# INSTALLATION GUIDE

## TRANSIT VAN ALUMINUM SIDE STEPS - 148”

TR1116B



## TOOLS REQUIRED (NOT INCLUDED)

+ WIRE BRUSH
+ HEAT GUN
+ MARKER
+ 13MM WRENCH
+ 13MM SOCKET
+ POWER DRILL
+ 17/32” DRILL BIT
+ M8-1.25 TAP AND DIE
+ CUTTING OIL
+ RIVET NUT TOOL
+ RUST PREVENTATIVE PAINT

## INSTALL INFO

TIME TO INSTALL THIS PRODUCT: 3-4 HOURS

Additional help is suggested for a few of the install steps.

## BEFORE YOU START

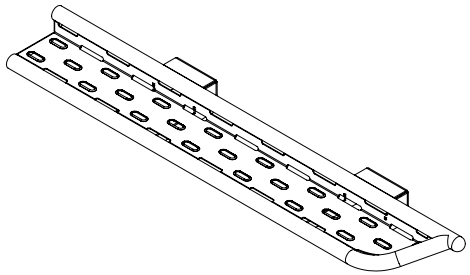
Please inspect the product and packaging upon delivery to ensure there are no issues and that all parts and hardware are accounted for.

Contact us ASAP if anything is missing at: support@flatlinevanco.com

# BEFORE YOU START

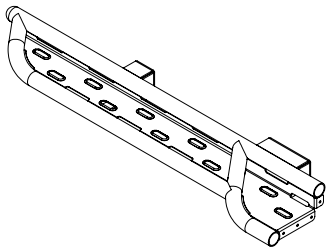
All Flatline Van Co products must be properly assembled and secured before attaching to your vehicle. Improper attachment could result in an automobile accident, and could cause serious bodily injury or death to you or to others involved. You are responsible for assembling and securing Flatline Van Co products to your vehicle, checking the mounting points and attachments prior to use, and regularly inspecting the products for wear and or damage. We always recommend you use a professional to install any aftermarket accessories to your vehicle. If you have no mechanical experience and are not thoroughly familiar with the installation procedures, you must have the product installed by a professional installer or other qualified persons. The responsibility is yours and must be taken seriously for everyone's safety.

# PACKAGE CONTENTS



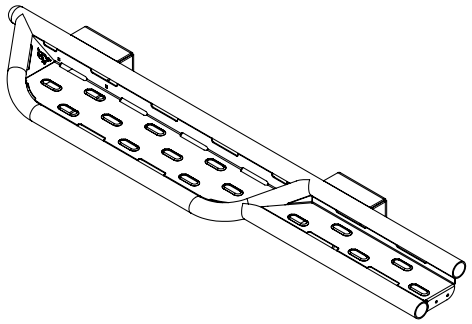
PASSENGER FRONT SIDE STEP WELDMENT

QTY: 1



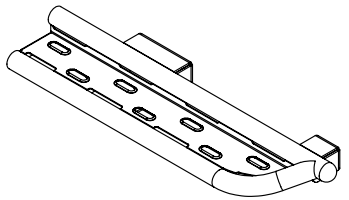
PASSENGER REAR SIDE STEP WELDMENT

QTY: 1



DRIVER FRONT SIDE STEP WELDMENT

QTY: 1



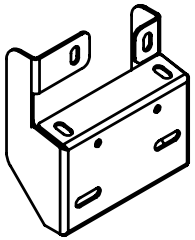
DRIVER REAR STEP WELDMENT

QTY: 1



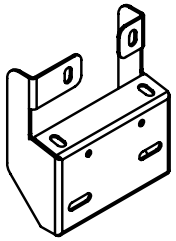
REAR STEP SUPPORT BRACKET

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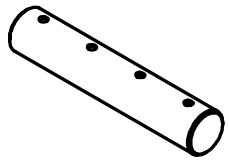
DRIVER FRONT HANGER BRACKET

QTY: 1



SIDE STEP HANGAR BRACKET WELDMENT

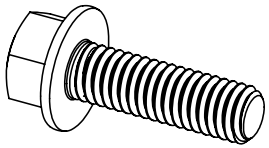
QTY: 5



BAYONET

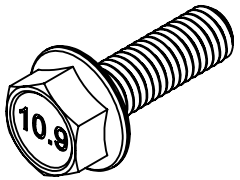
QTY: 4

# HARDWARE



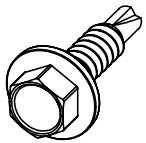
3/8-16 X 1.25 FLANGED HEX HEAD SCREW

QTY: 14




38-1.25 X 25 FLANGED HEX HEAD SCREW

QTY: 20



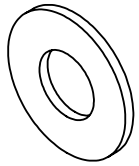
1/4 X 1.0 HEX HEAD/SEALING WASHER DRILLING SCREW

QTY: 14



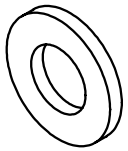
1/4-20 X 0.75 FLANGED BUTTON HEAD HEX SCREW

QTY: 22



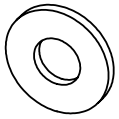
3/8 FLAT WASHER

QTY: 14



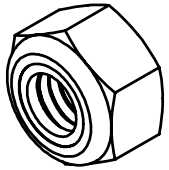
M8 FLAT WASHER

QTY: 8



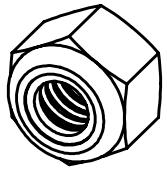
1/4 FLAT WASHER

QTY: 6



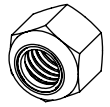
3/8 NYLON LOCKNUT

QTY: 14



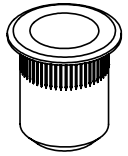
M8 NYLON LOCKNUT

QTY: 8



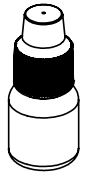
1/4 NYLON LOCKNUT

QTY: 6



M8-1.25 RIVET NUT

QTY: 8



THREADLOCKER

QTY: 1

TOOLS REQUIRED FOR THIS STEP:

## STEP | 01 LAYOUT AND INSTALL PREP

**1.1 Identify Mounting Locations: FVC Side Steps** are designed to work with the **Ford Factory Side Step** mounting locations. See **FIG 1** and **FIG 2** for the factory mounting locations that will be utilized for this install.

**NOTE -** *The factory chassis holes on your van may or may not contain inserts that are **threaded**. For **unthreaded inserts**, you'll need to cut in threads as described in the next step. For chassis holes that **don't contain inserts at all**, install **Rivet Nuts** as described in **Step 1.4***

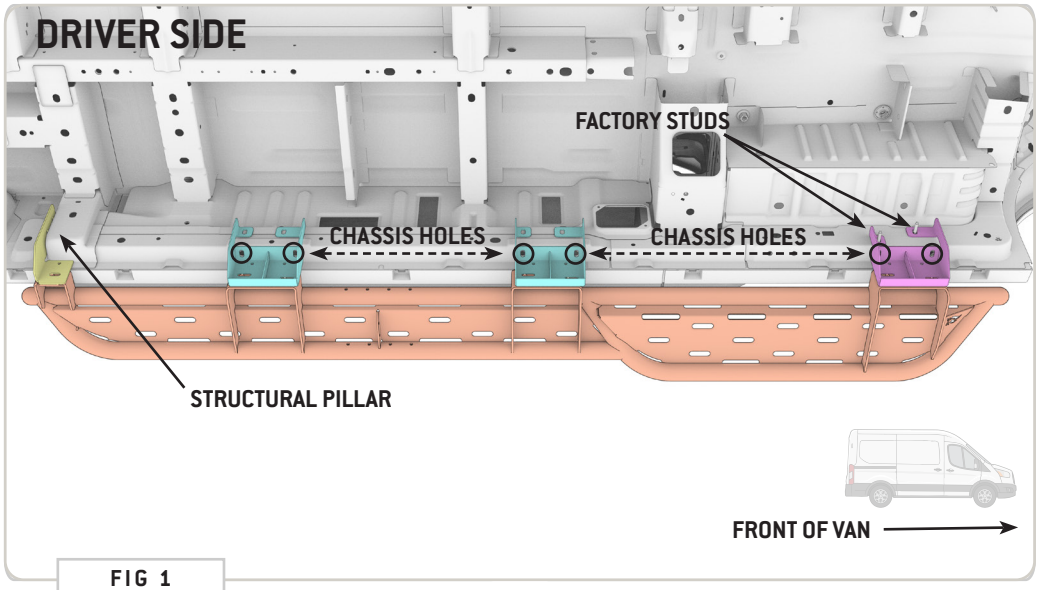



FIG 1

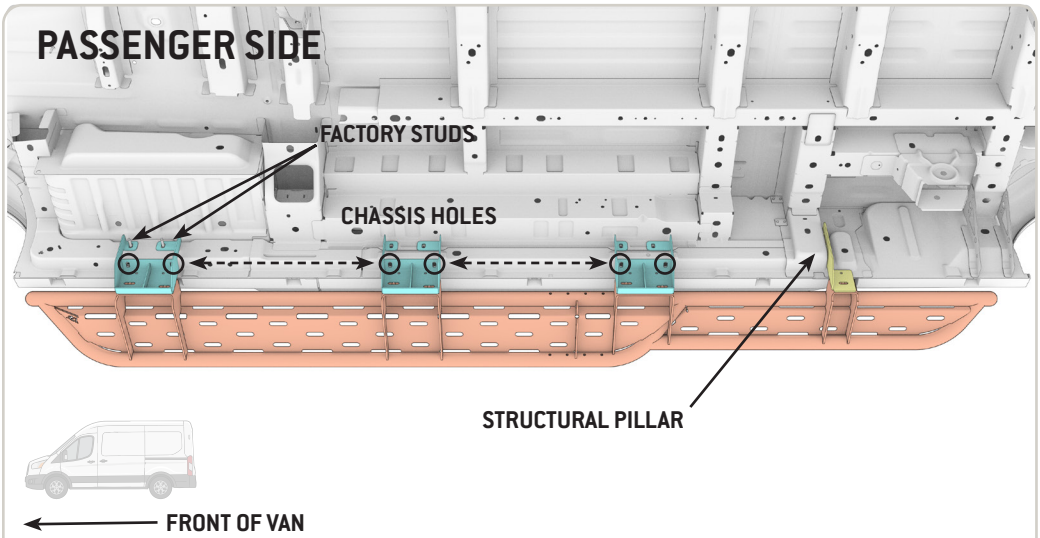



FIG 2

**TOOLS REQUIRED FOR THIS STEP:**

+ M8 X 1.25 DIE
+ WIRE BRUSH
+ HEAT GUN
+ M8-1.25 TAP
+ CUTTING OIL

## STEP | 01 LAYOUT AND INSTALL PREP

**1.2 Underbody Factory Mount Preparation:** Inspect the factory Ford mounting locations beneath the front cab area. Clean undercoating from pre-existing studs using a wire brush with a heat gun or an **M8x1.25 Die (FIG 3)**. For pre-existing threaded or unthreaded chassis holes, apply cutting lubricant and carefully run the provided **M8-1.25 Tap** through to clean or otherwise cut in new threads **(FIG 4)**.

**NOTE -** *We highly recommend using a lubricant when tapping holes. WD40 or motor oil works in a pinch, but a cutting oil is recommended.*

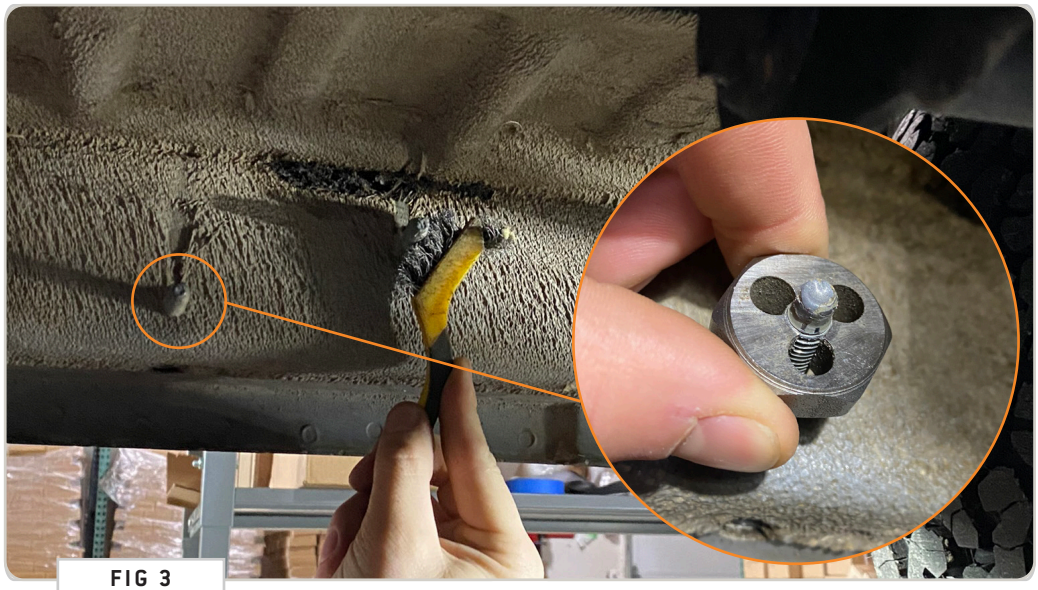


FIG 3



FIG 4

**TOOLS REQUIRED FOR THIS STEP:** + RIVET NUT TOOL

## STEP | 01 LAYOUT AND INSTALL PREP

**1.3 Identify Open Chassis Holes:** Locate the pre-existing factory holes along the underbody that do not contain factory inserts.

**1.4 Install M8 Rivet Nuts:** Thread an **M8-1.25 Rivet Nut** onto your installation tool mandrel. Insert the rivet nut completely into the chassis hole until the collar sits flush against the sheet metal, then compress until fully collapsed and secure **(FIG 5-6)**.

**NOTE -** *We recommend using a pneumatic or electric drill adapter rivet nut tool for this, although a manual rivet nut tool can work if you have enough ground clearance. We like the* ***Astro Tools ADN38 XL*** *model for a drill adapter.*




FIG 5



FIG 6

# INSTALL

**TOOLS REQUIRED FOR THIS STEP:**

+ 5/32" ALLEN WRENCH
+ 3/16" ALLEN WRENCH
+ 7/16" SOCKET OR WRENCH
+ LOCTITE

## STEP | 02 ASSEMBLE SIDE STEPS

**2.1a Assemble Driver's Side Step:** Insert a **Bayonet** into the tubing of the **Front Driver Side Step Weldment (FIG 8)**.

**b)** Align the first two holes of the **Bayonet** to the holes of the weldment and loosely attach using **(2) 1/4 x 0.75 Flanged Button Head Screws** with **Loctite**.

**c)** Slide the **Rear Driver Step Weldment** onto the protruding **Bayonet** and attach using the same hardware and method, leaving the hardware loose for now.

**d)** Finish by joining the step weldments together using **(4ea) 1/4-20 x 0.75 Flanged Button Head Screws, Flat Washers and Nylon Locknuts (FIG 9)**

**2.2 Assemble Rear Passenger's Step:** Repeat for the **Passenger Step** using the same hardware and method.

**2.3 Tighten All Step Screws:** Once aligned, fully tighten all fasteners.

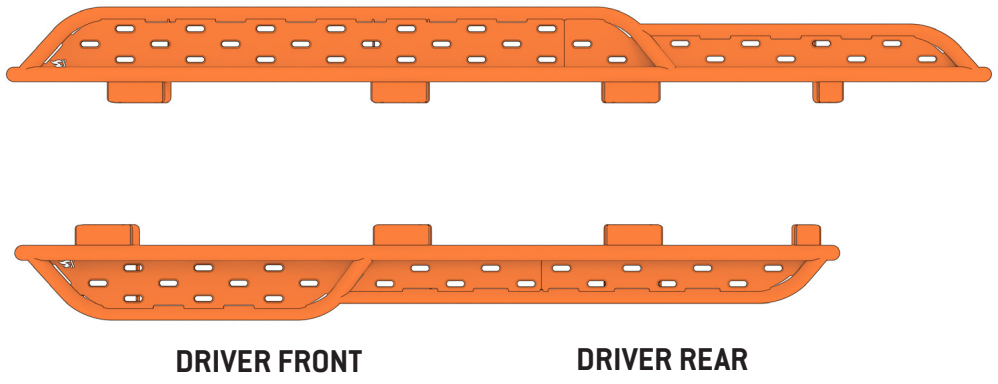



FIG 7

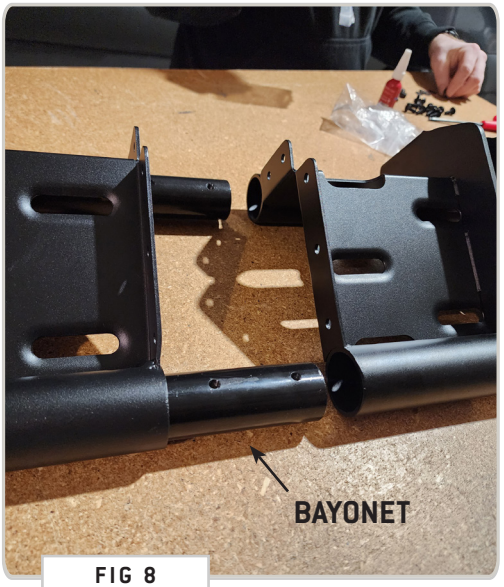



FIG 8



FIG 9

**TOOLS REQUIRED FOR THIS STEP:**
+ RIVET NUT TOOL
+ M8 MANDREL
+ 13MM WRENCH OR SOCKET

## STEP | 03 DRIVER SIDE BRACKETS

**3.1 Install Driver Front Hanger Bracket:** Mount the unique **Driver Front Step Bracket** onto the forward factory underbody studs using **M8 Flat Washers** and **M8-1.25 Nylon Locknuts** and **M8-1.25 X 25mm Flanged Hex Head Screws (FIG 10).**

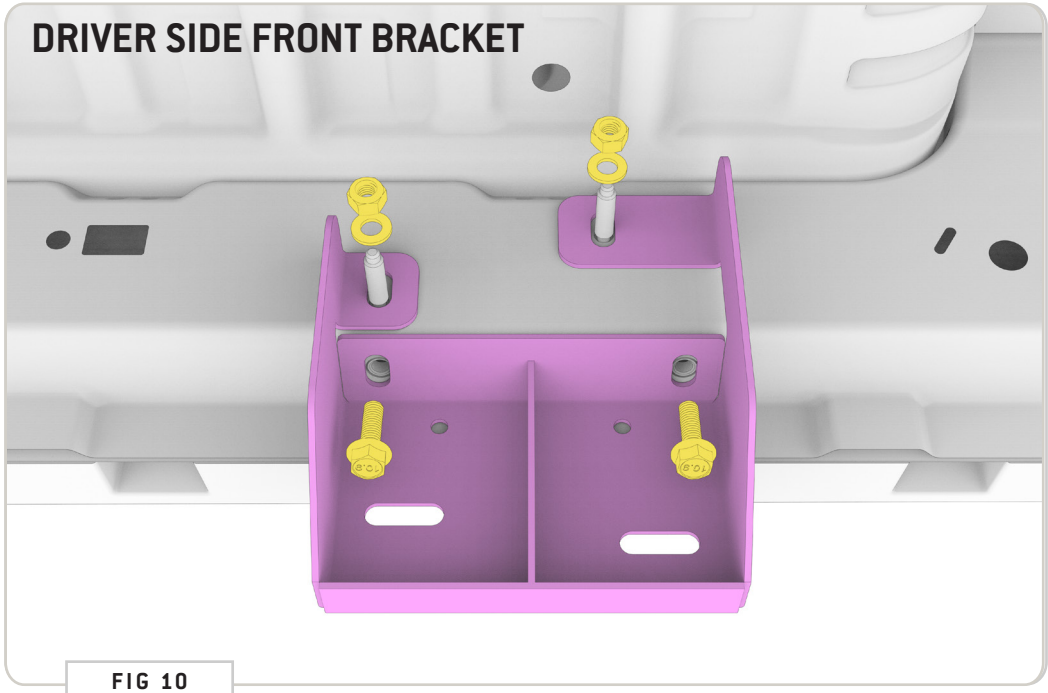



FIG 10

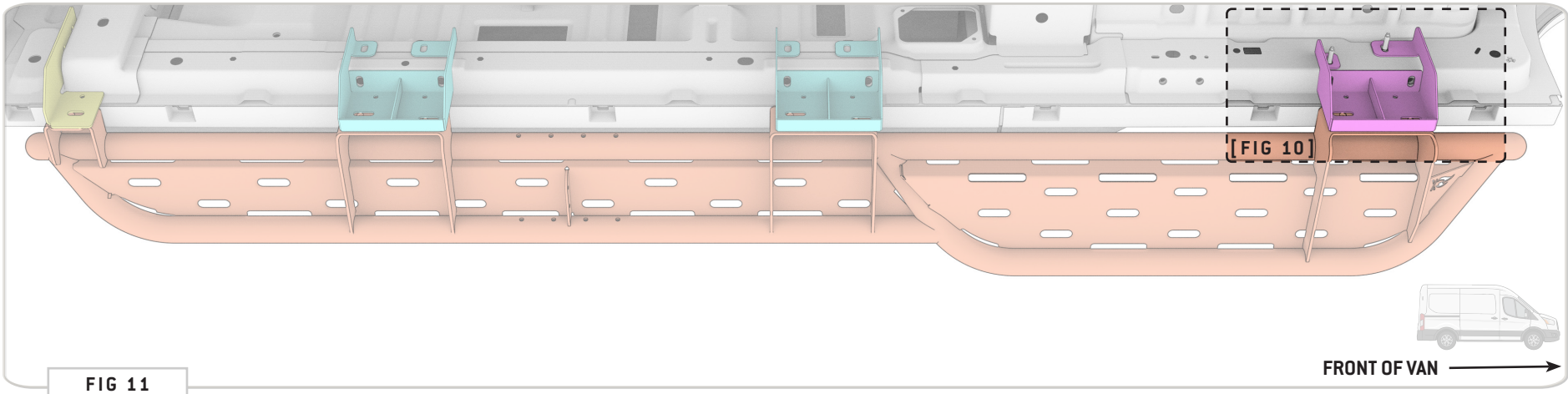



FIG 11

**TOOLS REQUIRED FOR THIS STEP:**

+ MARKER
+ POWER DRILL
+ 17/32" DRILL BIT
+ RIVET NUT TOOL
+ M8 MANDREL

## STEP | 03 DRIVER SIDE BRACKETS

**3.2 Position Front Hangar Bracket:** Position one standard **Hangar Bracket** to the mounting location shown and thread in **M8-1.25 X 25mm Flanged Screws** into the bottom inserts or rivet nuts **(FIG 12-13)**.

**3.3 Mark and Drill Pinch Weld Holes:** Mark the upper mounting hole locations onto the vehicle underbody. Remove bracket, center punch your marks and out drill pilot holes. Use a **17/32" Drill Bit** to expand and install **M8-1.25 Rivet Nuts.**

**NOTE -** *We recommend painting all drilled holes with a rust preventative paint.*

**3.4 Reinstall Front Bracket:** Reinstall bracket using **M8-1.25 X 25mm Flanged Hex Head Screws** with threadlocker into the lower inserts and upper rivet nuts.

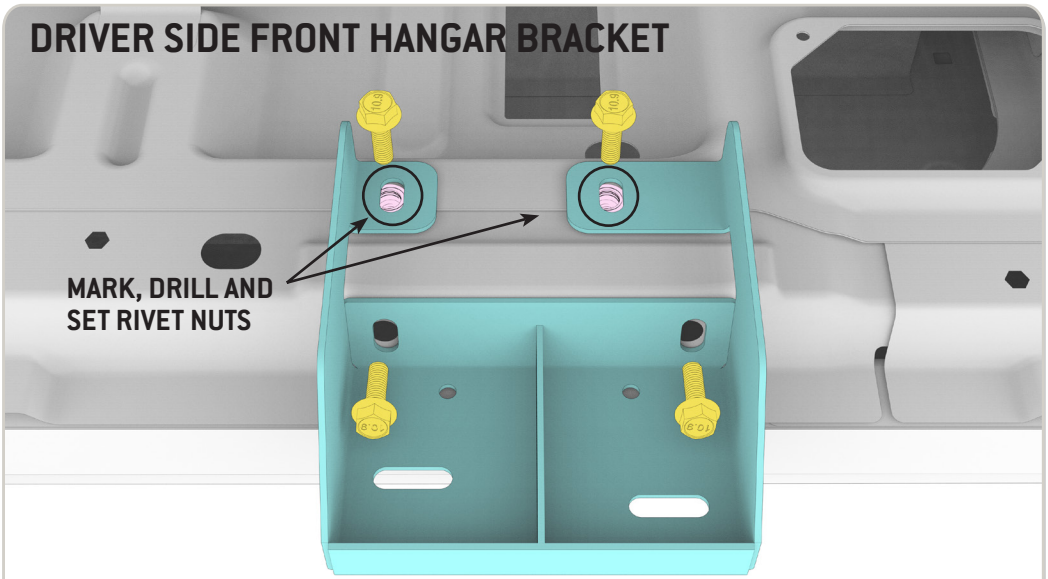



FIG 12

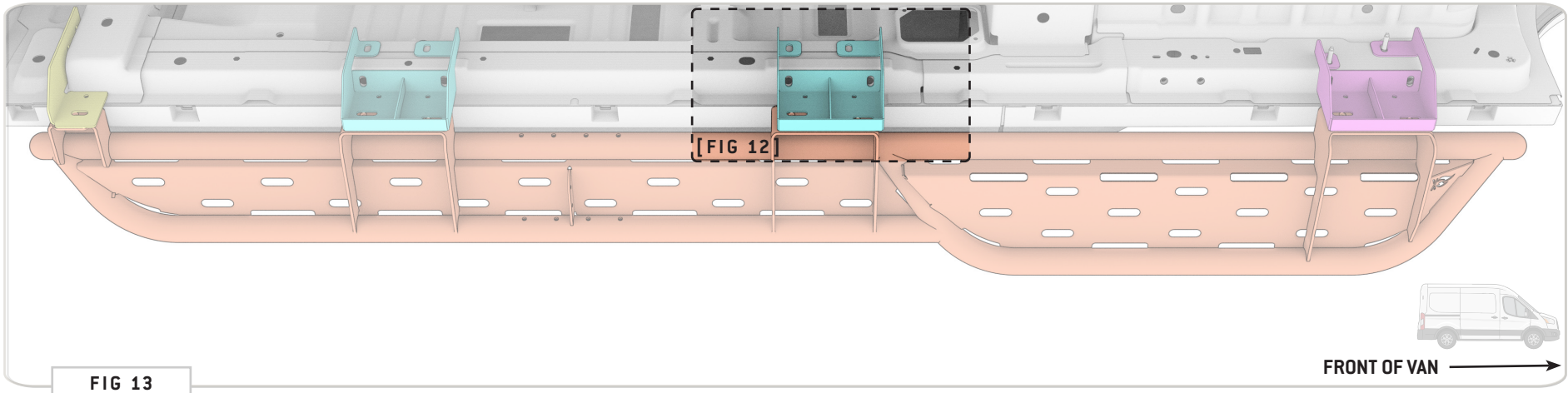



FIG 13

**TOOLS REQUIRED FOR THIS STEP:**

+ MARKER
+ POWER DRILL
+ 17/32" DRILL BIT
+ RIVET NUT TOOL
+ M8 MANDREL

## STEP | 03 DRIVER SIDE BRACKETS

**3.5 Position Rear Hangar Bracket:** Position one standard **Hangar Bracket** to the mounting location shown and thread in **M8-1.25 X 25mm Flanged Screws** into the bottom inserts or rivet nuts **(FIG 14-15)**.

**3.6 Mark and Drill Pinch Weld Holes:** Mark the upper mounting hole locations onto the vehicle underbody. Remove bracket, center punch your marks and out drill pilot holes. Use a **17/32" Drill Bit** to expand and install **M8-1.25 Rivet Nuts.**

**NOTE -** *We recommend painting all drilled holes with a rust preventative paint.*

**3.7 Reinstall Rear Hangar Bracket:** Reinstall bracket using **M8-1.25 X 25mm Flanged Hex Head Screws** with threadlocker into the lower inserts and upper rivet nuts.

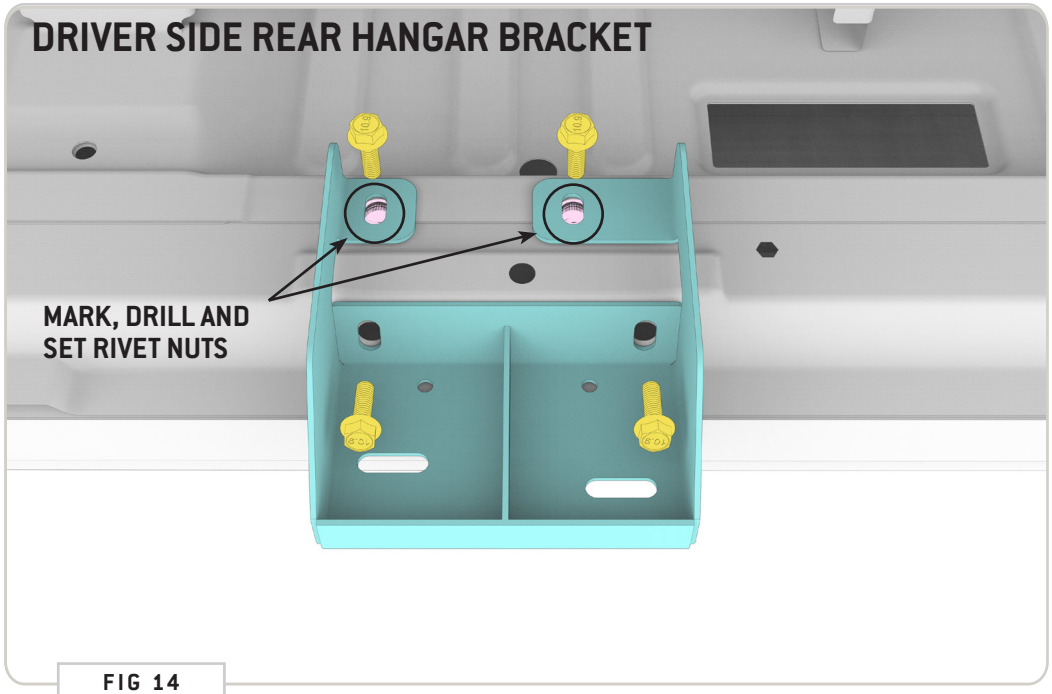



FIG 14

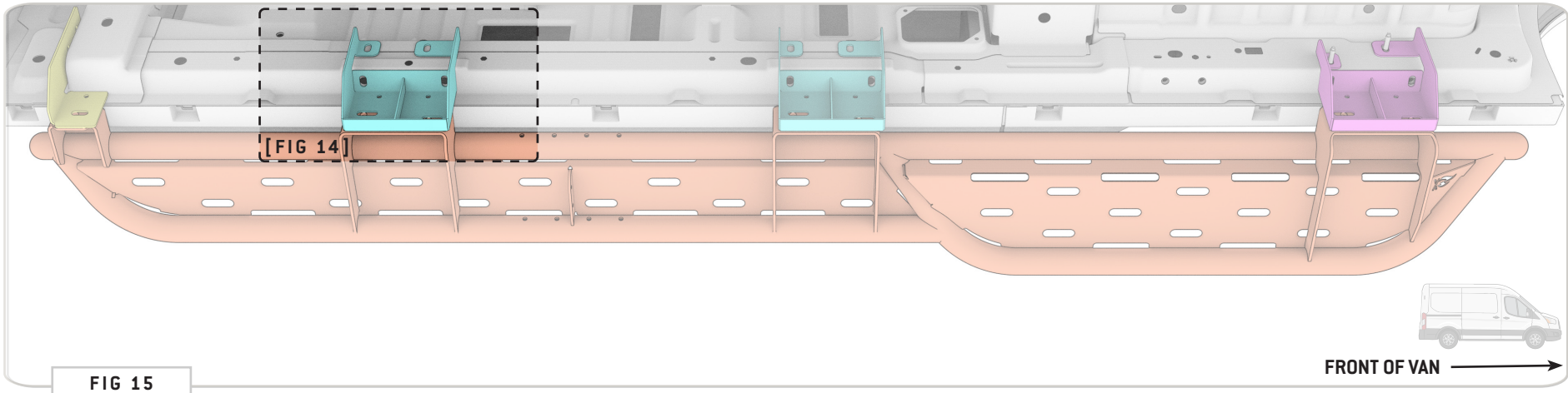



FIG 15

**TOOLS REQUIRED FOR THIS STEP:**
+ RIVET NUT TOOL
+ M8 MANDREL
+ 13MM WRENCH OR SOCKET

## STEP | 04 PASSENGER SIDE BRACKETS

**4.1 Mount Passenger Side Hangar Brackets:** Mount **Hangar Brackets** onto the factory underbody studs along the **Passenger Side** of the van using **M8 Flat Washers** and **M8-1.25 Nylon Locknuts (FIG 16-17).**

**4.2 Install Brackets:** Secure brackets using **M8-1.25 X 25mm Flanged Hex Head Screws** with threadlocker into the lower inserts or rivet nuts.

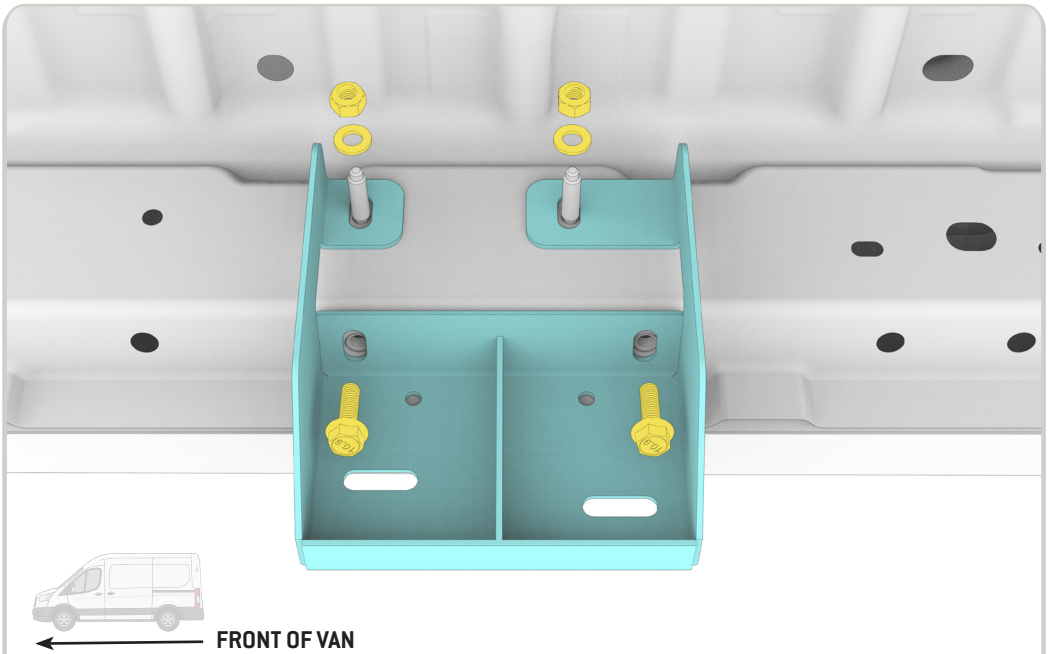



FIG 16




FIG 17

**TOOLS REQUIRED FOR THIS STEP:** + 13MM SOCKET AND WRENCH

## STEP | 05 SIDE STEP INSTALLATION

**5.1 Fasten Steps to Brackets:** Lift the **Side Step Assemblies** into place against the mounted front and rear brackets and insert **M8-1.25 X 25 Flanged Hex Head Screws** through the **Hangar Brackets**. Loosely fasten using **M8 Oversized Flat Washers** and **M8 Nylon Locknuts (FIG 18).**

**5.2 Final Leveling:** Check the exterior of the van to ensure the step is aligned. Notice there is left-to-right adjustment built into the step **(FIG 19)**. This adjustment is critical for the next steps of the install.

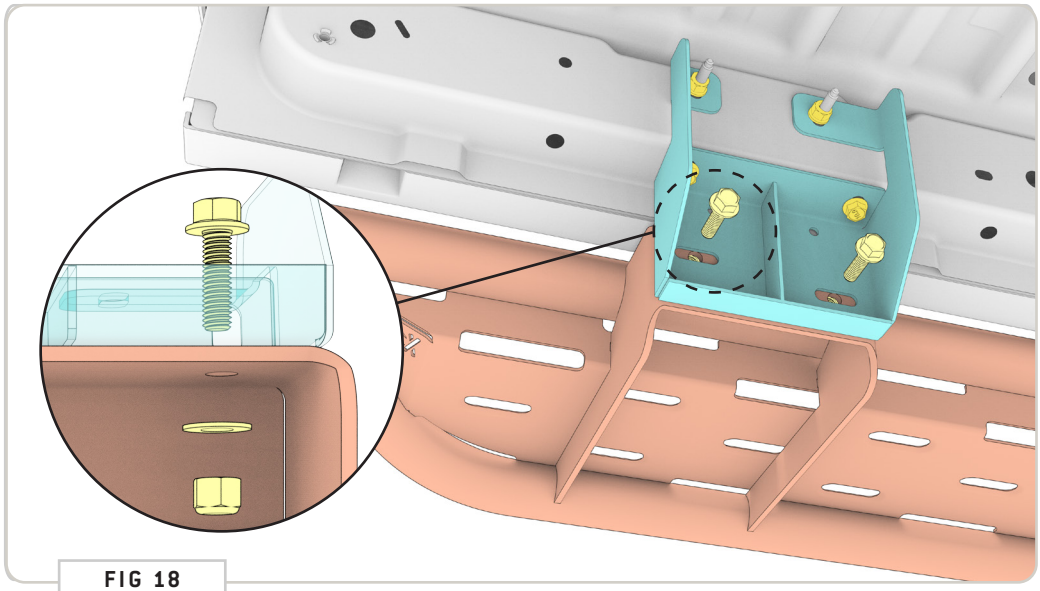


FIG 18



FIG 19

**TOOLS REQUIRED FOR THIS STEP:** + 13MM SOCKET

## STEP | 05 SIDE STEP INSTALLATION

**5.3 Attach Passenger Support Bracket:** Insert a **M8-1.25 X 25 Flanged Hex Head Screw** through the **Passenger Side Rear Support Bracket** and loosely fasten to the **Side Step** using **M8 Oversized Flat Washers** and **M8 Nylon Locknuts (FIG 20-21).**

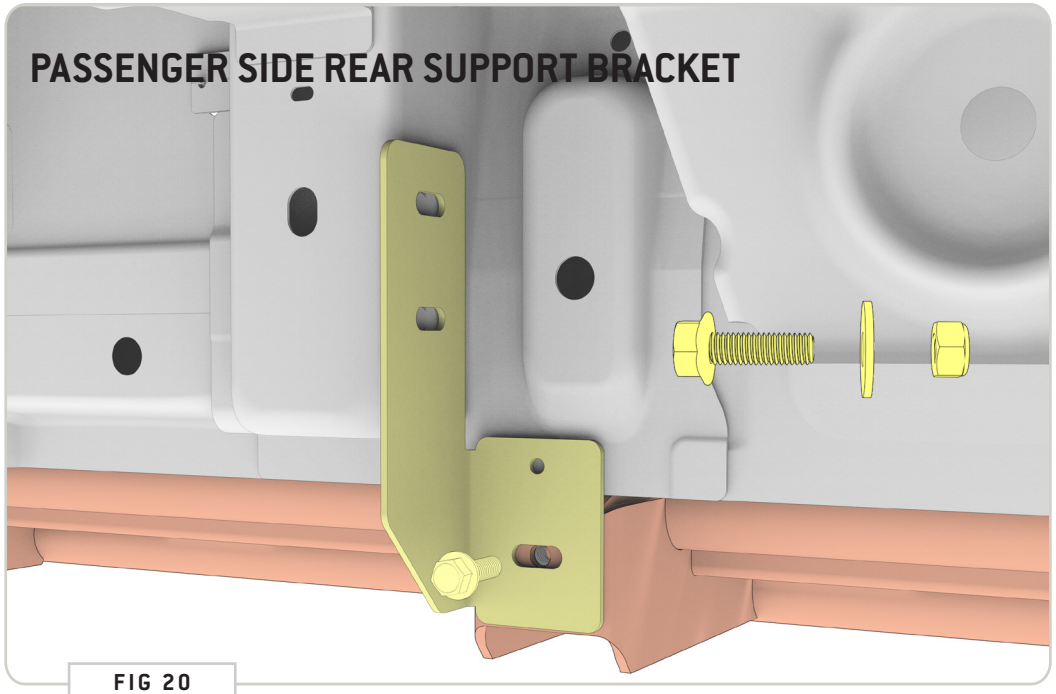



FIG 20

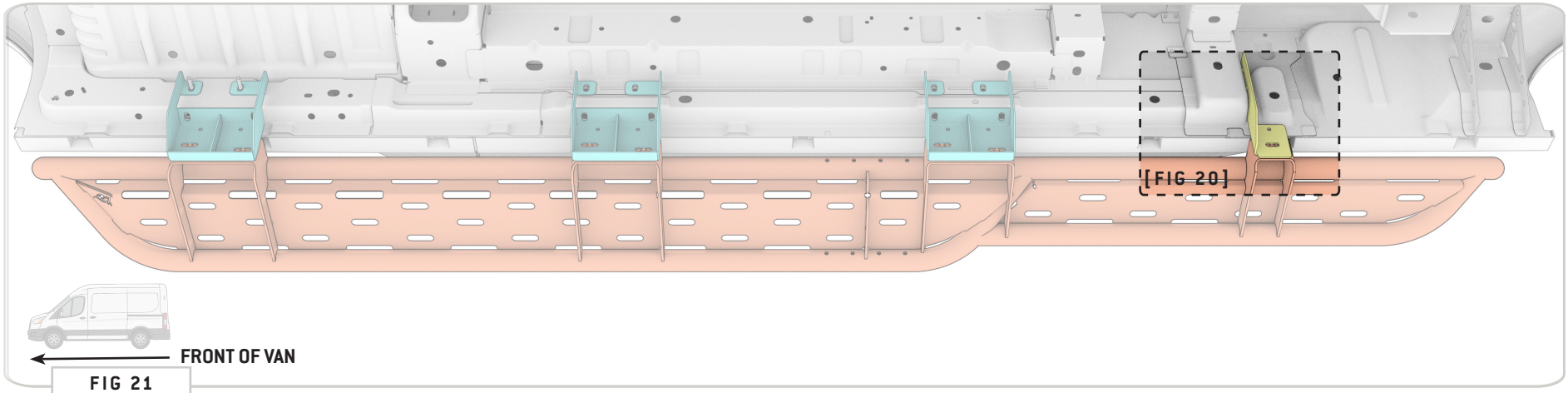



FIG 21

**TOOLS REQUIRED FOR THIS STEP:** + 13MM SOCKET

## STEP | 05 SIDE STEP INSTALLATION

**5.4 Attach Driver Support Bracket:** Insert a **M8-1.25 X 25 Flanged Hex Head Screw** through the **Driver Side Rear Support Bracket** and loosely fasten to the **Side Step** using **M8 Oversized Flat Washers** and **M8 Nylon Locknuts (FIG 22-23).**

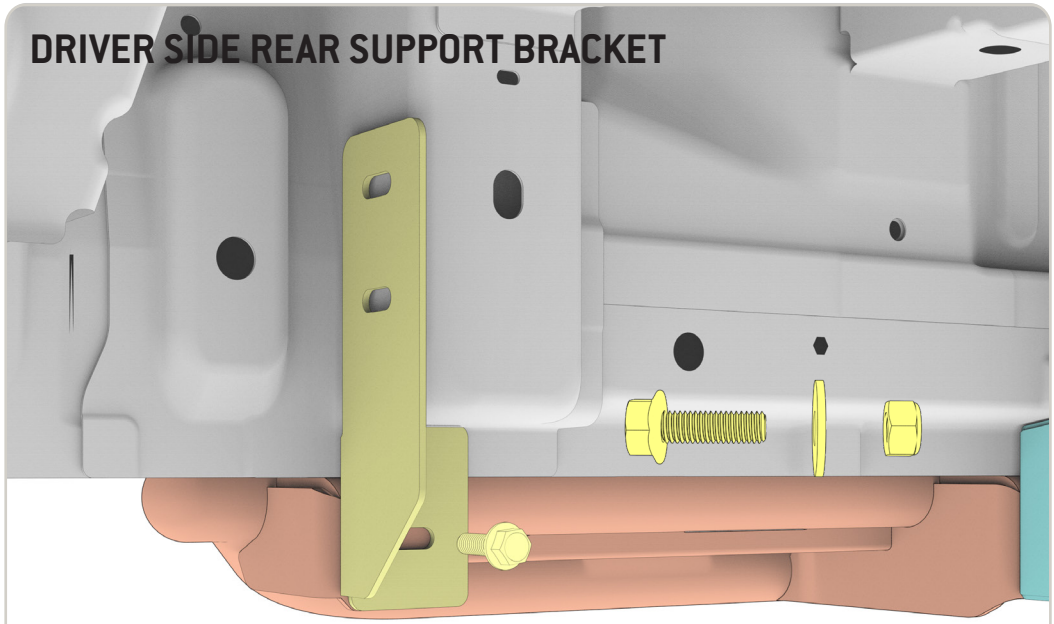



FIG 22

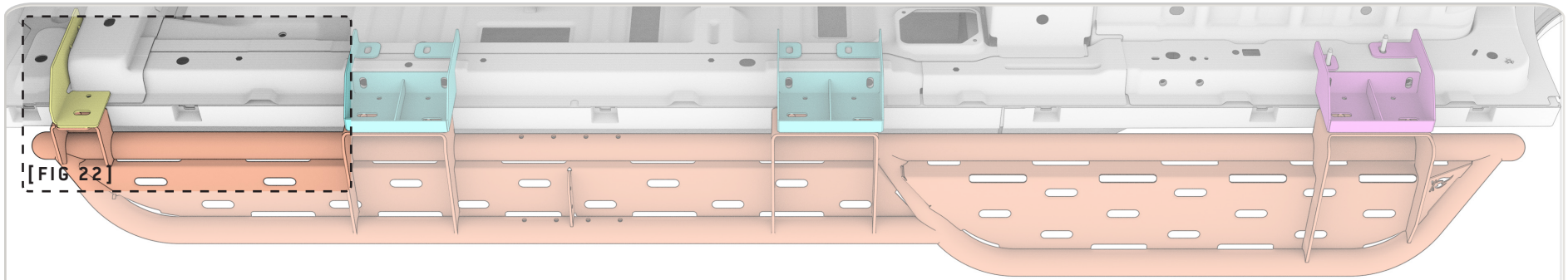



FIG 23

**TOOLS REQUIRED FOR THIS STEP:**

+ MARKER
+ POWER DRILL
+ 17/32" DRILL BIT
+ RIVET NUT TOOL
+ M8 MANDREL

## STEP | 05 SIDE STEP INSTALLATION

**5.5a Position Rear Step Support Bracket:** Press the Rear Step Support Bracket against the vertical chassis rib of the van. Mark both vertical slot locations onto the sheet metal **(FIG 24)**.

**5.6a Install Vertical Rivet Nuts:** Remove bracket and drill out marked locations on the vertical chassis rib to 17/32" and install **M8-1.25 Rivet Nuts (FIG 25-26).**

**5.7a Fasten Steps to Brackets:** Reinstall support bracket to van underbody and **Side Steps.**

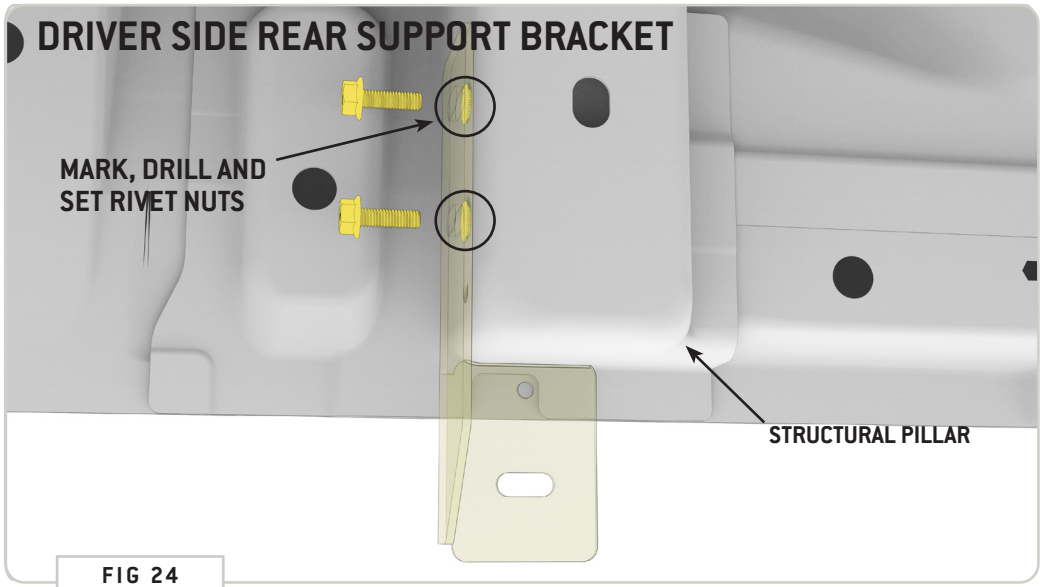



FIG 24

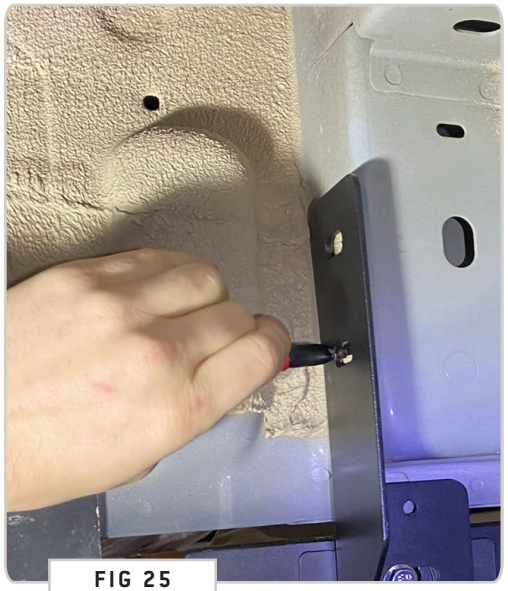


FIG 25

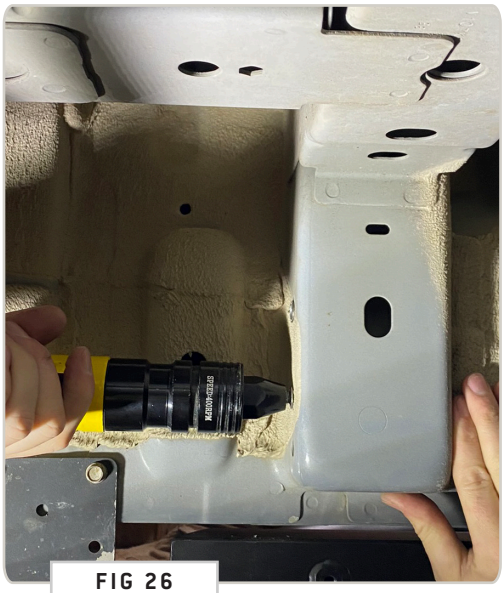


FIG 26

**TOOLS REQUIRED FOR THIS STEP:**

+ MARKER
+ POWER DRILL
+ 17/32” DRILL BIT
+ RIVET NUT TOOL
+ M8 MANDREL

## STEP | 05 SIDE STEP INSTALLATION

**5.5b Position Rear Step Support Bracket:** Press the Rear Step Support Bracket against the vertical chassis rib of the van. Mark both vertical slot locations onto the sheet metal **(FIG 27)**.

**5.6b Install Vertical Rivet Nuts:** Remove bracket and drill out marked locations on the vertical chassis rib to 17/32” and install **M8-1.25 Rivet Nuts (FIG 28-29).**

**5.7b Fasten Steps to Brackets:** Reinstall support bracket to van underbody and **Side Steps.**

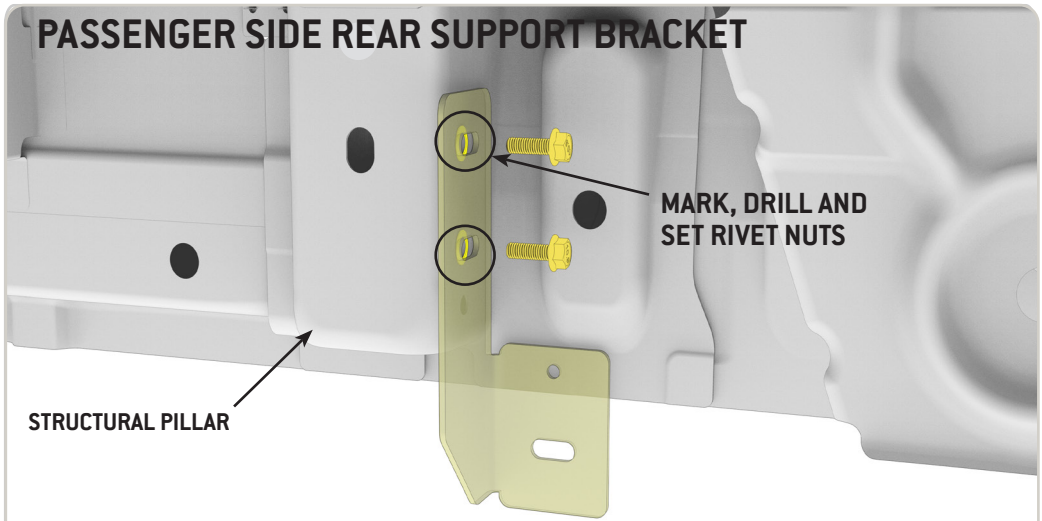



FIG 27



FIG 28



FIG 29

**TOOLS REQUIRED FOR THIS STEP:**
+ IMPACT DRIVER
+ 3/8" SOCKET
+ 13MM WRENCH AND SOCKET

## STEP | 05 SIDE STEP INSTALLATION

**5.8 Final Checks:** Go through each **Hangar/Support Bracket** and secure all fasteners **(FIG 30).**

**5.9 Secure Steps:** Drive self-drilling screws through **Hangar/Support Brackets** to finalize the install **(FIG 31).**



FIG 30

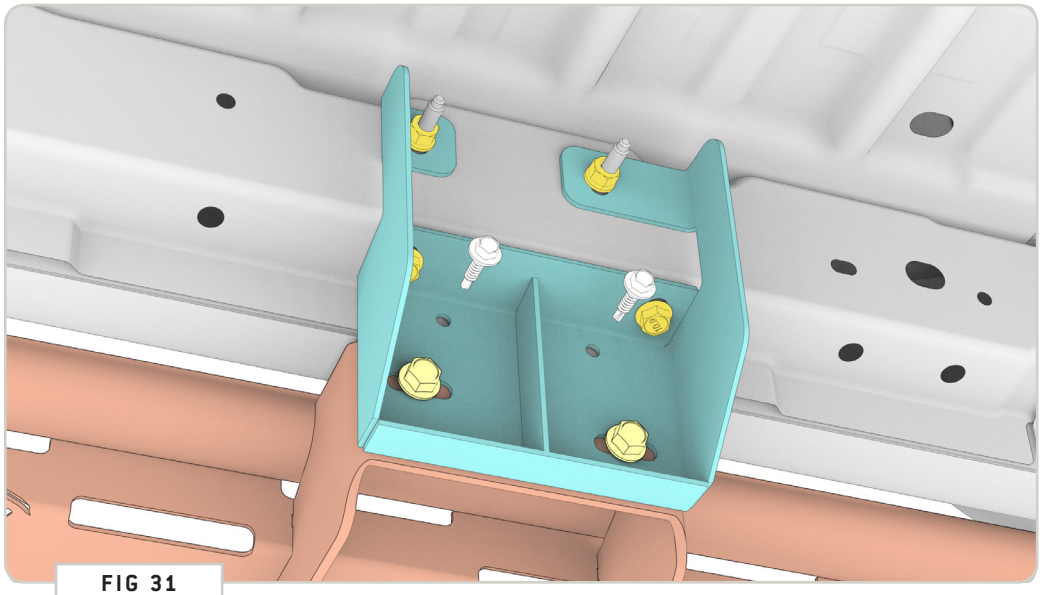


FIG 31

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