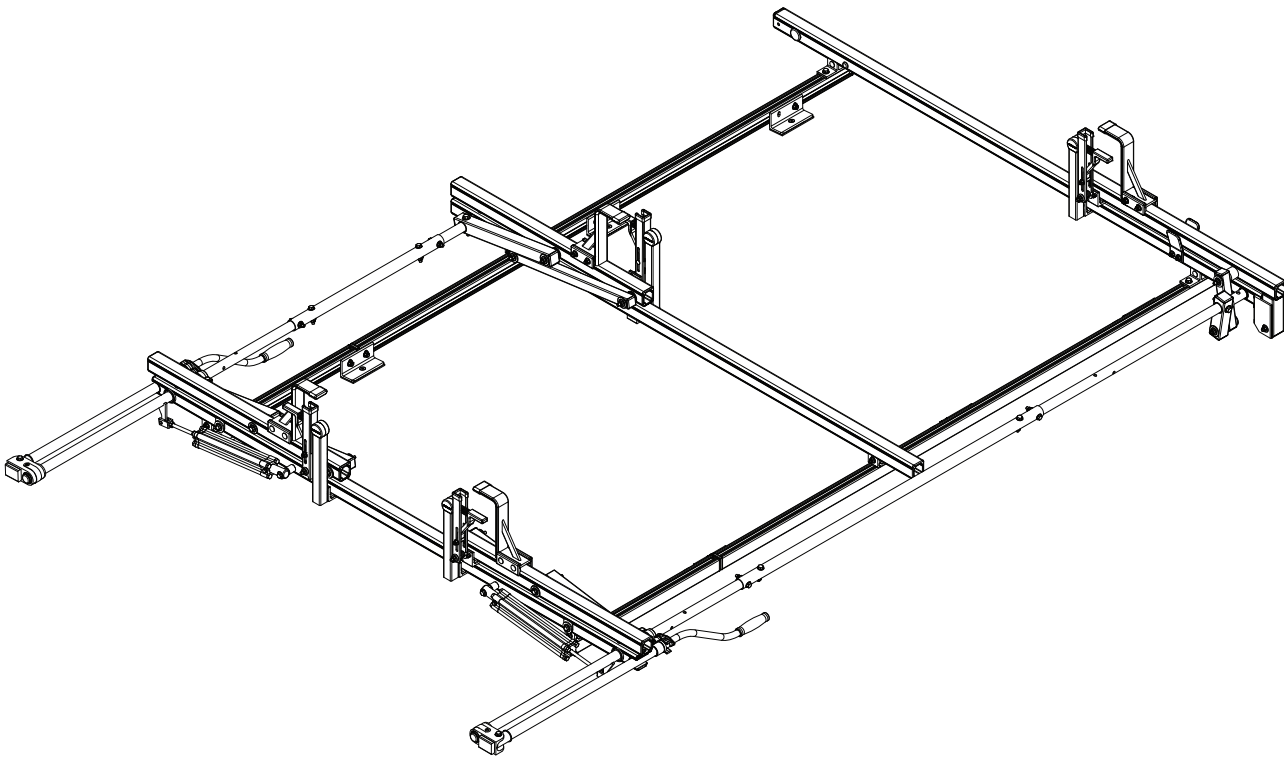


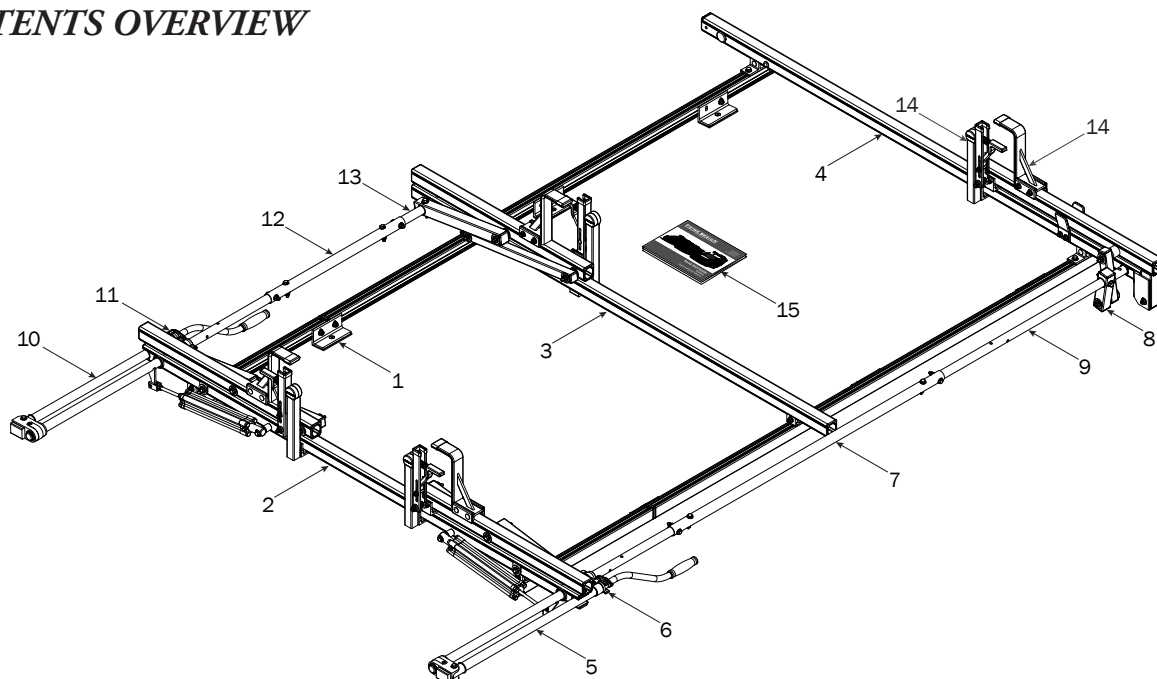
PRIME DESIGN™

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VRI3

CONTENTS OVERVIEW



1—FBM3-0102 (Qty 1)
Channels w/HKT-8149



23" Channels (2X)



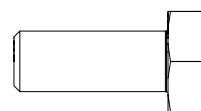
78" Channels, Pre-assembled (2X)



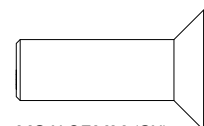
Channel Bracket (6X)



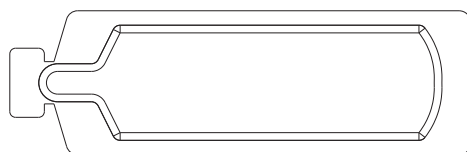
5/16" Lock Washer (6X)



M8 x 20MM (6X)



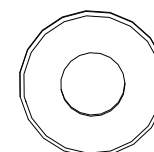
M8 X 25MM (8X)



Anti-Seize (1X)



M8 Lock Nut (10X)



5/16" Flat Washer (16X)

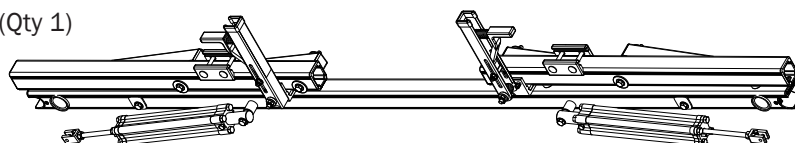


Mounting Bracket (8X)

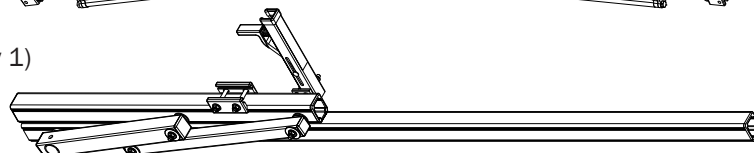


Foam Pad (8X)

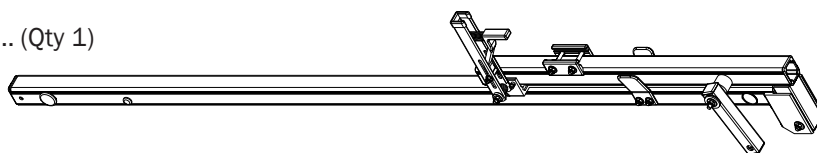
2—Rear Crossbar Assembly..... (Qty 1)



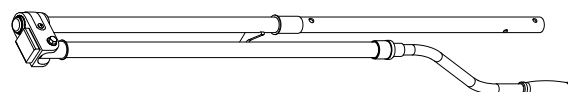
3—Center Crossbar Assembly..... (Qty 1)



4—Front Crossbar Assembly (Qty 1)



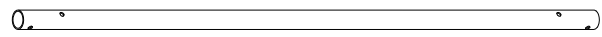
5—Rear Drive Shaft..... (Qty 1)
Right Hand, B4 Version, 46.00"



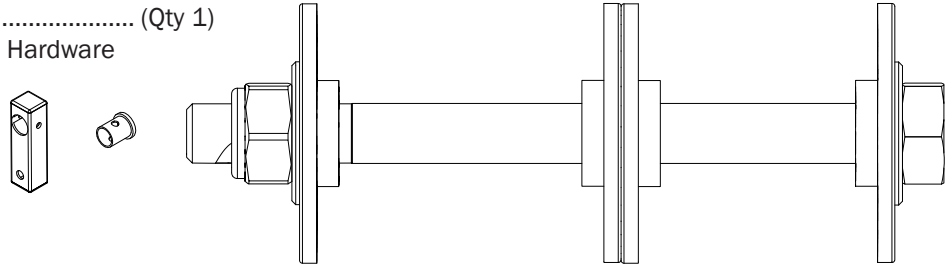
6—Handle Latch Assembly (Qty 1)
Right Hand



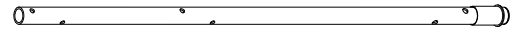
7—Connecting Bar..... (Qty 1)
4.00'



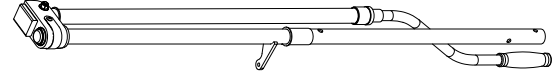
8—Drive Arm (Qty 1)
Incline Version with Bushing and Hardware



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



10—Rear Drive Shaft..... (Qty 1)
Left Hand, B4 Version, 46.00"



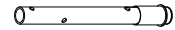
11—Handle Latch Assembly (Qty 1)
Left Hand



12—Connecting Bar (Qty 1)
24.00"



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



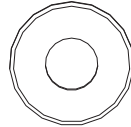
14—L & Z Post Kit..... (Qty 2)
Adj. Z Post, 7.25", L Post, w/HKT-0160



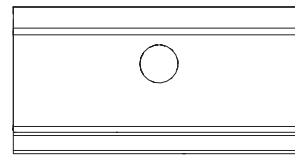
M6 x 20MM (2X)



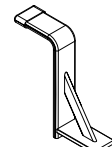
1/4 Lock Washer (2X)



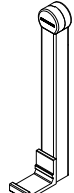
1/4 Flat Washer (2X)



L Post Bracket Clamp (2X)



Z Post (2X)



L Post (2X)

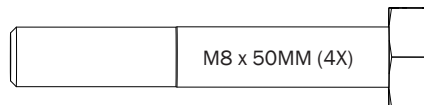
15—USQSG-Ergorack (Qty 1)
Quick Start Guide, Rotation



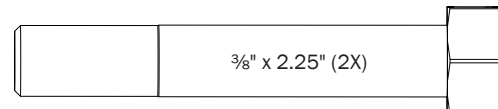
16—HKT-8163 (Not called out in Overview)..... (Qty 2)



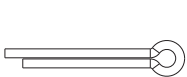
Clevis Pin (1X)



M8 x 50MM (4X)



3/8" x 2.25" (2X)



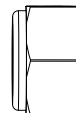
Cotter Pin (1X)



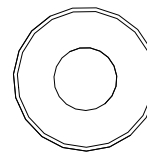
M8 x 25MM (1X)



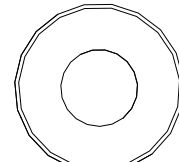
M8 Lock Nut (5X)



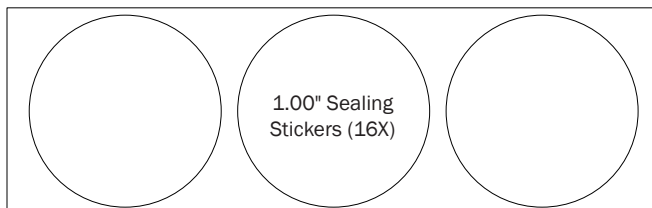
3/8" Lock Nut (2X)



5/16" Flat Washer (10X)



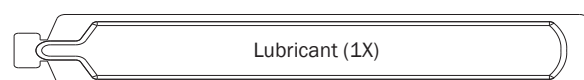
3/8" Flat Washer (4X)



1.00" Sealing
Stickers (16X)



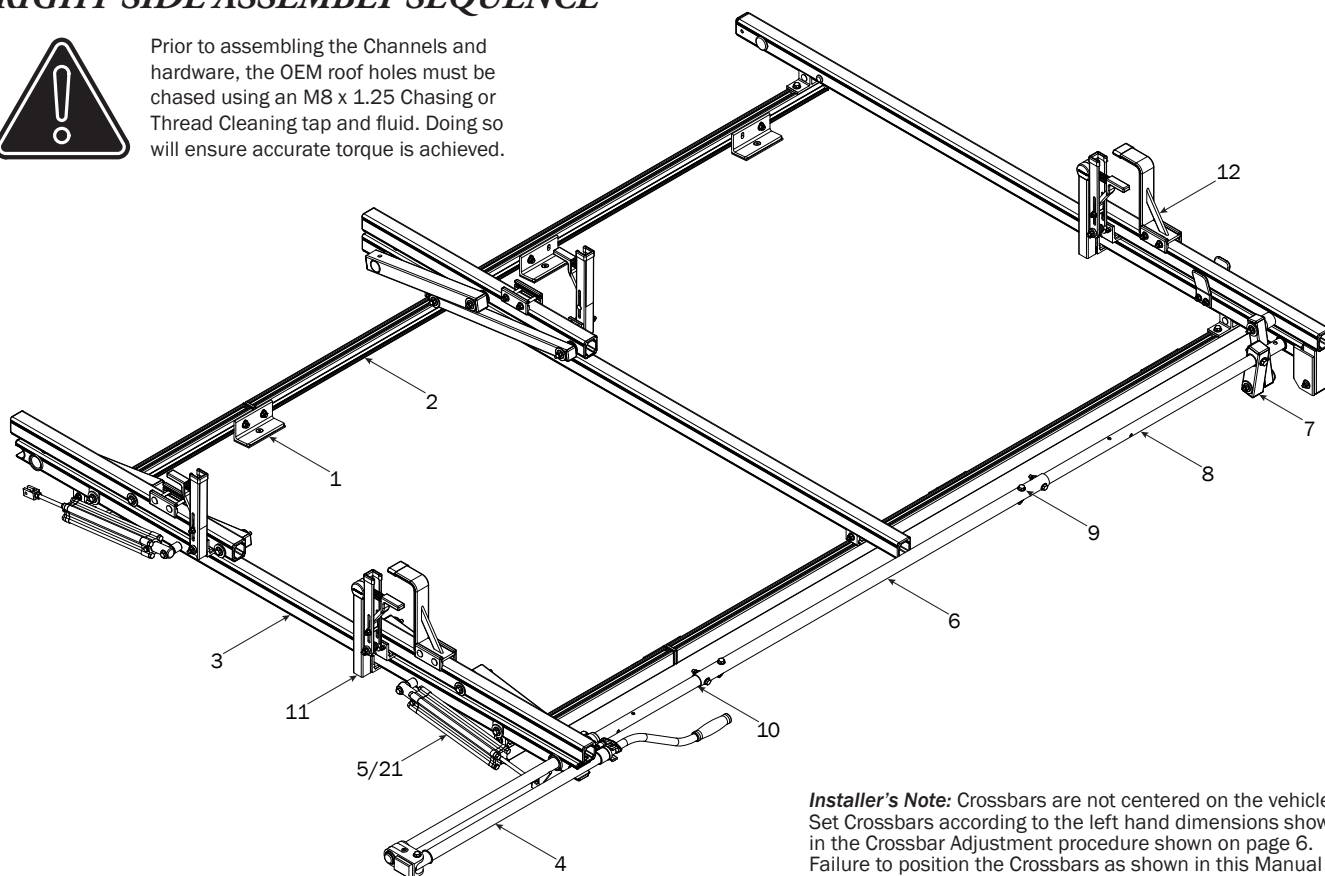
Anti-Seize (1X)



Lubricant (1X)

RIGHT SIDE ASSEMBLY SEQUENCE

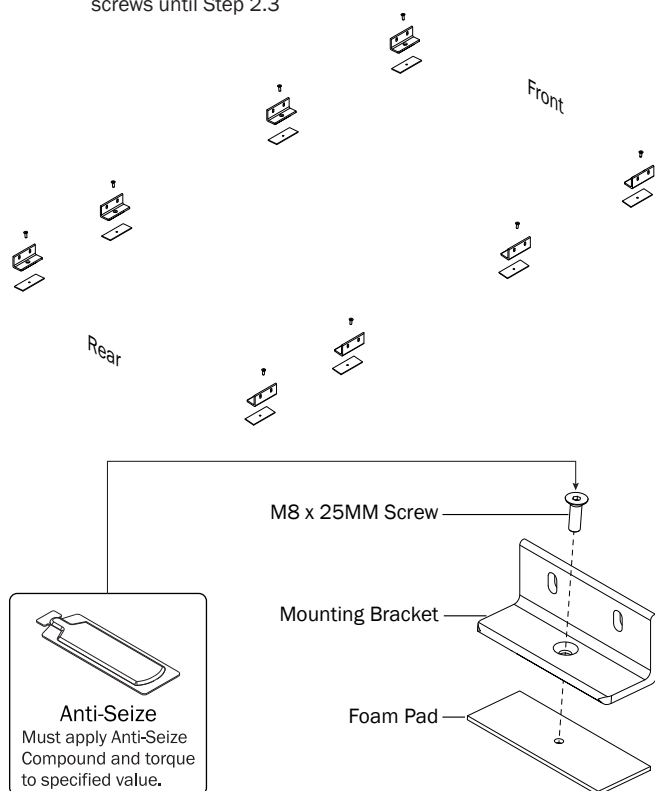
Prior to assembling the Channels and hardware, the OEM roof holes must be chased using an M8 x 1.25 Chasing or Thread Cleaning tap and fluid. Doing so will ensure accurate torque is achieved.



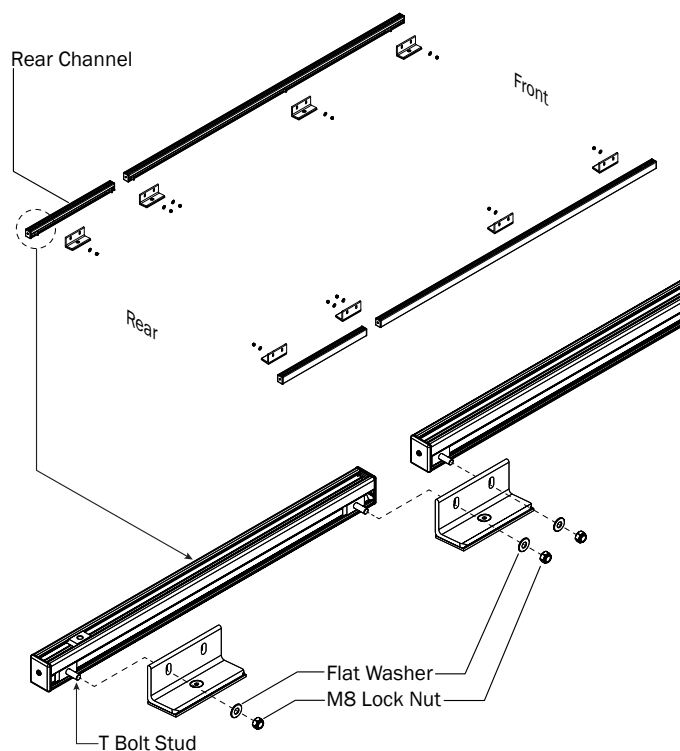
Installer's Note: Crossbars are not centered on the vehicle. Set Crossbars according to the left hand dimensions shown in the Crossbar Adjustment procedure shown on page 6. Failure to position the Crossbars as shown in this Manual may result in damage to the sliding door and/or ladder rack.

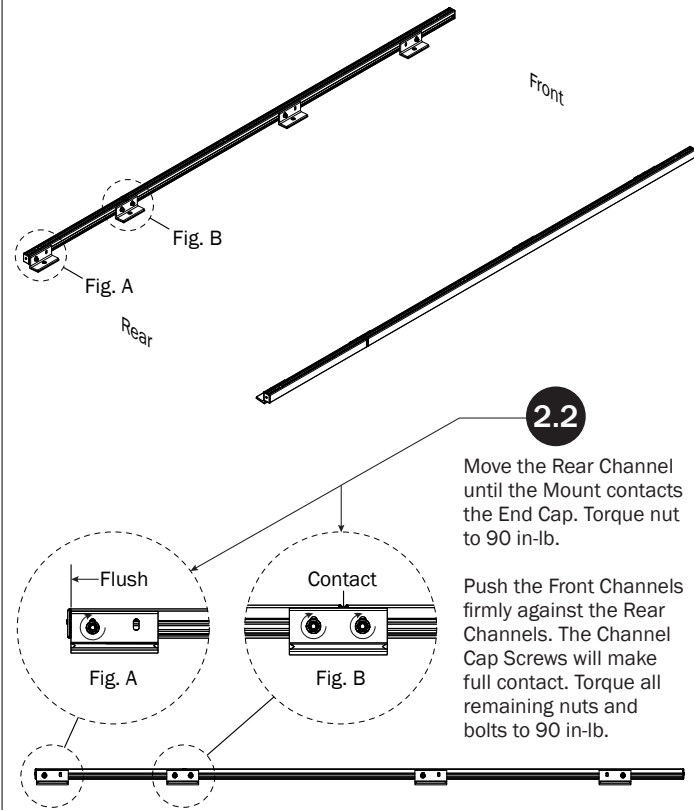
MOUNTING BRACKETS**1**

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

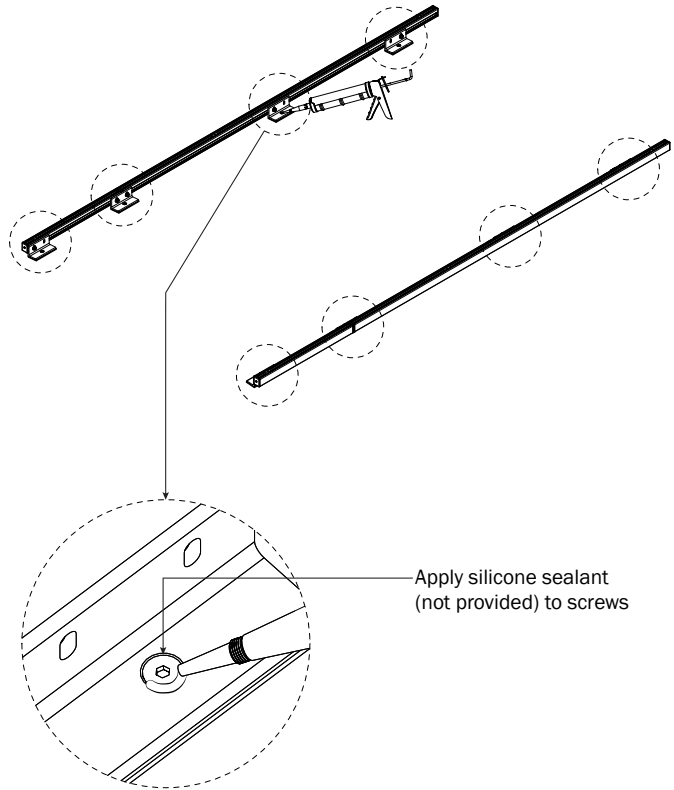
**CHANNELS****2.1**

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

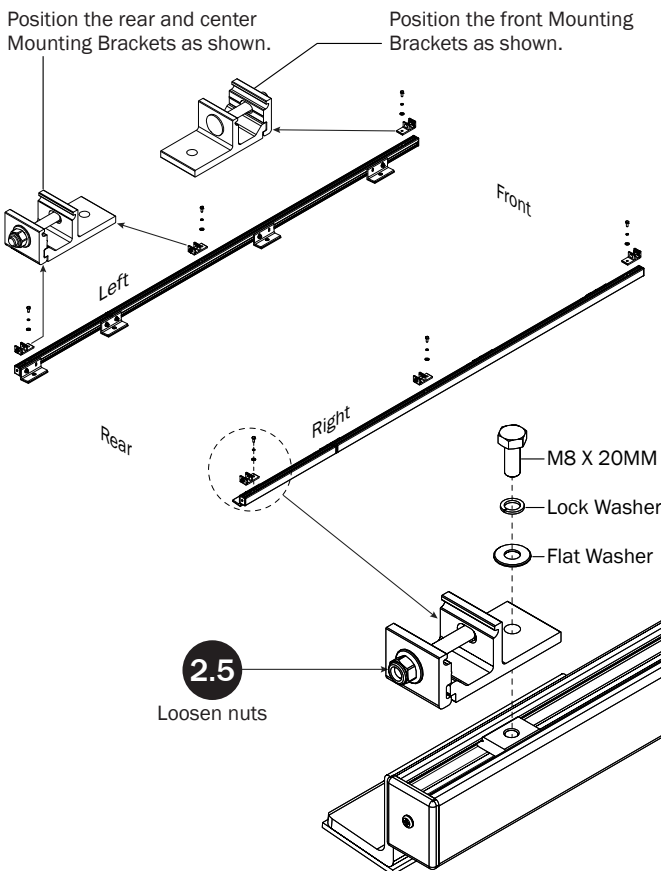




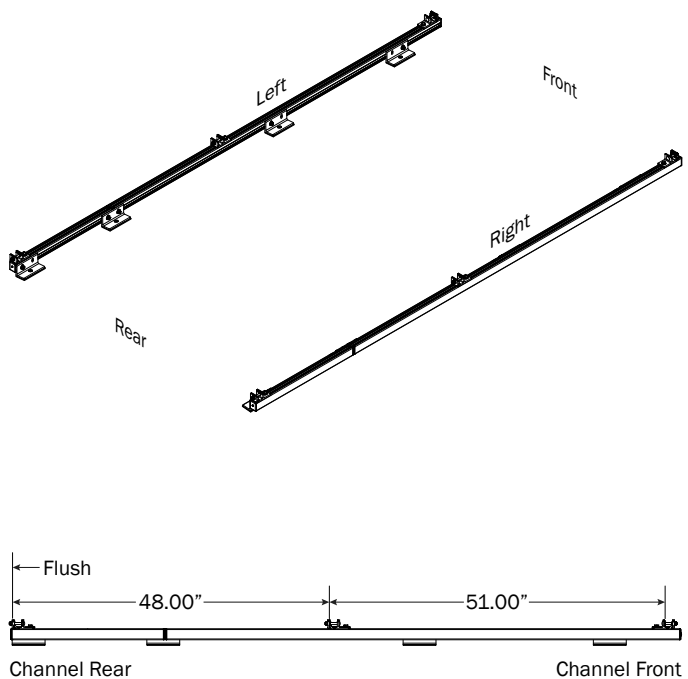
2.3 Torque all M8 x 25MM Flat Head Screws to 150 in-lbs. Apply Silicone Sealant to screw heads to seal against water intrusion.

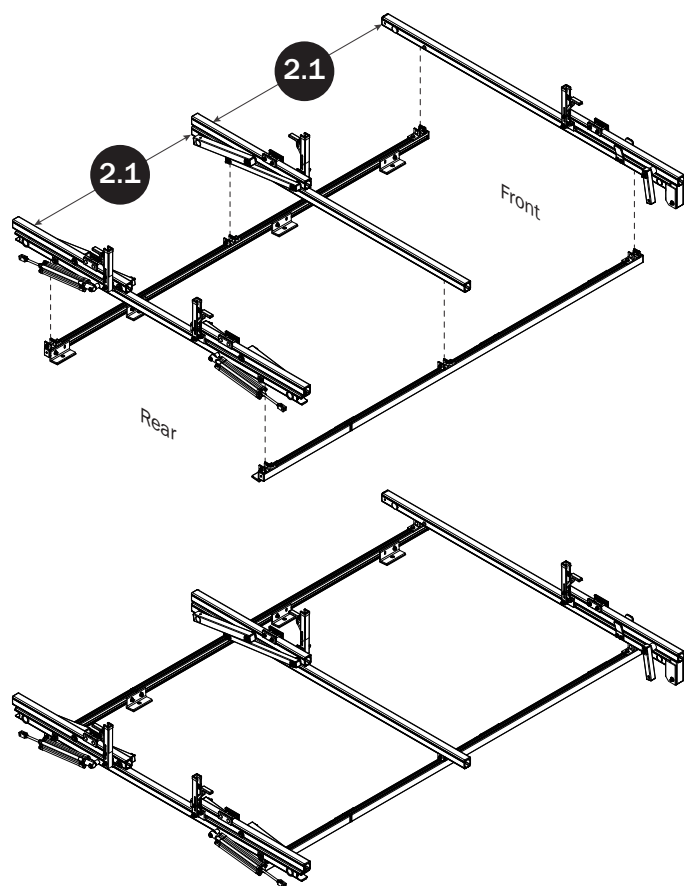
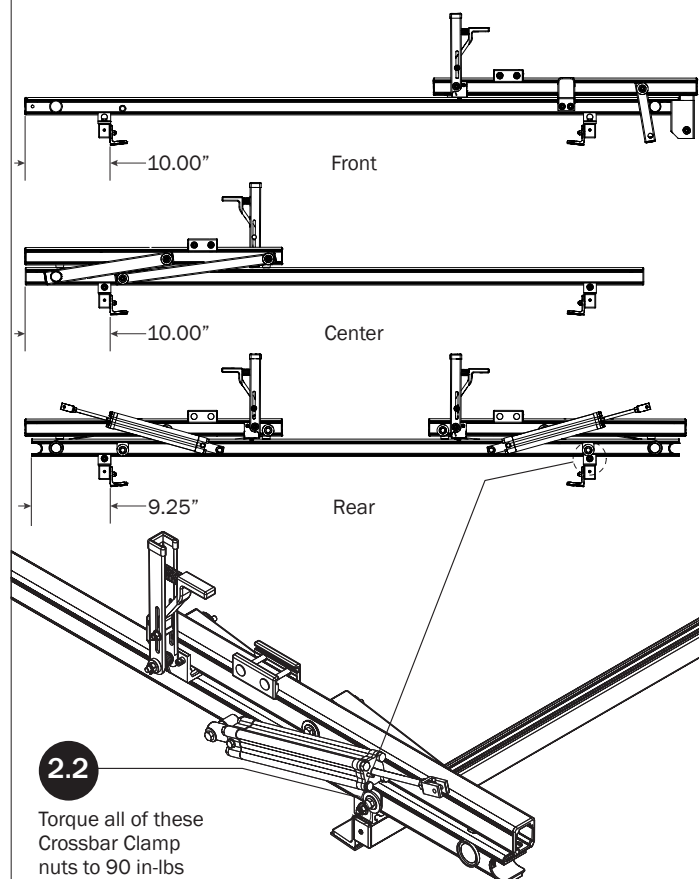


2.4 Attach Mounting Brackets to the Aluminum Strip Nuts located in the Channels

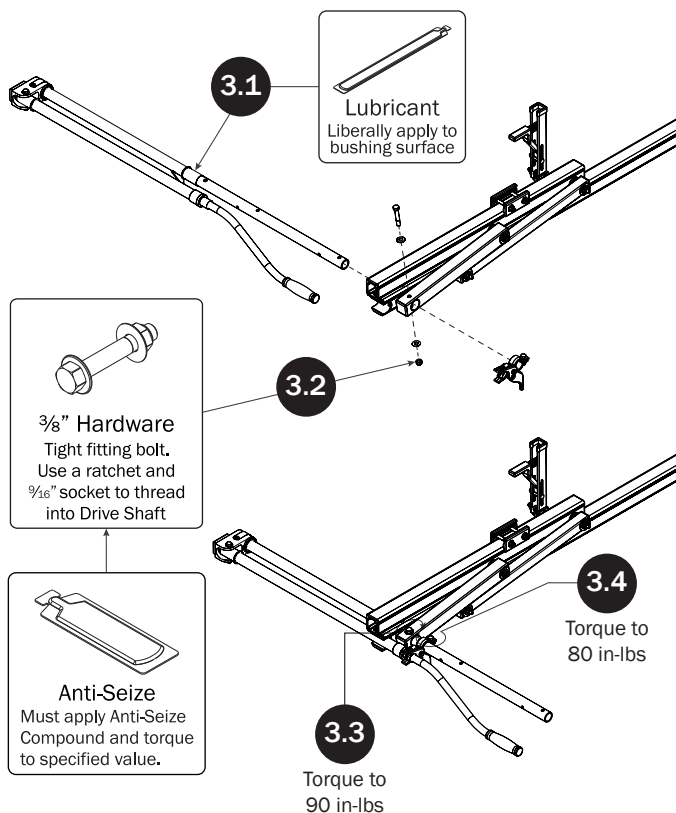
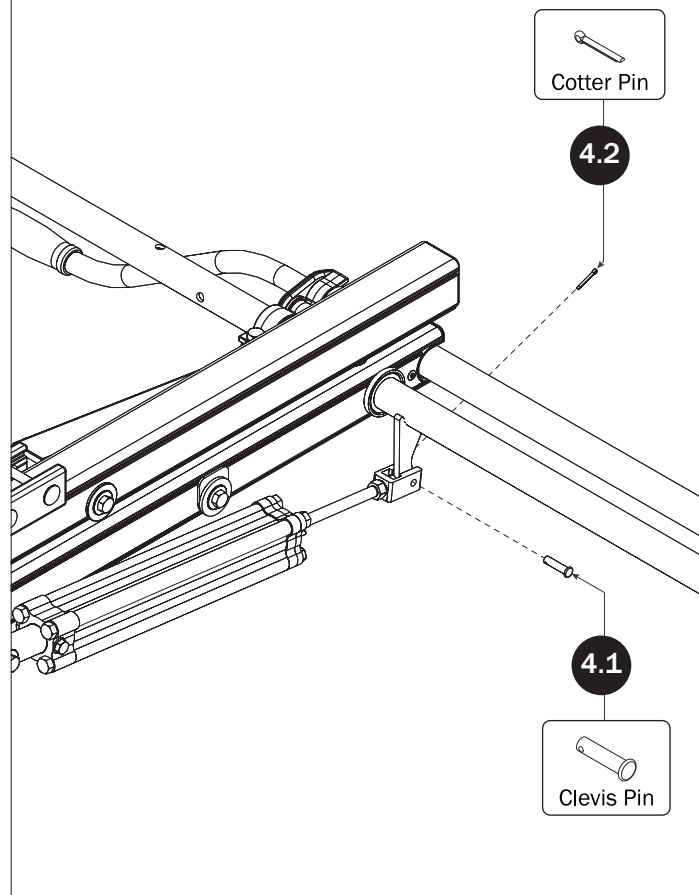


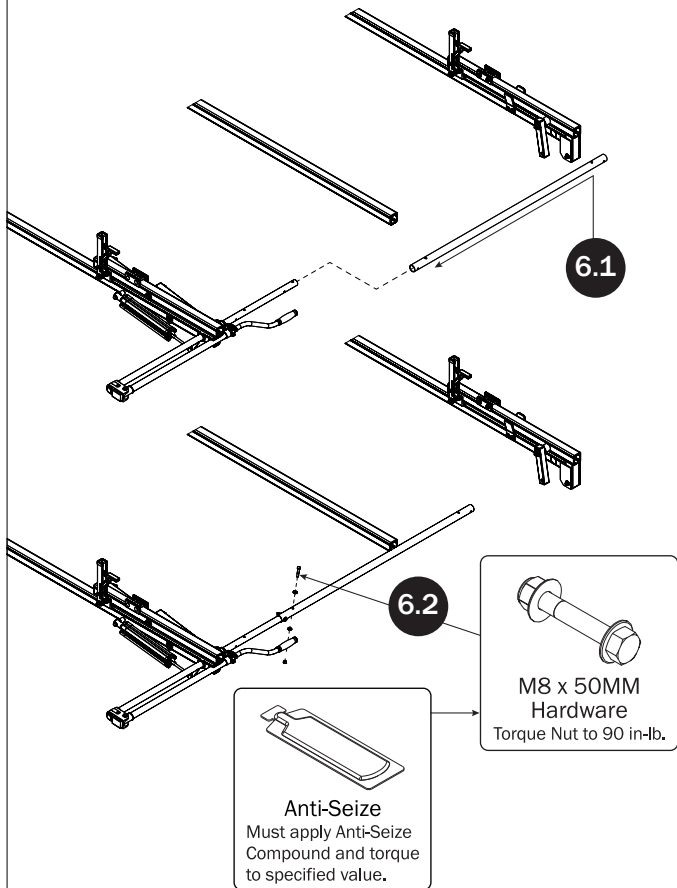
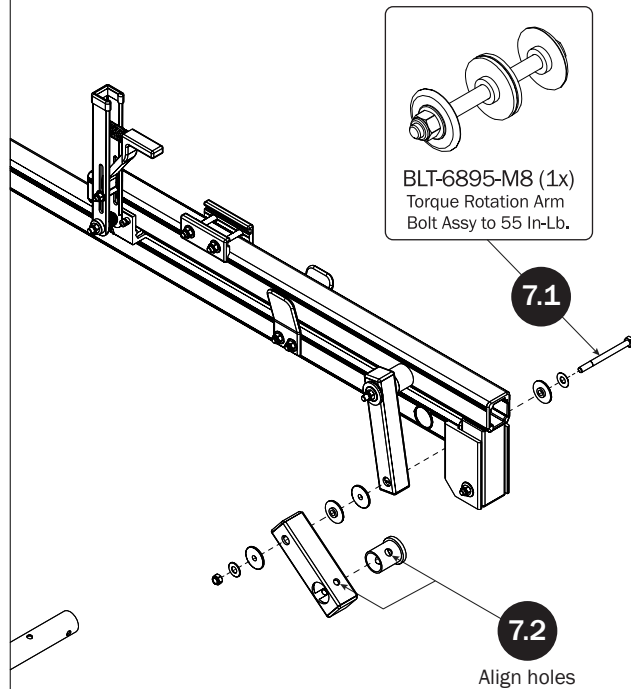
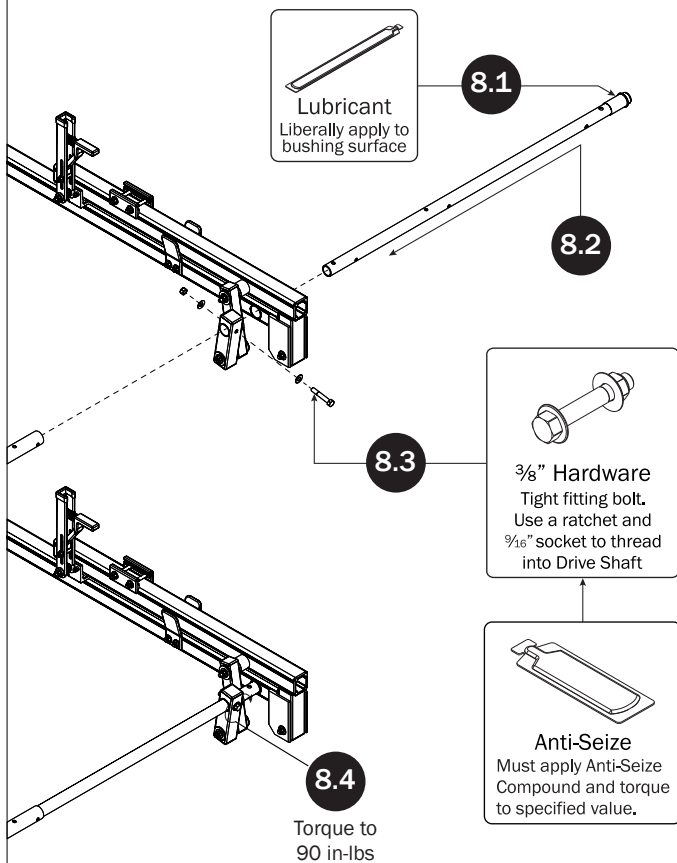
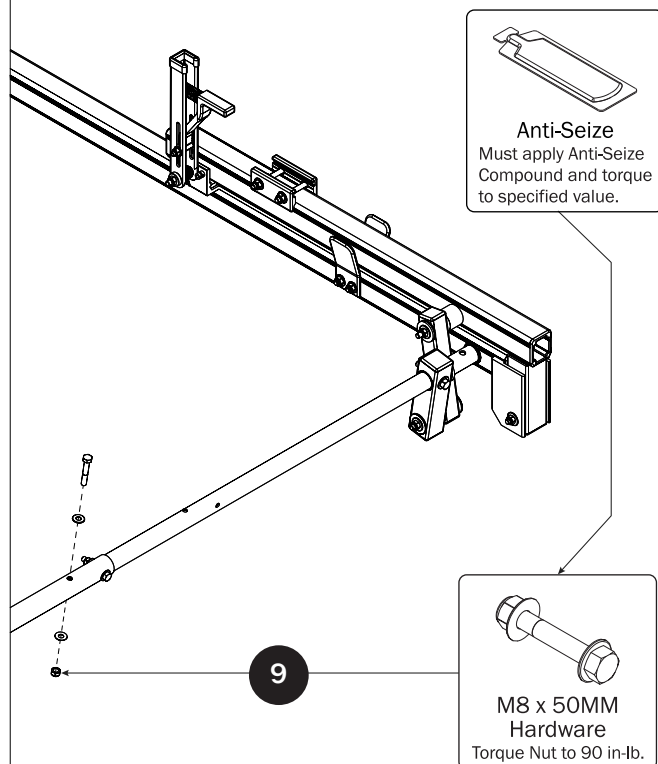
2.6 Position Mounting Brackets to designated dimension shown below, then torque the M8 X 20MM bolt to 90 in-lbs. Proceed to Step 3.1.

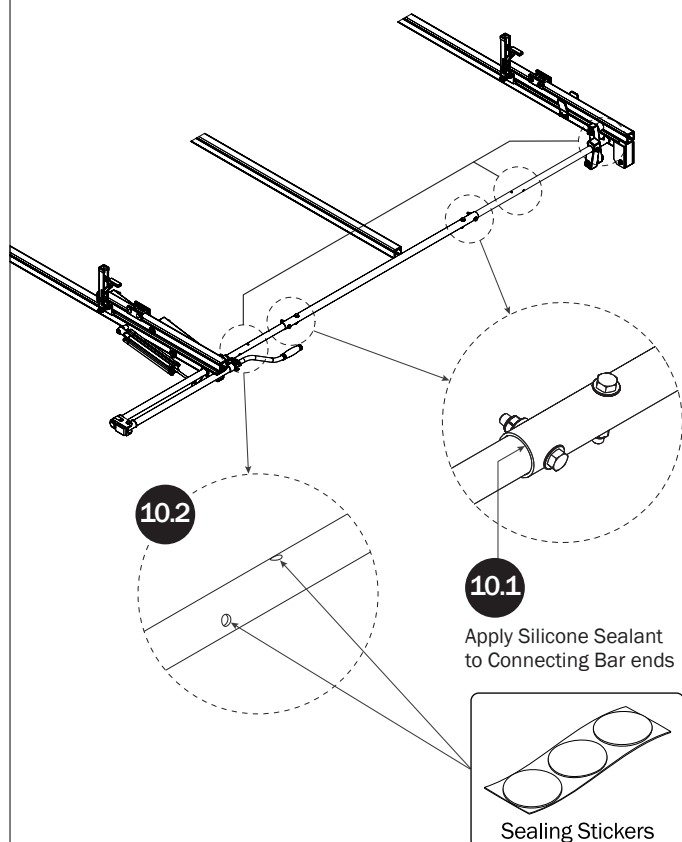


CROSSBARS**CROSSBAR ADJUSTMENT****REAR DRIVE SHAFT**

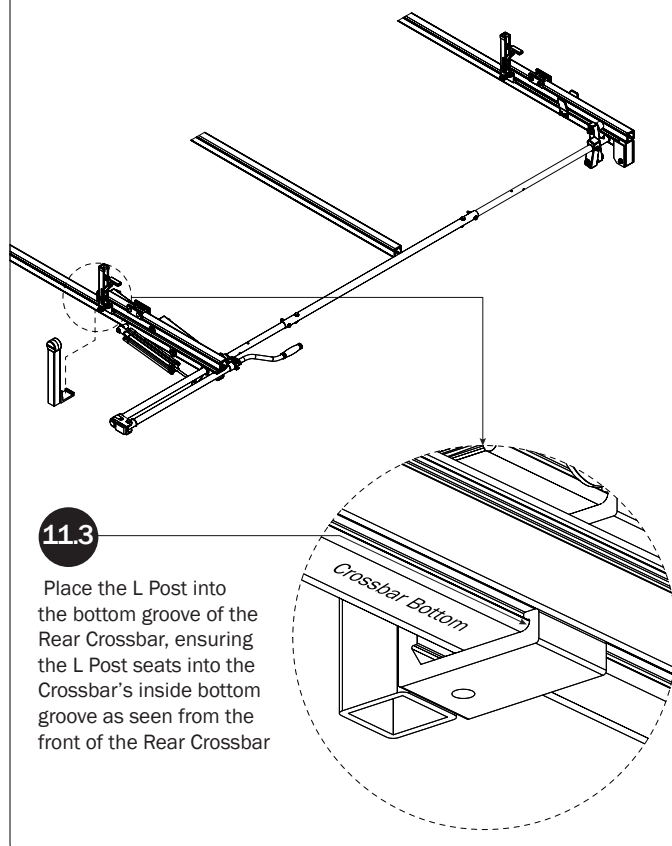
NOTE: For instructional clarity, the FBM Mounting System will not be shown for the remainder of this Assembly Manual.

**CYLINDER HARDWARE**

CONNECTING BAR**FRONT DRIVE ARM****FRONT DRIVE SHAFT****CONNECTING BAR FASTENERS**

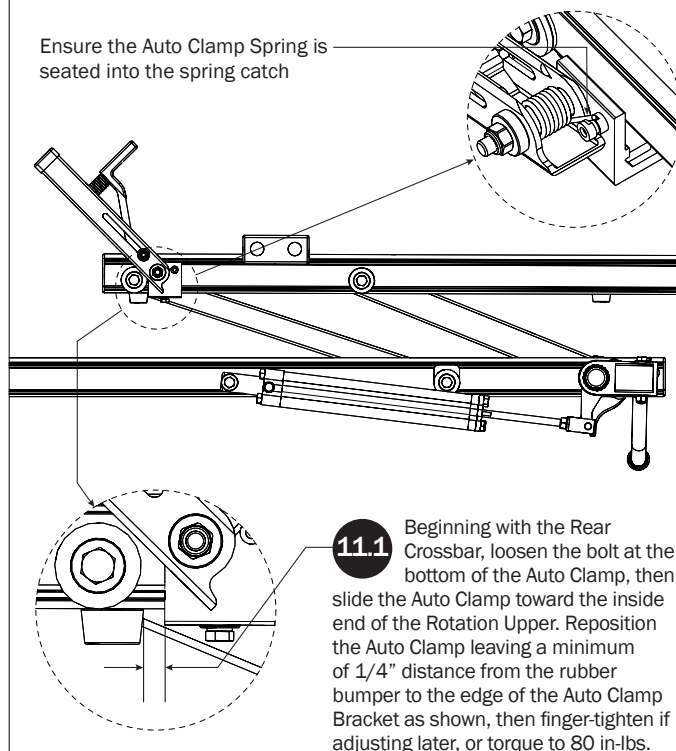
DRIVE SHAFT SEALING

- 11.2** Prepare the L Post by removing the hex head bolt, lock washer, flat washer, and Bracket Clamp. Retain for installation Steps 11.4—11.8.

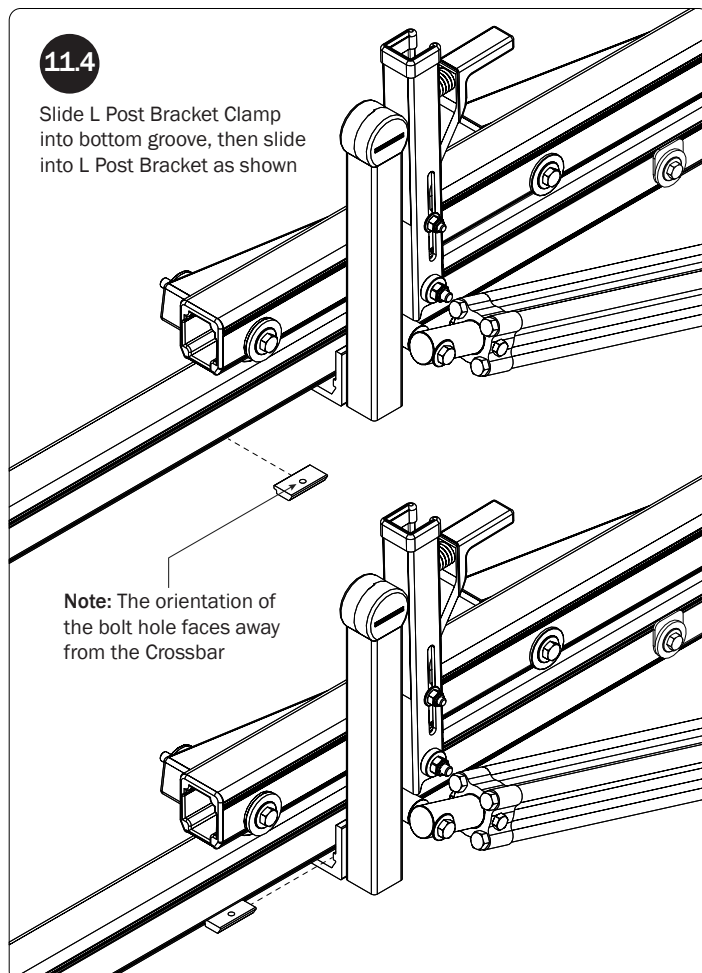
**L POSTS****SEE QUICK START GUIDE FOR ADJUSTMENTS**

NOTE: The Auto Clamps may come preset from the factory for packaging purposes only. To assemble the L Posts to the Crossbars, the Auto Clamps may need to be repositioned.

Ensure the Auto Clamp Spring is seated into the spring catch

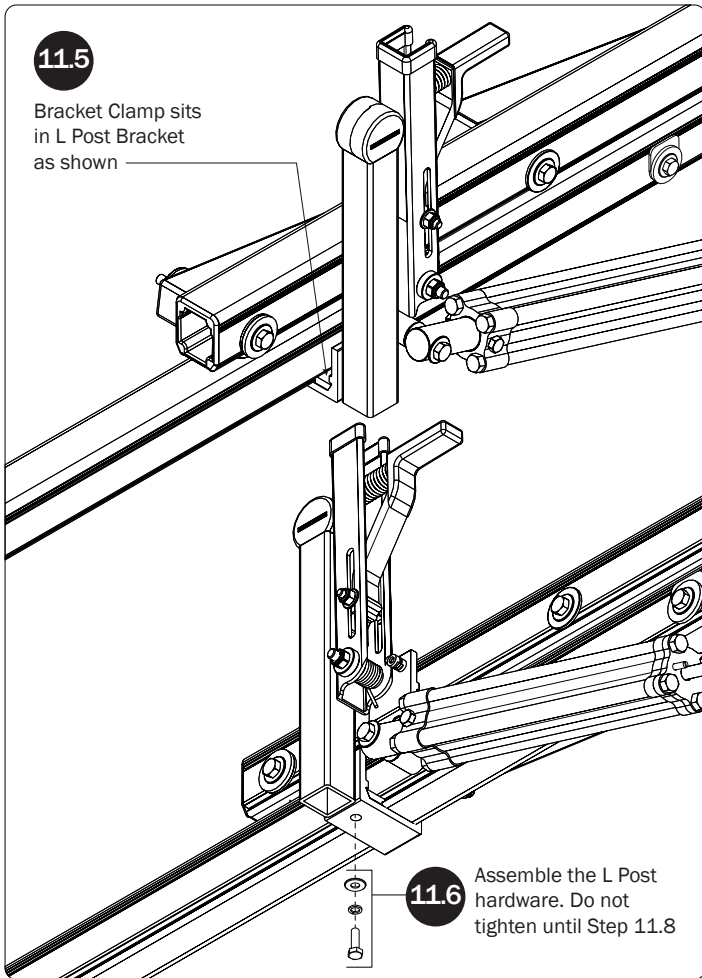


- 11.4** Slide L Post Bracket Clamp into bottom groove, then slide into L Post Bracket as shown



11.5

Bracket Clamp sits
in L Post Bracket
as shown

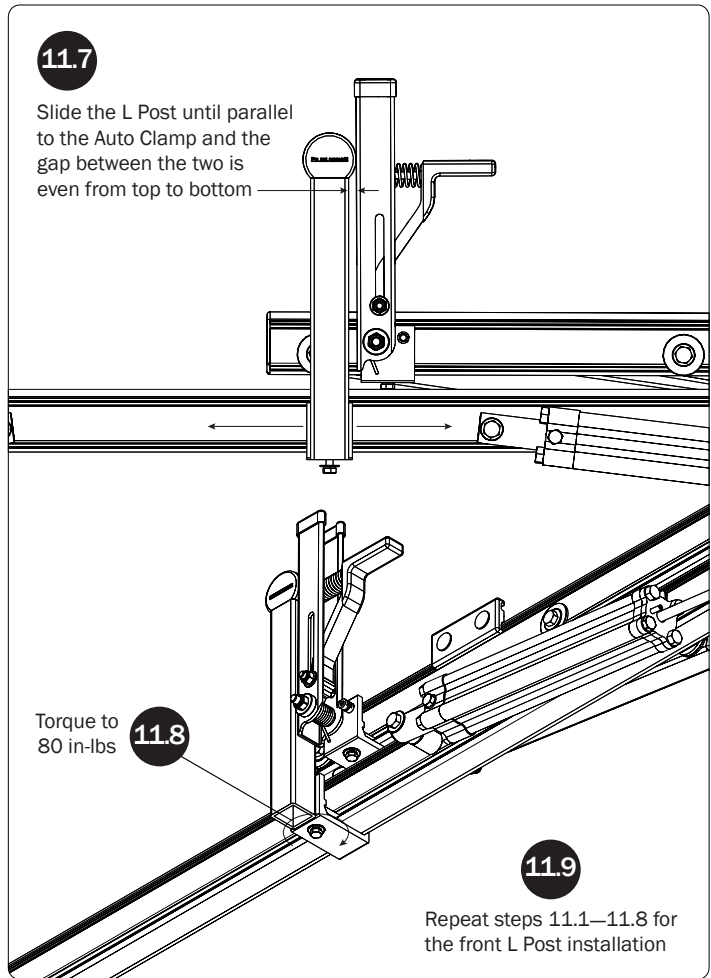


11.6

Assemble the L Post
hardware. Do not
tighten until Step 11.8

11.7

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



Torque to
80 in-lbs

11.8

11.9

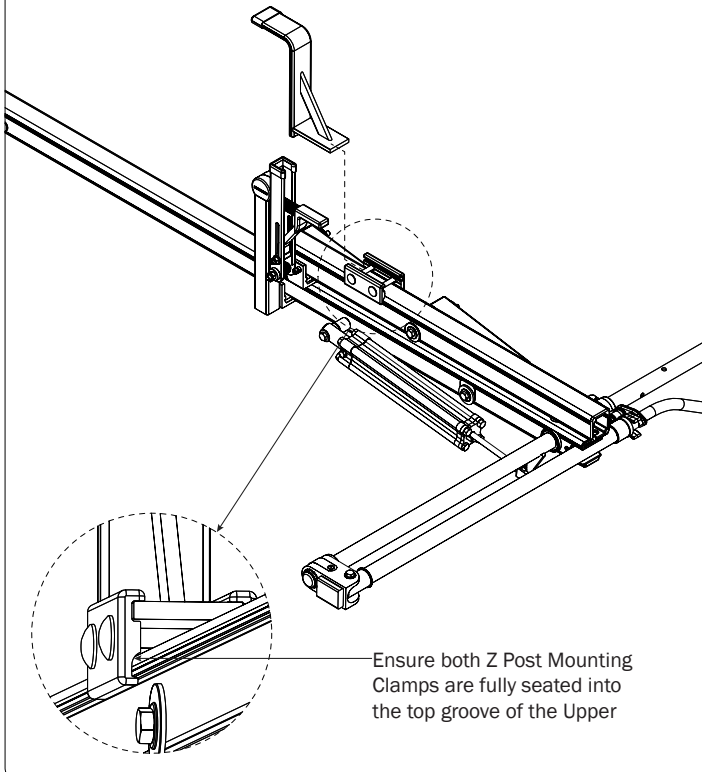
Repeat steps 11.1–11.8 for
the front L Post installation

Z POSTS

SEE QUICK START GUIDE FOR ADJUSTMENTS

12.1

Slide the Z Post into the Mounting Clamp Assembly



Ensure both Z Post Mounting
Clamps are fully seated into
the top groove of the Upper

12.2

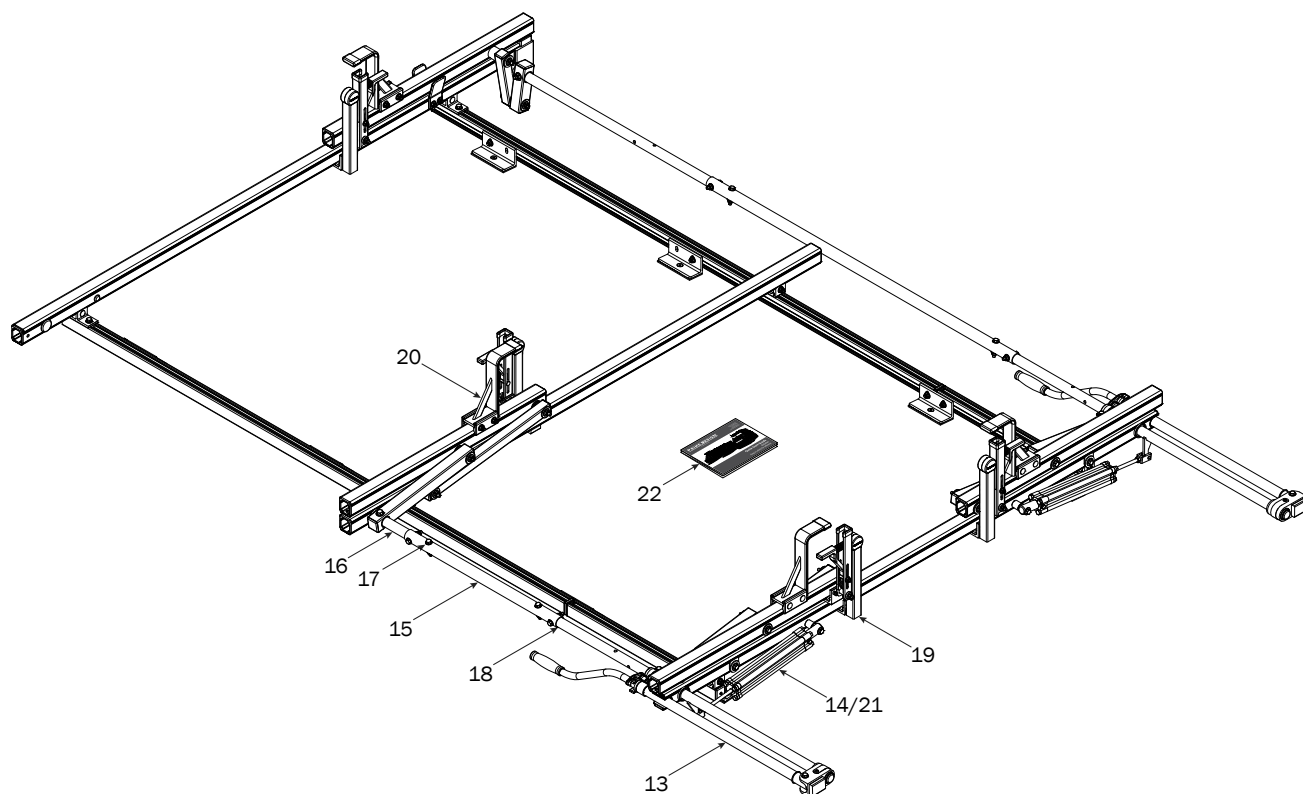
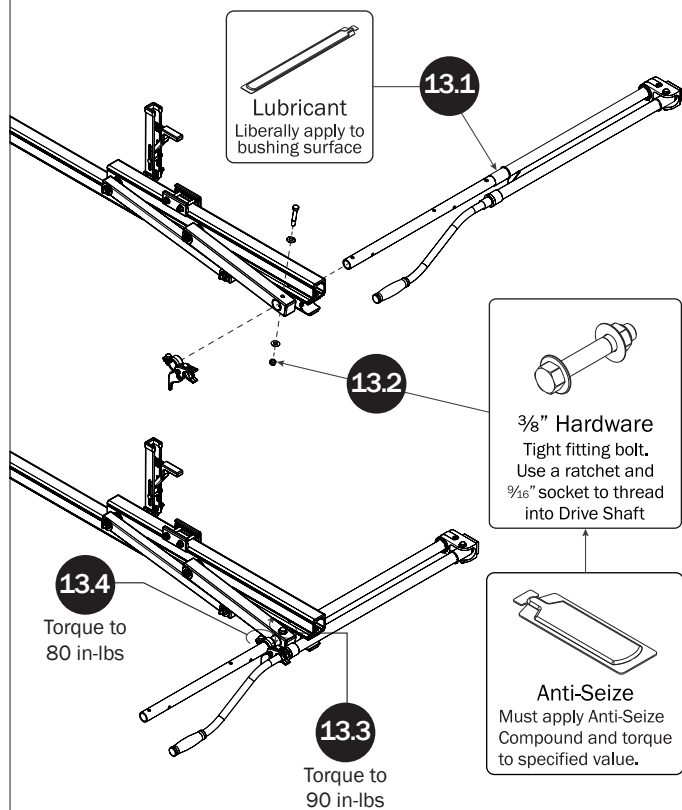
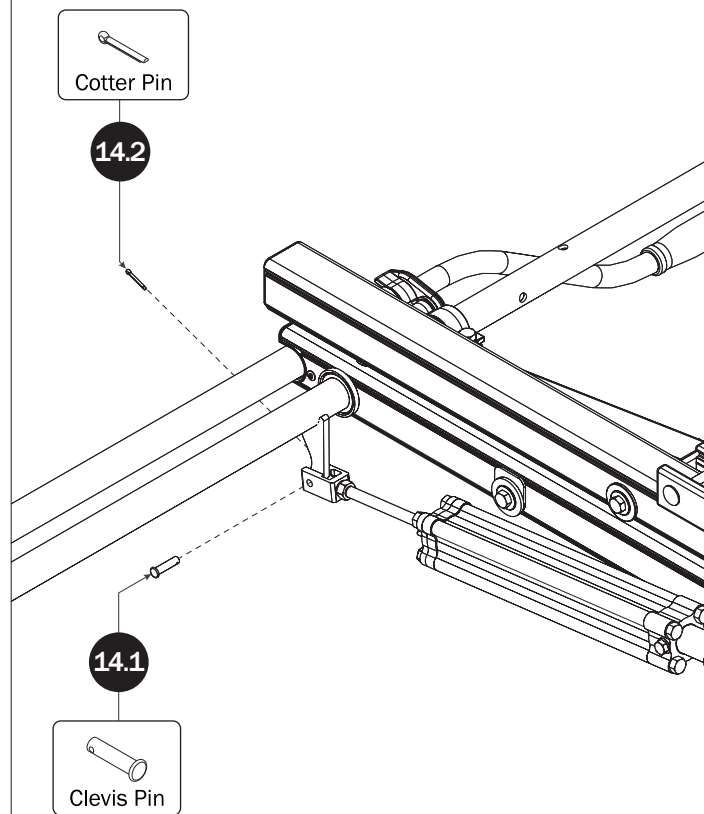
Refer to the Quick
Start Guide for Z
Post positioning.

12.3

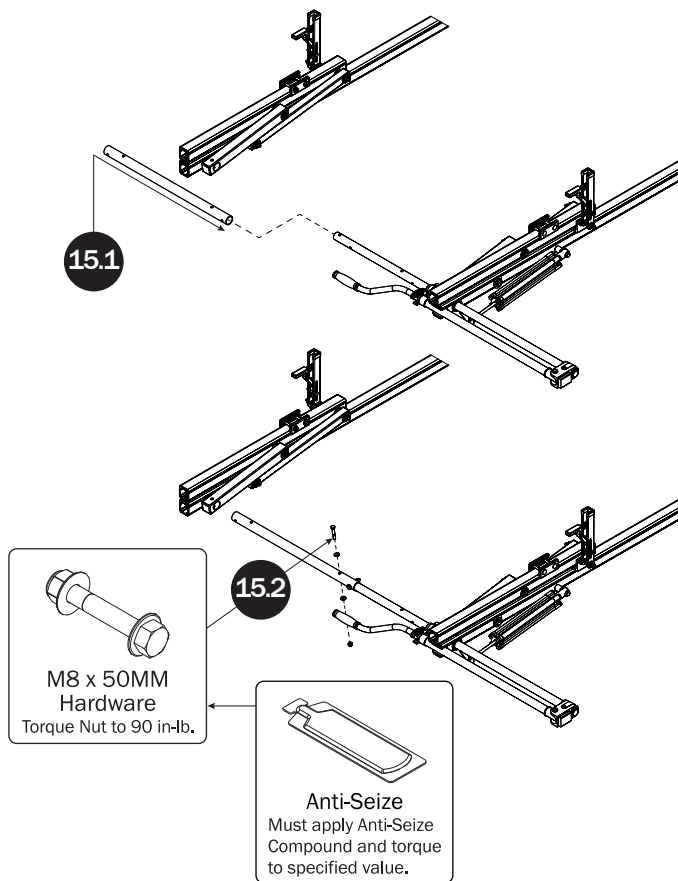
Torque to
90 in-lbs

12.4

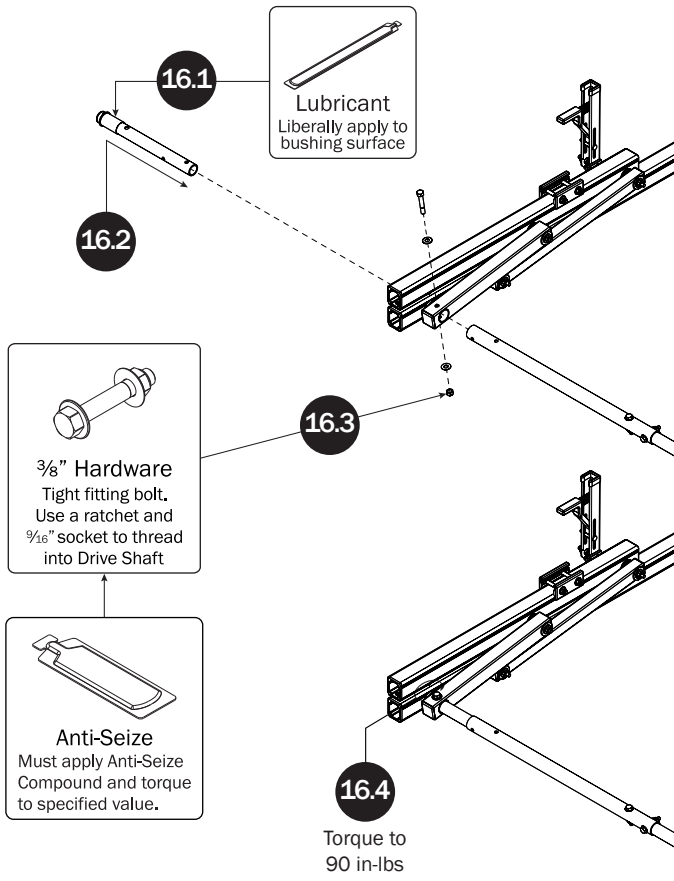
Repeat steps 12.1–12.3 for
the front Z Post installation

LEFT SIDE ASSEMBLY SEQUENCE**REAR DRIVE SHAFT****CYLINDER HARDWARE**

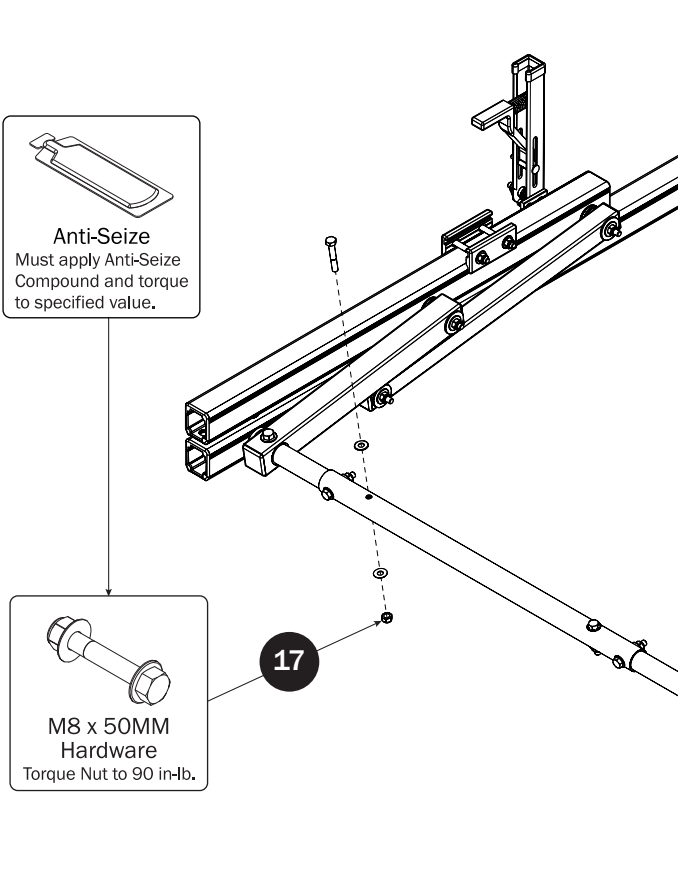
CONNECTING BAR



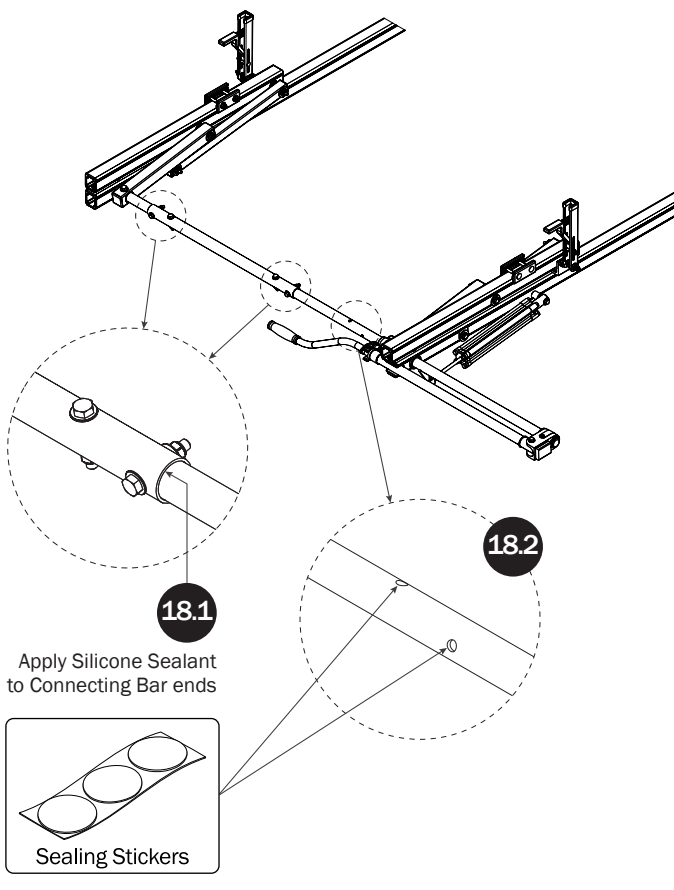
FRONT DRIVE SHAFT



CONNECTING BAR FASTENERS

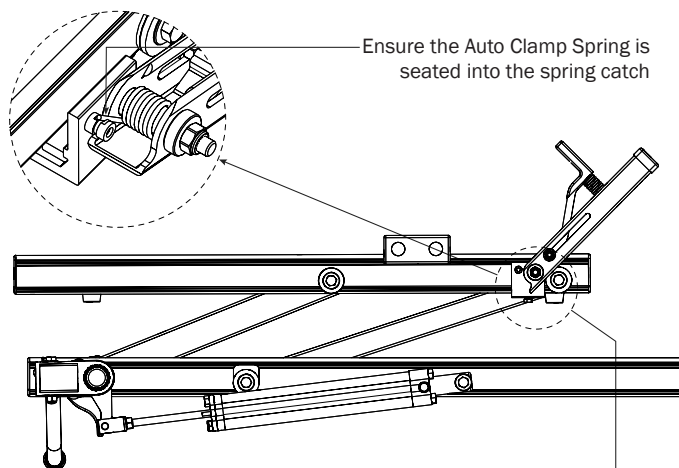


DRIVE SHAFT SEALING



L POSTS**SEE QUICK START GUIDE FOR ADJUSTMENTS**

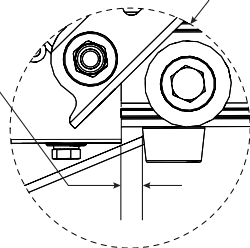
NOTE: The Auto Clamps may come preset from the factory for packaging purposes only. To assemble the L Posts to the Crossbars, the Auto Clamps may need to be repositioned.



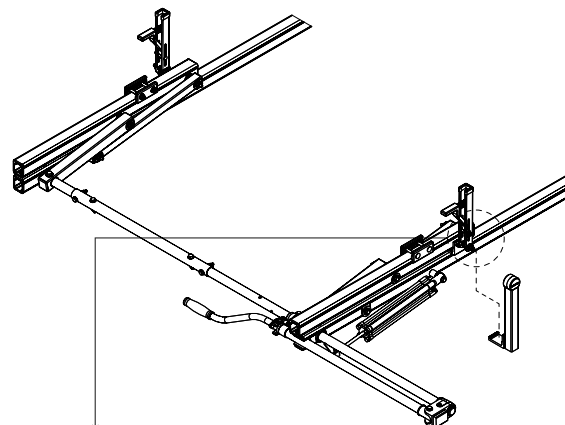
Beginning with the Rear Crossbar, loosen the bolt at the bottom of the Auto Clamp, then slide the Auto Clamp toward the inside end of the Rotation Upper. Reposition the Auto Clamp leaving a minimum of 1/4" distance from the rubber bumper to the edge of the Auto Clamp Bracket as shown, then finger-tighten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

19.1

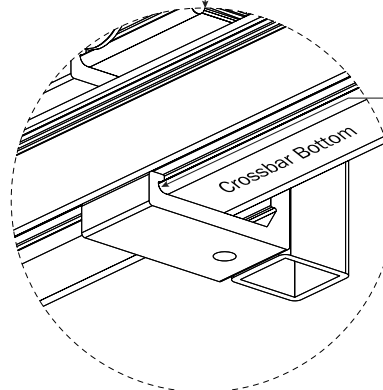
Ensure the Auto Clamp Spring is seated into the spring catch

**19.2**

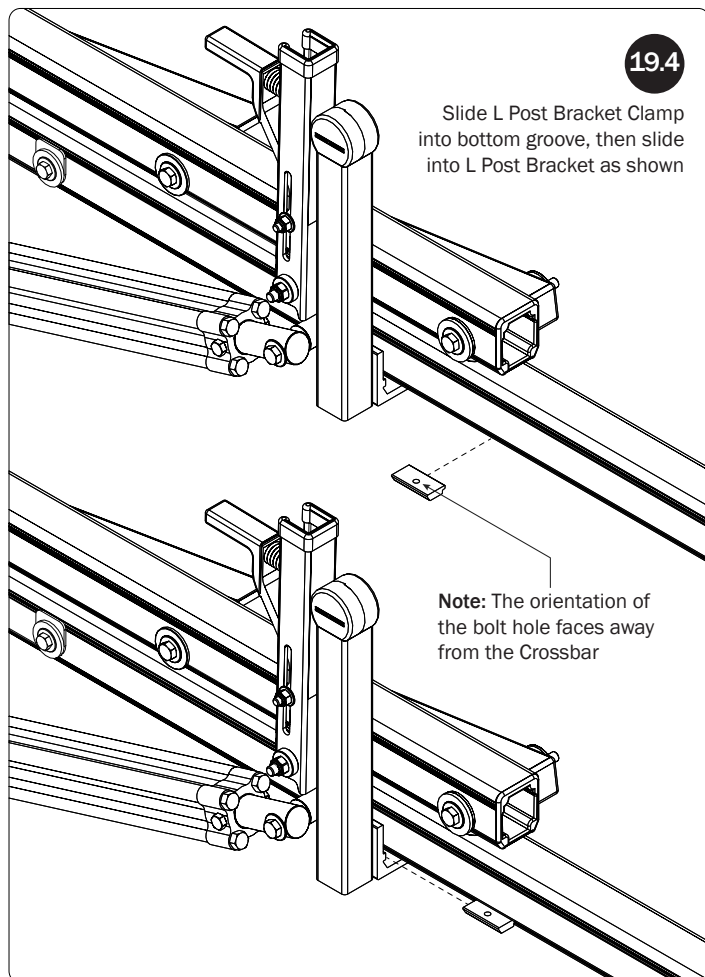
Prepare the L Post by removing the hex head bolt, lock washer, flat washer, and Bracket Clamp. Retain for installation Steps 19.4—19.8.

**19.3**

Place the L Post into the bottom groove of the Rear Crossbar, ensuring the L Post seats into the Crossbar's inside bottom groove as seen from the front of the Rear Crossbar

**19.4**

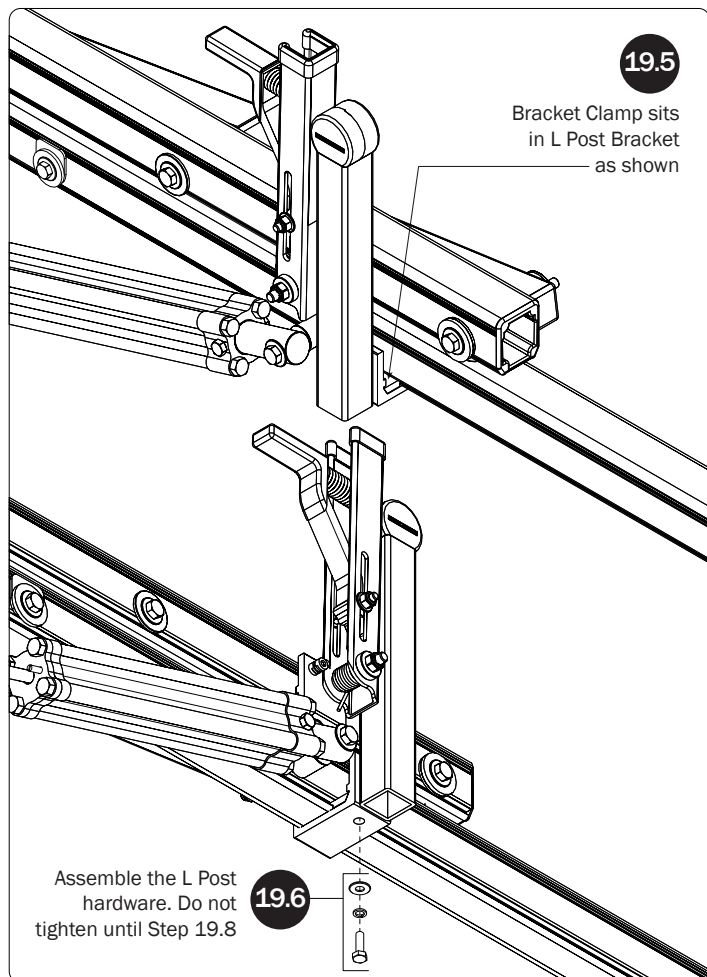
Slide L Post Bracket Clamp into bottom groove, then slide into L Post Bracket as shown



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

19.5

Bracket Clamp sits in L Post Bracket as shown

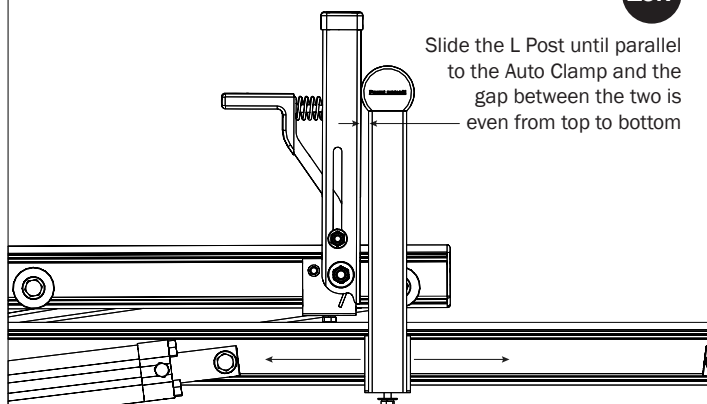


Assemble the L Post hardware. Do not tighten until Step 19.8

19.6

19.7

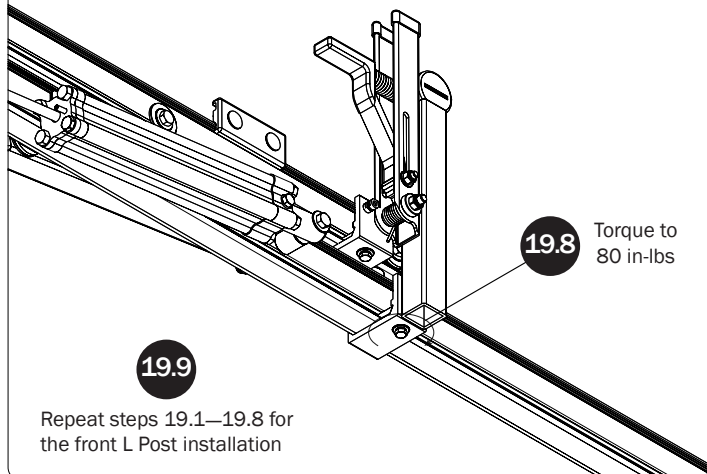
Slide the L Post until parallel to the Auto Clamp and the gap between the two is even from top to bottom



19.8 Torque to 80 in-lbs

19.9

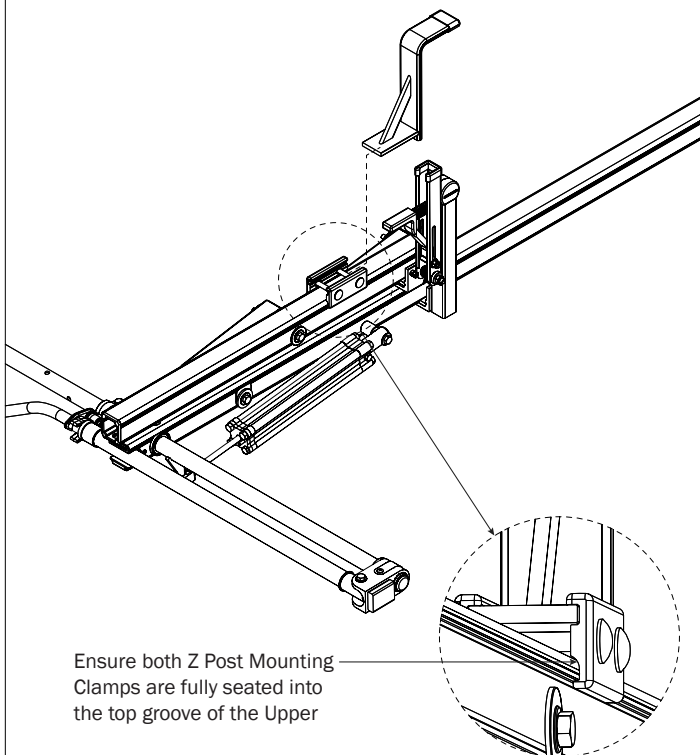
Repeat steps 19.1—19.8 for the front L Post installation

**Z POSTS**

SEE QUICK START GUIDE FOR ADJUSTMENTS

20.1

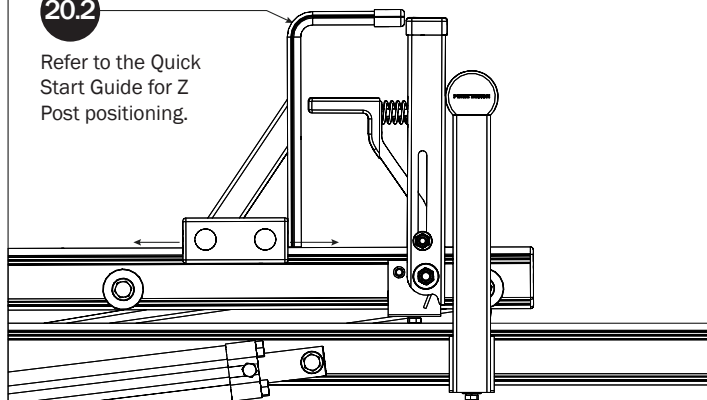
Slide the Z Post into the Mounting Clamp Assembly



Ensure both Z Post Mounting Clamps are fully seated into the top groove of the Upper

20.2

Refer to the Quick Start Guide for Z Post positioning.

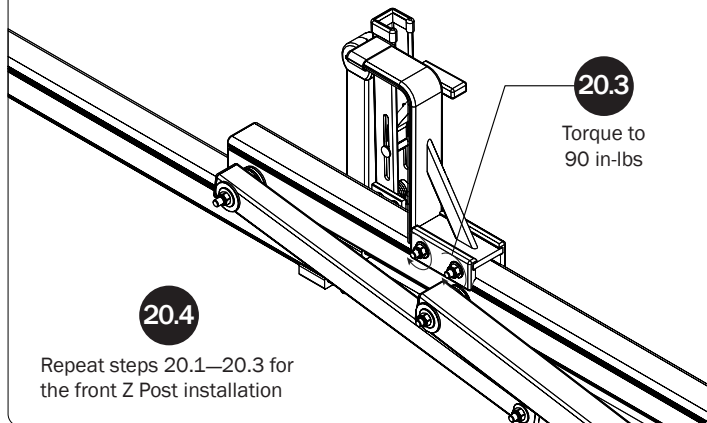
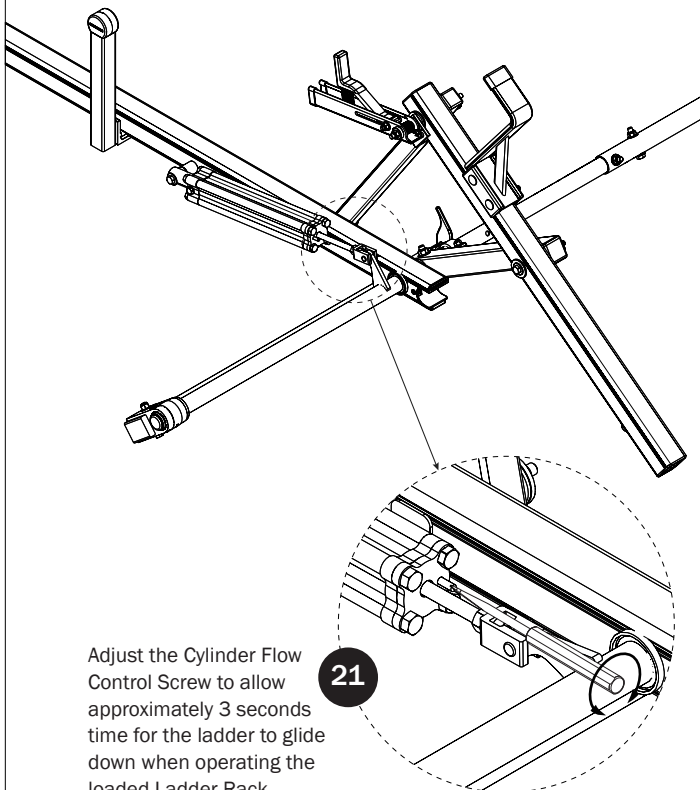


20.3

Torque to 90 in-lbs

20.4

Repeat steps 20.1—20.3 for the front Z Post installation

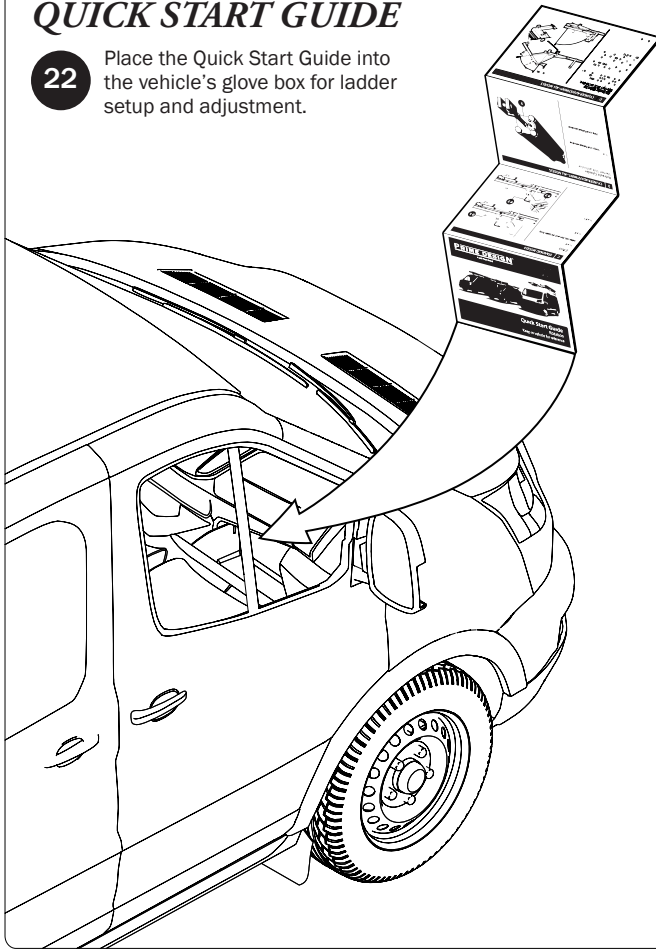
**CYLINDER ADJUSTMENT**

Adjust the Cylinder Flow Control Screw to allow approximately 3 seconds time for the ladder to glide down when operating the loaded Ladder Rack.

21

QUICK START GUIDE**22**

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



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