Installation Instructions

REESE Dual Cam HP

High-Performance Sway Control

DUAL CAM HP ASSEMBLED

Equipment Required:
Fastener Kit: 100126
Wrenches: 1-1/2" Open End, ¾" Open End
½" Open End, ¾" Socket & Ratchet
Drill Bits: 7/16", 17/32" & Center Drill (Pilot Drill)
Other: 8 – 10" C-Clamp, Tape Measure, Light Penetrant Oil

DEALER/INSTALLER:

(1) Provide this Manual to end user

END USER:

(1) Read and follow this Manual every time you use Dual Cam HP.

(2) Save this Manual for Future Reference.

(3) Pass on copies of Manual to any other users or owner.

Do Not Exceed Lower of Towing Vehicle Manufacturer's Rating, or Trailer Manufacturer's Rating

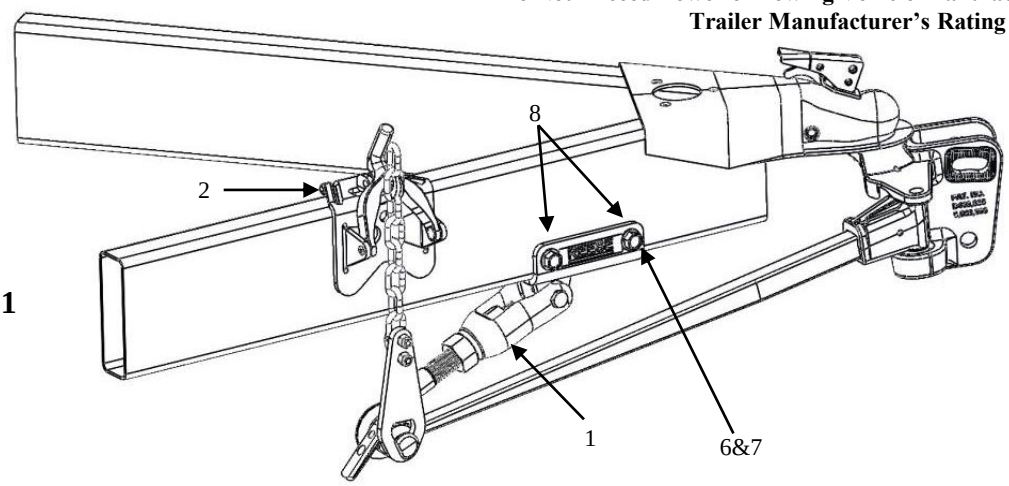

Figure 1

STEEL trailer frames only. Not for use with aluminum frames.

①	Qty. (2)	Dual Cam HP Cam Arm Assembly
②	Qty. (2)	Hanger Bracket – Snap up Bracket
③	Qty. (2)	½ - 13 Thread Forming Screw (Optional use with snap up Bracket. Not Shown Here.)
④	Qty. (2)	½-13 X 3 ½" Square Head Bolt
⑤	Qty. (6)	½-13 Hex Nut
⑥	Qty. (4)	½" Lock Washer
⑦	Qty. (4)	½-13 X 1 ½" Grade 5 Bolt
⑧	Qty. (4)	Rivet Nuts

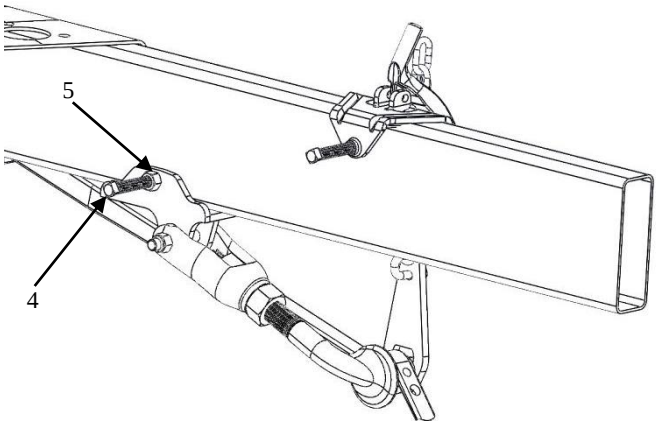

Figure 2

Inside View of Trailer Frame

⚠ **WARNING:**
Failure to follow all of these instructions may result in death or serious injury!

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INSTALLATION

1. Locate both hanger brackets included in the kit (item 2, figure 1). Install U-bolt and chain from your Weight Distribution Kit on each hanger bracket as shown in figure 3 (if installing Dual Cam HP on an existing weight distribution kit, the U-bolts and chains will need to be removed from each spring bar before they can be installed on the hanger brackets).

   The U-bolts must be installed in the ends of the chains (last link) as shown in figure 3.

2. Install 2 lock nuts per U-bolt, tighten u-bolt nuts. Make sure at least 2 threads are showing past the ends of the nuts.

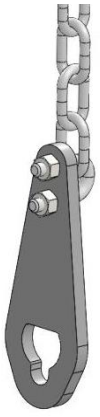

Figure 3

3. Using a grease pencil or suitable marking device such as a marker and a straight edge locate and mark the center of the hitch ball on the coupler both horizontally and vertically as shown in figure 4 . This reference point will be used to locate the cam arm assembly position. Mark both sides of the coupler.

Figure 4

4. If the adjustment is difficult, as the adjustment nut must be turned by hand, apply a small amount of light penetrating oil such as WD40 or PB Blast to the threads of the cam arm. Work the adjustment nut back or forward to get the penetrating oil into the threads until the adjustment nut moves freely to the desired position.

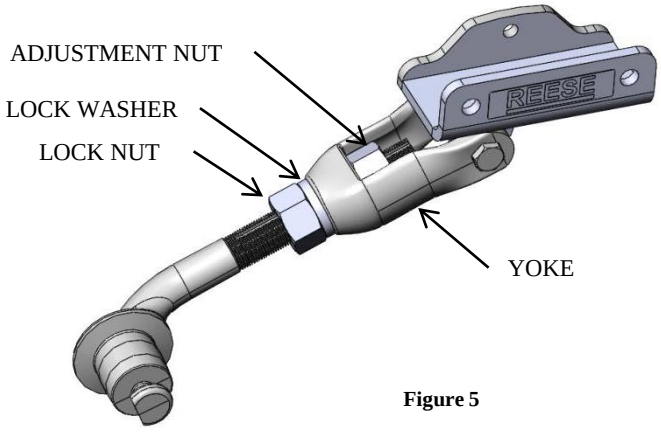

Figure 5

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5. Using a C-clamp suitable to accommodate your trailer frame height and the Dual Cam HP frame plate, temporarily clamp the Dual Cam HP cam arm assembly to the trailer frame and Dual Cam HP frame plate as shown in **figure 6 for Trunnion style Weight Distribution kits**, for **Round Bar style Weight Distribution Kits, follow the dimensions in figure 7**.

6. Position the Frame Plate at the dimension shown for your type Weight Distribution Kit (Trunnion Style or Round Bar. Standard coupler or bottom mounted).
   Measure from the mark on the ball coupler to the center of the cam arm pivot bolt as shown in figure 6 or figure 7 on the next page. If the frame plate interferes with any part of the trailer frame, the orientation can be changed by switching sides, see figure 10 for optional Frame plate orientation – maintain the same coupler center to cam arm pivot dimension regardless of frame plate orientation.

7. Position the Chain Hanger temporarily above the cam arm. (Upon hook-up, the Hanger position must be adjusted to be sure the chain is vertical before towing). Tighten the Chain Hanger bolt shown in figure 2 against the frame.

Trunnion Style Set Up Locations

(Standard Coupler)

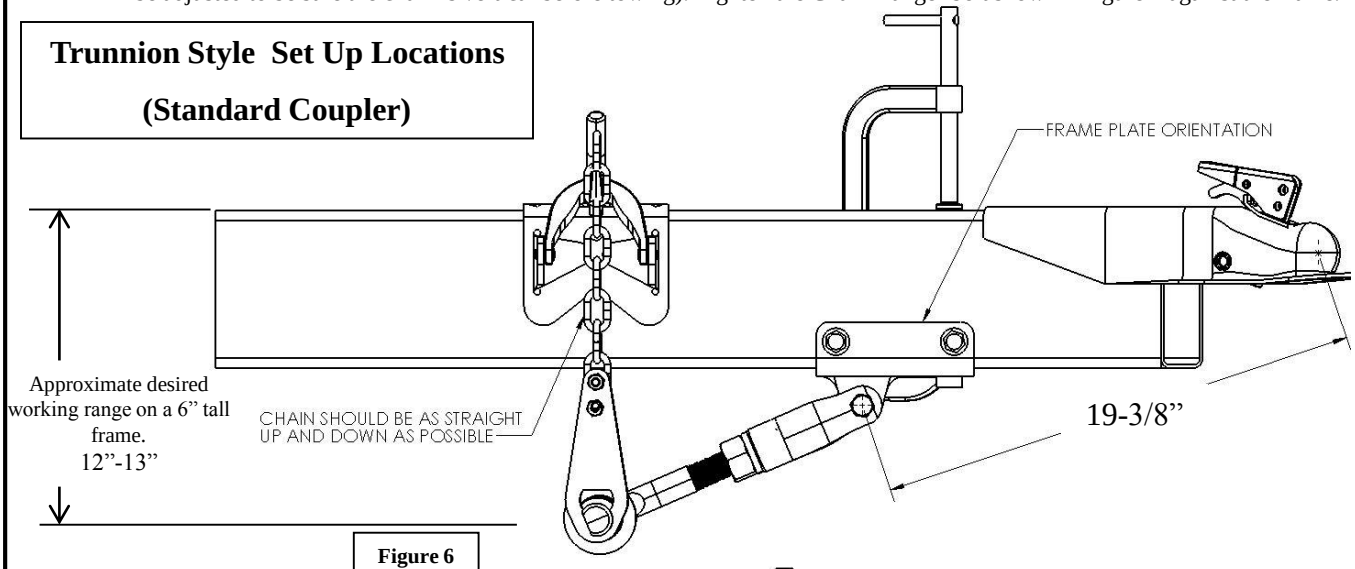

Figure 6

Trunnion Style Set Up Locations

(Bottom Mounted Coupler)

8. If you have a bottom mounted coupler it may be necessary for you to tilt the ball mount as far forward towards the front of the tow vehicle as possible.

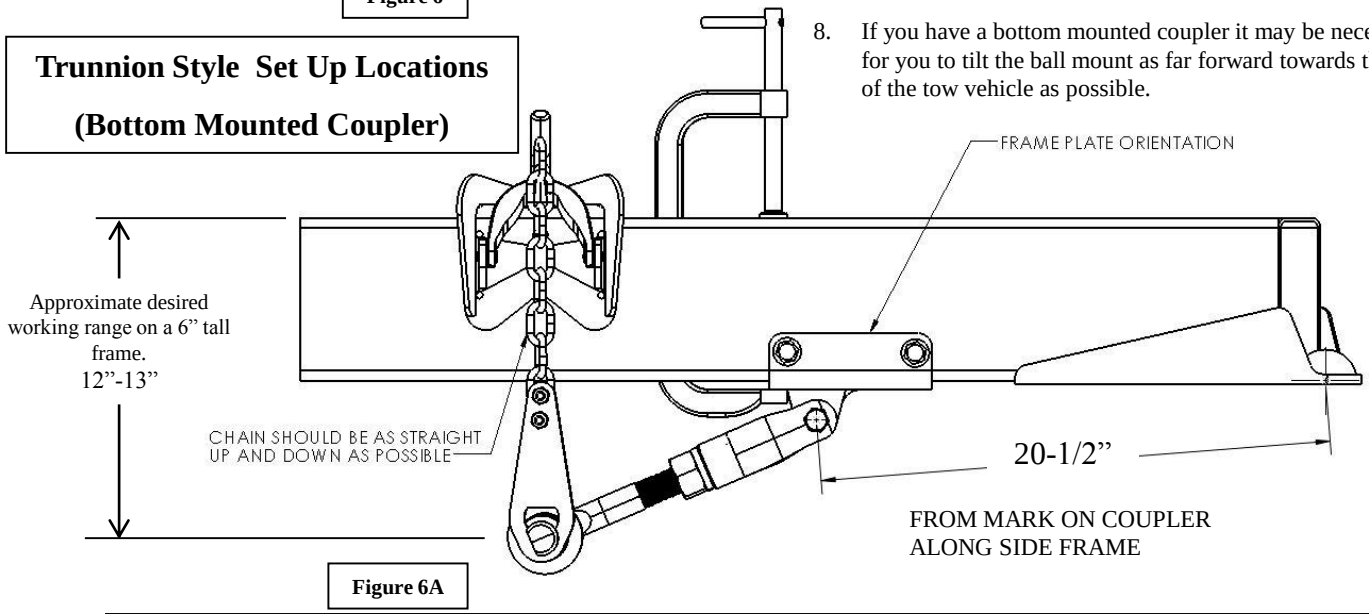

Figure 6A

⚠ CAUTION:

The Measurements in figures 6, 6A, 7 & 7A are guidelines, adjustment of the cam arm length via the adjustment nut (Figure 5) may be required after hookup in later instructions of this manual Cequent Performance Products, Inc. is not responsible for damage incurred due to disregarding any part of this manual.

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Round Bar Set Up Locations

(Standard Coupler)

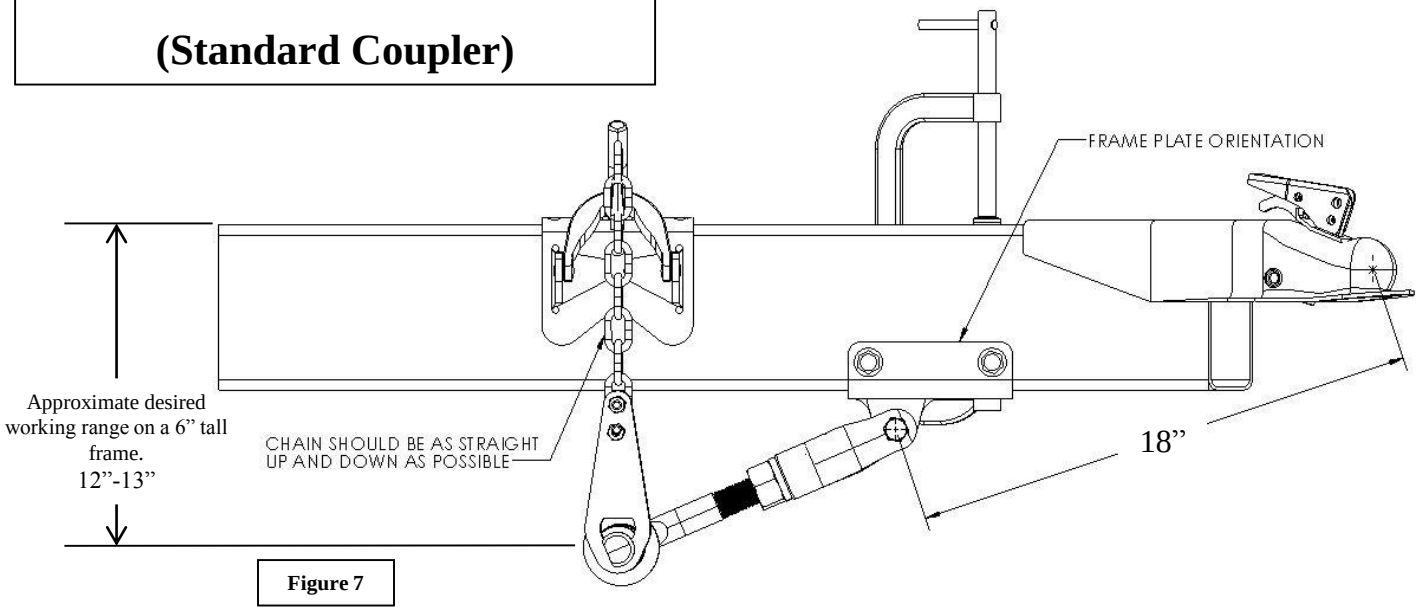


Figure 7

Round Bar Set up Locations
(Bottom Mounted Coupler)

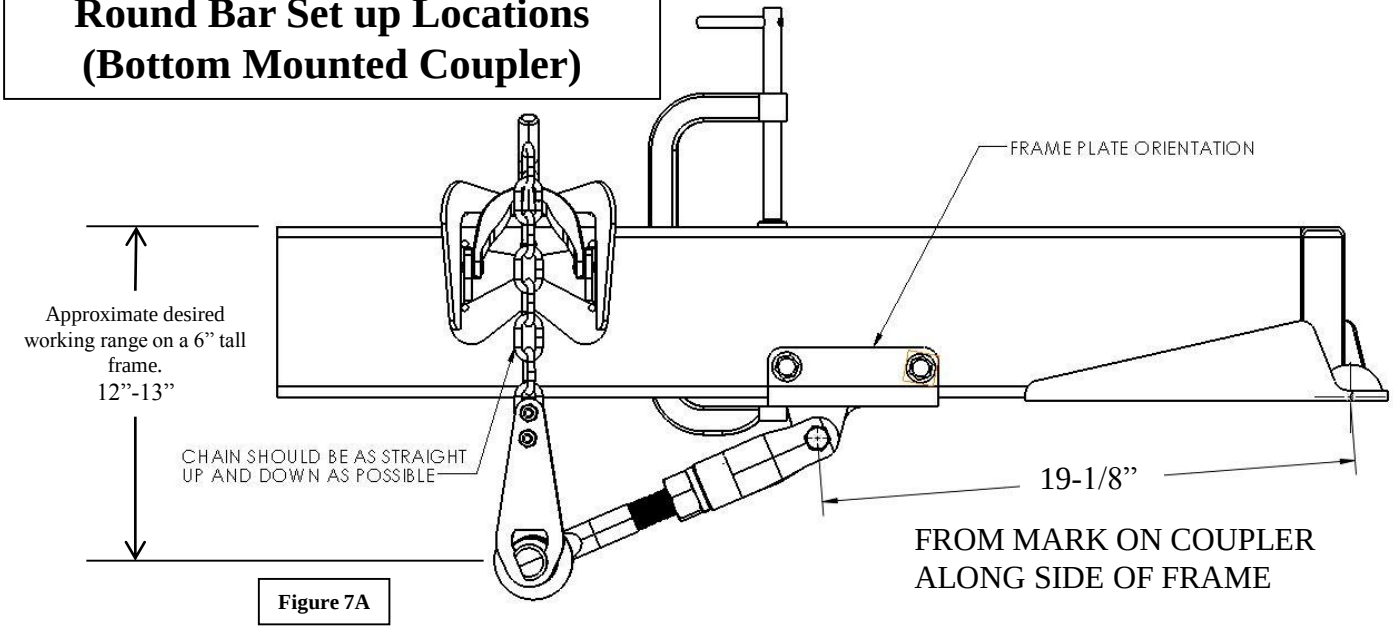


Figure 7A

If you have a bottom mounted coupler it may be necessary to tilt the ball mount as far forward towards the front of the tow vehicle as possible.

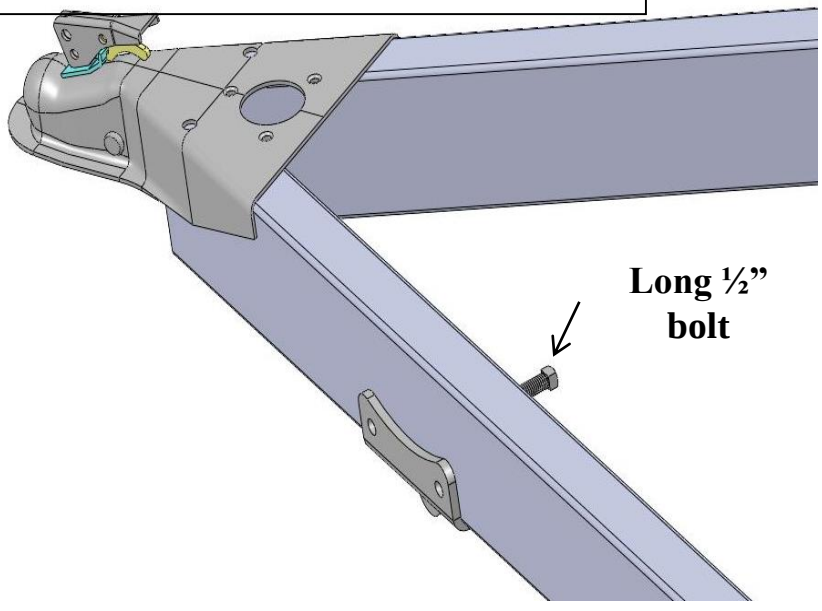
⚠ CAUTION:

The Measurements in figures 6, 6A, 7 & 7A are guidelines, adjustment of the cam arm length via the adjustment nut (Figure 5) may be required after hookup in later instructions of this manual Cequent Performance Products, Inc. is not responsible for damage incurred due to disregarding any part of this manual.

⚠ CAUTION:

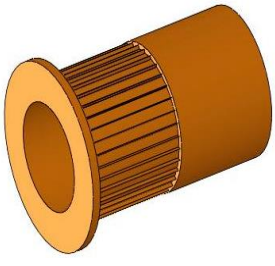
Before drilling, make sure there are no obstructions in the trailer frame where the intended bolt holes are to be drilled, such as trailer wiring and/or electric brake breakaway switch.

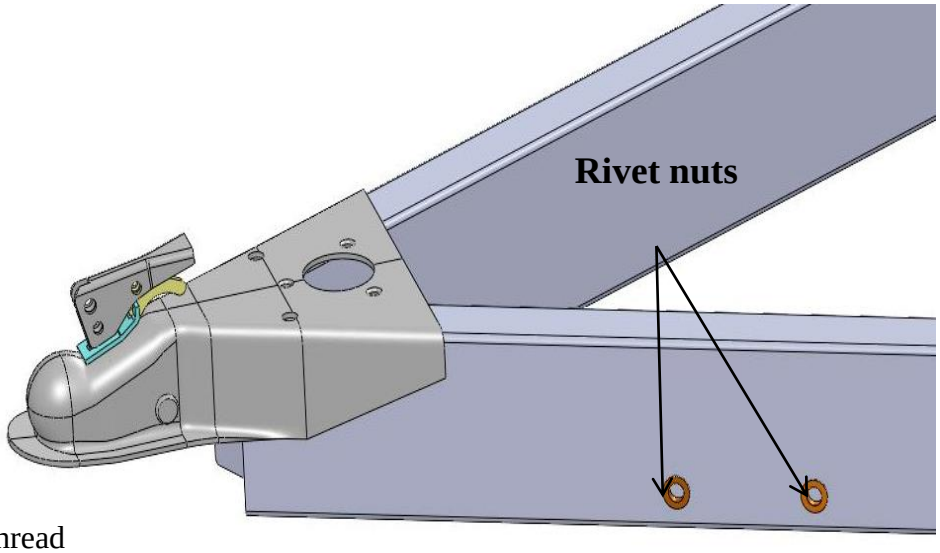
Directions for installing the rivet nut in a Tube Frame



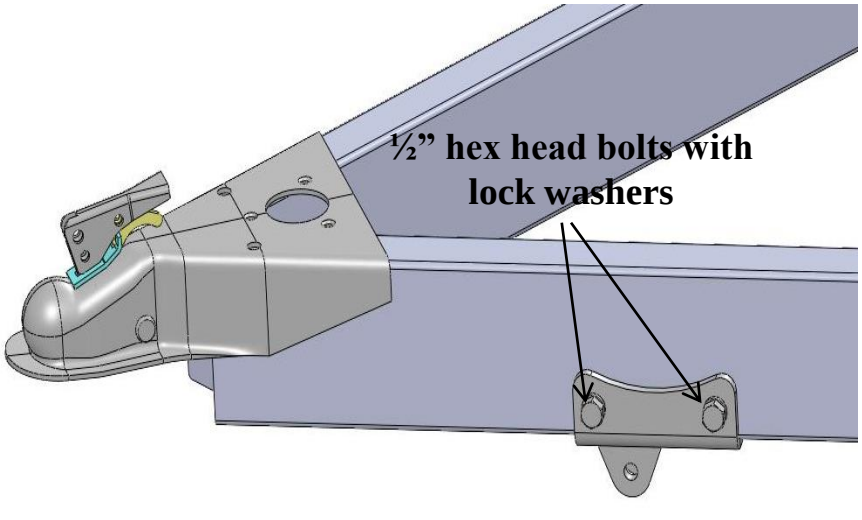
1. Place the dual cam bracket on the frame at the correct spot for your installation.
2. Use the long ½" bolt to clamp the bracket in position, with C-clamp still in place.
3. Using the holes in the bracket as a guide, drill two 7/16" holes into the frame.
4. Remove the bracket and drill the holes out to 11/16". Do not ream out the hole. This needs to be a snug fit.
5. Put the Rivet Nuts into the holes in the frame.

Rivet Nut





6. Place the bracket over the rivet nuts, thread the ½-13 x 1-1/2 hex head bolts with lock washers into the holes.
7. Tighten the long ½" bolt against the frame, ½ turn after contact with the frame.
8. Tighten the ½" bolts on the outside of the frame.
9. Torque to 75 ft. lbs.



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C-CHANNEL DUAL CAM HP FRAME PLATE INSTALLATION

NOTE: Some C-Channel frames may have square outside corners that do not allow the frame plate to contact the bottom of the frame. For these type of frames a ½" flat washer (Not Supplied) is required between the outside of the trailer frame and the frame plate. The bottom of the frame plate MUST contact the bottom of the trailer frame.

1. With the C-clamps still in place, center punch (2) holes in the frame for each bracket.
2. Drill (2) 17/32" holes in each side of the frame where the punched center marks were made. The use of a center drill or small pilot hole may be very helpful prior to final drilling.
3. Install the (2) supplied ½-13 x 1 ½" Bolts, ½" Lock Washers & ½" Nuts (items 5,6 & 7) figure 12. Repeat for opposite side and torque (4) ½-13 Bolts to 85 ft-lb.
4. Install ½-13 Hex Nuts onto the ½-13 X 3 ½" Square Head Bolts and install into the frame brackets as shown in figure 9.
5. Tighten the Set Screw until it contacts the trailer frame. Then proceed to tighten ¼ to ½ turn (DO NOT OVERTIGHTEN SET SCREW). Tighten the Jam Nut preventing the set screw from backing out while in use. Repeat for other side of trailer frame.
6. Remove C-Clamps from frame.

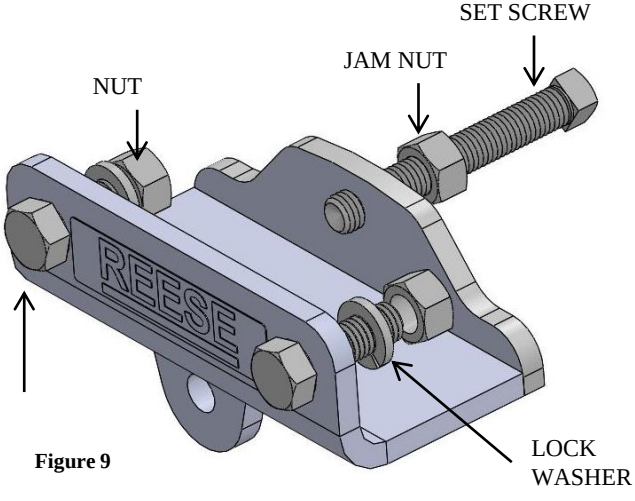

Figure 9

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FOLLOW THE SAME MEASUREMENTS FOR THIS ORIENTATION AS SHOWN IN FIGURE 6 OR 7.

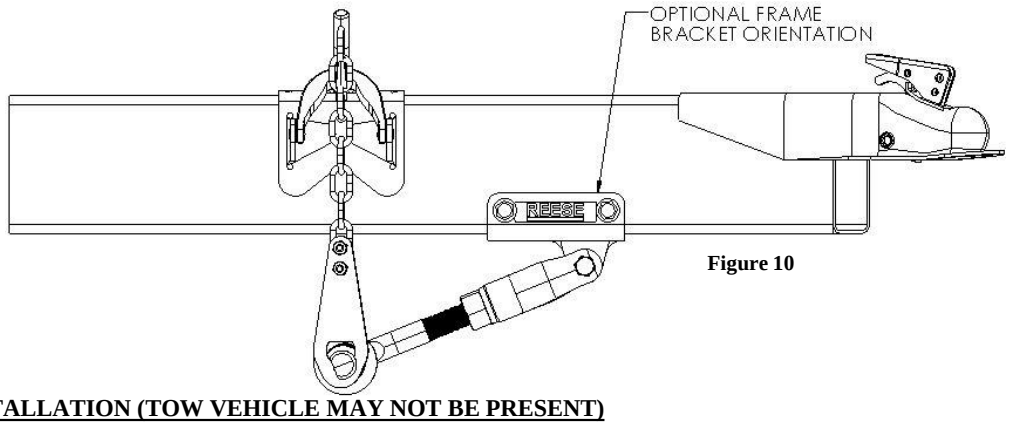

Figure 10

PRE-INSTALLATION (TOW VEHICLE MAY NOT BE PRESENT)

1. If the tow vehicle is not available at the time of installation of the Dual Cam HP system, position the yoke centered on the threads of the cam arm (Approximately 2" from either end of the threaded portion of the cam arm. Run the adjustment nut down to meet the yolk. Tighten the locking nut until the lock washer is fully compressed and continue to the Frame Plate Installation portion of this manual for your specific frame style; Tubular Frame or C-Channel Frame.

2. Pass this manual along to the customer/end user of this product and inform them that minor adjustments to their cam arm length may be required depending on head tilt of the WD system, number of chains used for proper weight distribution, tow vehicle variance and/or; changes in tongue weight of their trailer as all of these variables will slightly affect the proper position of the cam with respect to proper seating in the detent of the cam arm.

3. Direct the customer to the INSTALLATION WITH TOW VEHICLE PRESENT portion of this manual for hook-up procedure, and fully explain proper seating of the cam within the spring bar detent. Refer them to their specific Weight Distributing Hitch Instruction manual and be sure they follow the INITIAL HOOKUP section of their Weight Distribution Kit Manual for first time hook-up and/or any changes in the variables listed in item 2. of this section occur.

4. BE SURE to pass along the Towing Information Packet (P/N: 110400) to the customer/end user and BE SURE they understand the material within the Towing Information Packet for safe towing.

INSTALLATION WITH TOW VEHICLE PRESENT

NOTE: Set-up and adjust weight distribution hitch per the installation instructions for your Weight Distribution Hitch.

1. Connect the trailer to the tow vehicle. Tow vehicle and trailer should be on level ground and in a straight line. Raise the tongue and rear of the vehicle enough to install the spring bars onto the dual cam arm with the trailer tongue jack (approximately 6"-12" or until the spring bar can be lifted with the supplied lifting handle with very little effort, this will vary depending on spring bar rating and head tilt adjustment).

⚠ **WARNING:**

Avoid putting any part of your body under the trailer or between the truck and trailer. Unexpected or accidental movement of the truck or the trailer can cause serious injury or death

- **If you must place any part of your body under the trailer or between the truck and trailer you MUST perform ALL of the following steps:**
  - **Check that the truck transmission is in park**
  - **Check that the emergency brake is set**
  - **Block in front of and behind all trailer tires**
  - **Check that the trailer jack foot is resting on firm ground**

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2. Install the spring bars into the ball mount head. Position the spring bar over the cam portion of the cam arm.

3. Install the Hanger Bracket (with the ends of the u-bolts facing outward) and Chain onto the cam by slipping the keyed slot of the
hanger bracket over the button end of the cam arm (figure 11). Rotate Hanger bracket to the vertical position and pull chain vertical to the chain attachment point on the snap-up bracket (figure 12).

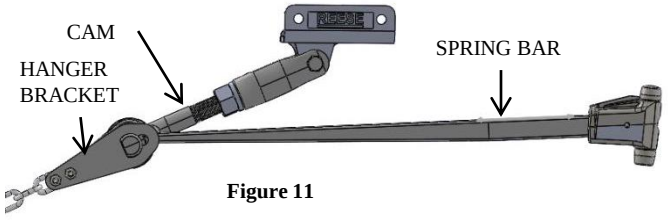

Figure 11

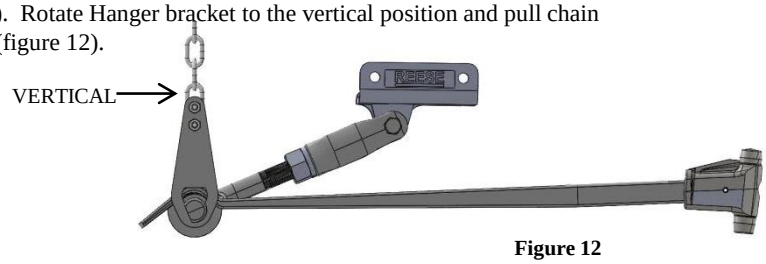

Figure 12

4. Raise the chains until they meet the hook of the snap-up bracket, using the chain link furthest down the chain that allows you to close the snap-up bracket by hand (without the supplied lifting tube – this is generally the 2nd or 3rd link from the free end of the chain for most installation). Use the same link # for both sides of the trailer. Lift both spring bars with the snap-up brackets and install the keeper pin in the snap-up bracket. Be sure that the hanger bracket is fully engaged in the slot of the cam arm.

> ⚠ **WARNING:**
> **When lifting/lowering Snap-Up Bracket, Avoid putting any part of your body in the path of the lifting handle and under the cam arm and spring bars. Components of this system are loaded with substantial force and could shift position or drop suddenly causing serious injury or death.**
>
> **Never Raise or Lower Snap-Up Brackets without raising the trailer tongue jack to remove the load from the spring bars and cam arms. Failure to do so could cause serious injury.**

5. Lower the trailer tongue jack.

6. Check that the cam is properly seated properly in the detent of the spring bar (figure 13). If the cam arm assembly does not automatically seat in the detent of the spring bar, rap the end of the cam arm with a mallet or hammer until it seats into the spring bar detent as shown in figure 13.

7. Once the cam arms are properly positioned in the detent of the spring bar. Check the ride height of the tow vehicle per your Weight Distributing Hitch Kit; specifically the Initial Hookup section of that manual. It may be necessary to adjust the number of links engaged or the ball mount tilt for proper weight distribution for your tow vehicle and trailer. Re-seating of the Cam Arm Assemblies in the spring bar detent may be necessary until the Initial Hookup requirements are met.

8. Run the adjustment nut shown in figure 5 down to meet the yoke. Tighten the locking nut shown in figure 5 until the locking washer is fully compressed. This process needs to be done for both cam assemblies, i.e. both sides of the trailer frame.

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CAM ARM ADJUSTMENT

1. Be sure that the truck and trailer are adjusted properly per the instructions for your Weight Distribution Hitch, pull forward far enough to be sure the truck and trailer are in a straight line. (Picking a point at a distance away from the vehicle (about 100 yards) drive forward toward that point keeping the steering perfectly straight until the truck and trailer are perfectly in a straight line.)

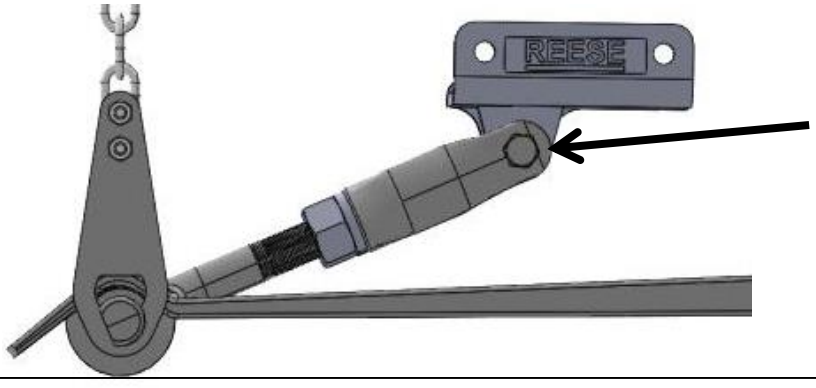
2. Go to each cam arm and check to see that the cam is perfectly centered in the detent of the spring bar. Make adjustments to the cam arm length as required, it is important to have the cam arm/spring bar detent exactly as shown in figure 13.

3. Before adjustments to the cam arm length can be made, raise the trailer tongue jack and lower the snap-up brackets. Loosen the Locking nut (figure 5) and move the adjustment nut (figure 5) until the cam is centered into the detent of the spring bar (figure 13). After making adjustments, lift both snap-up brackets and install retainer clips; lower the trailer tongue jack. Repeat step 2 of this section

4. Adjust the position of the snap-up brackets as needed, the chain should be perfectly vertical while in use to avoid damage to the snap up bracket itself.

* From time to time, with changing towing/loading conditions, it may be necessary to use a different chain link to properly level the tow vehicle (See your Weight Distribution Kit Installation Instructions). Anytime a different link is used, the cam arm must be readjusted.

Figure 13



Note: Once the cam arm is in the proper position, this ½" pivot bolt MUST be torqued to 35 ft.-lbs. on both sides of the trailer A-frame.

BEFORE EACH TRIP:

1. CHECK YOUR EQUIPMENT: Check that condition of all of your towing equipment and keep it in top condition.
2. Check that the torque of all fasteners are in accordance to this manual.
3. Re-Check spring bar detent and cam alignment, and periodically while towing for the best performance.
4. Check for any excessive wear to any of the components of this system.

MAINTENANCE:

1. DO NOT – use grease on the cams or cam arms.
2. If noise of the system is offensive, a very light coating of lubricant such as Vaseline may be used on the portion of the cam where the spring bar rides on the cam.

   Tongue weights in excess of 1,200 lbs. may require the use of such a lubricant to prevent excessive wear.
3. Keep all painted parts painted to prevent rust and maintain a good appearance. (Do Not paint over labels)

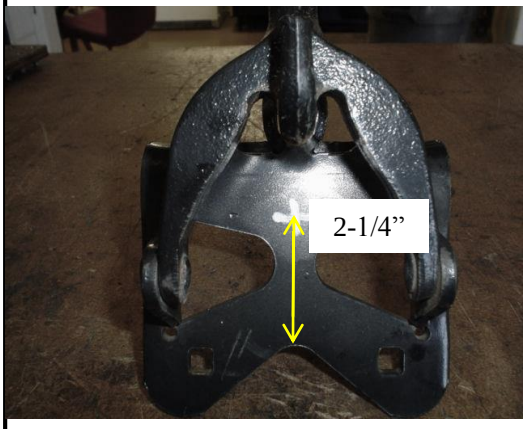
Installation Instructions

TOOLS NEEDED:

Drill Bits: 7/16”, 9/16” & ¼”

Snap Up Bracket

⚠ WARNING:
Read all instructions before installing the additional bolt.
Failure to follow all of these instructions may result in death or serious injury!



•Installation of an additional bolt into the snap up bracket when using a Jayco RV with a coupler mounted to the bottom of the frame.

•If a hole does not already exist, mark the location of the hole to be drilled into the snap up bracket. Center the hole from left to right and place it 2-1/4” above the arc in the bracket. See the picture at left.

•Before the bracket is placed on the frame, drill a 9/16” hole in the bracket

•Place the bracket in the correct place on the frame as directed in the product instructions or replace it where it was if it had already been installed.
•Using the hole in the bracket as a guide, drill a ¼” pilot hole. Be sure to stay centered in the bracket hole.
• One method to stay centered is to use the 9/16” drill first. Just put a small dimple into the frame with the 9/16” bit. Then finish drilling with the ¼” drill bit and then a 7/16” drill bit to get the final hole. See pilot hole to the left.

•Install the ½” self tapping screw into the hole in the bracket and frame. Tighten it to 50 ft/lbs.
•Re-tighten the ½” set screw on the inside of the frame. Turn only ¼ to ½ of a turn after making contact with the frame.

PARTS LIST	
QTY	DESCRIPTION
2	1/2" x 1.00" SELF TAPPING SCREW
1	INSTRUCTION SHEET