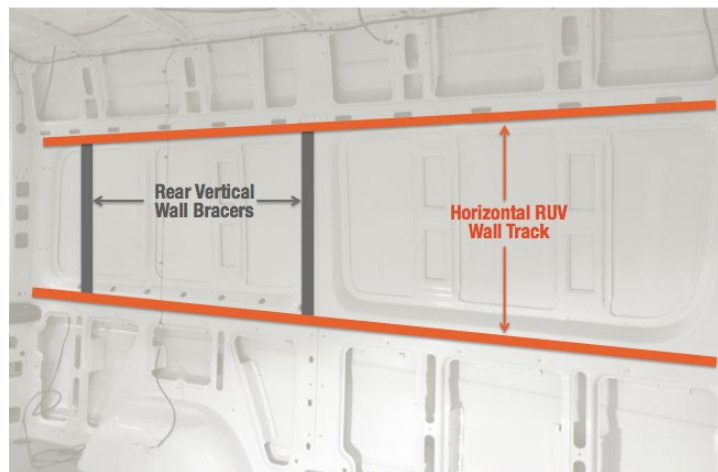


# Vertical Wall Bracer Installation Guide

## Overview

This guide provides instructions for installing Adventure Wagon's Vertical Wall Bracers in a 2007+ Sprinter 144/170 van. These wall bracers are the first installation step for our full Modular Interior System and are necessary to correctly position the rest of the interior components. These wall bracers are also referred to as the

MOAB bracers as they can also be used to mount our MOAB bed even if the rest of the Modular Interior Kit is not installed. **Getting the measurements for these bracers is critical!**

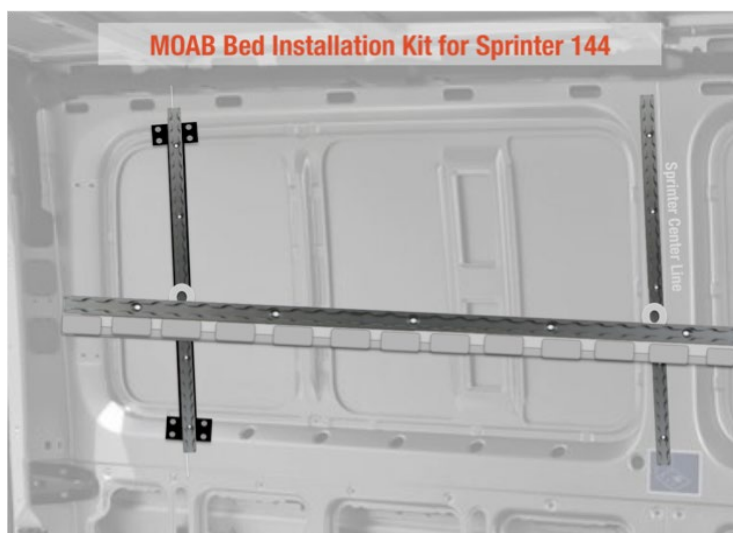


Passenger Van Note: The Bed wall bracers will fit in passenger vehicles, however some of the trim around the rear window area will need to be removed for installation.

170 Wheelbase Note: See the Addendum at the end of the document for specific measurements for 170.

## Installation Time and Skillset

It should take the moderately skilled first-timer about 2 hours to install. You'll need a buddy to help measure and hold the brackets in place while installing. We rate the installation skill set "moderate" due to the fact that you will need to know how to drill, rivet and screw holes into the framing of your van along with the need for precise measurements. If you are not comfortable installing these parts after reviewing the instructions, contact one of the trained installers listed on our website.



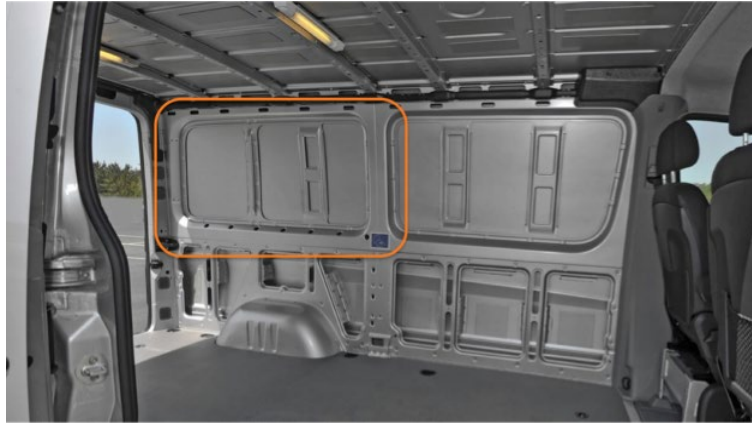
## Tools You Will Need

- A Rivet Gun ([Mechanical](#) or [Pneumatic](#))
- A Rivnut gun (Mechanical or Pneumatic)
- Philips driver bit
- Cordless drill
- 3/16 drill bit for setting Rivets for Rear vertical Bracer
- 25/64 drill bit for setting Rivnuts for front vertical bracer
- A steel boring drill bit or [steel step bit](#). (optional for prepping holes for Rivnuts)
- Tape measure
- Sharpie

## Installation of the Rear Wall Bracer

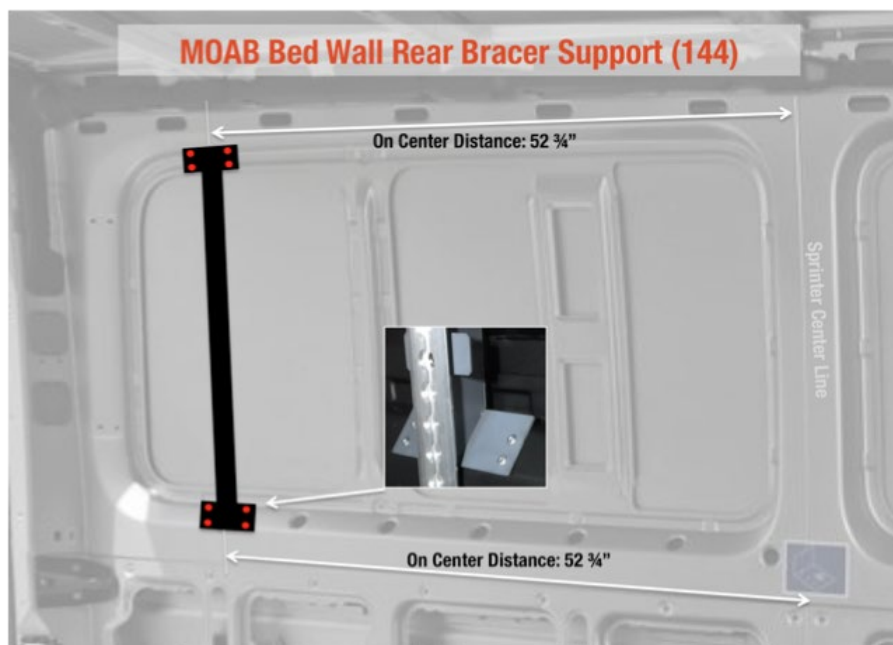
### I. Removing factory wall panels:

If you have any existing upper rear wall panels in your van you will need to remove them. You will need installation access from the center or mid pillar of the van all the way back to the rear pillar in the highlighted area pictured.



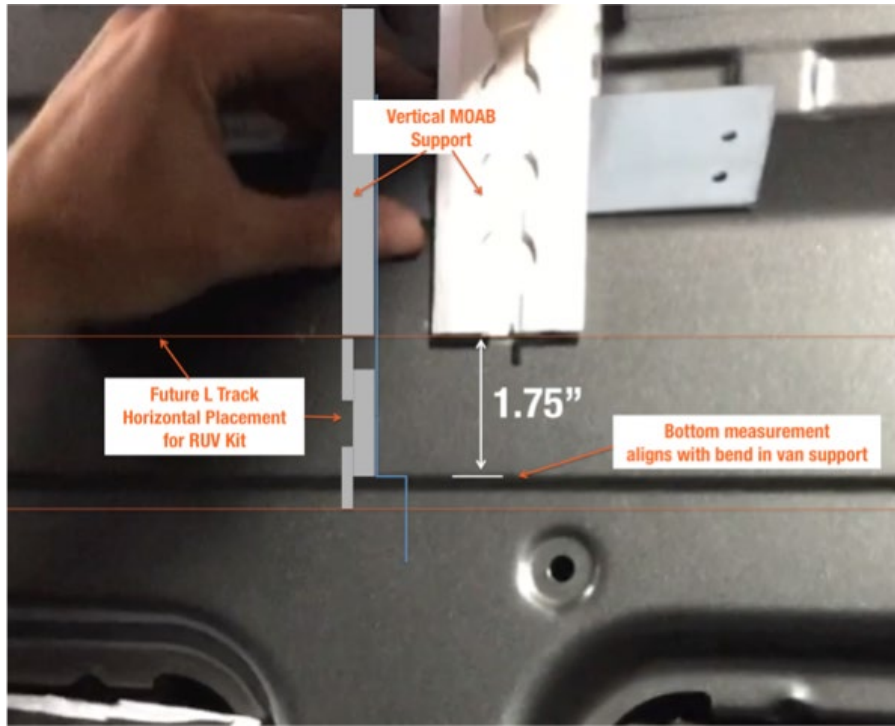
## II. Mark the Centerline for the rear wall bracer.

Measure and make a mark 52  $\frac{3}{4}$  inches back towards the rear door from the van midline marker. Mark on both the top side and the bottom side of the window panel framing. This marks the centerline of where the wall bracer will attach to the van.

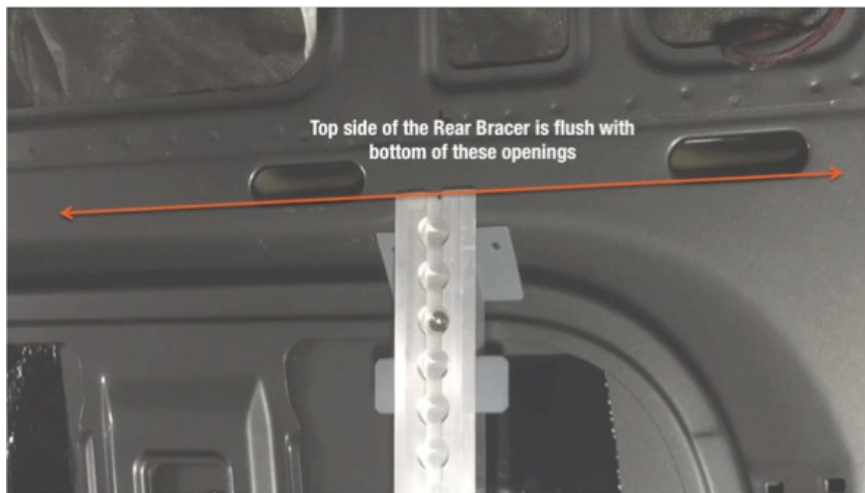


## III. Determine the Vertical placement of the Rear Bracer

We use the bottom of the bracer to set the vertical placement. The bottom of the bracer should be 1.75 inches above the bend in the framing. It helps if you can hold a piece of RUV Track (L Track) horizontally to help set the height marker for the rear bracer.



The top should look like this:

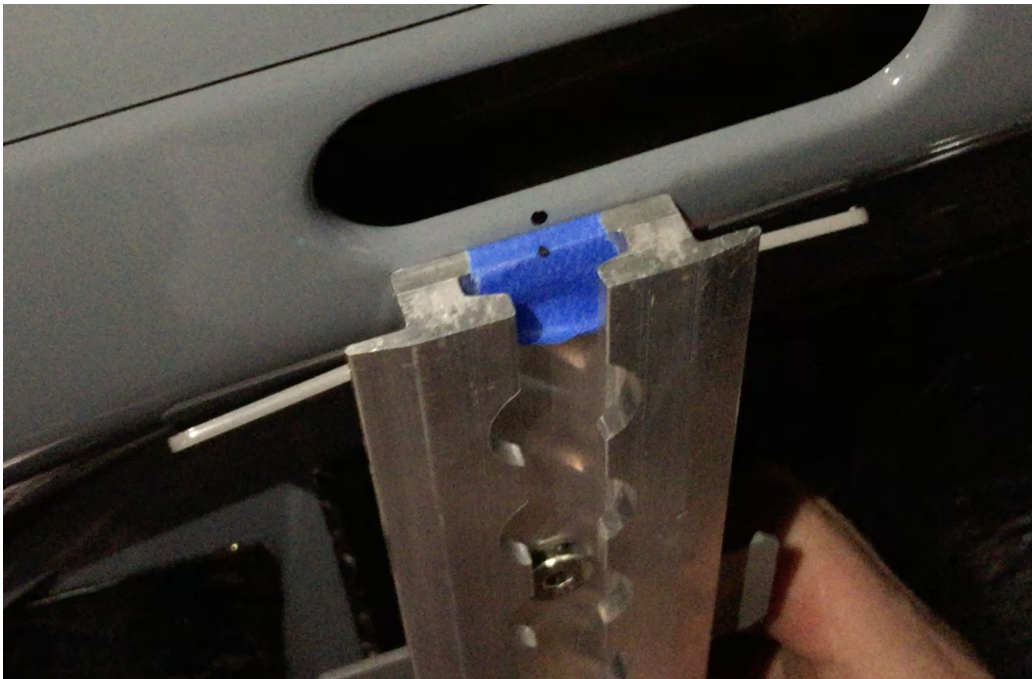


#### IV. Test fit the Rear wall bracer

Choose either side of the van to start with. Inspect the rear wall bracer and press fit it in place in the rear window panel area of the side you chose. It should naturally "pocket" itself inside the window panel framing.



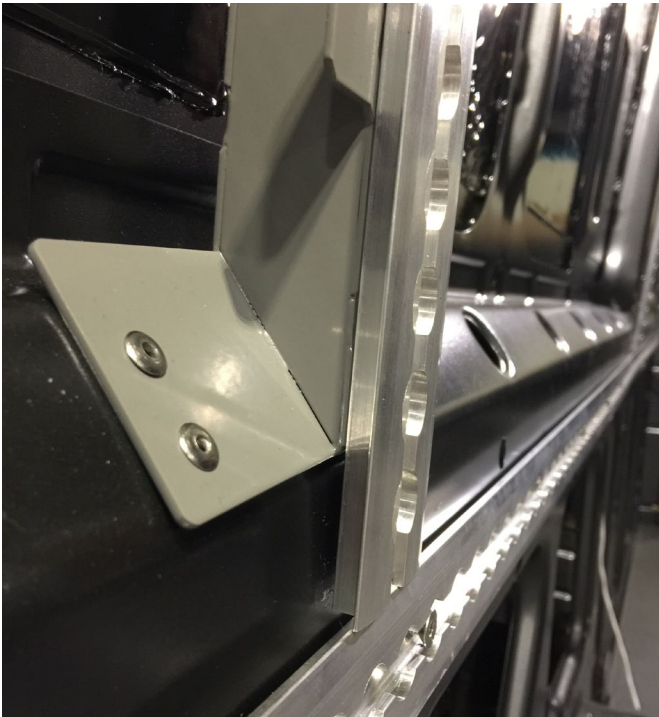
Typically, the top of the bracer "ears" prevents it from seating into the slightly curved frame of the van. Use a rubber mallet and tap/bang the end of the bracer ears on both sides to allow for a tighter fit. One firm tap should be enough – don't overdo it.



The L Track that is mounted to the bracer should sit flush with the side of the van. It is ok to have 1-2mm spacing, but flush is preferred as this will mate up with the rest of the



Adventure Wagon RUV interior kit.



## V. Temporarily install rear bracer

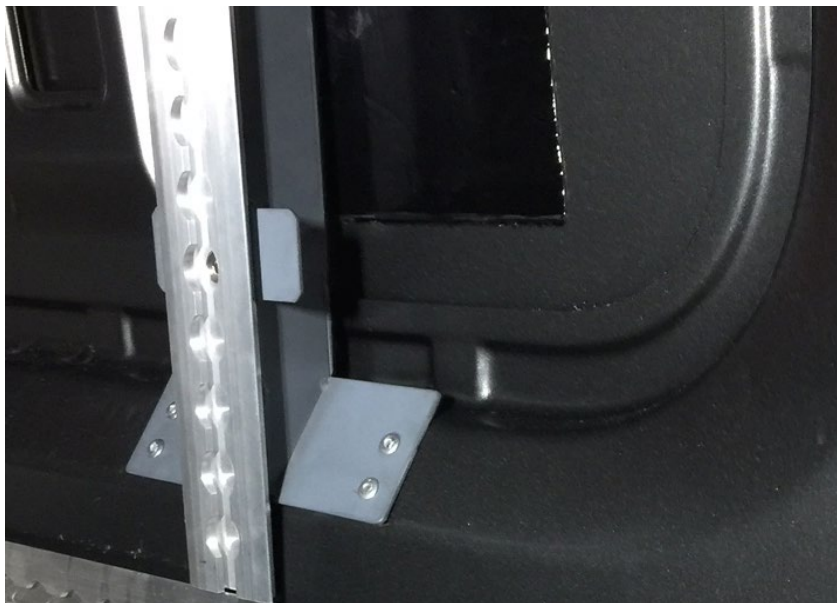
With the top and the bottom of the steel bracer lined up vertically in the window pocket and in-line with the 52.75" marks, screw a #10 self-tapping screw through one of the holes on the top side of the bracer. If you have trouble getting the self-tapping screw to

set, then drill a pilot hole to help. Put another self-tapping screw into one of the holes through the bottom of the bracer... all the while making sure that the steel bracer is lined up with your pen marks on the van at both the top and the bottom. With the bracer lined up, alternating from top to bottom and add at least 2 more screws to each end. To gain full access to the bracer holes at the top and the bottom, remove the L-Track that is attached to the steel wall bracer. (Use hand tools only to remove L-track, and remove the top and bottom screws first.)

*170 Note: You will not be able to put rivets in all holes due to body holes near the bracer ends.*

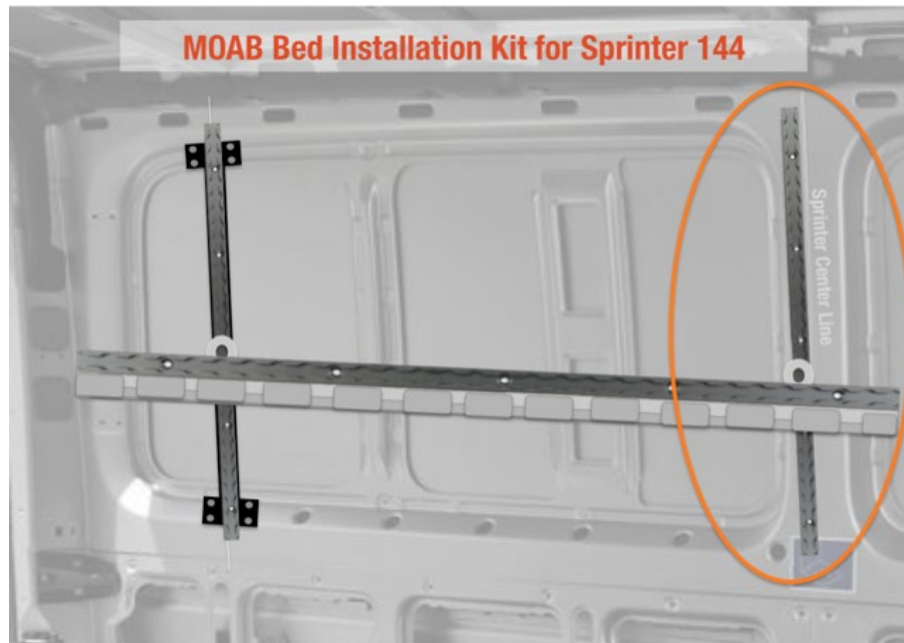
## VI. Permanently install rear bracer

One by one replace the self-tapping screws with a 3/16 stainless pop rivet. Alternate top to bottom, one at a time. Remove a screw, drill the hole with a 3/16" bit, and set a rivet. We use a low cost pneumatic rivet gun ([like this one](#)), however you can use a traditional mechanical riveter to attach the rivets. We recommend you practice riveting on some test metal pieces, however if you do screw up on the installation you can drill out the rivet and start-over on that hole. When you are finished go ahead and screw back in the L-track that was previously attached to the wall bracer. (Again, hand tools only. Hold the track with pressure against the bracer and tighten the center bolts first. Good time for a 2<sup>nd</sup> set of hands. Don't try to compress the track against the bracer with your wrench.)



## Installation of the forward L-track

The 144 WB vans require only a single piece of L-Track that gets installed with Rivnuts just behind the centerline of the van. The 170 WB vans have a second set of forward wall bracers that install similarly to the rears. (See Addendum for details.)



### VII. Align the forward vertical track

The forward track locates against the rearward side of the van centerline seam. Align the track vertically by measuring up 1.75 inches from the bend in the van's window support frame. This is the same height as the rear bracer and can be checked with a straight-edge or horizontal piece of L-track spanning bracer-to-bracer.





*Centerline of van. Forward track mounts to the rear of this seam.*

## VIII. Temporarily install forward track with self-tapping screws

Keeping track aligned as noted above, use 4 self-tapping #10 screws to fasten the track into the side of the van. You can drill pilot holes if needed. Screws in every other hole is sufficient hold temporarily.

## IX. Permanently install forward track with Rivnuts

Drill out and bore a 25/64 hole in each of the remaining empty holes of the track. Be careful not to drill into the track itself. Remove the entire track when finished by unscrewing the self-tapping screws.

Using the Rivnut gun, install M6 Rivnut inserts into the 4 holes you have drilled. When completed, reattach the track to the van using the newly installed rivnut inserts and their M6 bolts as the fastening point.

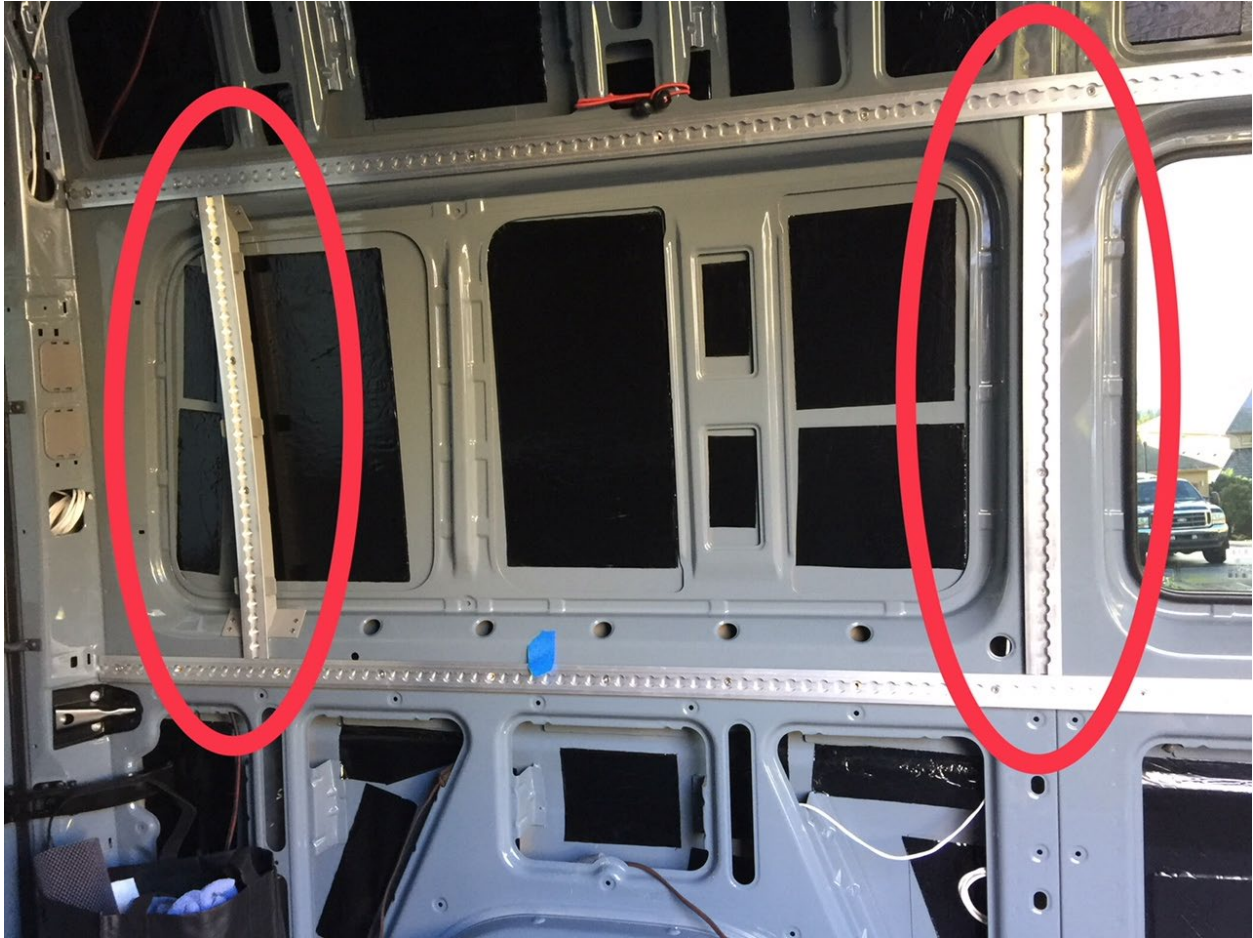
Repeat the process of installing Rivnuts in the remaining 4 empty holes that previously had the self-tapping screws. Drill out and bore a 25/64 hole in each of the remaining empty holes of the track. Be careful not to drill into the track itself. Remove the entire track when finished by unscrewing the M6 bolts. Install the remaining Rivnuts.

When finished re-install the RUV track completely using the M6 rivnut bolts provided.



## Repeat the same steps on the other side to install the support brackets

Here is a pic of the final vertical rail installation as part of Adventure Wagons RUV interior track system:



## Addendum for Sprinter 170 Length Vans.

The vertical rail installation kit for 170 length vans contains 4 steel wall bracers (2 on each side) and install using pop rivets just as the 144 rear bracers outlined in the guide above.

The bracers are marked to indicate forward and aft. The rear/aft bracer is slightly shorter than the forward bracers and is marked with a small round hole punched in one end. The forward/front bracer has a small square punched in the end. Also note that the wider tabs are positioned at the bottom.

Refer to the detailed instructions above, but use the measurements below to locate each bracer.



