ZR. For those with a maximum speed capability over 186 mph, tire manufacturers always use the letters ZR.

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 that the tire was built. The other numbers are marketing codes used at the manufacturers discretion.

Tire Ply Composition and Materials Used
The number of plies indicates the number of layers of rubber-coated fabric in the tire. The greater number of plies, the more weight a tire can support. Tire manufacturers must also indicate the materials in the tire, which include steel, nylon, etc.

Maximum Load Rating
This number indicates the maximum load in kg and lbs that can be carried by this 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.

2.4.12 UTQGS Information

Treadwear Number
This number indicates the tire's wear rate. The higher the treadwear number is the longer it should take for the tread to wear down.

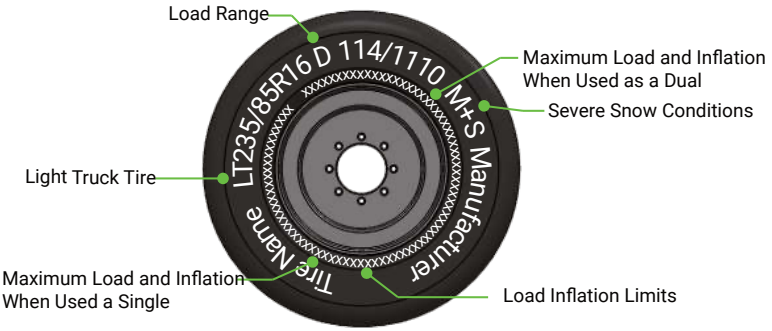
Traction Letter
This letter indicates a tire's ability to stop on wet pavement. A higher graded tire should allow stops on wet roads in a shorter distance than a tire with a lower grade. Traction is graded from highest to lowest as "AA", "A", "B" and "C."

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 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."

2.4.13 Additional Information on Light Truck Tires

Please refer to the diagram below



Tires for light trucks have other markings besides those found on the sidewalls of passenger tires.

LT

The "LT" indicates the tire is for light trucks or trailers.

ST

An "ST" is an indication that the tire is for trailer use only.

Max Load Dual kg(lbs) at kPa(psi) Cold

This information indicates the maximum load and tire pressure when the tire is used as a dual-when 4 tires are put on each rear axle.

Max Load Single kg(lbs) at kPa(psi) Cold

This information indicates the maximum load and tire pressure when the tire is used as a single.

2.4.14 Tire Safety Tips

Preventing Tire Damage

- Slow down going over a pothole or other object in the road.
- Do not run over curbs or other foreign objects in the road, try not to strike the curb while parking.

Tire Safety Checklist

- Check tire pressure regularly, including the spare.
- Inspect tires for uneven wear patterns on the tread, cracks, foreign objects, or other signs of wear or trauma.
- Remove bits of glass and foreign objects wedged in the tread.
- Make sure tire valves have caps.
- Check tire pressure before going on a long trip.
- Do not overload the vehicle

3. COUPLING TO THE TOW VEHICLE

Follow all of the safety precautions and instructions in this manual to ensure safety of persons, cargo, and satisfactory life of the trailer.

3.1 USE AN ADEQUATE TOW VEHICLE AND HITCH

If the vehicle or hitch is not properly matched to the Gross Vehicle Weight Rating of the trailer, then this could cause an accident that could lead to death or serious injury. Know the vehicle's tow rating and Gross Combination Weight Rating and make certain the trailer's rated capacity is less than or equal to the tow vehicle's rated towing capacity. Make certain that the tow rating of the tow vehicle is equal to or greater than the GVWR of the trailer and that the GCWR will be within limits.

⚠DANGER Do not use a hitch with a load rating less than the load rating of the trailer. Loss of control and will lead to death or serious injury.

⚠DANGER Do not use a tow vehicle with a towing capacity less than the load rating of the trailer. Loss of control, and will lead to death or serious injury.

⚠DANGER Do not use a hitch or tow vehicle that are rated below the Gross Vehicle Weight Rating (GVWR) of the trailer. Loss of control, and will lead to death or serious injury.

3.1.1 Trailer Information

Certification/VIN Label

The trailer Certification tag contains the following safety information for the use of the trailer.

- MANUFACTURER: Name of trailer manufacturer
- DATE OF MANUFACTURE: Month and year the trailer was manufactured.
- GVWR: The Gross Vehicle Weight Rating is the maximum allowable gross weight of the trailer and its contents. The gross weight of the trailer includes the weight of the trailer and all of the items within it.
- GAWR: The Gross Axle Weight Rating is the maximum gross weight that an axle can support. It is the lowest of axle, wheel or tire rating. The sum total of the GAWR for all trailer axles may be less than the GVWR for the trailer, because some of the load is carried by the tow vehicle rather than by the axles. The total weight of the cargo and trailer must not exceed the GVWR and the load on each axle must not exceed it GAWR.
- TIRE SIZE: The tire size recommended for the trailer and load range.
- PSIC: The "pounds per square inch cold" is the tire pressure measured when cold.

- CERTIFICATION STATEMENT: “This vehicle conforms to all applicable U.S. Federal Motor Vehicle Safety Standards in effect on the date of manufacture shown above”
- VIN: The vehicle Identification Number
- VEHICLE TYPE: Generally the word “trailer” is used. However there may be a Model #, or additional descriptor.

TOW VEHICLE

- **Overall Carrying and Towing Capacity of Vehicle:** Vehicle manufacturers will provide the maximum towing capabilities of their various models as well as the GCWR.
- **Towing Hitch:** The towing hitch attached to the tow vehicle must have a capacity equal to or greater than the load rating of the trailer. The hitch capacity must also be matched to the tow vehicle capacity.
- **Suspension System:** A tow vehicle equipped with a factory installed “Towing Package” likely comes equipped with heavy duty springs, heavy duty tires and other suspension components which are able to serve the size and weight of the trailer that the vehicle is rated to tow.
- **Brake Controller:** The brake controller is part of the tow vehicle and is essential in the operation of the electric brakes on the trailer. Electric trailer brakes require a brake controller installed at the driver’s position. The brake controller is not the same as the safety breakaway brake system that is installed on the trailer.
- **Side View Mirrors:** The size of the trailer that is being towed and state regulations determine the size of the mirrors.
- **Heavy Duty Flasher:** A Heavy Duty Flasher is an electrical component that may be required when trailer turn signal lights are attached to the tow vehicle flasher circuit.
- **Electrical Connector:** An electrical connector connects the light and brake systems on the trailer to the light and brake controls on the towing vehicle.
- **Heavy Duty Engine Oil Cooling System:** The tow vehicle engine works harder when a trailer is being towed. Inadequate engine cooling may result in engine failure.
- **Automatic Transmission Oil Cooler:** The automatic transmission of a towing vehicle handles more power when a trailer is being towed. Inadequate cooling will shorten transmission life and may result in transmission failure.
- **Fire extinguisher:** It is sensible to have a fire extinguisher in the tow vehicle.
- **Emergency Flares/Reflectors:** It is wise to carry these warning devices even when not towing a trailer.

3.2 COUPLING AND UNCOUPLING THE TRAILER

A secure coupling of the trailer to the tow vehicle is essential. A loss of coupling may result in death or serious injury. The following parts are involved in making a secure coupling between the trailer and tow vehicle:
Coupling: That part of the trailer connecting mechanism by which the connection is made to the trailer hitch.
Hitch: That part of the connecting mechanism including the ball support platform and ball and those components that extend and are attached to the towing vehicle.

- **Weight Distributing Hitch**: A mechanical device that connects the trailer to the towing vehicle and by means of leverage applied on both the trailer and towing vehicle structures, distributes the imposed vertical load at the hitch and coupling connection between structures of the towing vehicle and trailer.
- **Weight Carrying Hitch**: A mechanical and/or structural device that connects the trailer to the towing vehicle and that does not employ features designed to redistribute the load imposed at the hitch and carrying connection.

Safety Chains or Cables: Texas Pride provides chains or cables that are permanently attached to the trailer such that if the coupler connection comes loose, the safety chains or cables can keep the trailer attached to the tow vehicle. In some cases, these chains or cables can be to short when the tow vehicle is making an extremely tight corner. Test for proper length of chain or cable by positioning the tow vehicle in as tight as corner as possible while checking the safety chain or cable for slack. If the chain or cable does not have enough slack in this maneuver, contact Texas Pride for instruction to remedy the problem.
Trailer Lighting (and braking) Connector: A device that connects electrical power from the tow vehicle to the trailer. Electricity is used to turn on brake lights, running lights, turn signals and trailer brakes.
Breakaway Switch: If the trailer becomes de-coupled from the towing vehicle, the breakaway switch lanyard will pull a pin in the emergency electrical break-away switch on the trailer. The breakaway switch is activated by a separate battery supply in the trailer to energize the trailer brakes independently of the tow vehicle. It is important to check the state of charge of the emergency breakaway battery before each trip. Pull the pin out of the switch by hand and then try to pull the trailer. A significant drag force should be felt. Be sure to re-insert the pin in the breakaway switch. See 3.3.5.
Jack: A device on the trailer that is used to raise and lower the trailer tongue-sometimes called the “landing gear.”

⚠WARNING An improperly coupled trailer can cause death or serious injury. Do not move the trailer until:

- The coupler is secured and locked to the hitch.
- The safety chains are secured to the tow vehicle
- The trailer jack(s) are fully retracted.

Do not tow the trailer on the road until:

- Tires and wheels are checked;
- The trailer brakes are checked;
- The breakaway switch is connected to the tow vehicle;
- The load is secured to the trailer;
- The trailer lights are connected and checked.

3.2.1 Various Coupler Designs

Trailers are produced with a variety of coupler devices. One of the sections below will pertain to the trailer:

- Bumper Pull (ball hitch) Coupler
- Gooseneck Hitch Coupler

3.3 TRAILER WITH BALL-HITCH COUPLER

A ball hitch coupler connects to a ball that is located on or under the rear bumper of the tow vehicle. A ball hitch trailer may be fitted with a tongue jack that can raise and lower the coupler. The tongue jack is mounted to the A-frame part of the trailer. By rotating the jack handle clockwise, the jack will extend and raise the tongue on the trailer.

Trailer with Ball-Hitch Coupler

Be sure the ball hitch coupler 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 trailer tongue. The load rating of the hitch and ball on the tow vehicle must be equal to or greater than that of the trailer. Also, the ball size must be the same as the coupler size. If the hitch ball is too small, too large, underrated, is loose or worn, the trailer can come loose from the tow vehicle and may cause death or serious injury.

⚠ NOTICE The tow vehicle hitch and ball must have a rated towing capacity equal to or greater than the trailer Gross Vehicle Weight Rating (GVWR).

It is essential that the hitch ball be of the same size as the coupler. The ball size and load rating are marked on the ball. Hitch capacity is marked on the hitch.

3.3.1 Before Coupling the Trailer to the Tow Vehicle

- Be sure the size and rating of hitch ball match the size and rating of the coupler. Hitch balls and couplers are marked with their size and rating.
- Wipe the hitch ball clean and inspect it visually and by feeling for flat spots, cracks and pits.
- Rock the ball to make sure it is tight to the hitch and visually check that the hitch ball nut is solid against the lock washer and hitch frame.
- Wipe the inside and outside of the coupler clean and inspect it 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. Use the jack if one is provided, or use wood or concrete blocks to support the tongue of the trailer.

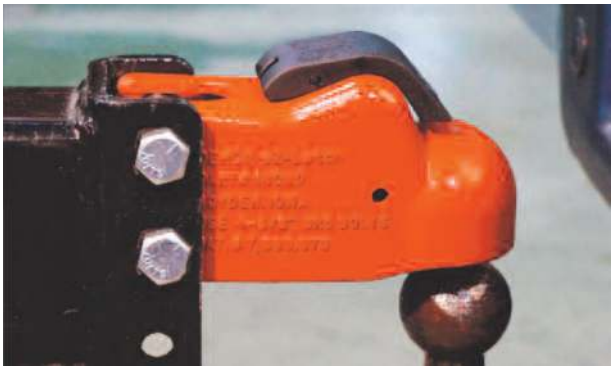
⚠WARNING Coupler-to-hitch mismatch can result in uncoupling, which could lead to death or serious injury. Be sure the LOAD RATING of the hitch ball is equal to or greater than the load rating of the coupler. Be sure the SIZE of the hitch ball matches the size of the coupler.

⚠WARNING A worn, cracked or corroded hitch ball can fail while towing, and may result in death or serious injury. Before coupling trailer, inspect the hitch ball for wear, corrosion and cracks.

⚠WARNING A loose hitch ball nut can result in uncoupling, which can lead to death or serious injury. Be sure the hitch ball is tight to the hitch before coupling the trailer.

3.3.2 Prepare the Coupler and Hitch

- Lubricate the hitch ball and the inside of the coupler with a thin layer of automotive bearing grease. If the trailer is equipped with a jack, raise the coupler above the ball height.
- EZ latch couplers do not require users to lift the handle for the coupler to engage the ball.
- Slowly back up the tow vehicle so that the hitch ball is near or aligned under the coupler. Position the ball in the center of the ball socket or slightly forward.



3.3.3 Couple the Trailer to the Tow Vehicle

- Lower the trailer tongue by using the trailer jack. At the midway point when lowering the trailer, the stem on the handle will begin to rise up allowing the ball to enter the socket.

- Once the ball has fully engaged the socket the ball keeper will snap back into place securing the coupler to the ball.

- Be sure the coupler is all the way on the hitch ball and the locking mechanism is engaged. A properly engaged locking mechanism will allow the coupler to raise the rear of the tow vehicle. After the coupler is locked to the hitch, use the trailer jack to test to see that the rear of the tow vehicle can be raised by 1 inch.
- Lower the trailer so that its entire tongue weight is held by the hitch, and continue retracting the jack to its fully retracted position.

If the coupler cannot be secured to the hitch ball, do not tow the trailer. Call Texas Pride Trailers at 936-245-8208 or the dealer for assistance.

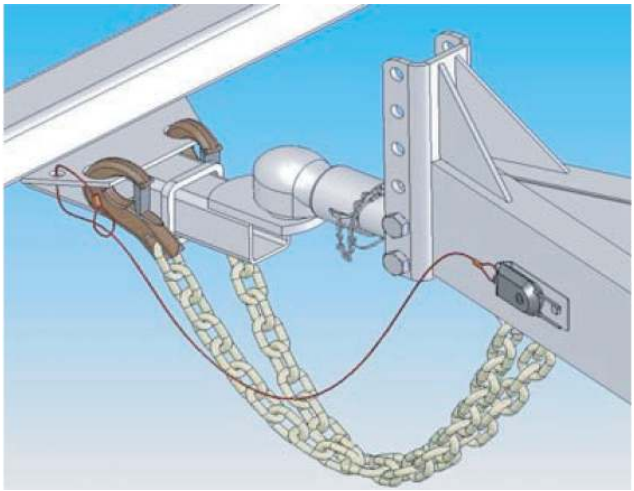
⚠NOTICE Overloading can damage the tongue jack. Do not use the tongue jack to raise the tow vehicle more than 1 inch.

3.3.4 Rig the Safety Chains

- Visually inspect the safety chains and hooks for wear or damage. Replace worn or damaged safety chains and hooks before towing.

Rig the safety chains so that they:

- Criss-cross underneath the coupler so if the trailer uncouples, the safety chains can hold the tongue up off the road.
- Loop around a frame member of the tow vehicle or to holes provided in the hitch system.
- Attach hooks up from underneath the hole.
- Provide enough slack to permit tight turns, but not be close to the road surface to drag.



Safety Chain Attachment Bumper Pull

⚠WARNING Improper rigging of the safety chains can result in loss of control of the trailer and tow vehicle, which could lead to death or serious injury if the trailer uncouples from the tow vehicle.

- Fasten chains to frame of tow vehicle. Do not fasten chains to any part of the hitch unless the hitch has holes or loops specifically for that purpose.
- Cross chains underneath hitch and coupler with enough slack to permit turning and to hold tongue up if the trailer comes loose.

3.3.5 Attach and Test Electric Breakaway Brake System

⚠CAUTION The breakaway system is not a parking brake. If the breakaway battery discharges while the trailer is parked, the trailer brakes will release and the trailer is free to move.

A properly connected and working breakaway brake system will apply electric brakes on the trailer if the coupler or hitch fails. The safety chains will keep the tow vehicle attached and as the brakes are applied at the trailer's axles, the trailer/tow vehicle combination will come to a controlled stop.

The breakaway brake system includes a battery, a switch with pull-pin, and a lanyard. The breakaway brake system may be fitted with a "charging" capability that draws power from the tow vehicle. If the electrical system on the tow vehicle does not provide power to the breakaway brake battery, periodically charge the trailer battery to keep the breakaway brake system in working order.

- Connect the pull-pin lanyard to the tow vehicle so that the pull-pin will be pulled out before all the slack in the safety chains is taken up(see Breakaway Brake System figure). Do not connect the pull-pin cable to a safety chain or to the hitch ball or hitch ball assembly. This would keep the breakaway brake system from operating when it is needed.
- Test the breakaway brake battery. Remove the pull-pin from the switch and attempt to pull the trailer forward. Drag should be felt as the trailer resists being towed, but the wheels will not necessarily be locked. If the brakes do not function, do not tow the trailer until brakes or battery are repaired.
- Replace the pull-pin immediately. The breakaway brake system battery discharges rapidly when the pull-pin is removed.

Do not tow the trailer with the breakaway brake system ON because the brakes will overheat which can result in permanent brake failure.

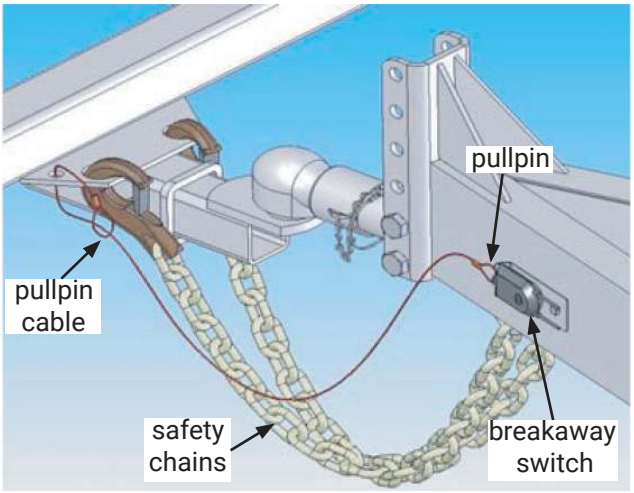
If not using the trailer for three or more months, or during winter months:

- Store the battery indoors
- Charge the battery every three months

Replace the breakaway battery according to the intervals specified by battery manufacturer.

Breakaway Brake Battery

The breakaway brake system will trickle charge from the tow vehicle. Dump trailers and trailers with 12 volt hydraulic pumps will use the hydraulic pump battery for the breakaway brakes and will not be equipped with the battery shown. The charging lamp on the breakaway brake battery will be illuminated when the battery is receiving a charge from the tow vehicle. Press the “Test” button to test the battery level of charge. Do not tow the trailer if the battery requires recharging. A discharged breakaway brake battery will not activate the brakes if the trailer uncouples from the tow vehicle. The battery must be fully charged before towing the vehicle.



Breakaway Brake System

WARNING An ineffective breakaway brake system can result in a runaway trailer, which could lead to death or serious injury if the coupler or ball hitch fails. Connect the breakaway cable to the tow vehicle; and not to the hitch, ball or support. Before towing the trailer, test the function of the breakaway brake system. If the system is not working do not tow the trailer, have it serviced or repaired.

WARNING Failure to replace the pull-pin will prevent brakes from working, leading to loss of control, serious injury or death.

3.3.6 Connect the Electrical Cables

- Connect the trailer lights to the tow vehicle's electrical system using the electrical connectors.
- Check all lights for proper operation: Clearance and Running Lights, Brake Lights and Turn Signals
- Check electric brakes for proper operation using brake controller mounted in the cab. If the trailer has electric brakes, the tow vehicle will have an electric brake controller that sends power to the trailer brakes. Before towing the trailer, operate the brake controller while trying to pull the trailer in order to confirm that the electric brakes operate. While towing the trailer at less than 5 mph, manually operate the electric brake controller in the tow vehicle cab. Trailer brake drag should be felt.

⚠WARNING Improper electrical connection between the tow vehicle and the trailer will result in inoperable lights and electric brakes, and can lead to collision. Before each tow:

- Check that the taillights, brakes lights and turn signals work
- Check that the electric brakes work by operating the brake controller inside the tow vehicle.

3.3.7 Uncoupling the Ball Hitch Trailer with Tongue Jack

Follow these steps to uncouple the ball hitch trailer from the tow vehicle:

- Block trailer tires to prevent the trailer from rolling, before jacking the trailer up.
- Disconnect the electrical connector.
- Disconnect the breakaway brake switch lanyard.
- Disconnect the safety chains from the tow vehicle.
- Unlock the coupler and open it.
- Before extending jack, make certain the ground surface below the jack pad will support the tongue load.
- Rotate the jack handle to slowly extend the jack and transfer the weight of the trailer tongue to the jack.

3.4 TRAILER WITH GOOSENECK COUPLER AND DROP-LEG JACK

A gooseneck coupler on the trailer connects to a gooseneck ball that was installed in the bed of the tow vehicle. This system of coupling a trailer to a tow vehicle permits the tow vehicle to turn sharper angles than are permitted by a bumper hitch system.

Trailer with Gooseneck Coupler

Texas Pride installed a Gooseneck ball receiver 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 gooseneck.
Customer must provide a gooseneck ball and support structure that is marked with a rating that meets or exceeds the GVWR of the trailer and matches the size of the gooseneck ball receiver. If the gooseneck ball is too small, is underrated, is loose or worn, the trailer can come loose from the tow vehicle, and may lead to death or serious injury.

NOTICE The tow vehicle support structure and gooseneck ball must have a rated towing capacity equal to or greater than the trailer Gross Vehicle Weight Rating(GVWR). It is essential that the gooseneck ball be of the same size as the gooseneck ball receiver.

WARNING Coupler-to-hitch mismatch can result in uncoupling, which could lead to death or serious injury. Be sure the LOAD RATING of the hitch ball is equal to or greater than the load rating of the coupler. Be sure the SIZE of the hitch ball matches the size of the coupler.

3.4.1 Ball Receiver Height Adjustment

Adjust the height of the ball receiver on the trailer to match the height of the gooseneck ball on the tow vehicle, so that:

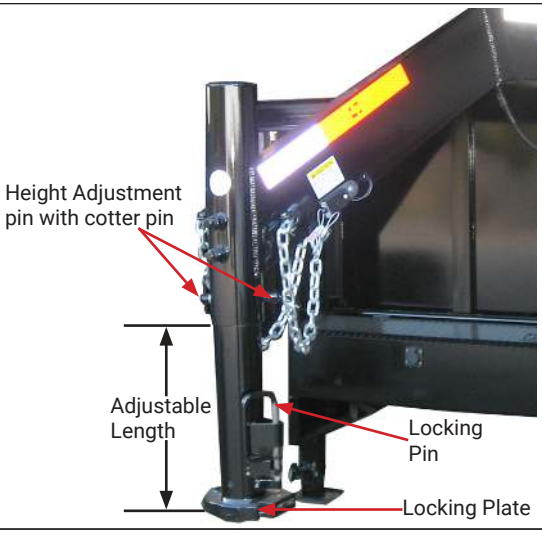
- There is clearance between the bottom of the trailer and the sides of the tow vehicle bed
- The trailer is level and allows equal weight distribution on tandem axles.

The “Gooseneck Ball Receiver and Height Adjustment” figure shows the gooseneck height adjustment. Remove the safety pin to adjust the height of the ball receiver to the proper position and then place the safety pin back in place along with the cotter pin. Check height adjustment pin for wear before towing trailer.

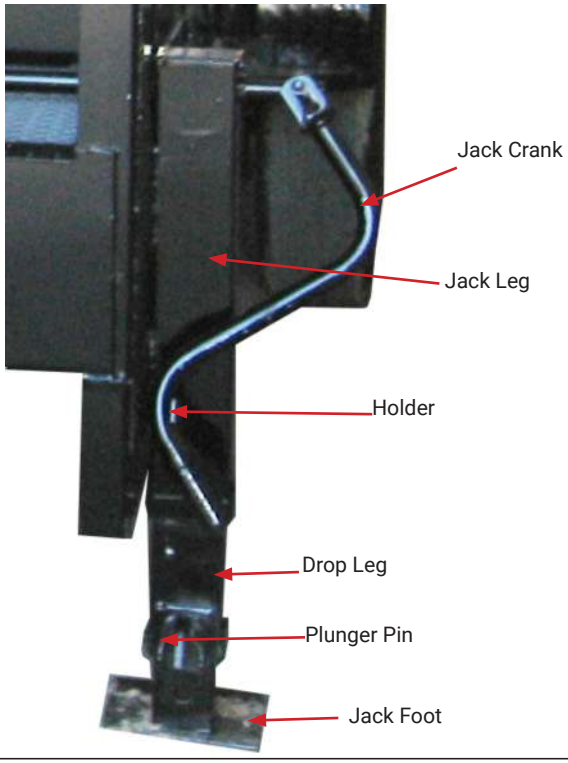
WARNING Improper gooseneck height adjustment can result in overloaded tires, blowout and loss of control, which could lead to death or serious injury. Adjust the gooseneck so the loaded trailer is level.

3.4.2 Drop Leg Jack Usage

Trailers having a gooseneck hitch will have one or two drop leg jacks for raising and lowering the gooseneck ball receiver. Because several drop leg jack mechanisms are available, the general instructions below may vary from the jack manufacturers instructions. If jack does not resemble the jack shown, follow the manufacturers instructions. Call Texas Pride Trailers at 936-245-8208 for a copy of these instructions.



Gooseneck Ball Receiver and Height Adjustment



Drop Leg Jack Arrangement

To lower the drop leg with no weight on the jack.

To lower the drop leg turn the pin to the disengaged position. The bracket around the pin is shaped so that when the pin is turned the bracket holds it in the disengaged position.

Using your foot carefully push the drop leg down to the desired position. Engage the drop leg pin by rotating it to the engaged position and into the desired adjustment hole. You will know when the pin is fully engaged into the jack when there is no space between the pin and the housing (bracket). If there is space, then the drop leg will need to be adjusted until the pin fully engaged. Make sure the pin is fully engaged before removing your foot.

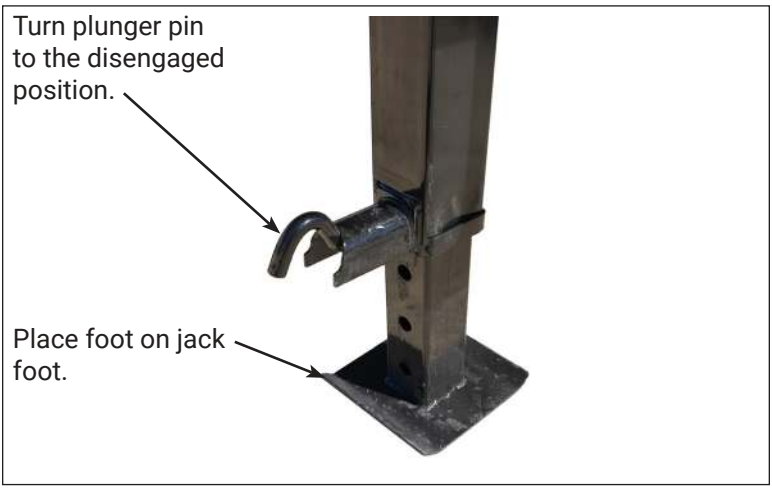
To retract the drop leg with no weight on the jack.

⚠CAUTION The drop leg is heavily spring loaded in the lowered position. It will rapidly return to the upper position when released and can inflict serious bruises, scraping or pinching. Always wear shoes while performing this operation.

⚠NOTICE Overloading can damage the drop leg jack. Do not use the drop leg jack to raise the tow vehicle more than 1 inch.

The drop leg retracts quickly.

1. Make sure the jack is not supporting any weight.
2. Place a foot on the jack foot to control the return of the drop leg.
3. Turn plunger pin to the disengeged position.
4. Control drop leg retraction with foot.



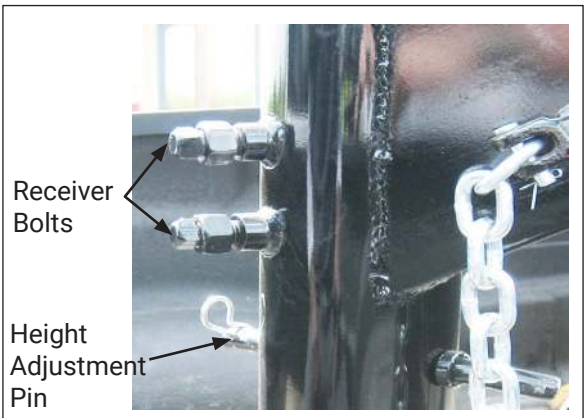
3.4.3 Checking the Gooseneck Ball and Receiver

Before attempting to pull the trailer:

- Check to be sure the size and rating of the gooseneck ball match the size and rating of the receiver. The ball size and load rating are marked on the ball, hitch capacity is marked on the hitch.
- Wipe the gooseneck ball clean and inspect it visually and by feel for flat spots, cracks and pits.
- Rock the ball to make sure it is tight to the ball support. Check that the gooseneck ball nut is solid against the lock washer and ball support frame.
- Wipe the inside and outside of the receiver clean and inspect it for cracks, worn spots and pits.
- Lubricate the inside of the gooseneck ball receiver with automotive bearing grease.
- Make sure the receiver is tight to the trailer by checking the goose-neck receiver bolts. Torgue all hardware to 125 ft-lbs.
- Check receiver height adjustment pin for wear.
- Release the jack crank from its holder. Rotate the crank to raise the bottom surface of the gooseneck to be above the top of the gooseneck ball.

⚠WARNING A worn, cracked or corroded gooseneck ball can fail while towing and may result in death or serious injury. Replace a worn or damaged ball.

⚠WARNING A loose gooseneck ball can result in uncoupling, which could lead to death or serious injury.



Gooseneck Receiver Bolts

3.4.4 Prepare the Ball Receiver and Gooseneck Ball

- Release the lock plate on the gooseneck ball receiver by moving the spring loaded locking plate to the OPEN position.
- Rotate the lock plate to a position that allows the gooseneck ball to enter the receiver.
- Slowly back up the tow vehicle so that the gooseneck ball is aligned under the gooseneck ball receiver.

⚠WARNING If the trailer drops during coupling, death or serious injury could result. No one must be under the trailer or coupler before or during the coupling operation.

3.4.5 Couple the Trailer to the Tow Vehicle

- Using the jack, lower the receiver over the gooseneck ball.
- Check the receiver and ball alignment. If the receiver does not line up with the ball, raise the receiver again and adjust it's position.
- Continue to lower the receiver over the ball by retracting the jack, causing the receiver to drop down and fully engage the ball transfering the weight of the trailer tongue to the towing vehicle hitch.
- Close the lock plate on the receiver by moving the spring-loaded lock plate locking pin to the CLOSED position.

⚠WARNING The lock pin must be in the closed position to hold the locking plate against the ball. Failure to properly position the lock pin in the CLOSED position will bend the lock pin and the receiver lock plate will not lock under the ball.

- Check to be sure the lock pin is holding the lock plate. Be sure the receiver is all the way on the ball and the lock plate is engaged.
- Test to see that the rear of the tow vehicle rises by 1 inch using the trailer jack. A properly engaged locking mechanism will allow the coupler to raise the rear of the tow vehicle.

Locking Plate Pin Positioning

- Retract the jack to its fully retracted position after testing to see that the receiver is properly secured and locked to the ball.
- Return the drop legs to their upper positions. The drop legs are held in position with a plunger pin. Rotating the plunger pin while pulling outward will cause it to come out of engagement with the drop leg and the leg will rise - see “Drop Leg Mechanism” figure.

If the gooseneck ball cannot be secured to the receiver do not tow the trailer. Call Texas Pride Trailers at 936-245-8208 or the dealer for assistance.

3.4.6 Rig the Safety Chains

- Visually inspect the safety chains and hooks for wear or damage. Replace worn or damaged safety chains and hooks before towing.
- Rig the safety chains so that they attach to the “safety chain receivers” in the bed of the tow vehicle. Do NOT attach the safety chains to the gooseneck ball or its support.
- Rig the safety chains so they have sufficient slack to permit turning, but not too much slack - the safety chains must keep the gooseneck on the tow vehicle bed if the trailer uncouples.

⚠WARNING Improper rigging of the safety chains can result in loss of control of the trailer and tow vehicle, which could lead to death or serious injury if the trailer uncouples from the tow vehicle.

3.4.7 Attach and Test the Breakaway Brake System

⚠CAUTION The breakaway system is not a parking brake. If the breakaway battery discharges while the trailer is parked, the trailer brakes will release and the trailer is free to move.

If the coupler or hitch fails, a properly connected and working break-away brake system will apply electric brakes on the trailer. The safety chains will keep the tow vehicle attached and as the brakes are applied at the trailer’s axles, the trailer/tow vehicle will come to a stop.

The breakaway brake system includes a battery, a switch with a pull-pin, and a breakaway brake controller. Read and follow the instructions here as well as the instructions provided by the breakaway brake manufacturer.

The breakaway brake system may be fitted with a charging facility that draws power from the tow vehicle. If the electrical system on the tow vehicle does not provide power to the breakaway brake battery, periodically charge the battery on the trailer to keep the breakaway brake system in working order.

If the trailer is not used for three or more months, or during the winter months:

- Store the battery indoors
- Charge the battery every three months
- Replace the breakaway brake battery at intervals recommended by the manufacturer.

- Visually inspect the breakaway brake system for broken parts.
- Connect the pull-pin cable to the tow vehicle so that the pull-pin will be pulled out before all of the slack in the safety chains is taken up (see “Safety Chains” figure). Do NOT connect pull-pin cable to a safety chain or a safety chain receiver or to the gooseneck ball or its support. Contact the hitch manufacturer or installer if not certain of the hitch provisions for breakaway brake connection.
- Check the breakaway brake battery. Pull the pull-pin out from the switch and attempt to pull the trailer forward. Brake drag should be felt.
- Replace the pull-pin immediately. The breakaway brake system battery discharges rapidly when the pull-pin is removed.
- Do not tow the trailer with the breakaway brake system ON because the brakes will overheat which can result in brake failure.

Safety Chain and Breakaway Brake Attachment Gooseneck

⚠WARNING An ineffective breakaway brake system can result in a runaway trailer, which could lead to death or serious injury if the coupler or hitch fails. Connect the breakaway cable to the tow vehicle; and not to the safety chain, safety chain receiver, gooseneck ball or gooseneck ball support. Before towing the trailer, test the function of the breakaway brake system. If the system is not working do not tow the trailer, have it serviced or repaired.

⚠WARNING Failure to replace the pull-pin will prevent brakes from working, which could lead to loss of control, serious injury or death.

3.4.8 Connect the Electrical Cables

- Connect the trailer lights to the tow vehicle's electrical system using the electrical connectors.
- Check all lights for proper operation: Clearance and Running Lights, Brake Lights and Turn Signals
- Check electric brakes for proper operation using brake controller mounted in the cab. If trailer has electric brakes, the tow vehicle will have an electric brake controller that sends power to the trailer brakes. Before towing the trailer, operate the brake controller while trying to pull the trailer in order to confirm that the electric brakes operate. While towing the trailer at less than 5 mph, manually operate the electric brake controller in the tow vehicle cab. Brake drag should be felt.

⚠WARNING Improper electrical connection between the tow vehicle and the trailer will result in inoperable lights and electric brakes, and can lead to collision. Before each tow:

- Check that the taillights, brakes lights and turn signals work
- Check that the electric brakes work by operating the brake controller inside the tow vehicle.

3.4.9 Uncoupling the Gooseneck Trailer with Drop Leg Jack

Follow these steps to uncouple the gooseneck hitch trailer from the tow vehicle.

- Block trailer tires to prevent the trailer from rolling before jacking trailer up.
- Disconnect the electrical connector.
- Disconnect the breakaway brake switch lanyard.
- Disconnect the safety chains from the tow vehicle.
- Move the spring-loaded gooseneck receiver lock plate locking pin to the OPEN position.

- Rotate the lock plate to a position that permits the gooseneck ball to exit the receiver.
- Before releasing dropleg jack, make certain ground below jack base will support the trailer tongue load.
- Rotate the drop leg plunger pin handle so that the plunger pin is released from the drop leg.
- Push down on the drop leg base with your foot to place a drop leg to the desired position.
- Rotate the plunger pin handle so that the plunger pin is attempting to engage the drop leg.
- Slowly raise your foot, permitting the drop leg to raise. The plunger pin will engage a hole in the drop leg.

⚠CAUTION The drop legs are heavily spring loaded in the lowered position. They will rapidly return to the upper position when released and can inflict serious bruises, scraping or pinching. Keep feet, shins and hands well clear of the drop legs and drop leg bases when releasing the drop legs. Always wear shoes while performing this operation.

- Be sure the plunger pin is fully engaged. Push it in by hand if necessary. The bent part of the plunger pin handle, must be touching the plunger pin housing.
- If the trailer has two drop leg jacks, lower them both to the same level.

⚠NOTICE If the drop legs are not set at the same level, one of the drop leg jacks can be overloaded and can be damaged.

- Release the handle from its holder
- Rotate the handle to slowly extend the jack and transfer the weight of the trailer tongue to the jack.
- On two speed jacks, pushing the handle shaft toward the gearbox can perform rapid extension. This shifts the gearbox into a high speed mode.
- When the drop leg base contacts the ground, shift the gearbox into low gear mode by pulling or pushing on the handle shaft until it locks into low gear.

⚠NOTICE Do not use high gear to lift the trailer, as this can damage the drop leg jack mechanism. High gear is used only to rapidly move the drop leg base to the ground.

- Continue to extend the jack, to provide level support for the trailer.
- After the jack is extended and the gooseneck ball receiver is well clear of the gooseneck ball to permit the tow vehicle to drive away, return the handle to its holder.

4. LOADING THE TRAILER

Improper trailer loading can cause accidents and death. To safely load a trailer make sure to consider:

- Overall load weight
- Load weight distribution
- Proper tongue weight
- Securing the load properly

To determine if the trailer is loaded within its rating consider the distribution of weight as well as the total weight of the trailer and its contents. The trailer axles carry most of the total weight of the trailer and its contents. The remainder of the total weight is carried by the tow vehicle hitch. It is essential for safe towing that the trailer tongue and two vehicle hitch carry the proper amount of loaded trailer weight, otherwise the trailer can develop an undesirable sway at towing speeds or the rear of the tow vehicle can be overloaded. The load distribution must be such that no component part of the trailer is loaded beyond its rating. This means consideration must be given to the rating of the tires and wheels and axles. For tandem and triple axle trailers, make sure that the front-to-rear load distribution does not result in overloading any axle.

Towing stability also depends on keeping the center of gravity as low as possible. Load heavy items on the floor and over the axles. When loading additional items, be sure to maintain even side-to-side weight distribution and proper tongue weight. The total weight of the trailer and its contents must never exceed the total weight rating of the trailer.

An overloaded trailer can result in loss of control of the trailer, which could lead to death or serious injury. Do not exceed the trailer Gross Vehicle Weight Rating (GVWR) or the Gross Axle Weight Rating (GAWR). Do not load a trailer so that the weight on any tire exceeds its rating.

4.1 TONGUE WEIGHT

It is critical to have a portion of the trailer load carried by the tow vehicle-the trailer tongue must exert a downward force on the hitch. The 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. If there is too much weight on the tongue, the tow vehicle is prone to jack-knife. If the front wheels of the tow vehicle are too lightly loaded this can cause loss of steering control and traction. Tongue weight is also necessary to insure that the trailer axles do not exceed their Gross Axle Weight Rating (GAWR).

The following table has guidelines for proper tongue weight.

Trailer Weight as a Percentage of Loaded Trailer Weight	
Type of Hitch	Percentage
Ball Hitch	10-15% for large trailers 6-10% for smaller utility and cargo trailers 4-6% for boat trailers
Gooseneck Hitch	20-25%
Fifth Wheel Hitch	

The numbers quoted above are for example purposes only and should be tailored to the specific trailer.

⚠WARNING Improper tongue weight can result in loss of control of the trailer, which can lead to serious injury or death. Make certain that tongue weight is within the allowable range. Be sure to:

- Distribute the load front-to-rear
- Distribute the load evenly, right to left to avoid tire overload
- Keep the center of gravity low.

4.2 CHECKING THE TONGUE WEIGHT

To check the tongue weight the tow vehicle and trailer must be on level ground. For lighter trailers, the recommended method to check tongue weight is to use a tongue weight scale.

⚠WARNING An unrestrained trailer can fall off its support, resulting in serious injury or death. Before checking tongue weight, block trailer front and rear wheels.

For heavier trailers, go to a truck stop where there is a “certified” scale. Pull only the tow vehicle onto the scale and get the weight. This weight must be less than the tow vehicle’s GVWR. Pull the trailer onto the scale and decouple it to get the total trailer weight only. Reconnect the trailer and drive the tow vehicle wheels off of the scale, just leaving the trailer axles on the scale to get the trailer’s axle weight. Subtract the axle weight from the total weight to determine the hitch weight.

4.3 SECURING THE CARGO

Secure the cargo so that it does not shift while the trailer is being towed.

⚠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, ropes and straps.

4.3.1 Distributing the Cargo(Open Trailer)

Couple the trailer to the tow vehicle before loading. This is essential for bumper pull trailers because the tongue can rise during loading before the cargo is properly distributed.

⚠WARNING Do not transport flammable, explosive, poisonous or other dangerous materials in the trailer.

4.3.2 Preparing the Trailer for Loading

Before loading the trailer:

- Inspect the deck of the trailer for corrosion or damage
- Inspect the stake pockets and D-rings. Hold down openings must be sturdy with no cracks. D-rings must be tight to the deck and not bent.

⚠WARNING Damaged or loose D-rings can break, allowing cargo to become loose inside the trailer. Loose cargo can shift the center of gravity and result in loss of control of the trailer. Inspect D-rings and test them for looseness before loading cargo. Do not use damaged or loose D-rings to secure cargo.

4.3.3 Loading a Rigid-Deck Trailer

Open trailers have either a rigid-deck or a pivoting deck. Before loading the trailer, couple the trailer to the tow vehicle and make sure that the deck is level. Make sure the top of the ramp is secure to the trailer and the bottom is resting on firm ground.

⚠WARNING Cargo can suddenly move or topple, which can result in serious injury or death. Do not load or unload an open trailer unless it is prevented from tipping and is on level ground.

Load the cargo onto the trailer with approximately 60% of the cargo in the front half of the trailer. Secure the cargo to the trailer using appropriate straps, chains and tensioning devices.

⚠WARNING Shifting cargo can result in loss of control of the trailer and can lead to serious injury or death. Tie down all load with proper sized fasteners, ropes and straps.

Return the ramps to their stowed position and secure them so they do not move during transit.

4.3.4 Manual Tarp

If equipped, a manual tarp can be used for securing and covering cargo. To unroll the tarp, unwrap the rope stored on the side of the trailer. Twist tarp handle outward and unlatch tarp lock. Pull rope toward rear of trailer to cover. Secure rope to tie downs on rear doors. Torque tarp by rotating tarp handle and latching tarp lock. Twist tarp handle inwards towards the trailer before driving.

Tarp Rope Storage

Tarp Handle

Tarp Lock Latched

Tarp Lock Unlatched

4.4 LOADING THE DUMP TRAILER

4.4.1 Payload Capacity

Determine the payload capacity by subtracting the empty weight of the trailer from the GVWR given on the VIN tag. Determine the density of the material to be loaded and dumped to determine how many cubic yards of material may be safely loaded.

⚠DANGER Load in the trailer must not exceed the payload capacity and it must be evenly distributed. Trailer hitch or dump body can fail causing death or serious injury.

4.4.2 Loading Cargo

Couple the trailer to the towing vehicle before loading. Make sure the trailer is located on even ground.

4.4.3 Loading Flowable Material

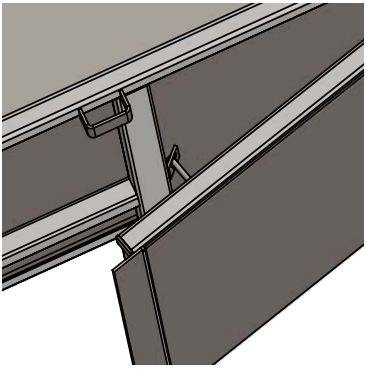
- Flowable loads should assume an even weight distribution within the trailer.
- Couple the trailer to the tow vehicle
- Check the bed for damage
- Close and fasten doors
- Level the load within the trailer from front to back and from side to side

4.4.4 Loading Fixed Loads

Fixed loads should be loaded evenly throughout the trailer. Too much load in the front portion will strain and possibly overload the hydraulic hoist. Too much load in the rear will lead to trailer sway.
Inspect the hold down openings and D-rings for cracks or kinks.

Place blocking under the rear of the trailer so the weight of the cargo does not raise the front of the trailer during loading.

Open both rear swing doors and secure open with door hold back latch.

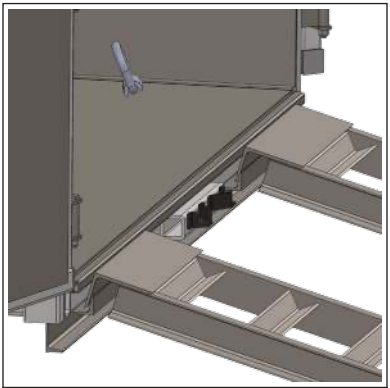


Door Hold Back Latch

Lift dump bed and support it with body prop and remove ramps.

Rams Stored Under Dump Bed

Position ramps at desired width as shown.



Rams Stored Under Dump Bed

⚠CAUTION Ramps will NOT support the load bearing capacity of the trailer. Do not overload the ramps.

Ramp Capacity Ratings

Size of Ramp	Max load per ramp
3”x5’	**5000**
3”x6’	**5000**
4”x5’	**7000**
4”x6’	**7000**
Aluminum 6’	**6000**
Aluminum 10’	**5000**

- Secure the cargo.
- Remove ramps and place in storage position.
- Close and secure rear doors.
- Remove blocking under rear of trailer.

4.4.5 Securing the Cargo

Make sure to secure all cargo that is not flowable with straps, chains and tensioning devices since the trailer is subjected to longitudinal and lateral forces.

4.4.6 Unloading Flowable Loads

- Read and understand the hoist operating procedure before dumping the load.
- Be sure the trailer is on level ground.
- Open the rear doors and make sure they are securely hooked to the sides of the trailer using the hold back door chains or rods..
- Unfasten the latch on the control box and open the cover. The control box should be locked when the trailer is not being used.

- Standing clear of the dump bed, push the UP button and walk to the rear of the trailer to estimate if there is enough space for the remainder of the load to be safely dumped. If not, lower the dump bed by pressing the DOWN button and pull the trailer forward then repeat the previous step.
- Standing clear of the dump bed, raise the dump bed to 3/4 of the maximum dump angle. Stop the lift and walk to the rear to see if there is enough space for continued dumping.
- Repeat the process until the load has been completely dumped.
- If the load has not completely dumped DO NOT drive forward and stop quickly to jar the load out of the bed. Also, DO NOT jerk the control button up and down to dislodge the load. The proper procedure is to lower the dump and dislodge the material by hand.
- Secure the rear doors prior to moving forward.

⚠DANGER Raised dump body can drop or tip over suddenly causing serious injury or death. Observe the following:

- Have trailer on level, firm ground before dumping.
- Keep others away while dumping.
- Stay at controls until dump body is down.

Never leave the scene when dump body is lifted.

- Lock hoist controls after use.
- Have dump body down before moving trailer.
- Use body-prop and have dump body empty before getting under raised dump body.
- If the hoist does not lift the load, manually reduce the load; obtain service from a qualified hydraulics technician.

Never assist the hoist

- If the load does not leave the dump body, lower the dump body and manually free the load.

Never attempt to free a load from a raised dump body

4.4.7 Hydraulic Components

Do not alter or substitute any hydraulic components on the dump trailer. Do not alter the hydraulic pressure or flow rate of the hoist system. Always have the hoist system repaired or maintained by a qualified technician.

4.4.8 Unload Bulk Material Using the Spreader Gate

Banjo Eye

- Read and understand the hydraulic hoist operating procedure.
- Park tow vehicle and trailer on a firm and level surface.

⚠WARNING A soft or uneven surface may cause the tow vehicle and trailer to overturn when the dump body is raised or while spreading material, which may lead to death or serious injury. Raise the dump body only if the tow vehicle and trailer are both on a firm and level surface.

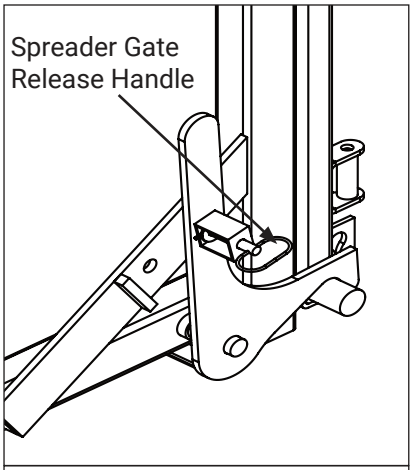
⚠WARNING An overloaded trailer or improperly distributed load can result in death or serious injury. An overloaded trailer can cause the hydraulic system to malfunction, resulting in the dump body falling. A load that is improperly distributed in the trailer can result in the trailer overturning when the dump body is raised.

- The dump trailer is provided with a “Banjo Eye” on the dump body and spreader gate. Set the metering chains at the desired number of links to control the opening distance of the spreader gate. Be sure to set both chains at equal length.
- Unlatch spreader gate by pulling on spreader gate release handle.

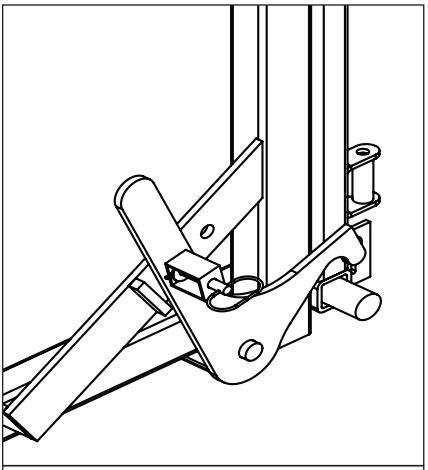
⚠CAUTION Loaded materials can exert pressure on the spreader gate. This may cause the spreader gate to swing out with force when unlatched. Stand away from trailer to unlatch spreader gate

- While using the dump body controller, stay clear of the dump body. Check for overhead power lines and other obstructions before raising the dump body.

⚠WARNING Risk of electrocution: Dump body coming near or contacting power lines may result in electrocution. Be sure there are no overhead power lines over or near the trailer before raising dump body.



Spreader Gate LATCHED



Spreader Gate UNLATCHED

DANGER A lowering or falling dump body can result in serious injury or death. NEVER enter the area under the dump body unless the empty dump body is supported by the body props.

DANGER The body props are designed to support an EMPTY dump body only.

- Press and hold button to raise the dump body. Release the button when the body has reached the halfway point of its dumping angle, or if the load begins to shift towards the rear. Never leave the dump body control when operating the dump body.

WARNING Fully raising the loaded dump body may result in the tow vehicle rear wheels losing traction. Do not fully raise a loaded dump body or place the entire load at the rear of the trailer.

- Watch for and avoid obstructions and slowly drive tow vehicle and trailer ahead to spread the material.
- DO NOT drive forward and stop quickly to jar the load out of the bed. Also, DO NOT jerk the control button up and down to dislodge the load. The proper procedure is to lower the dump and dislodge the material by hand.
- Raise the dump body higher after a portion of the load has been spread to dump the rest of the material.
- Stop tow vehicle after all material has exited the dump body.
- Press and hold button to lower the dump body. Release button when the dump body is fully lowered.
- Close and latch rear gate.

4.5 LOADING THE TILT BED TRAILER

The tilt bed trailer is fitted with a handle that keeps the trailer deck in the locked down or CLOSED position. Or rotated to the OPEN position so the deck can be tilted for loading. After the trailer is loaded and the cargo is secured, be sure the handle is rotated to the CLOSED position to secure the deck in place before driving.

⚠WARNING A tilt deck can pinch and crush. Keep away from the deck while tilting to avoid injury.

4.5.1 Gravity Tilt Deck Trailer

The Gravity Tilt Deck Trailer is equipped with a handle on the side of the trailer that keeps the deck in locked down position. Couple the trailer to the tow vehicle before tilting the deck and loading the trailer.

Turn handle to the OPEN position and walk to the back of the deck to tilt the deck down. Load the cargo onto the trailer with approximately 60% of the cargo on the front half of the deck, the deck will pivot down into driving position.

Handle in OPEN Position

With the load in position, turn handle to the CLOSED position to lock deck for transport.

⚠WARNING An unlocked tilt deck can result in loss of cargo or loss of control of the trailer, which can result in death or serious injury.

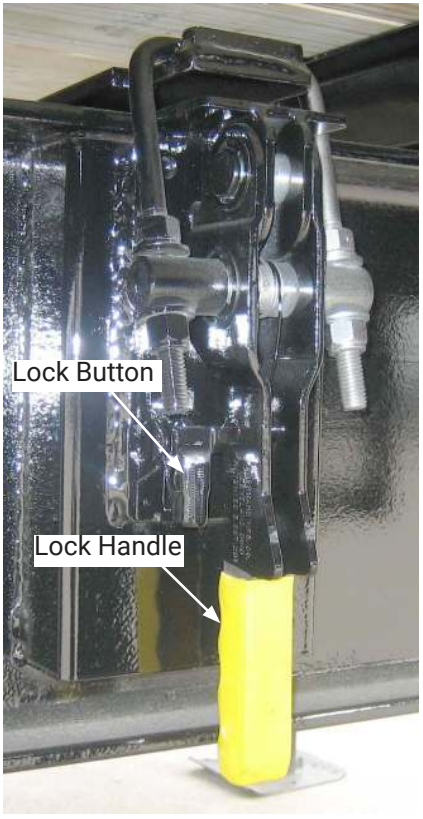
Handle in CLOSED Position

4.5.2 Power Tilt Trailer

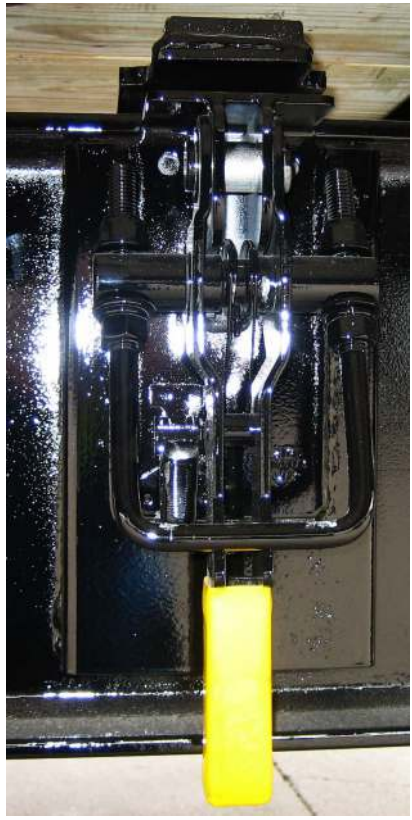
DANGER NEVER alter or substitute any hydraulic system component. Death or serious injury may result. An altered or substituted hydraulic system component may malfunction, resulting in the deck falling without warning.

WARNING Risk of death by crushing. Tilt deck can drop unexpectedly. Never go under a raised tilt deck. Use body prop for maintenance.

NOTICE BEFORE TILTING TRAILER DECK MAKE SURE DECK LOCK DOWNS ARE RELEASED.



Power Tilt Deck Lock SECURED



Power Tilt Deck Lock OPEN

The locking mechanism for the power tilt deck is located on the sides of the trailer. To tilt the trailer deck, press down on lock button with thumb and lift out on lock handle. See “Power Tilt Deck Lock” figures. Use hydraulic control to raise the tilt bed.

DANGER Do not stand on the trailer with the tilt deck moving. A moving tilt deck can pinch and crush. Keep off the trailer while operating to avoid injury or death.

When loading the trailer:

- Position equipment on trailer and secure load to trailer.
- Secure power tilt deck lock downs into travel position.

DANGER Do not load or unload your trailer unless it is prevented from tipping and is on firm and level ground. Loads can suddenly move or topple, which can result in serious injury or death..

5. CHECKING THE TRAILER BEFORE AND DURING EACH TOW

5.1 PRE-TOW CHECKLIST

Before towing, check all of these items: See section 7, “Inspection, Service & Maintenance Summary Charts for more information.

- Tires, Wheels and lug nuts
- Tire pressure
- Coupler secured and locked
- Safety chains properly rigged to tow vehicle
- Test all lights
- Test trailer brakes
- Safety breakaway switch cable fastened to tow vehicle, not to safety chains
- Cargo properly loaded and tied down
- Tongue weight and weight distribution correct
- Doors and gates latched and secured
- Fire extinguisher
- Flares and reflectors

5.2 MAKE REGULAR STOPS

After each 250 miles, or scheduled stop, check the following items:

- Coupler secured
- Safety chains fastened and not dragging
- Cargo secured
- Cargo door latched and secured.
- Breakaway cable is secure

6. BREAKING-IN A NEW TRAILER

6.1 LUG NUTS

Re-torque lug nuts at 50, 250, 500 miles. See 7.2.9.2.

⚠WARNING Lug nuts are prone to loosen after initial installation, which can lead to death or serious injury. Check lug nuts for tightness on a new trailer or when wheels have been remounted after the first 10, 25 miles of driving.

See section 7 for proper torque technique.

6.2 ADJUST BRAKE SHOES

The brakes must be adjusted after the first 200 miles of use and each 3,000 miles thereafter. Some axles are fitted with a mechanism that will automatically adjust the brake shoes when the trailer is “hard braked” from a rearward direction. Read the axle and brake manual to see if brakes adjust automatically.

A hard stop is used to:

- Confirm the brakes work
- Confirm the trailer brakes are properly working with the tow vehicle brakes using the controller in the tow vehicle.
- Adjust the brake shoes as necessary
- Check the master cylinder reservoir for fluid for surge brakes.

If the trailer is not fitted with automatically adjusting brakes, the brakes will need to be adjusted manually. See section 7 for instructions.

6.3 SYNCHRONIZING THE BRAKE SYSTEMS

When the tow vehicle and trailer braking systems are synchronized, both braking systems contribute to slowing and the tongue of the trailer will neither dive nor rise sharply.

⚠WARNING If trailer and tow vehicle brakes do not work together properly, death or serious injury can occur. Road test the brakes in a safe area at no more than 30 mph before each tow.

To insure safe brake performance, read and follow the axle and brake controller manufacturers instructions.

6.4 TIRE PRESSURE

Check tire pressures on the trailer. Inflate to maximum air pressure listed on the tire..

7. INSPECTION, SERVICE & MAINTENANCE

7.1 SUMMARY CHARTS

Inspect, maintain and service the trailer regularly to insure safe and reliable operation. If unsure how to perform these items, contact the dealer.

Inspection and Service before Each Use		
Item	Inspection/Service	Manual Section Reference
Breakaway Brakes • Electric • Hydraulic	 Check operation Check fluid level	 Section 3.3.5 & 3.4.7 Section 7.2.3.4
Breakaway Battery	Fully charged, connections clean	Section 3.3.5 & 3.4.7 Section 7.2.3.3
Brakes, all types	Check operation	Section 6.3
Shoes and Drums	Adjust	Section 6.2 & 7.2.3.2
Brakes, Hydraulic-vacuum actuated	Check gauge for proper vacuum of 18 In. of Mercury	Section 7.2.3.4
Coupler and Hitch Ball	Check for cracks, pits and flats. Replace w/ ball & coupler with trailer GVW Rating. Grease. Check locking device and replace.	Section 7.2.4.1
Gooseneck Ball	Check for cracks, pits and flats. Replace w/ ball & coupler with trailer GVW Rating. Grease. Check locking device and replace.	Section 3.4.3 Section 7.2.4.2
Safety Chains and Hooks	Check for wear and damage	Section 3.3.4 & 3.4.6
Tires	Check tire pressure when cold	Section 2 & 7.2.7
Wheels-Lug nuts and Hub	Check for tightness	Section 6.1 & 7.2.9.2

Inspection and Service each 3 Months or 3,000 Miles		
Item	Inspection/Service	Manual Section Reference
Structure • Hinges, doors and dividers	Remove mats. Wash both sides and floor. Inspect. Repair or replace damaged, worn or broken parts.	Section 7.2.2 Section 7.2.2.1

Inspection and Service each 6 Months or 6,000 Miles		
Item	Inspection/Service	Manual Section Reference
Tires	Rotate @ 5,000 miles Inspect tread and sidewalls. Replace tire when treads are worn, when sidewall has a bulge or is worn	Section 7.2.7 Section 7.2.7 Section 7.2.7
Brakes, electric • Magnets • Controller	Check wear and current draw. Check power output and modulation.	Section 7.2.3.3 Section 7.2.3.3 & Controller Manufacturers Manual

Inspection and Service Each Year or 12,000 Miles		
Item	Inspection/Service	Manual Section Reference
Brakes, all types Shoes and Drums	Check for scoring and wear. Replace per manufacturers specs.	Section 7.2.3.1 & Brake Manufacturers Manual
Jack, drop leg	Grease gears	See Jack Mfr's Manual
Structure • Frame Members • Welds	Inspect all frame members, bolts and rivets. Repair or replace damaged or worn parts. Inspect all welds. Repair as needed.	Section 7.2.1 Section 7.2.2.2
Wheels • Sealed Bearings (Hubs) • Unsealed Bearings (Hubs) • Rims	Check and confirm free running, replace if not (sealed bearings are not serviceable.) Disassemble/inspect/ assemble and repack. Replace promptly if immersed in water. Inspect for cracks & dents. Replace as needed.	Section 7.2.9 Section 7.2.9.1 & Axle Manufacturers Manual Section 7.2.8
Structure • Axle Attachment Bolts	Check by DEALER	Section 7.2.1
• Tilt Bed Hinges, doors and dividers	Grease	Section 7.2.2.1

7.2 INSPECTION AND SERVICE INSTRUCTIONS

7.2.1 Axle Bolts, Frame, Suspension & Structure

⚠WARNING Worn or broken suspension parts can cause loss of control and injury may result. Have trailer professionally inspected annually and after any impact.

To perform the inspection and maintenance procedures the trailer must be jacked up. A jack may be applied to any part of the trailer frame. When using jack stands, place them clear of wiring, brake lines, and suspension parts.

⚠WARNING Never crawl under the trailer unless it is on firm and level ground and resting on properly placed and secured jack stands.

7.2.2 Trailer Structure

Because the trailer floor receives the most abuse, it will most likely corrode before any other part of the trailer. Using a power washer and a detergent solution, wash the floor and walls of the trailer.

7.2.2.1 Fasteners and Frame Members

Inspect all of the fasteners and structural frame members for bending and other damage, cracks or failure. Repair or replace any damaged fastener and repair the frame member. Grease all hinges, doors and dividers with general purpose grease. Call the dealer with questions about the condition or method of repair of fasteners or frame members.

WARNING Broken or damaged fasteners or welds can cause injury or damage to trailer and contents. Inspect for, and repair all damaged parts at least once a year.

7.2.2.2 Welds

Welds can crack or fail when subjected to heavy loads or movement of cargo that was not properly tied to prevent movement. If the trailer has been subjected to heavy loads or movement of the cargo, immediately inspect the welds and fasteners for damage. To prevent severe damage to the trailer, inspect all of the welds for cracks or failure at least once a year.

WARNING Improper weld repair will lead to early failure of the trailer structure and can cause serious injury or death.

7.2.3 Trailer Brakes

7.2.3.1 Brake Shoes and Drums

Properly functioning brake shoes and drums are essential to ensure safety. Have the dealer inspect these components at least once per year, or 12,000 miles, whichever comes first.

The brake shoes must be adjusted after the first 200 miles of use and each 3,000 miles after. Most axles are fitted with a brake mechanism that will automatically adjust the brake shoes when the trailer is “hard braked” from a rearward direction. Read the axle and brake manual to see how to adjust the brakes.

7.2.3.2 Manually Adjusting Brake Shoes

The following steps apply to adjust most manually adjustable brakes. Read the axle and brake manual to see how to adjust the brakes.

- Jack up the trailer and secure it on adequate capacity jack stands.
- Be sure the wheel and brake drum rotate freely.
- Remove the adjusting-hole cover from the adjusting slot on the bottom of the brake backing plate.
- With a screwdriver or standard adjusting tool, rotate the star wheel of the adjuster assembly to expand the brake shoes. Adjust the brake shoes out until the pressure of the linings against the drum makes the wheel very difficult to turn. Note: the axle may be equipped with drop spindle axles. See axle manual for axle type. With drop spindle axles, a modified adjusting tool with an 80 degree angle should be used.
- Rotate the star wheel in the opposite direction until the wheel turns freely with a slight drag.
- Replace the adjusting hole cover.
- Repeat the above procedure on all brakes.
- Lower the trailer to the ground.

7.2.3.3 Brakes, Electric

Two different types of electric brakes may be present on the trailer: an emergency electric breakaway system and/or an electric braking system that acts whenever the brakes of the tow vehicle are applied.

7.2.3.3.A Breakaway Brake

7.2.3.3.A (i) Breakaway Battery

This battery supplies the power to operate the trailer brakes if the trailer uncouples from the tow vehicle. Be sure to check, maintain and replace the battery according to the battery manufacturer's instructions.

7.2.3.3.A (ii) Breakaway Switch

This switch causes the breakaway battery to operate the electric brakes if the trailer uncouples from the tow vehicle. The pull cable for the pull pin is connected to the tow vehicle, and the switch is connected to the trailer. To check for proper functioning of the switch, battery and brakes, pull the pin from the switch and confirm that the brakes apply to each wheel. Pull the trailer with the tow vehicle, after pulling the pin. The trailer brakes may not lock, but notice that a greater force is needed to pull the trailer.

⚠WARNING If electric breakaway brakes do not operate when trailer becomes uncoupled from the tow vehicle, death or serious injury can occur. Check emergency breakaway brake system BEFORE each tow.

7.2.3.3.B Tow Vehicle Operated Electric Brakes
The electric brakes that operate in conjunction with the tow vehicle brakes must be synchronized so that braking is properly distributed to the tow vehicle brakes and the trailer brakes. For proper operation and synchronization, read the axle/brake manual and brake controller manufacturers instructions.

7.2.3.3.C Magnets for all Electric Brakes
To make certain an electrically-operated braking system will function properly, have the dealer inspect the magnets at least once a year, or each 12,000 miles. See the brake manual for wear and current inspection instructions.

7.2.3.4 Brakes, Hydraulic (vacuum, air or electric operated)
If the trailer has hydraulically operated brakes, they function the same way the hydraulic brakes do on the tow vehicle. The hydraulic braking system must be inspected by a dealer, at least as often as the brakes on the tow vehicle, but no less than once a year. This inspection includes an assessment of the condition and proper operation of the wheel cylinders, brake shoes, brake drums and hubs.

Check the fluid level in the master cylinder reservoir at least every three months. If using the trailer an average of 1,000 miles per month in a hot and dry environment, check the brake fluid level once a month. The brake fluid reservoir is located on the tongue of the trailer or near the gooseneck. Fill with DOT 4 brake fluid.

7.2.3.4.A Vacuum-operated Hydraulic
When towing a trailer, the vacuum gauge in the tow vehicle must indicate 18 In. of Mercury or more at all times.

⚠WARNING If the vacuum gauge in tow vehicle is not at or above 18 In. of Mercury, damage to the brake system will result and the brakes may be inoperable.

7.2.3.4.B Air Pressure-operated Hydraulic

Air/hydraulic braking systems are typically used when the tow vehicle has a diesel engine. The tow vehicle has an air compressor that routes the air to an air/hydraulic mechanism, which sends brake fluid to the wheel cylinders. The air pressure gauge in the tow vehicle indicates the current air pressure. See the tow vehicle manual for proper air pressure.

7.2.3.4.C Electrical-operated Hydraulic

Electric/hydraulic braking systems use an electrically driven pump to generate hydraulic pressure,this operates the brake cylinders. This braking system is operated by an electrical signal from tow vehicle.

7.2.4 Trailer Connection to Tow Vehicle

7.2.4.1 Coupler and Ball

The coupler on the trailer connects to the ball attached to the hitch on the tow vehicle. The coupler, ball and hitch transfer the towing forces between the tow vehicle and the trailer. Before each tow, coat the ball with a thin layer of automotive bearing grease to reduce wear and ensure proper operation. Check the locking device that secures the coupler to the ball for proper operation. See the coupler manufacturers manual for other inspection and maintenance activities. If evidence of wear, such as flat spots, deformations, pitting or corrosion, on the ball or coupler is present, immediately have the dealer inspect them to determine the proper action. All bent or broken coupler parts must be replaced before towing the trailer. The coupler handle lever must be able to rotate freely and automatically snap into the latched position. Oil the pivot points, sliding surfaces and spring ends with SAE30W motor oil. Keep the ball pocket and latch mechanism clean. When replacing a ball, the load rating must match or exceed the GVWR of the trailer.

7.2.4.2 Gooseneck

The gooseneck receiver on the trailer connects to a high-mounted ball on the tow vehicle. The receiver, ball and hitch transfer the towing forces between the tow vehicle and the trailer. Before each tow, coat the ball with a thin layer of automotive bearing grease to reduce wear and ensure proper operation, and check the locking device that secures the receiver to the ball for proper operation. See the gooseneck ball receiver manufacturers manual for other inspection and maintenance activities. If evidence of wear such as flat spots, deformations, pitting or corrosion, on the ball or receiver is present, immediately have the dealer inspect them to determine the proper action. When replacing a ball, the load rating must match or exceed the GVWR of the trailer.

7.2.5 Landing Leg or Jack

If a grease fitting is present, use a grease gun to lubricate the jack mechanism.

7.2.6 Lights and Signals

Before each tow, check the trailer tail lights, stoplights, turn signals and any clearance lights for proper operation.

⚠WARNING Improperly operating tail lights, stop lights and turn signals can cause collisions. Check all lights before each tow.

7.2.7 Tires

Trailer tires can be worn out even though they have plenty of tread left. This is because trailer tires have to carry a lot of weight all the time, even when not in use. It is better for the tire to be rolling down the road than to be idle. During use, the tire releases lubricants that are beneficial to tire life. Using the trailer tire often also helps prevent flat spots from developing.

The main cause of tire failure is improper inflation. Check the cold tire inflation pressures at least once a week for proper inflation levels. Wheel and tire manufacturers recommend adjusting the air pressure to the trailer manufacturer's recommended cold inflation pressure, in pounds per square inch (PSI), stated on the Tire Placard when the trailer is loaded to its GVWR.

The average life of a trailer tire is about five years under normal use and maintenance conditions. It is best to have to have tires inspected by a tire supplier to determine if the tires need to be replaced. If storing the trailer for an extended period make sure the tires are fully inflated to the maximum rated pressure and store them in a cool, dry place.

⚠WARNING Worn, damaged or under-inflated tires can cause loss of control, resulting in damage, serious injury and possibly death. Inspect tires before each tow.

7.2.8 Wheel Rims

If the trailer has been struck or impacted, or if the trailer has struck a curb, inspect the rims for damage and replace any damaged wheel. Inspect the wheels for damage every year.

7.2.9 Wheels, Bearings and Lug Nuts

The following is intended to serve as a general reference for non-specific wheel bearing care. Consult the axle manufacturers service repair manual for specific procedures. To check the bearings, jack up trailer and check wheels for side-to-side looseness. If the wheels are loose,

or spin with a wobble, the bearings must be serviced or replaced. Most trailer axles are built with sealed bearings that are not serviceable. Sealed bearings must be replaced as complete units.

7.2.9.1 Unsealed Bearings (Hubs)

If the trailer has unsealed bearings, they must be inspected and lubricated once a year, or 12,000 miles whichever comes first. If a trailer wheel bearing is immersed in water it must be replaced. If the trailer has not been used for an extended time, have the bearings inspected and packed more frequently, at least every six months and prior to use.

Follow the steps below to disassemble and service the UNSEALED wheel bearings.

- After removing the grease cap, cotter pin, spindle nut and spindle washer, remove the hub and drum to inspect the bearings for wear and damage.
- Replace bearings that have flat spots on rollers, broken roller cages, rust or pitting. Always replace bearings and cups in sets. The inner and outer bearings are to be replaced at the same time.
- Replace seals that have nicks, tears or wear.
- Lubricate the bearings with a high quality EP-2 automotive wheel bearing grease.

Every time the wheel hub is removed and the bearings are reassembled, follow the steps below to check the wheel bearings for free running and adjust.

- Turn the hub slowly by hand, while torqueing the spindle nut, until the hub cannot be turned by hand.
- Loosen the spindle nut just enought so the hub rotates.
- Put a new cotter pin through the spindle nut and axle.
- Check the adjustments. Both the hub and the spindle nut should be able to move freely.

7.2.9.2 Lug Nuts

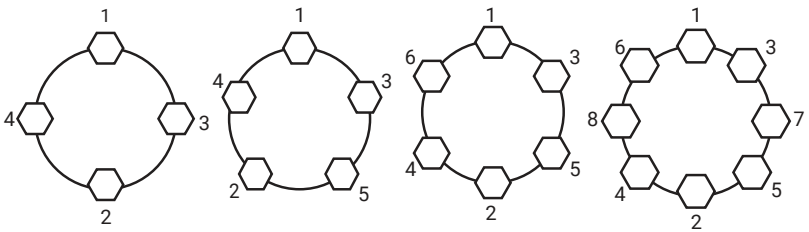
Inadequate and/or inappropriate wheel nut torque is a major reason that lug nuts loosen in service. Loose lug nuts can rapidly lead to a wheel separation.

⚠WARNING Lug nuts are prone to loosen after initial installation, which can lead to death or serious injury. Check lug nut tightness on a new trailer or when wheels have been remounted after the first 10, 25 miles of driving.

WARNING Metal creep between the wheel rim and lug nuts will cause rim to loosen and could result in a wheel coming off, leading to death or serious injury. Torque lug nuts before each tow.

Torque the lug nuts to the proper torque for the axle size on the trailer to prevent wheels from coming loose. Use a torque wrench to torque fasteners. Use a torque wrench to measure the torque applied to the lug nut. Over torqueing will result in breaking the studs or permanently deforming the mounting stud holes in the wheels.
Contact the dealer immediately if any lug nut is constantly loose or for any other lug, wheel or axle problems. In the event of a wheel separation incident, notify the dealer. Seek prompt professional assistance in assessing the trailer and its gear, and retain but do not re-use involved lugs, wheels and studs. Call a trained technician to repair or service the trailer.

Wheel Lugnut Torque Requirements & Torqueing Sequence				
Axle Capacity (lb)	Lug Nut Size (in)	Stud Diameter (in)	Wheel Diameter (in)	Torque Range (ft*lb)
3500	3/4	1/2	15	80-90
7000	7/8	9/16	16	100-110
7000	1 1/16	9/16	17.5	130-140
8000	7/8	9/16	16	100-110
8000	1 1/16	9/16	17.5	130-140
9000	1 1/16	5/8	17.5	130-140
10000	1 1/16	5/8	16	150-175
10000	1 1/16	5/8	17.5	150-175
12000	1 1/16	5/8	16	150-175
12000	1 1/16	5/8	17.5	150-175
15000	1 5/16	7/8	17.5	325- 350



8. TEXAS PRIDE TRAILERS WARRANTY

Manufacturer's Limited Warranty for all products manufactured by TEXAS PRIDE TRAILERS and sold under the "Texas Pride" label are subject to specific and implied warranties as follows:

TEXAS PRIDE TRAILERS warrants that each Texas Pride trailer operated by the original purchaser under normal use in the Continental United States or Canada will be free from defects in materials and workmanship for one (1) year following the original purchase, subject to requirements, exclusions and limitations stated below which will be strictly applied.

EXCLUSIONS

1) Equipment that has been modified, repaired, or altered in any fashion by anyone besides.

2) Unreasonable use, including failure of purchaser or user to provide reasonable and necessary care and maintenance.

3) Improper loading or subjecting trailers to load weights in excess of its capacity.

4) Tires, axles, axle assemblies, suspension components, couplers, safety chains, or any other equipment or component, which is warranted separately by the respective manufacturers of, said component.

5) Any consequential damages for breach of this or any other warranty expressed or implied whatsoever. Repair or replacement under this Warranty is the exclusive remedy to the purchaser or anyone else.

6) Parts not supplied by TEXAS PRIDE TRAILERS.

7) Any parts which require replacement or maintenance in the ordinary use due to normal wear such as, brake parts, seals, hinges, spring bushings etc. and bearings carry no warranty at all or any kind.

8) No warranty against rust or rust through of paint and no warranty against scratches or dents at time of purchase. No warranty against axle bending for any reason.

9) Any trailer utilized as a rental unit or as part of a rental combination with rental equipment is warranted for 90 days from the date of original retail purchase.

10) Transportation of any trailer to and/or from your dealer or any Texas Pride approved repair facility shall be the responsibility of the trailer owner. TEXAS PRIDE TRAILERS shall not be liable for any such costs.

LIMITATIONS

1) This warranty is not a statement of fitness or merchantability. TEXAS PRIDE TRAILERS does not offer any warranty of fitness or merchantability for any particular use or application of any trailer or part.

2) Customer must present original purchase receipt or invoice to TEXAS PRIDE TRAILERS for any WARRANTY consideration.

3) Warranty is not transferable.

EXCLUSION OF COMPONENTS WARRANTED BY OTHER MANUFACTURERS

Tires, axles, brake components, springs and suspension components, couplers, jacks, tarps and batteries purchased and installed by Texas Pride are warranted by their respective manufacturers and are excluded from this TEXAS PRIDE TRAILERS Warranty. See component information supplied with the trailer (page 85).

NORMAL USE, NO REPAIRS OR ALTERATIONS

This Limited Warranty covers only defects in original components which arise from normal use and does not apply if the trailer has been subjected to negligence, accident, abuse, misuse, neglect, overload or has been repaired or altered without prior written consent of TEXAS PRIDE TRAILERS. Normal wear items, including but not limited to struts, lights, bearings, brakes, brake linings, tires, spring bushings, and batteries will not be replaced due to wear.

TRANSPORTATION COSTS EXCLUDED

Transportation of any trailer to and/or from your dealer or any Texas Pride approved repair facility shall be the responsibility of the trailer owner. TEXAS PRIDE TRAILERS shall not be liable for any such costs.

PRIOR WRITTEN CONSENT REQUIRED AND RETURN OF DEFECTIVE PARTS REQUIRED

No reimbursement will be made to any dealer or owner for repairs made without the prior written consent of TEXAS PRIDE TRAILERS. Any defective part(s) must be sent by prepaid freight to TEXAS PRIDE TRAILERS in order to qualify for replacement or reimbursement under this Limited Warranty.

LIMITATIONS

THE SOLE RESPONSIBILITY OF TEXAS PRIDE TRAILERS UNDER THIS LIMITED WARRANTY SHALL BE TO REPAIR AND REPLACE PARTS AT A TEXAS PRIDE TRAILERS FACTORY; HOWEVER, UNDER UNUSUAL CIRCUMSTANCES WITH PRIOR WRITTEN APPROVAL AND AT TEXAS PRIDE TRAILERS DISCRETION, A REASONABLE ALLOWANCE MAY BE MADE FOR REPAIR OFF SITE. ALL OTHER OBLIGATIONS OR LIABILITIES, INCLUDING INCIDENTAL OR CONSEQUENTIAL DAMAGES OR CONTINGENT LIABILITIES ARISING OUT OF THE FAILURE OF ANY PARTS TO OPERATE PROPERLY ARE HEREBY EXCLUDED, INCLUDING BUT NOT LIMITED TO ANY DAMAGES RESULTING FROM LOSS OF USE, INCONVENIENCE, LOSS OF TIME, COMMERCIAL LOSS OR ANY OTHER TYPE OF DAMAGES, GENERAL OR SPECIFIC, FORESEEN OR UNFORESEEN, UNLESS APPLICABLE STATE LAW PROVIDES OTHERWISE.

DISCLAIMERS

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND REPRESENTATIONS. TEXAS PRIDE TRAILERS MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO TEXAS PRIDE TRAILERS

WHETHER AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER MATTER. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. NO ONE, INCLUDING AN AUTHORIZED TEXAS PRIDE TRAILERS DEALER, IS AUTHORIZED TO MAKE FURTHER OR ADDITIONAL WARRANTIES ON BEHALF OF TEXAS PRIDE TRAILERS. ALL IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR INTENDED USE ARE LIMITED TO WARRANTY PERIODS STATED ABOVE, UNLESS ANY APPLICABLE STATE LAW PROVIDES OTHERWISE.

DISPUTES UNDER THIS LIMITED WARRANTY

Any and all disputes and claims of any kind and nature whatsoever arising under this Limited Warranty shall be handled as provided in any agreement of purchase and sale for the product.

If such agreement does not include an express provision relating to the handling of disputes and claims, then the following terms shall apply to this Limited Warranty. This Limited Warranty shall be deemed to have been made in the State of Texas (without regard to the conflict of law principals of the State), including matters of construction, validity and performance regardless of location of the product. You expressly wave any and all rights to jury trial regarding any dispute hereunder. You hereby irrevocably submit to the exclusive jurisdiction and venue of courts sitting in Madison County, Texas. You hereby irrevocably waive, and hereby agree not to assert by way or motion, defense, or otherwise, any claim that you are not subject personally to the jurisdiction of such courts, that the product or any other property of yours is exempt or immune from attachment or execution, that any action brought under this Limited Warranty is brought in an inconvenient forum, that the venue of the action is improper or that this Limited Warranty cannot be enforced by any such courts.

REQUIRED WARRANTY CLAIM PROCEDURE

To validate this Limited Warranty, you must register your TEXAS PRIDE TRAILERS product by doing the following:

1) Go to www.texspridetrailers.com.

2) Scroll to the bottom of the page and click “Warranty Form”.

3) Fill out the Warranty Registration Form in its entirety. Ensure that the supplied information is accurate.

4) Click “SUBMIT REGISTRATION”

IF THIS WARRANTY REGISTRATION IS NOT COMPLETED BY THE THIRTIETH DAY AFTER PURCHASE OF THE TRAILER, ALL EXPRESS WARRANTIES CONTAINED IN THIS LIMITED WARRANTY SHALL BE NULL AND VOID EXCEPT AS PROHIBITED BY LAW.

Within five (5) days after discovering a problem with your Texas Pride trailer, return your trailer for inspection to the Texas Pride dealer where you bought your trailer.

If your dealer cannot repair the problem free of charge and you want to file a claim under this Warranty and within ten (10) days of your discovery of the defect, your dealer must send a Limited Warranty Claim form to TEXAS PRIDE TRAILERS by fax, or email with all required information.

TEXAS PRIDE TRAILERS will acknowledge such receipt of claim verbally or in writing, to the dealer and to the claimant. TEXAS PRIDE TRAILERS will respond as soon as possible, but no later than thirty (30) days after receipt of the claim. Any defective part(s) must be sent by freight to TEXAS PRIDE TRAILERS in order to qualify the claimant for replacement under this Limited Warranty. **ALL DEFECTIVE PARTS MUST BE RETURNED TO TEXAS PRIDE TRAILERS WITHIN 30 DAYS FROM THE DATE OF TEXAS PRIDE APPROVAL TO QUALIFY FOR REPLACEMENT.**

TEXAS PRIDE TRAILERS will not reimburse any claimant for any adjustment or repair of a Texas Pride trailer without prior written approval by TEXAS PRIDE TRAILERS.

TEXAS PRIDE TRAILERS reserves the right to not pay unreasonable costs for replacement of repair defects in Texas Pride trailers and may, at TEXAS PRIDE TRAILERS discretion, establish a reasonable reimbursement for any authorized work performed under the terms of this Limited Warranty.

TEXAS PRIDE TRAILERS MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES AND THERE ARE NO OTHER WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS LIMITED WARRANTY.

For questions or comments, please direct your correspondence to the address below.

Texas Pride Trailers

1241 Interstate 45 North

Madisonville, TX 77864

(936) 348-7555 Phone

CONTACT US

For customer service, or general assistance, call:

ENGLISH: (936) 285-8757 | ESPAÑOL: (936) 286-6122

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