

INSTALLATION MANUAL

17510

Level of Difficulty

Moderate

Installation difficulty levels are based on time and effort involved and may vary depending on the installer level of expertise, condition of the vehicle and proper tools and equipment.

Max Capacity Without Spring Bars

| | |
|----------------------------|-------------|
| Gross trailer weight (GTW) | 10,000 lbs. |
| Tongue weight (TW) | 800 lbs. |

When spring bars are not used, the weight rating is dependent upon the trailer ball manufacturer's weight ratings. Do not exceed the maximum weight rating of the trailer ball.

Max Capacity With Spring Bars

| | |
|----------------------|---------------------|
| Gross trailer weight | 8,000 - 10,000 lbs. |
| Tongue weight | 800 - 1,000 lbs. |

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 rated the same.

Parts List

| Item | Qty | Description |
|------|-----|------------------------------|
| 1 | 1 | Hitch head |
| 2 | 1 | Adjustable horn |
| 3 | 2 | Spring round bar |
| 4 | 1 | Adjustable shank |
| 5 | 1 | Clevis pin and clip |
| 6 | 4 | Serrated conical washer 3/4" |
| 7 | 2 | Cup point set screw, 3/4"-10 |
| 8 | 2 | Nylock nut, 3/4"-10 |
| 9 | 2 | Hex bolt, 3/4"-10 x 5" |
| 10 | 2 | Snap-up bracket |
| 11 | 1 | Clip |
| 12 | 1 | Hitch pin |

Tools Required

| | |
|---------------|--------------|
| Ratchet | Socket set |
| Torque wrench | Tape measure |

⚠ WARNING

Never exceed the vehicle manufacturer's recommended towing capacity.

The 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 and braking at the same time.

If the loaded trailer ball height is greater than the uncoupled height, reduce take-up on the spring bar, remeasure and adjust until the proper height is obtained.

Spring bars are under tension, handle with care.

Product Photo



NOTICE

Visit www.curtmfg.com for a full-color copy of this instruction manual, as well as helpful videos, guides and much more!

Before you begin installation, read all instructions thoroughly.

Proper tools will improve the quality of installation and reduce the time required.

Some states require a clear view of license plates. Remove trailer ball when not in use if it restricts view.

This product complies with regulation V-5, C.S.A. Standard D-264 and safety requirements for connecting devices and towing systems of the State of New York.

Periodic inspection of your product should be performed to ensure all hardware and / or components remain secure.

To help prevent damage to the product or vehicle, refer to the specified torque specifications when securing hardware during the installation process.

Maintenance

Keep the socket-mounted ends of the spring bars and the lock pins 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. Do not allow dirt or stones to lodge between the spring bars and the head.

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

Keep lift brackets clean and lubricated to ensure ease of operation.

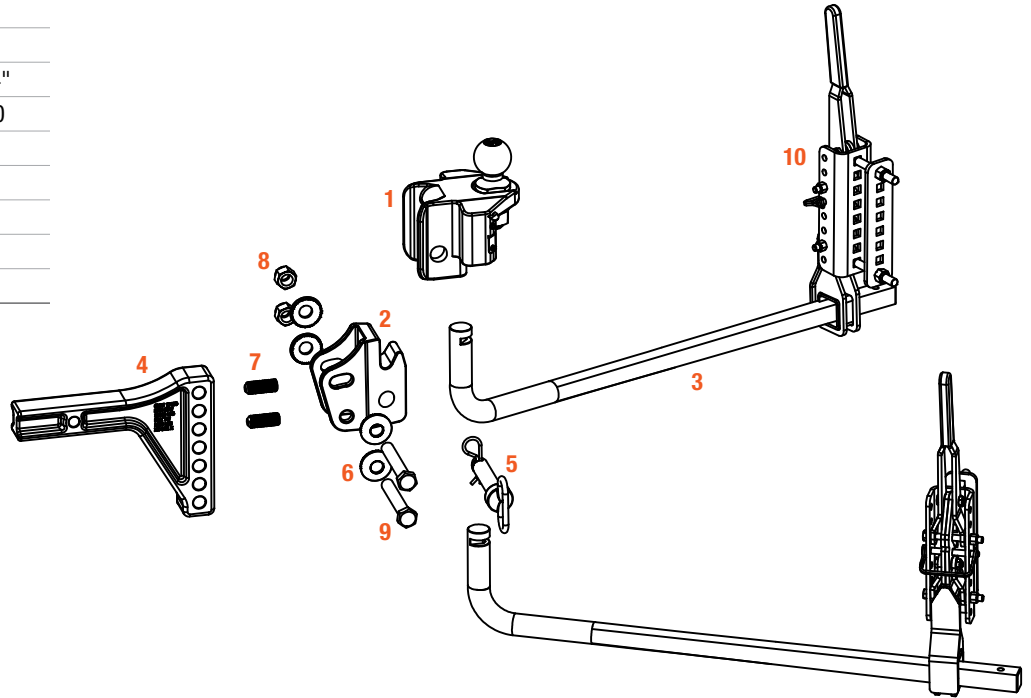
Product Registration and Warranty

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ASSEMBLY & INSTALLATION

Parts List

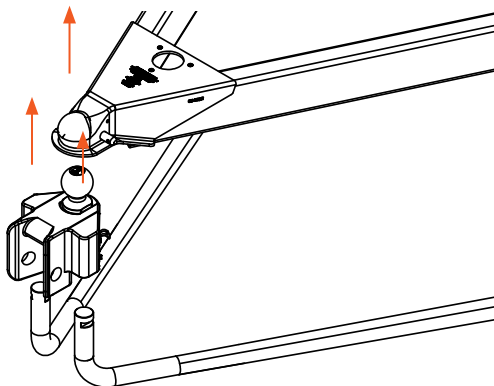
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Step 1 - Install head and spring bars

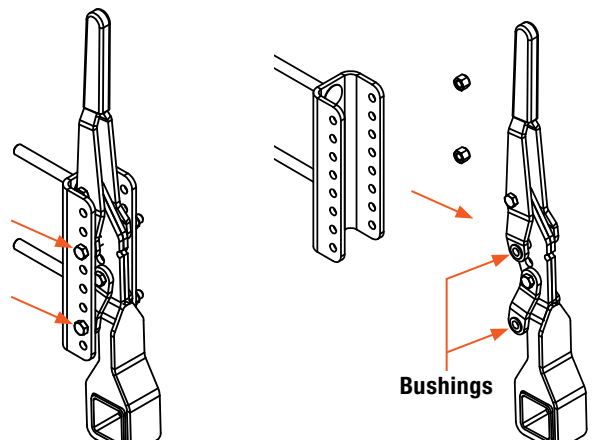
Install the head (#1) into the trailer coupler and latch. Apply a heavy white lithium grease on the round end of each spring bar (#3) and push end up into the head socket until you hear a click. This will indicate that the spring bar is locked into place.

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



Step 2 - Mounting snap-up brackets

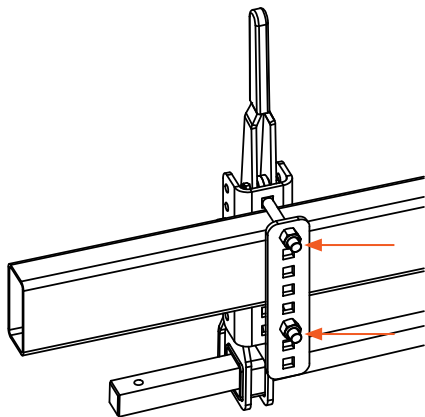
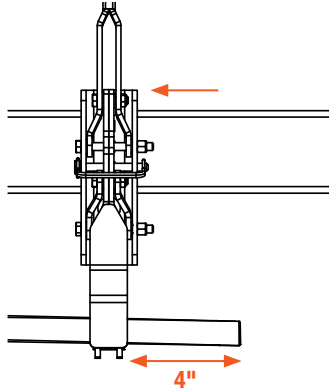
Adjustment of the bracket to fit the trailer frame requires the snap-up mechanism to be removed. Remove the two 3/8"-16 hex bolts and pull out the mechanism. Ensure that the bushings stay in the proper holes. Adjust the 1/2"-13 carriage bolts to fit trailer frame and reinstall the 3/8"-16 hex bolts.



Step 2 - Mounting snap-up brackets (Continued)

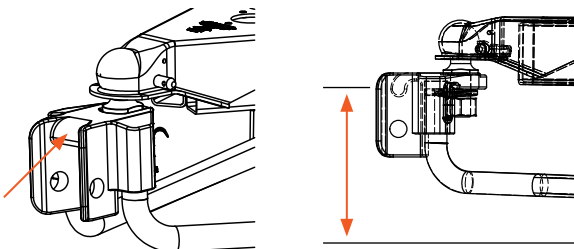
Mount the bracket assembly in the loaded position to the trailer frame by inserting the carriage bolts through the adjustment plate and tighten the two 1/2"-13 nylock nuts by hand. Slide the spring bars into the snap-up bracket and move the bracket until there is a minimum of four inches of the spring bars sticking out. The height of the snap-up bracket mechanism should be set by making the spring bars parallel to the trailer frame. To adjust these, remove the two 3/8"-16 hex bolts and adjust up or down. Ensure that there is at least one inch of clearance between the bottom of the trailer frame and the top of the spring bars.

Torque the 1/2"-13 carriage bolts to 68 ft-lbs. Tighten all 3/8"-16" hardware on snap-up bracket. Snug but do not over tighten as it may prevent the linkage from operating smoothly.



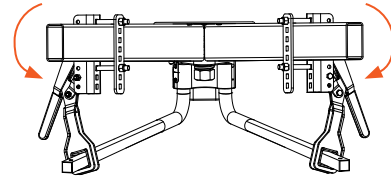
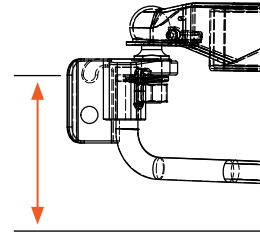
Step 3 - Calculate starting trailer height & unload snap-up brackets

Align the tow vehicle and trailer on level pavement in a straight position. Use the trailer tongue jack to level the trailer. Measure the distance from pavement to the hook inside of the head and record here _____



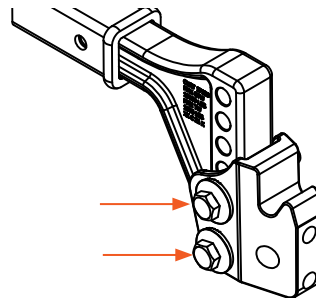
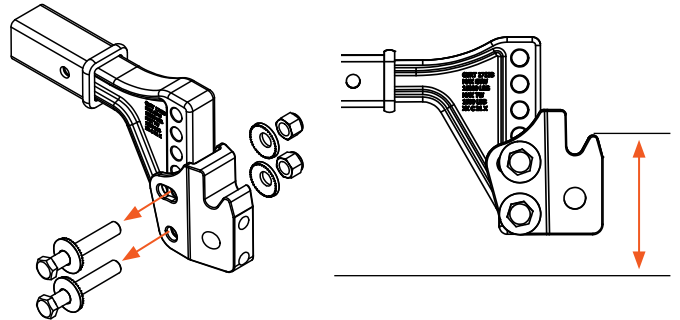
Step 3 (Continued)

Use the trailer jack to raise the head starting at level, up 1/8" per 100 lbs. of tongue weight, up to a max of 1,000 lbs. or 1-1/4". Unload the snap-up brackets by pulling the wire lock clevis pin and rotating the snap-up handles down to the unloaded position.

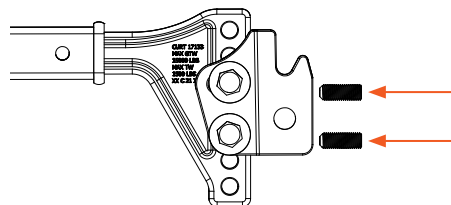


Step 4 - Adjustment of shank and horn

Install the adjustable shank (#4) into the vehicle and measure from the pavement to the tip of the horn. Adjust the height of the horn (#2) by removing the 3/4"-10 hex bolts and moving the horn up and down to get the closest to adjusted measurement from above without exceeding. Reinstall the 3/4"-10 hex bolts (#9) and tighten by hand.



Run the set screws inside the horn to make the horn parallel to the shank (no tilt).



Step 5 – Hooking up trailer to vehicle

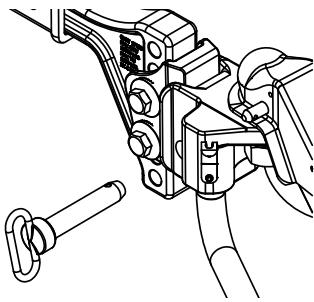
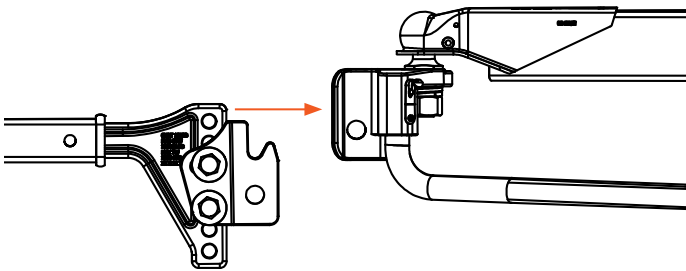
For vehicles with air springs, air shocks or automatic leveling systems only, check the vehicle's owners manual or other instructions on these items. Unless otherwise indicated, air springs and air shocks should be deflated to their minimum recommended pressure before assembling and adjusting the weight distribution hitch.

Back the vehicle up and lower the trailer jack onto the horn and insert the locking pin and clip (#5) into the head and horn.

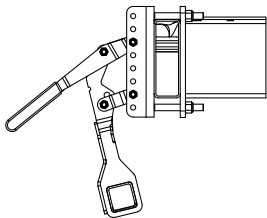
Pick reference points on the front and rear bumper of the towing vehicle. Measure and record height to pavement.

Front bumper to pavement: _____

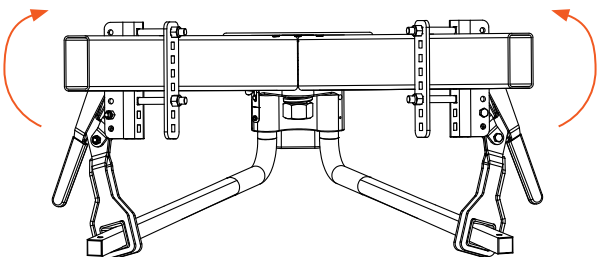
Rear bumper to pavement: _____



To check if arms are properly loaded, lift up on the snap-up bracket until resistance is felt. The handle should be approximately be at 30°. If you are experiencing load resistance prior to 30°, adjust the tilt of the horn until you reach the correct angle. This will help with proper pin installation on uneven terrain



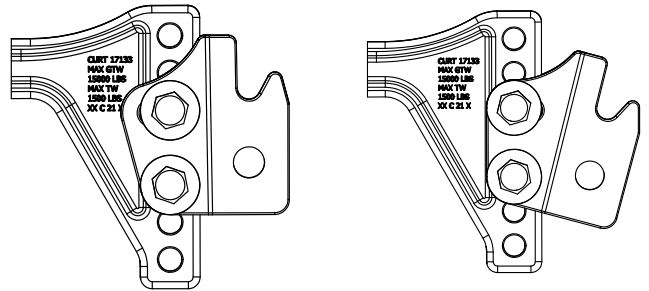
Snap-up one snap-up bracket at a time, ensuring that the clevis pin is installed before taking pressure off of the handle. Measure the front and rear bumper again. To ensure proper distribution of weight, the front bumper should measure lower than the previous dimension and the rear dimension



Step 6 - Adjusting horn

If adjustment is needed, disconnect the head and horn and raise the head off of the horn. Incrementally increase the tilt away from the shank using the set screws. Repeat measurement check from the end of step 5 as needed.

Max weight distribution has been reached when the locking pin can no longer be inserted into the head and horn freely. Once optimal position is achieved, torque 3/4" bolts to 200 ft-lbs. Tighten set screw to 200 ft-lbs.



Step 7 - Uncoupling

Recommended uncoupling procedure:

Run the jack down to take the load off of the spring bars. Unload the snap-up brackets. Raise the jack until the locking pin can be removed, then raise the trailer to take the head off of the horn.

Lower the snap-up brackets when not in use.

⚠ WARNING

Failure to tighten the hardware may result in fastener loss or failure.

Before You Tow

Check all connections listed below prior to towing:

- Hitch pin & clip (securing shank to receiver)
- Head to shank fasteners
- Trailer ball nut
- Coupler latch
- Spring bar support brackets
- Safety chains
- Lights and turn signals
- Braking system (including breakaway switch)

TOWING BASICS & SAFETY INFORMATION

For information on safely towing your trailer, visit curtmfg.com/understanding-towing.

TROUBLESHOOTING

| Feature | Problem | Possible Cause | Possible Solution |
|--|---|---|---|
| Hooking up trailer to vehicle | Cannot insert clevis pin and clip | Uneven terrain between trailer and tow vehicle | Remove the spring bars and connect to the trailer. Move the trailer to a level surface and follow the steps to re-install the WD bars and trailer hookup. |
| | | Improper tilt adjustment / setup | Reduce the horn tilt to eliminate pre-load on the bars prior to installing the clevis pin (Snap brackets must not see resistance until the handle is lifted approximately 30°). |
| Inserting wire lock lynch pin through snap-up brackets | Cannot insert the pin after rotating snap-up bracket arm to loaded position | Snap-up bracket assembly not aligned properly with spring bar | Unload the arms, loosen 1/2" carriage bolts to adjust bracket to vertical, re-tighten hardware. |
| | | 3/8" Pivot bolts are not tight enough and are allowing the support arm to twist | Unload the arms, tighten the two pivot bolts to prevent the support arm from twisting/shifting. |
| WD arms | Significant noise when towing / cornering | Finish is rubbing off during use | Apply grease to the spring bars and snap up bracket where there is metal on metal contact. |