

# INSTALLATION MANUAL

# 17501

## 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) 15,000 lbs.

Tongue weight (TW) 1,500 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 10,000 - 15,000 lbs.

Tongue weight 1,000 - 1,500 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 shank
3	2	Spring trunnion bar
4	2	Spring bar support bracket
5	1	Snap-up handle
6	2	Hex bolt, 3/4"-10 x 5"
7	4	Conical-toothed washer, 3/4"
8	2	Nylock nut, 3/4"-10
9	2	Wire lock lynch pin
10	1	Hitch pin & clip, 5/8"
11	1	Adjustment rod, short
12	1	Adjustment rod, long
13	2	Flat washer, 1/2"
14	1	Hex bolt, 5/8"-11 x 1-1/2"

## Tools Required

Ratchet	Socket set
Torque wrench	Tape measure

## Product Registration and Warranty

CURT stands behind our products with industry-leading warranties. To get copies of the product warranties, register your purchase or provide feedback, visit: [warranty.curtgroup.com/surveys](http://warranty.curtgroup.com/surveys)

## ⚠ 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.

## Product Photo



## NOTICE

Visit [www.curtmfg.com](http://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.

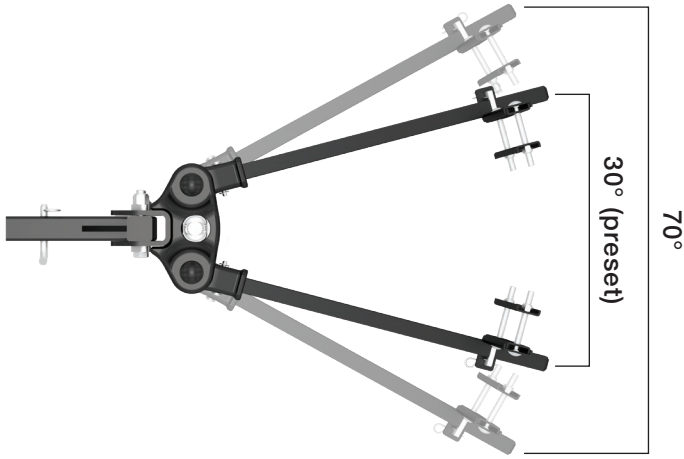
Keep hitch parts painted to prevent rust and maintain good appearance. Do not paint over labels.

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

# SPRING BAR WIDTH ADJUSTMENT

## Step 1 - Determine your spring bar width setting

TruTrack™ is designed to work in two neutral spring bar settings to fit most A-frame trailers. The spring bars can easily be repositioned in the 30° or 70° position (+/-5°). For narrow frames (50° and less) no adjustment is needed as it comes preset in the narrow setting. For wider frames (over 50°) adjustment is needed.

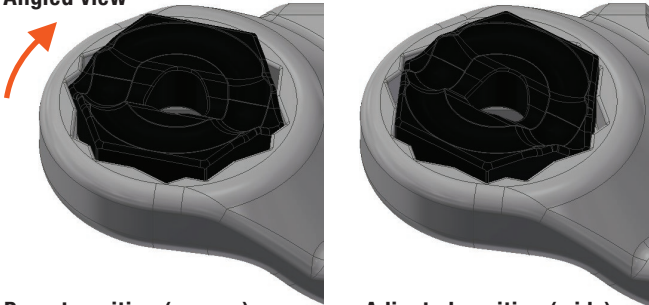


## Step 2 - Adjust the cam blocks

To change the neutral angle of the spring bars, the cam block will need to be adjusted. To adjust the cams, remove the cotter pins from the castle nuts. Remove the castle nuts, bushing sleeves and springs. Remove the carriage bolts from the top while holding the socket in place.

With the head resting upside down, carefully remove the socket with the bushing and balls. Looking at the cam block in the head, pull the cam block out and rotate it outward to the next position as shown.

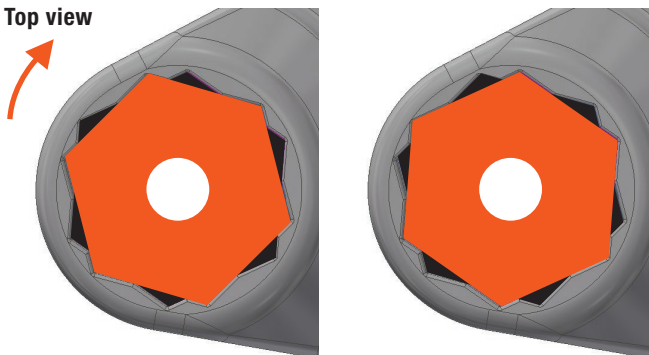
### Angled view



Preset position (narrow)

Adjusted position (wide)

### Top view



Preset position (narrow)

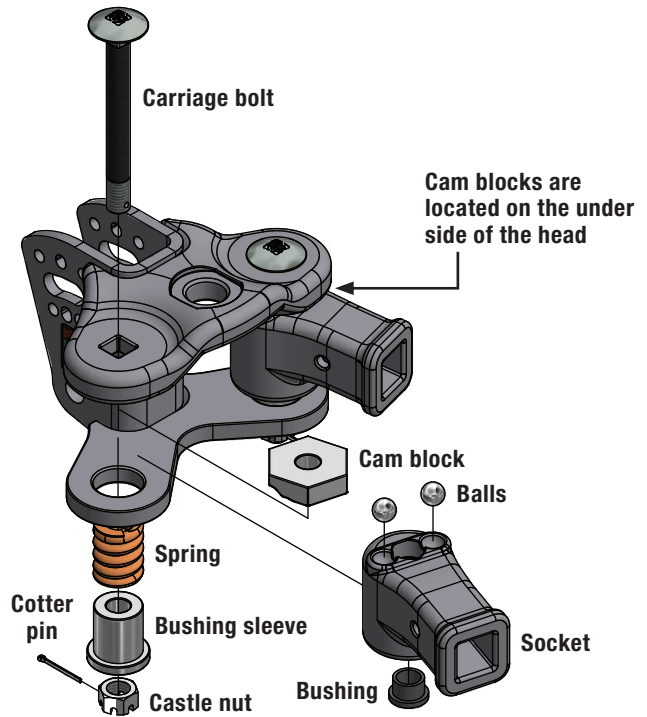
Adjusted position (wide)

## Step 3 - Install the sockets back into the head

Once the cam block has been adjusted, lightly coat the balls with grease and set into the ball sockets. Flip the socket upside down and position it so the balls are resting in the cam block recesses.

Hold the socket in place and insert the carriage bolt through, making sure the bushing is still in its correct position. Reinstall the spring, bushing sleeve and castle nuts.

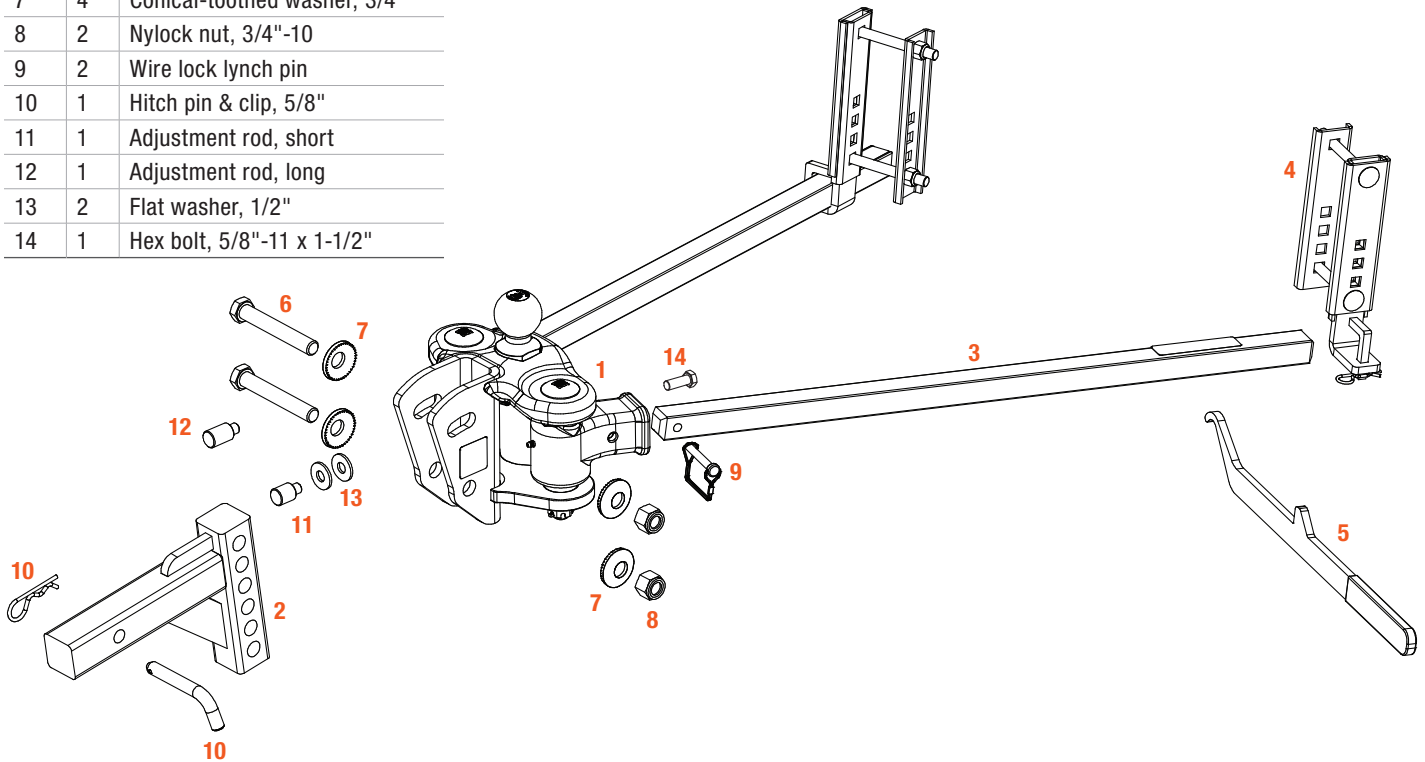
Torque castle nuts to 75 lb-ft. and reinstall the cotter pins. Grease with white lithium grease in the zerk when finished.



# ASSEMBLY & INSTALLATION

## Parts List

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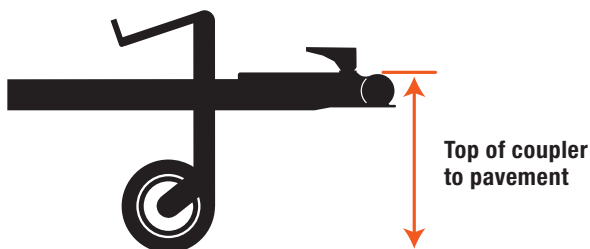


### Step 1 - Measure the trailer coupler height

Line up 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 top of the coupler socket.

Record distance here \_\_\_\_\_



### Step 2 - Measure the towing vehicle

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 \_\_\_\_\_

For vehicles with air springs, air shocks or automatic leveling systems only, check the vehicle owner's 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.

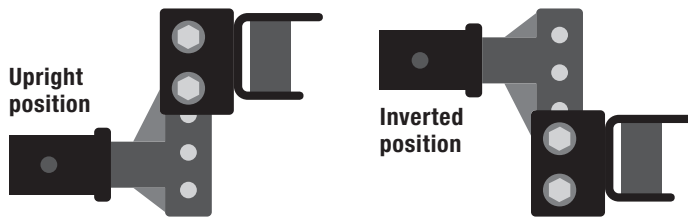
### Step 3 - Determine the 'target' uncoupled ball height for the tow vehicle

The tow vehicle's uncoupled ball height will be set higher than the coupler height measured in Step 1 to allow for vehicle squat when coupled to the trailer.

For cars, vans and small SUVs, add 1/8" for each 100 lbs. of tongue weight. Record ball height \_\_\_\_\_

#### Step 4 - Install the shank, hitch head and ball

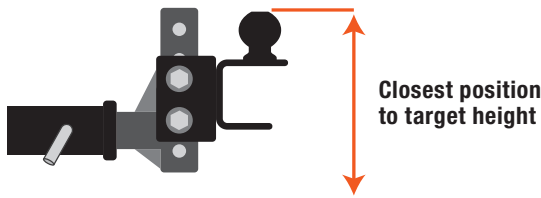
Insert the adjustable shank (#2) into the receiver tube on the tow vehicle and secure with the provided hitch pin & clip (#11). **Note:** To obtain the proper ball height on high-ground-clearance vehicles, the shank may be inverted as shown below. If the shank is used in the inverted position, check for adequate ground clearance.



#### Step 5

Position the hitch head (#1) on the adjustable shank (#2). Slide the head up or down to the nearest bolt hole alignment position that corresponds with the target uncoupled ball height determined in Step 3.

Mark the position on the shank.

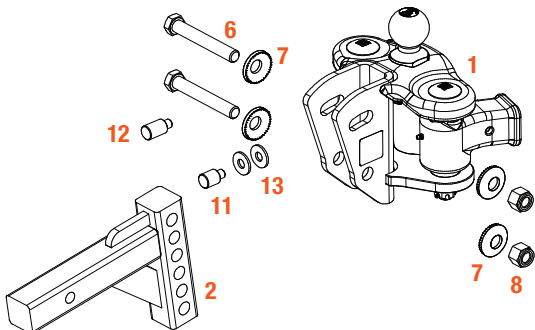


#### Step 6

Place the 1/2" flat washers (#13) over the short adjustment rod (#11). Insert a 3/4" hex bolt (#6) through a 3/4" conical washer (#7). Hold the hitch head (#1) on the shank at the position marked in Step 5. Insert the assembled hex bolt and washer through the lower hole in the hitch head channel.

Rotate the head forward as far as it will go. The ball should be vertical or tilted slightly back. If it is not, remove the short adjustment rod (#11) and replace it with the long adjustment rod (#12). You can also change the number of washers on the rod and reassemble.

Place the remaining 3/4" conical washer (#7) on the 3/4" hex bolt (#6) and insert it through the upper slotted hole in the hitch head. Install a second 3/4" conical washer (#7) on both hex bolts. Start threading the 3/4" nylock nuts (#8) and tighten until the head is snug and does not tilt on its own.

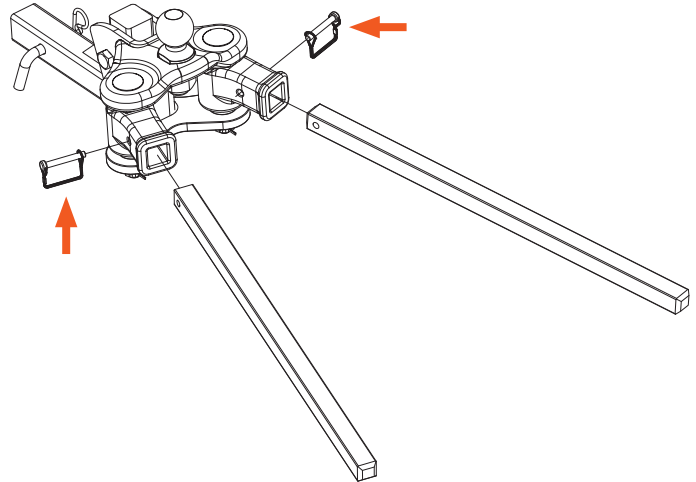


#### Step 7

Tighten the 3/4"-10 hex bolts (#6) just enough to hold the adjustment rods (#11, #12) into the hitch head (#1). These bolts will be tightened after the correct tilt setting has been determined.

#### Step 8 - Install the spring bars

Secure the two spring bars (#3) with the wire lock lynch pins (#9).



#### Step 9

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

Raise the front of the trailer and back of the tow vehicle approximately 3" with the tongue jack. This will allow easier installation of the spring bars onto the support brackets.

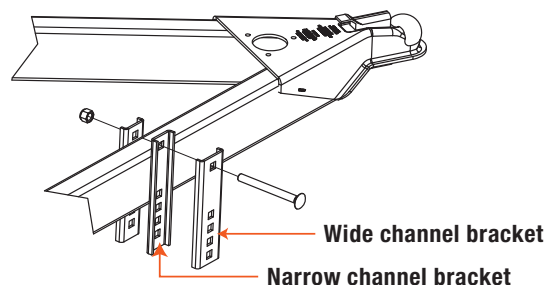
#### Step 10 - Installing the spring bar support brackets

Mark the position of the support brackets (#4) by making a center line on the trailer A-frame 4" in from the end of the spring bars (#3).

#### Step 11

Place a carriage bolt through the top hole on all three support brackets. Spin the nylock nut loosely onto the bolt and hang the assembly over the trailer A-frame on the center line from Step 10.

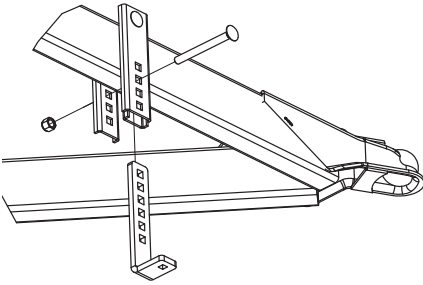
**Note:** The wide channel bracket should be installed over the narrow channel as detailed below.



### Step 12

Slide the L-support between the two captive support brackets as shown. Set the bracket height closest to the spring bar position set with the jack in Step 9. Install the second carriage bolt in the first hole directly below the trailer A-frame.

With the L-bracket installed, tighten both nylock nuts to 25 lb-ft.

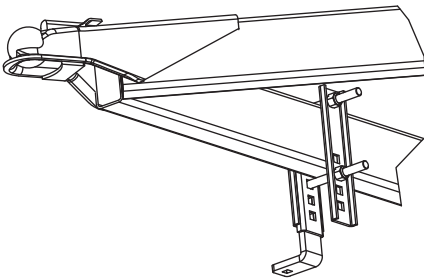


### Step 13

Repeat Steps 10 through 12 with the second support bracket on the opposite side of the trailer A-frame.

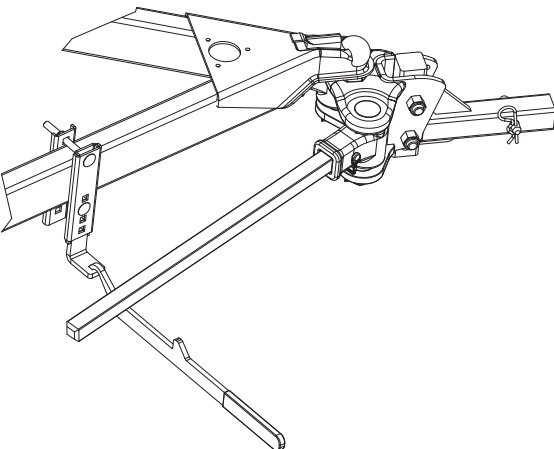
#### **⚠ WARNING**

Keep clear of the pivot path of all moving parts when there is tension on the spring bar. Maintain control of the lift handle at all times when raising or lowering the spring bar. Be sure that the locking clip and cotter pin are in place once the spring bar is in position.



### Step 14 - Raise the spring bars

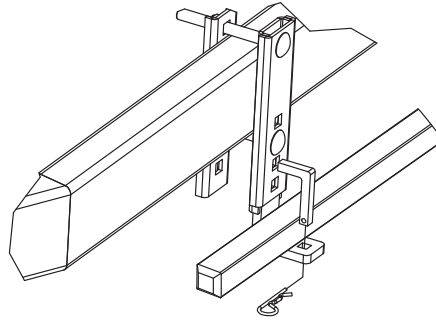
Pull the spring bar out from the A-frame and hook the lift bar into the L-bracket as shown.



### Step 15

Pry the spring bar onto the L-bracket by rotating the lift bar to vertical.

With the spring bar supported by the L-bracket, remove the lift handle. Secure the spring bar by installing the retainer clip and cotter pin.



### Step 16

Check the vehicle height and adjust the spring bars if necessary.

With the spring bars secured, lower the jack to apply load to the hitch. The vehicle should settle evenly. Remeasure the front and rear bumper reference points. If the front has settled much more than the rear, lower the L-brackets to reduce the load on the spring bars. The spring bars should be nearly horizontal when correct height is achieved.

### Step 17 - Tilt adjustment

If the L-support bracket in Step 12 is in the highest position and you are unable to bring the rear of the vehicle to level when the load is applied, you will need to adjust the head tilt.

Uncouple the trailer after removing the load from the spring bars.

Remove the top 3/4" hex bolt (#6) installed in Step 6 and add washers or the long adjustment rod (#12) to increase head tilt. Reinstall the 3/4" hex bolt and repeat Steps 14 -16 to ensure the proper loaded ride height is achieved.

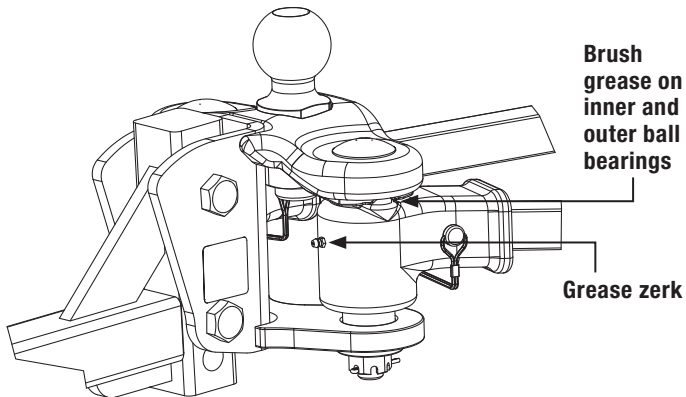
When the vehicle ride height is achieved, complete the installation by fully torquing all hardware to 200 lb-ft, including the 3/4" hex bolts (#6) installed in Step 7.

## 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)

Apply grease to the locations shown below prior to each use to ensure quiet and trouble-free operation.



## Lowering The Spring Bars

Remove the weight from the spring bars by using the trailer jack to lift the front of the trailer and rear of the tow vehicle.

With the tension removed from the spring bars, carefully remove the cotter pin & retainer clip.

With the spring bar retainer clip removed, use the lift bar as a lever to pry the spring bar off of the L-bracket.

## Final Installed Image



## TOWING BASICS & SAFETY INFORMATION

For information on safely towing your trailer, visit [curtmfg.com/understanding-towing](http://curtmfg.com/understanding-towing).