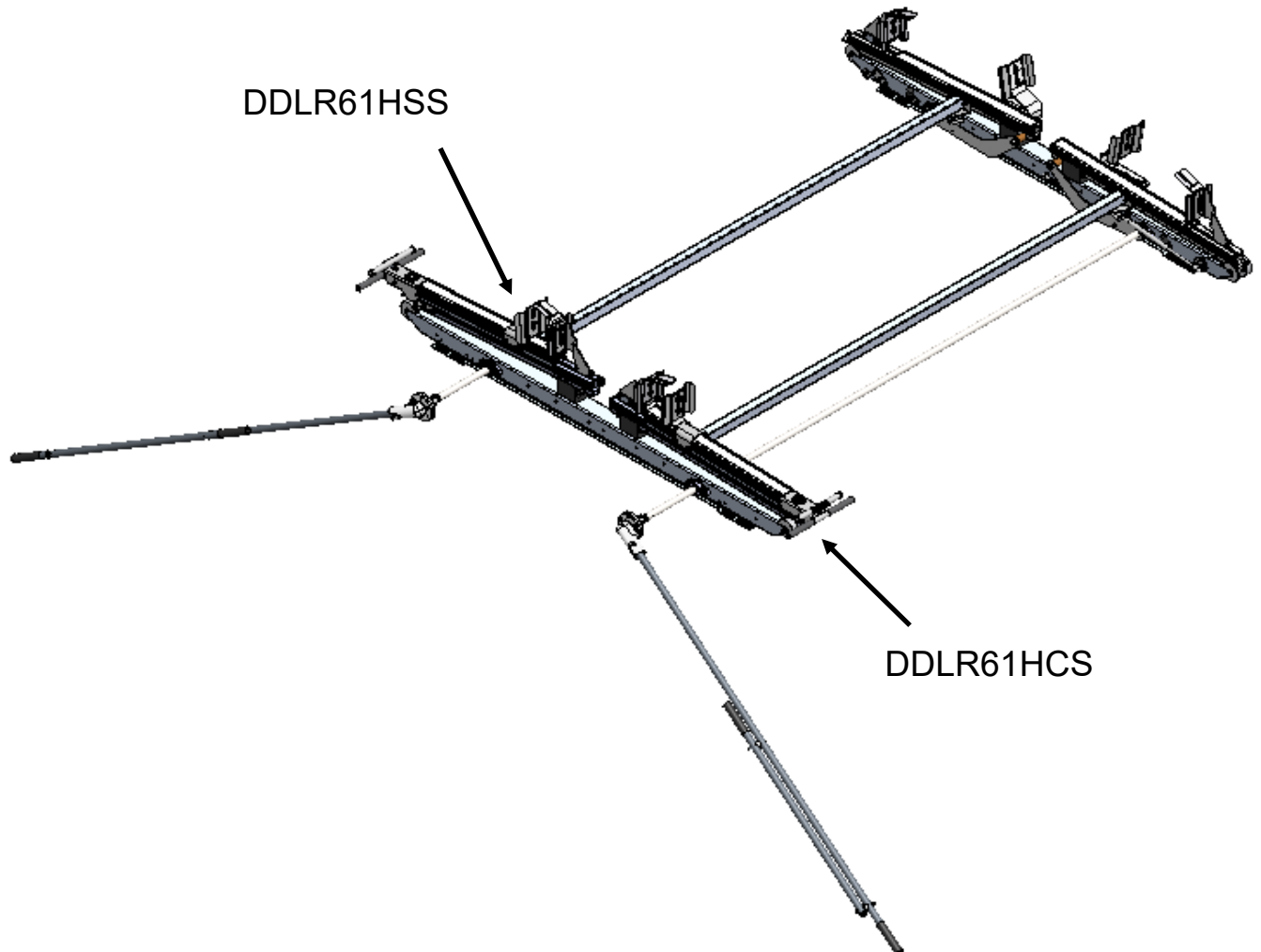


Introduction / Comments:

Installation instructions for DDLR61HCS and DDLR61HSS. NOTE: This is for high roof vehicles only

Note:

It is advised that all fasteners used in this assembly and installation should be checked for tightness at the following intervals: @ 2-weeks and again @ 6-weeks of operation. This preventive maintenance step must be completed to ensure your Product gives you long service life.



**DDL61HCS / DDL61HSS
SINGLE DROP DOWN LADDER RACK
CURB AND STREET SIDE, HIGH ROOF VANS W/
HANDLE EXT.**

- PRECAUTIONS -



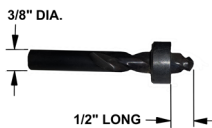
CAUTION
THE USE OF AIR IMPACT TOOLS CAN
OVER-TORQUE FASTENERS AND
CAUSE FASTENER FAILURE!



CAUTION
ALL INSTALLATION HOLES SHOULD BE SEALED
WITH SILICON OR BUTYL SEALANT TO PREVENT
EXHAUST FUMES FROM ENTERING THE VEHICLE!



DANGER
INSPECT FOR FUEL TANK, FUEL LINES, BRAKE LINES, HIGH
VOLTAGE BATTERIES AND ELECTRICAL LINES PRIOR TO
DRILLING TO AVOID DAMAGING CRITICAL VEHICLE SYSTEMS
OR INJURY TO INSTALLER DURING INSTALLATION PROCESS!



CAUTION
TO AVOID DAMAGING THE VEHICLE ALWAYS USE DRILL
STOPS WHEN DRILLING ANY INSTALLATION HOLES!
ADRIAN AVAILABLE PART #'S 31119-0 (3/8" X 1/2"
DEEP), 31121-0 (1/2" x 1/2" DEEP)



- IMPORTANT WARRANTY REQUIREMENTS -

1. SUBSTITUTING ADRIAN STEEL SPECIFIED FASTENERS FOR ASSEMBLY AND/OR INSTALLATION WILL VOID YOUR PRODUCT WARRANTY.
2. ALL HOLES DRILLED INTO VEHICLE SHOULD HAVE THE RAW METAL EDGES SEALED WITH A SELF-ETCHING PRIMER TO RESIST CORROSION AND POTENTIAL FASTENER POINT FAILURE.
3. ALL FASTENERS USED IN THE INSTALLATION OF THIS PRODUCT SHOULD BE TIGHTENED TO THE TORQUE(S) SPECIFIED IN THESE INSTRUCTIONS.
4. THESE INSTRUCTIONS SHOULD BE KEPT WITH THE VEHICLE.

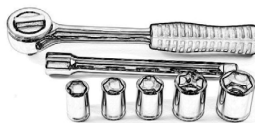
THE BASIC TOOLS NEEDED FOR MOST INSTALLATIONS



DRILL



DRILL BIT WITH
STOP



RATCHET, SOCKETS
AND/OR WRENCHES



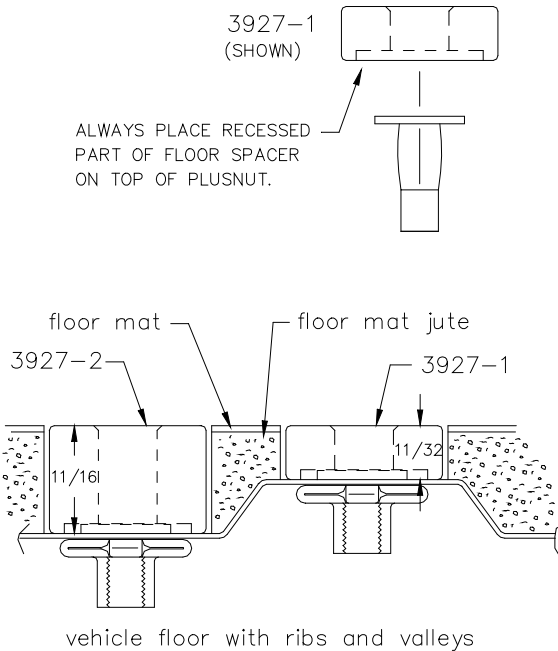
SCREWDRIVERS



MEASURING TAPE

ADDITIONAL TOOLS MAY BE NEEDED FOR THIS INSTALLATION AND THEY WILL BE IDENTIFIED IN THE STEPS THAT FOLLOW.

If your vehicle contains carpet or a rubber floor mat you will need to prepare the mounting location. Position the product to be installed into the vehicle and once you are satisfied with the mounting locations, mark the mounting locations. Using a 1-3/16" diameter carpet cutter (P/N: 31183-0). Select the appropriate floor spacers as shown in the illustration. Set those aside for use later into the installation process. Using the correct drill bit size for the selected plusnut, drill the mounting holes in the vehicle sheet metal to prepare for installing the plusnuts. If you are thru-bolting at any of the locations simply drill a hole that is 1/16" larger than the bolt size(s) for those locations. Once you have drilled the holes into the vehicle, the raw metal edges should be sealed using a self-etching primer to resist corrosion and potential fastener point failure.



A PLUSNUT (RIVNUT) SETTING TOOL IS REQUIRED FOR PLUSNUT (RIVNUT) INSTALLATION . PLUS NUT SETTING TOOL CAN BE ORDERED THROUGH ADRIAN STEEL, OR USE AN AIR POWERED PLUSNUT SETTING GUN.

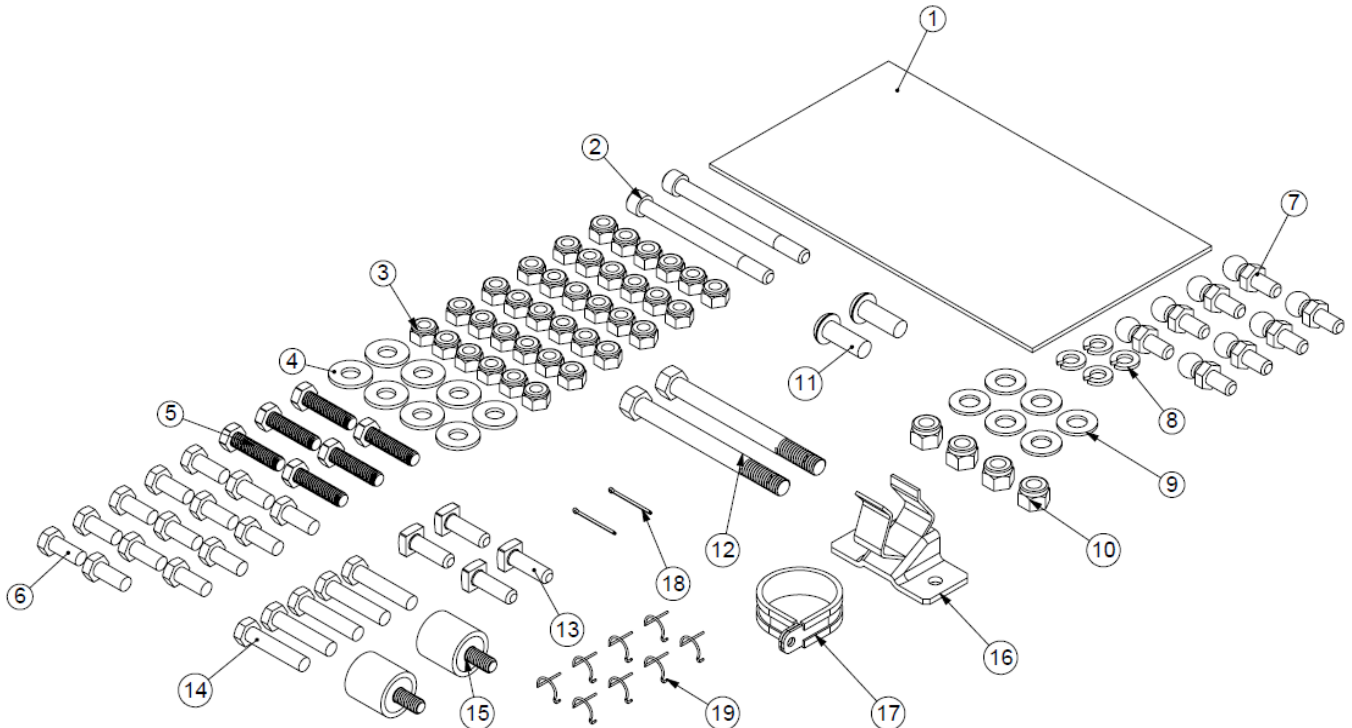
1/4-20UNC Plusnut (FAS0052) Use 3/8" dia. drill w/stop
 FAS0080 SCREW, HXHD, 1/4-20UNCx2.00", G8
 FAS0067 WASHER, FLAT, 1/4"ID
 22200-0 PLUSNUT TOOL

5/16-18UNC Plusnut (FAS0091) Use 1/2" dia. drill w/stop
 FAS0095 SCREW, HXHD, 5/16-18UNCx2.00", G8
 FAS0086 WASHER, FLAT, 5/16"ID
 22200-0 PLUSNUT TOOL

Place barrel of the plusnut body in sheet metal thru hole until flange is flush with sheet metal.
 Using a 9/16" combination wrench of plusnut tool body and a second hand wrench, ratchet, or air tool, rotate the hex bolt head CW to draw plus nut flanges up (set the plusnut).

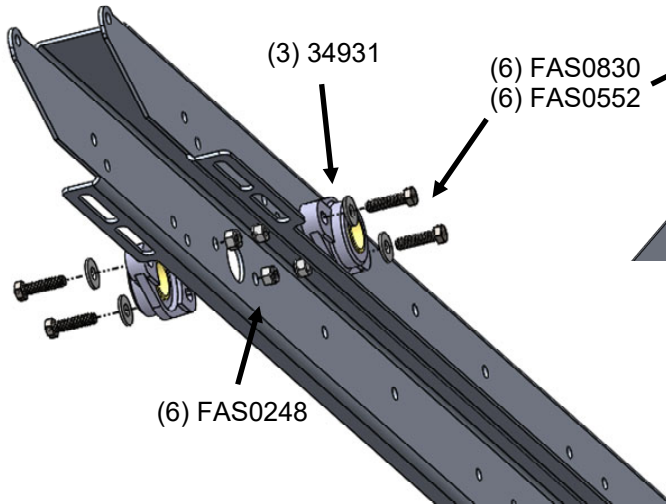
**BAG56325
FASTENER BAG FOR DDLR HIGH ROOF**

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	BAG0509-A	5"X10" 4MIL AUTOBAG	1
2	FAS0811	SCREW,CAP, 5/16-18X3.20 SS	2
3	FAS0248	Nut, Nylon Insert Lock, 5/16-18 SST	36
4	FAS0552	Washer, Flat, 5/16, SST	8
5	FAS0830	Screw, Hex Hd, 5/16-18 X 1.25 SS	6
6	FAS0799	Screw, Hex Hd, 5/16-18x0.75 SS	14
7	34927-0	Ball Stud, Damper	8
8	FAS0588	Washer, Lock, Split, 5/16, SS	4
9	FAS0246	Washer, Flat, 3/8, HRD, ZN	6
10	FAS0110	Nut,Hex Nylk 3/8-16 SS W	4
11	FAS0572	Screw, Button Hd Hex Soc, 3/8-16x1.00 NI-ZN	2
12	FAS0286	SCREW, HHCS, 3/8-16x4, SS	2
13	FAS0035	BOLT,SQ HD,5/16-18X1.0 SS	4
14	FAS0242	Screw, Hex Hd, 5/16-18x1.50 Stainless Steel	5
15	56098	BUMPER STUD, 1" X 1", HR	2
16	34922-0	HOLDER, TOOL, LOAD RATED	1
17	34921-0	CLAMP, CABLE, LOOP, 1.5" ID	1
18	FAS0287	COTTER PIN, 1/16DIA X 1"LG, SS	2
19	34928-0	CLIP, SPRING, RETAINER, 13mm	8

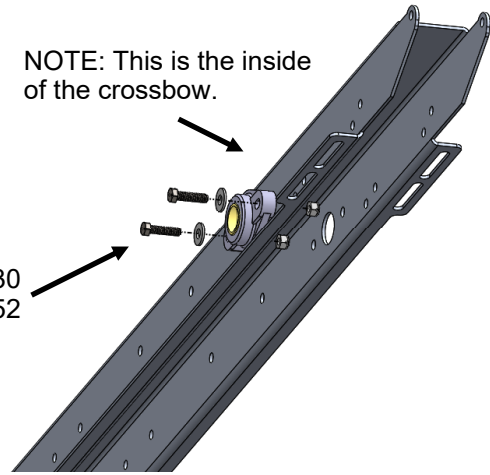


Step 1CS Fasten driveline bearings to crossbows. Rear crossbow should have bearings on inside and outside of crossbow. The front crossbow should have one bearing facing the center of the ladder rack.

REAR CROSSBOW

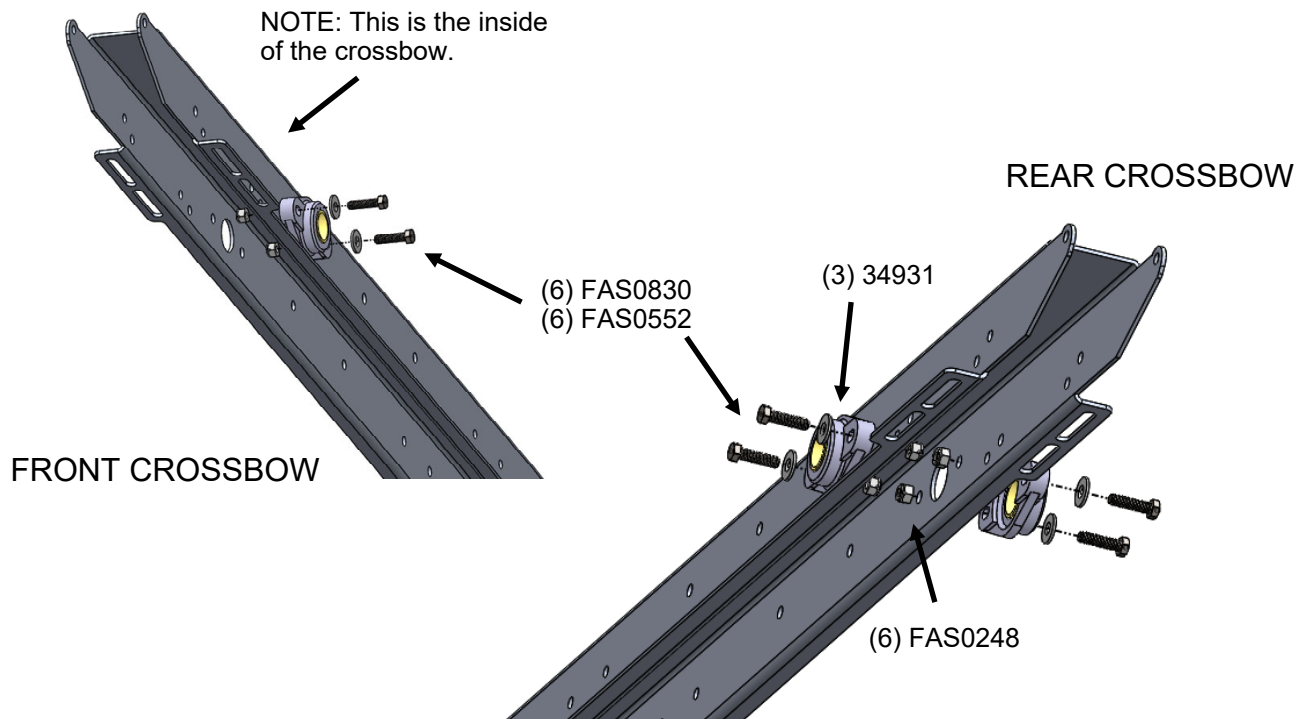


NOTE: This is the inside of the crossbow.

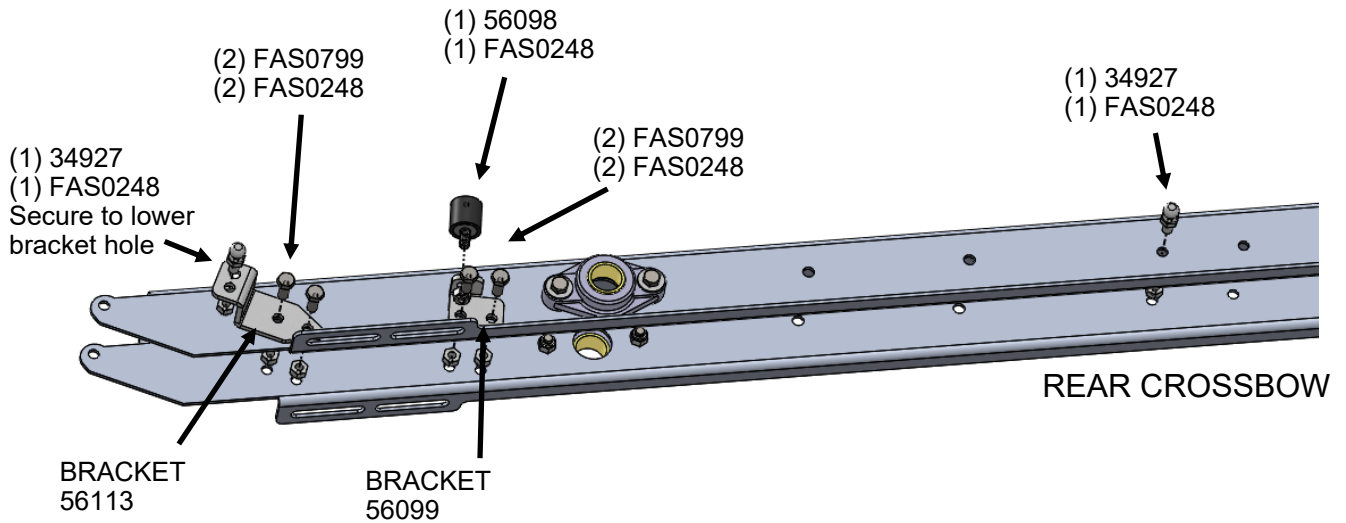


FRONT CROSSBOW

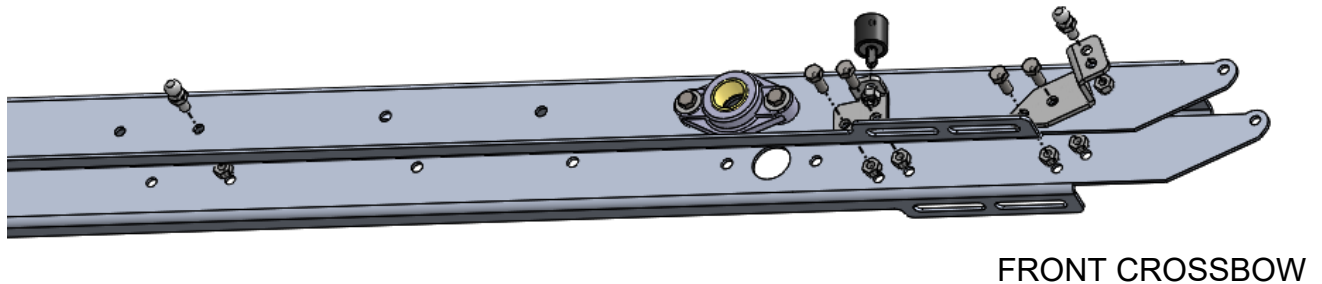
Step 1SS To mount to the streetside you follow the same rules as with the curbside; two bearings on the rear crossbow and one on the front, facing the inside of the ladder rack.



Step 2CS / 2SS Attach damper brackets and bumper to the inside of the front and rear crossbows. This step is the same for a curbside and streetside facing drop down.



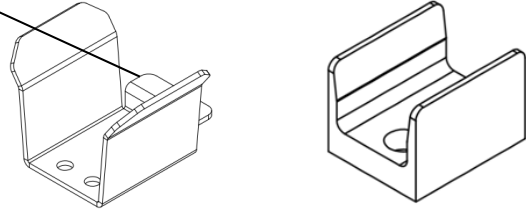
THIS STEP IS MIRRORED FOR FRONT AND REAR CROSSBOWS



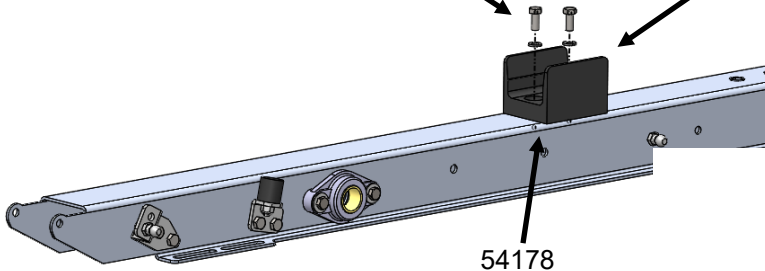
Step 3CS / 3SS Fasten capture bracket to the front and rear crossbows, use the set of rivnuts closest to the application side of the van. Also attach the stationary backstop on the front crossbow only.

IF USING THIS STYLE, ENSURE THE REST FLANGE IS MOUNTING FACING TO THE OUTSIDE OF THE LADDER RACK! THIS WILL GIVE CLEARANCE FOR A CONDUIT KIT TO BE MOUNTED IN THE CENTER.

NOTE: ITEM 54178 WILL VARY APPEARANCE AS EITHER VIEW SHOWN BELOW.



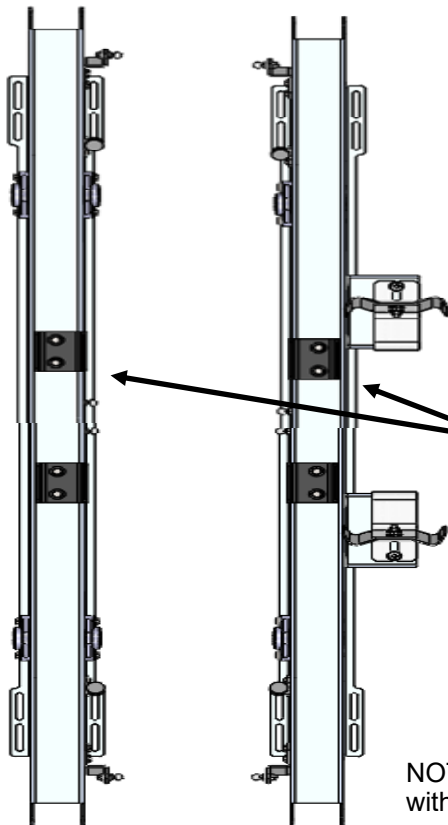
(2) FAS0588
(2) FAS0799



NOTE: Backstop assembly may need to be adjusted later depending on the ladder carried.

REAR CROSSBOW

FRONT CROSSBOW



(2) FAS0572
(2) FAS0246

(2) FAS0799
(2) FAS0552

(2) FAS0110

(2) FAS0248

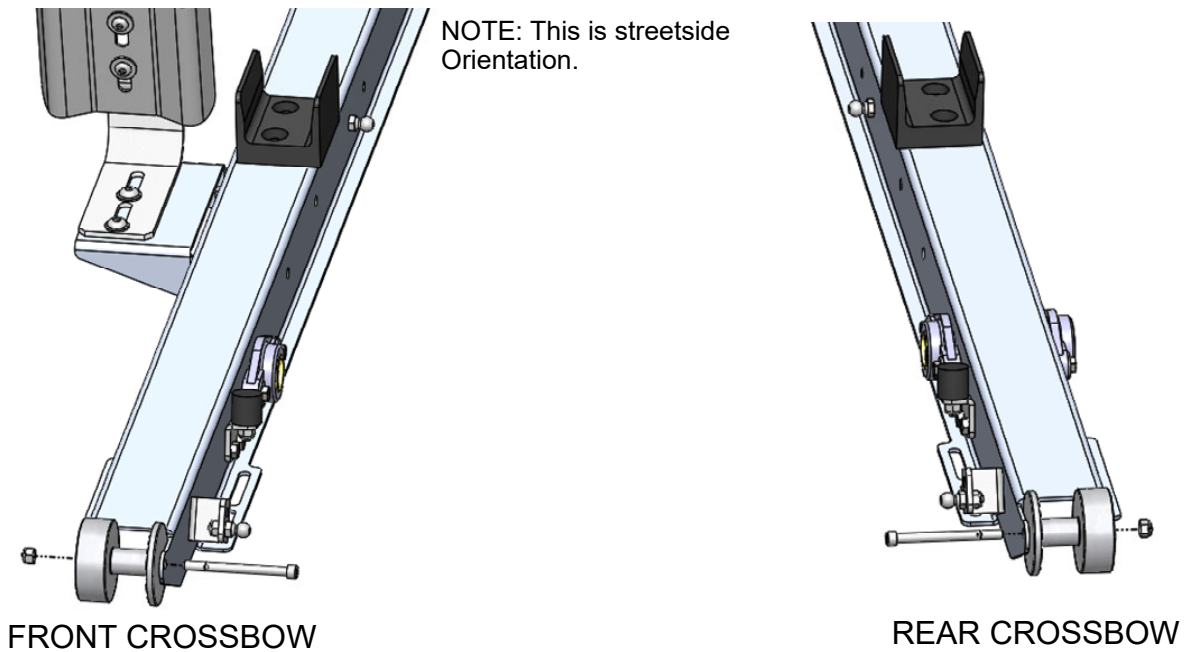
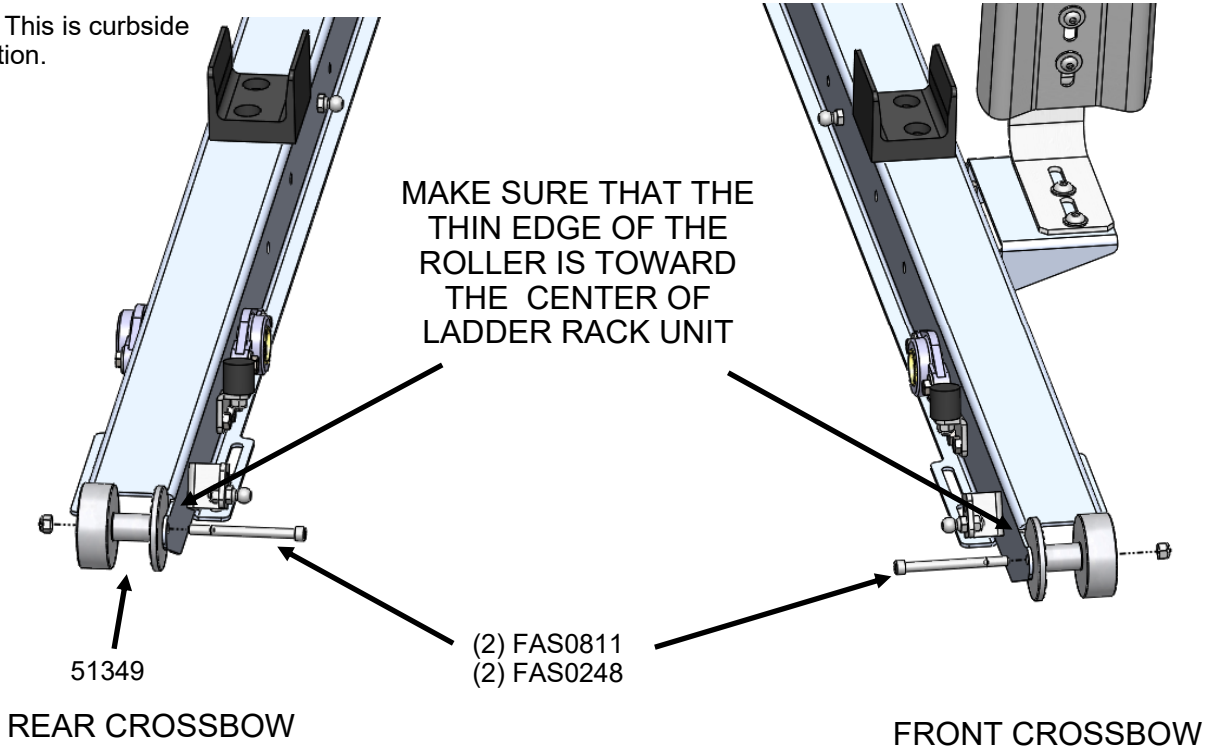
NOTE: The wider side of the capture bracket goes toward the inside of the ladder rack for both front and rear.

FRONT CROSSBOW

NOTE: This is an overhead view with both curbside and streetside components on the crossbows.

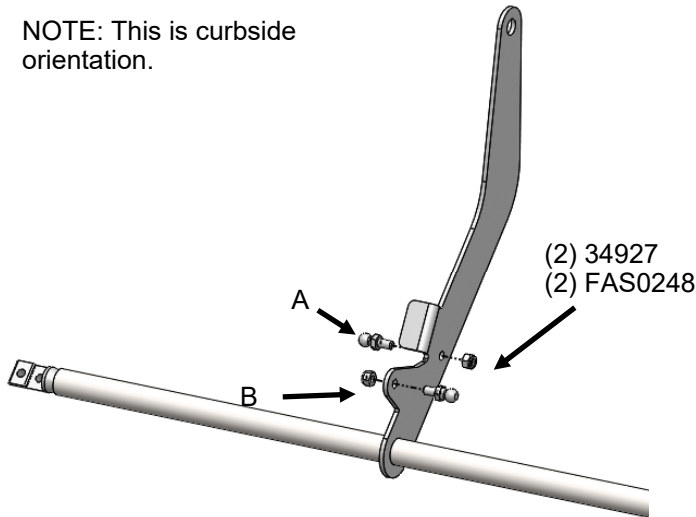
Step 4CS / 4SS Fasten drop down rollers to the side of the crossbow you are using to access your ladder rack. Curbside or streetside.

NOTE: This is curbside orientation.

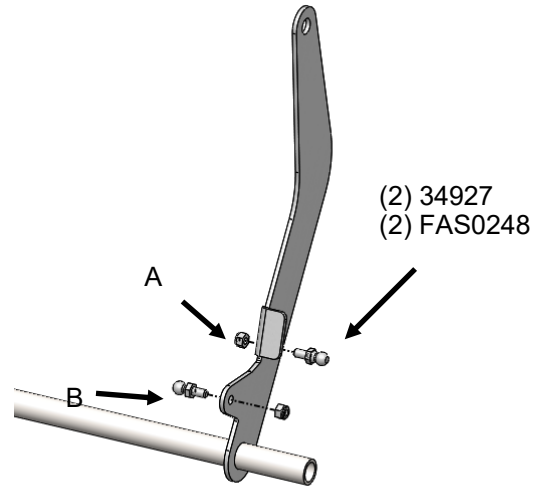


Step 5CS / 5SS Attach damper bolts to the driveline. NOTE: the fasteners labeled (A) go outward of the ladder rack and the fasteners labeled (B) face inward on the ladder rack

NOTE: This is curbside orientation.

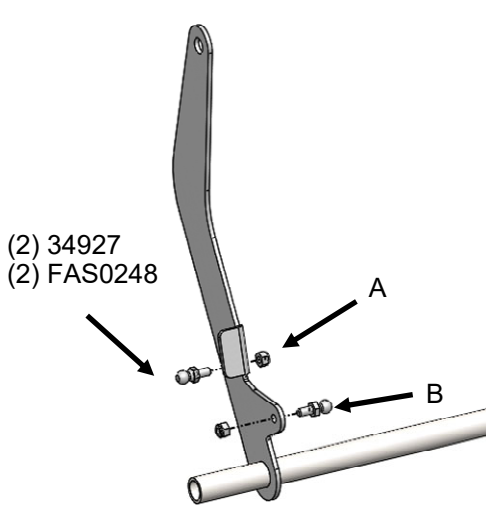


DRIVELINE TOWARDS REAR OF VAN

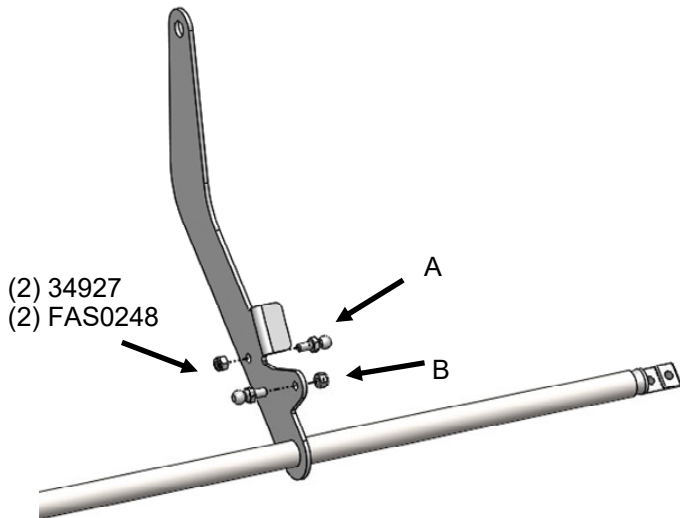


DRIVELINE TOWARDS FRONT OF VAN

NOTE: This is streetside orientation.

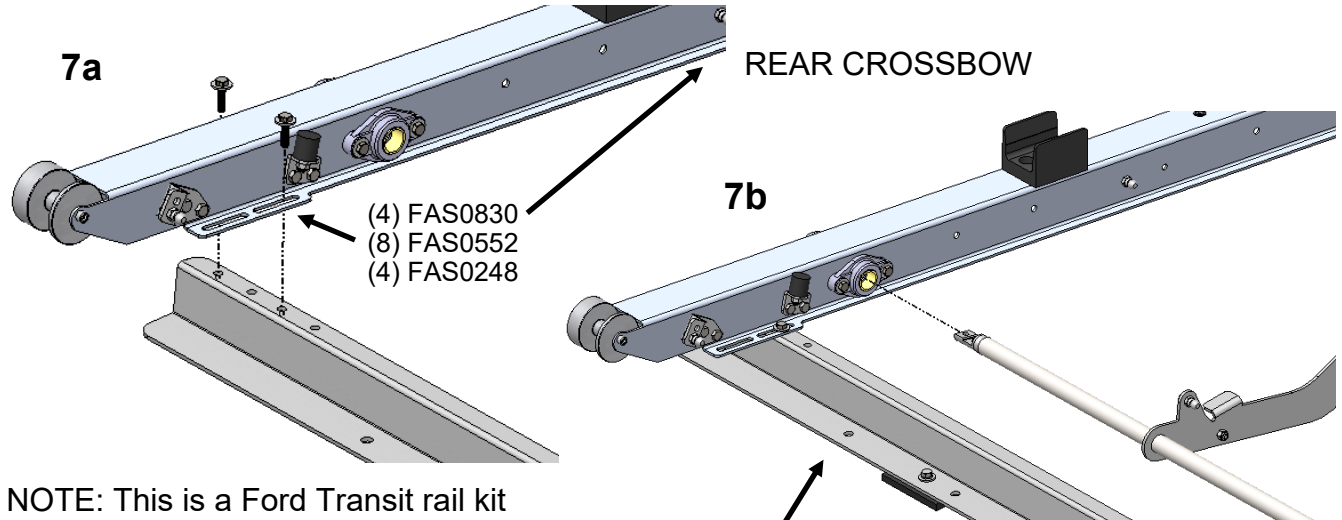


DRIVELINE TOWARDS FRONT OF VAN



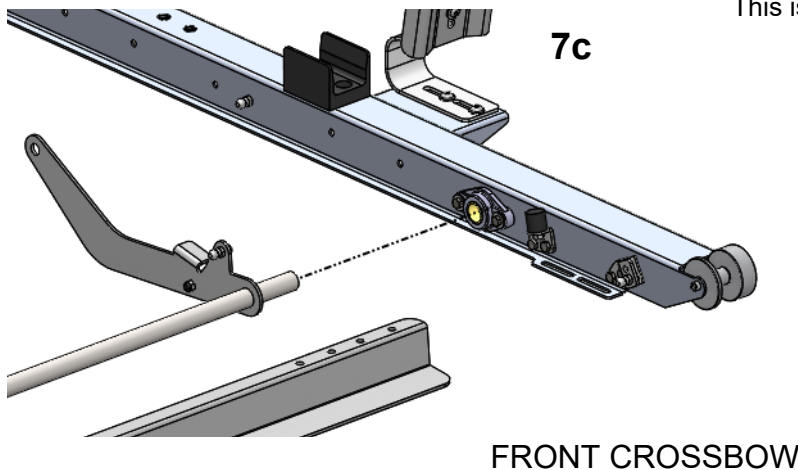
DRIVELINE TOWARDS REAR OF VAN

Step 6CS / 6SS First, fasten the rear crossbow to the roof rails on the van (a) and slide the driveline through the rear crossbow bearings (b). Then, set the front driveline into the bearing on the front crossbow (c) and attach the front crossbow to the van's roof rails (d). If you are assembling a double DDLR unit, these steps MUST be done at the same time.



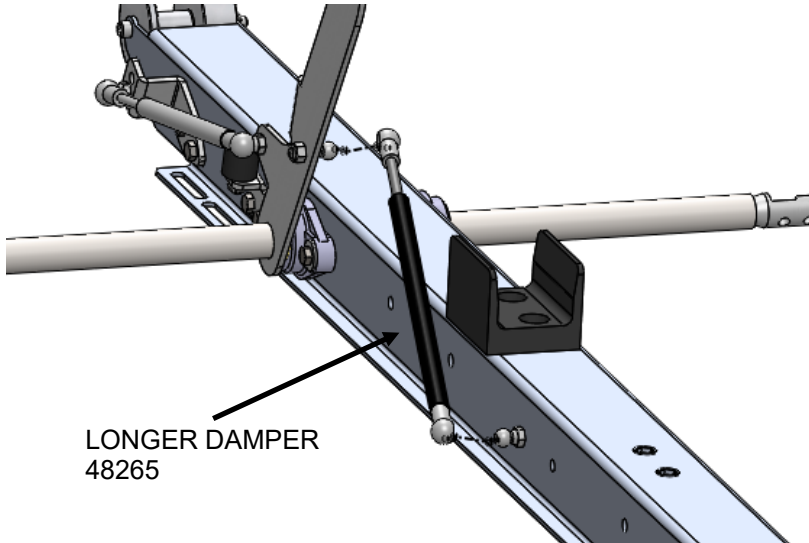
NOTE: This is a Ford Transit rail kit depicted. If your van is not a Ford Transit you will have a different rail kit. Refer to your rail kit instructions for crossbow placement, fasteners and fastening holes.

NOTE: The longer, notched end of the driveline must go into the rear crossbow for both curbside and streetside units. This is for the handle to be used.



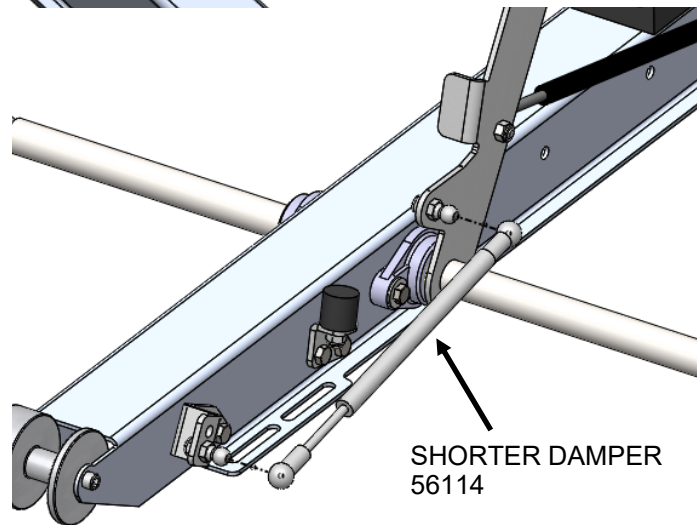
NOTE: These pictures are for a curbside assembly, but the steps are simply mirrored for a streetside one.

Step 7CS / 7SS Attach dampers to the rounded bolt heads. Use the damper's pins to secure the dampers to their bolts. Be sure that you distinguish between the long and short dampers during assembly.



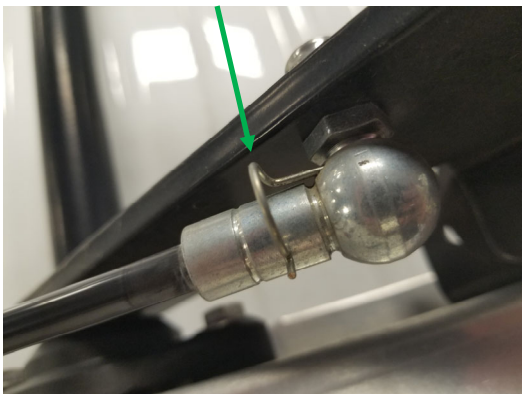
NOTE: Only the rear crossbow and dampers are shown, however this is mirrored onto the front crossbow as well.

NOTE: While this is a curbside unit image, the same steps must be followed for a streetside unit.



NOTE: Use the damper's pins to secure onto rounded bolts.

OPEN (8) 34928-0

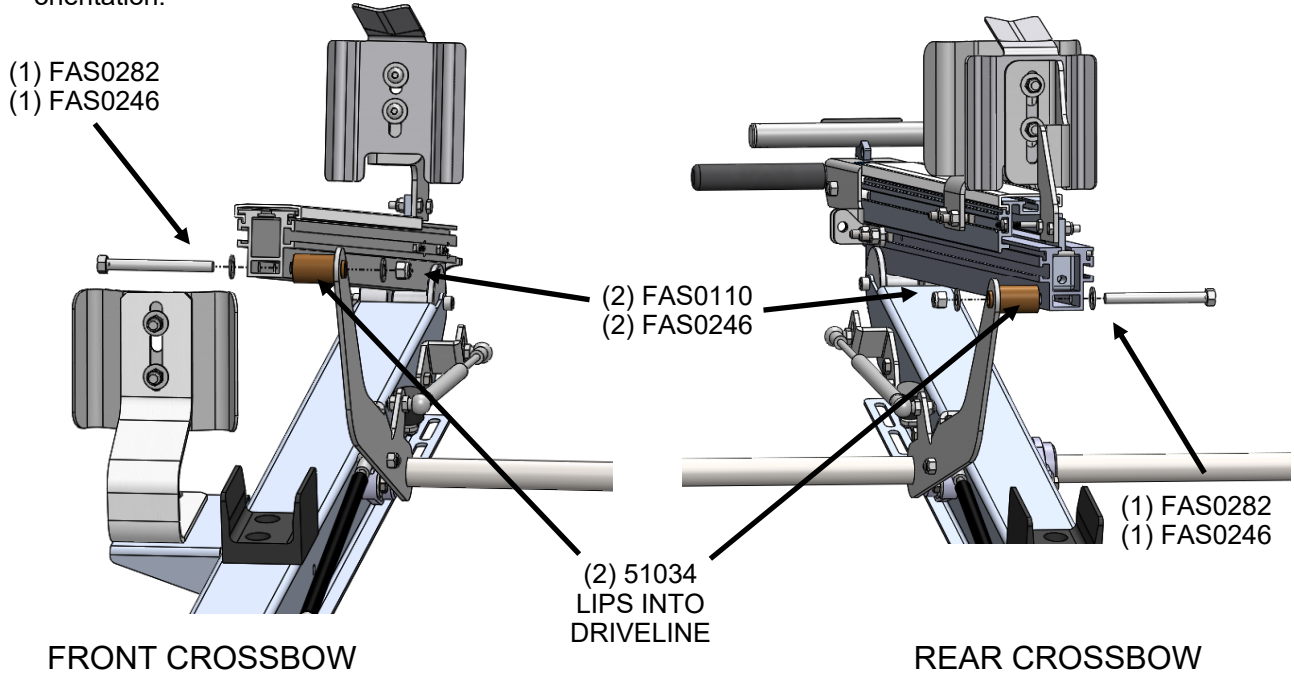


CLOSED

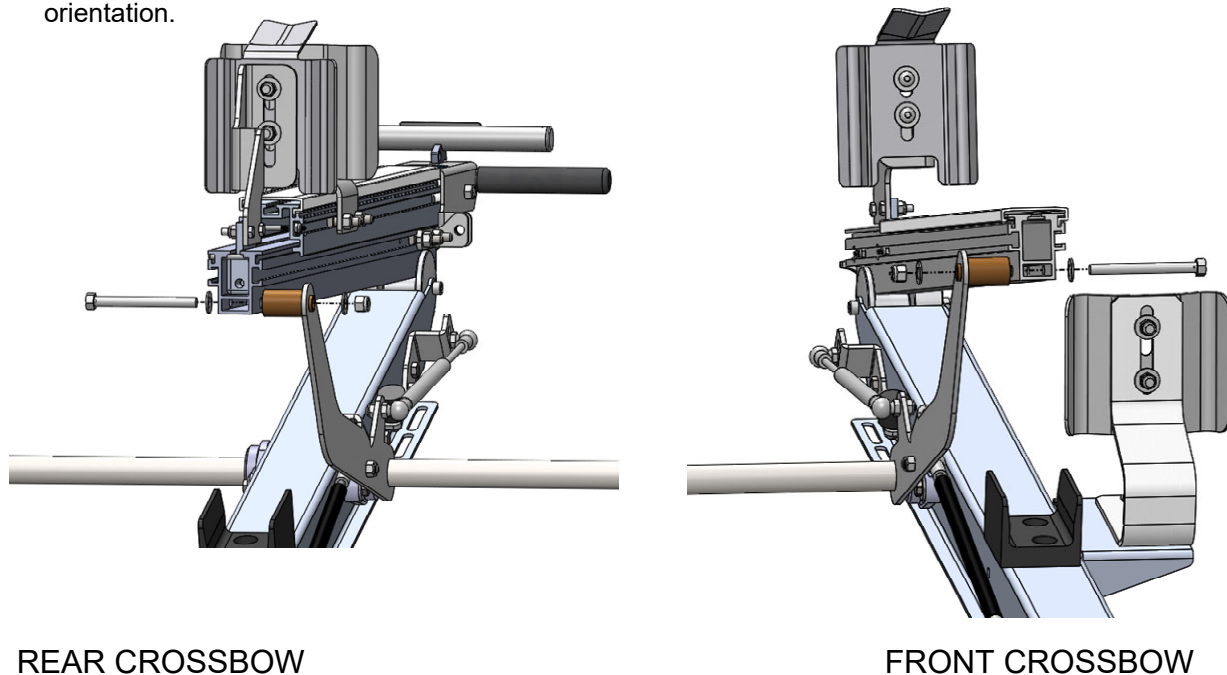


Step 8CS / 8SS Fasten drop down assemblies to the driveline and set them into the rollers on the end of each crossbow. Be sure that the primary drop down unit (with handle) is towards the rear of the van, in both streetside and curbside assemblies.

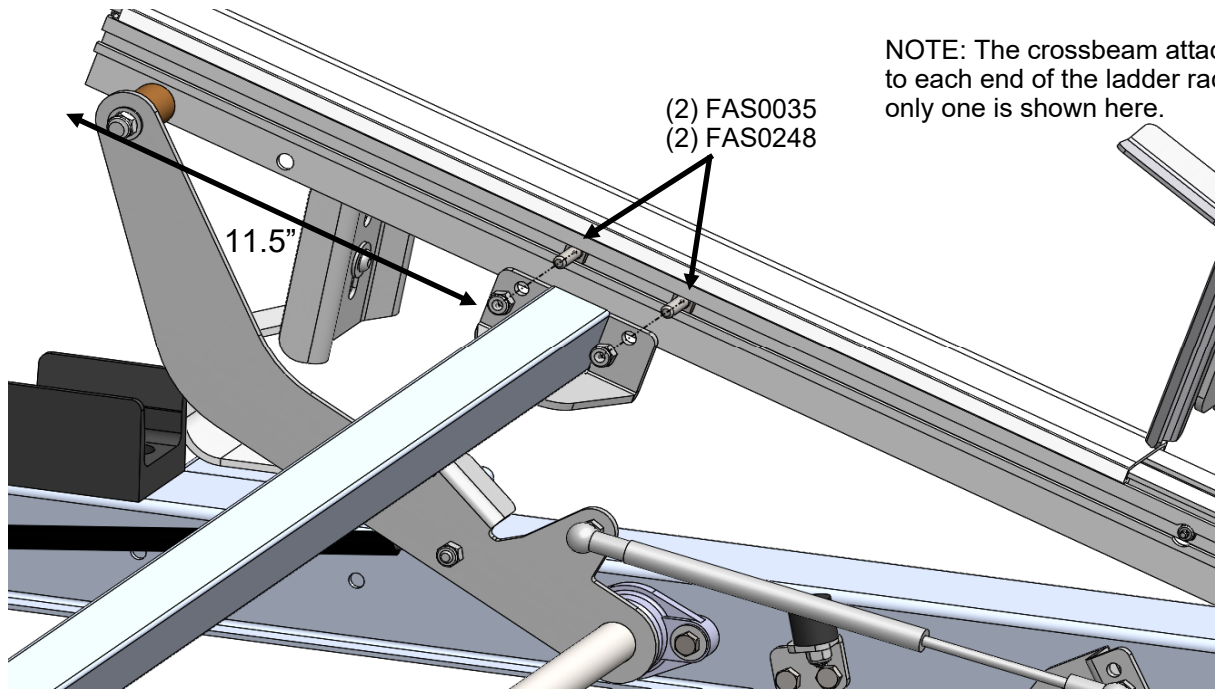
NOTE: This is curbside orientation.



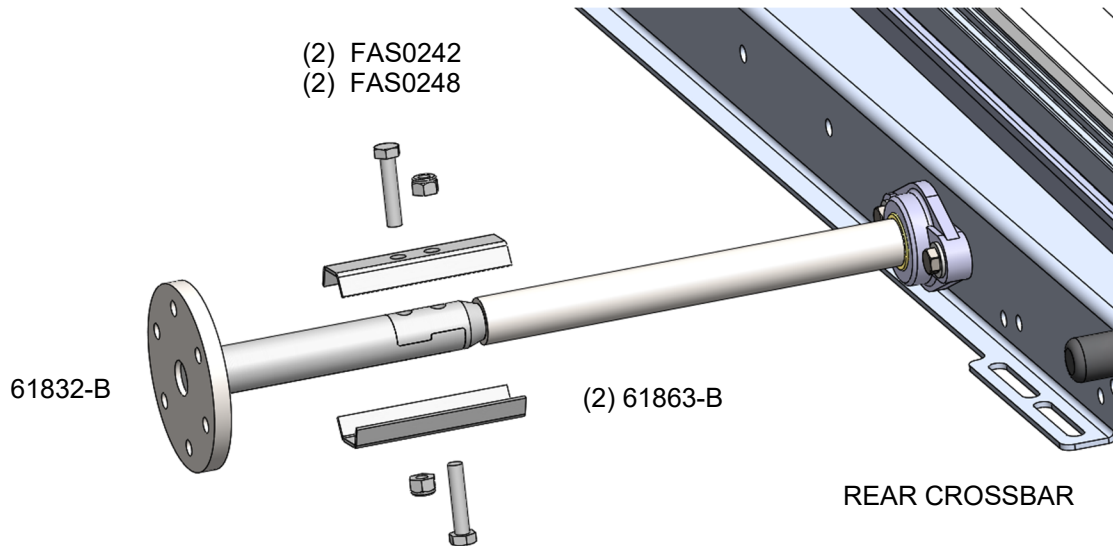
NOTE: This is streetside orientation.



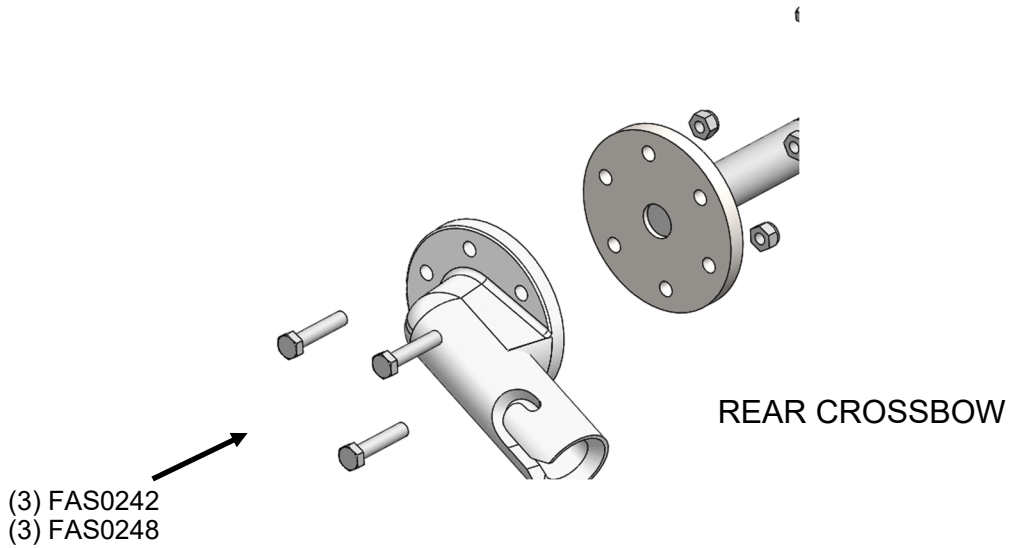
Step 9CS / 9SS Attach crossbeam to each drop down slide. The FAS0035 go into grooves on the drop down extensions. NOTE: The distance from the top of the slide to the crossbeam should be 11.5 inches.



Step 10CS / 10SS Fasten circular handle connector to the driveline. There will be one of these connections for both curbside and streetside units.

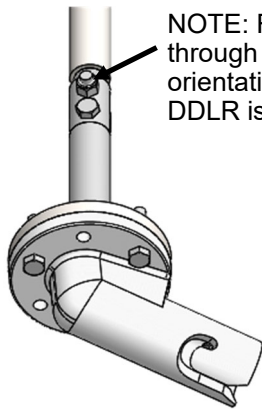


Step 11CS / 11SS Attach handle casting to the driveline. This orientation will be affected by a curbside and streetside unit.



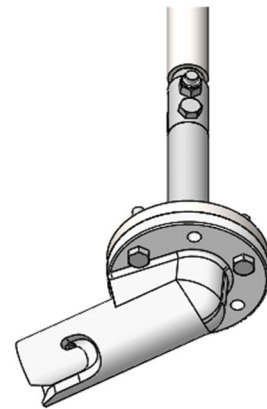
CS VIEW

SS VIEW



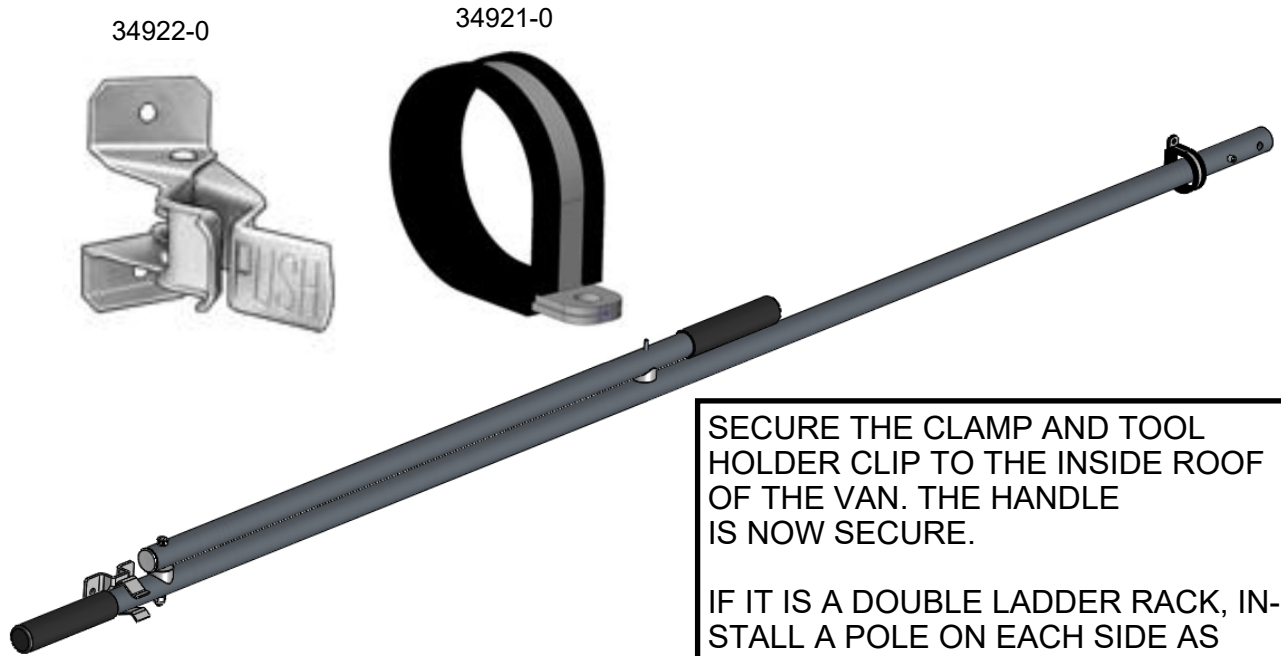
NOTE: Fasteners are vertical through the driveline. This driveline orientation is achieved when the DDLR is in the stowed position.

NOTE: This is the orientation required for the driveline handle to be properly positioned. The newly attached casting should be one hole off of vertical with the driveline in the counter-clockwise direction.



NOTE: This is the orientation required for the driveline handle to be properly positioned. The newly attached casting should be one hole off of vertical with the driveline in the clockwise direction.

Step 12CS / 12SS Optional, stow the pivot handle.

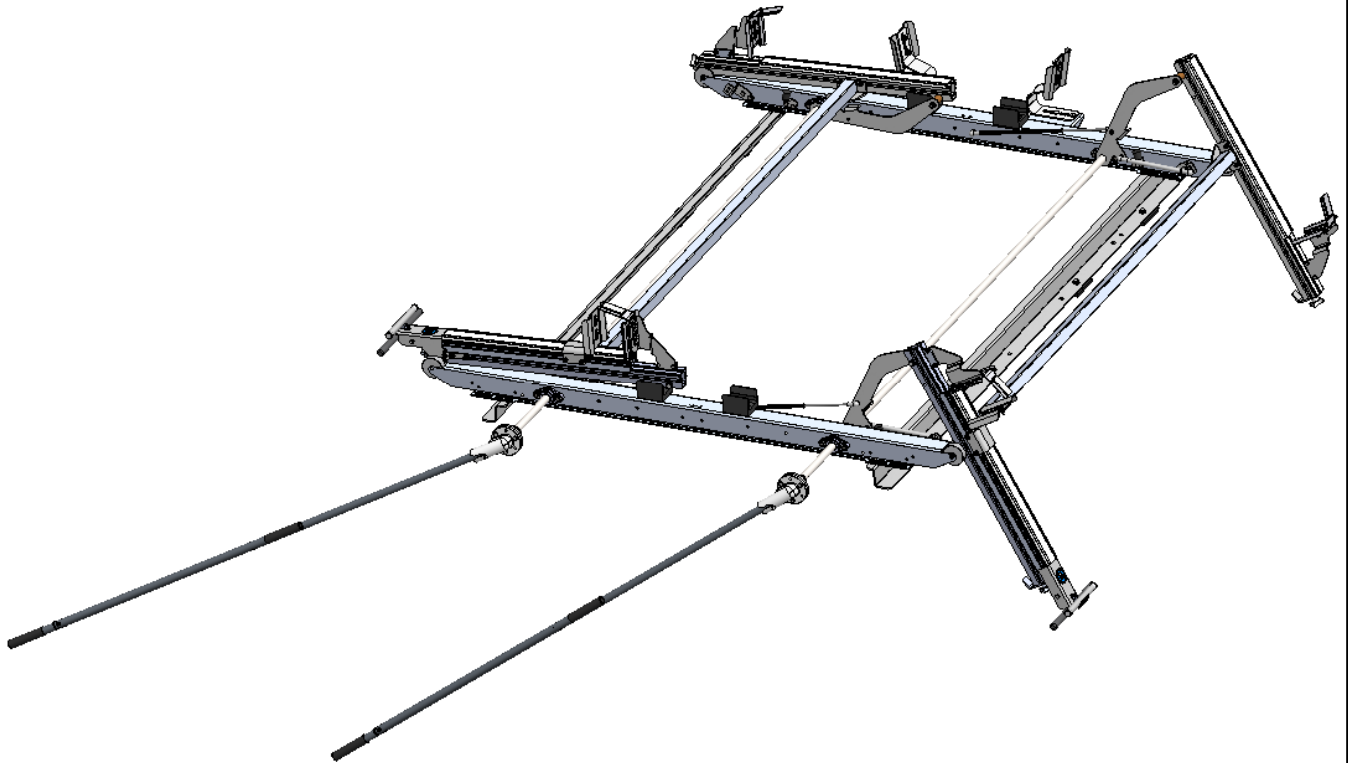


SECURE THE CLAMP AND TOOL HOLDER CLIP TO THE INSIDE ROOF OF THE VAN. THE HANDLE IS NOW SECURE.

IF IT IS A DOUBLE LADDER RACK, INSTALL A POLE ON EACH SIDE AS SHOWN.



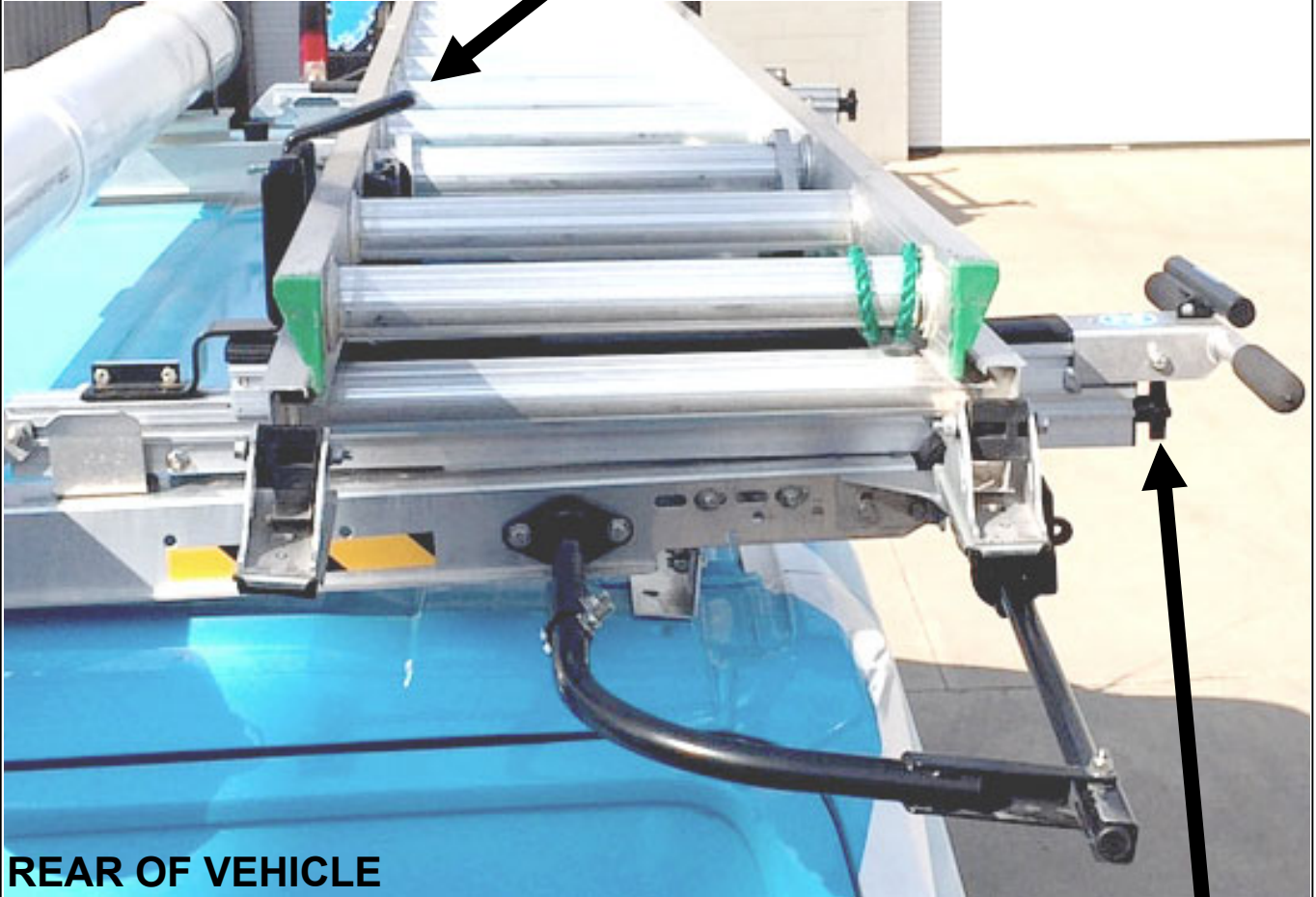
Step 13CS / 13SS Your drop down installation is now complete.



NOTE: As stated previously, this view contains a Ford Transit roof rail kit. If your vehicle is not a Ford Transit you will have a different roof rail kit. However, the drop down units will stay the same.

**DOUBLE CHECK ALL FASTENERS LOCATIONS TO BE SURE THAT ALL
FASTENERS ARE TIGHTENED TO SPECIFICATIONS.
YOUR INSTALLATION IS NOW COMPLETE!
STOW THIS COPY IN THE VEHICLE FOR FUTURE REFERENCES!**

**REAR CLAMP PAD MOVES TOWARDS CURB TO
TIGHTEN LADDER TO RACK**



REAR OF VEHICLE

**TURN KNOB TO ADJUST TO
YOUR LADDER.**

**DO NOT OVER TIGHTEN!
CLAMP PAD SHOULD JUST
TOUCH THE LADDER.**



**FRONT CLAMP PAD MOVES TOWARDS STREET
TO TIGHTEN LADDER TO RACK**



FRONT OF VEHICLE

**TURN KNOB TO ADJUST TO
YOUR LADDER.**

**DO NOT OVER TIGHTEN!
CLAMP PAD SHOULD JUST
TOUCH THE LADDER.**



DDL61 Series Final Adjustment Instruction

**DOUBLE CHECK ALL FASTENERS LOCATIONS TO BE SURE THAT ALL FASTENERS ARE
TIGHTENED TO SPECIFICATIONS.**

YOUR INSTALLATION IS NOW COMPLETE!

STOW THIS COPY IN THE VEHICLE FOR FUTURE REFERENCES!