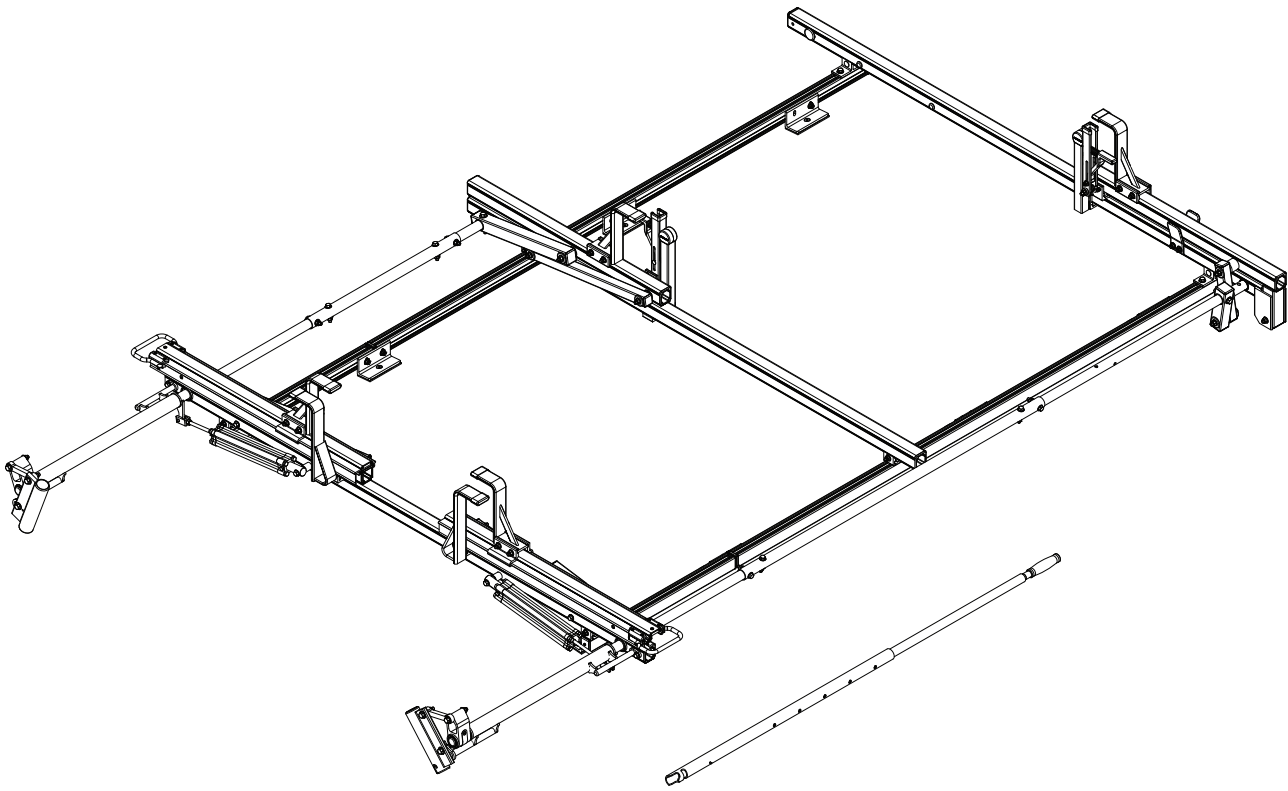


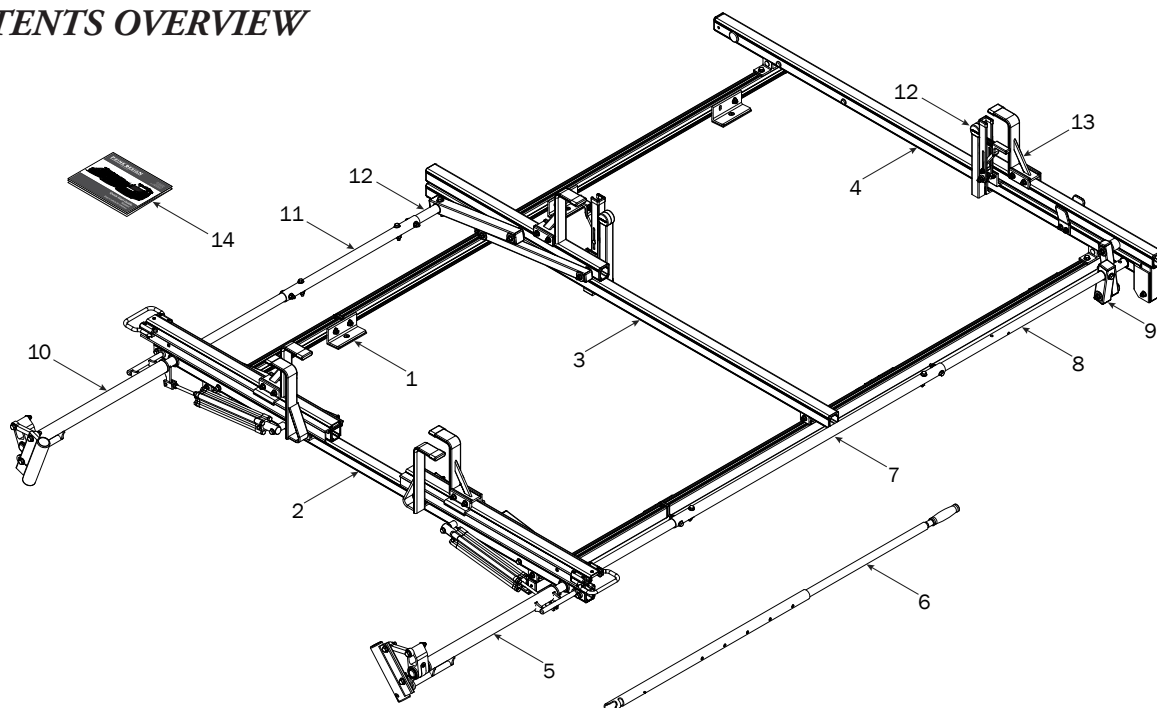
**PRIME DESIGN™**

A Safe Fleet Brand



**HR13-E**

## CONTENTS OVERVIEW



1—FBM3-0102 ..... (Qty 1)  
Channels w/ Hardware



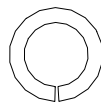
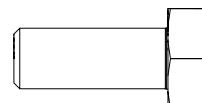
23" Channels (2X)



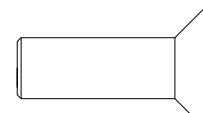
78" Channels, Pre-assembled (2X)



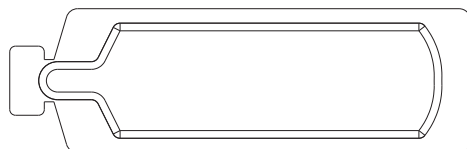
Channel Bracket (6X)

 $\frac{5}{16}$ " Lock Washer (6X)

M8 x 20MM (6X)



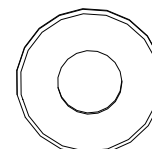
M8 X 25MM (8X)



Anti-Seize (1X)



M8 Lock Nut (10X)

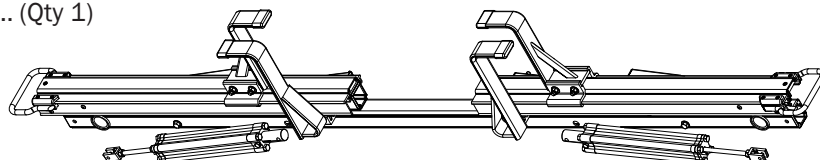
 $\frac{5}{16}$ " Flat Washer (16X)

Mounting Bracket (8X)

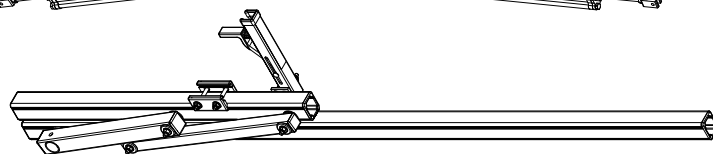


Foam Pad (8X)

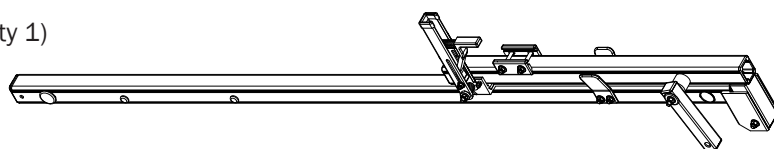
2—Rear Crossbar Assembly ..... (Qty 1)



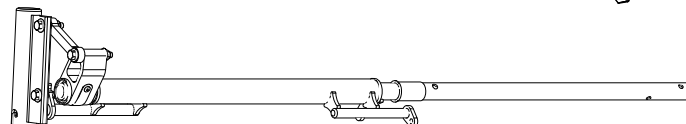
3—Center Crossbar Assembly ..... (Qty 1)



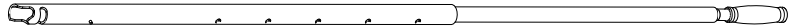
4—Front Crossbar Assembly ..... (Qty 1)



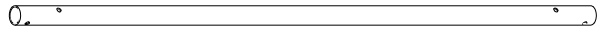
5—Rear Drive Shaft ..... (Qty 1)  
Right Hand, A Version, 50.00"



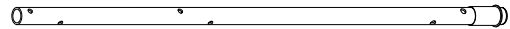
6—HHR Handle Assembly ..... (Qty 1)  
35.00"



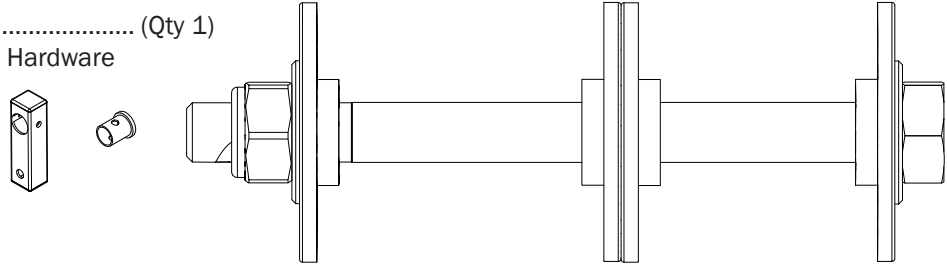
7—Connecting Bar ..... (Qty 1)  
4.00'



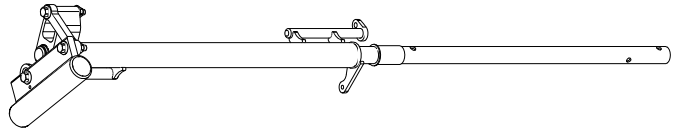
8—Front Drive Shaft ..... (Qty 1)  
B Version, 38.75"



9—Drive Arm ..... (Qty 1)  
Incline Version with Bushing and Hardware



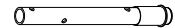
10—Rear Drive Shaft ..... (Qty 1)  
Left Hand, A Version, 50.00"



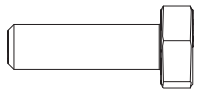
11—Connecting Bar ..... (Qty 1)  
24.00"



12—Front Drive Shaft..... (Qty 1)  
LH, B Version, 11.75"



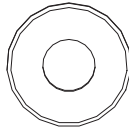
13—L & Z Post Kit..... (Qty 2)  
Adj. Z Post, 7.25", L Post, w/HKT-0160



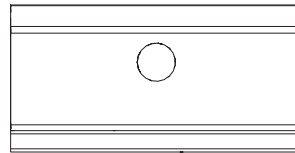
M6 x 20MM (1X)



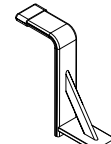
1/4 Lock Washer (1X)



1/4 Flat Washer (1X)



L Post Bracket Clamp (1X)



Z Post (1X)



L Post (1X)

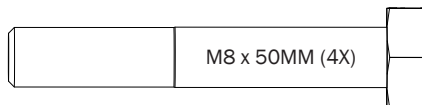
14—USQSG-Ergorack ..... (Qty 1)  
Quick Start Guide, Rotation



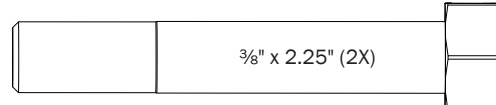
15—HKT-8163 (Not called out in Overview) ..... (Qty 2)



Clevis Pin (1X)



M8 x 50MM (4X)



3/8" x 2.25" (2X)



Cotter Pin (1X)



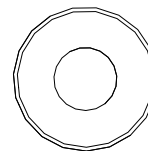
M8 x 25MM (1X)



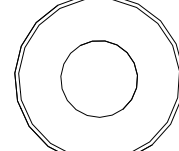
M8 Lock Nut (5X)



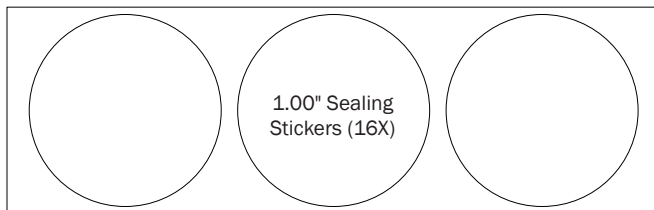
3/8" Lock Nut (2X)



5/16" Flat Washer (10X)



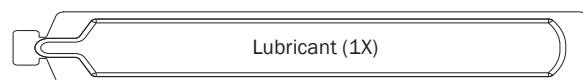
3/8" Flat Washer (4X)



1.00" Sealing  
Stickers (16X)



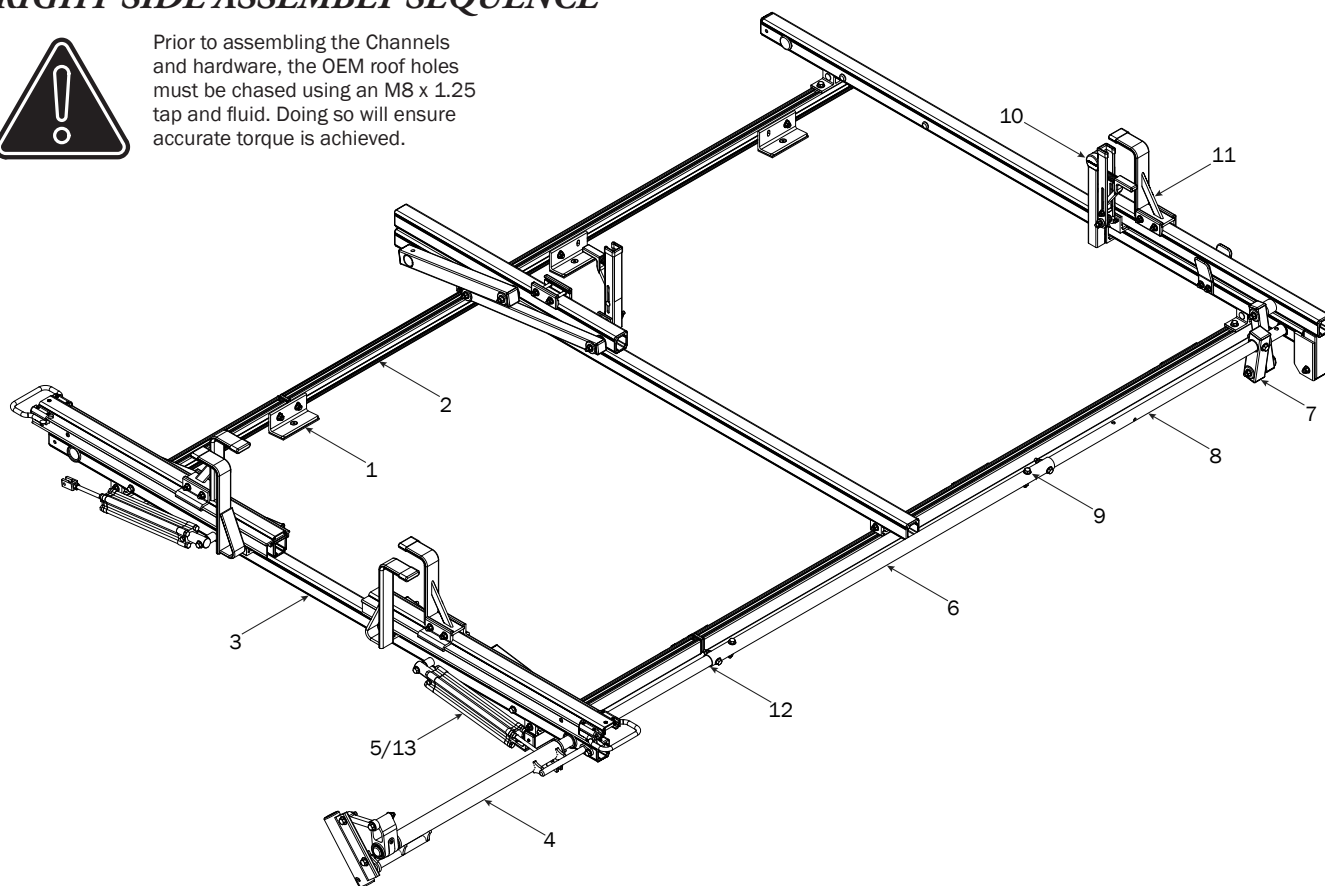
Anti-Seize (1X)



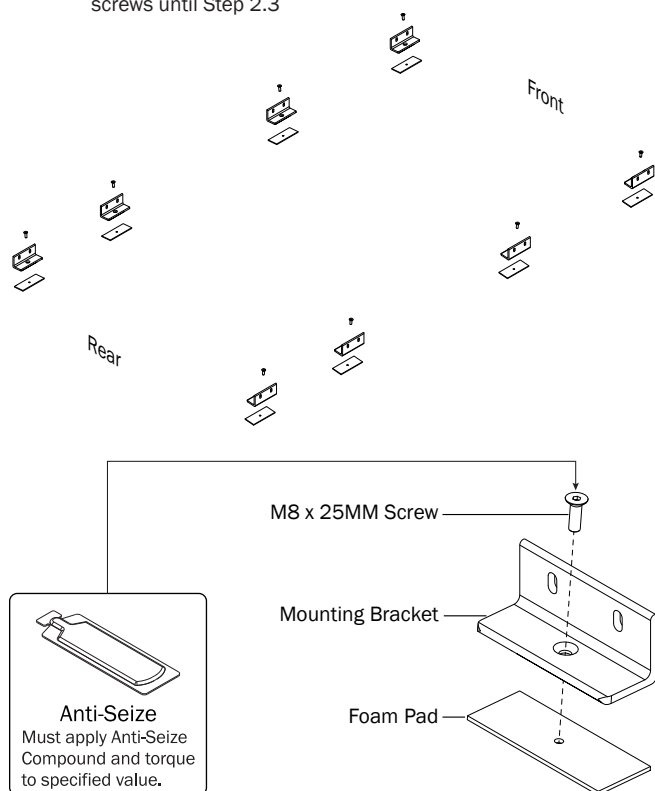
Lubricant (1X)

**RIGHT SIDE ASSEMBLY SEQUENCE**

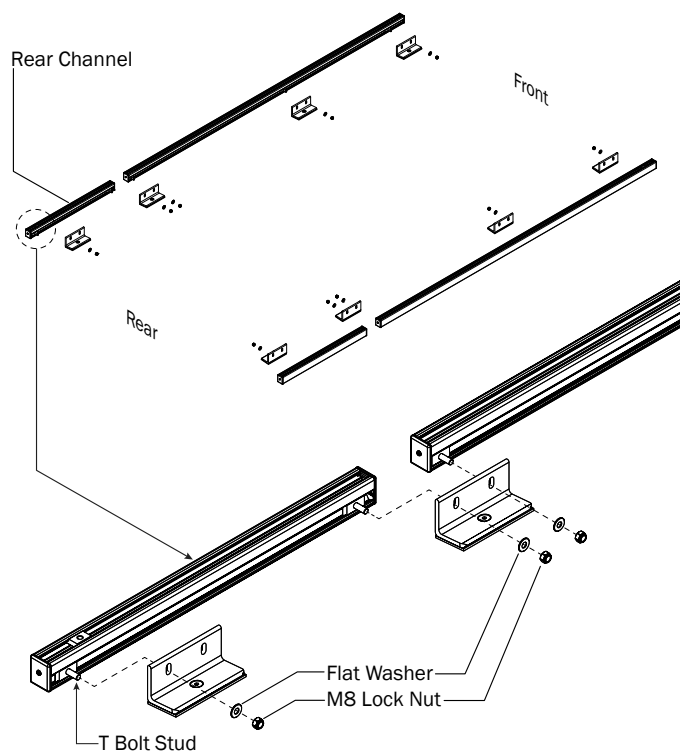
Prior to assembling the Channels and hardware, the OEM roof holes must be chased using an M8 x 1.25 tap and fluid. Doing so will ensure accurate torque is achieved.

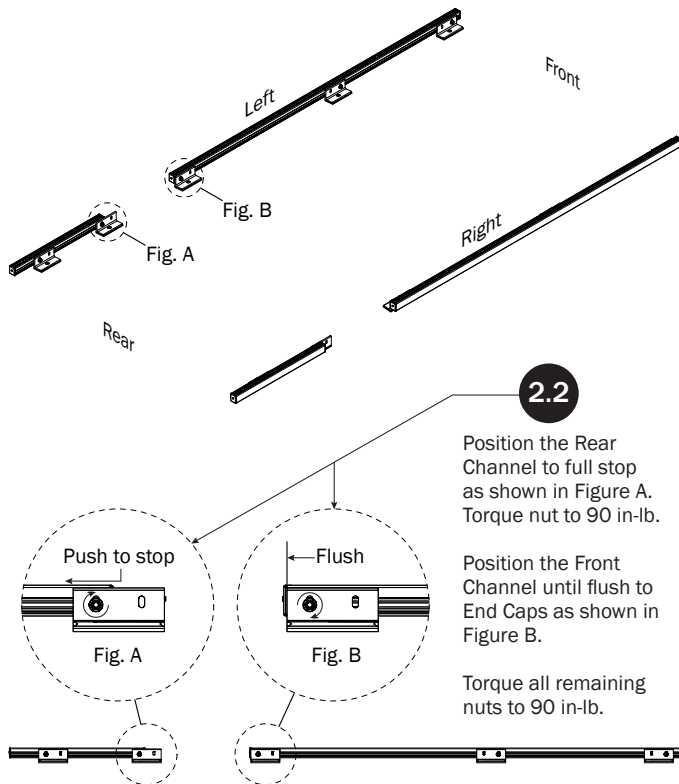
**MOUNTING BRACKETS****1**

Apply Anti-Seize to all M8 x 25MM Flat Head Screws and install the Channel Mounting Brackets with Foam Pads onto the vehicle's roof mounting holes. Do not tighten screws until Step 2.3

**CHANNELS****2.1**

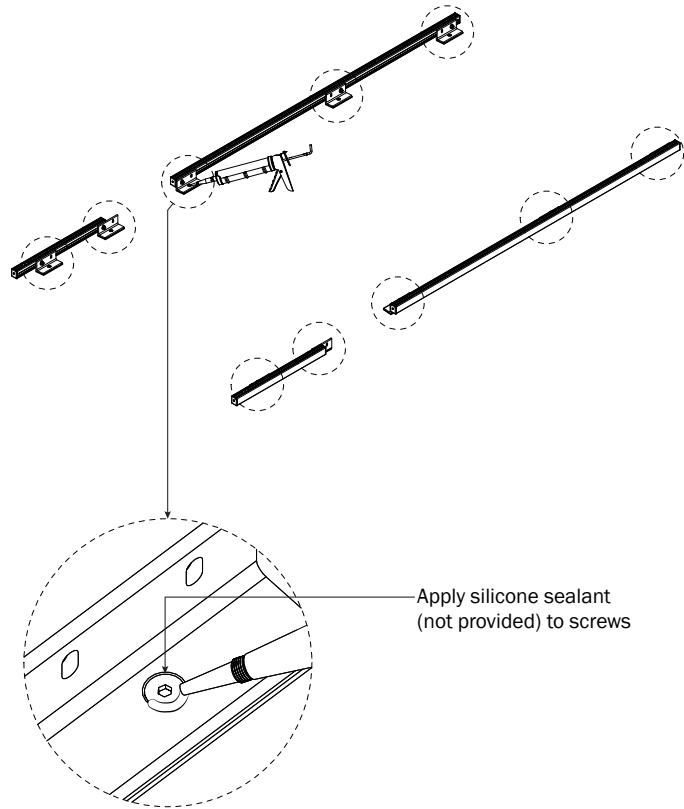
Apply Anti-Seize to all M8 T Bolt studs, then attach to Mounts using the indicated hardware. Do not tighten until Step 2.2





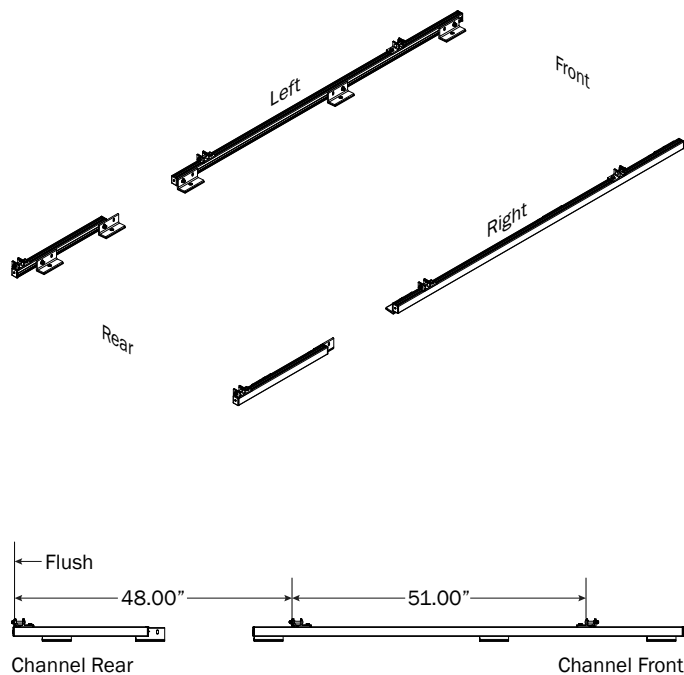
## 2.3

Torque all M8 x 25MM Flat Head Screws to 150 in-lbs. Apply Silicone Sealant to screw heads to seal against water intrusion.



## 2.6

Position Mounting Brackets to designated dimension shown below, then torque the M8 X 20MM bolt to 90 in-lbs. Proceed to Step 3.1.

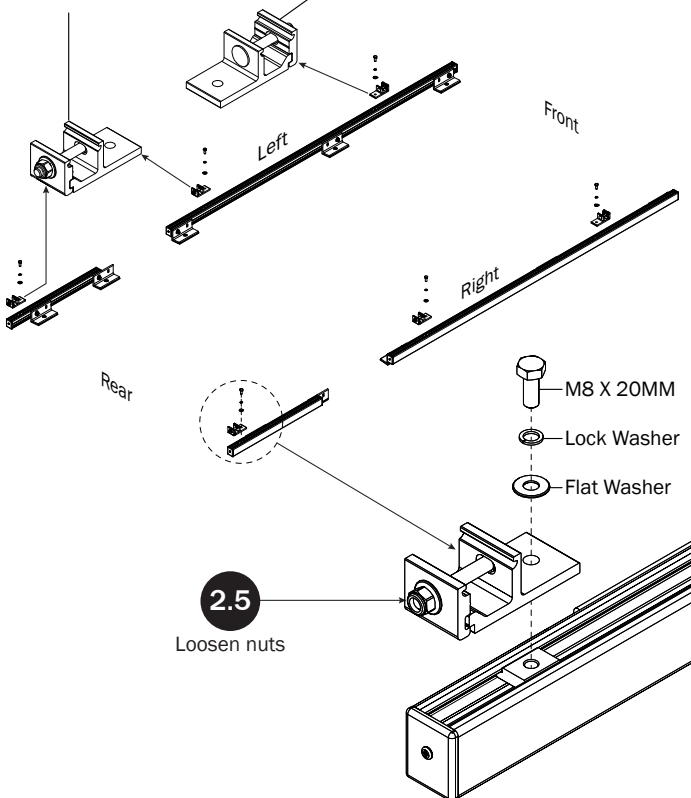


## 2.4

### Attach Mounting Brackets to the Aluminum Strip Nuts located in the Channels

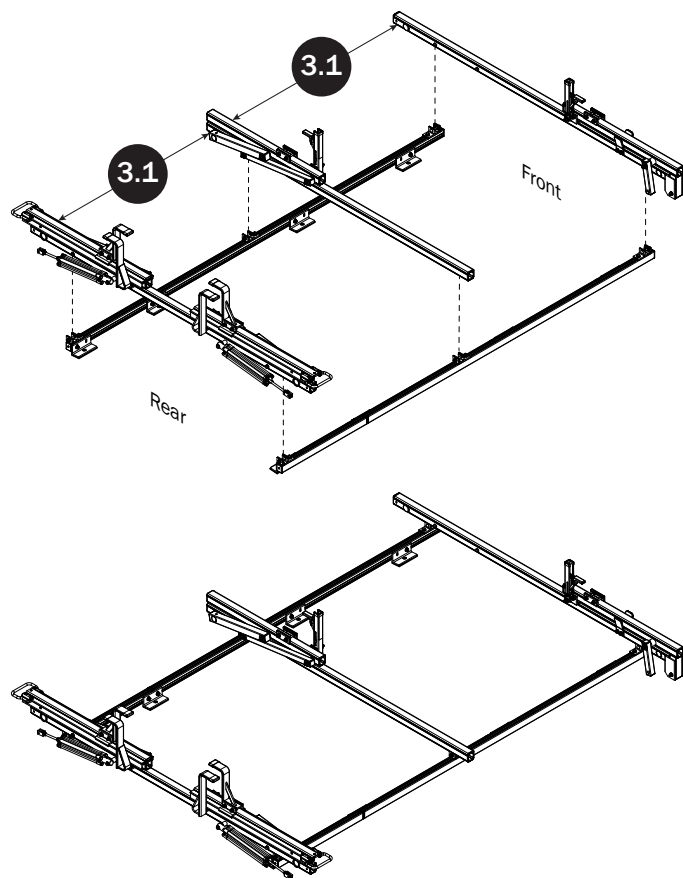
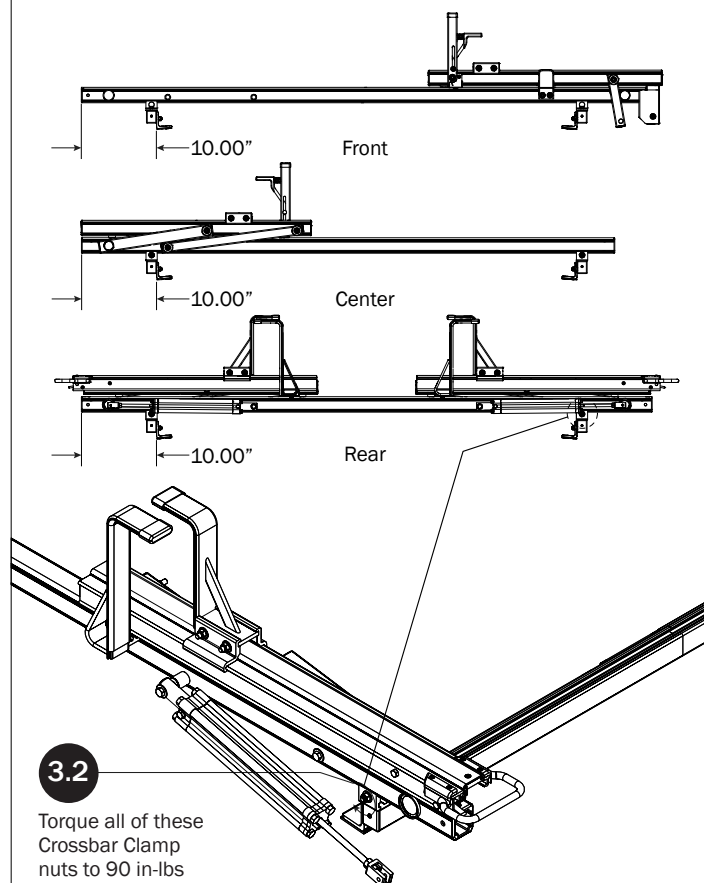
Position the rear and center  
Mounting Brackets as shown.

Position the front Mounting—Brackets as shown.

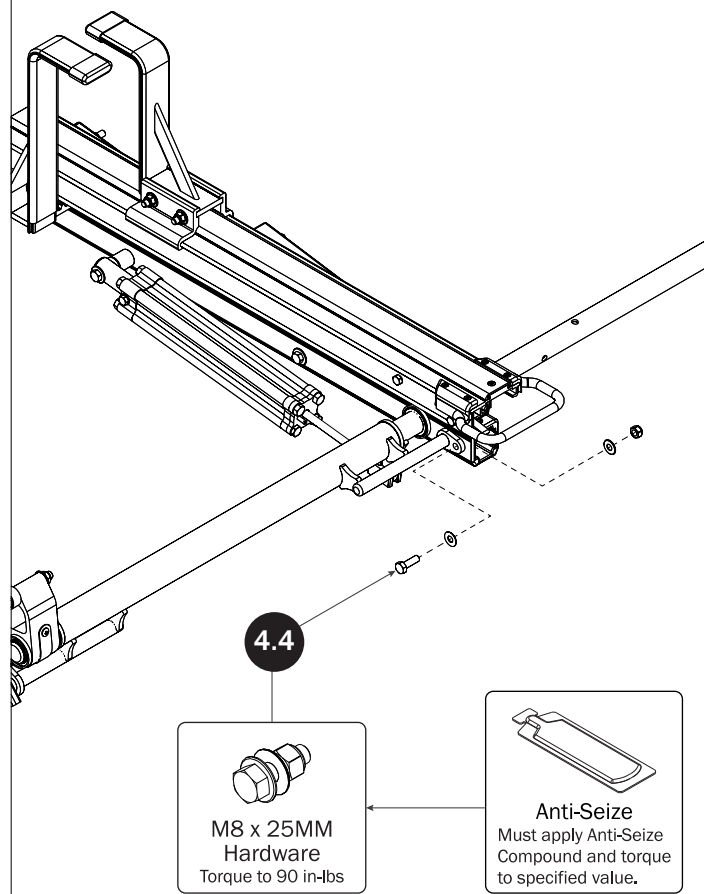
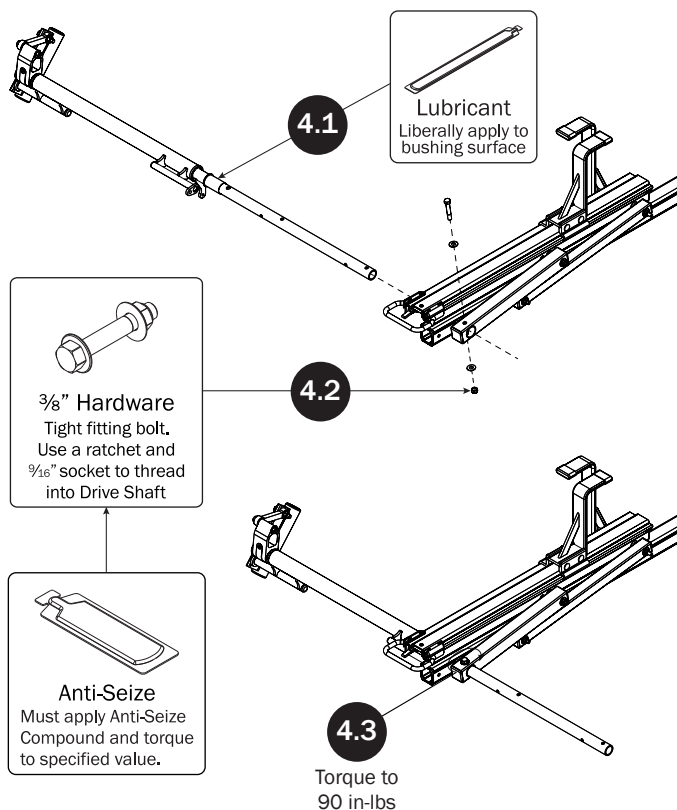


## 2.5

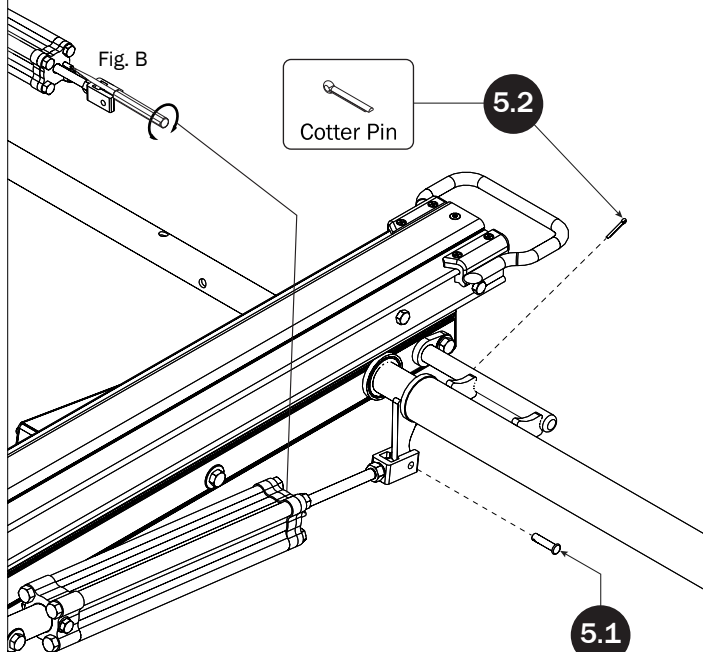
Loosen nuts

**CROSSBARS****CROSSBAR ADJUSTMENT****REAR DRIVE SHAFT**

NOTE: For instructional clarity, the FBM Mounting System will not be shown for the remainder of this Assembly Manual.



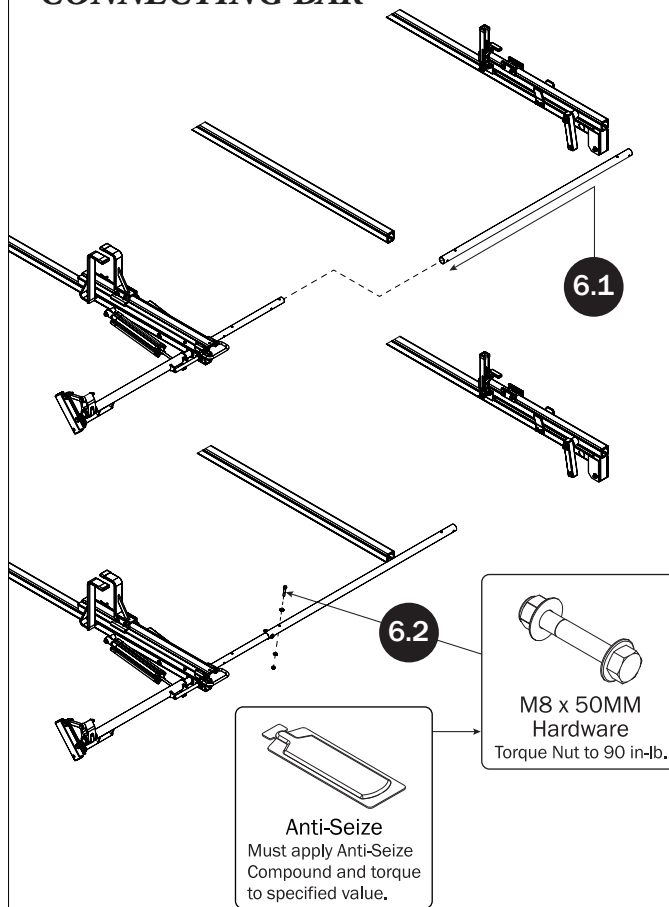
## CYLINDER HARDWARE



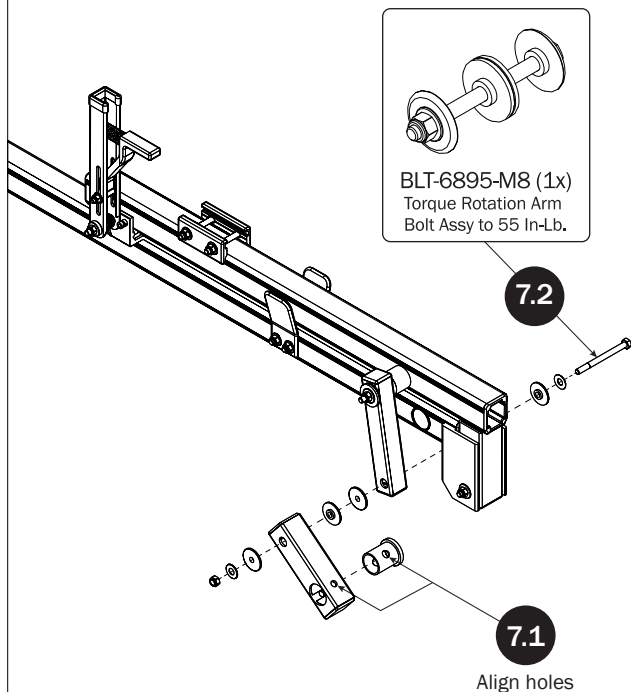
NOTE: Loosen the Cylinder Flow Control Screw (Fig. B) as needed to allow movement for this step sequence.

When finished with Cylinder Hardware, tighten the Flow Control Screw all the way closed then turn back open 1½ turn.

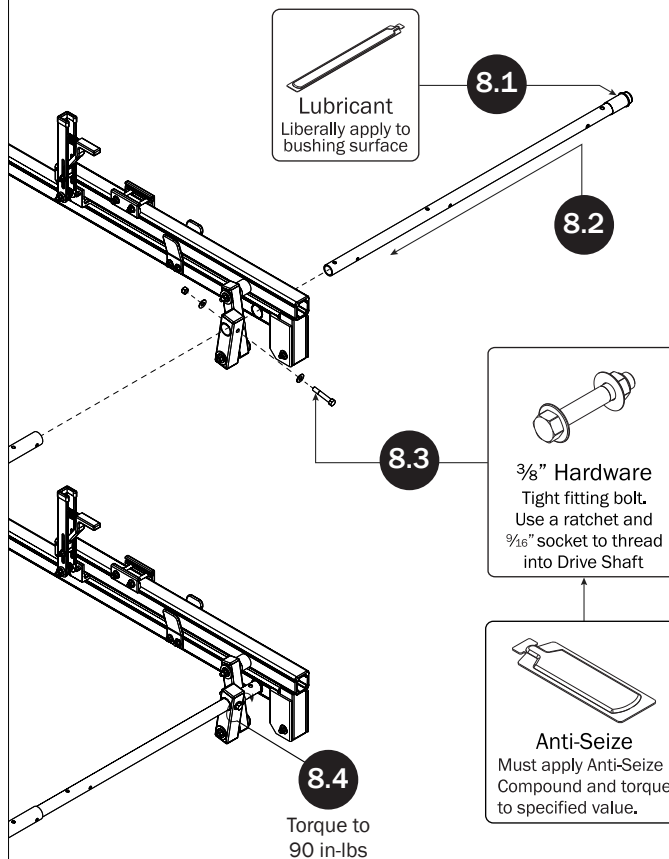
## CONNECTING BAR

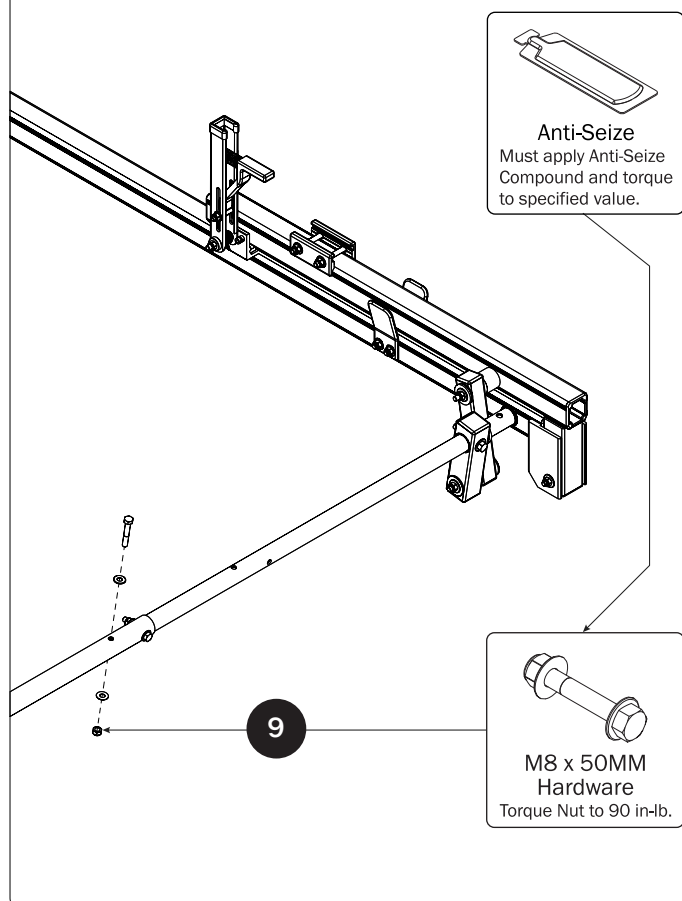


## FRONT DRIVE ARM

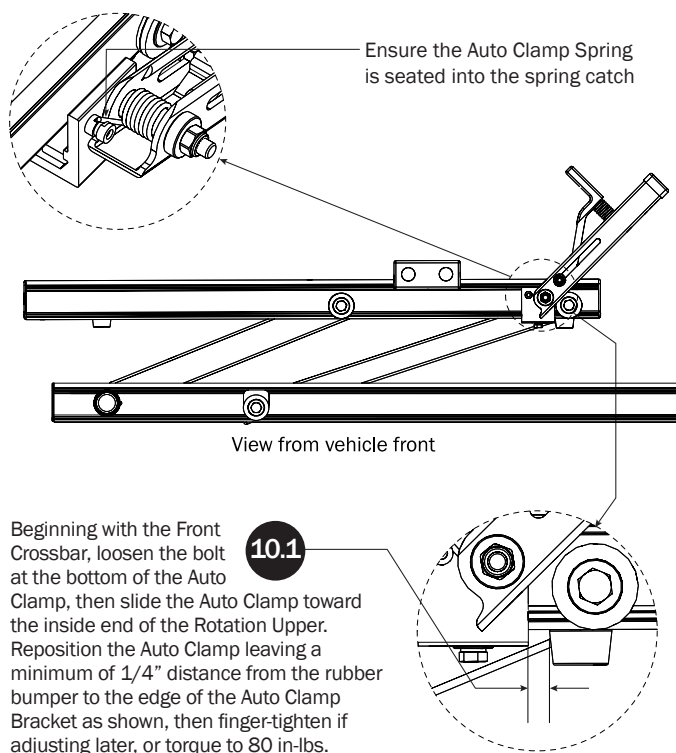


## FRONT DRIVE SHAFT

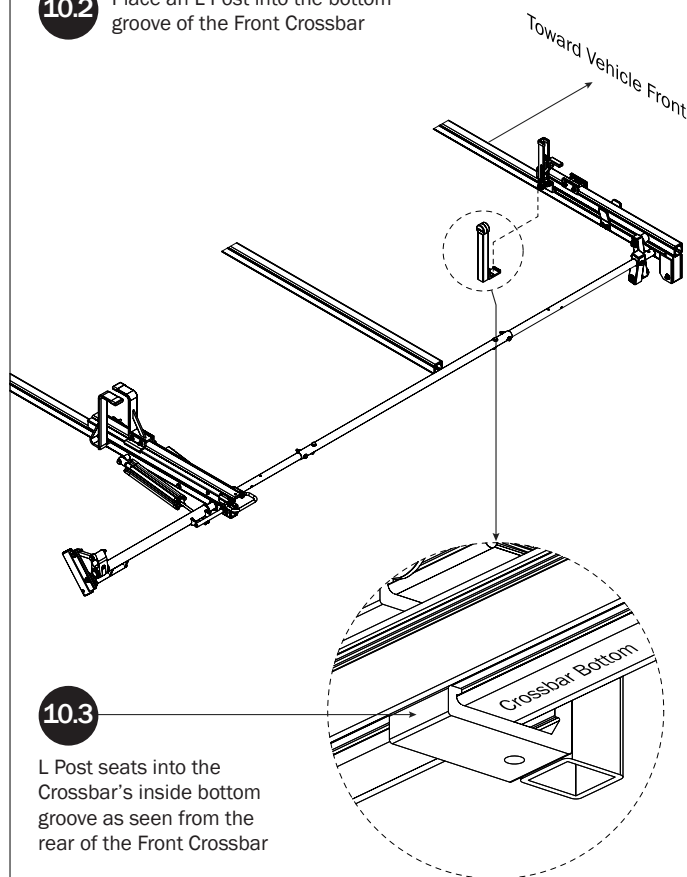


**CONNECTING BAR FASTENERS****L POSTS****SEE QUICK START GUIDE FOR ADJUSTMENTS**

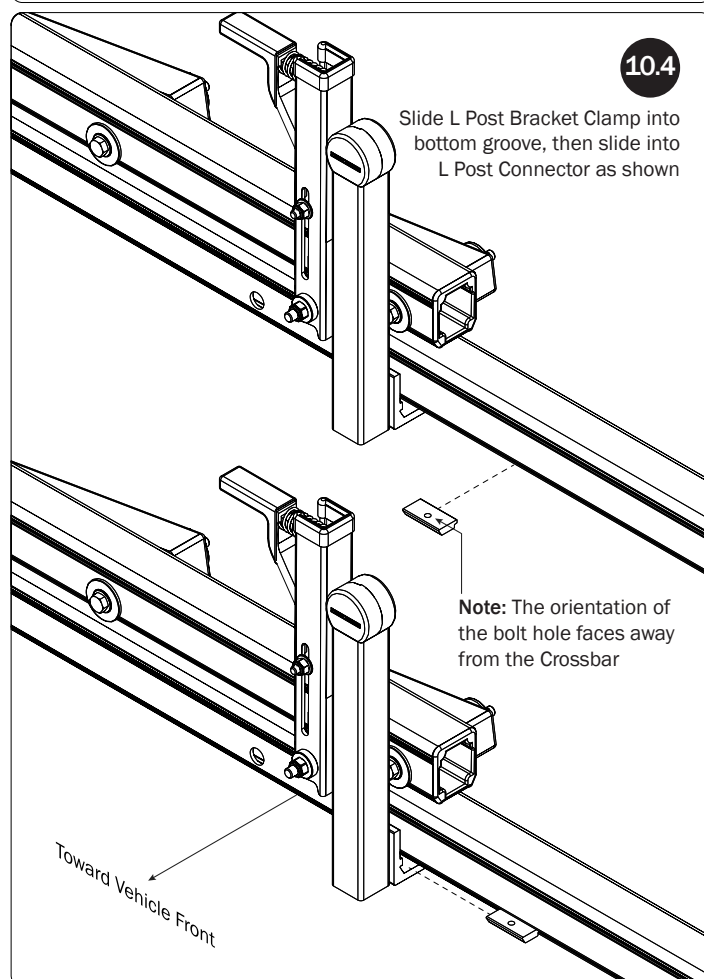
**NOTE:** The front Auto Clamp come preset from the factory for packaging purposes only. To assemble the L Post to the Crossbar, the Auto Clamps must be repositioned.

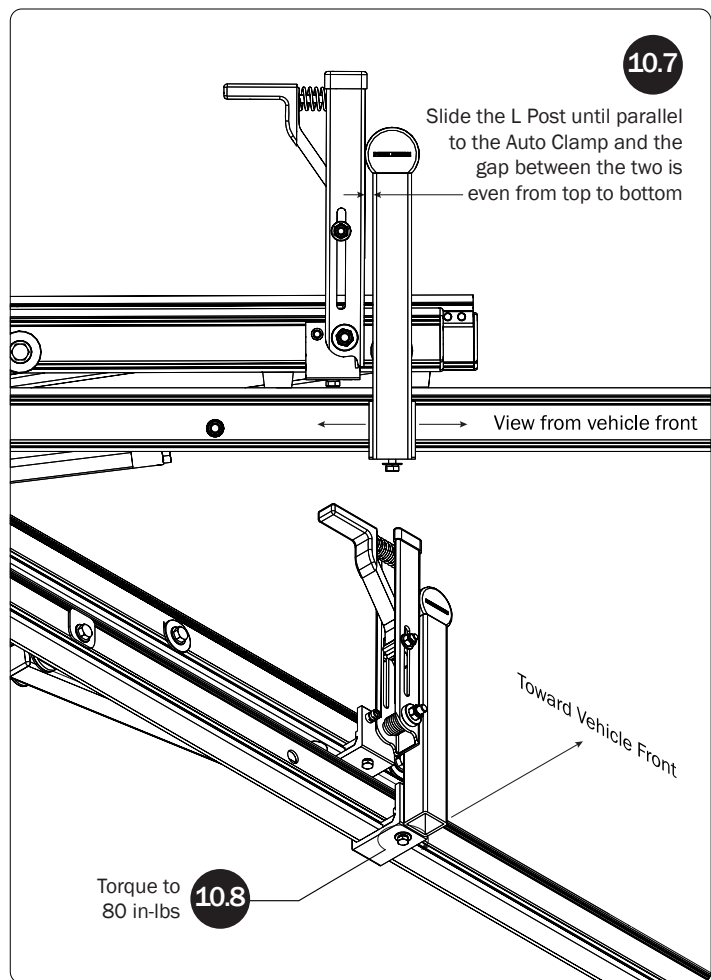
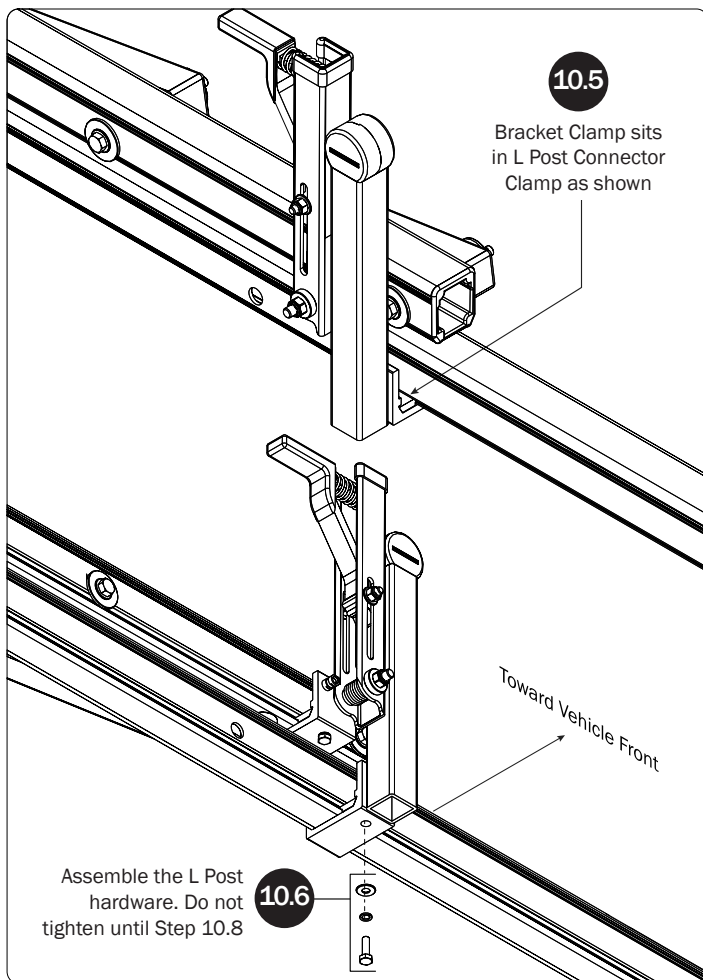


- 10.2** Place an L Post into the bottom groove of the Front Crossbar



- 10.4**

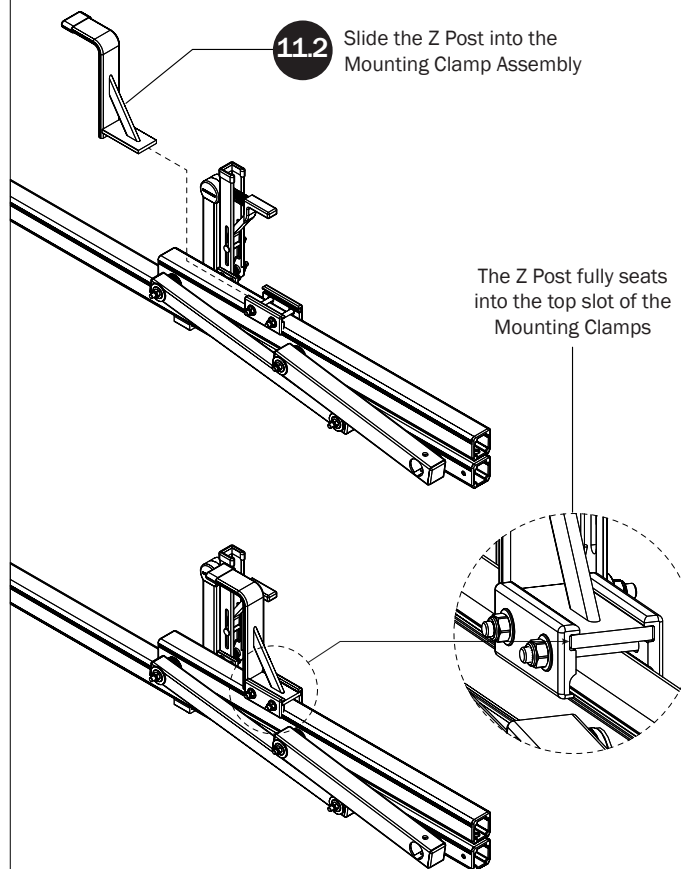
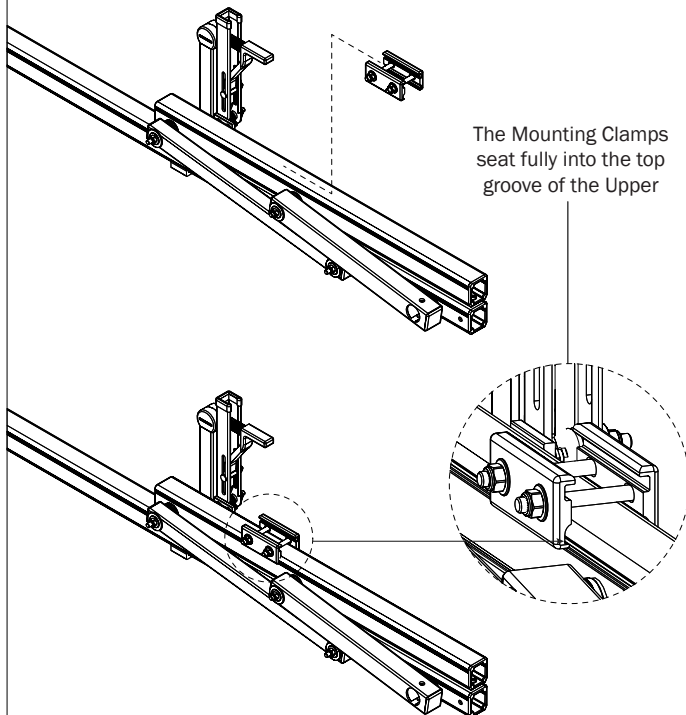




## Z POSTS

### SEE QUICK START GUIDE FOR ADJUSTMENTS

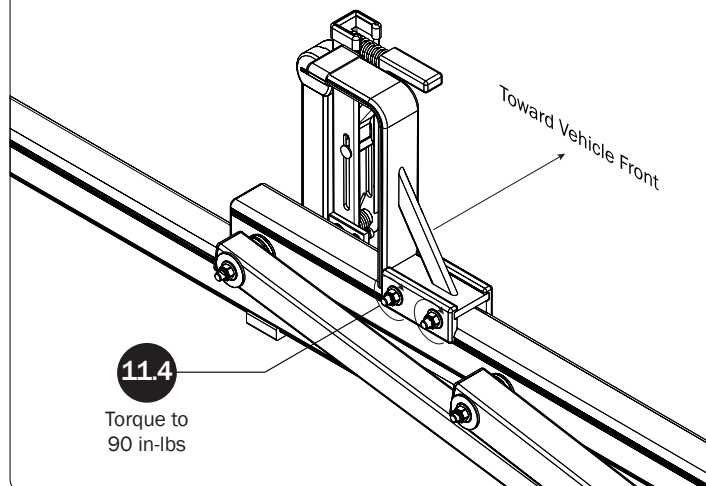
- 11.1** Assemble the Z Post Mounting Clamp Assembly onto the Rotation Upper. Do not tighten until Step 11.4



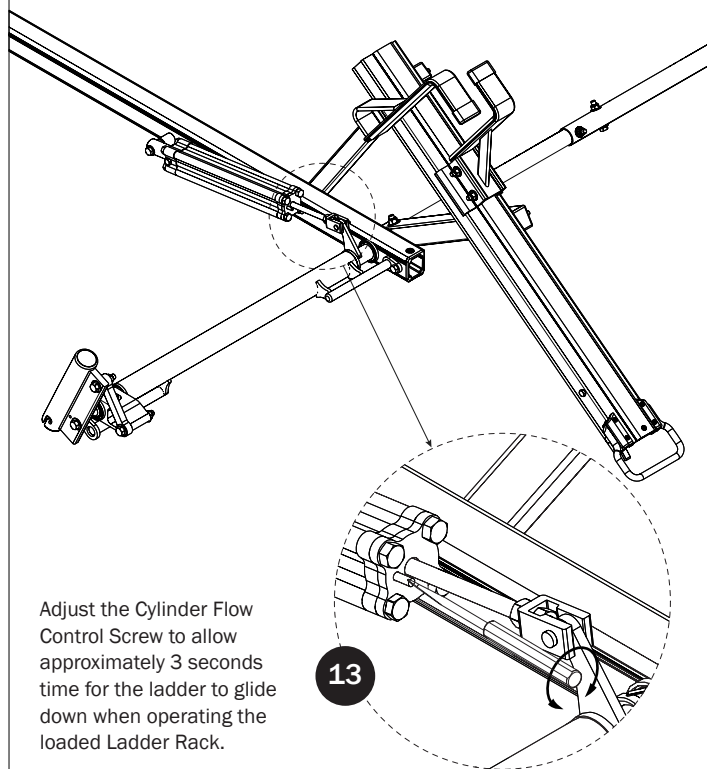
11.3

Refer to the Quick Start Guide for Z Post positioning.

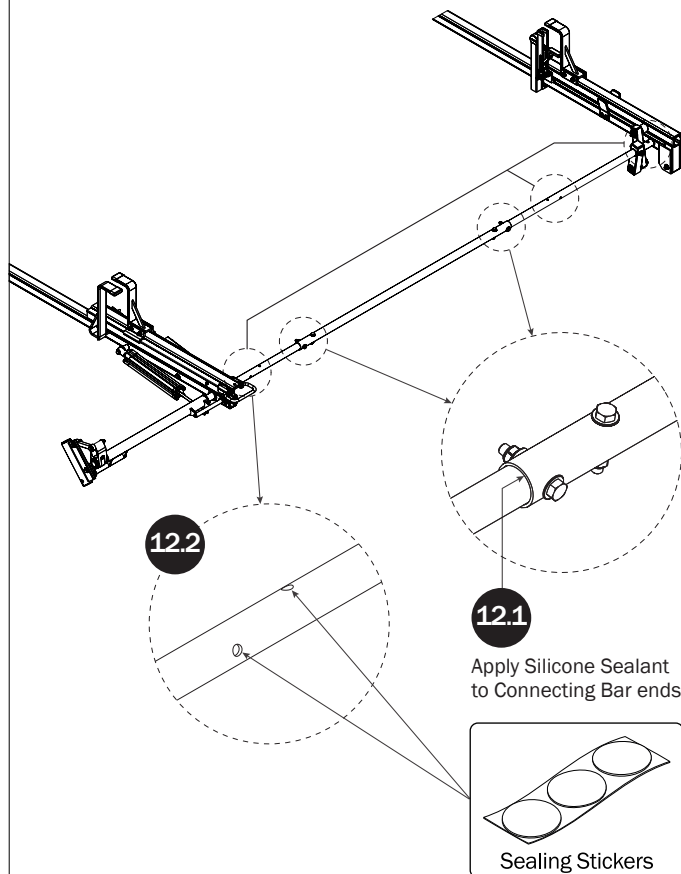
View from vehicle front



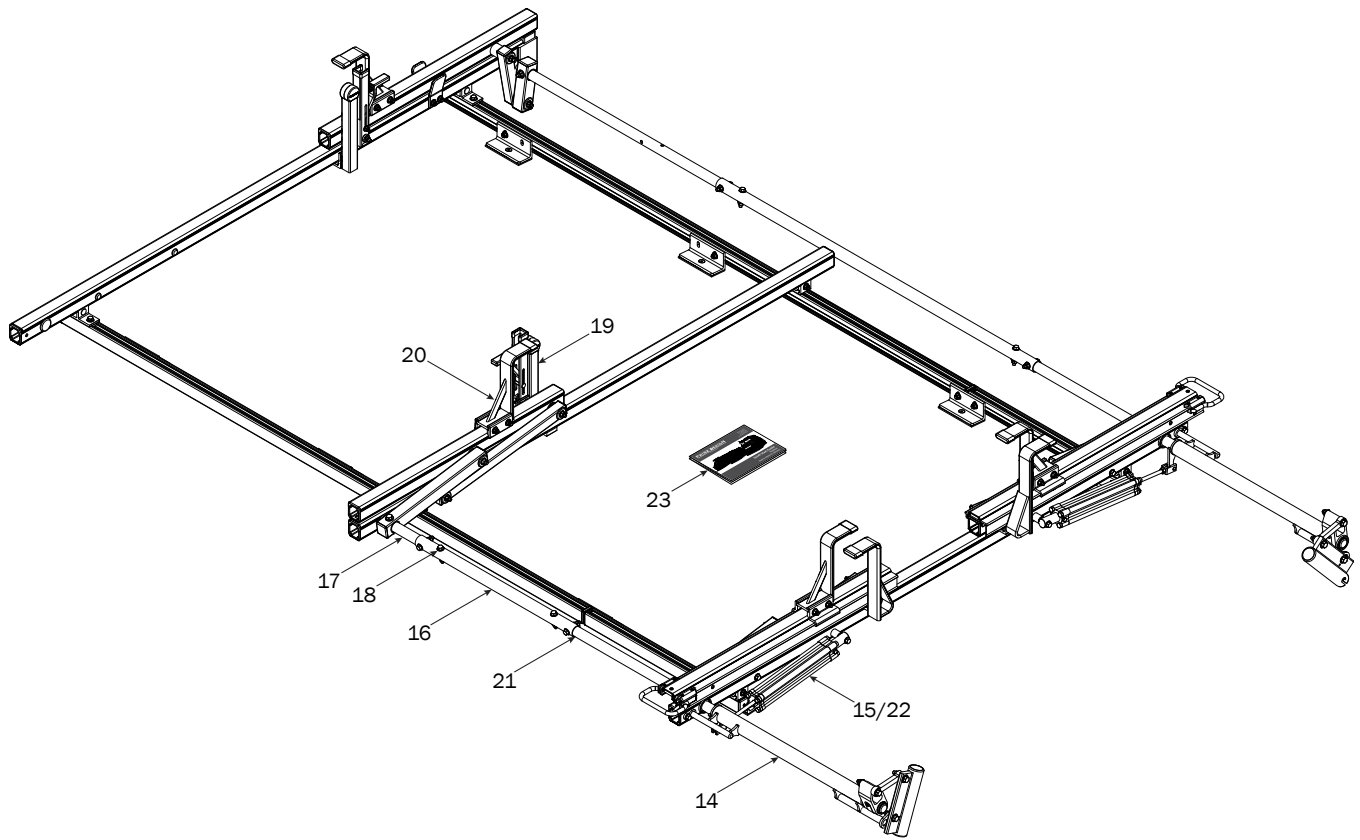
## CYLINDER ADJUSTMENT



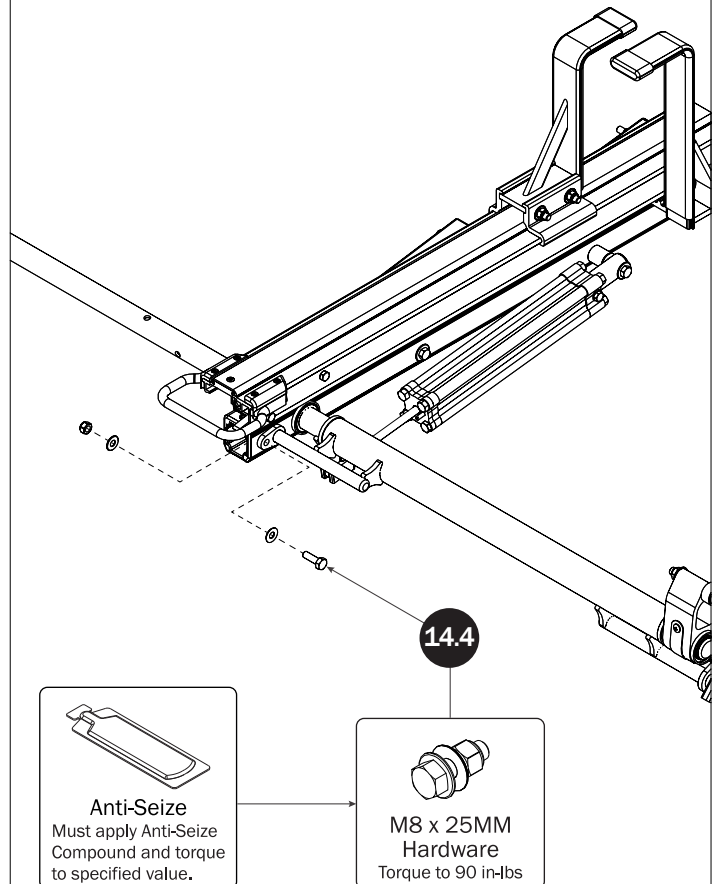
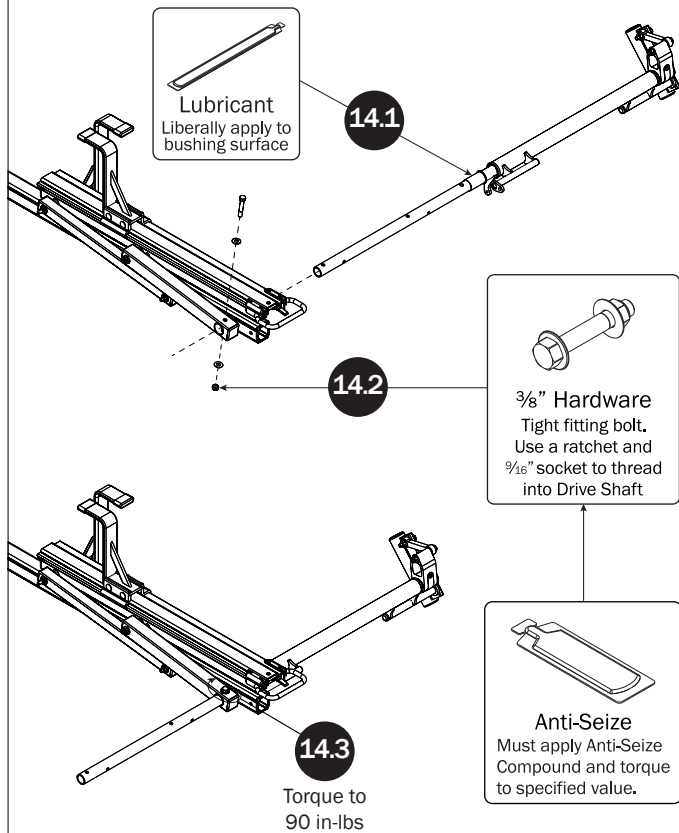
## DRIVE SHAFT SEALING

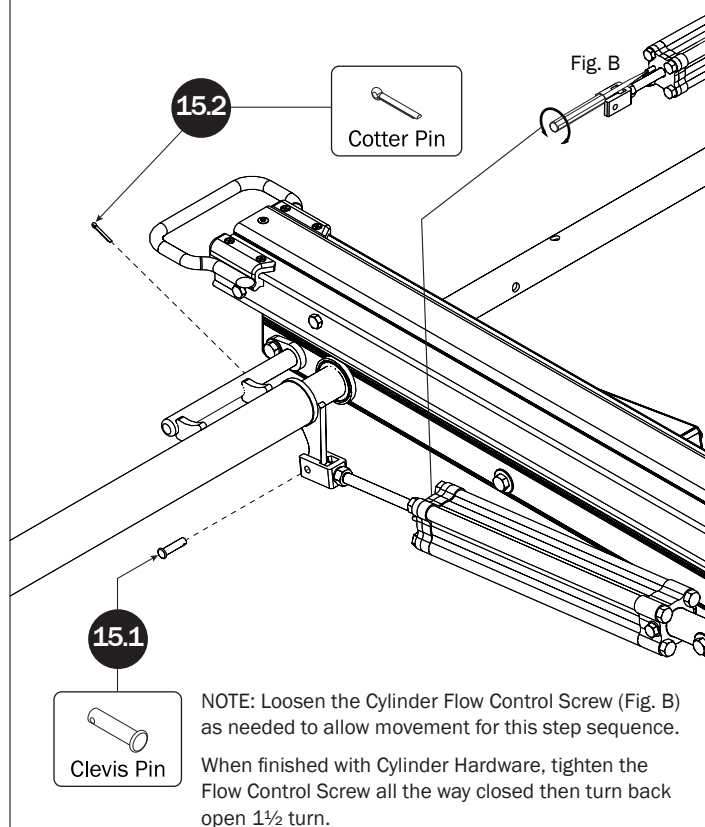
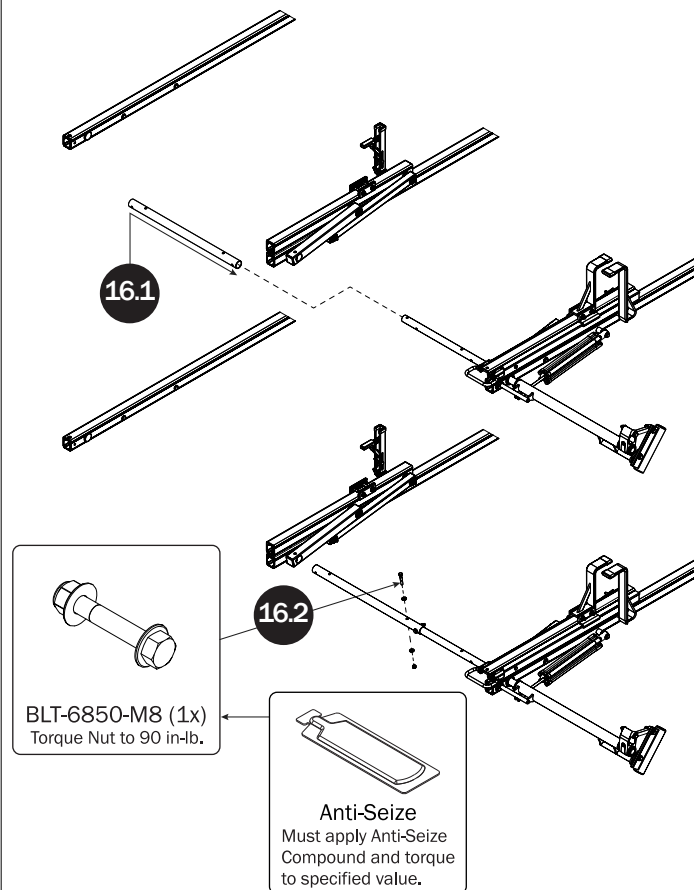
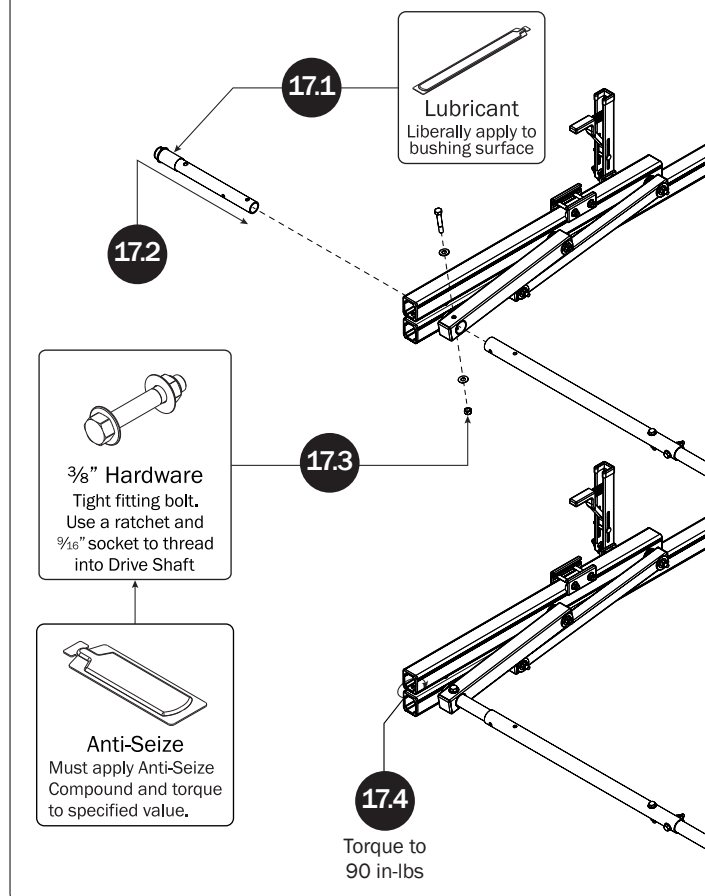
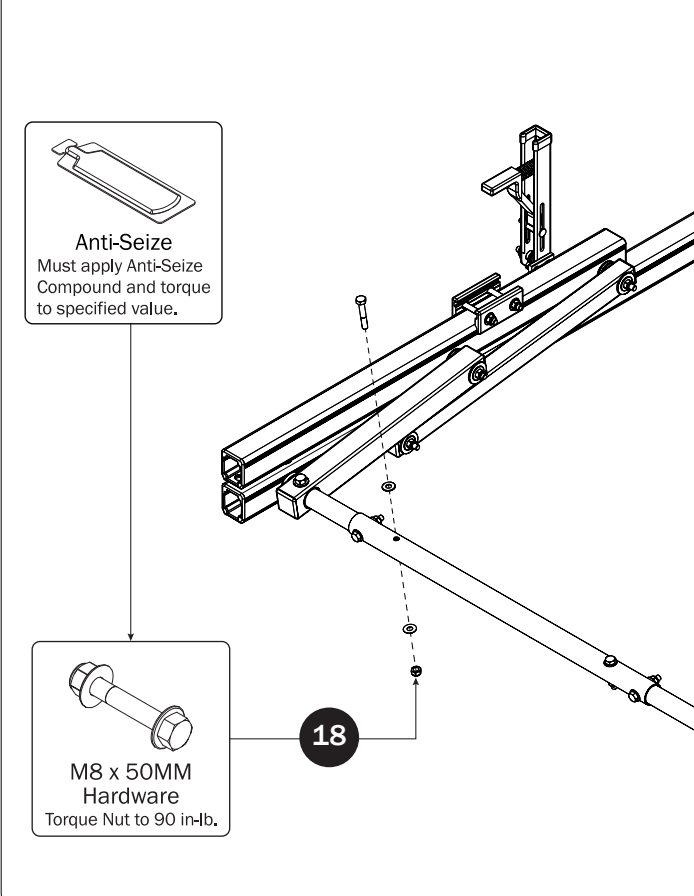


## LEFT SIDE ASSEMBLY SEQUENCE



## REAR DRIVE SHAFT



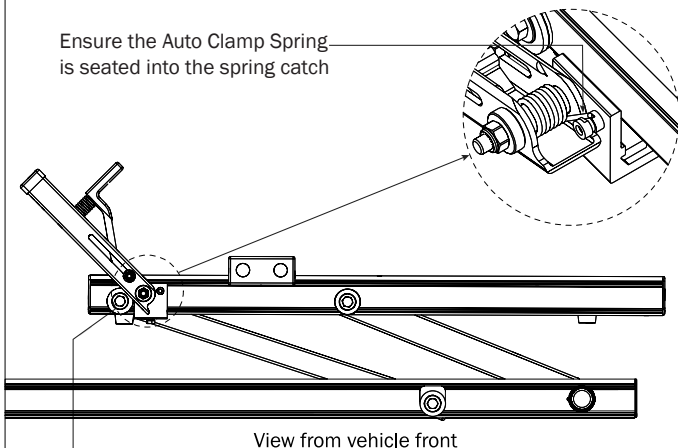
**CYLINDER HARDWARE****CONNECTING BAR****FRONT DRIVE SHAFT****CONNECTING BAR FASTENERS**

## L POSTS

### SEE QUICK START GUIDE FOR ADJUSTMENTS

**NOTE:** The front Auto Clamp come preset from the factory for packaging purposes only. To assemble the L Post to the Crossbar, the Auto Clamps must be repositioned.

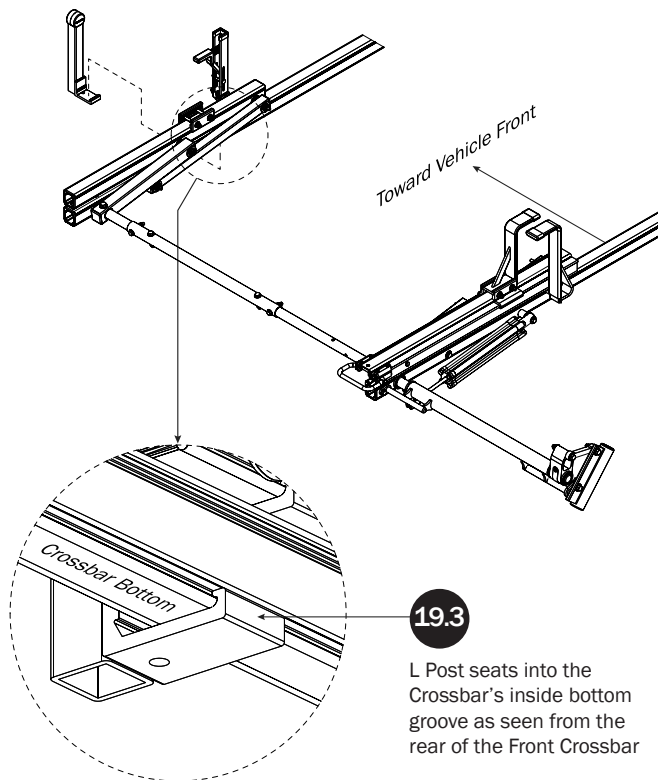
Ensure the Auto Clamp Spring is seated into the spring catch



View from vehicle front

**19.1** Beginning with the Front Crossbar, loosen the bolt at the bottom of the Auto Clamp, then slide the Auto Clamp toward the inside end of the Rotation Upper. Reposition the Auto Clamp leaving a minimum of 1/4" distance from the rubber bumper to the edge of the Auto Clamp Bracket as shown, then finger-tighten if adjusting later, or torque to 80 in-lbs.

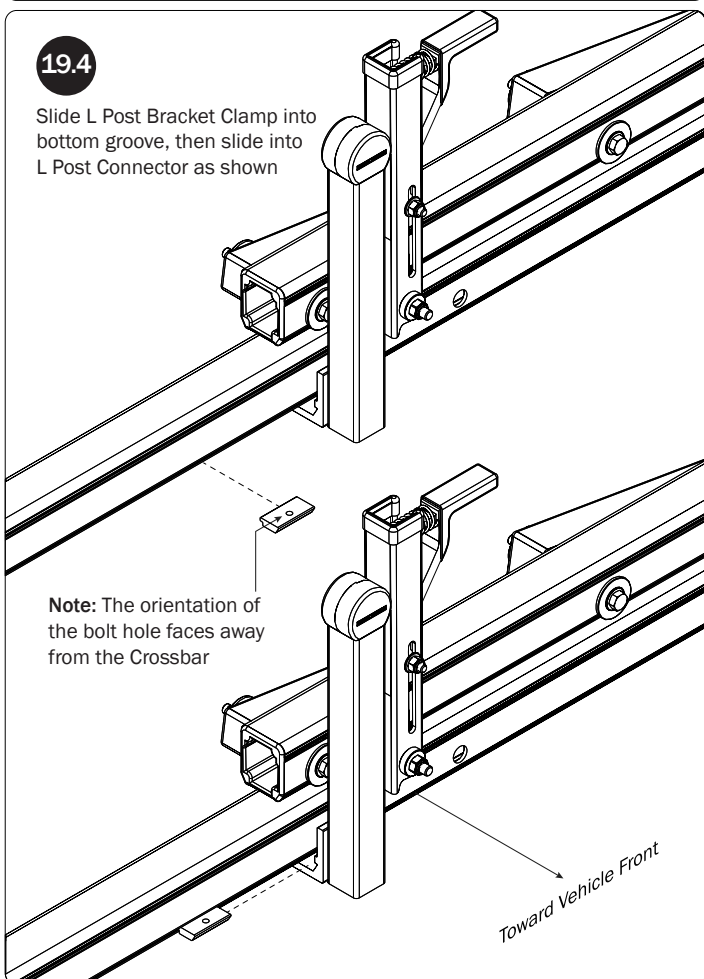
**19.2** Place an L Post into the bottom groove of the Front Crossbar



**19.3** L Post seats into the Crossbar's inside bottom groove as seen from the rear of the Front Crossbar

**19.4**

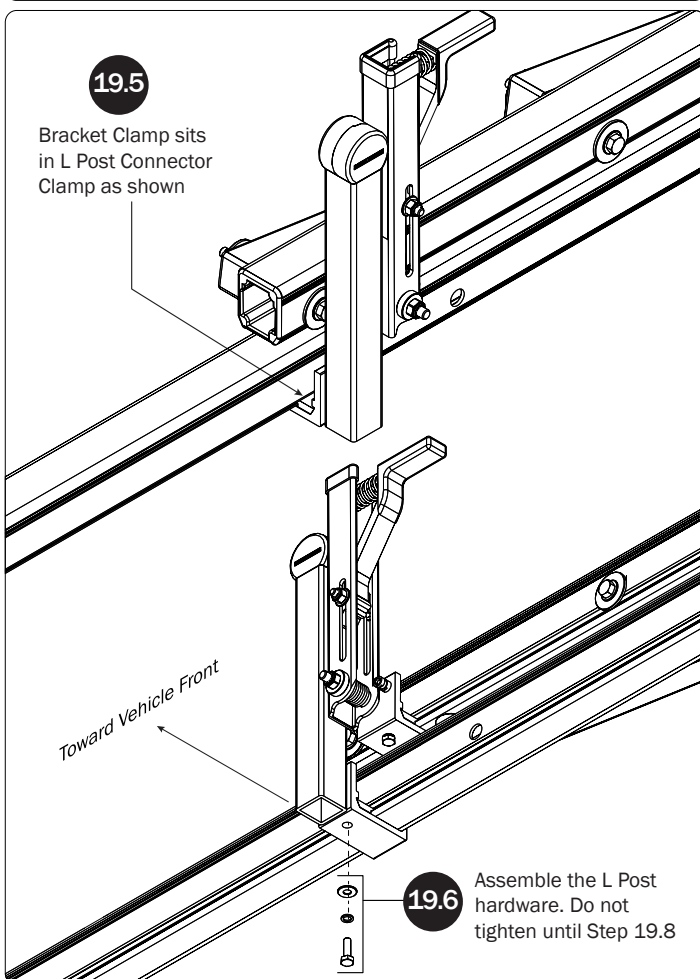
Slide L Post Bracket Clamp into bottom groove, then slide into L Post Connector as shown



**Note:** The orientation of the bolt hole faces away from the Crossbar

**19.5**

Bracket Clamp sits in L Post Connector Clamp as shown



**19.6** Assemble the L Post hardware. Do not tighten until Step 19.8

19.7

Slide the L Post until parallel to the Auto Clamp and the gap between the two is even from top to bottom

View from vehicle front

Toward Vehicle Front

19.8 Torque to 80 in-lbs

Slide the Z Post into the Mounting Clamp Assembly

20.2

The Z Post fully seats into the top slot of the Mounting Clamps

20.3

Refer to the Quick Start Guide for Z Post positioning.

View from vehicle front

Toward Vehicle Front

20.4

Torque to 90 in-lbs

**Z POSTS**

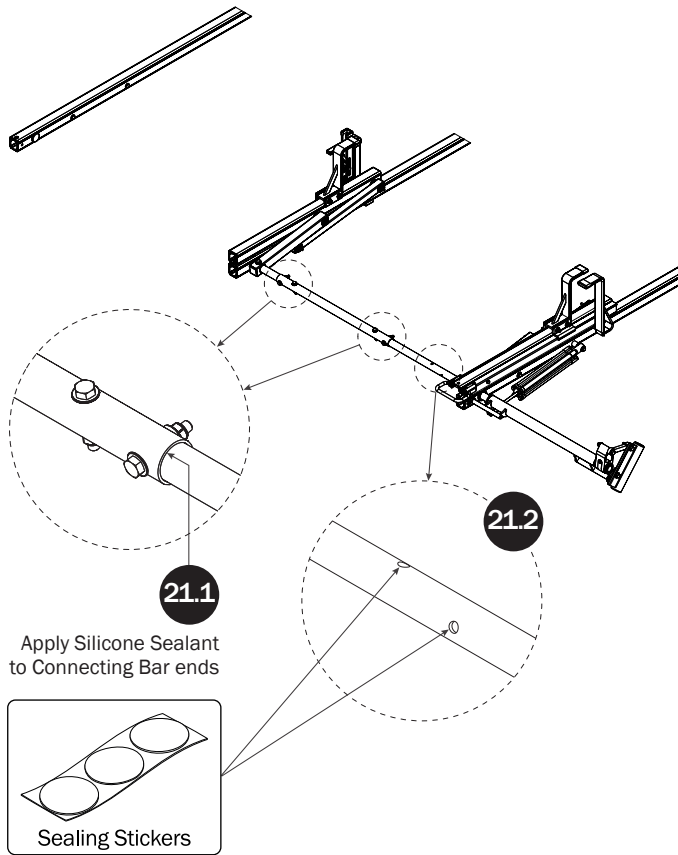
SEE QUICK START GUIDE FOR ADJUSTMENTS

20.1

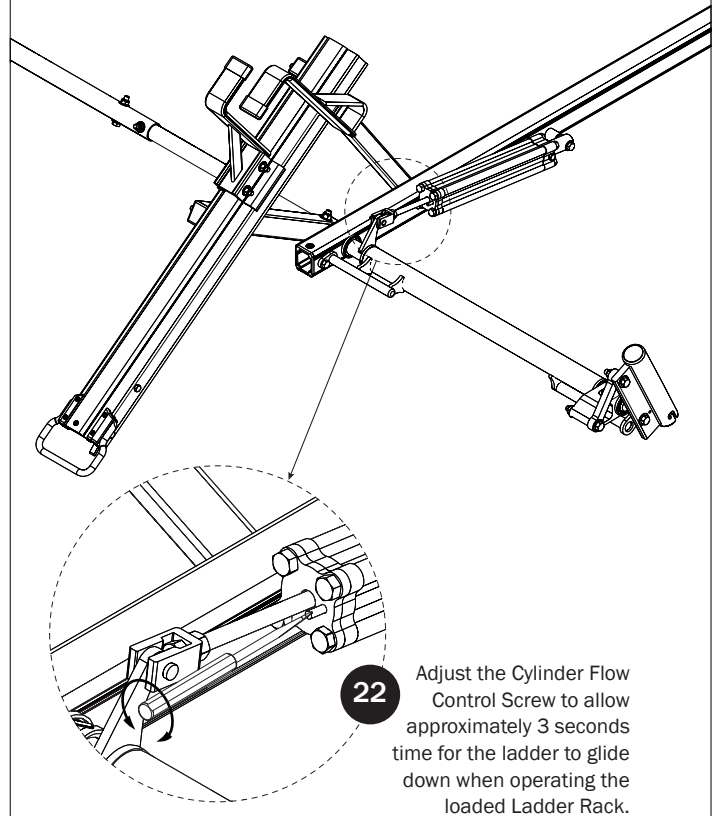
Assemble the Z Post Mounting Clamp Assembly onto the Rotation Upper. Do not tighten until Step 20.4.

The Mounting Clamps seat fully into the top groove of the Upper

## DRIVE SHAFT SEALING



## CYLINDER ADJUSTMENT



## QUICK START GUIDE

- 23** Place the Quick Start Guide into the vehicle's glove box for ladder setup and adjustment.

