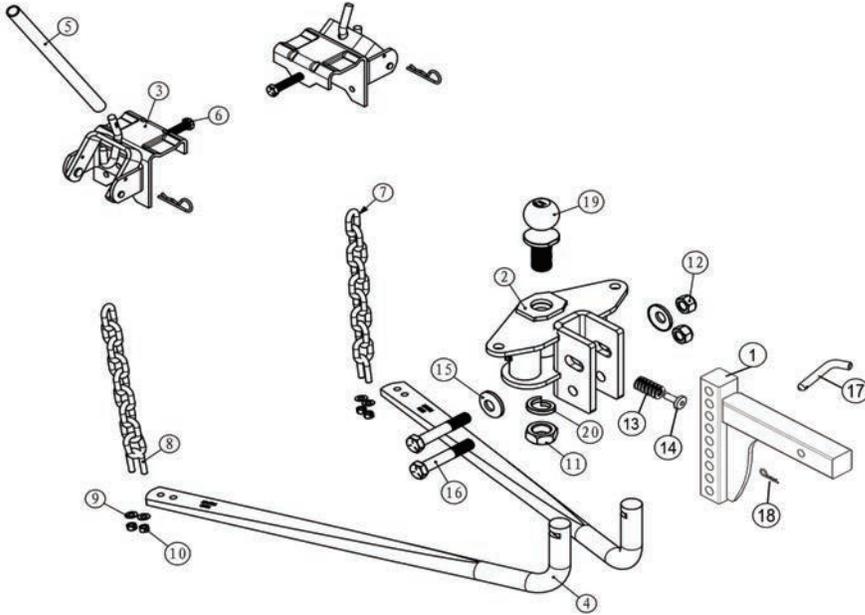




# WEIGHT DISTRIBUTION & AIR EQUALIZER INSTALLATION & SET UP GUIDE - CHAIN STYLE

Part#: SH-7500 - 12,000 lbs. GTW / 1,200 lbs. TW



### Tools Required:

**Wrenches:** 7/8", 3/4", 1-1/8"

**Socket:** 3/4", 1-1/8"

Torque Wrench capable of reading 260 ft. lbs.

1.	Qty. 1	L-Shank Assembly	11.	Qty. 1	1-1/4" Hex Nut
2.	Qty. 1	Head Assembly	12.	Qty. 2	3/4" Lock Nut
3.	Qty. 2	Chain Lift Bracket	13.	Qty. 7	Hardened Washer
4.	Qty. 2	Sprint Bar	14.	Qty. 1	Pin
5.	Qty. 1	Lift Handle	15.	Qty. 2	Toothed Washer
6.	Qty. 2	1/2" x 3-1/2" Hex Bolt	16.	Qty. 2	3/4" x 4-1/2" Hex Bolt
7.	Qty. 2	Lift Chain	17.	Qty. 1	Hitch Pin
8.	Qty. 2	3/8" U-Bolt	18.	Qty. 1	Hair Pin
9.	Qty. 4	3/8" Flatwasher	19.	Qty. 1	2-5/16" Trailer Ball
10.	Qty. 2	3/8" Lock Nut	20.	Qty. 1	1-1/4" Lock Washer

## INSTALLING WEIGHT DISTRIBUTION

### SIZING WD AND TRAILER HITCH SYSTEMS

- Refer to provided Consumer Information to weigh loaded trailer tongue to determine proper system size.
- Tongue rating of trailer hitch must meet or exceed measured tongue weight of trailer. OEM hitches may not be rigid enough for tongue weight and may need to be replaced (too much flex and won't carry load).
- Total trailer gross weight rating must never exceed tow vehicle rated gross tow rating.
- This system works on trailer frames 1.5" – 2" wide and 4" to 7" tall, with top or bottom mount couplers.

### INITIAL SET-UP

•NOTE: Some truck and trailer combinations can be prone to sway such as short wheel base tow vehicles towing long trailer. Ensure vehicle tow ratings meet or exceed trailer GVWR, ensure proper trailer loading to maintain 10% to 15% tongue weight, upgrade tow vehicle tires to heavier load ratings, and when additional sway control may be required an optional Shocker Hitch friction sway bar SH-1001 (sold separately) can be added to the Shocker Weight Distribution Towing Kit and/or Air Equalizer.

•Line up tow vehicle and trailer on level pavement, in straight-ahead position, uncoupled. Level the trailer and measure and record the distance from the ground to the top of the coupler (see Figure 1).

•Insert the L-shank assembly ① into the hitch box and install a hitch pin ⑰ and hair pin ⑱. Hitch bar ① may be used in either the up or down position (see Figure 2).

•NOTE: The ball height should be greater than coupler height by approximately 3/4" to 1" (see Figure 1) to compensate for vehicle squat. For vehicles with air springs, air shocks or an automatic leveling system, check vehicle owner's manual. Unless otherwise specified make sure you adjust the ball mount and do the trailer set up with the trailer and vehicle loaded as they will be when towing. Raised balls usually have reduced load ratings. Ball rating MUST equal or exceed trailer GVWR.

•With ball attached to ball mount, slide ball mount up or down hitch bar (hitch bar may be used in the up or down position) until nearest ball height dimension is obtained and holes line up with hitch bar. Insert bolt in bottom hole first (rest hitch head).

•Pin ⑭ and seven spacer washers ⑬ are supplied in order to gain correct downward angle of spring bars. For an initial fitment, try four spacer washers for top mounted couplers and three spacer washers for bottom mounted couplers. Insert pin ⑭ and depending on angle or slope of bars that must be gained, use the least amount of washers ⑬ necessary in order to establish correct angle. (See Figures 1, 2, and 3).

•The pin ⑭ and its accompanying washers ⑬ are placed in the 1/2" hole between the "U" on ball mount 1 to acquire desired angle of spring bar ④. Once spring bar ④ angle has been determined, insert top bolt ⑯ with serrated washer ⑮. Install second serrated washer ⑮ and nut ⑲ to secure unit in correct position. Before tightening bolts, lock (tighten) ball mount set screw. Tighten the 3/4" top bolt ⑯ to 260 ft. lbs. torque once head angle is set. Secure lower bolt ⑯ to 260 ft. lbs. torque. After first day of towing, check ball mount set screw for tightness.

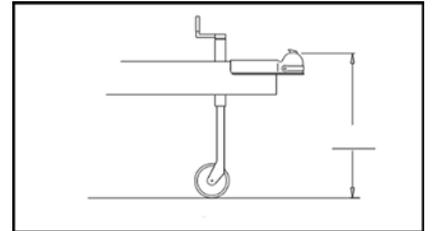


Figure 1: On a level surface, measure the height of your trailer coupler to ground.

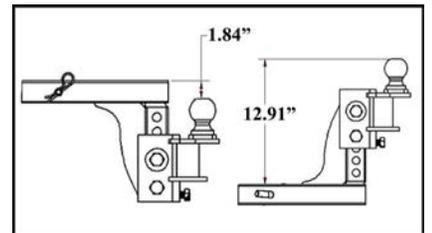


Figure 2: Hitch bar can be used in the raised or dropped position.

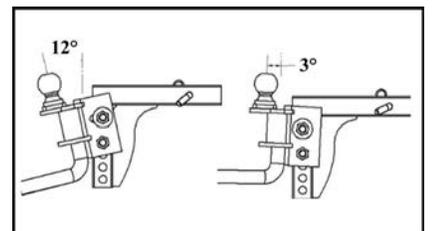


Figure 3: Using spacer washers, find the correct angle needed for your setup.

## INITIAL HOOK-UP

**NOTE: Tow Vehicle and trailer should be loaded and ready for travel before final leveling.**

•Pick a reference point on the front wheel well. Measure and record distance to pavement. Front wheel well to pavement

•Using tongue jack, lower coupler onto ball and close coupler latch. Do not retract jack completely.

•Assemble the lift chains ⑦ to the tapered ends of each spring bar using the 3/8" u-bolts ⑧, 3/8" flatwashers ⑨, and the 3/8" hex locknuts ⑩. Let two or three threads of the u-bolts extend out through the bottom of each locknut. The chain must be free to move in the u-bolt (see Figure 4).

•Apply grease to the ball mount ends of the spring bars. The spring bars can be inserted into either side of head (there is no 'right' or 'left bar'). To insert and lock spring bar in socket, hold bar under socket and push up. The spring bar will automatically be locked into position by the spring bar locking device (check to make sure bar is locked in by moving it up and down at the frame bracket end).

•To remove spring bars, just swing bar around under the bumper and it will drop free (see Figure 5).

•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 (see Figure 6). **NOTE:** If chain is angled it may catch the bracket when turning, this can damage the lift bracket or pry it open during use.

•Mark the location of the lift bracket on the trailer tongue then start installing 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.**

•**NOTE WHILE HOOKING UP SPRING BARS:** The amount of leveling is adjusted by engaging different spring bar chain links with the lift unit.

•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 (see Figure 6).

•Lower the lift bracket and slip the marked link over the hook, be sure that the chain is not twisted.

•Raise the lift bracket and secure with the locking pin (see Figure 7). Repeat procedure on the opposite side of the trailer using the same number of chain links as the first side.

•Retract the jack. Remeasure front wheel well reference point. The front wheel well height should be equal to or lower than the original uncoupled measurement.

-If the front wheel well height is higher than originally measured, increase the load on the spring bars by either raising the chains or adding hardened washers ⑬ under pin ⑭. **NOTE:** To allow movement when turning, there should be at least 5 links between the lift bracket and the spring bars. The number of links should ALWAYS be the same on both bars.

## MAINTENANCE

•Keep sockets in head assembly free of dirt and well lubricated. Excessive wear in this area may indicate overload or inadequate lubrication. Keep head assembly exterior clean, especially the spring bar sockets. Do not allow dirt or stones to lodge between spring bar and head. Keep hitch painted to prevent rust and maintain a good appearance. (Do not paint over labels) **BEFORE EACH TOW: Clean ball and coupler socket and coat ball lightly with grease. Check spring bar brackets and spring bars for wear. Check to see that all bolts are properly tightened and hitch pin and clip are securely in place. Check to see that electrical hookups are in working order, and that safety chains are connected.**

## SAFETY NOTICES / IMPORTANT NOTES

•**LOADED BALL HEIGHT SHOULD NOT BE GREATER THAN UNCOUPLED BALL HEIGHT.** Front wheel overload and loss of rear wheel traction can result, and can lead to unstable handling, reduced braking ability, and a tendency to "jackknife" when turning and braking at the same time. **IF LOADED BALL HEIGHT IS GREATER THAN UNCOUPLED HEIGHT, reduce take up on spring bars and remeasure until proper height is obtained.**

**DO NOT TOW MULTIPLE TRAILERS:** Do not attempt to tow any type of trailer behind another trailer. Towing multiple trailers may cause severe instability, loss of control and/or structural failure, and may result in vehicle accident, property damage and person al injury. Towing multiple trailers is illegal in many jurisdictions.

**FRONT WHEEL DRIVE VEHICLES: DO NOT ATTEMPT TO HOOK UP OR TOW WITH REAR WHEELS OF TOWING VEHICLE REMOVED.** Severe structural damage to towing vehicle, hitch, and trailer may result. A towing vehicle/trailer combination cannot be controlled adequately unless the towing vehicle's rear wheels are carrying their share of the load.

**SURGE BRAKES:** Some surge brakes will not work with weight distributing hitches. **CHECK TRAILER AND/OR SURGE BRAKE OPERATING INSTRUCTIONS FOR ANY SPECIAL REQUIREMENTS REGARDING WEIGHT DISTRIBUTING HITCHES.** Do not use sway control with surge brakes.

## TOWING TIPS

**DRIVING:** Good habits for normal driving need extra emphasis when towing. The additional weight affects acceleration and braking, and 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 OCCURED IN ANY OTHER WAY, PULL OVER AND MAKE A THOROUGH INSPECTION. CORRECT ANY PROBLEMS BEFORE RESUMING TRAVEL.**

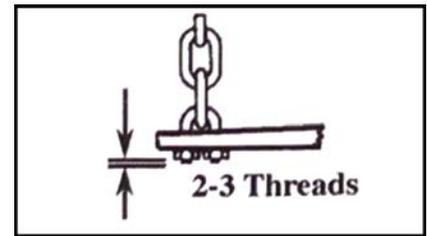


Figure 4: Let 2-3 threads of u-bolt through the bottom of each lock nut.

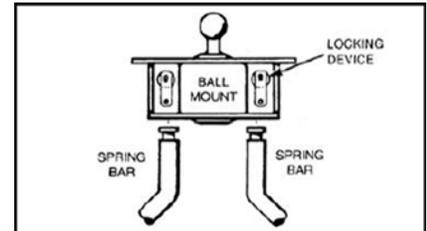


Figure 5: WD spring bars attached to head through socket and secures with clip.

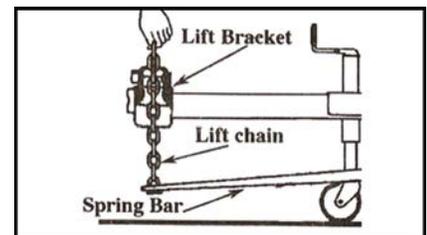


Figure 6: Center the lifting bracket parallel with the spring bar chains.

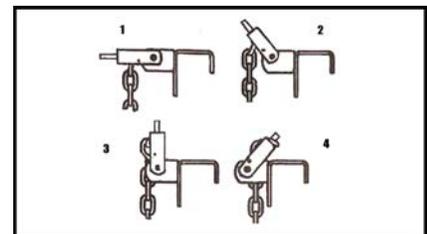


Figure 7: Raise the lift bracket with the chain and secure with locking pin.



# INSTALLING SHOCKER AIR EQUALIZER & WD HITCH

## SIZING WD AND TRAILER HITCH SYSTEMS

- Refer to provided Consumer Information to weigh loaded trailer tongue to determine proper system size.
- Tongue rating of trailer hitch must meet or exceed measured tongue weight of trailer. OEM hitches may not be rigid enough for tongue weight and may need to be replaced (too much flex and won't carry load).
- Total trailer gross weight rating must never exceed tow vehicle rated gross tow rating.
- This system works on trailer frames 1.5" – 2" wide and 4" to 7" tall, with top or bottom mount couplers.
- The Shocker Hitch Air Equalizer works on TRUCKS ONLY, this system WILL NOT WORK ON SUV type vehicles.

## INITIAL SET-UP

•NOTE: Some truck and trailer combinations can be prone to sway such as short wheel base tow vehicles towing long trailer. Ensure vehicle tow ratings meet or exceed trailer GVWR, ensure proper trailer loading to maintain 10% to 15% tongue weight, upgrade tow vehicle tires to heavier load ratings, and when additional sway control may be required an optional Shocker Hitch friction sway bar SH-1001 (sold separately) can be added to the Shocker Weight Distribution Towing Kit and/or Air Equalizer.

•Line up tow vehicle and trailer on level pavement, in straight-ahead position, uncoupled. Level the trailer and measure and record the distance from the ground to the top of the coupler (see Figure 8).

•Insert the XR channel hitch into the hitch box and install 5/8" pin and clip. the XR channel hitch may be used in either the up or down position (see Figure 9).

•NOTE: The ball height should be greater than coupler height by approximately 3/4" to 1" to compensate for vehicle squat. For vehicles with air springs, air shocks or an automatic leveling system, check vehicle owner's manual. Unless otherwise specified make sure you adjust the ball mount and do the trailer set up with the trailer and vehicle loaded as they will be when towing. Raised balls usually have reduced load ratings. Ball rating MUST equal or exceed trailer GVWR.

•Attach the Shocker Air Equalizer to the XR channel hitch (the XR channel hitch may be used in the up or down position). With ball attached to ball mount, attach the ball mount on the Air Equalizer. Insert bolt in bottom hole first, rest hitch head. NOTE: Ensure air bag is deflated, you can do so by taking a pin and pushing the air valve bleeder while pushing on the air bag.

•Pin 14 and seven hardened washers 13 are supplied in order to gain correct downward angle of spring bars. For an initial fitment, try four spacer washers for top mounted couplers and three spacer washers for bottom mounted couplers. Insert pin 14 and depending on angle or slope of bars that must be gained, use the least amount of washers 13 necessary in order to establish correct angle (see Figure 10).

•The pin 14 and its accompanying washers 13 are placed in the 1/2" hole between the "U" on head assembly 2 to acquire desired angle of spring bar 4. Once spring bar 4 angle has been determined, insert top bolt 16 with toothed washer 15. Install second toothed washer 15 and nut 12 to secure unit in correct position. Before tightening bolts, lock (tighten) ball mount set screw located at the bottom rear center of ball mount channel. Tighten the 3/4" top bolt 16 to 260 ft. lbs. torque once head angle is set. Secure lower bolt 16 to 260 ft. lbs. torque. After first day of towing, check ball mount set screw for tightness.

## INITIAL HOOK-UP

NOTE: Tow Vehicle and trailer should be loaded and ready for travel before final leveling.

•Pick a reference point on the front wheel well. Measure and record distance to pavement. Front wheel well to pavement

•Using tongue jack, lower coupler onto ball and close coupler latch.

•Assemble the lift chains 7 to the tapered ends of each spring bar using the 3/8" u-bolts 8, 3/8" flatwashers 9, and the 3/8" hex locknuts 10. Let two or three threads of the u-bolts extend out through the bottom of each locknut. The chain must be free to move in the u-bolt (see Figure 11).

•Apply grease to the ball mount ends of the spring bars. The spring bars can be inserted into either side of head (there is no 'right' or 'left bar'). To insert and lock spring bar in socket, hold bar under socket and push up. The spring bar will automatically be locked into position by the spring bar locking device (check to make sure bar is locked in by moving it up and down at the frame bracket end).

•To remove spring bars, just swing bar around under the bumper and it will drop free (see Figure 12).

•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 (see Figure 13). NOTE: If chain is angled it may catch the bracket when turning, this can damage the lift bracket or pry it open during use.

•Mark the location of the lift bracket on the trailer tongue then start installing 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.

•NOTE WHILE HOOKING UP SPRING BARS: The amount of leveling is adjusted by engaging different spring bar chain links with the lift unit.

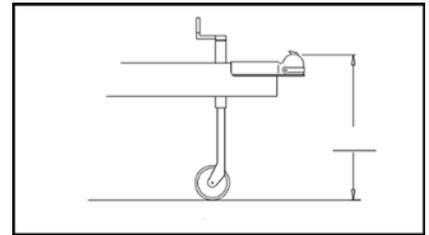


Figure 8: On a level surface, measure the height of your trailer coupler to ground.

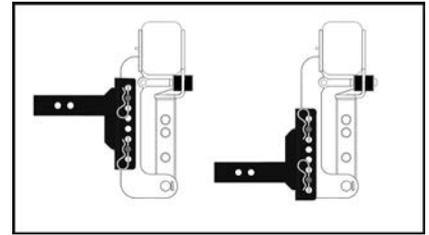


Figure 9: XR channel hitch can be used in the raised or dropped position.

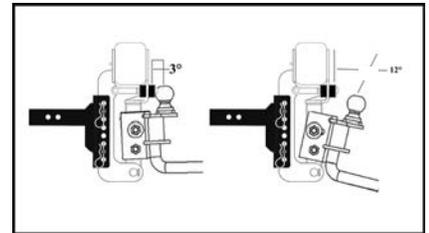


Figure 10: Using spacer washers, find the correct angle needed for your setup.

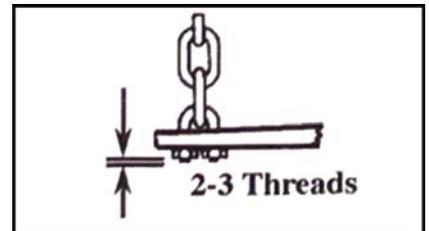


Figure 11: Let 2-3 threads of u-bolt through the bottom of each lock nut.

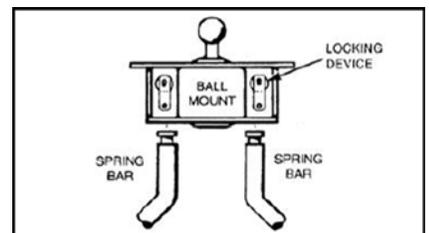


Figure 12: WD spring bars attached to head through socket and secures with clip.

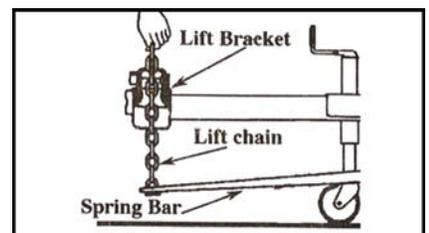


Figure 13: Center the lifting bracket parallel with the spring bar chains.

•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 (see Figure 13).

•Lower the lift bracket and slip the marked link over the hook, be sure that the chain is not twisted.

•Raise the lift bracket and secure with the locking pin (see Figure 14). Repeat procedure on the opposite side of the trailer using the same number of chain links as the first side.

•Retract the jack. Inflate airbag on the Shocker Hitch Air Equalizer until rear section of hitch releases off front bump cushions of hitch, note pressure. Typical pressure to achieve release bump cushion contact is less than 80 psi maximum, less is preferred. If pressure is higher continue with setup to determine air pressure remedy (see Figures 15 & 16).

•Remeasure front wheel well reference point. The front wheel well height should be equal to or lower than the original uncoupled measurement.

-If the front wheel well height is higher than originally measured, increase the load on the spring bars by either raising the chains or adding hardened washers (13) under pin (14). NOTE: To allow movement when turning, there should be at least 5 links between the lift bracket and the spring bars. The number of links should ALWAYS be the same on both bars.

-If the front wheel well is lower than originally measured AND if the noted airbag pressure is higher than 80 psi, reduce the load on the spring bars by either lowering the hitch position in XR channel or removing spacer washers then recheck the wheel well measurement. Adjust pressure in airbag so hitch is between both front and back bump cushions.

•If the original wheel well height is not achievable, it is preferred that the front wheel well height is lower after the spring bars are loaded. Adjusting height of the air hitch on the XR channel may be necessary when adjusting the number of spacer washers. If the airbag pressure is higher than 80 psi, and the trailer is not level, raising the ball mount height may be necessary to level trailer.

•Test drive hitch, adjust pressure in hitch until desired smooth ride is achieved. Adding air to hitch to contact rear bump cushions is typical. If pressure exceeds 100 psi, revisit adjusting chains, spacer washers, hitch position, or if the actual tongue weight of trailer exceeds 10-15% of total weight of trailer.

#### MAINTENANCE

•Keep sockets in head assembly free of dirt and well lubricated. Excessive wear in this area may indicate overload or inadequate lubrication. Keep head assembly exterior clean, especially the spring bar sockets. Do not allow dirt or stones to lodge between spring bar and head. Keep hitch painted to prevent rust and maintain a good appearance. (Do not paint over labels) **BEFORE EACH TOW: Clean ball and coupler socket and coat ball lightly with grease. Check spring bar brackets and spring bars for wear. Check to see that all bolts are properly tightened and hitch pin and clip are securely in place. Check to see that electrical hookups are in working order, and that safety chains are connected.**

#### SAFETY NOTICES / IMPORTANT NOTES

•**LOADED BALL HEIGHT SHOULD NOT BE GREATER THAN UNCOUPLED BALL HEIGHT.** Front wheel overload and loss of rear wheel traction can result, and can lead to unstable handling, reduced braking ability, and a tendency to "jackknife" when turning and braking at the same time. **IF LOADED BALL HEIGHT IS GREATER THAN UNCOUPLED HEIGHT, reduce take up on spring bars and remeasure until proper height is obtained.**

•**DO NOT TOW MULTIPLE TRAILERS:** Do not attempt to tow any type of trailer behind another trailer. Towing multiple trailers may cause severe instability, loss of control and/or structural failure, and may result in vehicle accident, property damage and personal injury. Towing multiple trailers is illegal in many jurisdictions.

•**FRONT WHEEL DRIVE VEHICLES: DO NOT ATTEMPT TO HOOK UP OR TOW WITH REAR WHEELS OF TOWING VEHICLE REMOVED.** Severe structural damage to towing vehicle, hitch, and trailer may result. A towing vehicle/trailer combination cannot be controlled adequately unless the towing vehicle's rear wheels are carrying their share of the load.

•**SURGE BRAKES:** Some surge brakes will not work with weight distributing hitches. **CHECK TRAILER AND/OR SURGE BRAKE OPERATING INSTRUCTIONS FOR ANY SPECIAL REQUIREMENTS REGARDING WEIGHT DISTRIBUTING HITCHES.** Do not use sway control with surge brakes.

#### TOWING TIPS

•**DRIVING:** Good habits for normal driving need extra emphasis when towing. The additional weight affects acceleration and braking, and 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 OCCURED IN ANY OTHER WAY, PULL OVER AND MAKE A THOROUGH INSPECTION. CORRECT ANY PROBLEMS BEFORE RESUMING TRAVEL.**

•**TRAILER LOADING:** Proper trailer loading is important. Heavy items should be placed close to the floor near the trailer axle. The load should be balanced side to side and firmly secured to prevent shifting. Tongue weight should be about 10-15 percent of the gross trailer weight for most trailers. Too low a percentage of tongue weight will often produce a tendency to sway. Excess weight on the tongue can also lead to sway and damage hitch and / or tow vehicle.

•**SWAY CONTROLS:** A sway control system can help minimize the affects of sudden maneuvers, wind gusts, and buffeting caused by other vehicles. Use of a sway control is recommended for trailers with large surface areas, such as travel trailers.

•**TIRE INFLATION:** Unless specified otherwise by the towing vehicle or trailer manufacturer, tires should be inflated to their maximum recommended pressure.

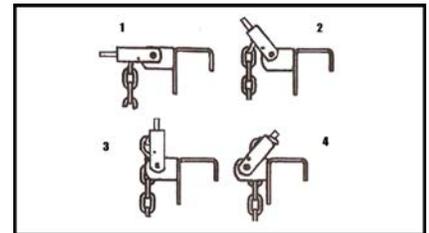


Figure 14: Raise the lift bracket with the chain and secure with locking pin.



Figure 15: Hitch frame resting on bump cushions closer to tailgate - add air.



Figure 16: Hitch frame resting on bump cushions closer to trailer - stop adding air.

