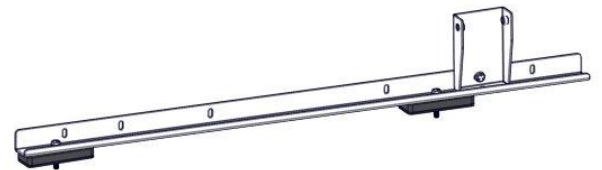

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Instruction Guide

409TD



*PLEASE READ ALL INSTRUCTIONS AND WARNINGS PRIOR TO ASSEMBLING,
INSTALLING, AND USING THIS PRODUCT*

Warning



Always check for wires, fuel tanks and lines, brake lines and other important vehicle functionality items prior to drilling and installing all products.

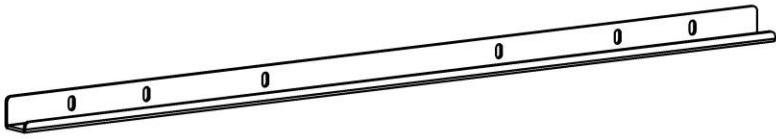
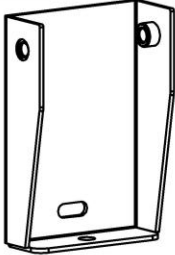
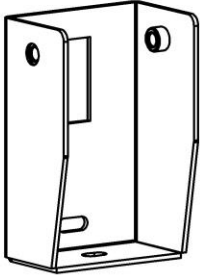
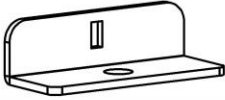
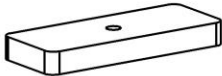
Tools Needed

13mm Wrench and Socket	1/2" Wrench and Socket
5mm Allen Hex	9/16" Wrench and Socket

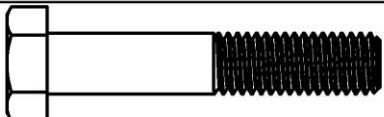
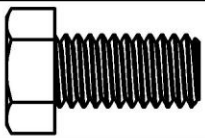

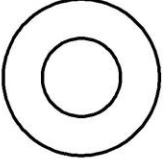
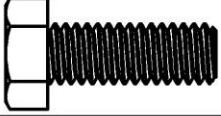

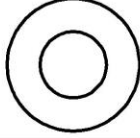


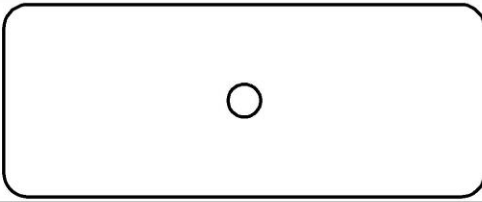

Before You Begin

- Read ALL instructions prior to installation.
 - Mount locations will vary based on van.
 - Be sure to put sealant around exposed threads in roof. Seal between the roof and the rubber pad. Apply some sealant on the threads of all bolts going into the roof.
-

Parts

ITEM NO.		PART NUMBER	DESCRIPTION	QTY.
A		4A901-10-001	Front Rail	2
B		13-03105	Tall Foot	2
C		4090T-10-R2	Large Foot	2
D		4A9ST-00-001	Rear Mount Bracket	2
E		T249-01	Black Nylon Block	4
		18-409TD-R2	Hardware	1

Hardware

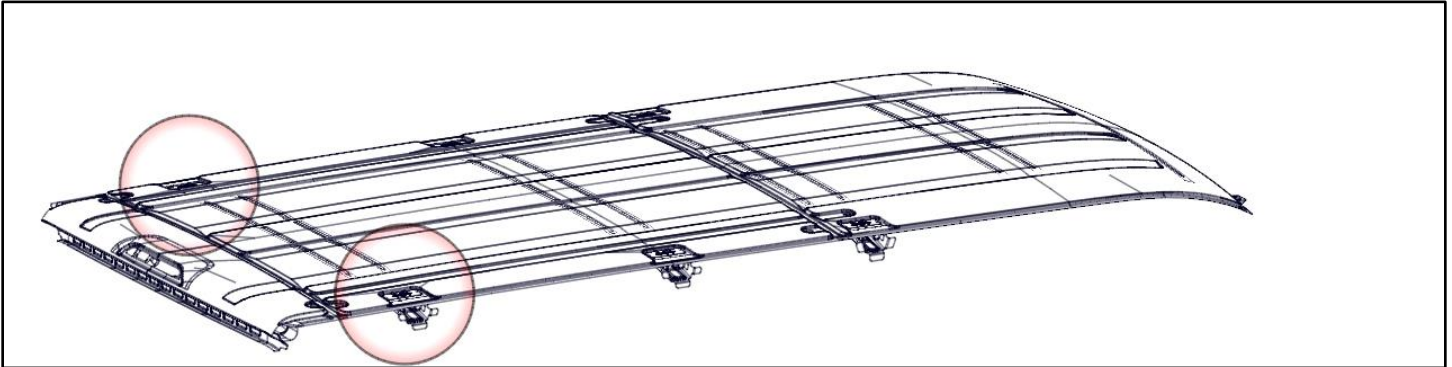
ITEM NO.	TO SCALE	PART NUMBER	DESCRIPTION	QTY.
1		95327A569	M8x1.25 x 45mm Hex Head	4
2		92865A622	3/8" x 3/4" Hex Head	8
3		91102A760	3/8" Split Lock Washer	8
4		90126A031	3/8" Flat Washer	8
5		92865A582	5/16" x 7/8" Hex Head	4
6		95615A160	5/16" Nyloc	4
7		90126A030	5/16" Flat Washer	12
8		91102A755	5/16" Split Lock Washer	4
9		91263A845	M8x1.25 x 30mm Flat Head	2
10		T249-02	Rubber Scale 1:2	8
		BH-821	Sealant	1

Ford Transit (EXCLUDING High Roof Extended)

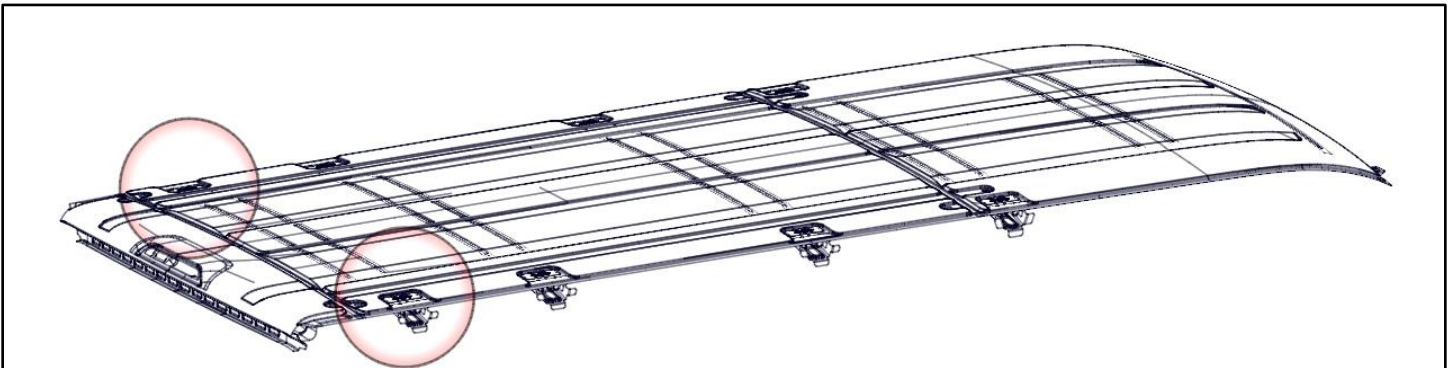
Step 1 – Rear Mounting

- Locate the threaded inserts at the rear of the van. Plugs will need to be removed.

130" Wheel Base

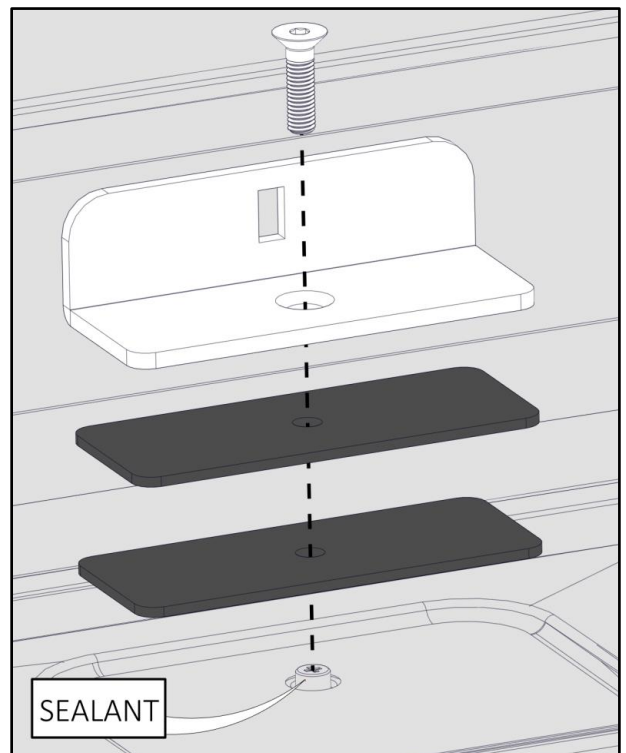


148" Wheel Base



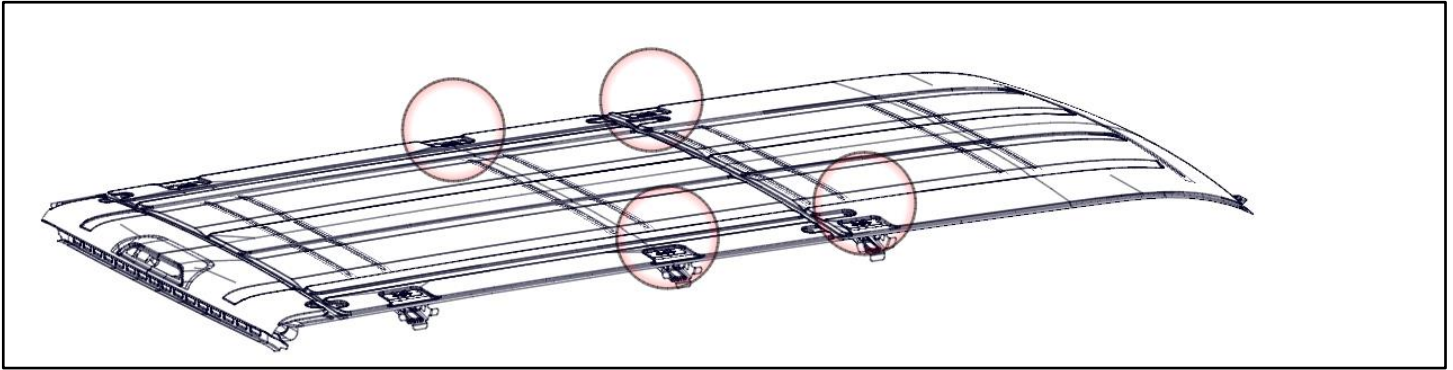
**** Place sealant around the exposed holes in the roof of the van under the rubber pads to ensure no water can leak into the cabin of the van. ****

- Attach the rear mount bracket using M8 x 30mm flat head bolts. Place two rubber pads between the bracket and the roof of the van. The bracket should be parallel with the length of the van and the flange should be to the inside.
- Tighten. (Passenger side shown)



Step 2A – Front Mount on 130” Wheel Base (Low/Mid Roof)

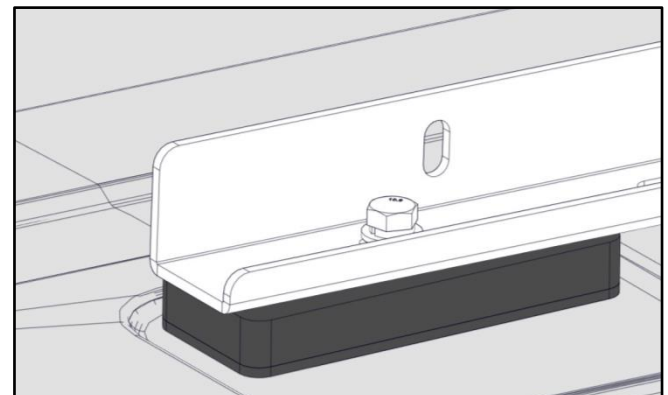
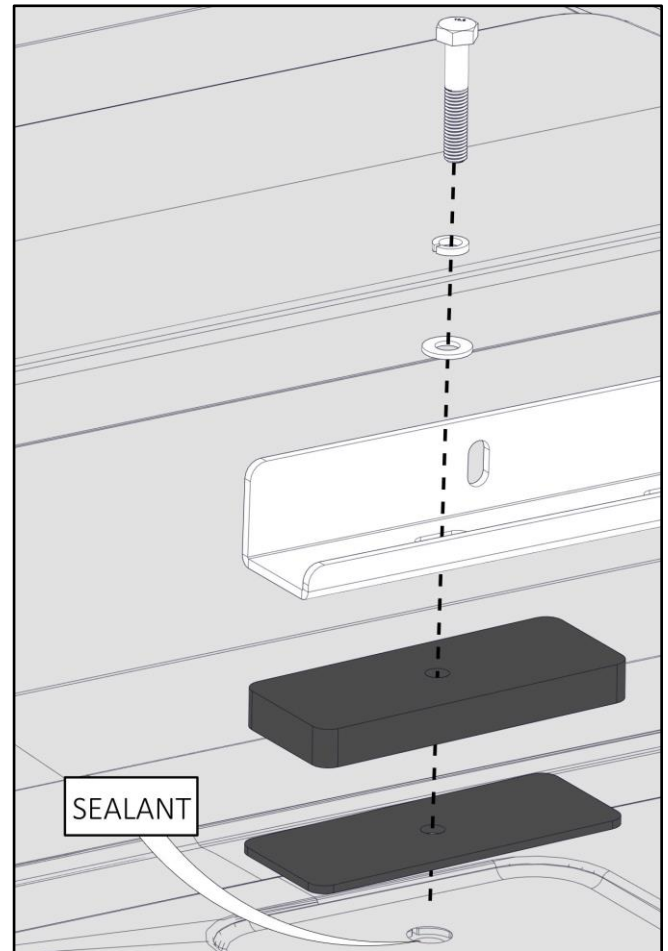
- Locate the other threaded inserts at the front of the van. Remove plugs.



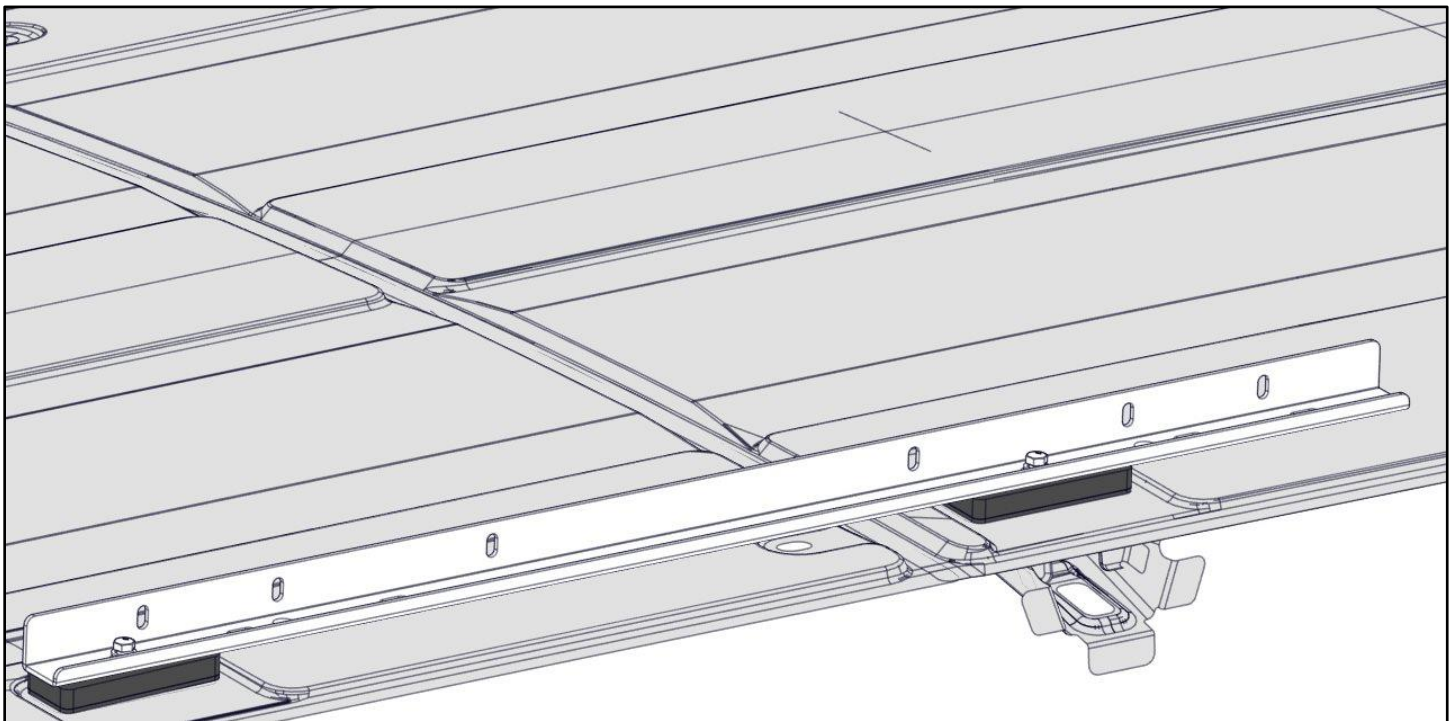
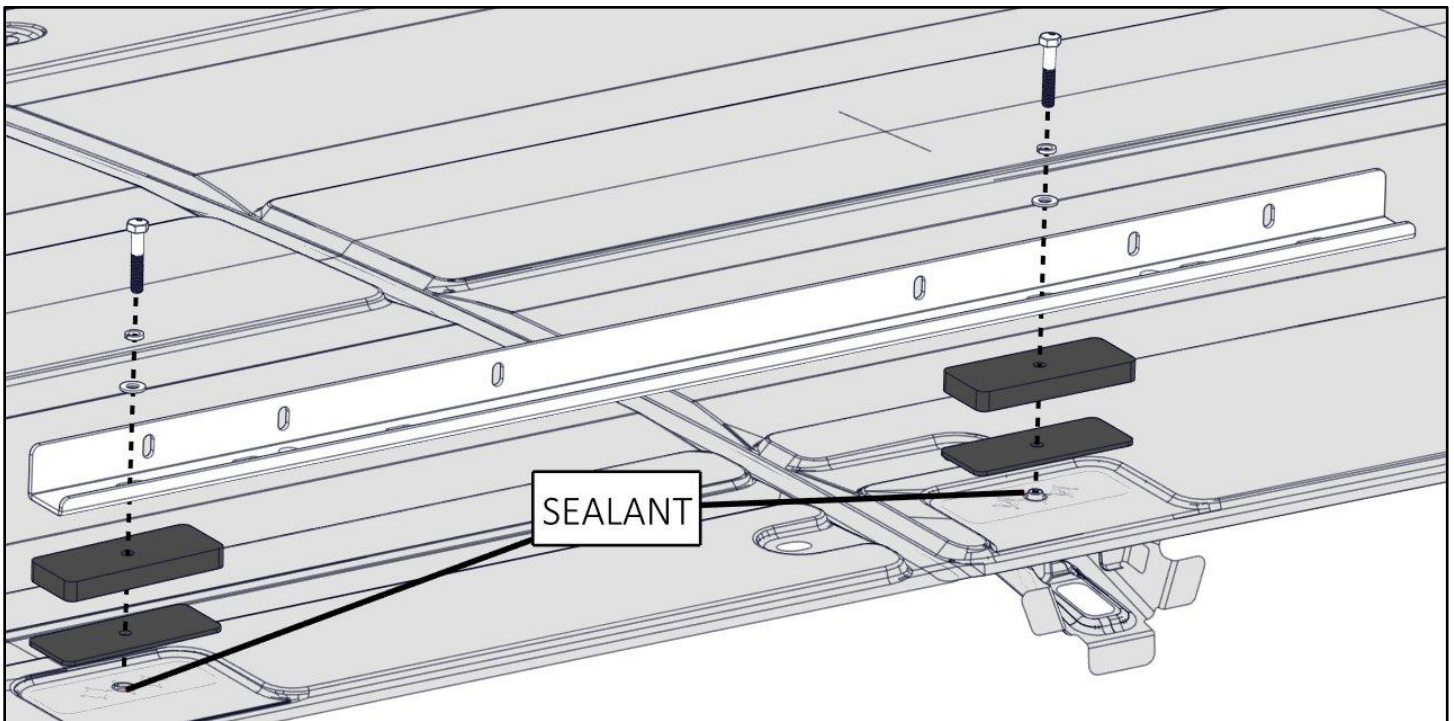
**** Place sealant around the exposed holes in the roof of the van under the rubber pads to ensure no water can leak into the cabin of the van. ****

- Place the long mount rail with the tall flange towards the center of the van on top of the rubber pad and black nylon block.
- Bolt through farthest rear slot in the rail and the corresponding front slot using M8 x 45mm bolts with lock washers and flat washers.
- The rail should be offset to the front of the van.

(Passenger side, rear most mount on the rail shown)

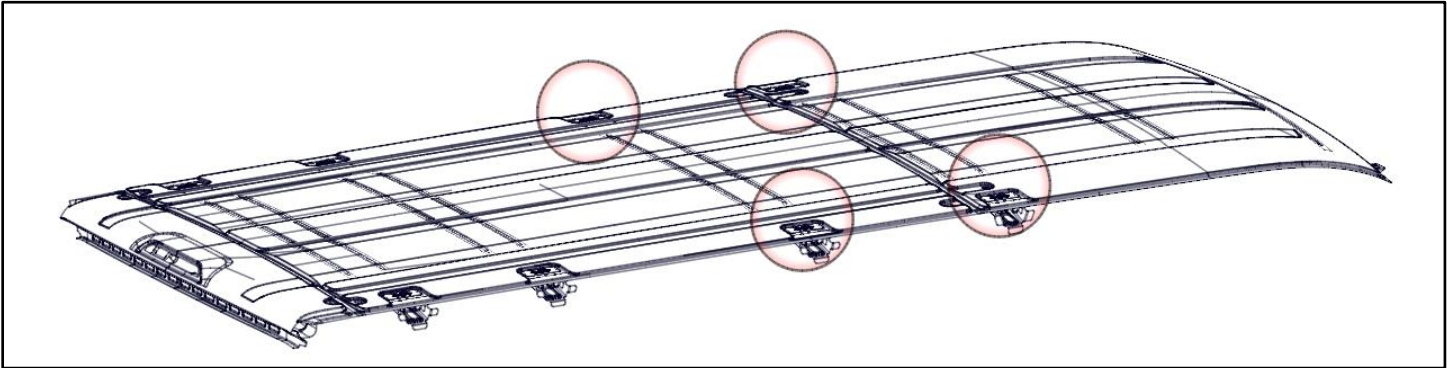


- Passenger side shown, repeat on driver side.
- Snug tighten.



Step 2B – Front Mount on 148” Wheel Base (Low/Mid/High Roof excluding Extended)

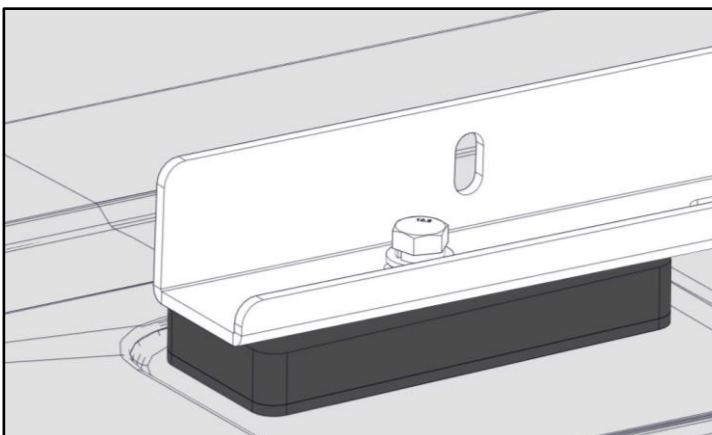
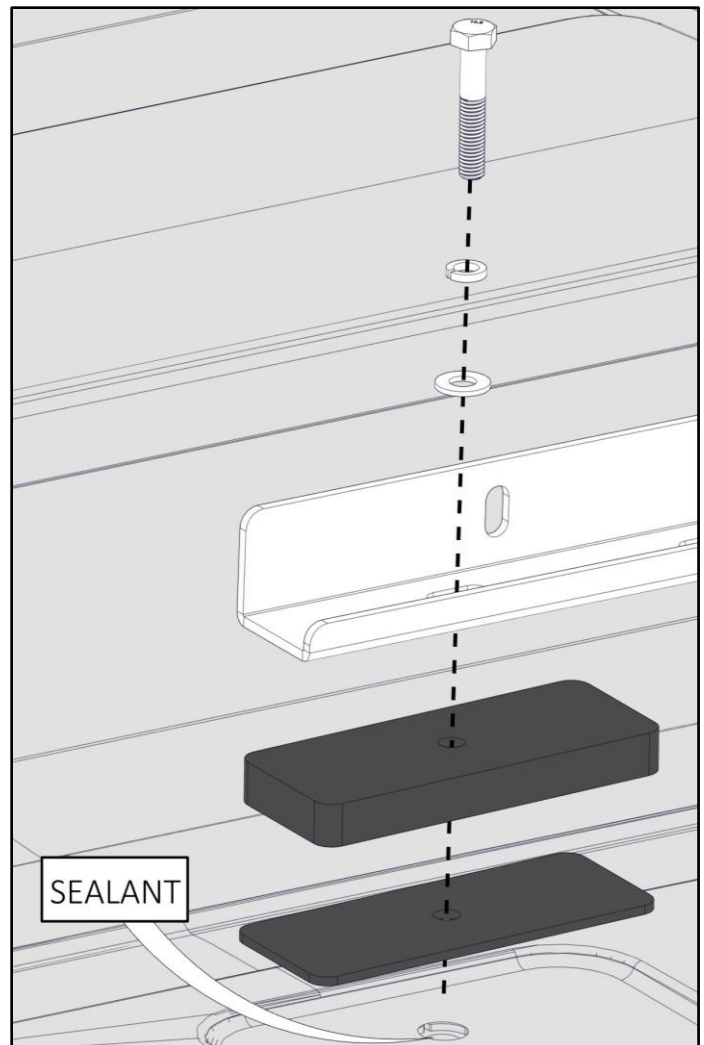
- Locate the other threaded inserts at the front of the van. Remove plugs.



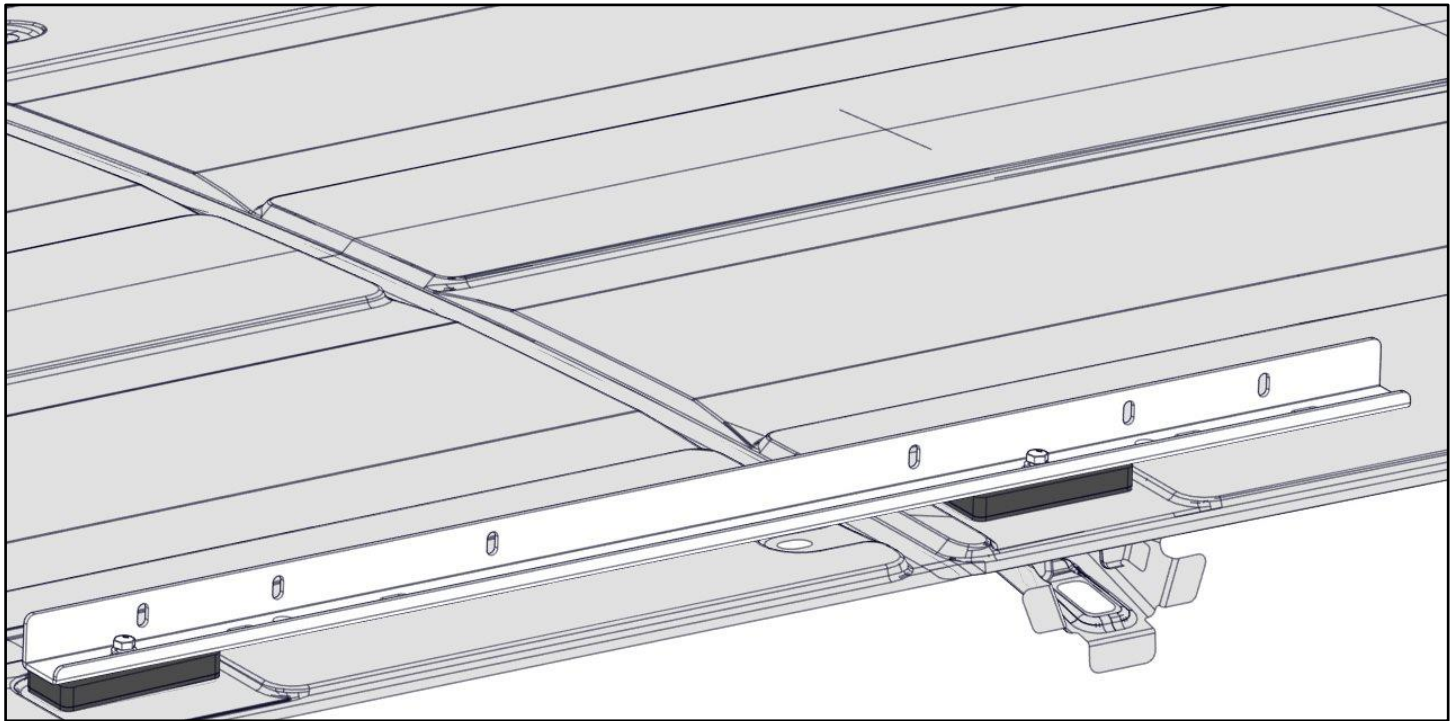
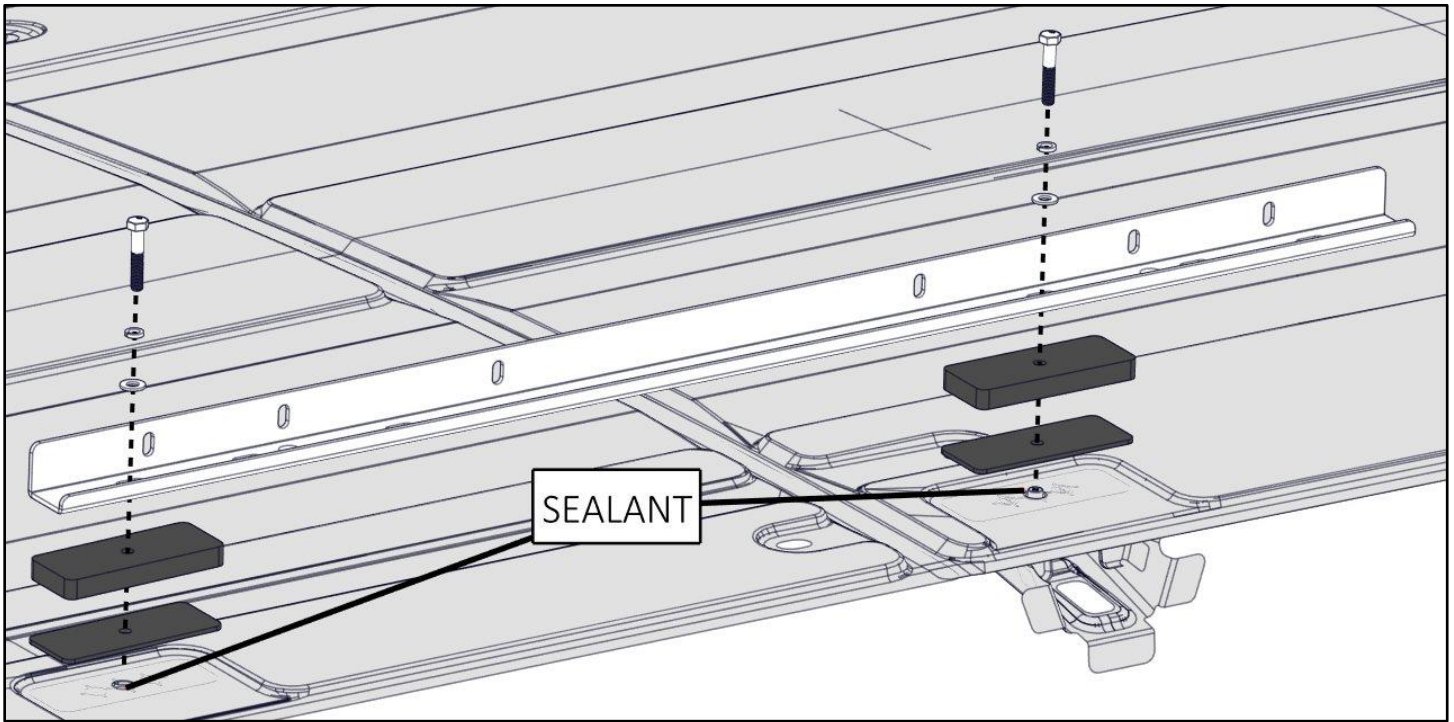
**** Place sealant around the exposed holes in the roof of the van under the rubber pads to ensure no water can leak into the cabin of the van. ****

- Place the mount rail with the tall flange towards center of the van on top of the rubber pad and black nylon block.
- Bolt through the farthest rear slot in the mount rail and corresponding front slot in the rail using M8 x 45mm bolts with lock washers and flat washers.
- The rail should be offset to the front of the van.

(Passenger side, rear most mount on the rail shown)

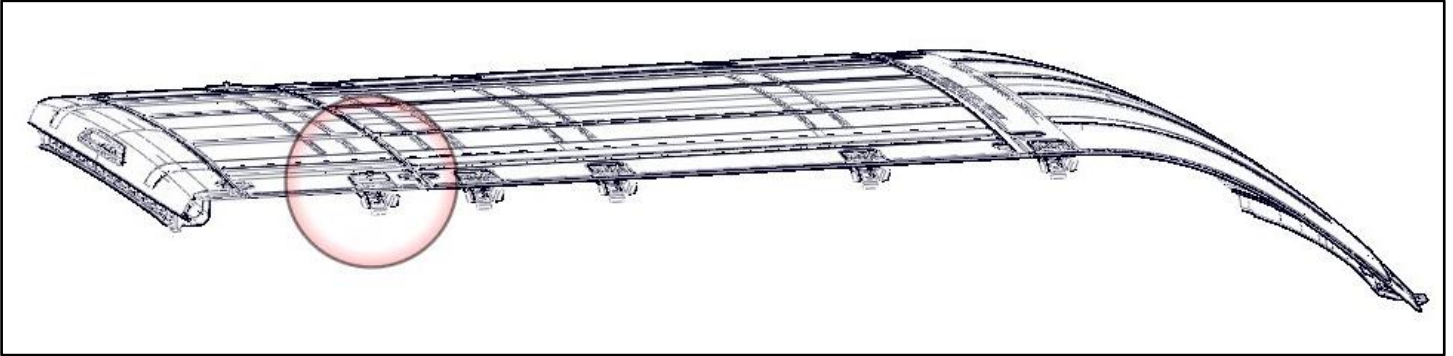


- Passenger side shown, repeat on driver side.
- Snug Tighten.



Transit 148" Wheelbase, High Roof, Extended

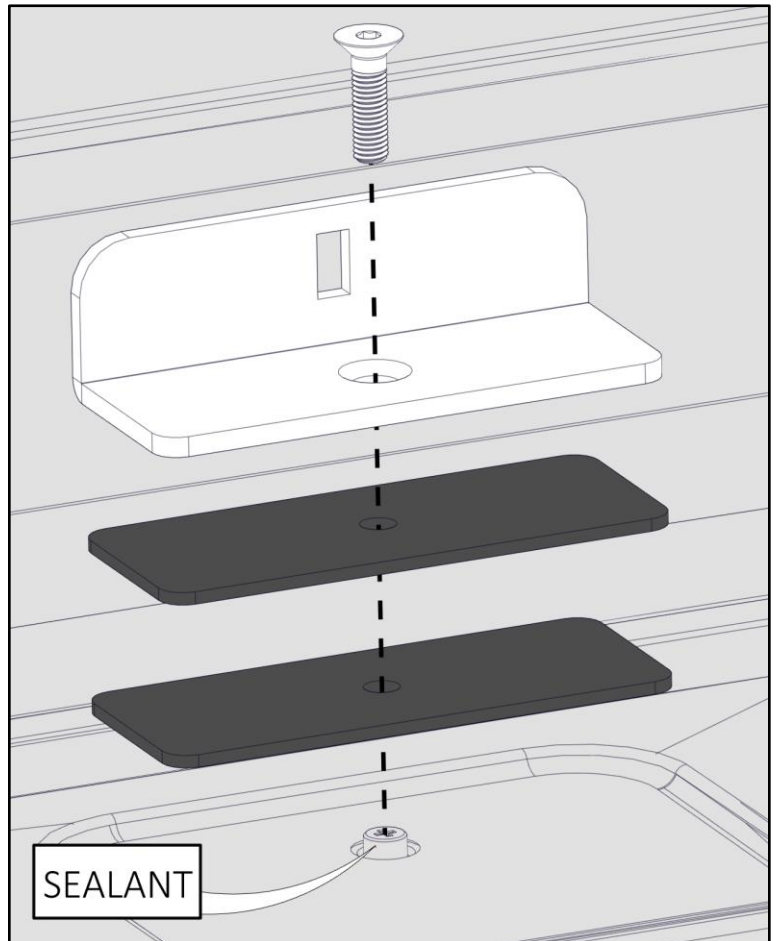
Step 3A - Extended - Rear Foot Mounting



**** Place sealant around the exposed holes in the roof of the van under the rubber pads to ensure no water can leak into the cabin of the van. ****

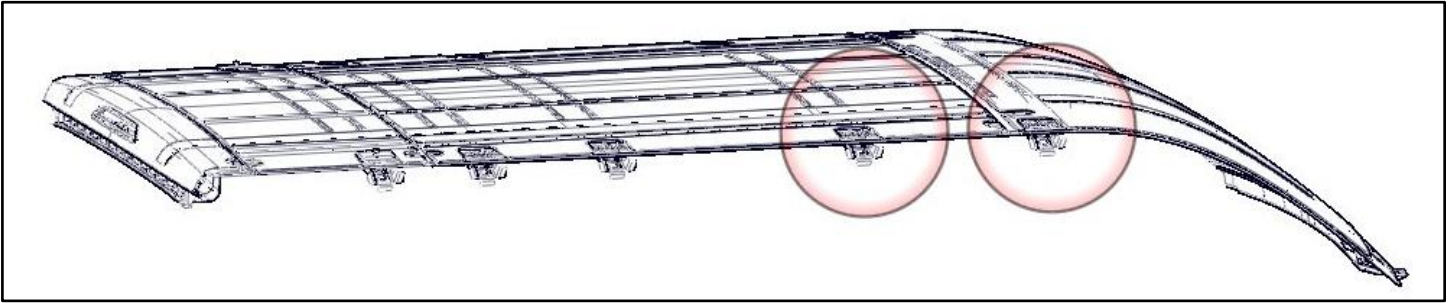
- Mount rear mount bracket using M8 x 30mm flat head bolts. Place two rubber pads between the bracket and the roof of the van. The bracket should be parallel with the length of the van and the flange should be towards the center as shown.

(Passenger side shown)



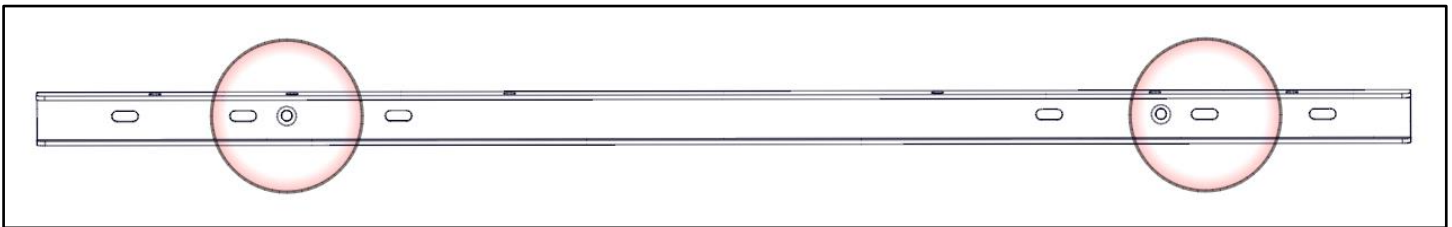
Step 3B - Extended - Front Mount

- Locate the other two threaded inserts at the front of the van. Remove plugs.

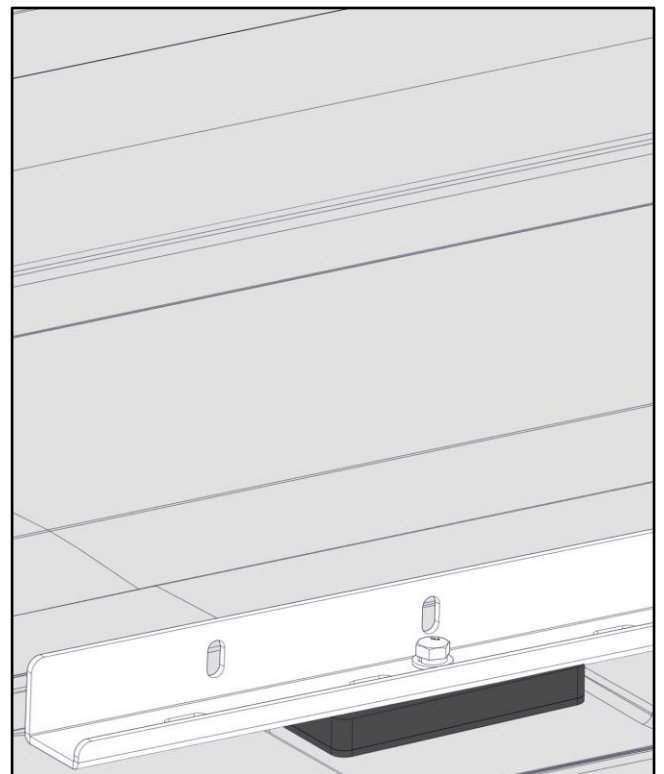
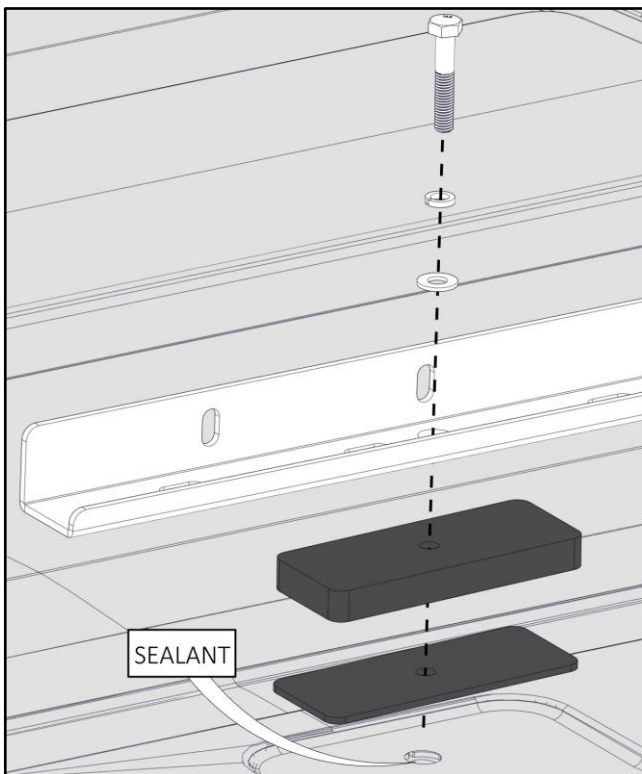


**** Place sealant around the exposed holes in the roof of the van under the rubber pads to ensure no water can leak into the cabin of the van. ****

- Place the long mount rail with the tall flange towards the center of the van.
- Bolt through the farthest rear countersunk hole and the 2nd slot from the front using M8 x 45mm bolts with lock washers and flat washers.

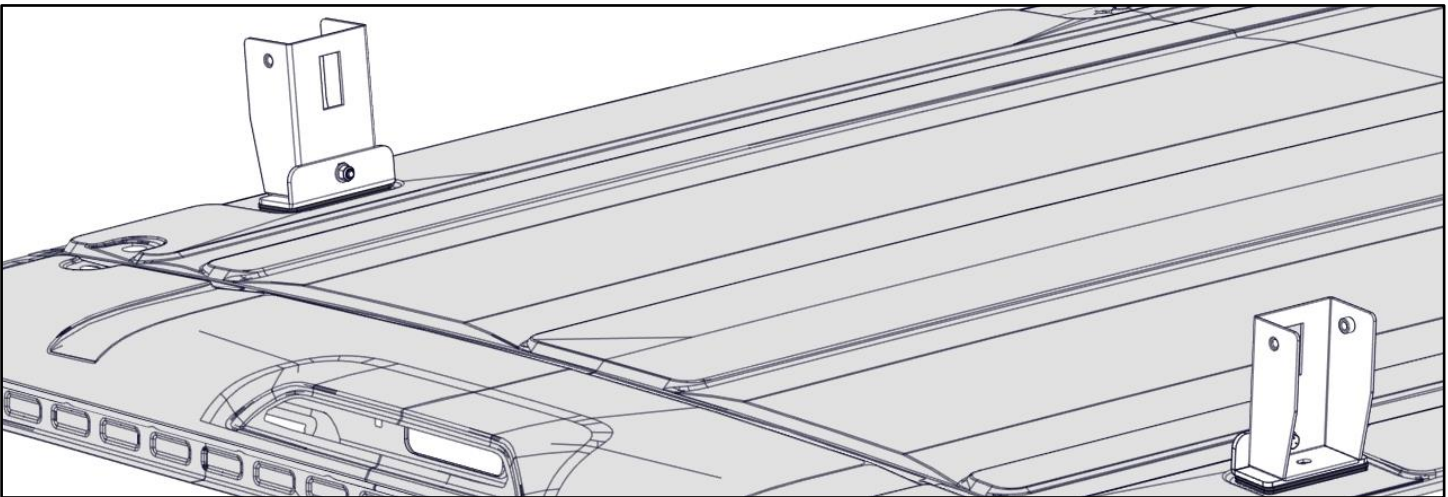
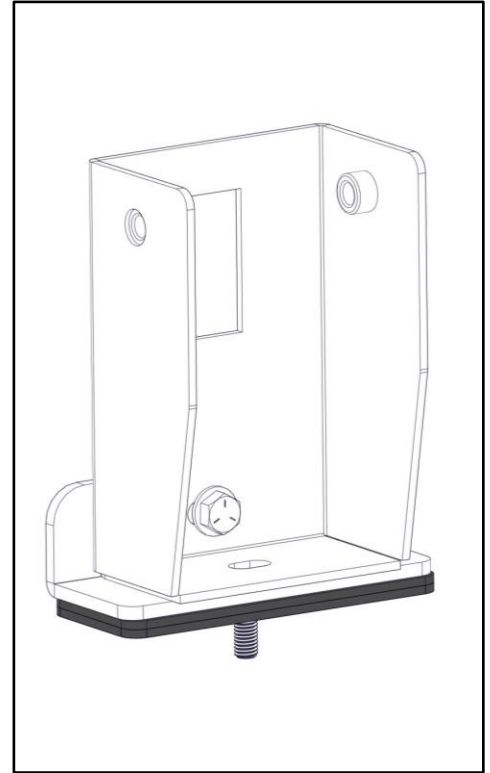
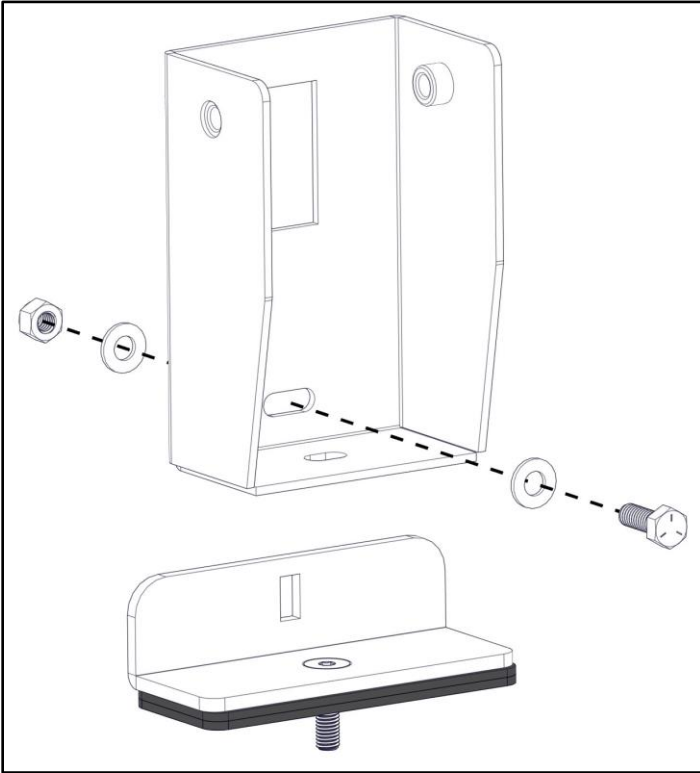


- The picture shown below is the rear most mount on the rail. (through the countersunk hole)
- Passenger side shown, repeat on driver side.
- Snug Tighten.



Step 4 – Install Rear Feet

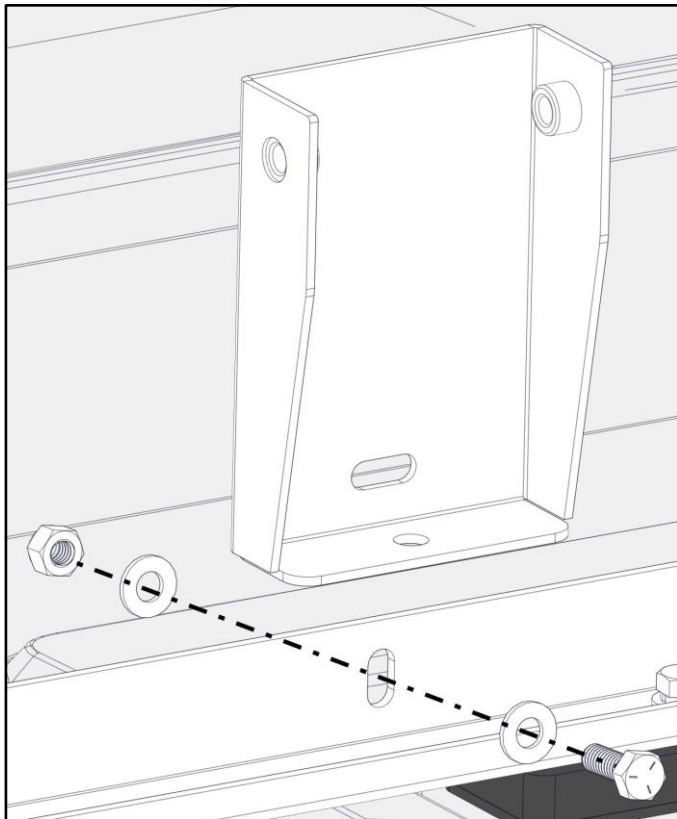
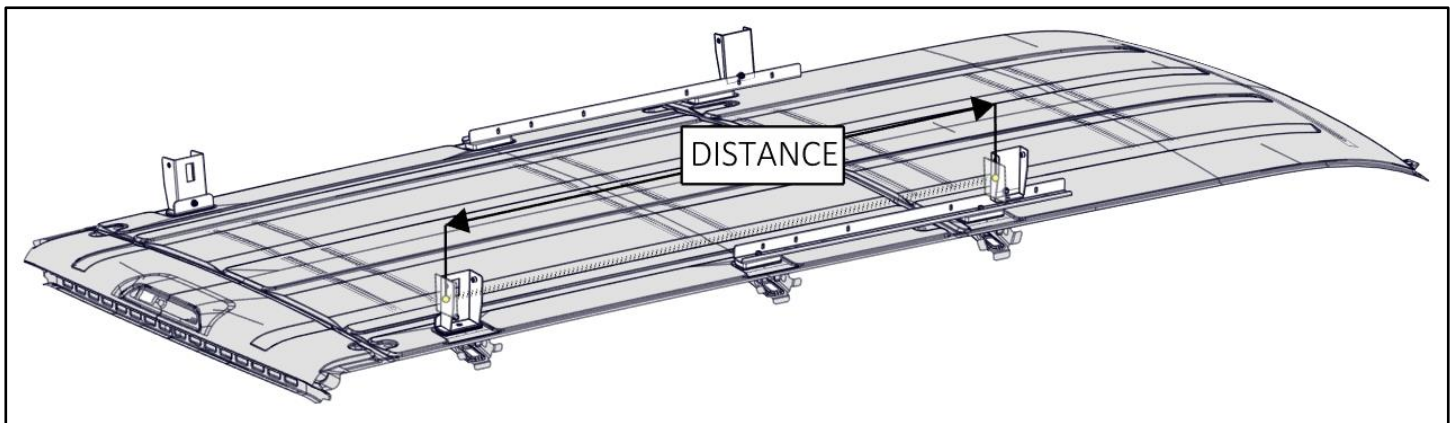
- Bolt large foot (has a cut out) to the rear mount previously installed using 5/16" x 7/8" hex head bolt, two 5/16" flat washers and a 5/16" nyloc nut. (Passenger side shown without roof and rack for clarity)



Step 5 – Install Front Feet

- Mount the tall foot to the previously installed rail using a 5/16" x 7/8" hex head bolt, two 5/16" flat washers and a 5/16" nyloc nut.
- Be sure the distance between the two feet closely matches the distance between the bows on the ladder rack being installed. The slot used on the front rail will vary from the picture below.

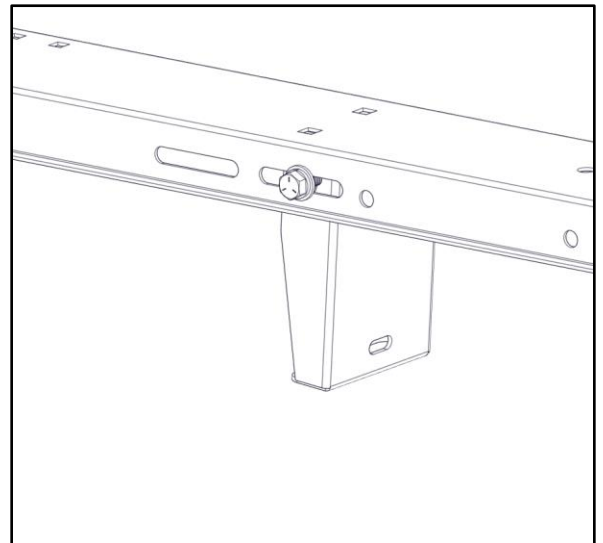
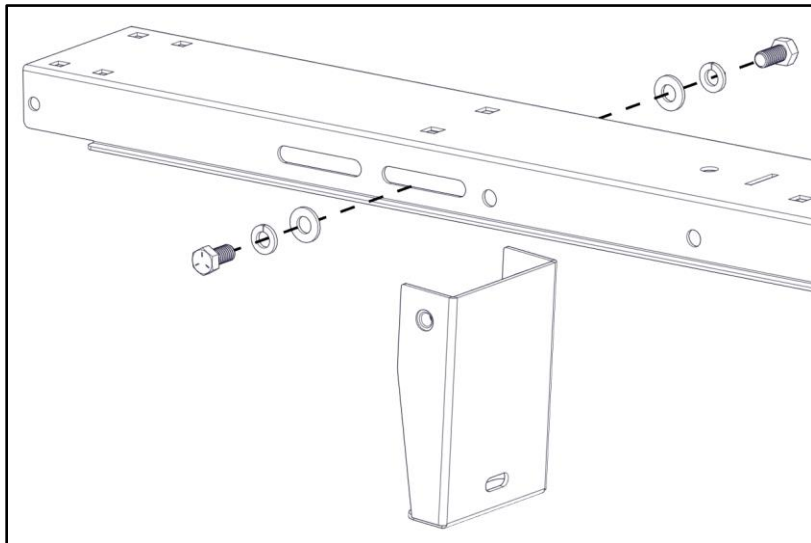
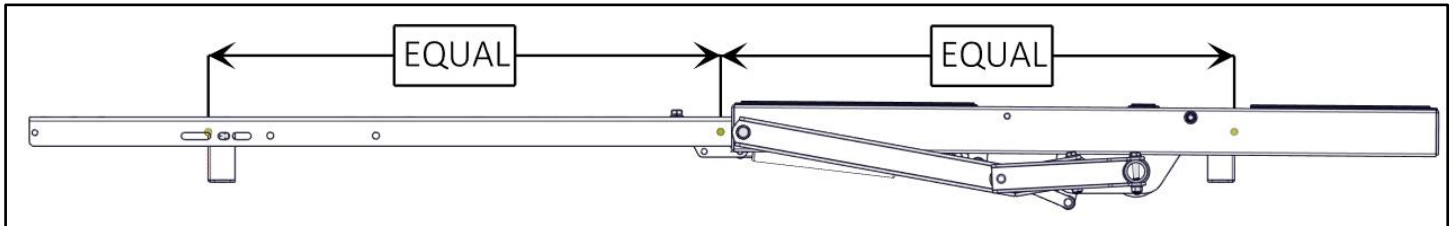
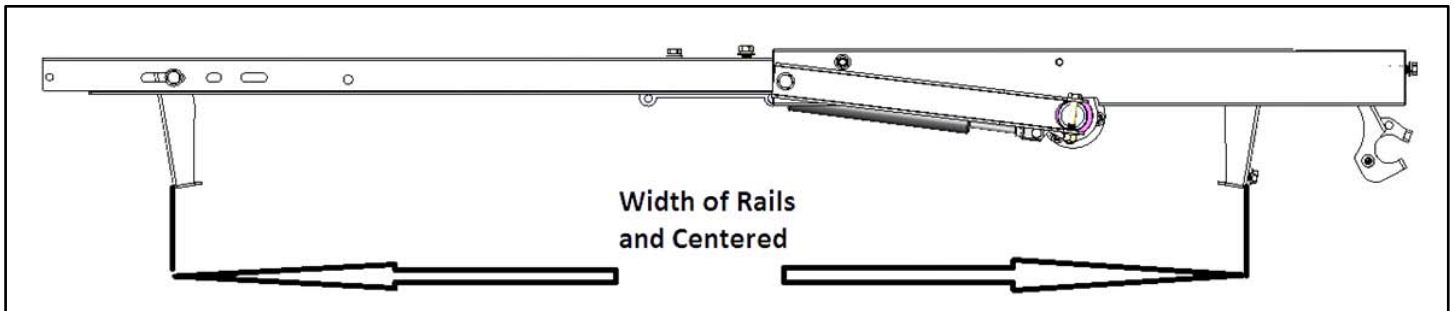
Note: One may choose to install the feet on the rack prior to installing onto the vehicle. It is the installers preference.



Step 6 – Feet to Rack

- Place assembled ladder rack on top of the previously installed feet.
- Measure width between the mounts on the van.
- Center the assembled rack on top of the installed feet. Align bow with the same slot on opposite ends.
- Bolt the feet to the bows as shown using 3/8" x 3/4" hex head bolts, 3/8" lock washers and a 3/8" flat washers.

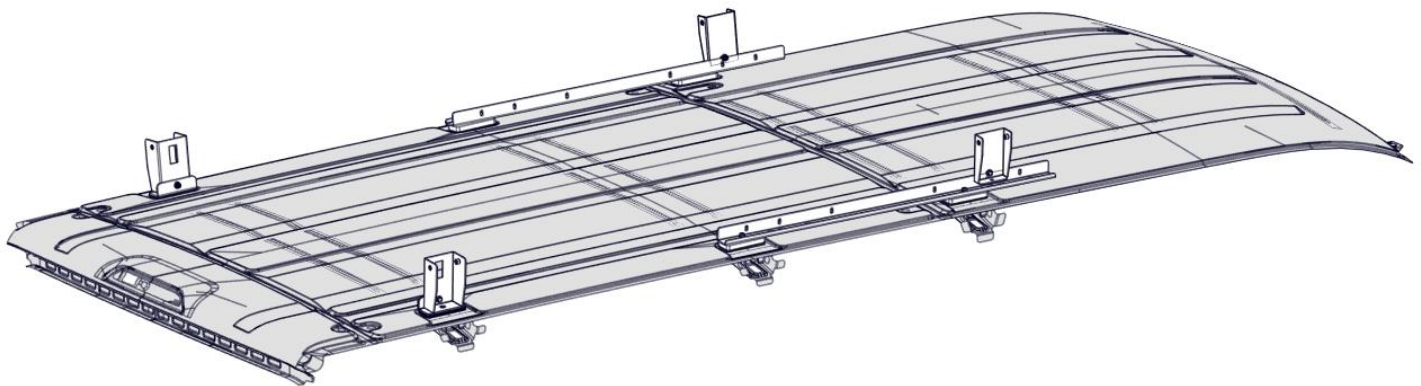
Note: One may choose to install the feet on the rack prior to installing onto the vehicle. It is the installers preference.



Go back and square the rack.

Ensure all hardware is tight. This includes into the roof, within the rack assembly and the mounting of the rack to roof mounts.

Your installation is complete.

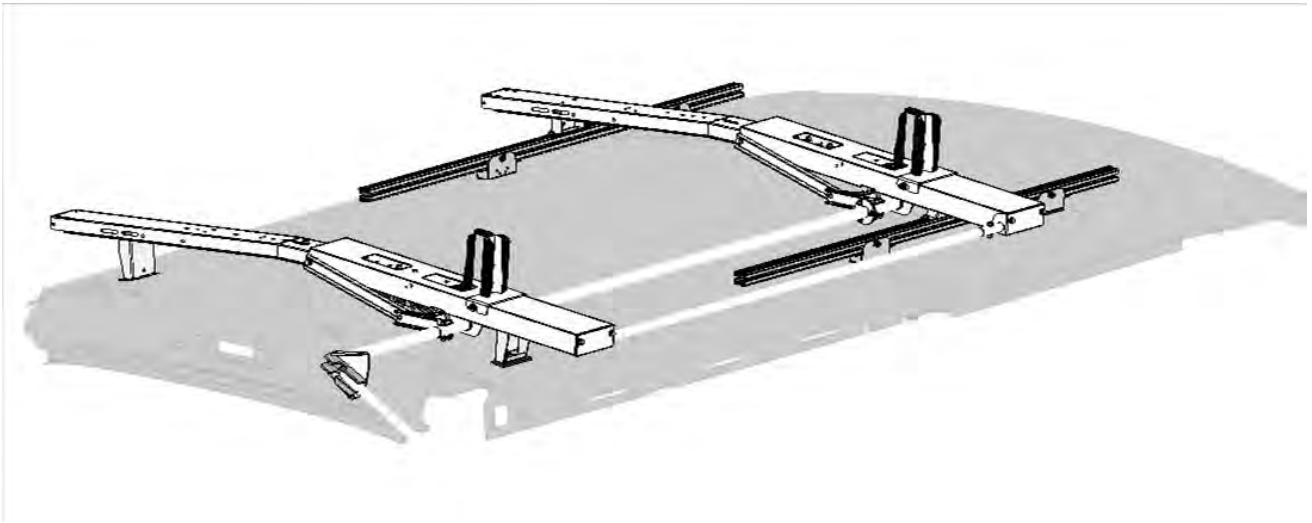


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Installation Guide

4099H



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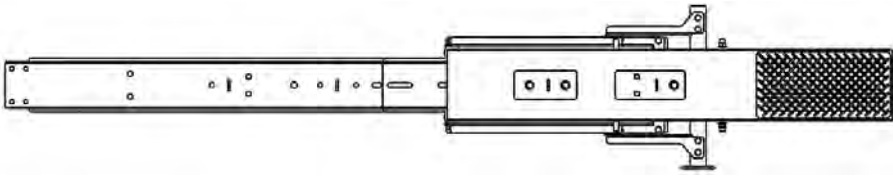
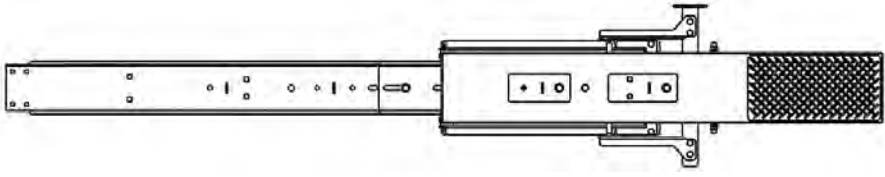
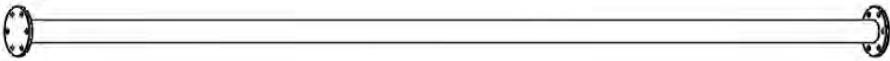
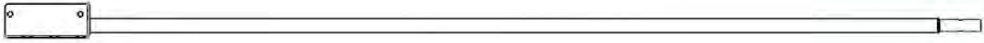
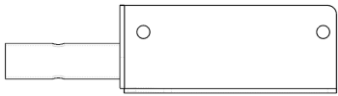
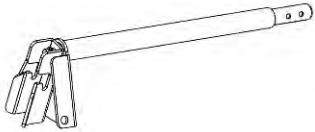




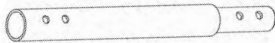
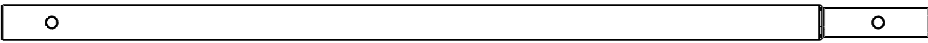
Tools Needed

1/2" Wrench and Socket	7/16" Wrench and Socket
9/16" Wrench and Socket	Tape Measure
Phillips Drive	

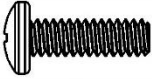

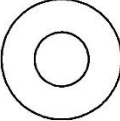

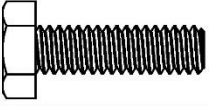
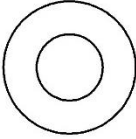
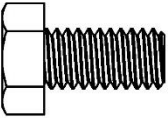
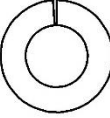

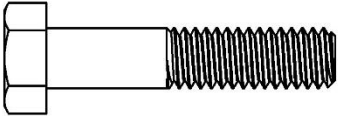
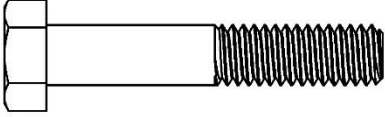
Before You Begin

- Read all instructions.
-

Parts

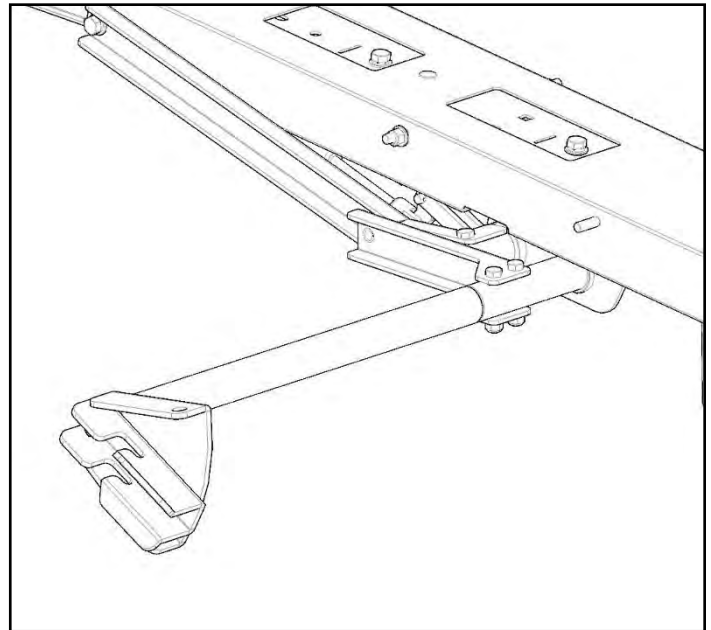
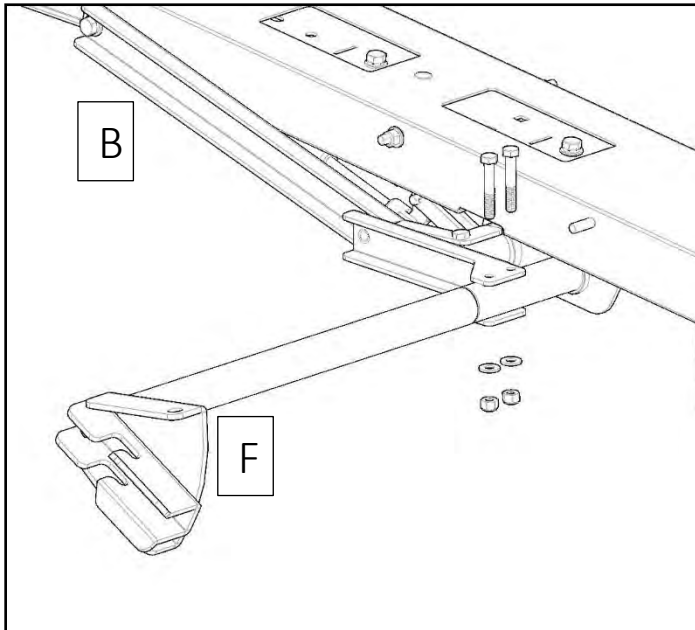
	4099H PARTS	DESCRIPTION	QTY
A		Front Bow Assembly	1
B		Rear Bow Assembly	1
C		Torque Tube	1
D		Support Tube	1
E		Support Tube End	1
F		Actuator	1
G		Removable Handle	1
H		Ladder Hook	2
I		Ladder Stop	2
J		Torque Tube Extender	1
K		Handle Extender	
L		Support Tube Extender	1
		HARDWARE	1

Hardware

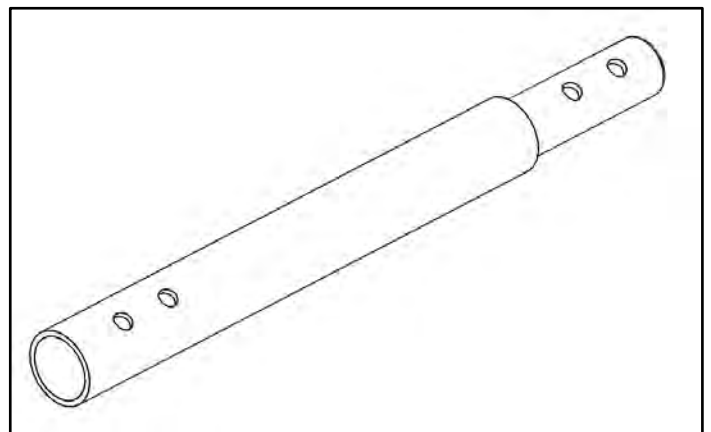
ITEM NO.	TO SCALE	DESCRIPTION	QTY.
1		10-24 x .625 PH Phillips Drive	2
2		10-24 Nyloc Nut	2
3		.25 flat washer	18
4		.25-20 NYLOC NUT	9
5		.25-20 x .875 HH	9
6		.312 Flat Washer	10
7		.312-18 x .625 HH	4
8		.312 Split Lock Washer	4
9		.312-18 Nyloc Nut	3
10		.312-18 x 1.50 HH	1
11		.312-18 x 1.75 HH	2
12		Handle Bar Holder	2
13		E6000	1

Step 1 – Install Actuator

- This can be done on or off the van.
- Remove existing hardware from the Rear Bow Assy. (B) as shown
- Keep Hardware, This will be re-used.
- Install the Actuator (F) with the “triangle” opening towards the end of the bow.
- Be sure to put E6000 into tube swedge and around the bolt holes.



If installing on a High Roof Extended Transit, the Handle Extension (L) will be used. This extension goes inbetween the rear bow (B) and the actuator (F).

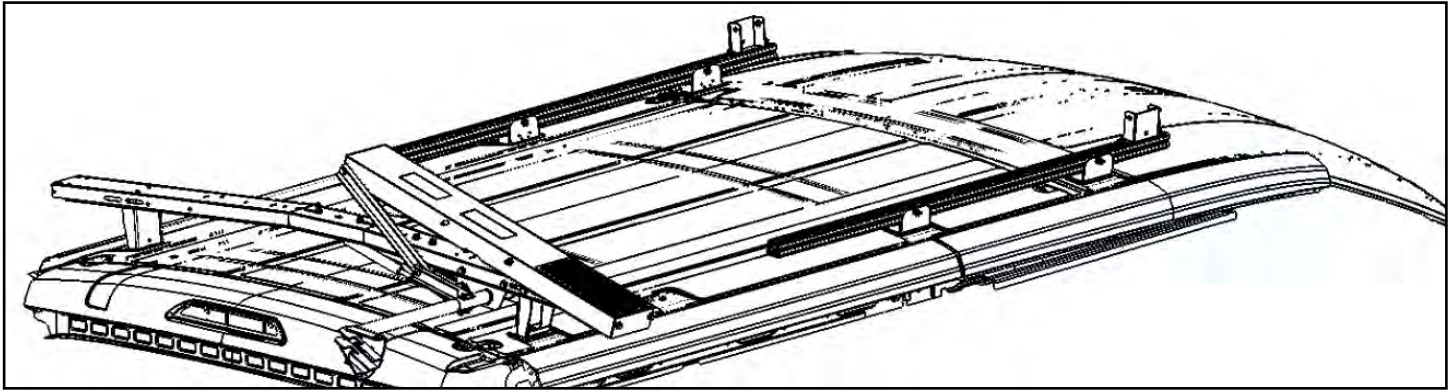


Step 2 – Install Front and Rear Bow

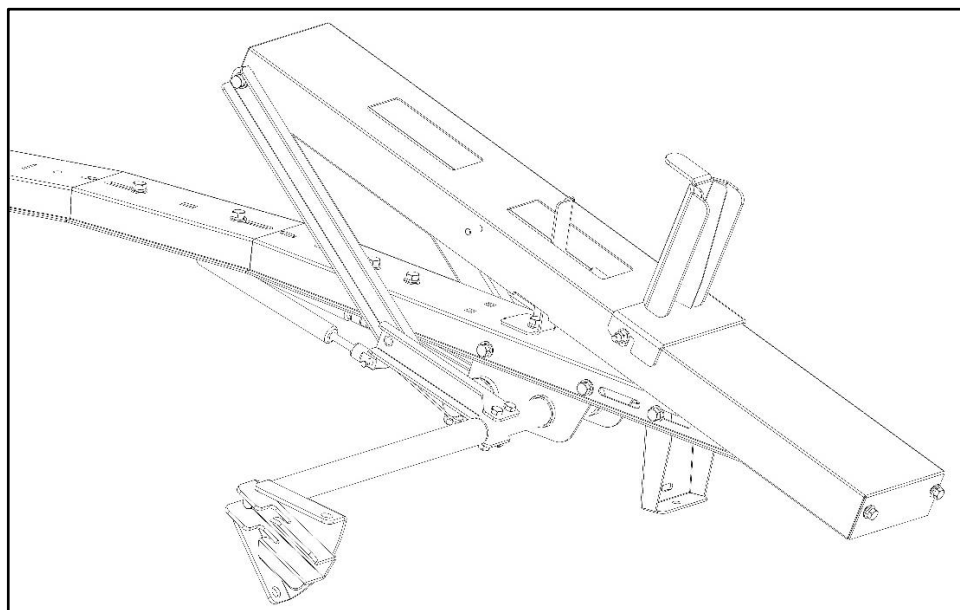
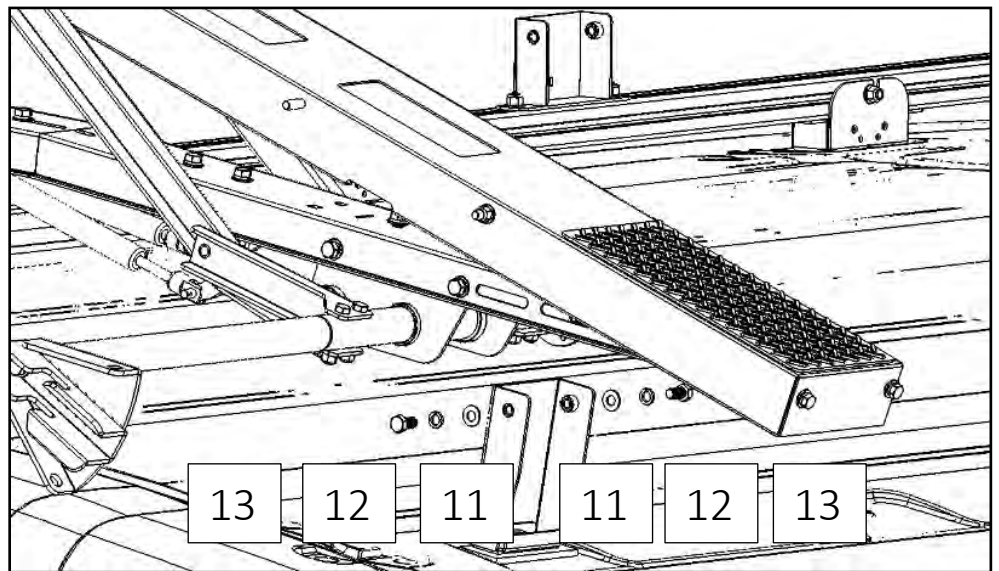
If you have a lift you can skip this step and continue building the rack on a bench

A. Rear Bow

- Set Rear Bow Assy. (B) on rear mounting feet as shown.

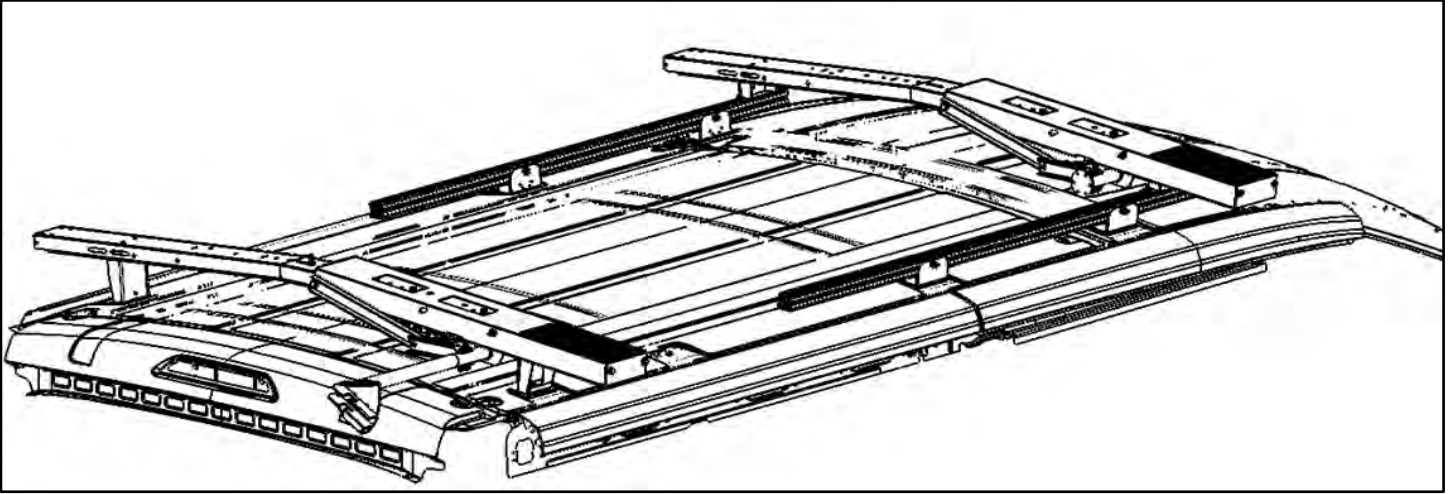


- Place a foam block from the packaging to hold the bow in the up position in order to access the mounting slots.
- Insert .375" x .75" hex head bolts (13) with .375" flat washer (12) and .375" lock washer (11) as shown.
- Leave loose until the the rack is assembled.
- Repeat on other side of bow.



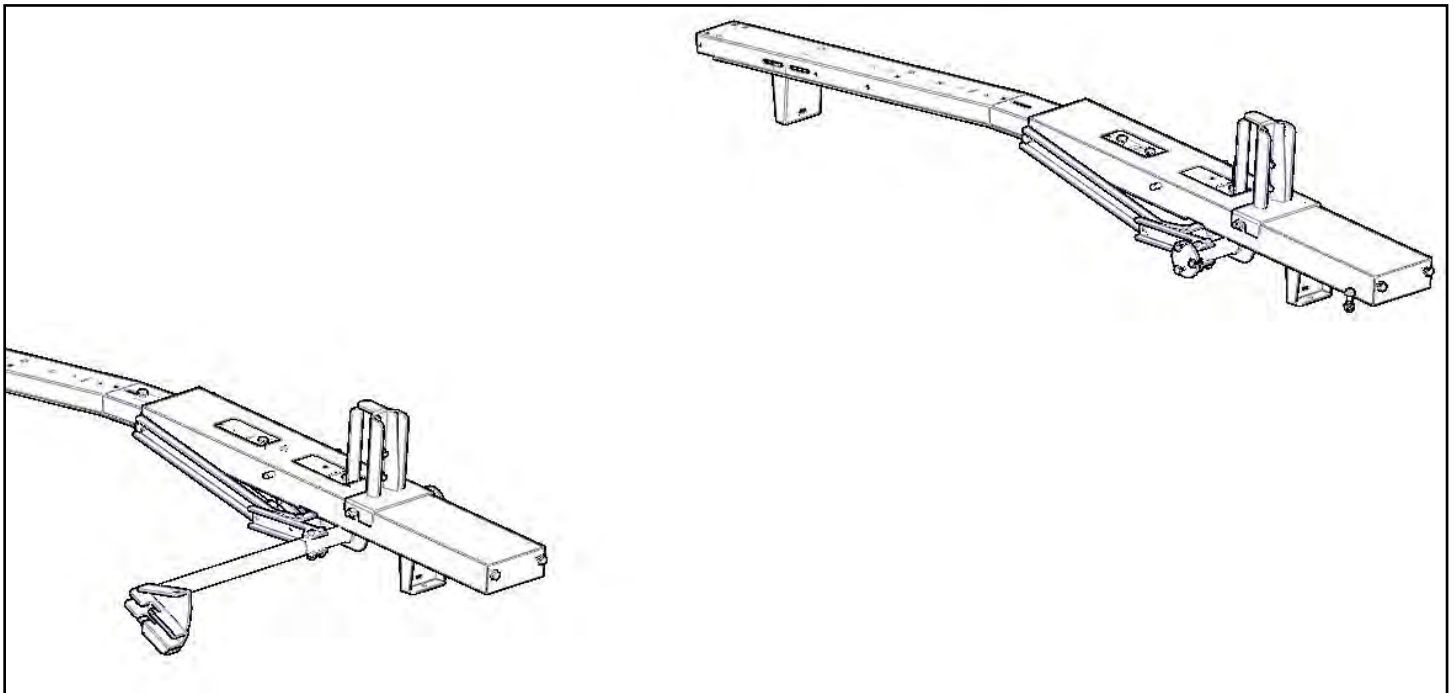
B. Front Bow

- Repeat the process for the front bow (A).



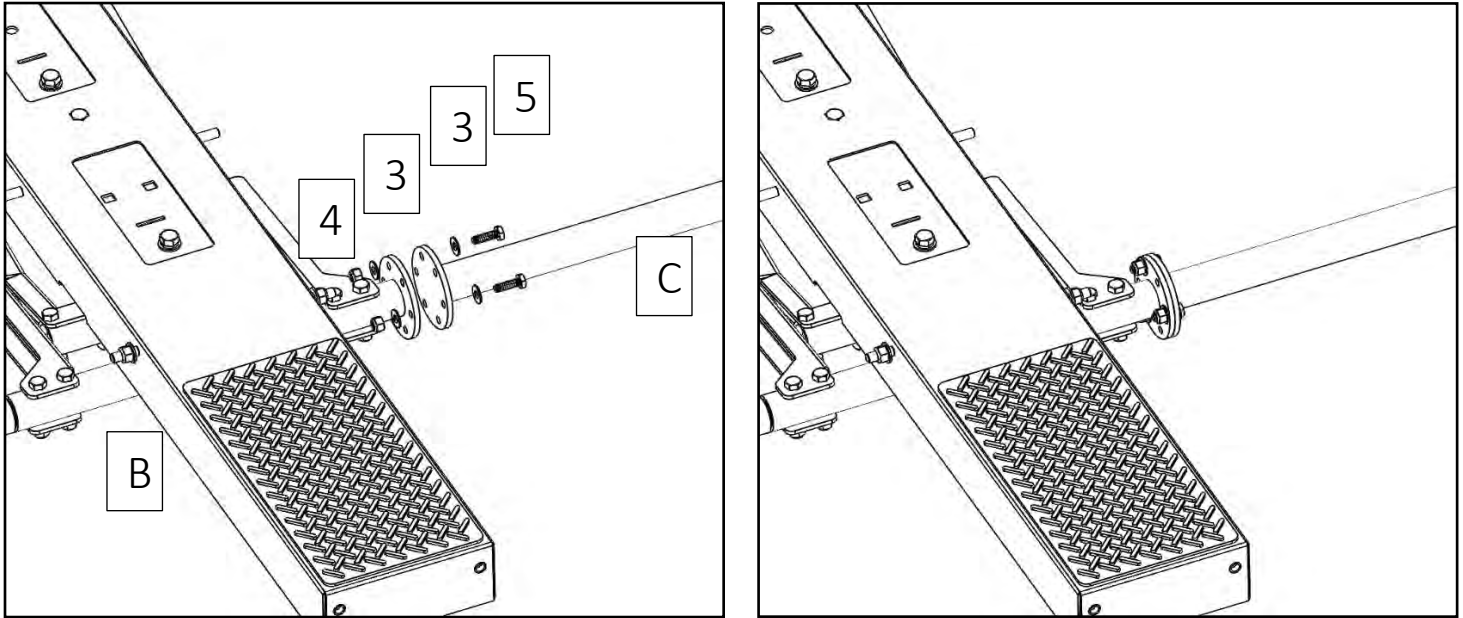
Step 3 – Torque Tube Installation

****BE SURE THE BOTH FRONT AND REAR LADDER PANS ARE ALL THE WAY DOWN ON THE BOWS WHILE TIGHTENING****



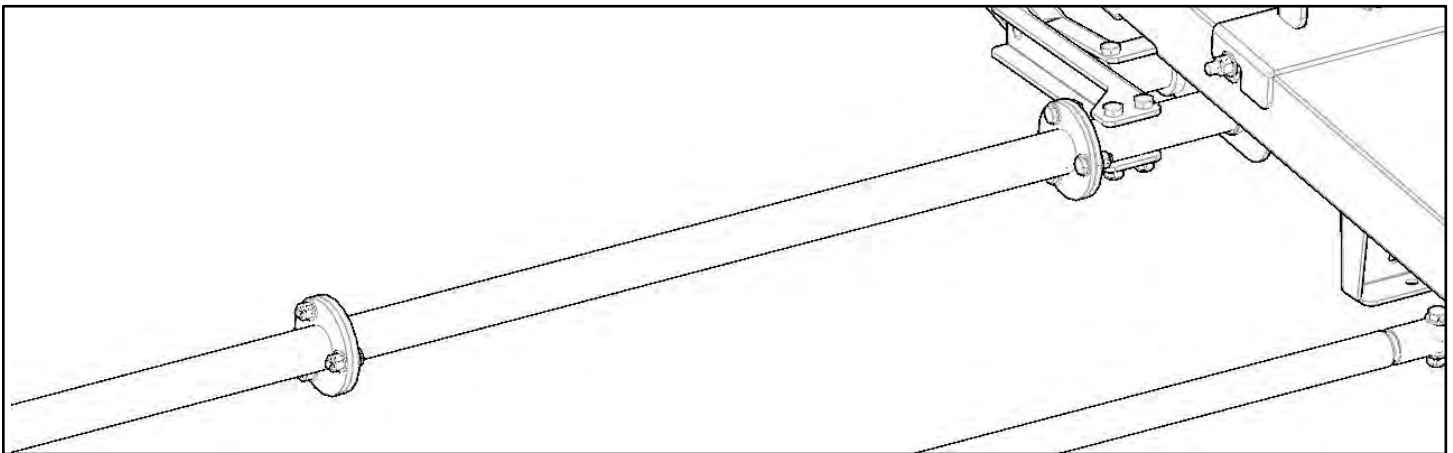
- Bolt Torque Tube(C) to Rear Bow Assy(B) using three .25" x .875" hex head bolts (5) six .25" flat washers(3) and three .25" nyloc nuts(4).

****You may want to put a foam packing block under the front of torque tube (C) to make it level while tightening.****



- Repeat process to bolt to the front bow assembly(A).

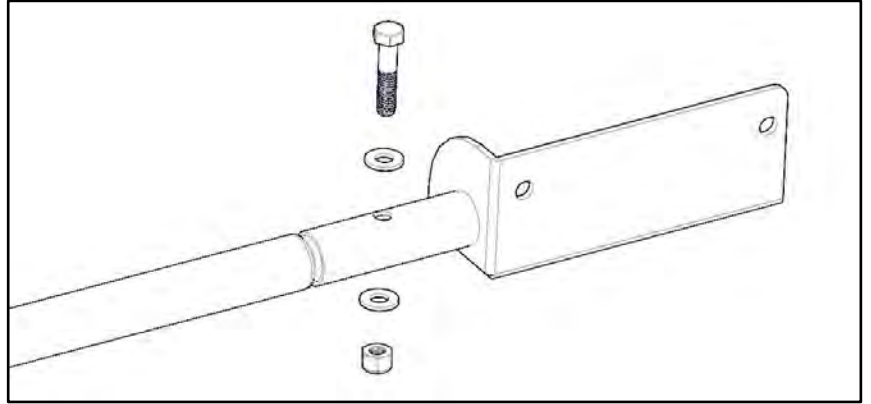
****If installing on a High Roof Extended Transit, the Torque Tube Extension (K) will be used****
This extension goes inbetween the torque tube (C) and the front bow (A)



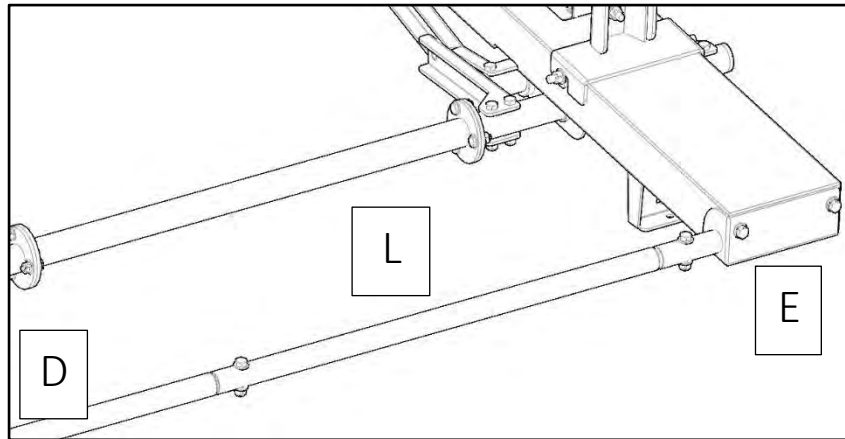
Step 4 – Ladder Pan Support

A.

- Assemble Support Tube(D&E). Put E6000(13) into tube swedge and around the bolt holes to prevent water from getting into tubes.

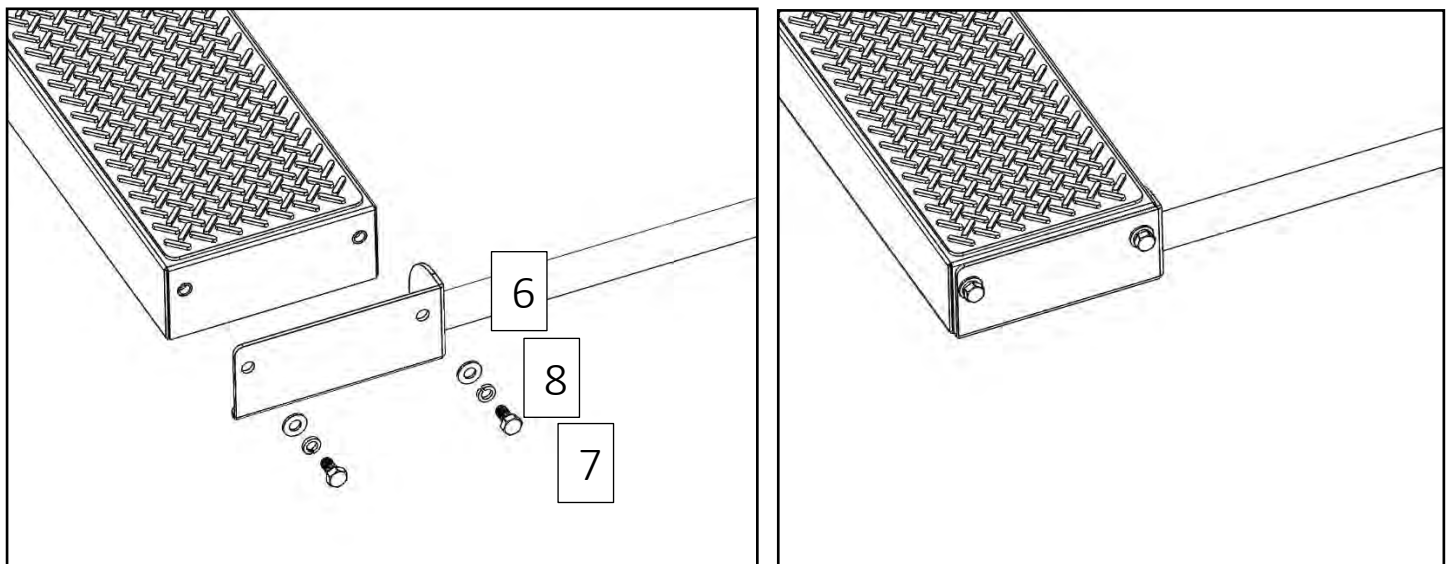


- **If installing on a High Roof Extended Transit, the support tube extension (L) will be used****
This extension goes inbetween the support tube (D) and the support tube end (E)



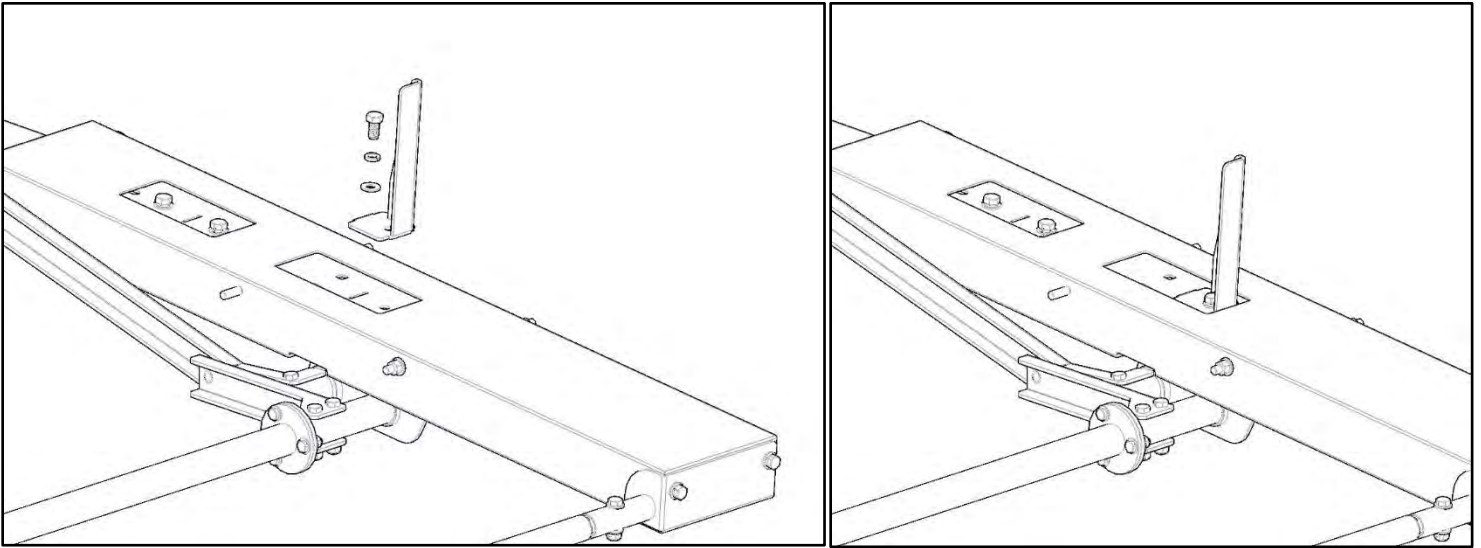
B.

- Attach Support Tube(D&E) to the Ladder pan as shown using .312" x .625 hex head (7) with .312" lock washers(8) and .312" flat washers(6)

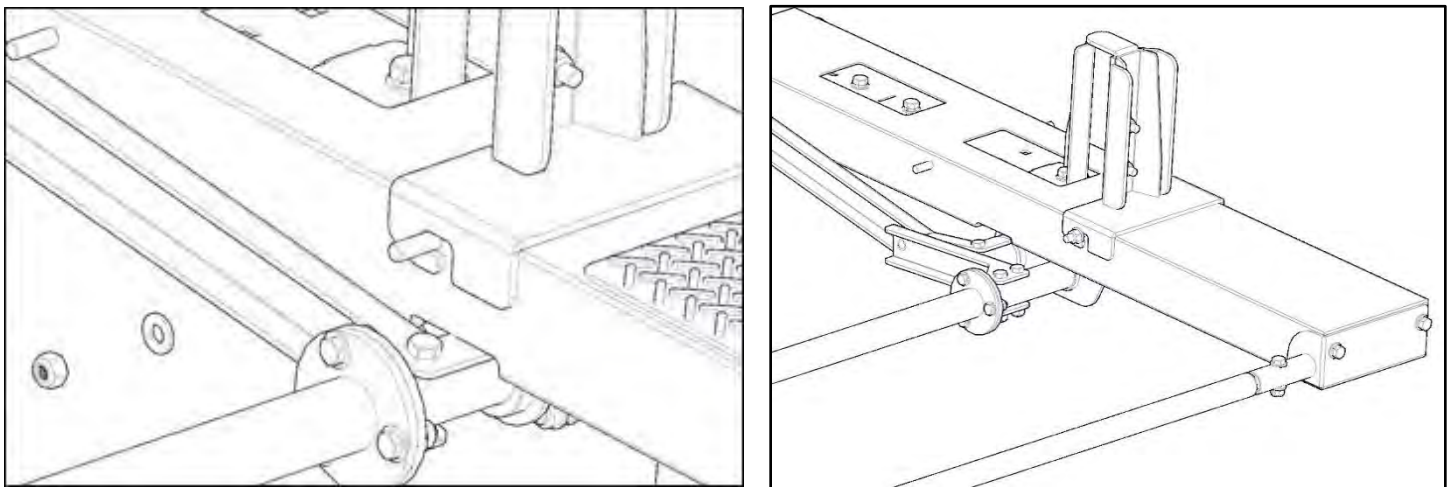


Step 5 – Ladder Stops and Hooks

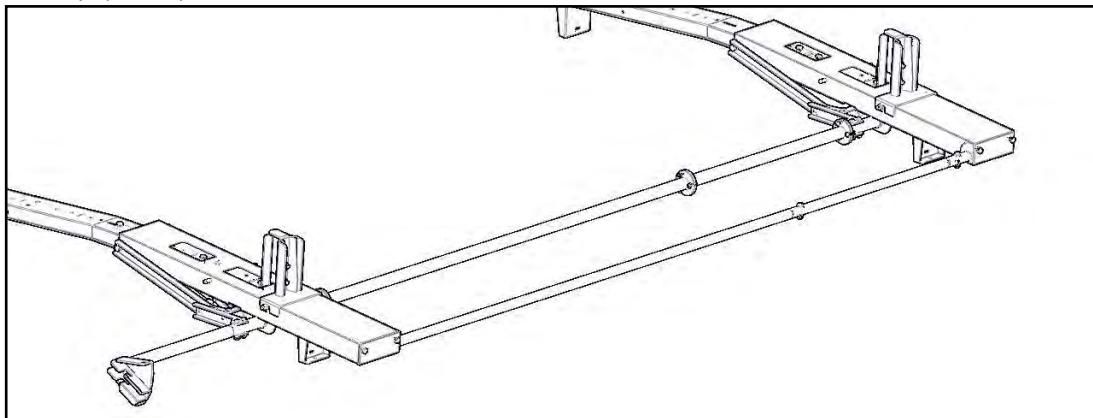
- On the front bow (A), remove 3/8"x3/4" bolt, 3/8" split lock washer and 3/8" flat washer from shown location and install Ladder Stop(I).



- Bolt Ladder Hook (H) to the lower position where the pem studs are installed. Use a .312 flat washer(6) and a .312 nyloc nut (9).

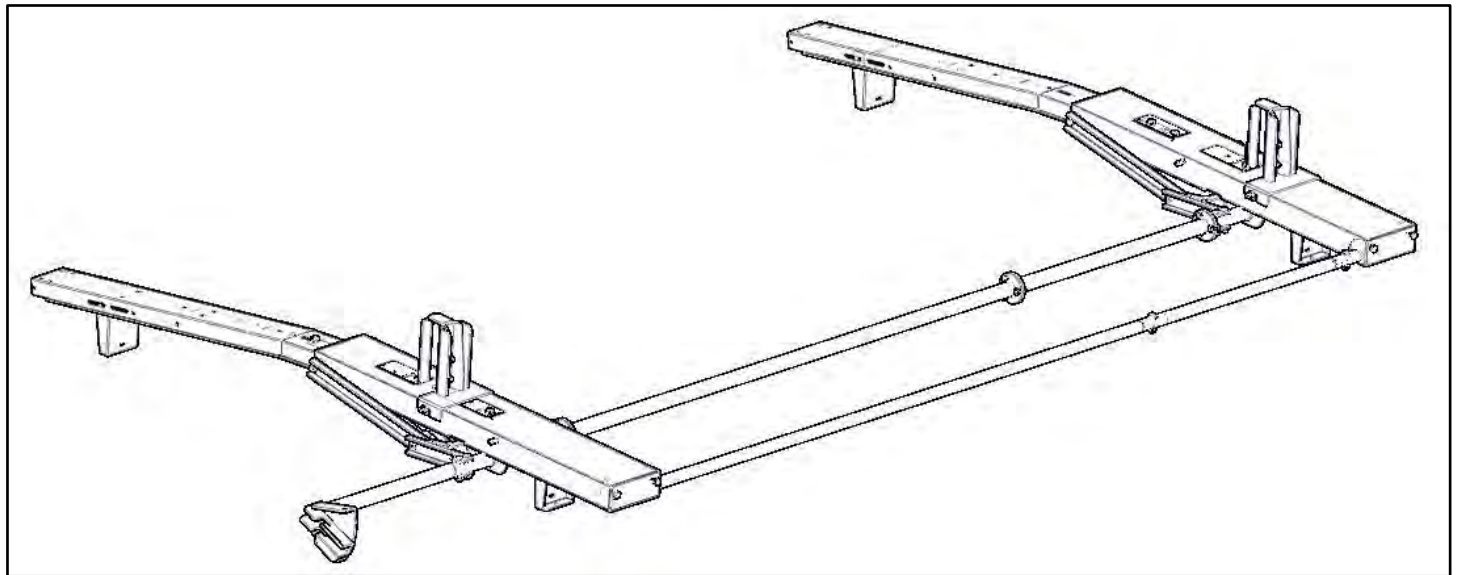
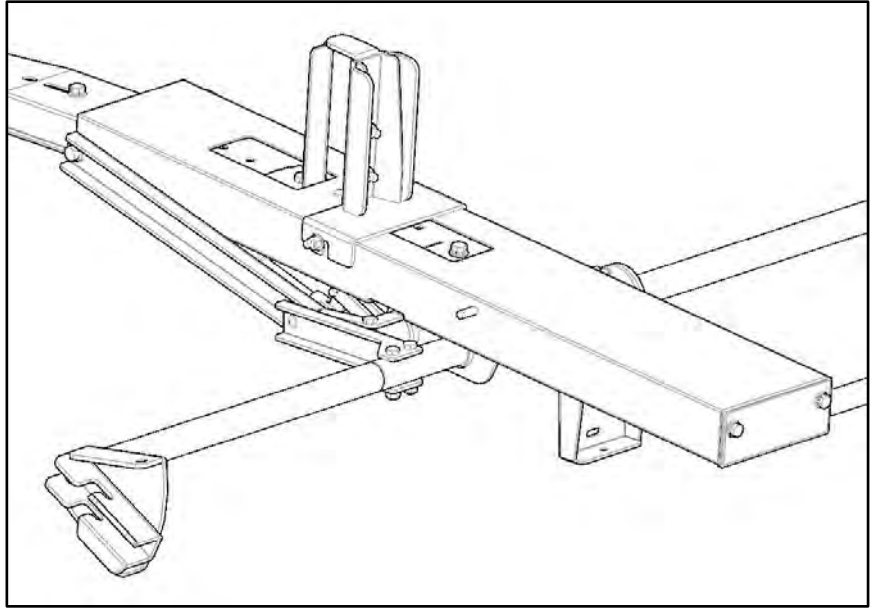


- Repeat on both sides of ladder hook (H).
- If using an "Extension Ladder" put the Ladder Stop(I) at the same location on the Front & Rear Bow Assy.(A&B).



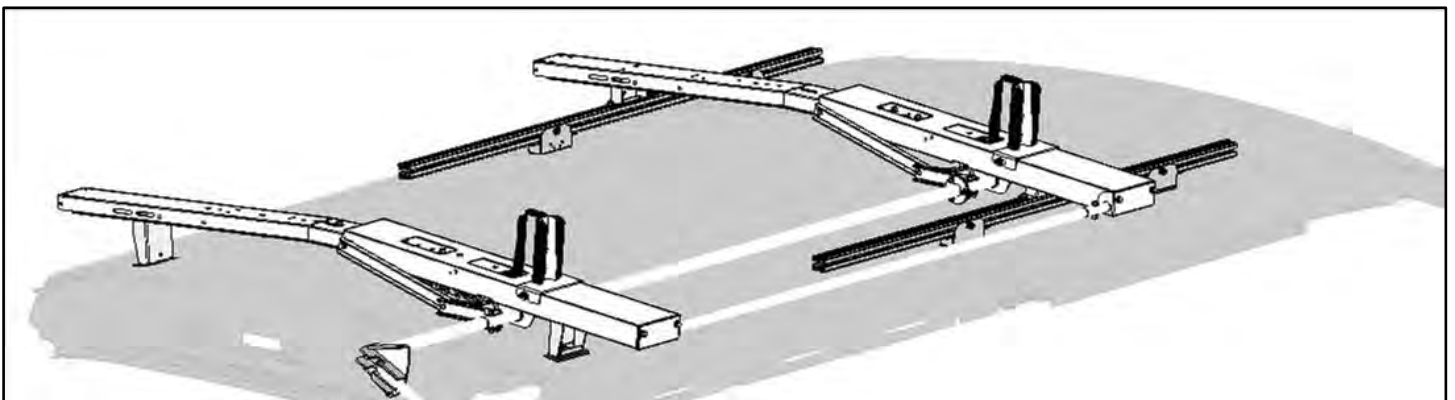
Step Ladder Set-Up

- If installing for a “Step ladder”, The ladder hook (H) and the ladder stop (I) change positions on the rear bow.
- Both of these parts move higher up on the bow and are installed using the other pem studs.



Step 6 – Installing Rack

- If you built the rack on the bench you can now set the rack on the mounts as described in Step 2.
- Be sure rack is centered on the van then TIGHTEN all the hardware.



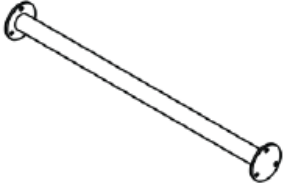
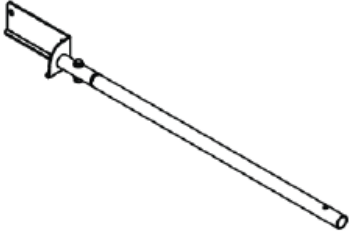
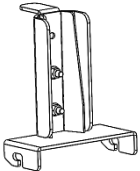


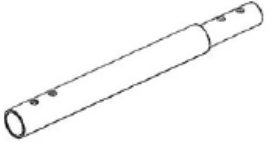
Step 7 – Install Handle Bar holder

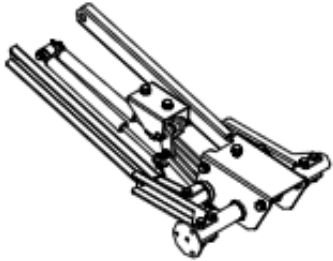
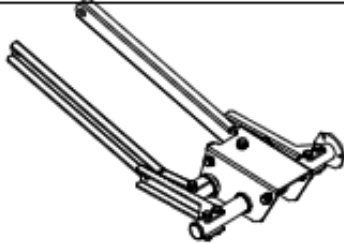
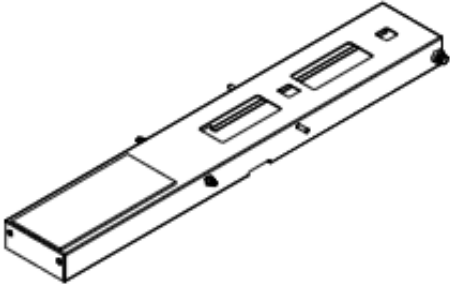

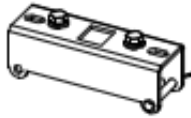
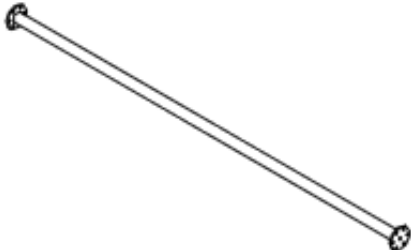

- Install handle bar holder clip from hardware kit to your preference. Most install at the rear of the van, on the backside of a shelving unit.
 - Install clips using #10 hardware provided.
-

GO BACK AND ENSURE ALL HARDWARE IS TIGHT

Your installation is now complete.

40913 Parts List

PART	PART NO.	QTY
	40993-25	1
	40993-831	1
	40900-31-R2	2
	40900-30-004	2
	spring	1
	40993-40-002	1

PART	PART NO.	QTY
	40993-08	1
	40993-09	1
	40993-10	2
	40993-45	1
	40993-12	1
	40993-24	1
	40993-832	1

40913 Hardware List

Tools Needed

8' Tape Measure

1/4" Socket

5/16" Socket

1/4" End Wrench

5/16" End Wrench

Hammer

Hardware Pack

(a)

Qty 2 -

Rubber Bumper



(b)

Qty 10 -

5/16" Flat Washer



(c)

Qty 4 -

5/16" Lock Washer



(d)

Qty 3 -

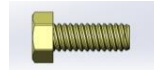
5/16"-18 Nyloc Nut



(e)

Qty 4 -

5/16"-18 x 5/8" Hex Bolt



(j)

Qty 9 -

1/4"-20 x 7/8" Fully Threaded Hex Bolt



(k)

Qty 18 -

1/4" Flat Washer



(l)

Qty 9 -

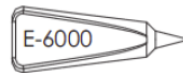
1/4"-20 Nyloc Nut



(m)

Qty 1 -

E6000



(n)

Qty 4 -

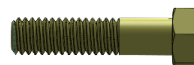
3/8" Nylon Washer



(q)

Qty 1 -

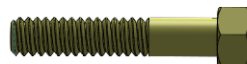
5/16"-18 x 1.5" Hex Bolt



(r)

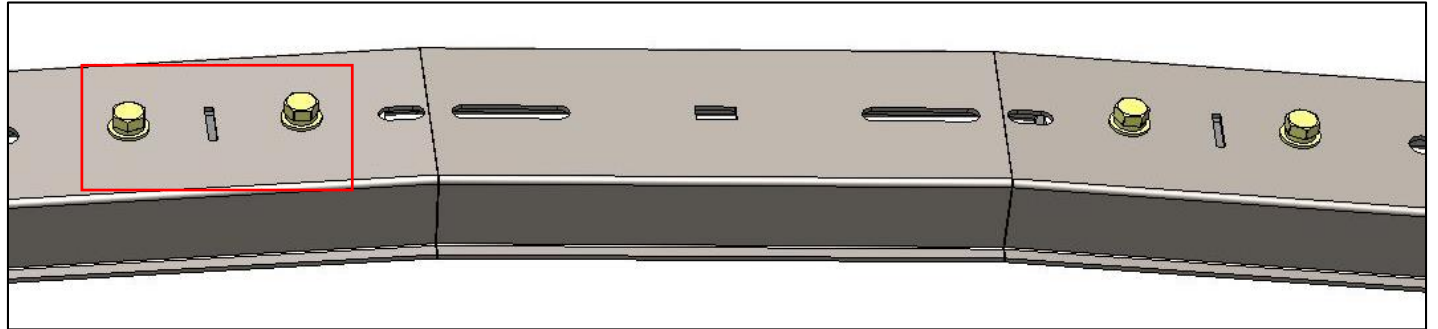
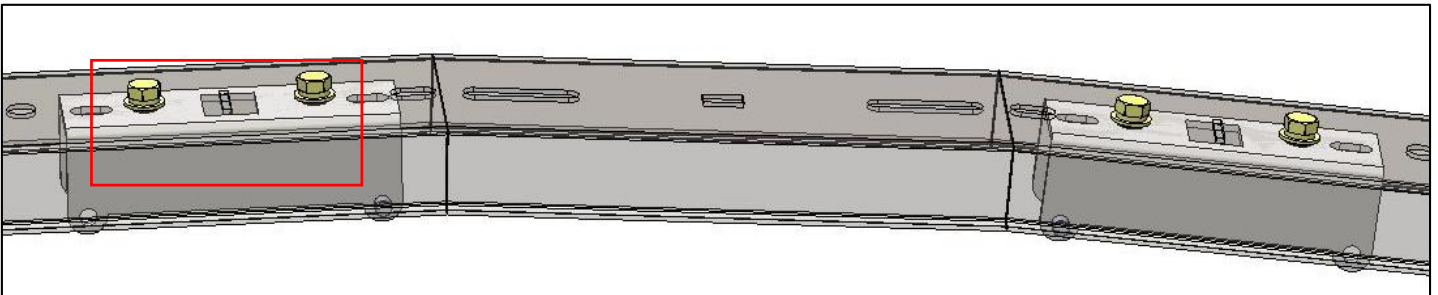
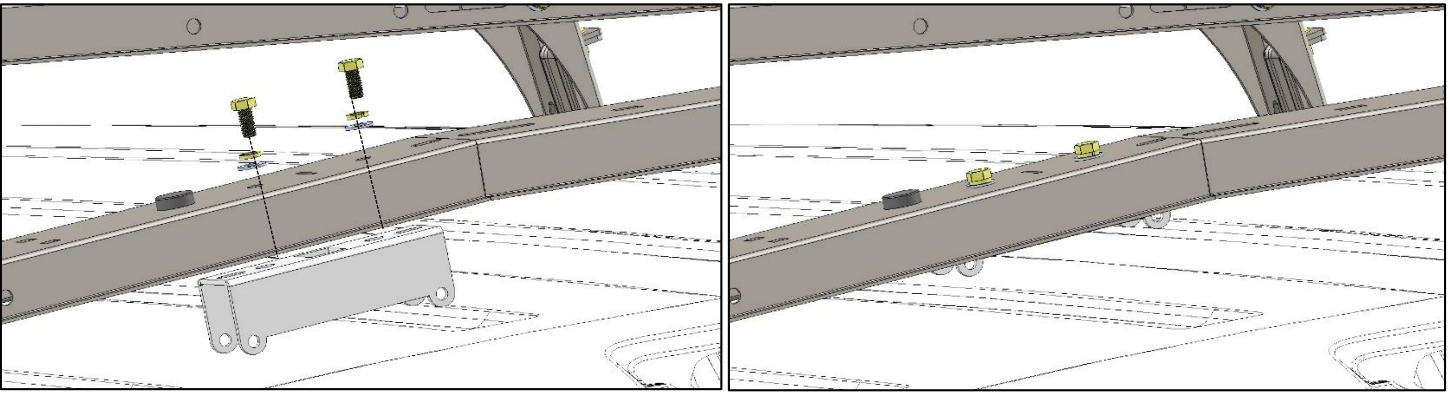
Qty 2 -

5/16"-18 x 1.75" Hex Bolt



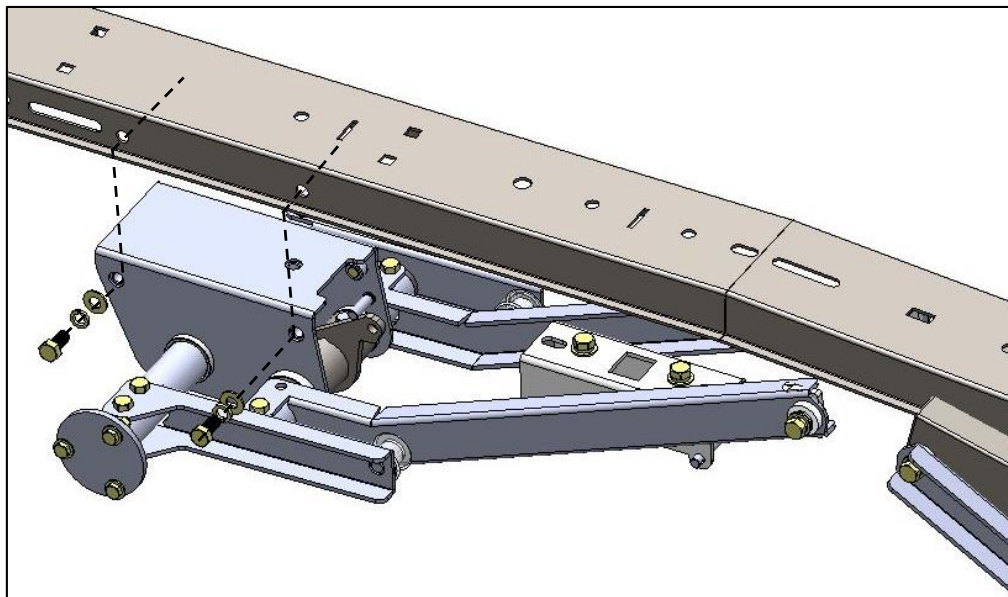
Step 1

Bolt "Dampener mounting bracket(40993-12)" underneath the crossbow (only the front side of the vehicle) as shown below using 3/8"x3/4 Bolts with flat and lock washers.



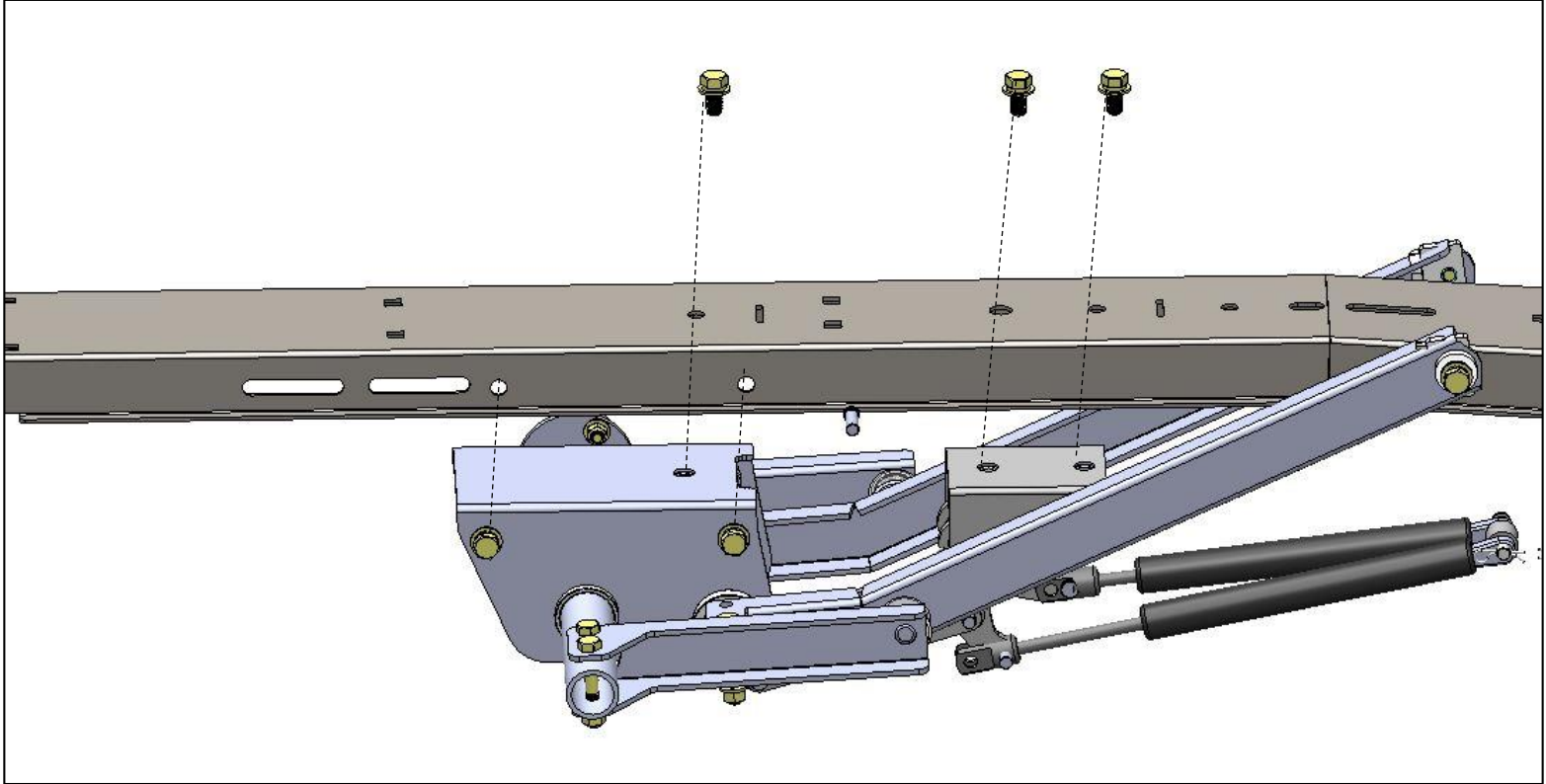
Step 2

Bolt "Torque tube pivot Assy. (40993-09)" underneath the front crossbow (Front side of vehicle) as shown below using 4 of 3/8"x3/4 Bolts with flat and lock washers. Repeat this step on the other side of the bow. You may need to un-bolt the mounting front from the crossbow to do this.



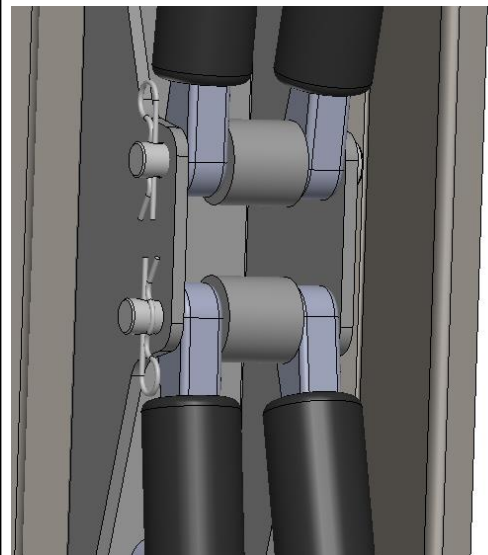
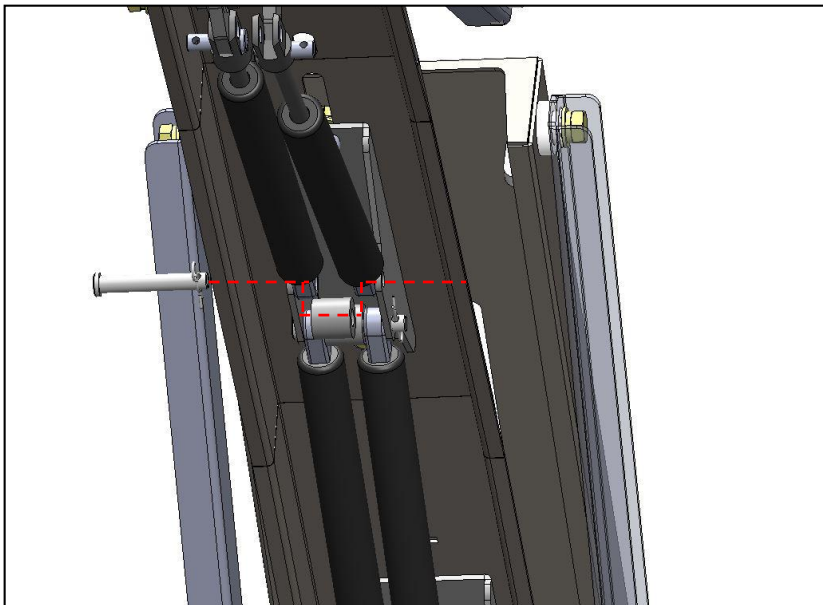
Step 3

Bolt "Torque tube pivot Assy. 2(40993-8)" underneath the rearcrossbow (rear side of the vehicle) as shown below using 3/8"x3/4 Bolts with flat and lock washers. You may need to un-bolt the mounting front from the crossbow to do this.



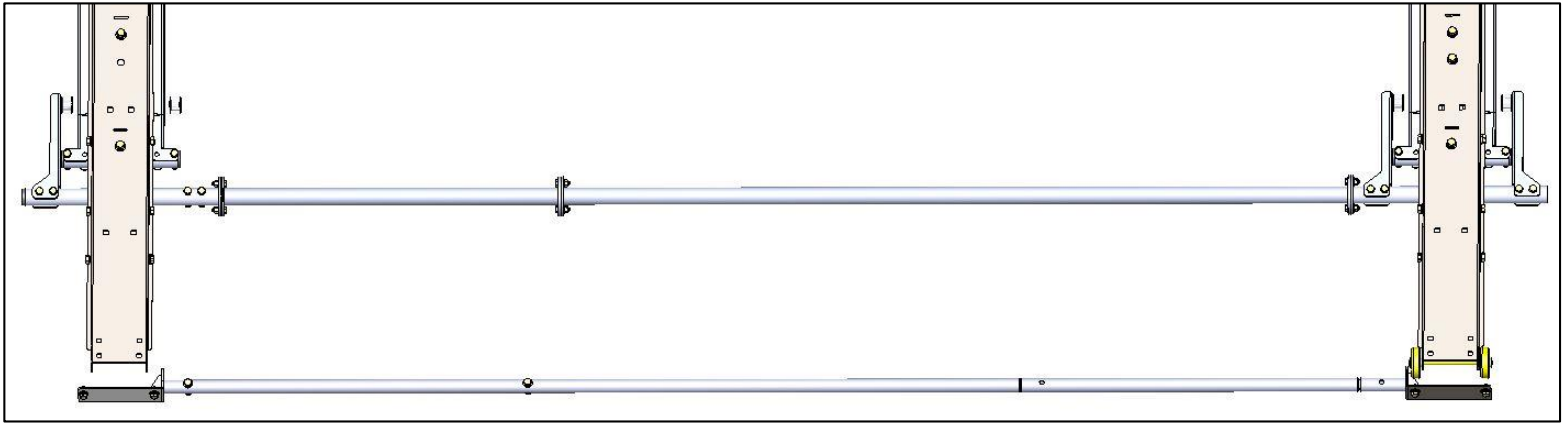
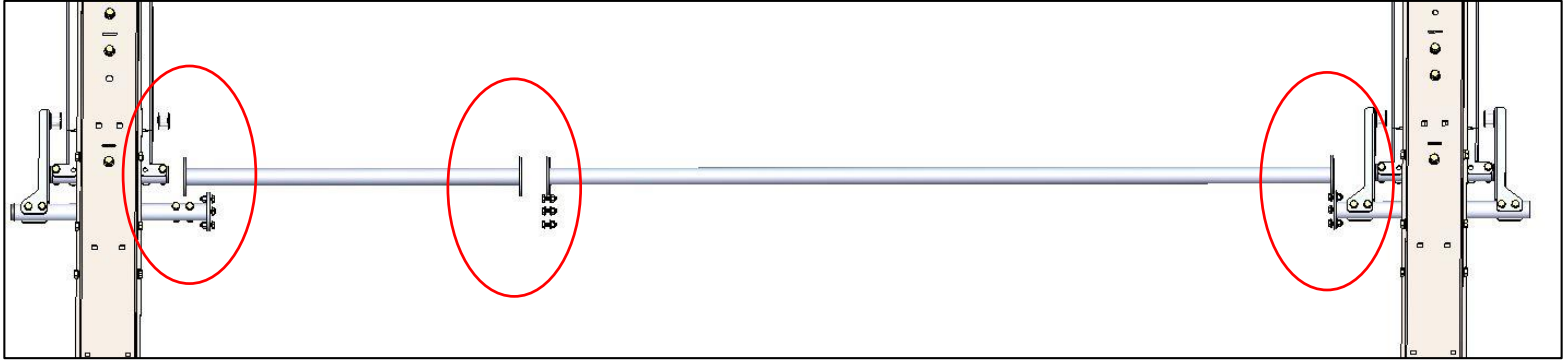
Step 4

Attach the open end dampeners to the center bracket using the 5/16"x2- 1/4" pin, sandwich the nylon spacer to secure the dampener in the middle of the bracket.



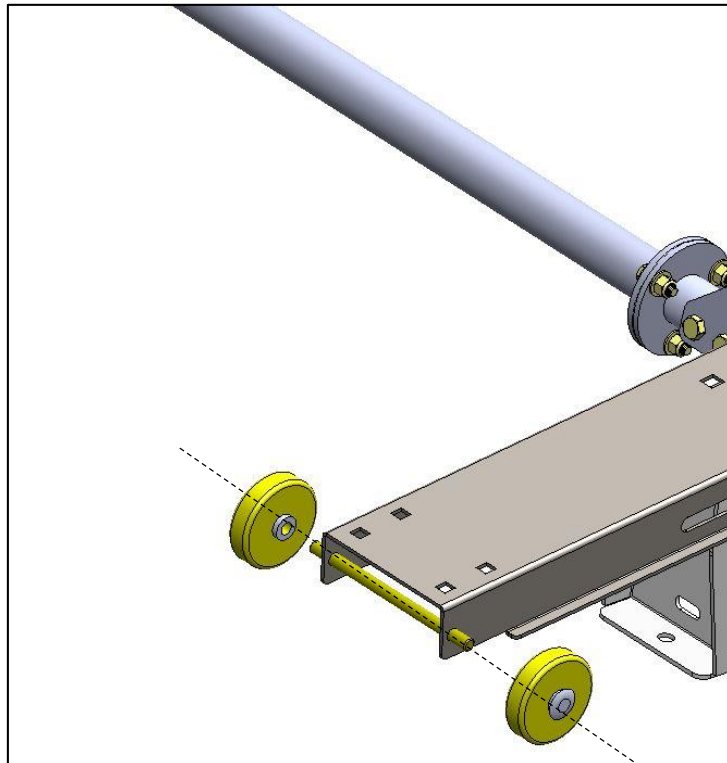
Step 5

Attach torque tube(40993-25 and 40993-24) using ¼" bolts (J) with flat washers(k) and nyloc nuts(l). Check distance between feet on both driver and passenger side, they must be EXACTLY the same to insure the bow assemblies are parallel.



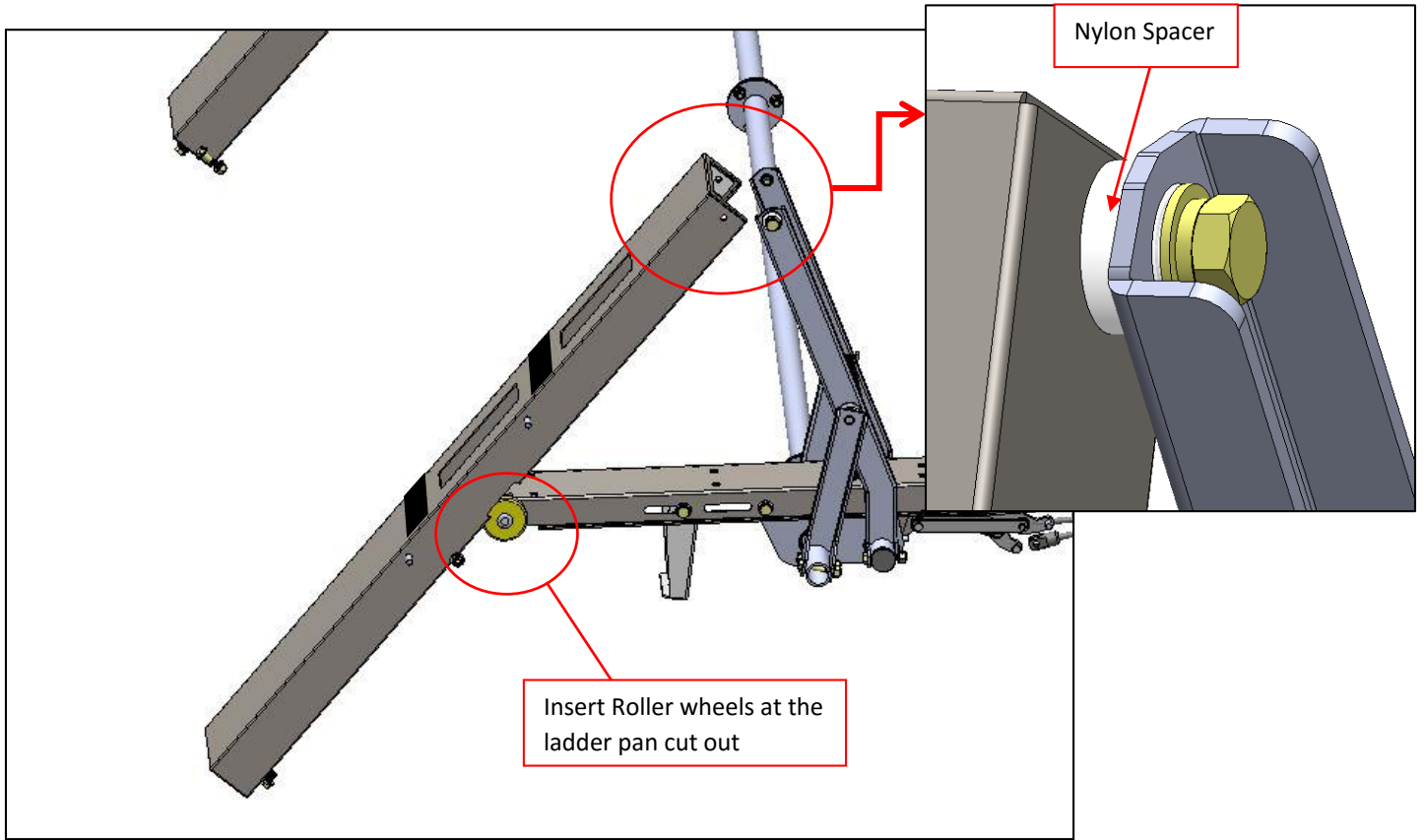
Step 6

Next install the "Axles" and "Rollers" at the end of both front and rear crossbow. The "Axle" just slides in and the "Rollers" slide over the ends of the "Axle" as shown below, make sure insert the nylon washers(n) between the wheels and crossbow.



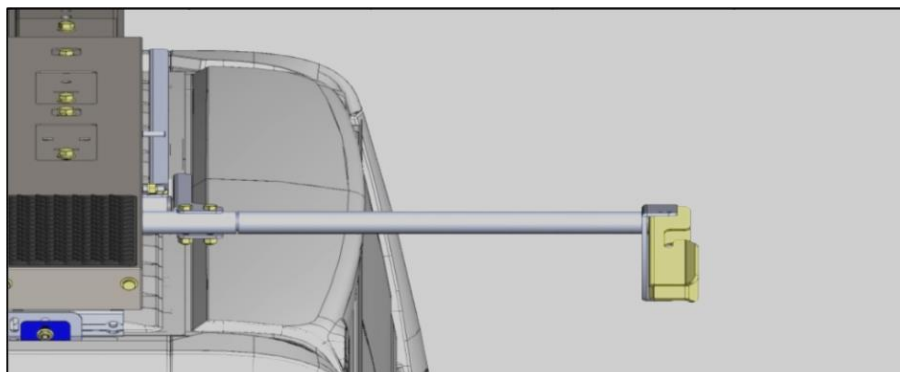
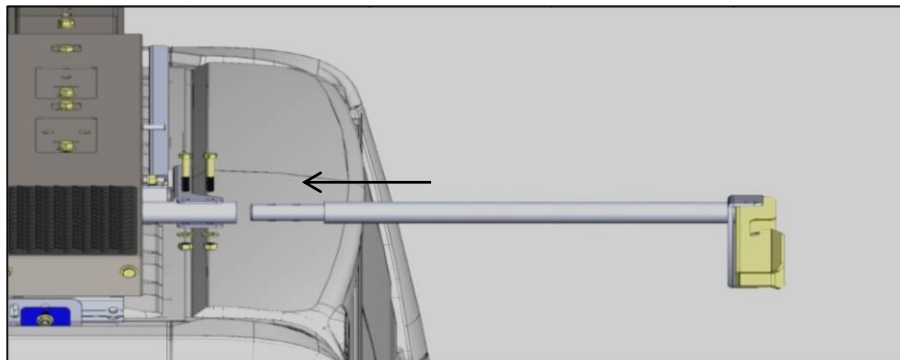
Step 7

Next install the "Ladder Pan Assy." Align cutouts in "Ladder Pan Assy.(40993-10)" with the "Rollers" and guide the arms onto the "Torque Tube Pivot Assy." As you lower the Pan assembly onto the rollers, remove the bolt assembly pre-installed on Ladder Pan, and use the same bolt assembly to secure the Arm with Ladder Pan. **Caution: Make sure the nylon spacer is sandwiched between the Arm and Ladder Pan, and lock washer or nyloc nut is used on this assembly.**



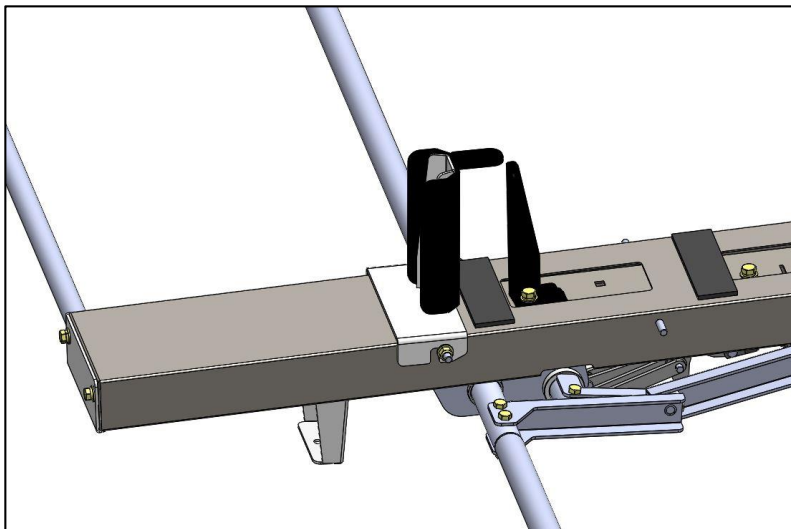
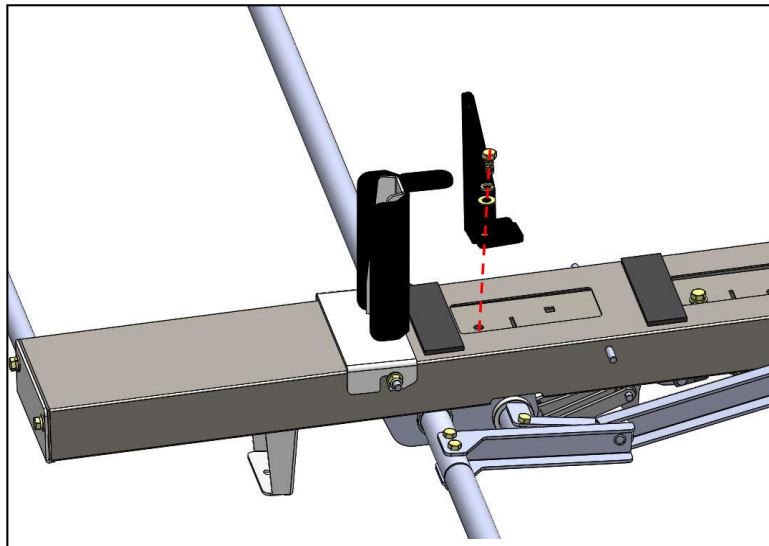
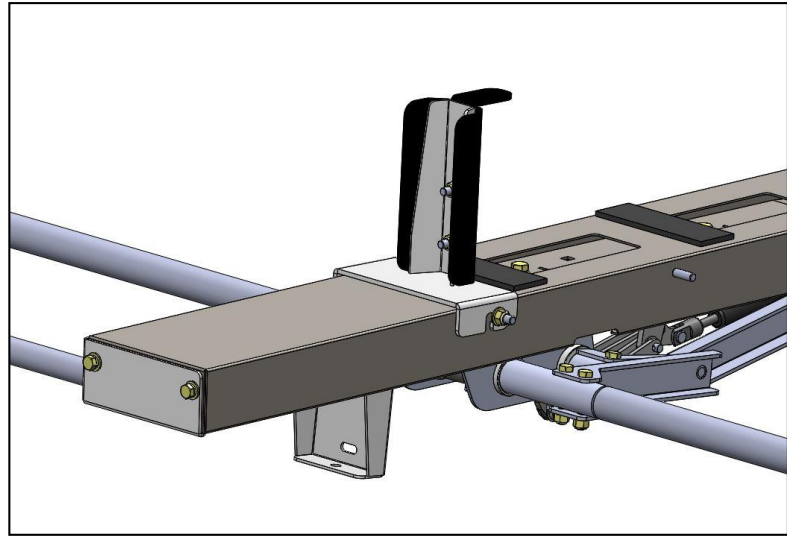
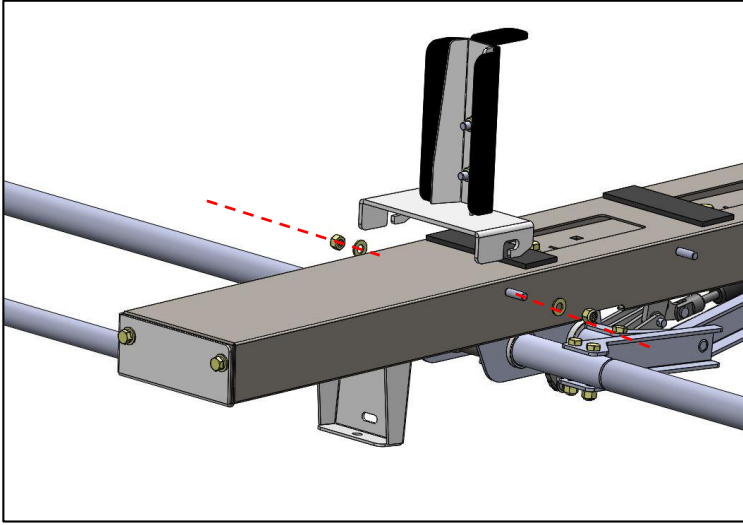
Step 8

Next attach the "Handle Assy. (40993-45)." as shown. **Optional:** If Handle Assy. does not extend far enough to clear rear vehicle, add the Extension Tube (40993-40-002) using 2 of 5/16" x 1.75" bolt (r), flat washer (b) and Nyloc Nut (d) to extend the Handle Assembly.



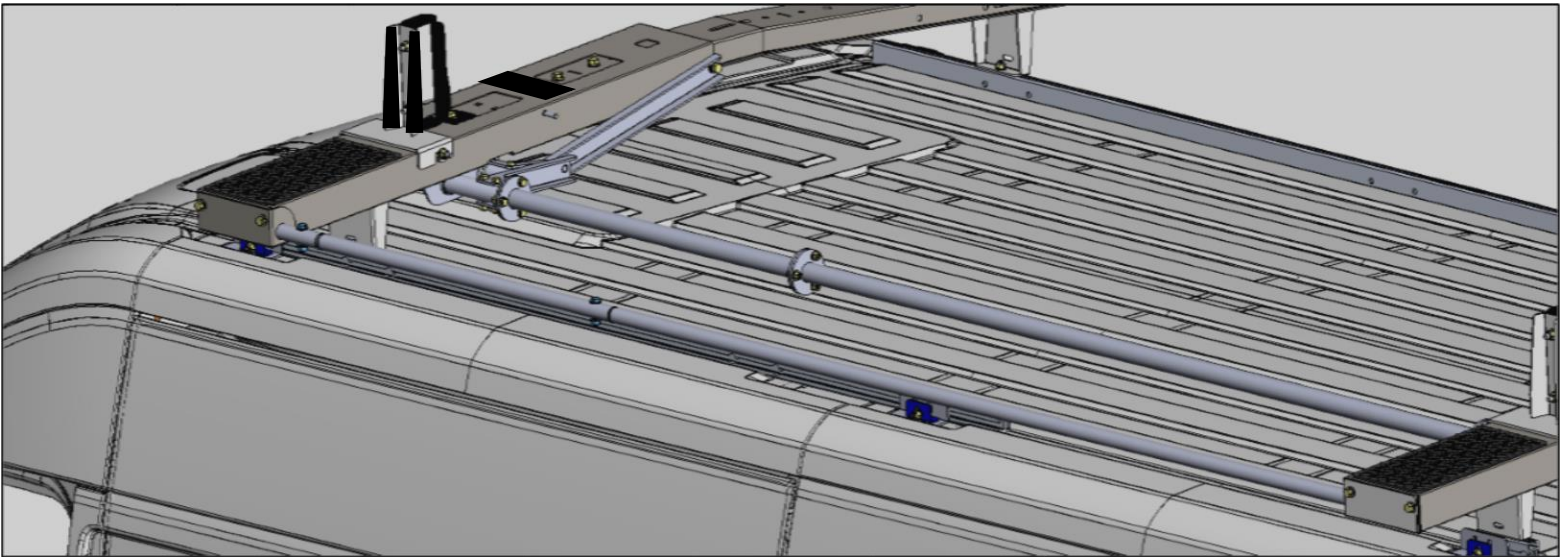
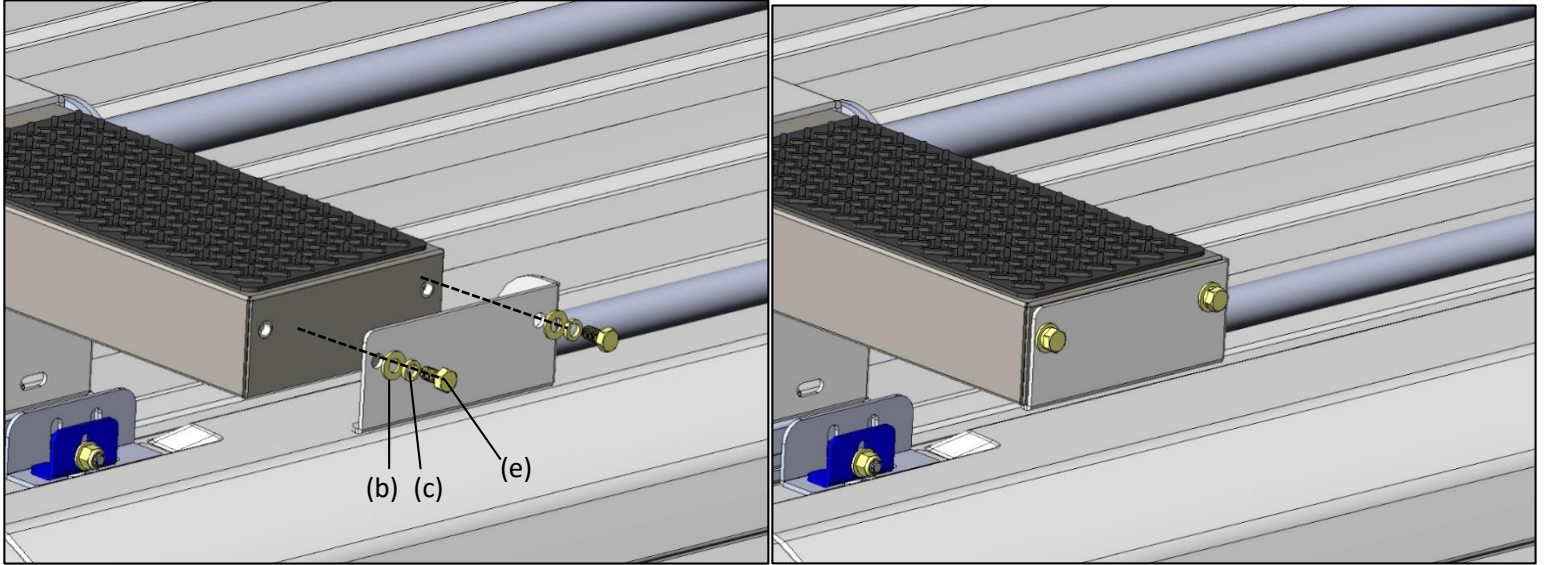
Step 9

Next attach the "Ladder Hooks (40800-31)" and "Ladder Stops (40900-30-004)". Attach "Ladder Hooks" to ladder pans on 5/16" studs in desired location. Attach "Ladder Stops" to coincide with "Ladder Hooks" by removing 3/8"x3/4" bolt and placing stop so the tab on the stop goes into the corresponding slot. If using a "step ladder" mount "Ladder Hooks" in the upper location in the rear. If you are using an "extension ladder" use the same location as the front bow.



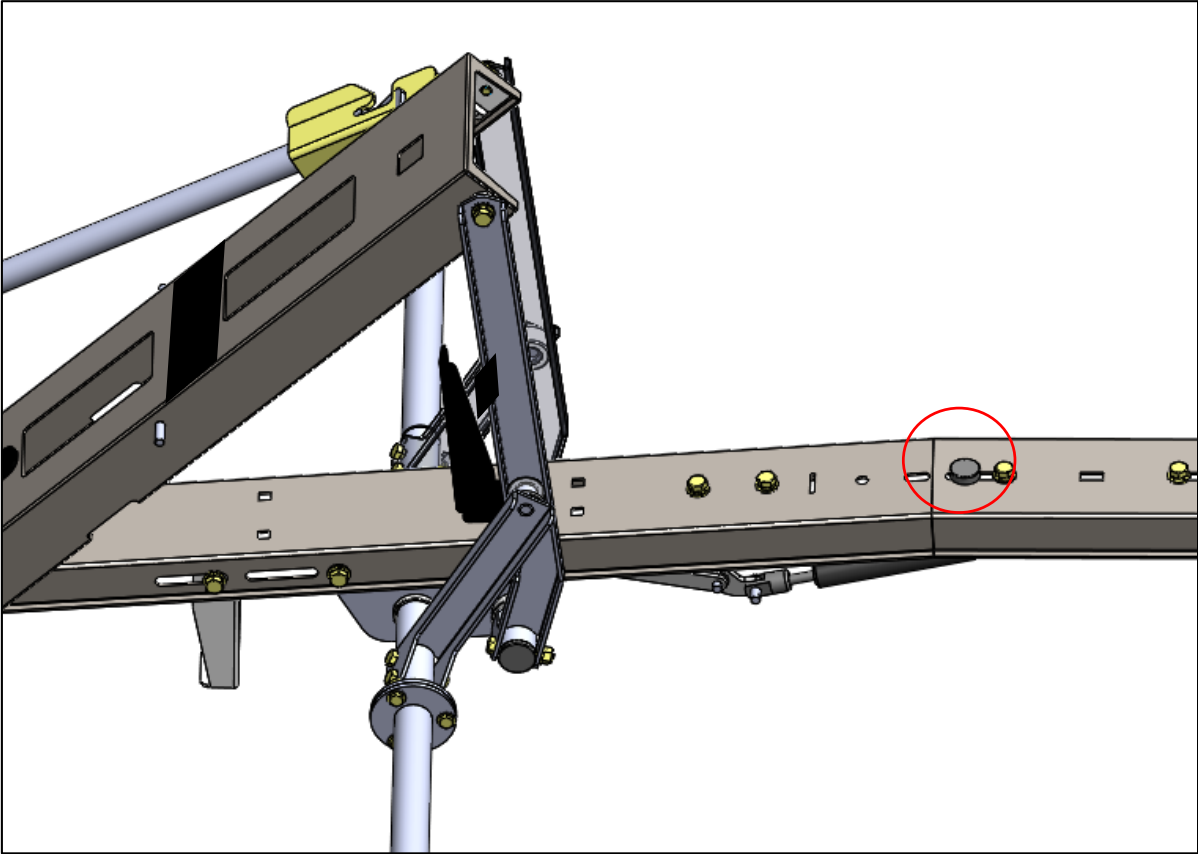
Step 10

First using 5/16"x1.5" Hex bolt (q) with two flat washers(b) and nyloc nut (d) to connect the ladder pan stiffener (40993-31 and 40993-832) and USE E6000(m) AROUND HOLES. Attach ladder pan stiffener, in the closed position, using 5/16"x5/8" bolts (e) with lock washers (c) and flat washers (b). Confirm that distance between passenger side feet and driver side feet are still EXACTLY the same. Now you can tighten the feet for the front and rear bow assemblies.



Step 11

Place the rubber bumper(a) to both front and rear crossbow as shown below.



Installation is now complete.

