

TowRight®

Adjustable Weight Distributing Hitch

User Manual



READ ALL INSTRUCTIONS AND CHECK PACKAGE CONTENTS BEFORE BEGINNING INSTALLATION.

SAVE THIS MANUAL: KEEP THIS MANUAL FOR SAFETY WARNINGS, PRECAUTIONS, ASSEMBLY, OPERATING, INSPECTION, MAINTENANCE AND CLEANING PROCEDURES. WRITE THE PRODUCT'S SERIAL NUMBER ON THE BACK OF THE MANUAL NEAR THE ASSEMBLY DIAGRAM (OR MONTH AND YEAR OF PURCHASE IF PRODUCT HAS NO NUMBER).



Warning

The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator. Read carefully and understand all **ASSEMBLY AND OPERATION INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

- Loaded ball height should never be greater than the uncoupled ball height. Front wheel overload and loss of rear wheel traction can result and can lead to unstable handling. It can reduce braking ability and create a tendency to jackknife when turning or braking at the same time.
- If the loaded ball height is greater than the uncoupled height, reduce take up on the spring bar chains and remeasure and adjust until the proper height is obtained.
- **CAUTION:** If the lift chain is angled fore or aft at the top within the lift bracket, it may catch on the bracket when turning. This could damage the lift bracket or pry it open.
- **FRONT WHEEL DRIVE VEHICLES:**
Do not attempt to hook-up or tow with the rear tires of the towing vehicle removed. Severe structural damage to the towing vehicle, hitch and trailer may result. A towing vehicle/trailer combination cannot be controlled adequately unless the towing vehicles rear wheels are carrying their share of the load.
- **CHECK ALL TRAILER TO TOWING VEHICLE CONNECTIONS FOR SECURITY AND OPERATION**

Surge brakes usually require a small amount of fore and aft movement for their actuating mechanism to function. To avoid restricting movement, it may be necessary to increase the number of chain links between the lift brackets and spring bars, by tilting the head down. Tighten the two 3/4' bolts to 260 ft. lbs. torque once head angle is set. Those surge brake actuators not designed for use with a weight distributing hitch, may bind and not operate freely. Check your surge brake operating instructions for any specific requirements regarding their use with weight distributing hitches.

Rating when used as a weight distributing hitch with spring bars:

Max. Tongue Wt.	Max. Gross Trailer Wt.
500-1000 lbs.	10,000 lbs.

Rating when used as a weight carrying hitch without spring bars: Do not exceed the towing vehicle manufacturer's load rating.

Max. Tongue Wt.	Max. Gross Trailer Wt.
500 lbs	5,000 lbs.

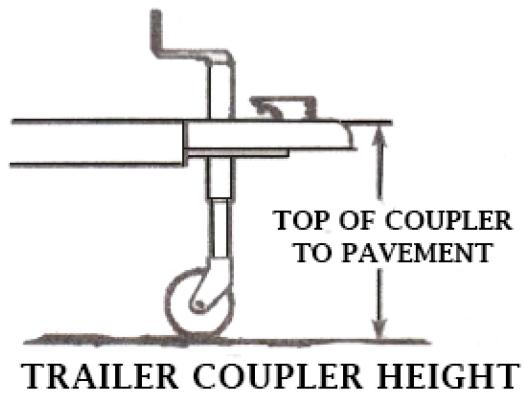
- **CAUTION:** The tongue weight rating of the spring bars represents the capacity of a pair of bars, NOT an individual bar. Always use a pair of spring bars and be sure they are of the same weight rating.

Do not exceed the towing vehicle manufacturer's load rating.

OPERATION

MEASURE TRAILER COUPLER HEIGHT

1. Line up the tow vehicle and trailer on level pavement in a straight position. Use the trailer tongue jack to level the trailer. (Built in level on the 35001b and 45001b electric tongue jacks). Measure the distance from pavement to the top of the coupler socket and record here _____, See Illustration 2•.



MEASURE THE TOW VEHICLE

2. For vehicles with air springs, air shocks or automatic leveling systems only: Check vehicle owners manual or other instructions on these items. Unless otherwise indicated, air springs and air shocks should be deflated to their minimum recommended pressure before assembling and adjusting the weight distributing hitch. Pick reference points on the front and rear bumper of towing vehicle. Measure and record height to pavement.

MEASURE THE TOW VEHICLE _____

MEASURE THE TOW VEHICLE _____

DETERMINE THE "TARGET UNCOUPLED BALL HEIGHT FOR TOW VEHICLE

3. Tow vehicle uncoupled ball height will be set higher than coupler height measured in Step 1, to allow for vehicle squat when coupled to trailer.

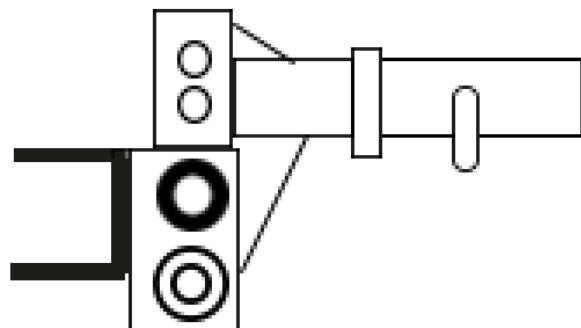
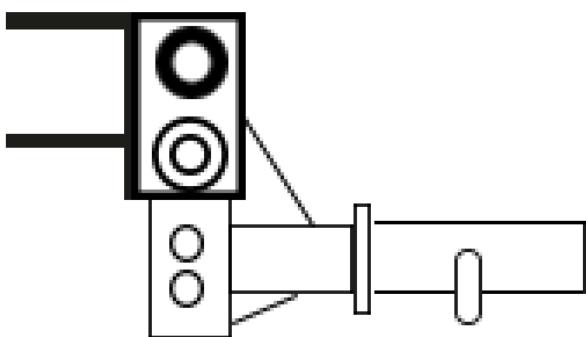
For trucks or other stiffly sprung vehicles; add 1/16" to the height measured in Step 1, for each 100 lbs. of tongue weight. Record ball height. _____

For passenger cars, add 1/8" for each 100 lbs. of tongue weight Record ball height. _____

INSTALL SHANK, HITCH HEAD AND BALL

4. Insert shank #1 into receiver on towing vehicle and secure with hitch pin and hair pin.

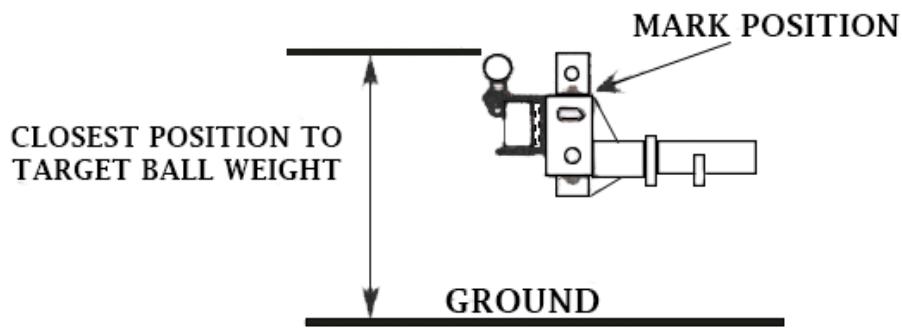
NOTE: To obtain proper ball height on high ground clearance vehicles, shank may be inverted as shown in Illustration 3. If shank is used in an inverted position, check for adequate ground clearance. Accessory shanks with greater height and length are available from your dealer.



5. Select a hitch ball to match the trailer coupler socket, having a 1• or 1-1/4• threaded shank and capacity exceeding the gross trailer weight. When using a ball with a 1• shank, the reducer bushing must be placed in the ball hole in the head assembly. Install ball, but do not tighten at this time.

OPERATION

5. Select a hitch ball to match the trailer coupler socket, having a 1 • or 1-1/4• threaded shank and capacity exceeding the gross trailer weight. When using a ball with a 1• shank, the reducer bushing must be placed in the ball hole in the head assembly. Install ball, but do not tighten at this time.



7. Place four hardened washers (14) on pin (13) and insert pin into the unthreaded hole in the upper portion of the head channel. The number of washers may have to be changed later.

8. Install head on shank at marked position. Insert the 3/4" x 4-1/2" hex bolt (6e) through the lower hole in the head channel. Rotate the head forward as far as it will go. Ball should be vertical or tilted slightly back. If it is not, change the number of washers on the pin and re-assemble as before. Insert the remaining 3/4" x 4-1/2" bolt (10) with toothed washer (12) through the upper slotted hole. Install a second toothed washer on the upper bolt. Start locknuts (11) on to bolts only finger tight. Thread the 5/8 Hex Bolt #15 into the threaded hole in lower channel of head and tighten against shank.

9. Tighten bolt (10) to 260 ft. lbs. torque.

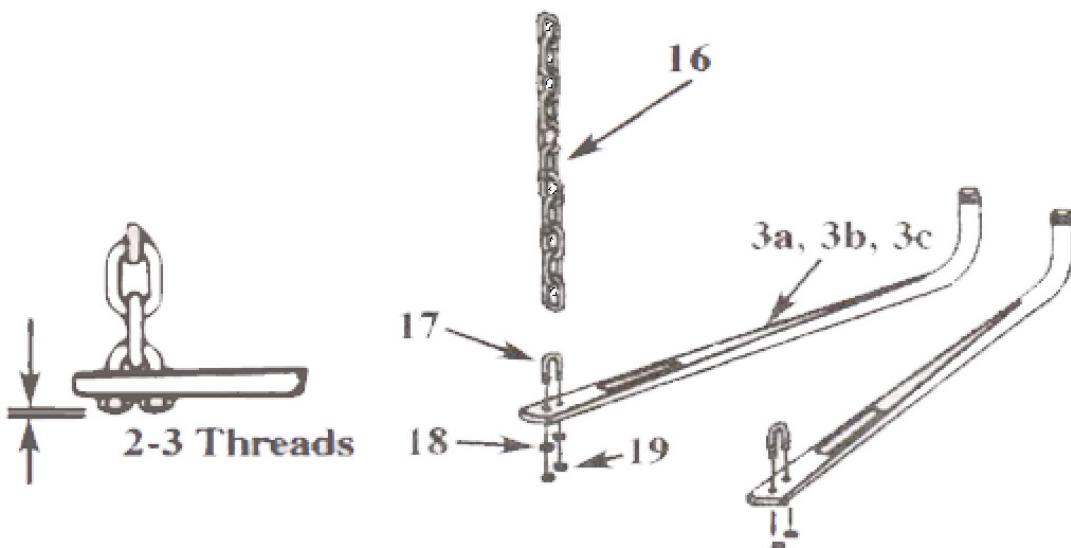
10. Place head assembly back into hitch assembly on towing vehicle and tighten the trailer ball to torque specified by the ball manufacturer.

ASSEMBLE. LUBRICATE AND INSTALL SPRING BARS:

1. Assemble the lift chains (16) to the tapered ends of each spring bar using the 3/8" u-bolts (17), 3/8 flatwashers (18) and the 3/8" hex locknuts (19) as shown below in Illustration 5. Let 2 or 3 threads of the u-bolts extend out through the bottom of each locknut. The chain must be free to move in the u-bolt.

2. Apply a heavy fibrous grease on the round end of each spring bar and push end up into head socket until you hear a click. This will indicate that the spring bar is locked in place.

NOTE: To release spring bar, lift up slightly on spring bar and gently pull out on the retaining pin in the hitch head. The spring bar should drop free of hitch head.



OPERATION

ATTACHING TRAILER TO BALL

1. Using the trailer tongue jack, lower the coupler onto the ball and close coupler latch. Do not retract jack fully at this time. Allow the jack to support some of the tongue weight.

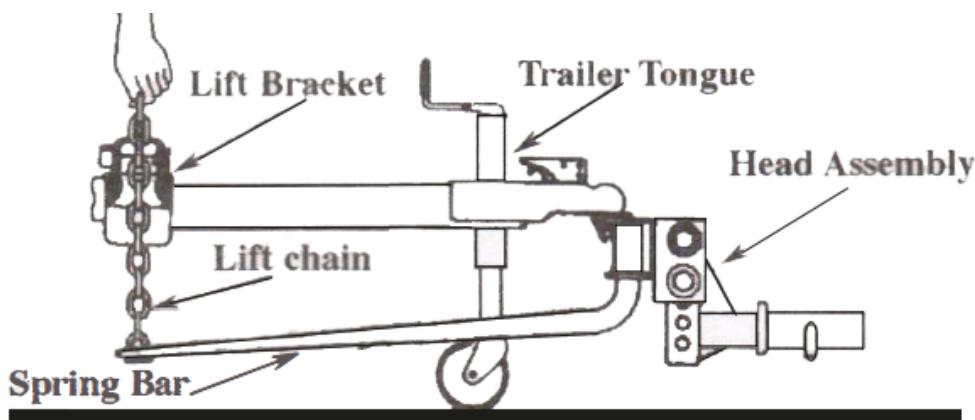
2. Raise the front of the trailer and back of the tow vehicle approximately 3" with tongue jack. This will allow easier.

INSTALLING THE CHAIN LIFT BRACKETS

The following directions apply to trailers with an "A" frame tongue.

1. Position the spring bar, which has been attached to the hitch head, parallel with the trailer tongue. Hold the lift chain vertical up alongside the trailer tongue. Position the lift bracket on the trailer tongue so that the chain is centered between the lift bracket as shown on Illustration 6 below.

CAUTION: If chain is angled fore or aft at the top within the lift bracket, it may catch on the bracket when turning. This could damage the lift bracket or pry it open.



2. Mark the location of the lift bracket on the trailer tongue.

3. Install the 1/2" x 3-1/2" bolt (6) into the threaded hole in the lift bracket. Turn the bolt in until it contacts the trailer tongue, then tighten 1/4 turn with a wrench. DO NOT OVERTIGHTEN.

HOOKING UP SPRING BARS

The amount of leveling is adjusted by engaging different spring bar chain links with the lift unit. Before proceeding, read the "LIFT UNIT OPERATION" section on following page.

1. With the lift bracket in the raised and locked position, pull straight up firmly on the spring bar lift chain.

Note which link is closest to the lift bracket hook. Mark the next lower chain link.

2. Lower the lift bracket and slip the marked link over the hook. Be sure that the chain is not twisted.

3. Raise the lift bracket and secure with the locking pin. Repeat procedure on opposite side of trailer using the same number of chain links as the first side. See Illustration 7.

4. Retract the trailer tongue jack so the hitch is now carrying the full trailer tongue weight.

OPERATION

LIFT BRACKET OPERATION

Before raising or lowering the lift bracket, raise the front of the trailer to reduce the spring bar chain tension. This will make the lift bracket operation easier and safer.

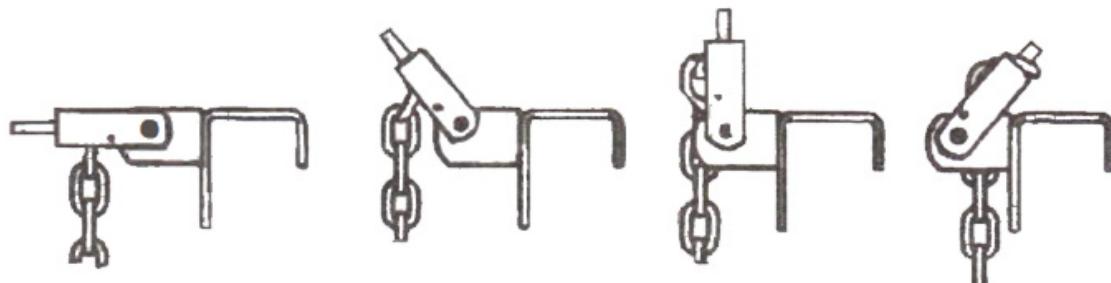
WARNING: Keep clear of the pivot path of all moving parts when there is tension on the spring bar chain. Maintain control of the lift handle at all times when raising or lowering the spring bar. Be sure that the locking pin is in place before leaving lift bracket in the up position.

TO LOWER FROM FULLY RAISED AND LOCKED POSITION

1. Remove the locking pin from lift bracket.
2. Insert lift handle onto the rod above the lift chain attachment.
3. Carefully lower bracket with handle. It will require effort to bring the bracket over center and then to resist the chain tension as the bracket rotates downward.

TO RAISE LIFT BRACKET

1. Slip the marked chain link over hook on lift bracket.
2. Insert lift handle onto heavier rod above lift chain attachment.
3. Using the handle, raise the lift bracket up and over center so that it is fully seated against the mounting bracket.

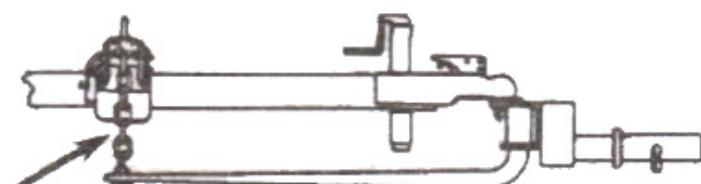


Be sure that chain is not twisted and hook extends through link

CHECK VEHICLE HEIGHT AND ADJUST SPRING BARS IF NECESSARY

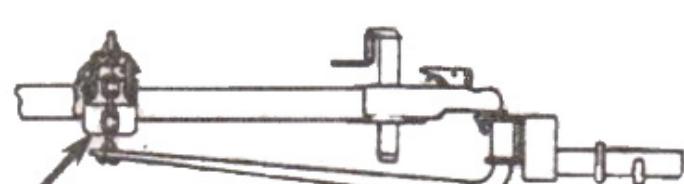
1. Vehicle should settle evenly, within 112°. Re-measure the front and rear bumper reference points. If the front has settled much more than the rear, increase the number of chain links between the lift bracket and the spring bar. The spring bars should be nearly horizontal when correct height is achieved.
2. When even settling and correct spring bar position have been achieved, mark the spring bar chain at the hooked position, with paint, for future hook up reference.

NOTE: Illustration 7, shows the correct and incorrect hook-up position of the spring bars. To allow movement when turning, there should be at least 5 links between the lift bracket and the spring bar. The number of links should be the same on both bars. Adjust head tilt to accomplish correct chain length.



At least 5 chain links

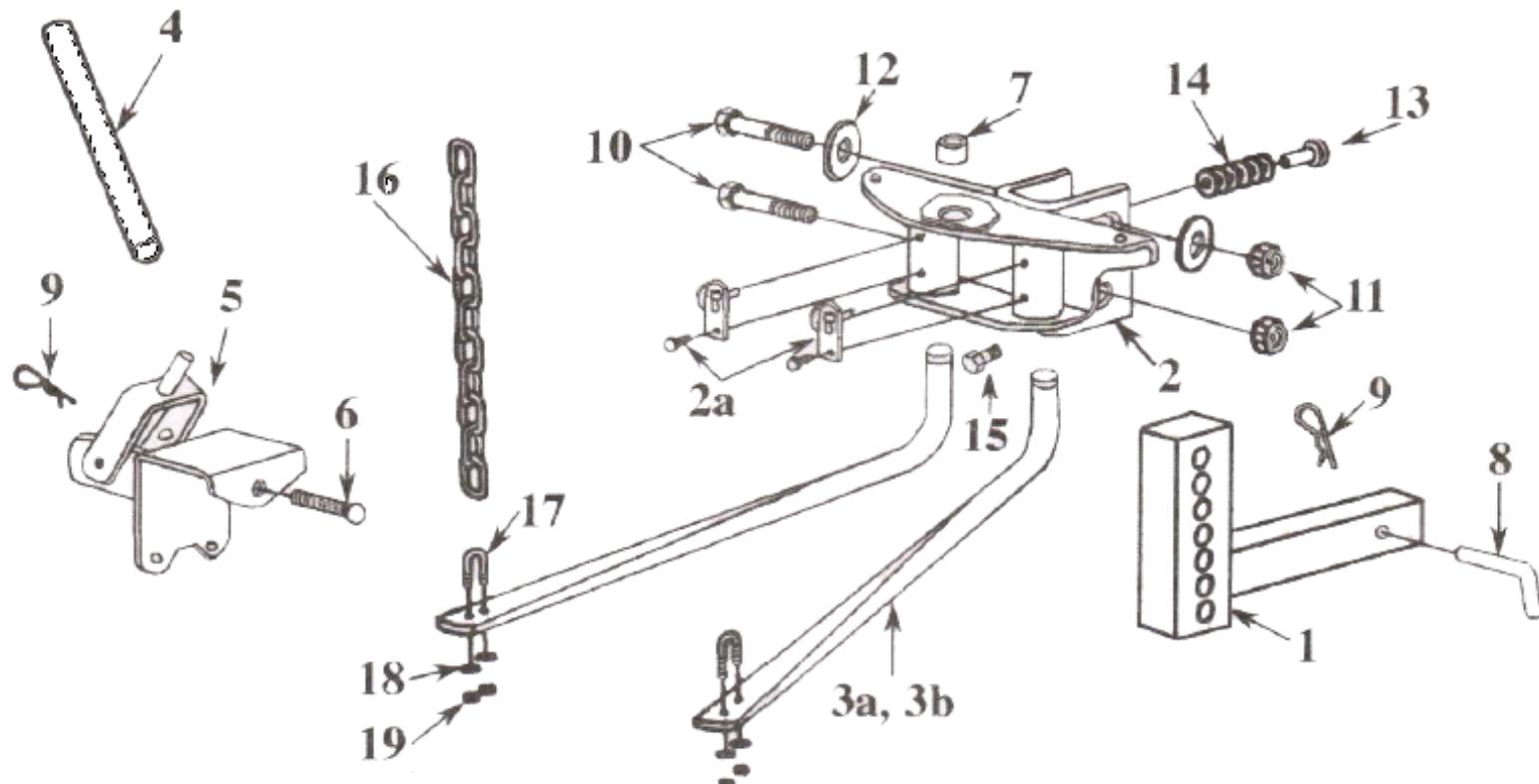
RIGHT



Less than 5 chain links

WRONG

OPERATION



Bill of Materials

ITEM	QTY	DESCRIPTION
1	1	Shank Assembly
2	1	Head Assembly
2a	2	Spring Bar Retainer
3a	2	400-600 Spring Bar Set
3b	2	501-800 Spring Bar Set
4	1	Lift Handle
5	2	Chain List Bracket
6	2	1/2 x 3-1/2 Hex Bolt
7	1	Reducer Bushing
8	1	Hitch Pin
9	3	Hair Pin
10	2	3/4 x 4-1/2 Hex Bolt
11	2	3/4 Locknut
12	2	3/4 Toothed Washer
13	1	Pin
14	7	Hardened Washer
15	1	5/8-11 x 1-1/2 Hex Bolt
16	2	Lift Chain
17	2	3/8 U-Bolt
18	4	3/8 Flatwasher
19	4	3/8 Locknut

TOWING TIPS

DRIVING A TOW VEHICLE

Good habits for normal driving need extra emphasis when towing a trailer. The additional weight of the trailer affects acceleration and braking. Extra time should be allowed for passing, stopping and changing lanes. Signal well in advance of a maneuver to let other drivers know your intentions. Severe bumps and badly undulating roads can damage your towing vehicle, hitch and trailer, and should be negotiated at a slow, steady speed. If any part of your towing system "bottoms out" or if you suspect damage may have occurred in any other way, pull over and make a thorough inspection. Correct any problems before resuming travel.

CHECK YOUR EQUIPMENT

Periodically check the condition of all your towing equipment and keep in top condition.

TRAILER LOADING

Proper trailer loading is very important. Heavy items should be placed close to the floor near the trailer axle centerline. The load should be balanced side to side and firmly secured in the trailer to prevent shifting. Tongue weight should be 10-15% of the gross trailer weight for most trailers. Too low a tongue weight often produces tendency to sway.

SWAY CONTROL

A sway control device can help minimize the effects of sudden maneuvers, wind gusts and buffeting caused by passing vehicles. Use of a sway control device is recommended for trailers with a large surface area, such as travel trailers.

TIRE INFLATION

Unless specified otherwise by the towing vehicle or trailer manufacturer, tire should be inflated to their maximum recommended pressure.

TOWING VEHICLE AND TRAILER MANUFACTURERS RECOMMENDATIONS

Review the owners manual for your towing vehicle and trailer for specific recommendations, capacities and requirements.

POLE TONGUE TRAILER

If your trailer has a straight (pole) tongue, instead of the A-frame tongue shown on the illustrations in this instructions manual, it will be necessary to use the POLE TONGUE ADAPTER for hook up of the weight distributing hitch lift brackets.

PASSENGERS IN TRAILERS

Trailers should not be occupied while being towed. Most states enforce this regulation.

TRAILER LIGHTS, TURN SIGNALS, ELECTRIC BRAKES

Always hook up all of the trailer lights, electric brakes and break-away switch connection, whenever trailer is being towed.

REMOVE HITCH WHEN NOT TOWING

Remove hitch from receiver on towing vehicle, when not towing a trailer, to prevent contamination of spring bar sockets, reduce chances of striking hitch on driveway or other objects, and reduce the chance of parts being stolen.

MAINTENANCE

- Keep the round ends of the spring bars and the sockets in the head assembly free from dirt and well lubricated. Excessive wear in this area may indicate an overload or inadequate lubrication.
- Keep the head assembly exterior clean, especially in the area of the spring bar retainer. Do not allow dirt or stones to lodge in this area.
- Keep hitch parts painted to prevent rust and maintain good appearance. Do not paint over labels.
- Keep lift brackets clean and lubricated to insure ease of operation.

AT THE BEGINNING OF EVERY TOWING DAY:

- Coat the round ends of the spring bars with a fibrous grease.
- Clean ball and coupler socket and coat ball lightly with grease.
- Check spring bar chains and U-bolts for wear and security. Replace before they become worn.
- Check to see that all hitch bolts are properly tightened and that the locking pins in the lift brackets are securely in place. Also, check that the hitch pin is in place and secure.
- Check to see that all electrical hook-ups are in working order and that the safety chains are securely connected.

CHECK ALL TRAILER TO TOWING VEHICLE CONNECTIONS FOR SECURITY AND OPERATION

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WARRANTY

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Record Product's Serial Number Here: _____

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.



SAVE THESE INSTRUCTIONS.

PRODUCT MADE IN CHINA