

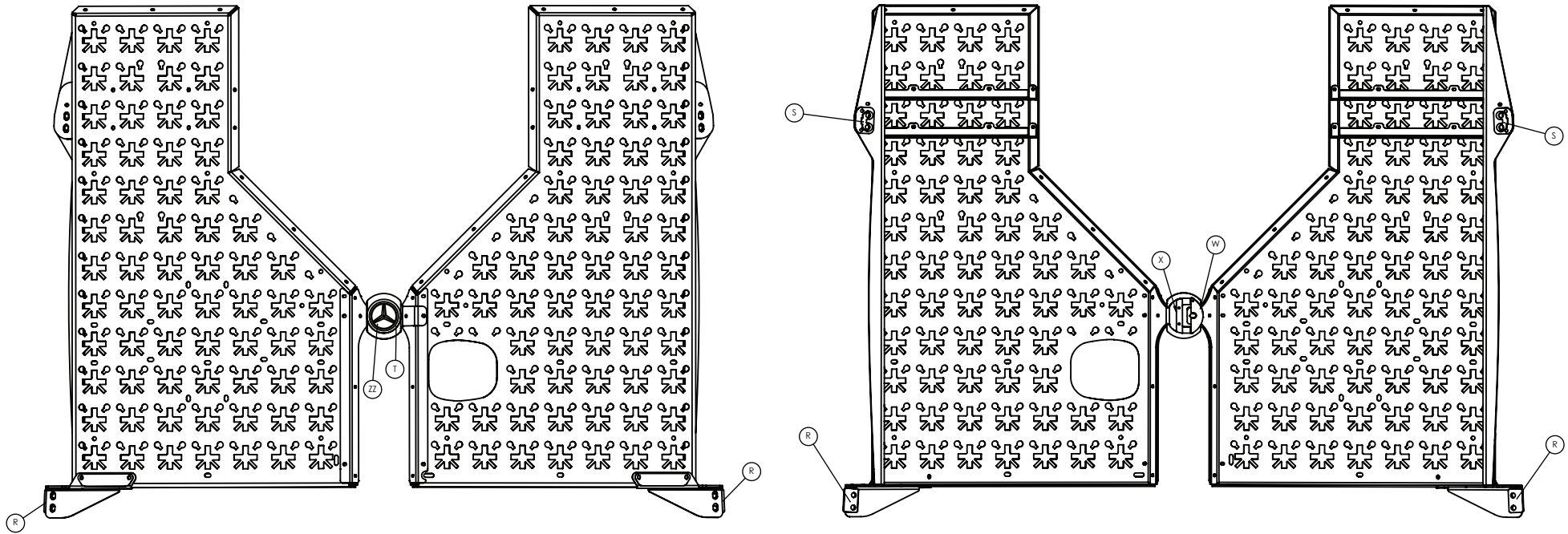


nVader

BY [FLARESPACE]

INSTALLATION INSTRUCTIONS

Note: Start with assembly instructions first.
This requires two people. You will
need a hand with a couple of steps.



INSTALLATION PARTS LIST

PART NAME	DESCRIPTION	QTY.
	ASSEMBLED LEFT PANEL	1
	ASSEMBLED RIGHT PANEL	1
R	LOWER HINGE BOLT PLATE	4
S	UPPER HINGE BOLT PLATE	2
T	BADGE SPACER RING	1
W	LEFT INNER DOOR PLATE	1
X	BADGE SUPPORT PLATE	1
ZZ	BADGE	1
AA	NVADER DOOR RIGIDIZER	1
BB	NVADER DOOR RIGIDIZER NUT PLATE	1

INSTALLATION HARDWARE LIST

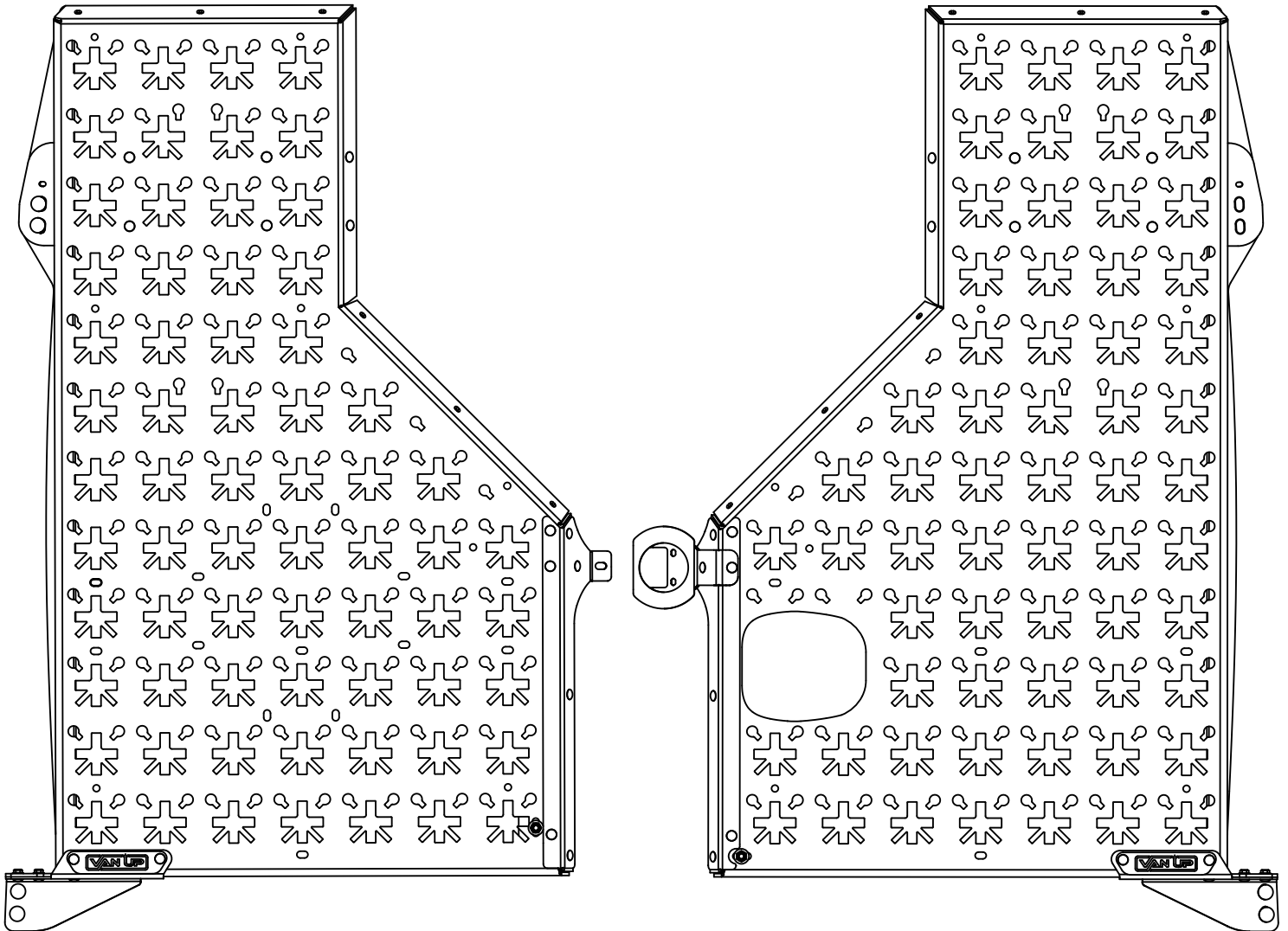
DESCRIPTION	QTY.
WASHER FOR 3/8" SIZE BOLT	9
3/8-16 X 1.5" BUTTON HEAD HEX DRIVE SCREWS	8
NYLON-INSERT LOCKNUT 3/8-16 SIZE BOLT	1
FLANGED NYLON-INSERT LOCKNUT 3/8-16 SIZE BOLT	8
3/8-16 X 1.5" SQUARE-NECK ELEVATOR BOLT	1
1/4-20 X .75" BUTTON HEAD HEX DRIVE SCREW	2
SPLIT LOCK WASHER FOR 1/4" SIZE BOLT	2
SPLIT LOCK WASHER FOR 1/4" SIZE BOLT	5

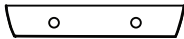
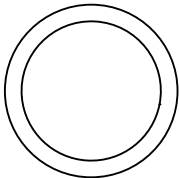
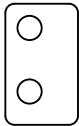
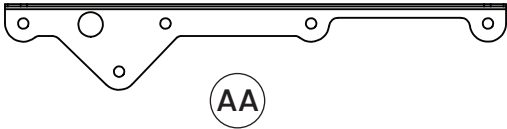
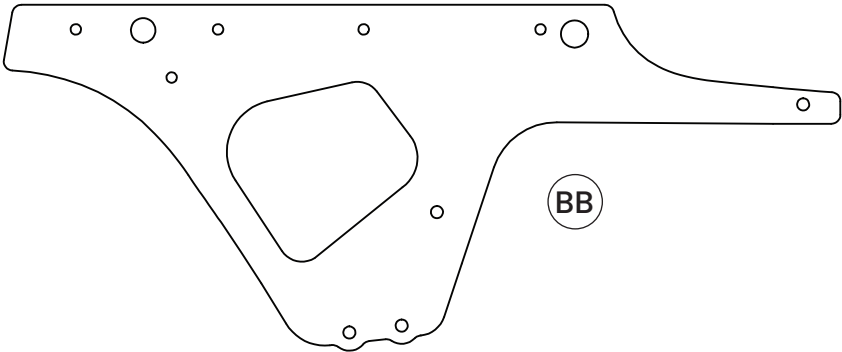
RIGIDIZER HARDWARE LIST

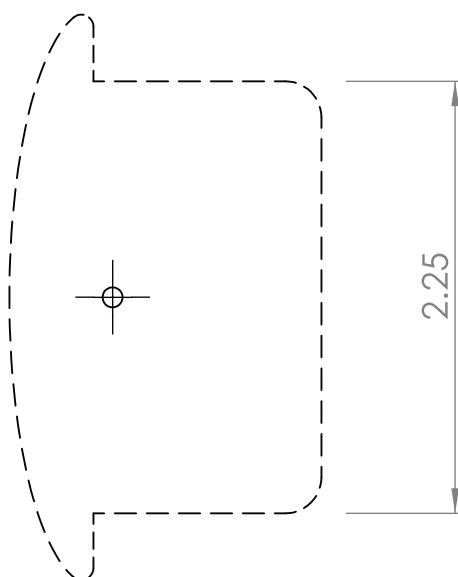
DESCRIPTION	QTY.
SPLIT LOCK WASHER FOR 1/4" SIZE BOLT	5
FLAT WASHER FOR 1/4" SIZE BOLT	13
1/4-20 X .75" HEX HEAD SCREW	9
NYLON-INSERT LOCKNUT FOR 1/4-20 SIZE BOLT	4

Assembled Left

Assembled Right

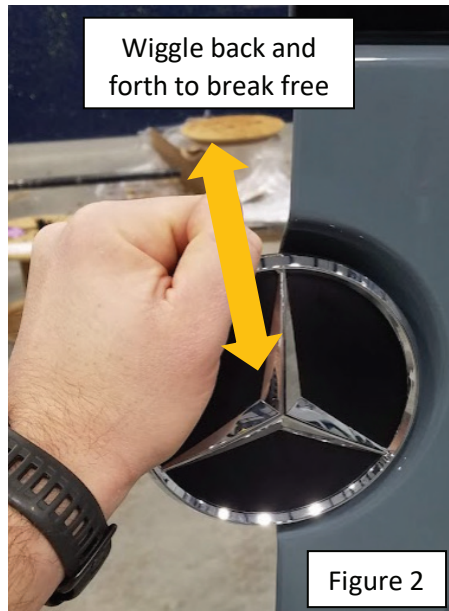
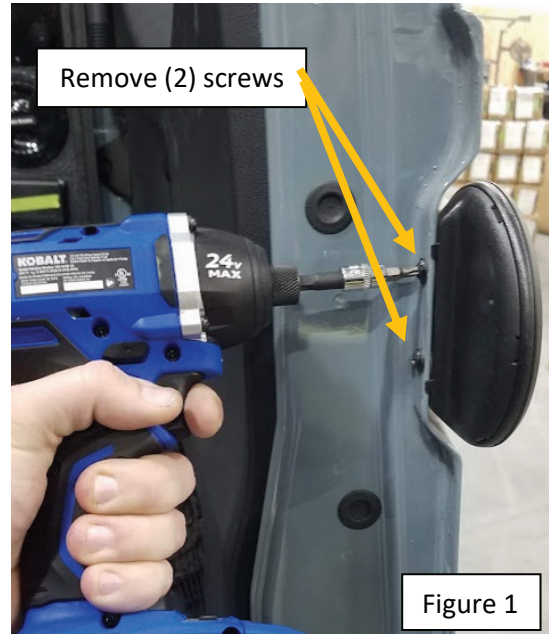




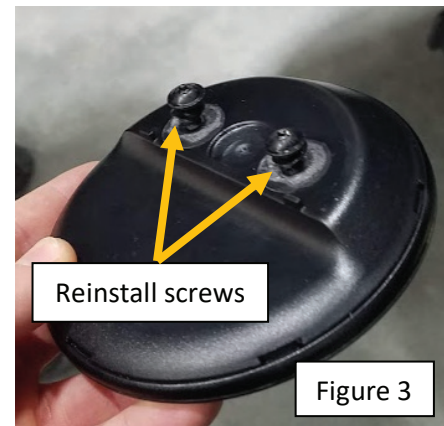


This is the drill template to locate the hole position drilled into the exterior of the left door. Please cut out this template for use during the installation process.

1. Remove rear door emblem
 - a. Open rear passenger door and use impact driver with T25 bit to remove the (2) screws securing the emblem to the door hem as shown in figure 1.
 - b. Once screws are removed, gingerly wiggle the emblem back and forth to break loose from the adhesive holding it onto the door. See figure 2



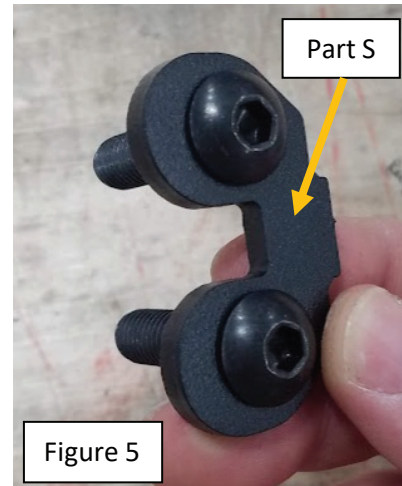
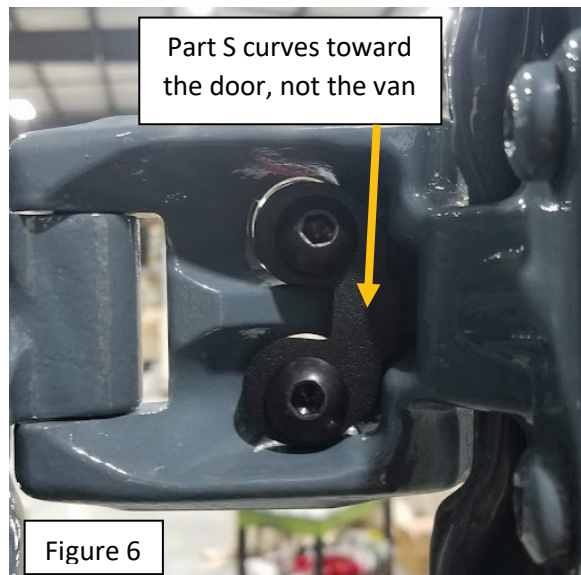
- c. Reinstall the (2) screws to the back side of the emblem as shown in figure 3 and place into the Colorado Locker inside the van.



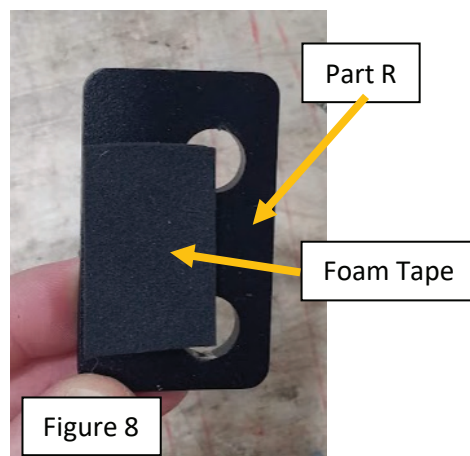
- d. Apply painter's tape to the curved edge around where the emblem was removed from for protection during the next steps. See figure 4.



2. Prep to install Nvader rack on passenger side rear door
 - a. Retrieve (1) Nvader part S and install (2) 3/8"-16 x 1.5" waxed SS Black oxide button head bolts through the holes as shown in figure 5
 - b. With the rear passenger door opened halfway, install part S and the screws on the inside of the upper door hinge through the 2 large holes. Ensure that the part curves around towards the door, not the van. See figure 6.



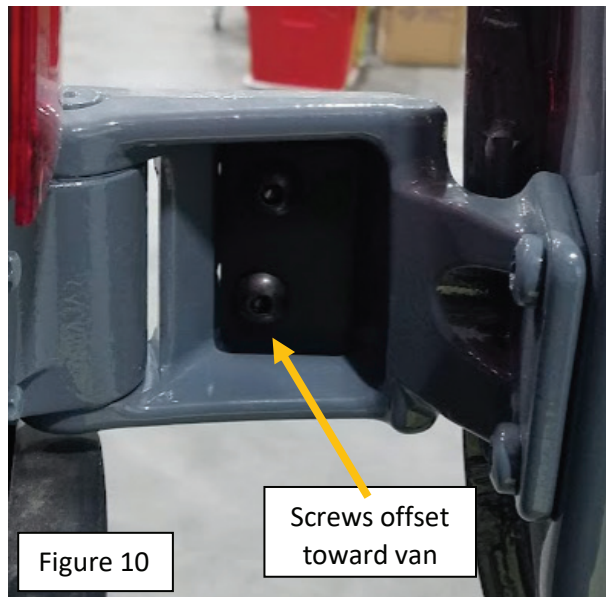
- c. Retrieve (2) Nvader parts R and install a strip of 1" foam tape about 1.5" long to one side of only 1 of the parts as shown in figure 8.



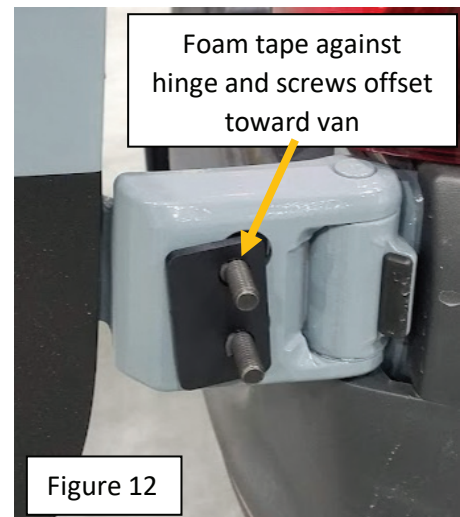
- d. Install (2) 3/8"-16 x 1.5" waxed SS Black oxide button head bolts through the part without foam tape. See figure 9



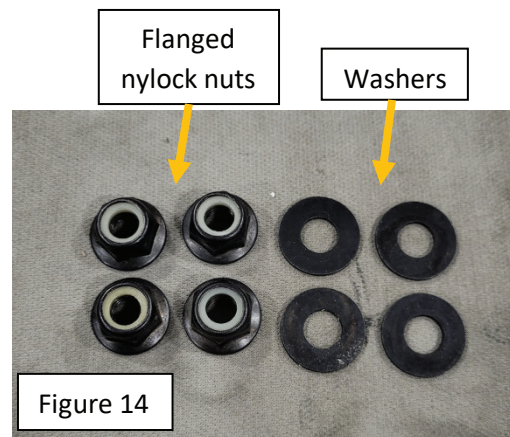
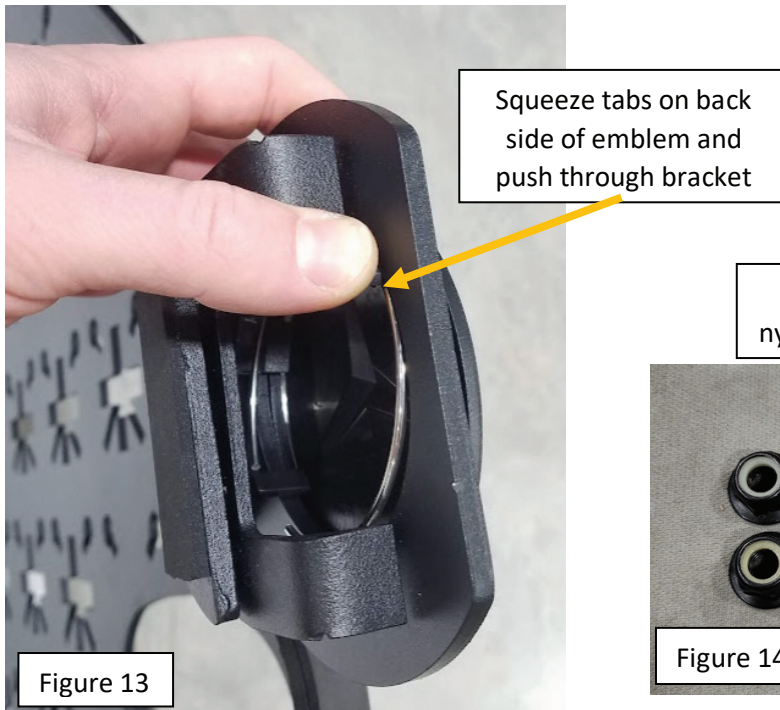
- e. Install part R with the screws on the inside of the lower door hinge through the 2 large holes. Ensure the part is oriented so that the screws are offset closest to the van as shown in figure 10.



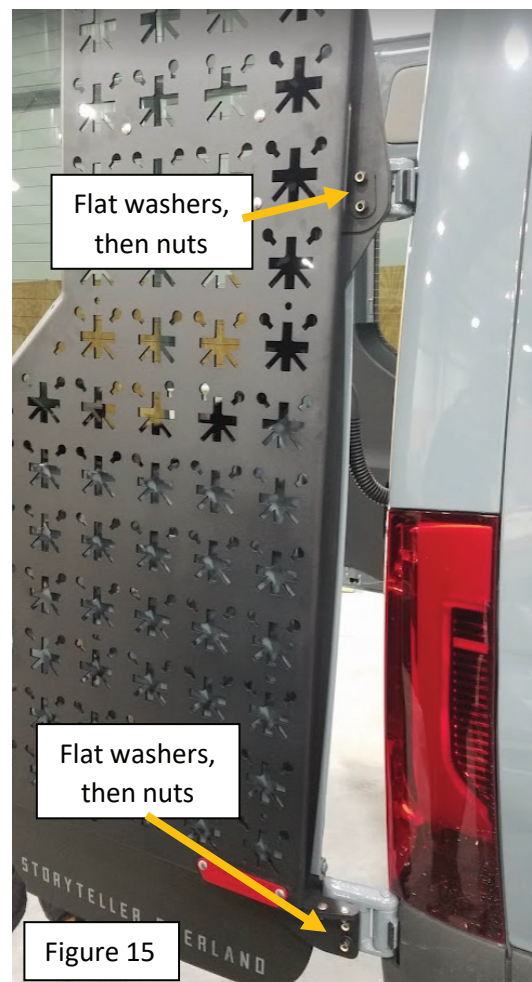
- f. Install (2) part R on the outside of the lower door hinge to the screws so that the foam tape is against the hinge and the holes are offset closest to the van like in Figure 12.
- g. Gently close the door so that the van hinges squeeze the foam holders to help hold the mounting hardware in place.



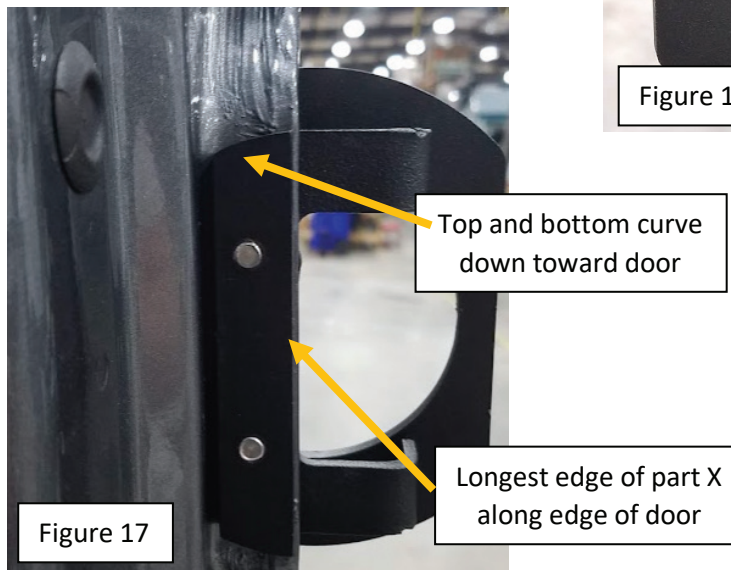
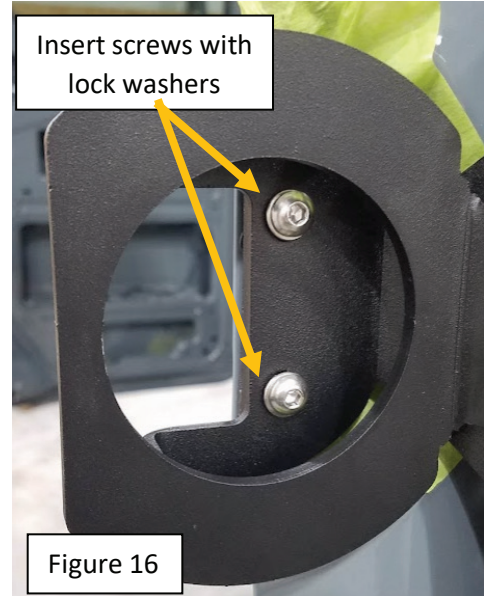
3. Mount passenger side Nvader rack to door
 - a. Retrieve pre-assembled passenger side Nvader rack and remove the emblem by gently squeezing the tabs on the back side and pushing through the bracket. See figure 13.



- b. Retrieve (4) 3/8"-16 SS black oxide flanged Nylock nuts and (4) 3/8" SS black oxide washers and place near the door for easy access when mounting the Nvader rack in the next steps. See figure 14.
 - c. Lift the passenger side Nvader rack and fit onto the screws protruding from the hinges, hold in place and loosely install the hardware as follows, see figure 15. **NOTE: Be very careful setting the rack up to the van to avoid damage to the door. Use a helper if needed.**
 - i. Install washers, then the nuts to the top hinge screws
 - ii. Install washers then the nuts to the lower hinge screws.



- d. Retrieve (2) $\frac{1}{4}$ "-20 x $\frac{3}{4}$ " SS button head screws, (2) $\frac{1}{4}$ " SS Split lock washers, and Nvader part X.
- e. Insert the 2 screws with lock washer on each through the 2 holes in the emblem bracket and the door. See figure 16.
- f. Hold Nvader part X on the back side of the door hem so the longest edge is toward the edge of the door and the top and bottom of the part curve down toward the door as shown in figure 17.



- g. Use a $\frac{5}{32}$ " hex head driver and ratchet handle to carefully thread the screws into part X. Be very careful not to cross thread or strip out the screws into part X. Do not fully tighten, just start the bolts into the part.
- h. Use a digital torque wrench set to 30 ft-lbs with a $\frac{9}{16}$ " socket attached and a $\frac{7}{32}$ " hex head driver and ratchet handle to torque all 4 upper and lower hinge screws. Torque stripe all 4 nuts with a paint pen once torqued. See figure 18.

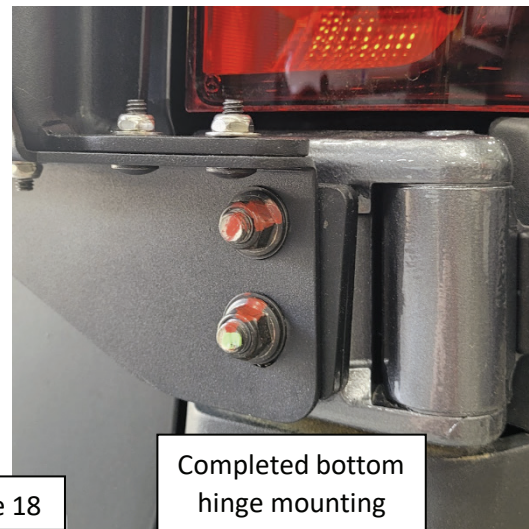
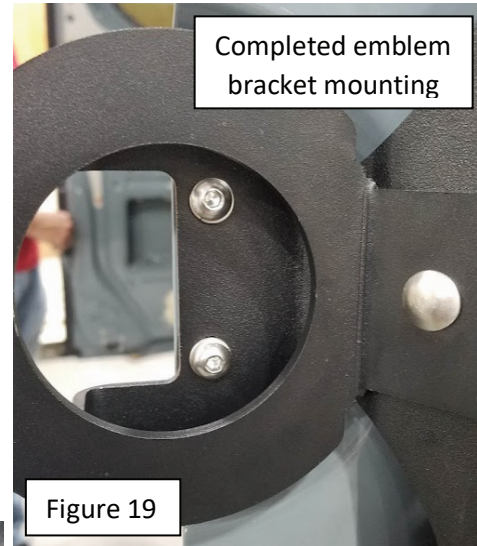
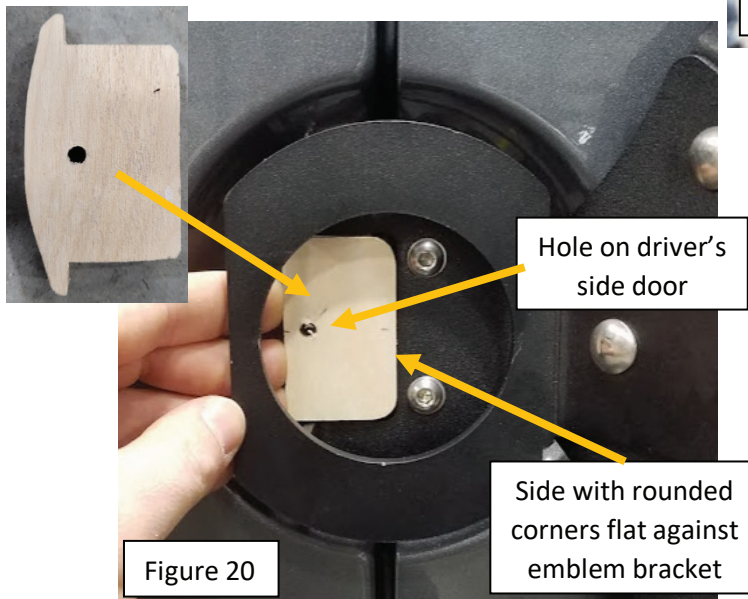


Figure 18

- i. Loosen the 2 screws on the emblem bracket and remove the tape from the van, then reinstall the screws and lock washers. Tighten the screws so that the lock washers flatten out fully. Do not overtighten. See figure 19.
4. Prep to install Nvader rack on driver side rear door
 - a. With both rear doors fully closed, insert the driver side drill jig into the middle of the emblem bracket on the passenger side rack as shown in figure 20. Make sure the hole is offset to the driver side door and the side with the rounded corners is pushed flat against the passenger side emblem bracket.



- b. Insert a center punch into the hole in the jig and make a mark onto the driver's side door. See figure 21.
 - c. Remove driver's side inner door panel
 - i. Open both rear doors
 - ii. Starting at the bottom of the driver's side inner door panel and working your way up, pull the panel away from the door to release the panel retaining clips. See figure 22.



- iii. Use a door panel clip tool to remove any clips that did not pull out with the panel, as shown in figure 23, and replace into the backside of the door panel. Set the panel with all retaining clips aside for reinstallation later.
- iv. Remove insulation from the door, keeping track of which piece was in each door pocket for reinstallation later.
- d. Close the driver's side door then use an 1/8" drill bit and drill to make a pilot hole in the outer door panel in the previously marked location. See figure 24. **Note: Be very careful to not go all the way through the inside of the door.**

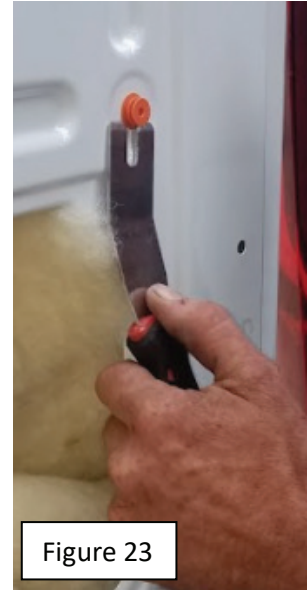


Figure 23

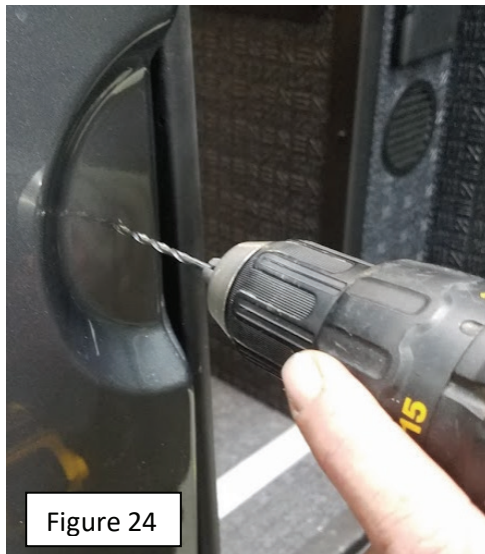


Figure 24

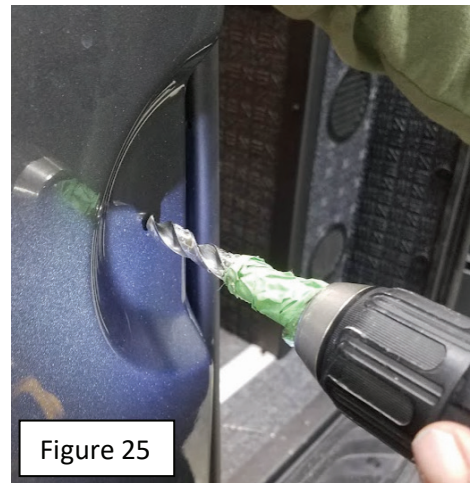


Figure 25

- e. Now use a 25/64" drill bit and drill to drill through the pilot hole as shown in figure 25.
- f. Apply etching primer to the hole's cut edge and allow to dry. Ensure the primer does not drip down the door. See figure 26.

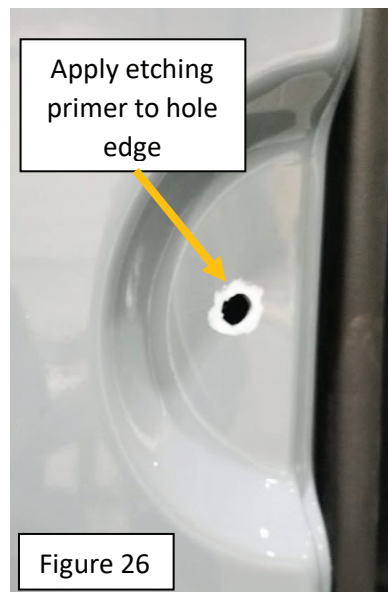
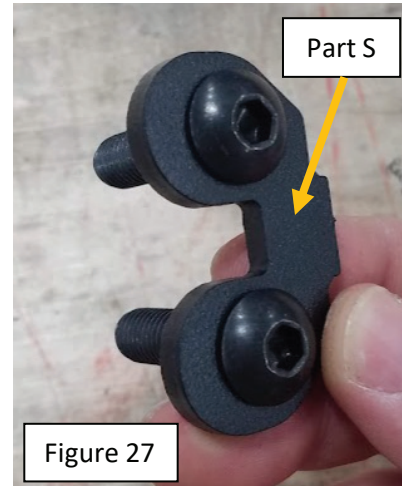
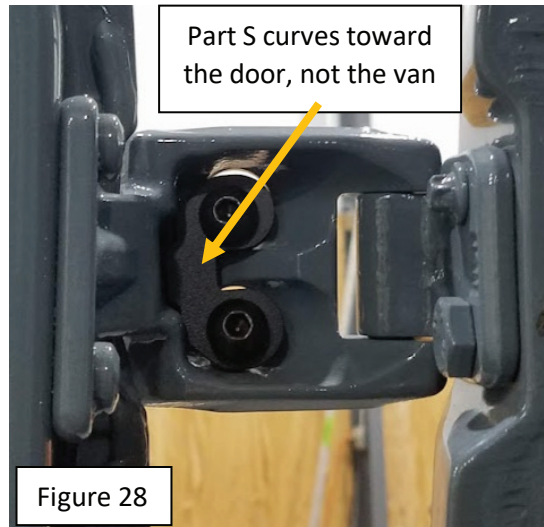
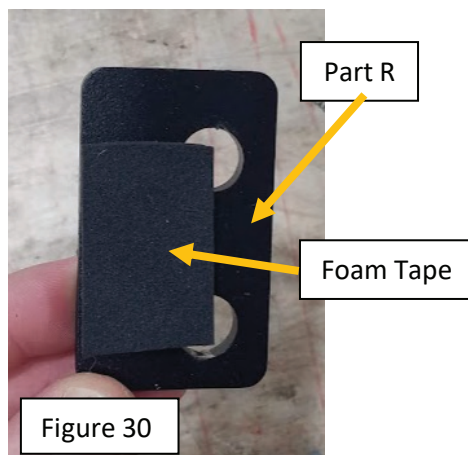


Figure 26

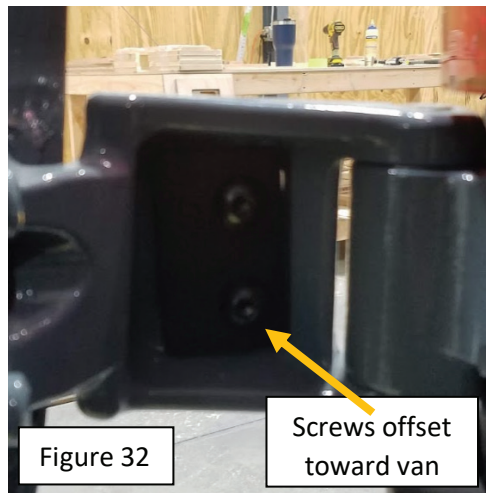
- g. Retrieve (1) Nvader part S and install (2) 3/8"-16 x 1.5" waxed SS Black oxide button head screws through the holes as shown in figure 27
- h. Install part S and the screws on the inside of the upper door hinge through the 2 large holes. Ensure that the part is oriented so that the part curves around toward the door, not the van. See figure 28.



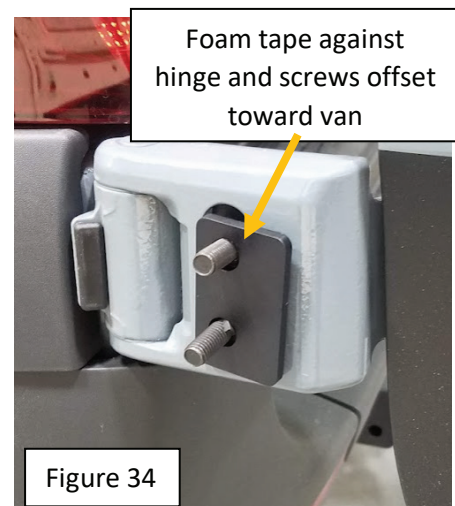
- i. Retrieve (2) Nvader parts R and install a strip of 1" foam tape about 1.5" long to one side of only 1 of the parts as shown in figure 30.
- j. Install (2) 3/8"-16 x 1.5" waxed SS Black oxide button head screws through the part without foam tape. See figure 31



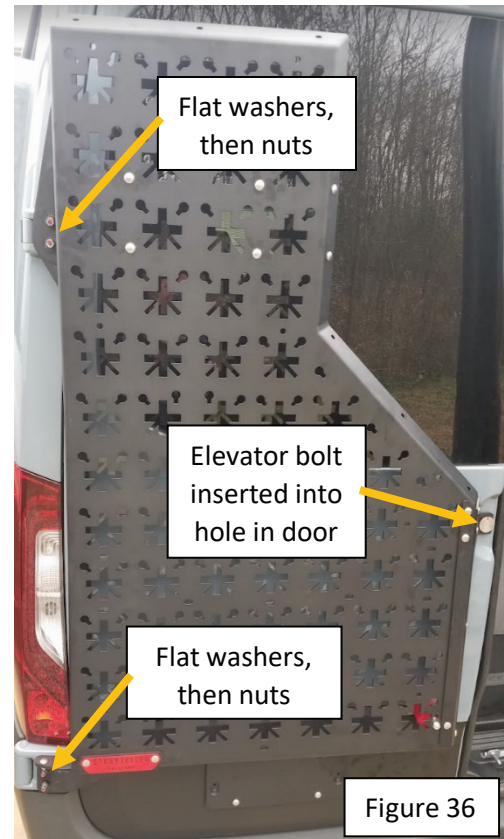
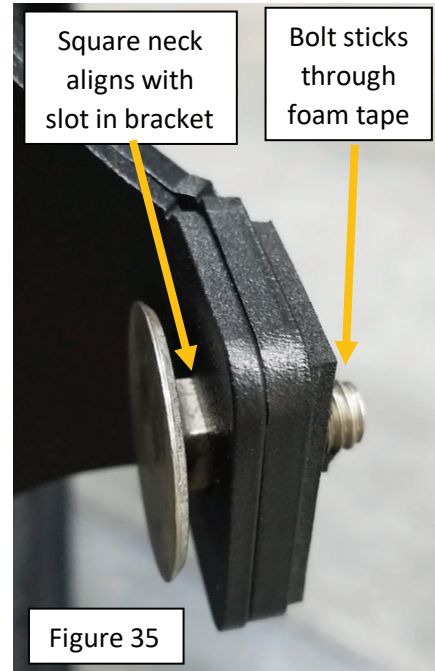
- k. Install part R with the screws on the inside of the lower door hinge through the 2 large holes. Ensure the part is oriented so that the screws are offset closest to the van as shown in figure 32.



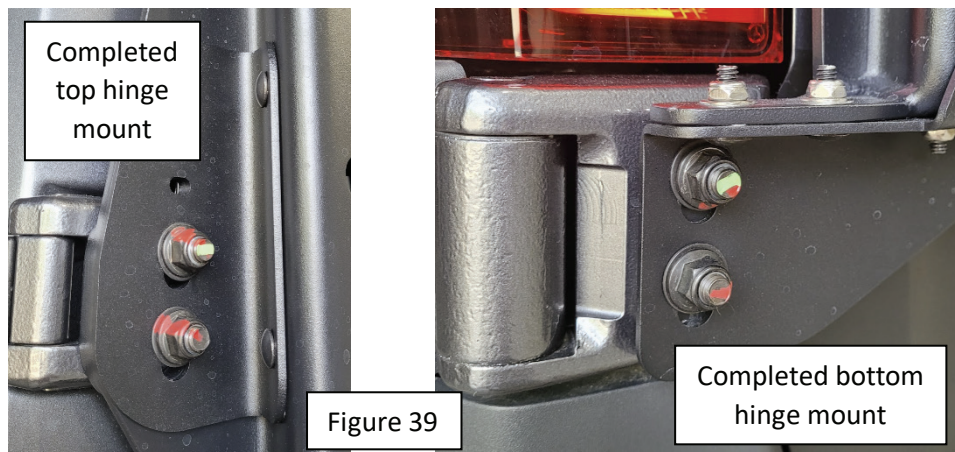
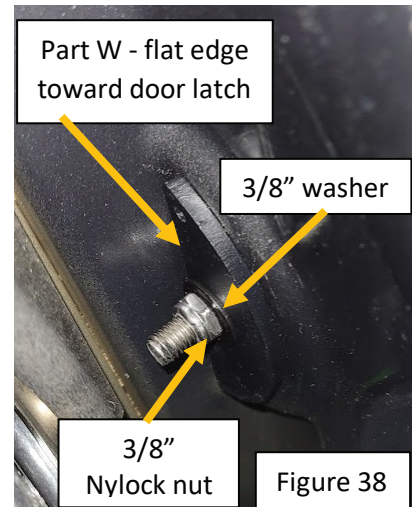
- l. Install the other part R on the outside of the lower door hinge to the screws so that the foam tape is against the hinge and the holes are offset closest to the van like in figure 34.
- m. Gently close the door so that the van hinges squeeze the foam holders to help hold the mounting hardware in place.



5. Mount driver's side Nvader rack to door
 - a. Retrieve pre-assembled driver's side Nvader rack
 - b. Insert the provided 3/8"-16 x 1.5" square neck elevator bolt through the slot in the bracket on the right side of the rack as shown in figure 35. Ensure the square neck aligns with the slot, it will be a snug fit, and that the bolt protrudes through the foam tape on the back side.
 - c. Retrieve (4) 3/8"-16 SS black oxide flanged Nylock nuts and (4) 3/8" SS black oxide washers and place near the door for easy access when mounting the Nvader rack in the next steps.
 - d. Lift the driver's side Nvader rack and fit onto the screws protruding from the hinges and insert the elevator bolt through the drilled hole in the door. Hold the rack in place and loosely install the hardware as follows, see figure 36. **NOTE: Be very careful setting the rack up to the van to avoid damage to the door. Use a helper if needed.**
 - i. Install washers then the nuts to the top hinge screws
 - ii. Install washers then the nuts to the lower hinge screws.
 - e. Apply an Irwin quick grip clamp to the head of the elevator bolt and the driver door to help keep the bolt pushed into the hole. See figure 37.

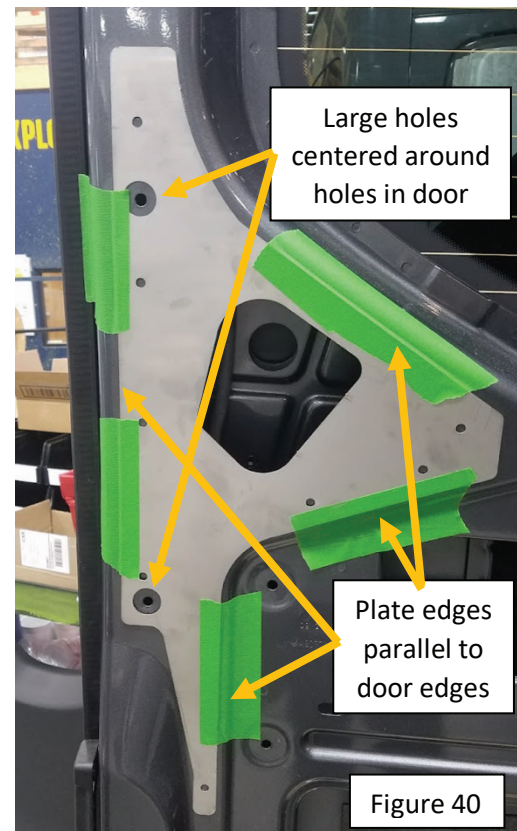


- f. On the inside of the door panel, install part W against the outer door panel so the flat edge is toward the door latch, then a 3/8" SS washer and lastly a 3/8"-16 SS thin nylock nut to the elevator bolt. Use a 9/16" wrench to tighten the nut to hand tight, ensuring the square head of the elevator bolt pulls into the rack and the bolt protrudes through the nylock nut. See figure 38.
- g. Use a digital torque wrench set to 30 ft-lbs with a 9/16" socket attached and a 7/32" hex head driver and ratchet handle to torque all 4 upper and lower hinge screws. Torque stripe all 4 nuts with a paint pen once torqued. See figure 39.

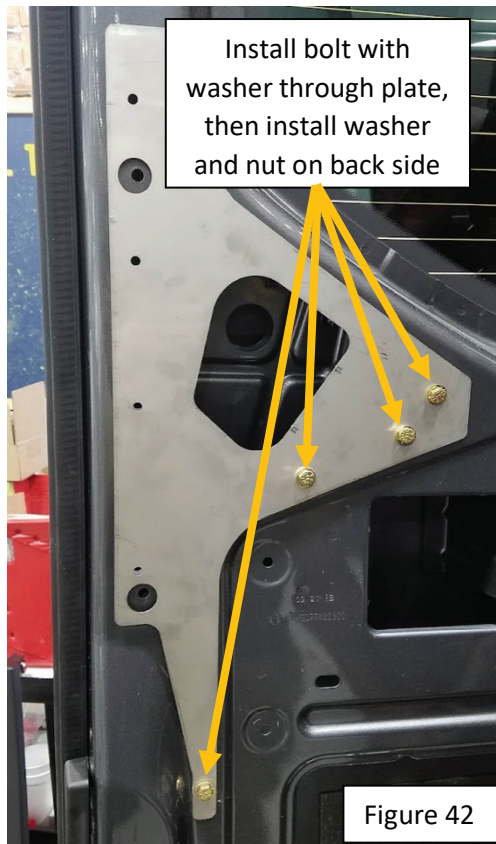


6. Install door stiffener to driver's side door

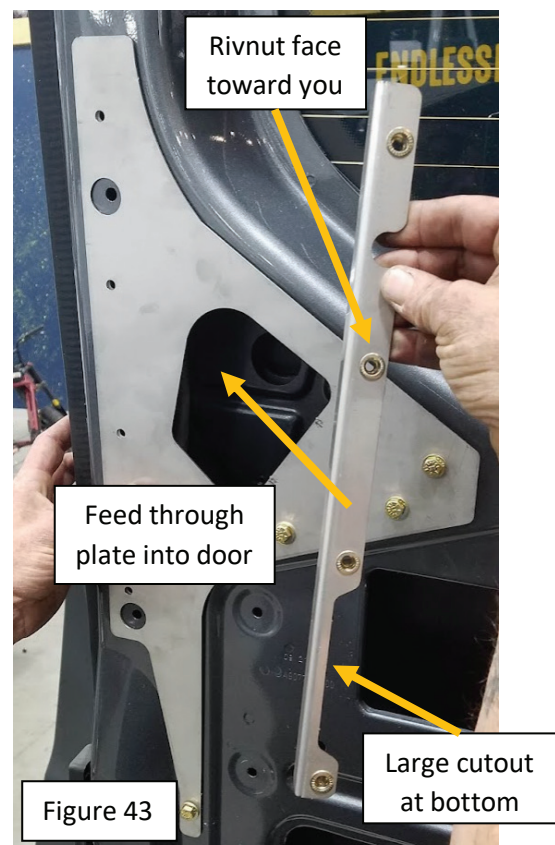
- a. Retrieve door stiffener plate and position on the inside of the driver's side door as shown in figure 40. Use tape along the edges to hold in place. Ensure the 2 large holes in the plate are centered around the holes in the door and the edges of the plate are parallel to the edges of the door as shown in the picture.



- b. Use a center punch to mark in the center of the (8) smaller holes shown in figure 41. Then remove the plate from the door.
- c. First use an 1/8" drill bit to drill pilot holes at the 8 marked locations. Then use a 5/16" drill bit to drill out the 8 pilot holes. **NOTE: Only drill through the inside panel of the door. Do not drill all the way through the outer panel of the door.**
- d. Apply etching primer to all 8 drilled holes.
- e. Reinstall the plate to the door using 4 of the provided bolts, 8 washers and 4 nuts. Install a washer to each bolt, then insert through the 4 locations shown in figure 42. Install a washer then a nut on the inside of the door to each of the 4 bolts.



- f. Orient the rivnut bracket so that the rivnuts are facing you and the large cutout is at the bottom. Then insert through the large cutout in the stiffener plate and align with the 4 remaining holes on the left side of the plate. See figure 43.



- g. Install 4 of the provided bolts with a lock washer and a flat washer through the 4 holes on the left side of the plate and into the rivnut bracket as shown in figure 44.
- h. Use a 7/16" socket on a digital torque wrench set to 14 ft-lbs to torque all 8 of the bolts. Use a 7/16" wrench to hold the 4 nuts on the inside of the door. Torque stripe all bolts with a paint pen once torqued. See figure 45.



Figure 45

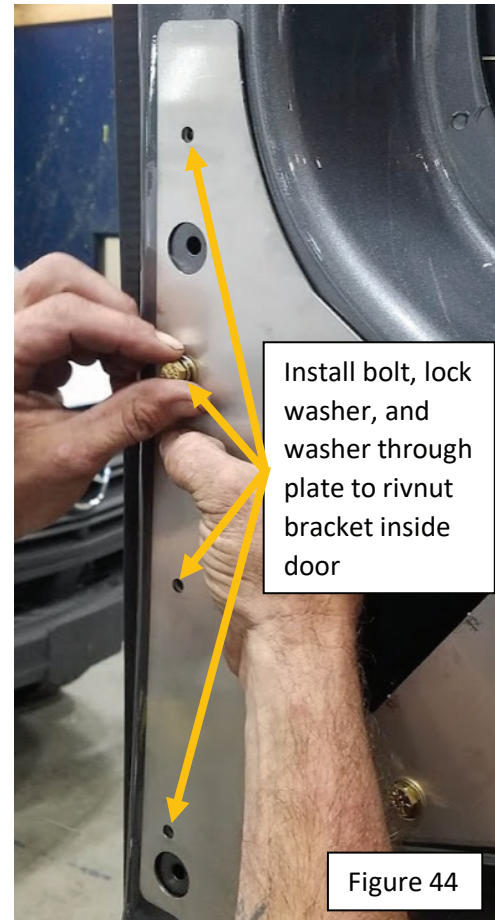


Figure 44

- i. Reinstall the inner door panel by aligning the inner door panel retaining clips with the holes in the door then using your hand to press the panel/clips into the door. Ensure all clips are firmly pressed into the door.
- j. Reinstall the Mercedes emblem to the passenger side Nvader rack and check over the installation, making sure all bolts have been tighten/torqued as required and there is no damage to the van or rack parts.





nVader

BY [FLARESPACE]

INSTALLATION INSTRUCTIONS