

INSTALLATION INSTRUCTIONS

Reese SC Weight Distributing Kits

PART NUMBER:

66151

66153

66155

66157

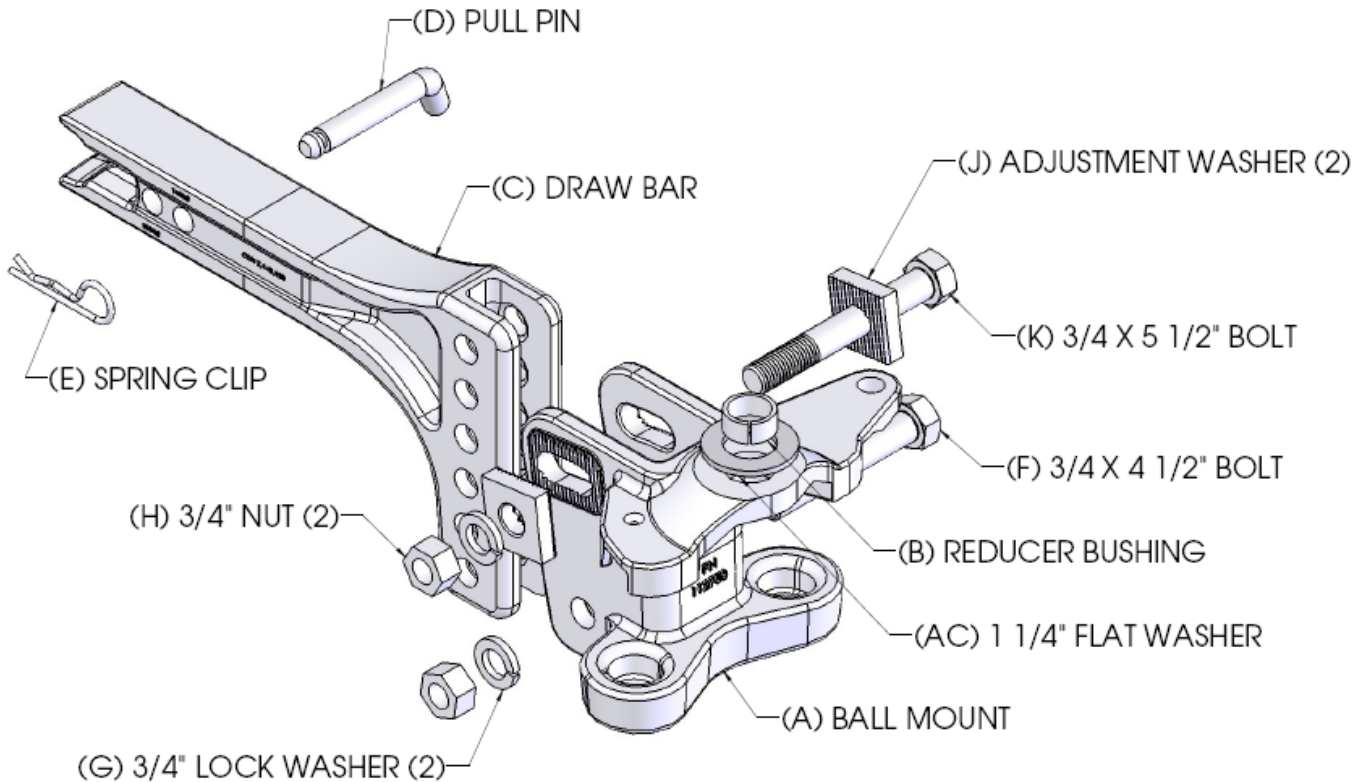


Fig. 1

SIZING WD AND TRAILER HITCH SYSTEMS

- Weigh loaded trailer tongue to determine proper system size.
- Choose a system with tongue rating at or above the actual trailer tongue weight.
- Tongue rating of trailer hitch must meet or exceed the measured tongue weight of the 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.

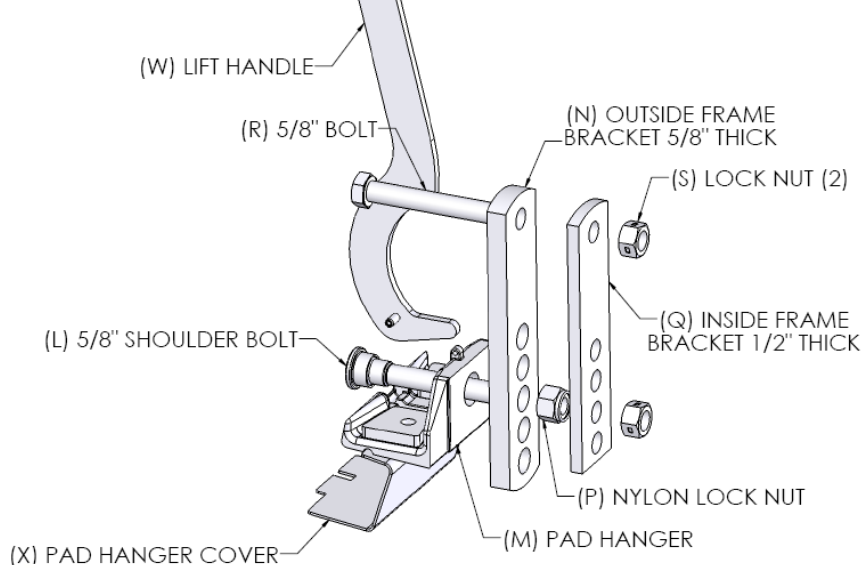


Fig. 2

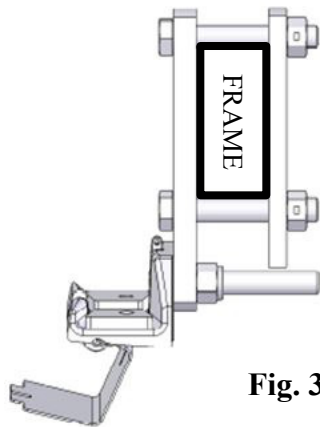


Fig. 3

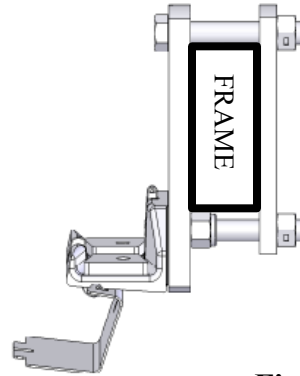
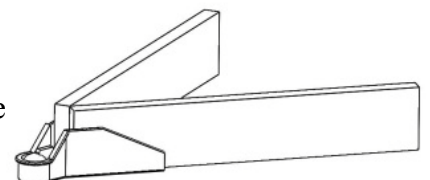


Fig. 4

FRAME BRACKET ASSEMBLY (600 lb and 800 lb kits only, shown in Fig. 2)

- Assemble 5/8" bolt (R) through the top holes of the outside frame bracket (N) and inside frame bracket (Q) (See Fig. 2).
- Slide frame bracket assembly over the trailer frame. Frame brackets have multiple mounting holes for various frame heights. Insert the second 5/8" bolt through the highest hole not obstructed by the bottom of the frame. Install 5/8" lock nuts (S) and hand tighten (See Fig. 3) .
- Slide frame brackets into position, the center of the frame brackets should be placed as shown in Fig. 6. See Chart 1 on page 4 for dimension specification.
- Insert 5/8" shoulder bolt (L) through pad hanger (M) and outside frame bracket (N). **NOTE:** For frames 5" and smaller, the 5/8" shoulder bolt (L) may be used in place of the lower 5/8" bolt (R) for higher pad hanger mounting locations (See Fig. 4).
- Install 5/8" Nylon lock nut (P) onto 5/8" shoulder bolt and torque to 50-75 ft*lbs. The top nut flat may need to be oriented horizontally to prevent interference with the frame for higher mounting locations (See Fig. 4). **NOTE:** During spring bar setup, it may be necessary to use a lower bracket hole to decrease spring bar load if there is not enough head angle adjustment (See Fig. 8).
- Torque 5/8" lock nuts (S) to 120 ft*lbs.
- Repeat for the other side.

FOR TRAILERS WITH A BOTTOM MOUNTED/INVERTED COUPLER: Use the lower pad hanger mounting holes in the outside frame brackets and adjust the ball mount angle to achieve the proper height before loading the spring bars (See. Fig. 8).



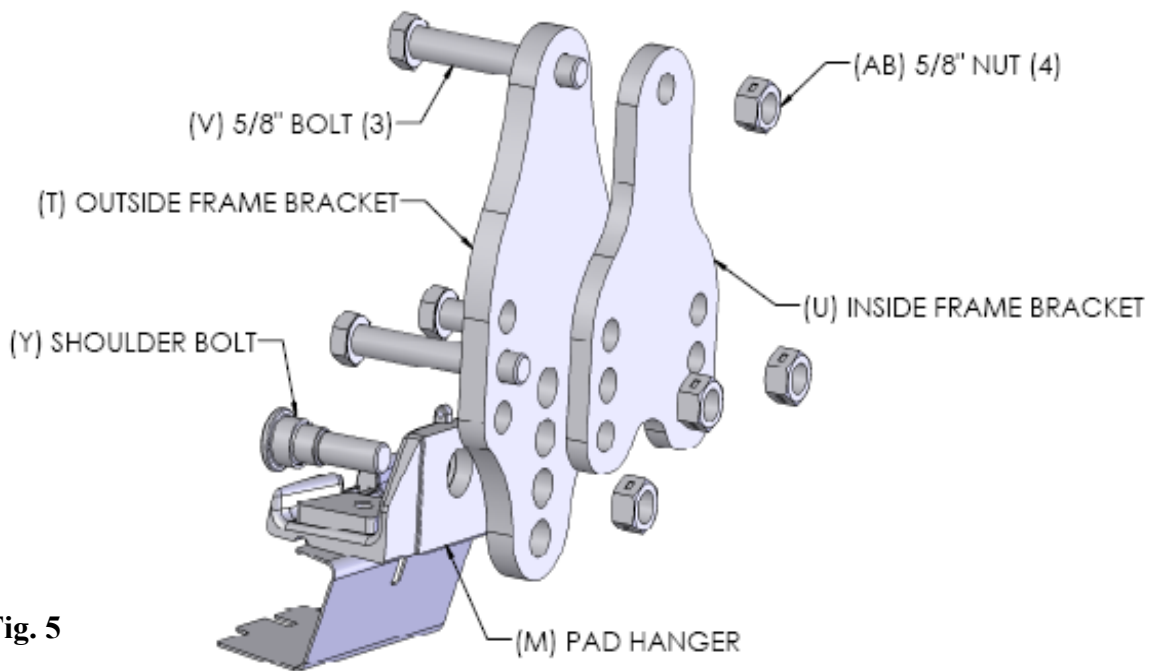


Fig. 5

FRAME BRACKET ASSEMBLY (1200 lb and 1500 lb kits only, shown in Fig. 5)

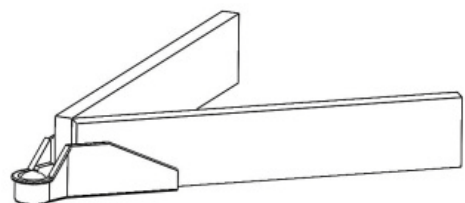
- Assemble 5/8” bolt (V) through the top holes of the outside frame bracket (T) and inside frame bracket (U) shown in Fig. 5.
- Slide bracket assembly over the trailer frame and install two 5/8” bolts through the highest bolt holes that are unobstructed by the bottom of the frame. Frame brackets have 3 sets of mounting holes to be used for 4”, 5” and 6” frames.
- Install three 5/8” nuts (AB) and hand tighten.
- Slide frame brackets into position, the center of the frame brackets should be placed as shown in Fig. 6. See Chart 1 on page 4 for dimension specification.
- Insert shoulder bolt (Y) through the pad hanger (M) and the hole in the outside frame bracket (T) which allows the proper height shown in Fig. 8.

NOTE: During spring bar setup, it may be necessary to use a lower bracket hole to decrease spring bar load if there is not enough head angle adjustment (See Fig. 8).

- Assemble 5/8” nut to the shoulder bolt clamping the pad hanger to the outside frame bracket.
- Torque all 5/8” nuts to 120 ft*lbs.
- Repeat for the other side.

FOR TRAILERS WITH A BOTTOM

MOUNTED/INVERTED COUPLER: Use the lower pad hanger mounting holes in the outside frame brackets and adjust the ball mount angle to achieve the proper height before loading the spring bars (See. Fig. 8).



NOTE: Propane bottles, batteries, etc. may obstruct installation of the frame brackets to the trailer frame. The frame brackets can be located within the following specified range from coupler ball center to the center of pad the hanger:

Chart 1

600# Range = 18" to 27"

800# Range = 20" to 27"

1200# Range = 24" to 30"

1500# Range = 28" to 30"

See Fig. 6

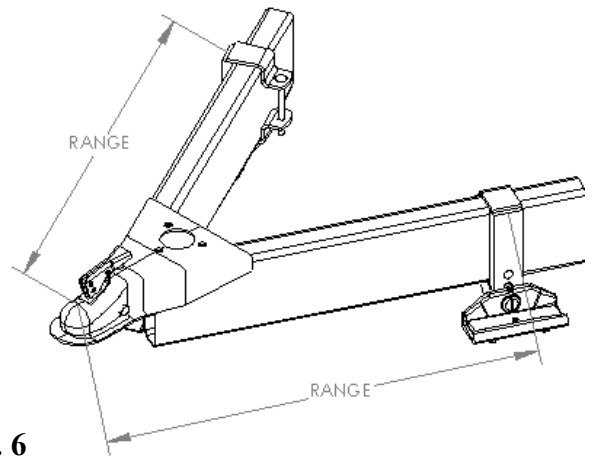


Fig. 6

INITIAL SETUP

- Line up the tow vehicle and trailer on level pavement, in straight-ahead position, uncoupled.
- Select a hitch ball with a diameter that matches the trailer coupler size. The three most common sizes are 1-7/8", 2", and 2-5/16". Select a ball with an 1-1/4" or 1" threaded shank that is V-5 rated equal to or greater than the trailer gross vehicle weight rating (GVWR).

WARNING: Raised balls usually have reduced load ratings. Ball rating MUST be equal to or exceed the trailer GVWR.

- Attach hitch ball to the ball mount (A) shown in Fig. 1. Standard height hitch balls with 1-1/4" shanks are typically supplied with lock washers and nuts. If a 1" shank ball is used, use reducer bushing (B) to reduce hole size in the ball mount to 1". If using an 1-1/4" shank ball on 600 or 800 lb kits, the supplied 1-1/4" flat washer (AC) may be used between the ball and the ball mount to space the ball upward slightly to prevent trunnion interference during a sharp turn. Always use a lock washer and place the washer between the nut and ball mount. Unless otherwise specified by the ball manufacturer, torque ball nut to 450 ft*lbs for 1-1/4" nuts and 250 ft*lbs for 1" nuts.

- Weight distribution kits are sold with and without draw bar (C). Some installations may require a longer draw bar. Extended bumper guards, pickup truck caps, or rear mounted spare tires can limit turn angles unless a longer draw bar is used. Individual draw bars are available in various sizes for length and height.
- Insert the draw bar into the hitch box and install pull pin (D) and spring clip (E). Place ball mount onto draw bar and move up or down so the top of the ball is approximately 1/2-1" above the top of the trailer coupler. The supplied draw bar may be used in either the up or down position shown in Fig. 7.



Fig. 7

PRELIMINARY BALL MOUNT ADJUSTMENT

- Install 3/4 x 4-1/2" bolt (F) in the lower hole of the ball mount as shown in Fig 1. Install the 3/4" lock washer (G) and snug the 3/4" nut (H).
- Level the trailer. Measure and record the distance from the ground to the top of the friction pad (X dimension Fig. 8).
- Install spring bar - Orient the spring bar/trunnion assembly with the trunnion reinforcement to the top (rating label side up) shown in Fig. 8. Set the bottom pin of the trunnion into the lower socket of the ball mount and slide the top trunnion pin into the top slot in the ball mount. Spring bar/trunnion assemblies will fit on either side.
- Swing spring bar outward to the same angle as when connected to the trailer. Lift up on bar to remove slack.
- As a starting point, the spring bar height "Y", shown in Fig 8, should be approximately 2 to 3" less than the friction pad height "X".
- Tilt ball mount for proper "Y" dimension at the end of the spring bar. The ball mount is adjustable through a 13° angle range for proper spring bar adjustment. Fig. 9
- Install 3/4 x 5-1/2" bolt (K) with two adjustment washers (J) as shown in Fig 1. Install lock washer and nut. Align the washers as shown and hand tighten nut. Recheck the "Y" dimension and torque both 3/4" nuts to 300 ft*lbs. If a large enough torque wrench is not available, torque nuts to 150 ft*lbs then tighten the nuts an additional 1/4 turn. Do not lubricate the threads.

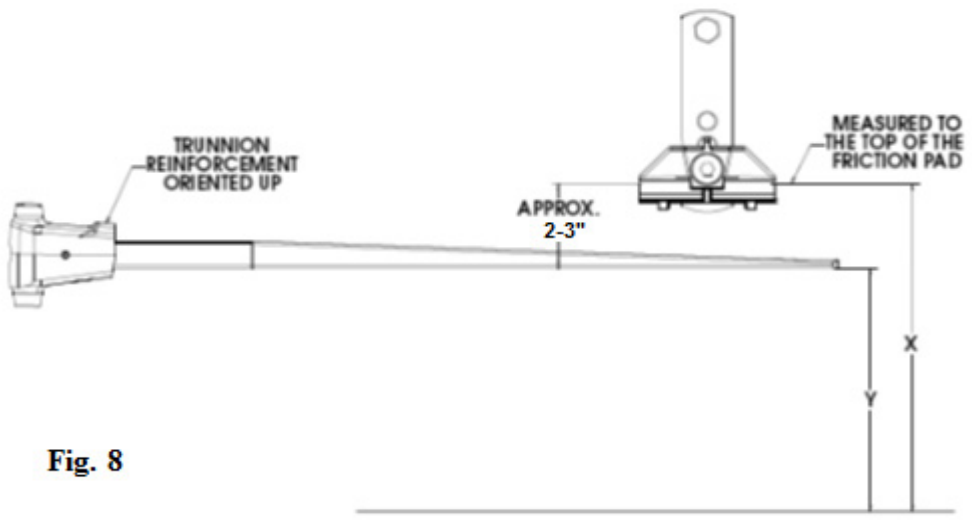


Fig. 8

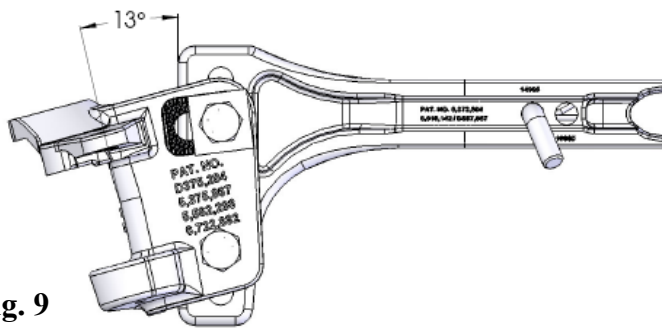


Fig. 9

INITIAL HOOK UP

- Pick reference points on front and rear wheel wells. Measure and record distance to pavement. Front wheel well to pavement _____ Rear wheel well to pavement _____
- Using the tongue jack, lower coupler onto ball and close the coupler latch.
- Install spring bars - orient the spring bar/trunnion assembly with the trunnion reinforcement facing up as shown in Fig 8. Set the bottom pin of the trunnion into the lower socket of the ball mount and slide the top trunnion pin into the top slot in the ball mount. Spring bar/trunnion assemblies will fit on either side.
- Using the tongue jack, raise the tongue of the trailer and rear of vehicle as high as possible and attempt to set spring bars on top of pad hangers. If bars will not swing over the pad hanger, use of the lift handle (W) will be required.

WARNING: To avoid serious injury, always stand to the side of the lift handle. Never stand at the end of the handle or allow any part of your body under the handle.

- Place the lift handle pivot pin in the pad hanger pocket and set spring bar in curved area of lift handle. Raise lift handle and spring bar should slide on to the pad hanger. Lower tongue jack until the jack is off of the ground. Re-measure the front wheel well reference point. Front wheel well height **MUST** be approx. equal to or less than the original measurement. If the front wheel well height is higher than previously measured, the head tilt angle must be increased (tilted downward). If the front wheel well height is substantially lower than originally measured (1 ½ inches or more), the head tilt angle must be reduced (tilted upward), or for coarse adjustment the pad hanger bolts can be lowered one hole. Spring bars must be unloaded and removed from the pad hangers prior to adjusting head tilt angle or removal of shoulder bolts. If head angle or shoulder bolt location adjustments are made repeat hook up steps until the front wheel well height is equal to or less than originally measured. It's preferred that the rear of the vehicle settle the same amount or more than the front.
- Optional: The ideal setup would allow the vehicle to settle an equal amount (front and rear) from the original measurements.
- Swing pad hanger cover (X) over the pad hanger and insert the spring clip. Fig. 10

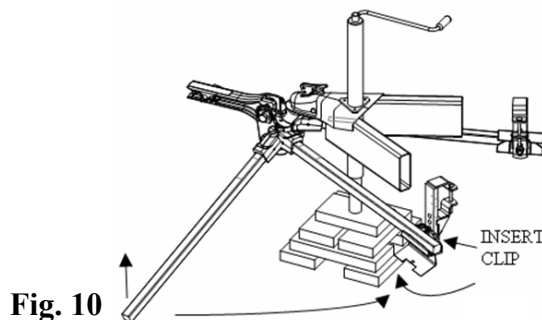


Fig. 10

UNHITCHING

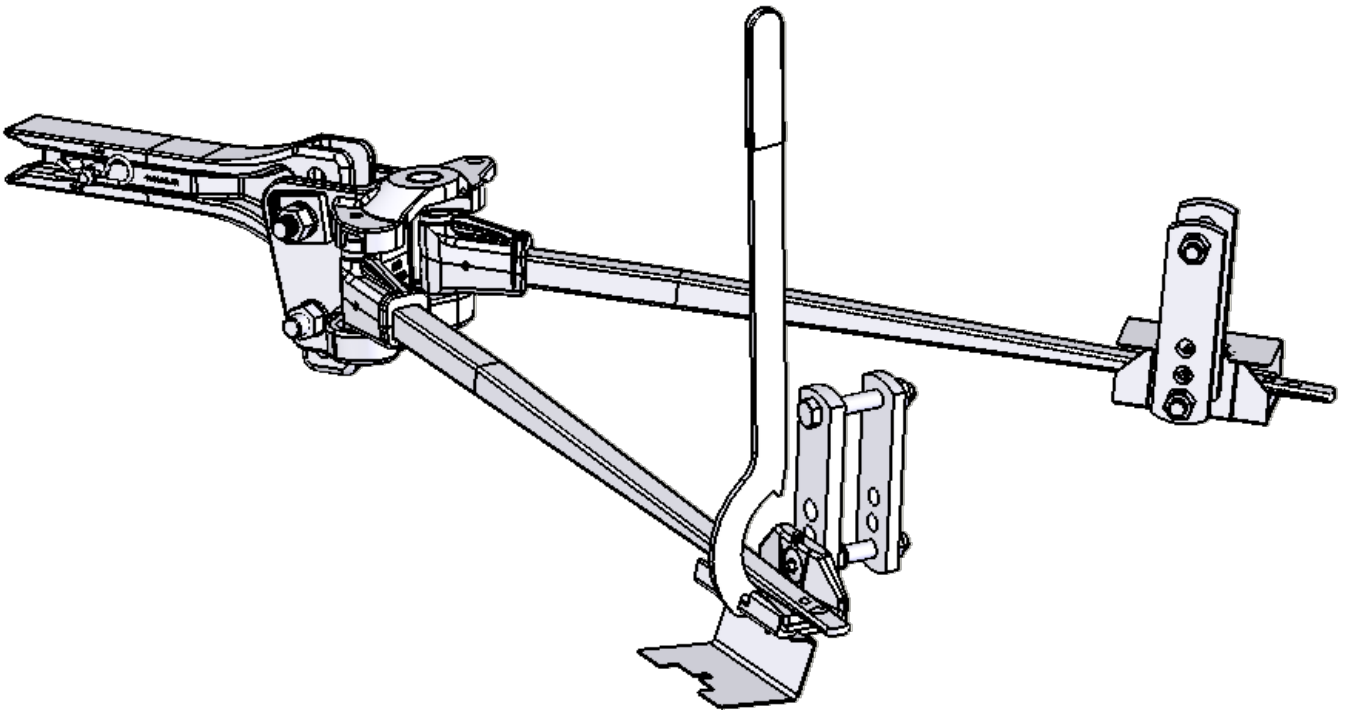
- Block trailer wheels front and rear.
- Raise tongue of trailer with tongue jack as high as possible.
- Remove spring clip from pad hanger cover and swing cover down.
- If spring bar is still loaded on pad hanger, use of the lift handle will be required.

WARNING: To avoid serious injury, always stand to the side of the lift handle. Never stand at the end of the handle or allow any part of your body under the handle.

- Place pivot pin of lift handle in the pad hanger pocket with spring bar in curved area of lift handle. Lower lift handle and spring bar should pivot off of the pad hanger.
- Swing spring bars away from pad hanger and remove from head.
- Repeat for the other side.
- Lower the tongue of the trailer until the jack is off the ground and unlatch the trailer coupler. Once unlatched, the trailer may be raised again to clear the top of the ball and vehicle can be driven away.

LUBRICATION

- Lubricate the ball mount sockets, hitch ball, and spring bar trunnions to prevent unnecessary wear. Trunnions should be lubricated daily when in use with heavy oil or grease. Lubricate upper and lower trunnion pivot pins and the contact area in the ball mount sockets. Excess oil and dirt should be wiped out whenever the trailer is uncoupled.



WARNINGS: LOADED BALL HEIGHT SHOULD NEVER 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, re-adjust head and re-measure 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.

MAINTENANCE: Keep trunnions and sockets in head assembly free of dirt and well lubricated. Excessive wear in this area may indicate overload or inadequate lubrication. Some elongation of socket openings "seat in" is normal.

Keep head assembly exterior clean, especially the trunnion sockets. Do not allow dirt or stones to lodge between trunnions and head.

Keep hitch painted to prevent rust and maintain a good appearance. (Do not paint over labels)

AT THE BEGINNING OF EVERY TOWING DAY:

- Add grease at trunnion contact areas with ball mount.
- Clean ball and coupler socket and coat ball lightly with grease.
- 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.

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.

CHECK YOUR EQUIPMENT: Periodically check the condition of all your towing equipment and keep it in top condition.

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 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.

TOWING VEHICLE AND TRAILER MANUFACTURERS' RECOMMENDATIONS: Review the owners' manuals for your towing vehicle and trailer for specific recommendations, capacities, and requirements.

PASSENGERS IN TRAILERS: Trailers should NOT be occupied while being towed, under any circumstances.

TRAILER LIGHTS, TURN SIGNALS, AND ELECTRIC BRAKES: Always hook up and verify function of the trailer lights, turn signals, electric brakes and break-away switch connection (if equipped) even for short trips.

REMOVE HITCH WHEN NOT TOWING: Remove hitch from towing vehicle receiver when not towing, to prevent contamination of head sockets, reduce chance of striking hitch on driveway ramps or other objects, and minimize damage in the event of a rear-end collision.