

SKEETER TRAILERS OWNERS OPERATION MANUAL



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WARNINGS

THE FOLLOWING SIGNAL WORDS AND SYMBOLS ARE USED TO ALERT YOU TO POTENTIAL HAZARDS. PLEASE ADHERE TO ALL MESSAGES AND INSTRUCTIONS THAT FOLLOW THESE WORDS TO AVOID POSSIBLE SERIOUS INJURY, OR DEATH.



WARNING indicates a potentially hazardous situation which, if not avoided, could result in serious injury, or death.



CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



NOTICE indicates special precautions that must be taken to avoid damage to the trailer or other property.

Introduction



Death, serious injury, and/or property damage can result if you do not read and follow instructions in the owner's manual. Make sure all people towing this trailer read and follow the instructions.

We would like to thank you for purchasing a SKEETER Boat Trailer, which is National Marine Manufacturers Association (NMMA®) certified, and National Association of Trailer Manufacturers (NATM®) compliant.

NMMA Certification means we comply with established industry standards and federal safety regulations. NATM verification compliance program verifies trailers are built to meet best practices according to state and federal regulations. Both organizations require annual or bi-annual inspections of the manufacturers facility and trailers.



Your new trailer is designed to make loading and launching your boat easier. Read this manual carefully before you use your trailer because it gives important details on the trailer you just purchased. Pay attention to and follow all instructions and maintenance procedures in this manual.

Trailer Length

NOTICE

Make sure when the boat is on the trailer, there is enough space between the front of your boat and the back of your tow vehicle.



The weight of the boat, as listed in the boat manufacturer's product brochure, may not include the weight of the motors, fuel, water and personal gear and should not be used alone when choosing a trailer. Overloading can cause serious injury or property damage.

Attaching Your Trailer

NOTICE

Always get help to back your tow vehicle to your trailer. NEVER move the trailer to the tow vehicle.

Before hitching your trailer to your tow vehicle, please check the items listed on the decal located on or near the winch stand.

Your SKEETER Dealer will provide another decal if it is missing or illegible.

Raise the front of the trailer with the tongue jack. Back your tow vehicle close to the trailer, then get out and check the location of the coupler and hitch ball. Move your tow vehicle until the coupler is over the hitch ball. Using the tongue jack, lower the trailer until the coupler completely covers the hitch ball. Lock the coupler with the supplied hitch pin.



Make sure the coupler completely covers the ball and the ball clamp inside the coupler is below the ball, not on top of the ball. Use a padlock or supplied pin to secure the coupler lever in the locked (down) position, failure to do so can cause trailer to become detached from tow vehicle, which may result in serious injury or death.

After the coupler is locked on the hitch ball, raise the front of the trailer using the tongue jack. If the coupler comes loose, reattach the coupler to the hitch ball and raise the front of the trailer again. If the coupler will not stay attached, check the hitch ball and coupler for size and damage.



BEFORE TOWING THIS TRAILER CHECK THAT:

- Coupler and hitch ball are the same size and correct rating.
- Coupler is latched (Closed).
- All safety chains are attached. The trailer safety chains are crossed under the tongue.
- All trailer lights are working correctly.
- Boat is secured to the trailer front and rear. (DO NOT use winch line alone).
- Tongue jack is all the way up and stored.
- Wheel lug bolts or nuts are tight.
- Tires have correct pressure.
- Trailer brakes are adjusted and breakaway cable is attached to tow vehicle
- Load in trailer is within trailer capacity, distributed correctly, and the trailer tongue weight is correct.

This product contains chemicals known to the State of California to cause cancer and other birth defects or other reproductive harm.



IMPORTANT

You are required to obey local and state laws and regulations regarding brakes, licensing, and additional equipment that is needed for your trailer. Contact your state motor vehicle department for more information.

After the coupler is secured to the hitch ball, raise the tongue jack all the way. If you have a swing-up style tongue jack, turn it to the traveling position and make sure the lock pin is secure in the hole. Cross the safety chains or cables under the tongue and attach them to the tow vehicle. Connect the trailer wiring harness to the lighting system of your tow vehicle. Remember to check your lights.

Spot check all other trailer components (i.e. tires and tie-downs).

Hitch Recommendations and Tips



WARNING
Make sure the jack is in the stored or traveling position before towing the trailer. If it is not, it can cause the trailer to separate from the tow vehicle, which may result in serious injury or death.



WARNING
Our trailer's GVWR must not exceed the capacity of your hitch. Be sure you have the right size ball, shank, and capacity to match your trailer's model and coupler size. The correct ball size and capacity is marked on the coupler

Two types of trailer hitches are normally used: Weight carrying hitches which attach to the tow vehicle and support the trailer tongue weight only, and Weight distributing hitches which transfer some of the tongue weight to the tow vehicle by using extra spring bars on each side of the trailer ball. Bumper hitches are not recommended for boat trailers.

For most boat trailers, a Weight carrying hitch is usually adequate. Weight distributing hitches are recommended for very heavy loads. Before you decide which hitch to buy, contact your SKEETER Dealer and read the manufacturer's recommendations for your towing vehicle. SKEETER does not recommend self-installation of trailer hitches.

If you choose a Weight distributing hitch, contact a dealer specializing in hitches and hitch installation to make sure it is properly installed, that it is compatible with your trailer's brake system and that you don't exceed weight requirements.



WARNING
Do not use Weight distributing hitches with surge-braked trailers. Overloading or improper installation of Weight distributing hitches may not let hydraulic surge brake actuators work and the tow vehicle and trailer may take longer to stop.

Several models of Weight distribution hitches will render the brakes inoperative. SKEETER cannot assume responsibility or accept warranty claims in such instances. Please make sure the Weight distribution hitch you choose is compatible with the trailer's braking system.

Please Note: Hitch ball height is determined by measuring from the ground to the top of the coupler ball housing with the trailer frame level when the trailer is on a level surface. The average height to the top of the hitch ball is usually from 14 inches to 21 inches above the ground when loaded. Actual height will vary from trailer to trailer.



WARNING
For proper load distribution on tandem and triple torsion axle trailers, it is very important that the trailer is parallel to the ground while towing

Every coupler on a SKEETER boat trailer is permanently marked with:

- Manufacturer's code, name or trademark;
- SAE ® coupling designation and gross coupler rating;
- Part number or style model; and Proper ball diameter.

Coupler and Hitch Ball Operation



WARNING
Do not use a different size ball shank, or capacity than recommended and be sure both the hitch ball and hitch ratings are the same or more than the Gross Vehicle Weight Rating of your trailer.

Keep the latch mechanism clean and lightly oiled.

If the latch mechanism or coupler is bent or deformed in any manner, do not use the trailer until a new latch assembly or coupler is installed. Some replacement assemblies and rebuild kits are available at your SKEETER dealer.

SKEETER trailers are equipped with XR-84 couplers. An example is shown below.



TO OPEN THE COUPLER (XR-84)
Remove hitch pin from hole on side of the coupler. Lift handle up and toward the rear until it rests in the open position. This coupler is self-latching and does not require the latch handle to be in the open position to insert the hitch ball.

TO CLOSE COUPLER (XR-84)
Coupler does not need to be in the open position when placing on hitch ball. To latch coupler onto hitch ball, make sure hitch pin is removed from side of coupler and simply lower coupler over ball. During this process, the coupler handle will rise and then self close when the coupler is fully seated onto hitch ball. If handle does not return to the fully closed position, ball is not fully inserted into coupler socket, there is a misalignment between coupler and ball or ball is oversized or egg shaped. **DO NOT FORCE HANDLE.** If necessary, replace ball with a quality unit that meets SAE specifications and the GVWR of the trailer. Once the handle is fully closed, insert hitch pin into hole on side of coupler. Hitch pin should go completely through to other side of coupler. To close coupler handle, push handle horizontally toward the front and it will slide down into the closed position.

Do not tow your vehicle if latch handle will not remain closed or with the handle open. Check to see if coupler is locked by lifting up on the handle. If the handle opens, the hitch ball is not the right size, oversized, egg shaped or the latch parts have been damaged. If the latch is damaged, contact UFP for replacement parts at www.ufpnet.com.

For further information see actuator brochure in your new trailer packet or visit www.ufpnet.com



Tongue Jack Use and Care

Place the jack into position, crank the jack handle until the trailer coupler is high enough for the coupler to go over the hitch ball and lower the trailer coupler onto the ball by cranking the jack handle in the opposite direction.

Like the winch, or any kind of mechanical assembly, a jack requires lubrication maintenance. Regularly grease the drive gear, and rack & pinion and oil the caster and wheel bearings.



LED
Your SKEETER trailer is equipped with LED's which are energy efficient and have a longer life.



WARNING
You must install the hitch pin (supplied) into the hitch pin hole before towing to prevent the coupler latch opening accidentally, which may result in serious injury or death.



WARNING
To avoid serious injury or death, back your tow vehicle to your trailer. DO NOT move your trailer to the tow vehicle. When the trailer is moved without a tow vehicle the brakes do not work.



WARNING
Always attach the trailer and boat bow safety chains before towing.

Trailer Lights



WARNING
To avoid serious injury or death back trailer lights to make sure they are in working order before any trip. If your trailer has electric brakes, unplugging the trailer wire from the tow vehicle will disable the trailer brakes.

Wire Color Code

WHITE	Ground
BROWN	Taillights, side Marker Lights.
YELLOW	Left Brake, Left Turn
GREEN	Right Brake, Right Turn
BLUE	Back Up Solenoid, Reversing Light

Using Safety Cables
Your trailer hitch should have a place to attach the trailer safety chains or cables. Crisscross the trailer safety chains or cables under the trailer tongue before attaching to the towing vehicles. Most state laws require the crisscrossing of these chains or cables. This may prevent the trailer tongue from falling to the road in the event that the trailer coupler becomes detached from the hitch ball. Do not connect the trailer safety chains or cables together.

Original trailer safety chains or cables should not be removed or tampered with. Should you need to replace them, contact a SKEETER Dealer for replacement chains or cables and hooks.

Proper attachment of the safety chains/cables is essential to trailer safety.

If your jack is a swing up type, return it to its stowed (up) position, making sure the securing pin is firmly in its hole. If your jack is not a swing-up type, retract your trailer jack completely (wheel raise as high as possible) before towing the trailer.



NOTICE
Care must be used when engaging or disengaging a swing-up style tongue jack.

When using the jack in the down position to support weight, make sure the securing pin is firmly in its hole before adding any weight to the jack. If the securing pin is not firmly in its hole, the jack may collapse under the weight placed on it. While towing, if your jack is not folded up or retracted completely, damage could result and your jack may have to be replaced.

Always double check your lights to make sure they are in working order before any trip. Twice a year, it is a good idea to inspect your taillights and look for bare wires, cracked insulation or corroded terminals. Always be sure the white ground wire is connected to the trailer frame. Replace all worn or damaged parts. Dielectric grease can be put on plug contacts and bulb bases to prevent rust and corrosion. Tow vehicles with three-light lighting system (different lights for brake, turn, and tail lights) need an adapter to change the three-light system to a two-light system. Make sure your vehicle is equipped with the proper lighting package. We recommend a professional, i.e. your auto motive dealer, install it for you. SKEETER's Wire Color Code is listed below.

SKEETER Wire Color Code

Before you Tow (Tying Down Your Boat)



WARNING
Make sure the boat is secure and held in place before towing.

Tie down the boat securely at the stern, in both a downward and forward direction, with approved tie downs. Use the rear tie down points provided on your trailer.

Make sure your boat is properly secured to the trailer. Do not depend on the winch line, strap or cable alone to hold your boat secure. Check winch line, strap or cable for fraying, cuts or tears. If it is damaged, replace it immediately.

DO NOT USE IF DAMAGED!



Winch Adjustment and Use



Never disengage the winch ratchet lock while winching your boat onto the trailer.

Whether your winch is a hand-operated model (standard) or an electric model (after market), both can be adjusted for the best possible performance. The winch height should be adjusted so that the winch cable/strap is level or as close as practical with the bow eye of the boat when the boat is resting on the trailer, with the bow stop roller or vee block just above the bow eye of the boat. Your boat will then be pulled in straight line onto the trailer and against the bow stop on the winch stand. The angle the winch is pulling your boat should not make the boat lift up or pull down when pulling the bow eye against the underside of the bow roller or vee block. It should pull the bow eye straight into the underside of the bow roller or vee block.



Maintenance of the mechanical winch is simple. Keep clean, lubricate regularly and apply heavy grease to the gears frequently. Make sure the winch line, strap or cable doesn't rub against anything sharp; fraying and wear could result. If your line, strap or cable becomes worn, contact your SKEETER Dealer for replacement as soon as possible.

Swing Tongue

The inline swing tongue is a UFP designed product which the manufacturer hides the bolts and hinge inside the application giving it a much nicer appearance.



The inside is a cast steel plated-piece that allow for the part to be opened without scratching the paint. This also has a pin application and bolt.

PRE-DEPARTURE SAFETY CHECKLIST

Before driving, make sure your vehicle maintenance and trailer maintenance are current. This is very important because towing puts additional stress on the tow vehicle.

- Check and correct tire pressure on the tow vehicle and trailer, including the spare tire.
- Make sure the wheel lug nuts/bolts on the tow vehicle and trailer are tightened to the correct torque.
- Be sure the hitch, coupler, draw bar and other equipment that connect the trailer and the tow vehicle are properly secured and adjusted.
- Make sure the safety chains are properly criss-crossed and connected, not touching the road but with enough slack to make turns.
- Check that the wiring is properly connected; not touching the road, but loose enough to make turns without disconnecting or damaging the wires.
- Make sure all running lights, brake lights, turn signals and hazard lights are working.
- Verify that the brakes on the tow vehicle and trailer are operating correctly.
- Ensure the breakaway system lanyard is connected to the tow vehicle but not to the safety chains or ball mount.
- Check that all items are securely fastened on and in the trailer.
- Be sure the trailer jack, tongue support and any attached stabilizers are raised and locked in place.
- Check load distribution to make sure the tow vehicle and trailer are properly balanced front to back and side to side.
- Check side- and rear-view mirrors to make sure you have good visibility.
- Check routes and restrictions on bridges and tunnels.
- Make sure you have wheel chocks and jack stands.



National Association of Trailer Manufacturers

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On the Road

SKEETER recommends all people wear safety restraints at all times while towing with any vehicle. Going too fast is a major cause of vehicle trailer accidents. At a minimum, observe the posted speed limits. Slow down for curves, bad weather, hazardous road conditions and expressway exits. A road hazard that could be avoided at 45 or 50 mph, may not be avoided at 55mph.

Stopping/Following Distance

Your tow vehicle and trailer are heavier and longer than your tow vehicle alone. This means it will take you longer to stop. Allow at least 4 seconds between you and the vehicle in front of you. Start counting when the back of the vehicle in front of you passes a fixed object, such as a sign post, telephone pole, or crack in the road. If the front of your vehicle reaches the object before the end of the 4 seconds, slow down to increase the distance. Then check the following distance again. If you are driving in bad weather, such as rain, snow or fog. Use at least a 5 second gap.

Hills

To prevent your tow vehicle's engine from lugging when going up hills, shift into lower gears. This will improve gas mileage and reduce engine overheating.

Swaying or "fishtailing" happens more often going downhill. To prevent this from happening, decrease speed BEFORE going down the hill. If your trailer has surge brakes, do not shift into lower gears when going downhill. This can make the trailer brakes come on the entire time you are going downhill and may cause your trailer brakes not to work.

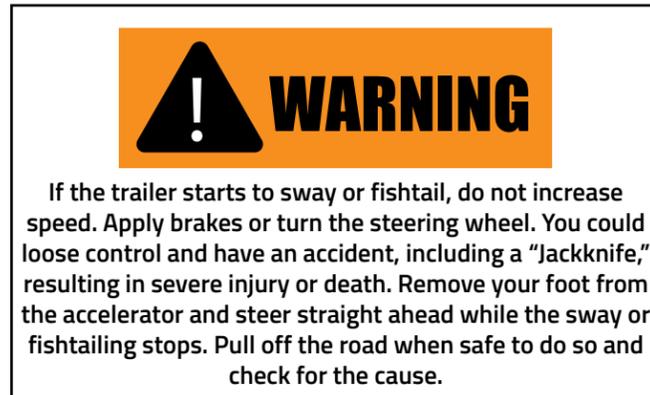
DO NOT ride the brake pedal going downhill. When you need to slow down, press the brake pedal and slow down at least 5 mph below the speed limit. Then let completely off the brake pedal and let the brakes cool before you press the brake pedal again if possible or practical.

Passing

Your tow vehicle and trailer are heavier and longer than your tow vehicle alone and you will need more time and distance to pass.

Passing by another vehicle in the same or opposite direction can cause sway or fishtailing. This sway is greater when your speed is higher. See the SWAY/FISHTAILING section below on what to do if this happens.

Sway/Fishtailing



One or more causes (cross winds, passing vehicles, quick driver steering actions, improper loading, excessive speed, etc.) may result in sway.

Check the cargo in your boat to make sure it has not shifted. Also make sure the trailer is loaded heavier in the front.

Check that all the tires are properly inflated and all lug bolts or nuts are tight.

Check the trunk or cargo bed of the tow vehicle to make sure it is not overloaded.

Drive at a slower speed.
Sway happens most often at higher speeds.

Road Shoulders

Sometimes the trailer is wider than the tow vehicle. Drive in the center of the lane to allow for a wider trailer. If wheels of your vehicle or trailer go off the paved roadway:
Hold the steering wheel firmly. Let off the gas pedal and slow down below 25 mph.

DO NOT apply the brakes.

DO NOT turn the steering wheel sharply.

After slowing down below 25 mph, gradually turn the steering wheel just enough to get you back on the roadway.

Proceed with caution when entering traffic.

Dropping off the shoulder may cause alignment issues with the trailer axle.

Backing

To back your trailer, keep your hand at the bottom of the steering wheel. To move the trailer left, move your hand left. To move the trailer right, move your hand right. Break very slowly if your tow vehicle and trailer starts to jackknife, or is not headed where you want it, STOP. Pull forward to straighten out, and then start again.

Breakdowns & Accidents

Get off the road if something goes wrong, and immediately park your tow vehicle in a safe place, as far away from the road as possible. Turn on your emergency flashers. Get all the occupants out of the vehicle and away from the roadway.

If you must continue on the road to reach a safe place off the road, turn on your emergency flashers, slow down and proceed with caution.

Do not hesitate to drive on a flat tire if it is necessary to reach a safe place completely off the roadway. Drive slowly, since the scraping tire and wheel could cause a fire.

Getting In and Out of the Water

The handling of your boat and trailer at the ramp requires practice, skill and patience. With care and attention to the following tips, you can launch and load your boat with relative ease.

Always prepare the boat for launching before you get to the ramp. Stop in a launching prep area near the ramp that does not block traffic and remove your tie-downs, tilt up your engine or drive unit,

replace your transom drain plugs, etc.

Do not disconnect the wiring harness, winch cable or optional boat bow safety chain until you are by the water, ready to launch.

Launching Checklist In the Parking Area

- Remove the trailer-to-motor supports.
- Remove tie-downs.

- Load and store gear that goes on the boat.

- Check all systems, including your boat's engine, blower, bilge pump and lights.

- Remember to properly install all drain plugs.

At the Ramp-in Launch Position

- Disconnect the bow safety chain hook for the bow eye.

- Follow launching instructions.

- Always practice good boating.



Bunk or Custom Trailers - Launching & Loading

You can rest assured that your new SKEETER bunk style custom-welded, adjustable or aluminum trailer is engineered to provide the easiest launching/loading experience possible. Unfasten the boat bow safety chain, and tie a mooring line to the boat so you will have control once it is floating. Slowly back the trailer down the ramp until there is enough water to make the rear of the boat float. Stop, secure the tow vehicle (in park, or in gear if standard trans. Engine off, and firmly apply the parking brake) walk to the front of the boat and hold the winch handle securely, reverse the winch lock and begin unwinding the line. Unwind it slowly and carefully back the trailer down the ramp until there is enough water to make the boat float. Because the bunks generate more friction than rollers, you need to back the trailer further into the water. Tie a mooring line to the boat so you will have control once it is floating.



If the winch handle slips out of your hand, let it spin. DO NOT try to stop it. It may lead to serious injury or death.

On an average grade, the bunks on your trailer will allow your boat to gently slip back and float into the water. If your boat does not immediately move, try unwinding about six inches of line, lock your winch and give the boat a push. Then unlock the winch and try again. If this does not work you might try backing the trailer in deeper if possible.

Care should be given when launching from trailers with bunks that are equipped with Channel Glide Bunk Covers or other plastic like materials. These materials make the bunk surfaces very slippery, and the boat may begin to unload as soon as tension is released on the winch cable/strap.

When loading, always prepare for the procedure prior to reaching the ramp. If the ramp is busy, preparation will shorten the time it takes for you to get your boat out of the water.

You probably will not have to back the trailer into the water as far to load the boat as you did to launch it. In fact, the easiest way is to back your trailer up until the rear of the bunks are in the water.

By not putting your trailer too deep in the water, your boat will actually center itself on the bunks about 1/3 to 1/2 the distance onto the trailer. Connect the winch cable/strap to the bow eye of the boat. Lock your winch before attempting to wind the cable/strap in. Once your boat is aligned and is pulled firmly against the winch stand roller or vee block and your winch is in the locked position, connect the boat bow safety chain and you are ready to drive to the loading/ preparation area near the ramp to connect all other tie-downs.

Trailer Maintenance and Storage

One of the best maintenance procedures for your trailer is washing the trailer with soap and rinsing with fresh water after every use. This will help prevent rust and give your trailer that "showroom" appearance for a long time.

Check your tire pressure (when tires are cold) and make sure they are inflated to the correct pressure. Tires can lose considerable amount of air pressure when stored during non-use. It is recommended that during storage, trailers be blocked up with the tires off the ground. Note: Under inflated tires can cause wear and tear problems.

Every trip check your lug nuts or bolts for tightness on your wheels. Once a year, or every 2000 miles, whichever comes first, check your greased hub bearings. Check your light wires and electric brake wiring (if applicable) for damage and make sure they do not hang down where they could be caught. When parked or stored, ensure brake actuator is fully extended to release brakes and master cylinder push rod. For off-season storage, park your boat and trailer in a protected area, such as a garage or carport. Do not put plastic bags around your light fixtures as condensation may occur and cause corrosion.

While your boat is in storage, it is a good time to touch up any rust spots, nicks and chips on your boat and trailer. Galvanized trailers occasionally show small rust spots, so touch up those spots with cold galvanizing spray paint, available at most paint stores.

A little trailer maintenance goes a long way in preserving the appearance and performance of your trailer. Please follow our recommendations. We want you to have your SKEETER boat trailer for a long, enjoyable time.

Tuff Coat Finish

This is a sprayed on polyurea. It is sprayed over a fully primed frame structure, offered by SKEETER to protect the surface of the trailers against rock chips.

Wheel maintenance

All warranty claims will be voided if improper maintenance or improper cleaning agents are used. Your investment in a product of the highest quality and workmanship does require care to maintain its factory appearance.

Regular Cleaning

Typical road soils trap moisture, which can cause corrosion over a period of time. Brake dust, caused by friction of your trailers braking system, is itself corrosive and may cause pitting of the wheel finish. These soils must be removed regularly, possibly weekly, depending on your trailering habits.

Use of proper cleaning agents

Your wheels finish should be treated as you would treat the finish of your car. All one-piece aluminum wheels, and two piece aluminum wheels are clear coated to preserve the finish and ease of cleaning. Most household cleaning agents are too harsh for the finish on your wheel and must be avoided.

There are commercially available wheel cleaners, but we urge extreme caution regarding their use, since they tend to be acid or lye based. Always follow the manufacturer's recommendations on the bottle for safe and effective cleaning. Note: Salt water can cause discoloration of aluminum wheels. This is not covered by your warranty. Chrome Steel Wheels After cleaning, always apply a coat of soft non abrasive cream wax to help prevent surface corrosion. Surface corrosion or rust can be prevented with proper care.

Additional tips

To prevent scratching of the wheel finish, never clean your wheels with scouring pads or mag polish. If you use automatic car washes, tell them not to use steam cleaners or strong chemicals to clean your wheels. They can cause permanent staining or corrosion.

Additional Tips (Continued)

Boat bottom cleaners containing muratic or other acids have a highly corrosive effect on both painted, galvanized or aluminum trailers and should not be allowed to contact the trailer. Use caution when cleaning tires with steel wool or bristle brush. These types of abrasive materials must not come in contact with the wheels. Never allow any harsh chemicals or tire cleaner to contact with the wheels, as they will damage the appearance of the wheel permanently. Never spray cold water on extremely hot wheels. Always allow time to cool before cleaning with soap and water or the recommended wheel cleaner

Wheel Installation

Clean and inspect all stud threads and mounting surfaces before installation. Threads must not be lubricated, but must be free of corrosion, rust, burrs and fractures. Replace studs if they are corroded beyond reasonable repair, if threads are stripped, or a fracture is found. Check and make sure the approved lug nuts are correct for the application. When placing the wheel on the studs, there will be an apparent looseness of fit, until the lug nuts are applied.

Check the lug nut thread engagement. Every stud must be long enough to thread into the lug nut a length at least equal to the stud diameter. For example: a 1/2" thread diameter must thread into the lug nut at least a 1/2". Check for this problem on every stud, some may be different lengths. If there is less than one stud thread engagement, do not install wheels.

Lug nuts must be applied in a star or crisscross pattern until desired torque is reached.

Wheel Alignment

A wheel alignment adjusts the angles of the wheels so they are positioned correctly relative to the vehicle's frame. This adjustment maximizes the life of your tires. These adjustments require special equipment and should be performed by a qualified technician.

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.

Check All Nuts and Bolts

Even though SKEETER uses self-locking, vibration resistant nuts, it is the owner's responsibility to make sure all of the fasteners are tight before using the trailer not just the first time you use it, but on a regular basis.

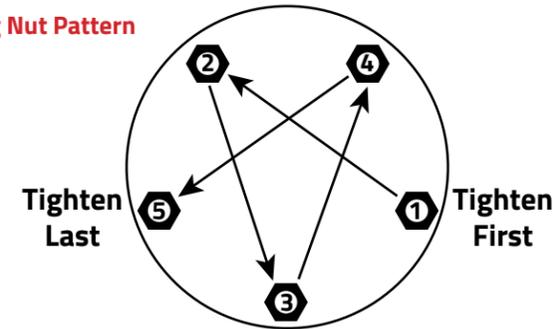


Check you lug bolts or nuts tightness before every trip.

Lug Bolt or Nut Tightening Method

Initially tighten to 20-25 lbs, using a criss-cross tightening sequence on a 5 bolt wheel. Finish torquing per manufacturer's recommendations on all new trailers. SKEETER is not responsible for damage from loose lug nuts. Re-torque after 25-50 miles of use and on a periodic schedule from then on. Lug bolts or nuts should be clean and dry. Do not put grease or other lubricant on them.

Lug Nut Pattern



Most state laws require brakes on trailers, check laws in your state.

Always keep tie-downs tightly fastened. Always use tie-downs or similar securing devices to secure the boat to the trailer, as well as the winch strap/cable and safety chains/cables supplied with your trailer.

Trailer Braking Systems

All four braking systems offer excellent trailer braking, but each have unique qualities.

Hydraulic Surge (Disc Brakes)

Hydraulic surge disc brakes operate on the same idea as hydraulic surge drum brakes. The disc brake needs a special actuator with a back-up solenoid wired into the tow vehicle's reverse lights. When the tow vehicle is put in reverse, the solenoid locks out the braking system allowing the trailer to back up on level ground without the brakes locking up. Since you can see most of the disc brake components, they are easy to keep clean and maintain. See the brochure in your new trailer packet for further information or visit www.ufpnet.com



IMPORTANT

In many states, trailers are required to have brakes on all wheels.

Brake Operation and Maintenance

Contact your state motor department, your SKEETER Dealer or www.boats.com/trailerclub/trailerlaws.asp for the trailer brake requirements in your state.

Inspect your brake system on a regular basis and adjust if necessary and replace any damaged or worn parts. Your SKEETER Dealer can also inspect your brakes. Replace brake fluid with DOT3, which is available from most auto part stores.

Trailer brake manufacturers recommend that when the boating season is over, the brake drums should be removed and the brake assembly should be inspected. All parts should be clean, dry and free from corrosion.

With hydraulic brakes, do not shift to a lower gear and use your engine as a brake when going downhill. This could activate the trailer's brakes continuously for the duration of the downhill run, causing overheating and fading to the point of possibly losing your trailer's braking ability completely.

A better way is to slow down as you approach the top of the hill, and maintain an even, slow, controlled downhill speed with repeated applications of your tow vehicle's brakes, allowing enough time in between for the brakes to cool off.

Brake Adjustments

Only a qualified mechanic trained in the repair and maintenance of braking systems should attempt brake adjustment, repair and replacement. To make the brake adjustments to your SKEETER trailer, follow the method explained below. If you are not sure about making these adjustments, your SKEETER Dealer can make these adjustments for you.



Using pads without enough brake lining material can result in brake damage, create excessive heat and cause the brakes not to work correctly, which could cause serious injury or death.

Trouble-Shooting Hydraulic Brakes

SYMPTOM		SOLUTION
BRAKE NOISE		
Shoe chatter, lining coated with grease or oil.	→	Locate cause of grease or oil leakage. reline and grind for proper lining-to-drum contact.
Vibrations with loose bolts. Out of round drums.	→	Tighten hub bolts or nuts and recondition or replace drums.
Vibration with loose bearing adjustment or rough bearing.	→	Adjust or replace bearings and races.
Worn/cracked drums or machined beyond oversize limits.	→	Replace drums.
EXCESSIVE TRAVEL OF ACTUATOR		
Leaks in hydraulic lines.	→	Replace defective lines.
Low fluid in master cylinder reservoir. Air in hydraulic lines.	→	Refill master cylinder and bleed system
Leaking wheel cylinders.	→	Repair or replace
Leaking primary cup in master cylinder. Ports closed or restricted with dirt. Defective hoses. Leaking check valves fails to keep hydraulic systems preloaded.	→	Check problem components and adjust repair or replace as required.
Excessive lining-to-drum clearance	→	Adjust brakes or replace linings.
PRESSURE BUILD-UP IN SYSTEM		
Contaminated fluid causing cup swelling.	→	Drain, flush and replace fluid. Replace cups.
Master cylinder piston fails to stop and keeps the compensating port closed.	→	Check all components and adjust, repair or replace as required.
Hose or cylinder ports are closed or restricted with dirt.	→	Overhaul or replace.
HEAVY CLUNKING SOUND FROM ACTUATOR		
Leaks in hydraulic lines.		Replace hydraulic lines.
Low fluid in master cylinder.	→	Refill master cylinder and bleed system
If no hydraulic leaks & good fluid level	→	Replace shock absorber.

Wheel, Tire and Hub Care

Since your SKEETER boat trailer is put in water and put through other severe conditions, it needs more attention to the wheels and its components than your car. Your SKEETER trailer is equipped with The Vault Hybrid Lubrication System™ or EUZ hubs.



To check your bearings, raise your wheel clear of the road surface (by the procedure indicated in "tire changing"). With your hands on the outside edges of the tire, try to rock the wheel by pushing on one side and pulling on the other. No noticeable rocking should occur. Spin the wheel and listen for noise or roughness. A smooth, silent operation means that your bearings are in good order. If a grinding sound is heard, contact your SKEETER Dealer for warranty and or replacement instructions.

For Disc Brakes

Adjustment is not necessary on SKEETER'S disc brakes. Make sure the brake parts are free from rust and debris. Check brake pads periodically to make sure there is a proper amount of lining left. Check the brake fluid and make sure it is full before every trip. Only a qualified mechanic trained in the repair & maintenance of braking systems should attempt brake adjustment, repair and replacement.

Tire Changing

Replace your trailer tires promptly if they become worn or damaged. If within the warranty period, contact the tire manufacture for an adjustment. You can get a spare tire at your SKEETER Dealer. We also recommend that you carry a jack, such as a small hydraulic jack for tire changes.



Getting your hands in tight places under the fender can cause accidental pinching.

We recommend wearing gloves while changing tires. After the tire is changed, be sure to re-torque the lug bolts or nuts as mentioned in the "Torque Procedure" section. To change a tire, make sure the trailer is not allowed to move. Attach it to the tow vehicle and block a tire on the opposite side.

Jack Placement



Make sure the trailer is not allowed to move. Attach it to the tow vehicle and block the tires.

On tubular steel type trailers, the best place to put your tire jack is under the axle where the spring mounts to the axle. On a torsion axle trailer, place the jack under the axle tube as near the tire as possible, but not on the torsion arm. If the jack will not fit under the axle, place it under the main frame rail (boom) as close to the axle as possible. On aluminum I-Beam trailers, the only allowable place to put the jack is under the axle as mentioned above.

SKEETER wheel sizes are as follows:

14"	5 Hole	4 1/2" Bolt Circle
15"	5 Hole	4 1/2" Bolt Circle
18"	5 Hole	4 1/2" Bolt Circle



Do not mount or attempt to mount anything other than the same size tires on the same size wheel (rim) per manufacturer specifications. Example 16.5" tire on a 16.5" wheel. Mounting the incorrect size tires or wheels can result in a loss of control which could cause serious injury or death.

Tire Basics

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

Finding Tire Pressure and Load Limits

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

- Recommended tire size.
- Recommended tire inflation pressure
- Ok capacity weight (VCW-the maximum weight the axle systems are designed to carry.) **Both placards and certification labels are permanently attached to the front of the trailer.**

Tire Pressure

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. You will also find this number on the vehicle information placard expressed in kilo pascals (kpa) which is the metric measure used internationally.) The worst enemy a tire can have is too little inflation pressure. It can reduce fuel economy through increased rolling resistance (soft tires makes your vehicle work harder). When a tire is under inflated, the shoulder of the tire tread bears the most of the load and reduces tread life through increased tread wear on the outside edges (or shoulders) of the tire. It also generates excessive heat, which reduces tire durability. Uneven wear reduces the useful life of a tire. Check your tires regularly for proper inflation. Abnormal tire wear may also be due to misalignment or mechanical problems. It is important to check your vehicle's tire pressure at least once a month for the following reasons:

- Most tires may naturally lose air over time. As air pressure is lost, carrying capacity is lowered.
- Tires can lose air suddenly if you drive over a pothole or other object or if you strike the curb when parking.
- With radial tires, it is usually not possible to determine under inflation by visual inspection.

Tire Description	PSI	Capacity
ST205/75R14C	50	1,760 LBS
ST205/75R14C	65	2,040 LBS.
ST215/75R14C	50	1,870 LBS.
ST205/75R15D	65	2,150 LBS.
ST205/75R15E	80	2,830 LBS
ST225/75R15D	65	2,540 LBS.
P245/45R18	51	1,929 LBS.

Recommended
Cold Tire Pressure Chart



Keep your tires inflated to the recommended tire pressure on the VIN decal (found on the front rail of your trailer). Check the tire pressure before each trip. Failure to maintain correct tire pressure may result in tire failure and loss of control, which could cause serious injury or death.

Measuring and Adjusting Air Pressure to achieve Proper Inflation

The recommended tire inflation pressure that vehicle manufacturers provide reflects the proper psi when a tire is cold. The term cold does not relate to the outside temperature. Rather, a cold tire is one that has not been driven on for at least 3 hours. When you drive, your tires get warmer, causing the air pressure within them to increase. Therefore, to get an accurate tire pressure reading you must measure tire pressure when the tires are cold or compensate for the extra pressure in warm tires.

Before each trip, check the air pressure of each tire. Be sure to check the air pressure in the spare tire as well.

Adverse safety consequences of under Inflation

Under-inflation of the tire only wear out the tire prematurely, but can also cause the tire to flex and to overheat quickly. Overheating of the tires can cause tread separation and tire failure. Tire separation or tire failure could lead to loss of control of the trailer and could lead to an accident.



Keep your tires inflated to the recommended tire pressure on the VIN decal (found on the front of your trailer). Check the tire pressure before each trip.

Maintaining Proper Tire Pressure

Locate the recommended tire pressure on the vehicle's tire information placard, certification label or in the owners manual.

Keep your tires inflated to the recommended tire pressure on the VIN decal (found on the front of your trailer). Check the tire pressure before each trip.

Record the tire pressure on all tires.

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 your tire gauge until you get to the correct pressure.

If the tire pressure is too low, note the difference between the measured tire pressure and the correct tire pressure. These "missing" pounds of pressure are what you will need to add.

At a service station, add the missing pounds of air pressure to each tire that is under inflated.

Check all the tires to make sure they have the same air pressure (except in cases in which the front and rear tires are supposed to have different amounts of pressure).

If you have been driving your vehicle and think a tire is under inflated, fill it to the recommended cold inflation pressure indicated on your vehicle's tire information placard or certification label. While your tire may still be slightly under inflated due to the extra pounds of pressure in the warm tire, it is safer to drive with air pressure that is lightly lower the vehicle manufacturer's recommended cold inflation pressure than to drive with a significantly under inflated tire. Since this is a temporary

fix, don't forget to recheck and adjust the tire's pressure when you can obtain a cold reading.

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.



Tire Information

There are many markings found on the Sidewall of a tire. They are placed there by the tire manufacturer.

ST-Indicates the tire is for trailer use only.

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 many years.

Next Number- This two-digit number is the wheel or rim diameter in inches.

If you change your wheel size, you will have to purchase new tires to match the new wheel diameter.

U.S. DOT Tire Identification Number-This begins with the letters "DOT" and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code where it was manufactured, and the last four numbers represent the week and year the tire was built. For example, the numbers 3197 means the 31st week of 1997. The other numbers are

marketing codes used at the manufacturer's discretion.

This information is used to contact consumers if a tire defect requires a recall.

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

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

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

RADIAL TIRES (Using a ST205/75R14C as an example)

ST	Special Trailer type tire
205	Nominal width of the tire in millimeters (205 millimeters in this example)
75	Aspect ratio of height to width (75% in this example)
R	Radial Tire
14	Size of Wheel (14" in this example)
C	Load Range Rating

Tire size labeling information

Tire Size

Your trailer will be equipped with radial tires. It is important to understand the tire labeling on your tire when selecting tire or replacement tires for your trailer. 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. Look at the tire information placard, the owner's manual, or the sidewall of the tire you are replacing to find this information. If you have any doubt about the correct size to choose, consult with the tire dealer.

Tire, Care, Maintenance, and Safety Practices

- Before each trip, check each tire for:
 - Uneven wear
 - Nails or other sharp objects.
 - Correct tire air pressure.
 - Tread separation.
 - Tread depth.
 - Proper tightening (torque) on the lug bolts or lug nuts

Tire checking

- Check Tire pressure regularly (at least once a month), including spare.
- Inspect tires for uneven wear pattern 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 your tire valves have valve caps.
- Check tire pressure before going on a long trip.
- Do not overload your vehicle. Check the Tire Information and Loading Placard or User's Manual for the maximum recommended load for the vehicle.

Bulges or other deformities of the sidewall of the tire.

If bulges or other deformities exist, do not use the trailer until the condition is corrected.

Preventing Tire Damage

- Slow down if you have to go over a pothole or other object in the road.
- Do not run over curbs or other foreign objects in the roadway, and try not to strike the curb when parking.

Vehicle Placard and Tire Inflation Pressure Label Information and Location

The Vehicle Placard and Tire Inflation Label are affixed to the forward part of the trailer near where the main frames meet the tongue.



VIN # & TIRE Inflation Pressure Label Information
Location SKEETER Custom Trailer's VIN number begins with 7FUBB



Vehicle Placard (Example)

Determining load limits

The load limit on a boat trailer is referred to as carrying capacity. The carrying capacity of your SKEETER trailer must be more than or equal to the weight of the boat and everything in or on the boat, including motor(s), fuel, water, personal gear and other items you may have on board. The final weight of all these items is called a "net weight" and must not exceed the carrying capacity of the trailer. The carrying capacity should not be confused with the GVWR rating of the trailer. The GVWR (Gross Vehicle Weight Rating) listed for the trailer is the maximum allowable combined weight of the trailer, boat, motor, fuel and gear. (See page 5, Choosing the Right Trailer.)

1. Locate the statement, "The weight of cargo should never exceed XXX kg or XXX lbs.," on your vehicle's placard.
2. Determine the empty weight of your trailer by weighing the trailer using a public scale or other means.
3. Locate the GVWR of the trailer on your trailer's VIN (Certification) label.
4. Subtract the empty weight of your trailer from the GVWR stated on the VIN label. That weight is the maximum available cargo capacity of the trailer and may not be safely exceeded.

Do not Exceed Load Carrying Capacity or GVWR

The weight capacity of your trailer is found using the Gross Vehicle Weight Rating (GVWR) of the trailer. The GVWR is printed on the Vehicle Identification Number (VIN) decal at the right front of the trailer (viewing trailer from the rear). This is the MOST weight the fully loaded trailer can weigh. When loading your cargo, be sure it is distributed evenly to prevent overloading front to back and side to side. Heavy items should be placed low and as close to the axle positions as reasonable. Too many items on one side may overload a tire. The best way to know the actual weight of the vehicle is to weigh it at a public scale.

TIRE / PNEU	SIZE / DIMENSIONS	COLD TIRE PRESS. / PRESS. DES PNEUS À FROID	SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION / VOIR LE MANUEL DE L'USAGER POUR PLUS DE RENSEIGNEMENTS
FRONT	ST205/75R14C	345 KPA (50 PSI)	
REAR	ST205/75R14C	345 KPA (50 PSI)	
SPARE/DE SECOURS	ST205/75R14C	345 KPA (50 PSI)	

Tire Information Pressure Label (Example)

Talk to your dealer to discuss the weighing methods needed to capture the various weights related to the trailer. This would include the weight empty or unloaded, weights per axle, wheel, hitch or king-pin and total weight. The trailer must not be connected to the tow vehicle when you get the total weight of the trailer. It is up to you to make sure the weight of your boat, trailer, and boat car go does not exceed the GVWR. Proper load distribution on your trailer is also very important. Tongue weight should be no less than 5% of recommended of specific GVWR and not to exceed the tongue weight capacity of the hitch. Five to ten percent of your trailer's Gross Vehicle Weight should be supported by the hitch ball, with the tongue level. This is called "tongue weight". If you are over or under the standard weight distribution, try moving gear inside your boat first. If further adjustment to the trailer is necessary, contact your SKEETER Dealer.

Locating the Load Limit Information

The manufacturer's VIN label has both the carrying capacity and the GVWR (Gross Vehicle Weight Rating) of your trailer. It also has tire size, cold tire pressure, VIN number, date of manufacture and other important information. The VIN label is located on the trailer frame towards the front end of the trailer rail.



Your trailer's GVWR must not exceed the capacity of your hitch.



Make sure the total weight of the trailer, boat, engine, fuel, batteries, and gear does not exceed the trailer's GVWR.

IMPORTANT

Check with your SKEETER Dealer or automotive dealer to make sure you have the proper towing vehicle for the load you will be pulling. Check your vehicle manufacturer's hitch weight recommendations as well. Be sure you have the right size ball, shank and capacity to match your trailer's model and coupler size. The correct ball size and capacity is marked on the coupler.

Understanding How Cargo Affects Trailer Capacity

The cargo or gear placed inside a boat while on a trailer adds to the GVW (Gross Vehicle Weight) of the trailer, and uses some of the capacity that may be available for the boat. The combined weight of the gear, boat, as well as anything else in or on the boat while trailering must not exceed the carrying capacity listed for your trailer. Excessive loads and/or under inflation cause tire overloading and, as a result, abnormal tire flexing occurs. This situation can generate an excessive amount of heat within the tire. Excessive heat may lead to tire failure. This is the air pressure that enables a tire to support the load, so proper inflation is critical. The proper air pressure may be found on the certification/VIN label and/or on the Tire Placard. This value should never exceed the maximum cold inflation pressure stamped on the tire.

Adverse Safety Consequences of Overloading on Handling, Stopping and on Tires



Poor weight distribution can cause trailer sway ("fishtailing") and put extra force on your boat, trailer, towing equipment and tow vehicle, which can result in an accident, serious injury or death



'DO NOT exceed your vehicle's GVWR

Overloading the trailer could produce the following:

- Increased stopping distances
- Improper tongue weight
- Abnormal or premature tire wear
- Tire failure
- Suspension failure
- Decreased cornering stability
- Brake overheating or failure
- Undue stress or failure of trailer components
- Hull damage

Never exceed the trailer's listed GVWR

Determining Compatibility of Tire and Vehicle Load Capabilities

The proper tire for your SKEETER Boat trailer is listed on the VIN label on the trailer.

Replacing a tire with any tire other than the size and type indicated on the VIN label should not be done. Each tire has a maximum load capacity printed on the sidewall.

The combined sum of the load capacities of all the tires of the trailer should meet or exceed the GVWR listed on the VIN label of the trailer. The Original Equipment Tires are designed to meet these requirements.

Tire Terminology

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 in 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, when inflated, bears the load.

Chunking: The breaking away of pieces of the tread or sidewall.

Cold Inflation Pressure: The pressure in the tire before you drive for at least 3 hours.

Cord: The strands forming the plies in the tires.

Cord Separation: The parting of cords from adjacent rubber compounds.

Cracking: Any parting within the tread, sidewall, or the inner liner of the tire extending to 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 and coolant, and, if so equipped, air conditioning and additional weight optional engine.

Extra Load Tire: A tire designed to operate at higher loads and at higher inflation pressures than the corresponding standard tire.

Groove: The space between the adjacent tread ribs.

Gross Axle Weight Rating: The maximum weight that any axle can support, as published on the certification/VIN label on the front left side of the trailer. Actual weight determined by weighing each axle on a public scale, with the trailer attached to the towing vehicle.

Gross Vehicle Weight Rating: The maximum weight of the fully loaded trailer, as published on the certification/VIN label. Actual weight determined by weighing trailer on a public scale, without being attached to the towing vehicle. Hitch Weight: The downward force exerted on the hitch ball by the trailer coupler.

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

Inner liner Separation: The parting of the inner liner from cord material in the carcass.

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 (LT) Tire: A tire designated by its manufacturer as primarily intended for use on lightweight 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 in which a tire is fitted for physical dimension requirements.

Non-Pneumatic Rim: A mechanical device which, when a non-pneumatic tire assembly incorporates a wheel, supports the tire, and attaches, either integrally or separably, 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, either directly or through a wheel or wheel center member, the vertical load and tractive forces from the roadway to the vehicle, generates the tractive forces that provide the directional control of the vehicle and does not rely on the containment of any gas or fluid for providing those functions.

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 68 kilograms (150 lbs.) times the number of occupants specified in the second column of Table 1 of 49 CFR 571.110.

Pin Weight: The downward force applied to the 5th wheel or goose neck ball, by the trailer kingpin or goose neck coupler. **Occupant Distribution:** The distribution of occupants in a vehicle as specified in the third column of Table 1 of 49 CFR 571.110.

Open Splice: Any parting at any junction of tread, sidewall, or inner liner that extends to cord material.

Outer diameter: The overall diameter of an inflated new tire.

Overall Width: The linear distance between the exteriors of the sidewalls of an inflated tire, including elevations due to labeling, decorations, or protective bands or ribs.

Ply: A layer of rubber coated parallel cords.

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 sustains the load.

Production Options Weight: The combined weight of those installed regular production options weighting over 2.3 kilograms (5 lbs.) in excess of those standard items which they replace, not previously considered in curb weight or accessory weight, including heavy duty brakes, ride levelers, roof rack heavy duty battery, and special trim. **Radial Ply Tire:** a pneumatic tire in which the ply cords that extend to the beads are laid at substantially 90 degrees to the centerline of the tread.

Recommended Inflation Pressure: This is the inflation pressure provided by the vehicle manufacturer on the Tire Information label and on the Certification /VIN tag.

Reinforced Tire: A tire designed to operate at higher loads and at higher inflation pressures than the corresponding standard tire.

Rim: A metal support for a tire or attire and tube assembly upon which the tire beads are seated.

Rim Diameter: This means the nominal diameter of the bead seat.

Rim Size Designation: This means the industry of manufacturer's designation for a rim by style or code.

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 tie 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 only.

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.

Tire Checking: Small cracks in the tire sidewall usually associated with age or sitting in intense sunlight conditions.

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.

Tread Indicators (TWI): 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 68 kilograms (150 lbs.) times the vehicle's designated seating capacity.

Vehicle Maximum Load on the Tire: The load on an individual tie that is determined by distributing to each axle its share of the maximum loaded vehicle weight and dividing by two.

Vehicle Normal Load on the Tire: The load on and individual tire that is determined by distributing to each axle its share of the curb weight, accessory weight, and normal occupant weight (distributed in accordance with Table 1 of CRF 49 571.110) and dividing by 2.

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, either integrally or separably, 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, either integrally or separably, 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.

Trailer Terminology

Aft: A nautical expression referring to the back area of a boat.

Actuator: See "Trailer actuator"

Anchor Chock: A bracket or roller usually mounted on the front of the boat and often sticking forward past the bow of the boat.

Back-Up Solenoid: An electrical solenoid used on brake actuators for trailers with disc brakes that allows the trailer to be backed up on level ground without the brakes locking up.

Bearing Protector: A device that is installed on the hub that allows lubrication of the bearings.

Boat Bow Safety Chains: Safety chain(s) are attached to the winch stand of the trailer and hooked onto the bow eye of the boat as a safety precaution. (See Safety Chains)

Boat Strakes: Small ribs on the underside of the boat running fore and aft, visible from the underside of the boat.

Boom: The main frame members that run fore and aft on the trailer.

Bow: The front tip of the boat.

Bow Eye Length: A measurement taken from the transom to the bow eye for purposes of determining trailer length and winch stand placement.

Bow Pulpit: A small platform sticking forward past the tip of the bow of the boat.

Bow Stop Roller: A roller on the trailer's winch stand that the bow of the boat rest against.

Brackish Water: Polluted water or mixed freshwater and saltwater.

Brake Controller: An electrical brake controller mounted inside the cab of the tow vehicle that lets you manually activate the brakes and also houses the inertia sensing device. (See Inertia Sensing Device)

Brake Flush Kit: A garden hose adapter kit that attaches to drum brakes that allows fresh water to be flushed into the drum brakes to rinse out salt water, brackish water or small debris.

Bunks: Generally made of wood covered with carpet. Provides the main support under the boat's hull while on a bunk style trailer.

Channel Glide Bunk Covers: A slippery channel shaped plastic like material that goes over the existing wood bunk to make launching and loading the boat easier by reducing friction between the boat and the carpeted bunk.

Coupler: Coupler Locking Device: A lock or small nut & bolt through the locking hole on the latch of the coupler that helps to prevent the coupler from coming off the hitch ball.

Coupler Safety Chains: Safety chains running from the coupler or actuator area on the trailer to the hitch area of the tow vehicle.

Fishtailing: The boat and trailer swaying from side to side while being towed.

Fore: A nautical term referring to the front area of the boat.

Gross Vehicle Weight: The actual combined weight of the trailer, boat with motor, fuel and gear.

Gross Vehicle Weigh Rating (GVWR):The maximum allowable combined weight of the trailer, boat, motor, fuel and gear.

Hitch Ball: The ball shaped part of the hitch on the rear of the tow vehicle used to connect the trailer.

Hydraulic Surge (Drum Brakes): Drum brakes on the trailer using the hydraulic surge method to apply the brakes.

I-Tube: An unique extra extrusion is added to the aluminum tube to help protect and hide the wiring and brake lines inside the non-corrosive environment.

Inertia Sensing Device: This is part of an electrical unit used with electric brakes that senses the vehicle slowing down and activates the trailer brakes automatically. It is generally mounted inside the cab of the tow vehicle. (See Brake Controller)

Keel: The fore and aft center line of the boat, the lowest point of the hull on a V-bottomed boat.

Launch Position: Having the trailer deep enough in the water that if the boat were launched it would have enough water to support the boat without making contact with the ground or cause any damage.

Load Guides: Attachments to the side of the trailer that have rollers, bunks or PVC tubes that are near the side of the boat to assist in keeping the boat centered on the trailer while loading or launching.

Mooring Line: A rope or line attached to the bow of the boat so that a person has control of the boat after it is launched off the trailer.

Port: A nautical directional term for left or left side.

Roller Pattern: The spacing the rollers have on the underside of the boat on roller trailers.

Rollers: Round cylindrical rolls that support the boat and roll when the boat is being launched or loaded on a roller style trailers.

Safety Chains or Cables: A general term used to describe either the safety chains located on the winch stand that attach to the bow eye of the boat, or located near the coupler or actuator and attach near the hitch area of the tow vehicle.

Saltwater: Water with salt content in it.

Side Rollers: Refers to roller style load guides. (See Load Guides)

Spindle Nut Retainer: A steel cap that fits over the spindle nut used in conjunction with a cotter pin to keep the spindle nut from unscrewing.

Spring Suspension: The springs work together to provide an absorption for the boat and trailer during towing. The springs come in many different applications depending on the capacity rating required.

Starboard: A nautical directional term for right or right side.

Stern: A nautical expression referring to the back end of the boat.

Swing Tongue: A tongue installed on a trailer that has the ability to fold so that the length of the trailer would be shortened for storage.

Tie-downs: A securing device that attaches to or near the rear transom of the boat and downward to the trailer to help secure the back end of the boat to the trailer.

Tongue: The most forward portion of the trailer that has the coupler or actuator attached to it.

Tongue Weight: The amount of weight the tongue is carrying if weighed at the actuator or coupler.

Torsion Axle Trailer: A trailer using torsion as a means of suspension rather than leaf springs. Trailer Tow Vehicle: The vehicle that pulls the boat and trailer.

Trailer Actuator: The part of the trailer that is bolted or welded to the tip of the tongue of the trailer that houses the hydraulic reservoir and several other components of a hydraulic brake system. This also is the part that attaches to the hitch ball on the tow vehicle.

Trailer Coupler: The part of the trailer that is bolted or welded to the tip of the tongue of the trailer and attaches to the hitch ball of the tow vehicle.

Trailer Tongue: See "Tongue"

Transom: The near vertical rear end of the boat where the outboard motor is generally attached, or the lower unit of the inboard outboard motor is generally attached.

Transom Drain Plugs: In the lower rear transom area that when removed will drain excess water from the boat after the boat is out of the water on the trailer. Drain plugs must be kept in the transom drain plug holes whenever the boat is in the water.

Tuff Coat: A professionally sprayed-on polyurethane finish that protects the trailer from rock chips and nicks.

Vee Block: A "V" shaped block on the trailer's winch stand that the bow of the boat rests against.

Underwater Launching Lights: This is a optional feature for most SKEETER trailers. This system works off a sensor installed on the rear of the trailer that works as a ground and as the trailer backs into the water, the lights go on and light up the bunk like a runway and turn off immediately when the trailer exits the water. Set usually consist of 3 lights on each of the two rails.

Weight Carrying Hitch: A hitch that distributes some of the weight of the boat and trailer into the frame of the tow vehicle.

Winch Latch Assembly: A latch assembly located on the winch that switches the winch from a "reel in" condition to a "reel-out" or a "neutral free-wheeling" condition.

Winch Safety Chains: See "Boat Bow Safety Chains"

Winch Strap/Cable: A cable or strap attached to the trailer winch used in loading, launching and securing of the boat.

60 degree Cone Angle Zinc Plated Lug Bolts: A 60 degree lug bolt used to attach the wheel to the hub or drum on trailer.

Replacement of Manufacturers Certificate of Origin (MCO) or Vehicle Identification Number (VIN) Tags

For your protection, never purchase a used SKEETER trailer without securing a state or province issued Certificate of Title properly transferred to you as the purchaser of the trailer by the legal owner. If the trailer has not been registered or is registered in a non- title issuing state, an MCO and/or other proof of ownership of the seller should be obtained. Before taking delivery of the trailer, verify that the VIN number of the trailer per the title or MCO matches the VIN number on the tag located on the inside front rail of the trailer. SKEETER will only replace MCOs for trailers that are less than two years old and that are owned by the first retail purchaser of the trailer. VIN tags may be replaced under certain circumstances.

Certain documentation will be required before issuing a possible replacement. There is a fee for replacement of the VIN tag.

For information regarding a replacement of an MSO or VIN tag for trailers with a VIN beginning with 7FUBB contact:

Cheryl_Richardson@Yamaha-Motor.com
(903) 983-5662

Canadian Registration Recall clearance document

If you are exporting a Skeeter custom welded trailer into Canada with a VIN number that begins with 7FUBB and need this document, contact Cheryl at **(903) 983-5662** or email at **Cheryl_Richardson@Yamaha-Motor.com**

Additional Information

The following websites are provided for reference:

Safe trailer towing National Highway Traffic Safety Administration (NHTSA®) <http://www.nhtsa.dot.gov/cars/problems/Equipment/towing/> Unique Functional Products (UFP®) www.ufpnet.com or **800-835-9211**. Trailer components such as actuators, axles, brakes, etc. Tread it tire and wheel www.tredittire.com or 855-887-3348 Tires and most wheels contact them regarding wear and warranty questions. Fulton Performance Products Jacks and winches visit www.fultonperformance.com Optronics, Inc. Lighting components visit www.optronicsinc.com

Warranty Registration

Please ensure that your Skeeter dealer has warranty registered your trailer. Having your trailer on file will speed up the process if you have a problem, need replacement parts, or if we need to contact you with important information about your trailer. Using the Vehicle Identification Number (VIN) we can look up the registration which has the information we would need to make sure that you get the right parts for your trailer. Please ask your SKEETER Dealer or give us a call if you have any question regarding the Warranty Card. Keep the upper portion of the card for your records. If you do not have access to a computer, send in the lower half to the following address:

SKEETER Products Inc.
One Skeeter Road
Kilgore, TX 75662

Warranty Questions

If your SKEETER boat trailer does not live up to our warranty, we want to make it right. Discuss the problem first with your SKEETER Dealer. In most cases, a satisfactory solution can be resolved.

Reporting Safety Defects

Manufacturer SKEETER Products Inc.

One Skeeter Road KILGORE, TX 75662

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 SKEETER Products Inc. 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 dealer, or SKEETER Products Inc.

To contact NHTSA you may either call the Vehicle Safety Hotline toll-free at **1-888-327-4236 (TTY: 1-800-424-9153)**, www.safercar.gov, or write to:

Administer
NHTSA

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

You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

Manufacturers of marine products are required to keep current owner registration lists. If there is a safety modification or product recall, SKEETER Products Inc. will be able to notify you accordingly.

IMPORTANT NOTICE

Laws regarding towing and trailers vary from state to state, make sure you are in full compliance with the laws in your area regarding trailer brakes, coupler requirements, safety chains, trailer width requirements, trailer lights, etc. Contact your state motor vehicle department for more information. Also, check with your automotive dealer or vehicle's owner's manual to make sure you have the proper towing vehicle, hitch and ball for the load you'll be pulling.

**For your records, please fill in the following information.
It is important for future part or service requests.**

Model Year _____

Model Number _____

Serial Number (VIN) _____

Carrying Capacity _____

Date Purchased _____

Dealer Name _____

Dealer Address _____

Dealer Telephone _____

Tire Size _____

Recommended Tire Pressure _____

If you sell your trailer: This manual must be transferred to the new owner. At the transaction, the original owner should photocopy this page, along with the name and address of the new owner and send it to:

Customer Relations
Skeeter Products One Skeeter Road Kilgore, TX 7562
(903) 984-0541

Original Owner _____

Address _____

City, State, Zip _____

New Owner Address _____

City, State, Zip _____

Warranty is not transferable to 2nd or other owner