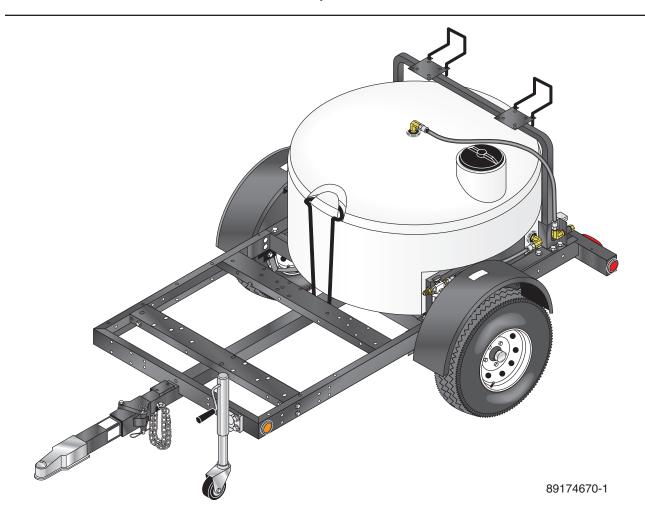


# TRAILER OPERATOR'S MANUAL

■ TRB-3500, 1.103-818.0



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#### INTRODUCTION

Thank you for purchasing a quality built trailer.

This manual is designed to provide information to help you to understand, use and maintain your new trailer.

#### **Owner/User Responsibility**

The owner and/or user must have an understanding of the manufacturer's operating instructions and warnings before using this equipment. Warning information should be emphasized and understood. If the operator is not fluent in English, the manufacturer's instructions and warning shall be read to and discussed with the operator in the operator's native language by the purchaser/owner, making sure that the operator comprehends its contents.

Owner and/or user must study and maintain for future reference the manufacturer's instructions.

This manual should be considered a permanent part of the equipment and should remain with it if unit is resold.

When ordering parts, please specify model and serial number.

#### **MACHINE SAFETY**



WARNING: To reduce the risk of injury, read operating instructions carefully before using.

- Read the owner's manual thoroughly. Failure to follow instructions could cause malfunction of the unit and result in death, serious bodily injury and/or property damage.
- 2. The best insurance against an accident is precaution and knowledge of this equipment.

#### REPORTING SAFETY DEFECTS

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying the trailer maufacturer.

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

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0123 in Washington, DC area) or write to NHTSA, U.S. Department of Transportation, Washington, DC 20590. You can also obtain other information about motor vehicle safety from the Hotline.

#### **CHECKLIST**

#### **Before Your First Trip**

☐ Tire Pressure and Tire Condition
☐ Wheel Lugs\*
☐ Bearing Lube and Tightness
☐ Burnish Brakes (See page 6)
☐ Brakes/Brake Controllers
☐ Breakaway Battery Charge
☐ Hitch
☐ Safety Chains
☐ 12V Running Lights
☐ Distribution and Security

☐ All Jacks "Up" in Travel Position

\* Check lug nuts for tightness before initial trip, at 10 miles, 25 miles and 50 miles. Recheck every 3 months or 3000 miles.

Your local Dealer, in all probability, checked each of these points before you took delivery. However, these are key things you should recheck before taking your trailer on the road for the first time.

#### WHAT TO CHECK AND HOW TO CHECK

#### **Tire Pressure**

Proper air pressure for your tires is printed on the sidewall. Check pressure while tires are cold. Do not raise or lower pressure to meet load. Pressure other than recommended pressure will lead to excessive tire wear or tire failure. <u>Balancing recommended</u>. Preferred balancing method is to center off of stud holes, since 13" through 16.5" wheels are not hub piloted.

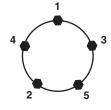
#### Wheels

Check wheels for hole elongation or "out of round". This condition can be caused by lug nuts not being tight or being too tight. Trailer wheels can be damaged by chuck holes or curb jumping. You may not be aware of the road shock to the wheels without periodic checks. Replace any wheel that is bent. Replace any wheel if you see elongation of the bolt holes.

#### Wheel Lugs

Wheel lug nuts must be tightened with a torque wrench. Refer to the chart below for proper torque

- Start all bolts or nuts by hand to prevent cross threading.
- Tighten bolts or nuts following sequence at right.
- The tightening of the fasteners should be done in stages.
   Following the recommended sequence, tighten fasteners per wheel torque chart below.



4. Wheel nuts/bolts should be torqued before first road use and after each wheel removal. Check and retorque after the first 10 miles, 25 miles and again at 50 miles. Check periodically thereafter.

#### **Wheel Torque Requirements**

## TORQUE SEQUENCE WHEEL 1st 2nd 3rd SIZE Stage Stage Stage 14" 20 - 25 50 - 60 90 - 120

#### **Ball Coupler Hitches**

Coupler assembly includes a latch lever and latch lever safety pin or hitch pin. Be sure the latch lever is locked and the pin properly secured before moving your trailer. The pin can be engaged fully only if ball is properly seated in the coupler.

#### **Hitch Balls**

These come in a variety of diameters and capacities. The GVWR (General Vehicle Weight Rating) capacity is always stamped on the ball. Use a 2" ball. **Always** be sure the hitch ball at least matches the GVWR of your trailer. **Always** be sure the diameter of the hitch ball matches the coupler diameter. **Never** attempt to tow your trailer with improper size ball. **Always** keep ball greased to avoid excessive wear. Replace worn hitch ball or locking dogs promptly.

#### **Tires**

Before mounting tires onto wheels make certain that the rim size and contour is approved for the tire as shown in the Tire and Rim Association Yearbook or the tire manufacturer's catalog. Also make sure the tire will carry the rated load. If the load is not equal on all tires due to trailer weight distribution, use the tire rated for the heaviest wheel position.

**Note:** The capacity rating molded into the sidewall of the tire is not always the proper rating for the tire if used in a trailer application. Use the following guideline:

- LT and ST tires: use the capacity rating molded into the tire.
- Passenger Car Tires: Use the capacity rating molded into the tire sidewall divided by 1.10.

Use tire mounting procedures as outlined by the Rubber Manufacturer's Association or the tire manufacturers.

Tire inflation pressure is the most important factor in tire life. Inflation pressure should be as recommended by the manufacturer for the load. Pressure should be checked cold before operation. Do not bleed air from tires when they are hot. Check inflation pressure weekly during use to insure the maximum tire life and tread wear. The following tire wear diagnostic chart will help you pinpoint the causes and solutions of tire wear problems.

**Note:** Tire wear should be checked frequently because once a wear pattern becomes firmly established in a tire it is difficult to stop, even if the underlying cause is corrected.

WEAR PATTERN		CAUSE	ACTION	
	Center Wear	Over Inflation	Adjust pressure to particular load per tire catalog.	
	Edge Wear	Under Inflation	Adjust pressure to particular load per tire catalog.	
	Side Wear	Loss of camber or overloading	Make sure load doesn't exceed axle rating. Align at alignment shop.	
	Toe Wear	Incorrect toe-in	Align at alignment shop.	
	Cupping	Out of balance	Check bearing adjustment and balance tires.	
	Flat Spots	Wheel lockup & tire skidding	Avoid sudden stops when possible and adjust brakes.	

#### **Safety Chains**

Your trailer is equipped with safety chains that meet the requirements of *D.O.T. Regulations 393.70*.

Always attach the chains by crossing them, forming a "cradle". If your coupler disengages for any reason, the "cradle" will keep the hitch from dragging on the ground. You'll be able to make an easier and safer stop.

#### Safety Chain Hook-Up

Abrasion (possibly from dragging on the ground) or unusual stress (like the situation described above) can weaken the links, making them unsafe for trailering. If you detect any of these conditions, *replace the safety chains!* If chains are too long, twist to shorten, and prevent dragging.

#### **Brakes**

Your trailer is equipped with one of several brake type options.

Complete service and repair information for each available type brake is found in the Service Manual that is furnished with your trailer,

**Note**: It is important to strictly adhere to the instructions for brake service and repair. In this way, you are protecting the validity of all applicable warranties.

#### **Burnishing the Brakes**

Brakes on a new trailer may tend to "grab" or pulsate. This is normal. To correct the situation, pull the trailer with the trailer brake control slightly engaged a short distance (about 1000 ft or until trailer does not grab or pull to one side anymore). This action smooths down the brake bands.

Note: Do not lock up the wheels.

## Breakaway Switch & D.O.T. Wet Cell Battery

After hitching to the tow vehicle, pull the safety pin on the breakaway switch. Check to see if system is operational. Push safety pin back in to its original position.

Check battery fluid level every 60-90 days. Remove cover. There are two fill caps. Refill with distilled water only.

#### Breakaway Switch Mounted on Frame

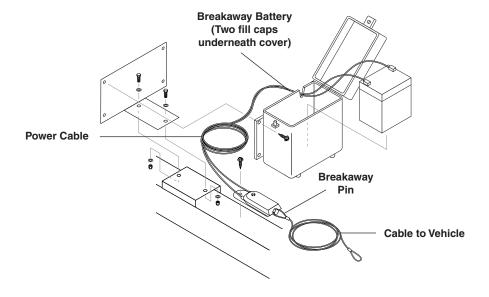
Attach breakaway switch cable securely in a straight line to the tow vehicle. Locate attachments so little "slack" is left in the cable, but enough slack to allow for turning without disengaging the pin. The cable will activate brakes the instant a trailer becomes disengaged. Brake adjustment is critical to stopping a disengaged trailer.

## Check Breakaway System & Brakes Before Each Trip

- 1. Disconnect 12V plug from tow vehicle.
- 2. Pull breakaway pin.
- 3. While pin is pulled, move tow vehicle forward. Brake should be on and wheels locked.
- 4. Replace pin and secure to tow vehicle. Do not loop over hitch ball.
- 5. Plug 12V connector into tow vehicle receptacle.
- 6. Test brakes with brake controller.

**Note:** When disconnecting trailer from tow vehicle, make sure to replace safety pin.

#### **Breakaway Battery**



#### **BRAKES**

#### **Brake Adjustment**

Brakes should be adjusted (1) after the first 200 miles of operation after the brake shoes and drums have "seated", (2) at 3000 mile intervals and (3) as use and performance require. The brakes should be adjusted in the following manner:

- 1. Jack up trailer and secure on adequate capacity jack stands. Check that wheel and drum rotate freely.
- 2. Remove adjusting hole cover from adjusting slot on bottom of brake backing plate.
- With screwdriver or standard adjusting tool, rotate the starwheel 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:** With drop spindle axles, a modified adjusting tool with about an 80 degree angle should be used.

- Then rotate starwheel in opposite direction until wheel turns freely with slight lining drag.
- Replace the adjusting hole cover and lower wheel to ground.
- 6. Repeat above procedure on all brakes.



CAUTION: Never crawl under your trailer unless it is resting on properly placed jack stands.

Do not lift or place supports on any part of the suspension system.

#### **Brake Cleaning & Inspection**

Your trailer brakes must be inspected and serviced at yearly intervals or more often as use and performance require. Magnets and shoes must be changed when they become worn or scored thereby preventing inadequate vehicle braking.

Clean the backing plate, magnet arm, magnet and brake shoes. Make certain that all the parts removed are replaced in the same brake and drum assembly. Inspect the magnet arm for any loose or worn parts. Check shoe return springs, hold down springs and adjuster springs for stretch or deformation and replace if required.



CAUTION: Asbestos Dust Hazard. Since some brake shoe friction materials contain asbestos, certain precautions need to be taken when servicing brakes:

- 1. Avoid creating or breathing dust.
- 2. Avoid machining, filing or grinding the brake linings.
- 3. Do not use compressed air or dry brushing for cleaning. (Dust can be removed with a damp brush).

#### TRAILER STORAGE

#### **Preparation**

If your trailer is to be stored for an extended period of time or over the winter, it is important that the trailer be prepared properly.

- Remove the emergency breakaway battery and store inside, out of the weather. Charge the battery at least every 90 days.
- 2. Jack up the trailer and place jack stands under trailer frame so that the weight will be off the tires. Never jack up or place jack stands on the axle tube.
- 3. Lubricate mechanical moving parts that are exposed to weather, such as the hitch and suspension parts.

**Note:** On oil lubricated hubs the upper part of the roller bearings are not immersed in oil and are subject to potential corrosion. For maximum bearing life it is recommended that you revolve your wheels periodically (every 2-3 weeks) during periods of prolonged storage.

## After Prolonged Storage — Inspection Procedures

Before removing trailer from jack stands:

- Remove all wheels and hubs or brake drums. Note which spindle and brake that the drum was removed from so that it can be reinstalled in the same location.
- 2. Inspect suspension for wear.
- 3. Check tightness of hanger bolt, shackle bolt and U-bolt nuts per recommended torque values.
- 4. Check brake linings, brake drums and armature faces for excessive wear or scoring.
- 5. Check brake magnets with an ohmmeter. The magnets should check 3.2 ohms. If shorted or worn excessively, replace.
- Lubricate all brake moving parts using a high temperature brake lubricant. (LUBRIPLATE or equivalent).

## CAUTION: Do not get grease or oil on brake linings or magnet face.

- Remove any rust from braking surface and armature surface of drums with fine emery paper or crocus cloth. Protect bearings from contamination while so doing.
- 8. Inspect oil or grease seals for wear or nicks. Replace if necessary.
- 9. Lubricate hub bearings. Refer to procedure in manual.
- 10. Reinstall hubs and adjust bearing per instructions in manual.

#### PREVENTATIVE MAINTENANCE

This trailer was produced with the best available materials and quality craftsmanship. However, you as the owner, have certain responsibilities for the correct care of the equipment. Attention to regular preventative maintenance procedures will assist in preserving the performance of your equipment.

MAINTENANCE SCHEDULE				
Tire Air Pressure	Inflate to proper pressure indicated on sidewall	Every Trip		
Wheel Lugs, Bolts & Nuts	Tighten to proper torque specifications	Every 3000 mi or 3 mos.*		
Wheel	Check for damage and or out-of-round	Every 6000 mi or 6 mos.		
Coupler Ball	Check for sufficient lube. Check lock mechanism. Check for unusual wear.	Every trip		
Safety Chains at Hitch Ball	Check for abrasion, distortion and general integrity of links.	Every trip		
Coupler	Check for proper fastening & hitch pin in position and secure.	Every trip		
Brakes	Check for proper adjustment & operation	Every trip		
Breakaway Switch	Test switch operation and connections	Every trip		
Breakaway Battery	Pull switch pin, check charge indicator light	Every trip		
Load Distribution	Check load distribution & security	Every trip		
Leveling Jacks	Check fastenings. Lube.	Every trip		
Welds	Check all weld beads for cracks or separations	Every 6000 mi. or 6 mos.		
Hinges	Grease zerks with a Lithium complex grease	Every 3000 mi. or 3 mos.		
Tie Down Devices	Check for fracturing, distortion and improper anchoring.	Every 3000 mi., or 3 mos.		
Electrical: Lights & Signals	Check to make sure all are working properly. Replace burned out bulbs.	Every trip		
* Check lug nuts for tightness before initial trip, at 10 miles, 25 miles and 50 miles. Recheck at least every 3 months or 3000 miles				

**Axles, Hubs and Brakes** 

Maintenance for axles, hubs and brakes is extremely important for protecting the longevity of your trailer. It is extremely important for your personal safety and the protection of others. Follow the maintenance schedule exactly as described.

Please, never shortcut axle, hub and brake service and maintenance.



#### HOTSY LIMITED TRAILER WARRANTY

(Effective August 2009)

We warrant to the original purchaser that each new part and accessory sold by Hotsy will be free from manufacturing defects in materials or workmanship in normal service for a period of one (1) year from date of purchase, provided it is installed properly and the equipment maintained in accordance with Hotsy instructions and manuals.

Our obligation under this warranty is expressly limited. As to the replacement or repair, at our option, at Hotsy Inc., Camas, Washington 98607, or at a service facility designated by us, for such part or parts as inspection shall disclose to have been defective.

#### **EXCLUSIONS:**

This warranty does not apply to defects caused by casualty or unreasonable use, including faulty repairs by others and failure to provide reasonable and necessary maintenance.

#### THE FOLLOWING ITEMS ARE NOT COVERED BY THIS WARRANTY:

Suspension axles, torflex axles, hubs, drums, brakes, bearings and seals. These are subject to the warranties, if any of their manufacturers.

WE SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND, including but not limited to labor costs or transportation charges in connection with the replacement or repair of defective parts.

ANY IMPLIED OR STATUTORY WARRANTIES, INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. We make no other express warranty, nor is anyone authorized to make any in our behalf.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

#### TO OBTAIN WARRANTY SERVICE:

Purchaser must bring the trailer to an authorized Hotsy Dealership. For the dealership nearest you consult our web page: www.Hotsy-inc.com.

