# **Ball Breaker** Shock Absorbing Hitch

## **Installation Instructions**

#### Please Note:

Trailer laws covering such things as brakes, lights, safety chains or cables, licenses, etc., will vary from state to state. Make sure your trailer is in full compliance with your state laws. Your trailer dealer can usually help you in this regard, or, you may contact your nearest state motor vehicle department office for full information.

#### Warning:

The total weight of your boat, engine, fuel, water and gear must not exceed the trailer's carrying capacity, the carrying capacity of your hitch, or the towing capacity of your vehicle. Overloading or imbalanced loads can cause serious injury or property damage. **Note:** Maximum weight load carrying capacity is the gross vehicle weight rating (GVWR) less the weight of the empty trailer.

#### Using your new Ball Breaker Cushioned Hitch

The Ball Breaker is designed for 2" square Class 2 & 3 hitches up to 5,000 lbs load carrying capacity. The Ball Breaker reduces wear on your vehicle and greatly reduces driver fatigue. The four-cord torsion action removes metal-to-metal contact and absorbs the sudden movement of the trailer. Shock absorption is handled in four directions, assuring you of a more pleasant towing experience.

#### **Connecting Your Ball Breaker**

- 1. Slide the Ball Breaker hitch into your towing vehicle's hitch receptacle and secure it with a pin with spring key or locking pin (not included). The pin must be 5/8" in diameter. Use of a smaller pin will result in hitch movement and possible damage to your vehicle and/or trailer.
- 2. Attach the proper size hitch ball (not included) to the Ball Breaker. Tighten nut according to the manufacturer's instructions. NOTE: Hitch balls are available in different diameters and weight capacities. Make sure you purchase the correct size ball for your coupler and correct weight capacity for your trailer. The correct ball diameter is marked on your trailer coupler.
- 3. To insure that the boat is riding properly on the trailer supports, the trailer should be in a level position when hitched to the tow vehicle. More important, if the coupler is much lower than the rear end of the trailer, it may prematurely activate surge brakes. This can be corrected in different ways, with the addition of air-pressure shock absorbers, or by switching to a weight distribution hitch. Consult your tow vehicle or trailer dealer for additional information.
- 4. Improper weight distribution can cause a trailer to "fishtail" (sway side to side) as it moves down the highway placing excess strain on both trailer and vehicle. It is extremely important that 5% to 10% of the total weight of your trailer should be felt at the trailer-coupling ball when the tongue is parallel to the ground. The Ball Breaker has a scale on the hitch to determine the tongue weight. For example, if the gross weight of your trailer with load and gear is 3,500 pounds, the weight on the tongue should not be more than 350 lbs., nor less than 175 lbs. If the weight down on the coupling ball does not fall within the proper range, you should take immediate steps to achieve it. This may require shifting some of the gear in/on your trailer from front to back or vice versa. DO NOT EXCEED 500 POUNDS OF TONGUE WEIGHT ON THE BALL BREAKER HITCH.

Instruction #08066



TIE DOWN ENGINEERING • 5901 Wheaton Drive • Atlanta GA, 30336 www.tiedown.com • (404) 344-0000 • FAX (404) 349-0401

### Hitching Up

Hitching a trailer to your tow vehicle is a one-person job, usually, but it is easier if someone helps. Here are the basic steps:

- 1. Back your tow vehicle as close as possible to the trailer; it is easier and safer to do this than to pull the trailer to your car or truck.
- 2. Release the coupler-locking device.
- 3. Raise the front end of the trailer. Place coupler directly over the hitch ball, then lower it until it is seated on the hitch ball, covering it completely.
- 4. Check under the coupling to ensure the ball clamp is below the ball and not riding on top of it.
- 5. Latch the coupler to the hitch ball. Make sure it is locked in place by lifting the trailer tongue. If the coupler comes loose from the ball, unlatch it and go back to Step 3.
- 6. Make sure your jack is fully raised.
- 7. If your trailer has a surge brake breakaway cable or chain; attach the cable or chain to your tow vehicle, allowing enough slack for you to make tight turns.
- 8. Attach the safety chains or cables.
- 9. Connect the trailer wiring harness to the lighting system of your tow vehicle and check for proper operation.
- 10. Take a "Shakedown Cruise". At least one short trial run before your first trip will help familiarize you with your trailer's operating characteristics. It will also let you know that the lights, brakes, hitch, etc., are working properly.

#### WARNING

DO NOT MODIFY TIE DOWN PRODUCTS. USE ONLY ON HITCHES SPECIFIED AND IN GOOD CONDITION. The Ball Breaker Hitch mount is designed specifically to tow trailers, and must be used only for this purpose. Do not tow multiple trailers. FAILURE TO HEED WARNINGS AND FOLLOW INSTUCTIONS MAY RESULT IN VEHICLE CRASH, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH. DO NOT OVERLOAD ANY PART OF YOUR TOWING SYSTEM, VEHICLE OR TRAILER.





