



INSTALLATION GUIDE

PROMASTER VAN REAR TIRE CARRIER AND LADDER

PM1102B



TOOLS REQUIRED (NOT INCLUDED)

+ AUTO PANEL REMOVAL TOOL	+ 5/32" ALLEN WRENCH
+ PAINTER'S TAPE	+ 7/32" ALLEN WRENCH
+ MEASURING TAPE	+ MARKER
+ POWER DRILL	+ T40 TORX
+ 3/16" DRILL BIT	+ FLATHEAD SCREWDRIVER
+ 27/64" DRILL BIT	+ 4MM ALLEN WRENCH
+ DEBUR TOOL	+ 6MM ALLEN WRENCH
+ RUST PREVENTATIVE PAINT	+ 5MM WRENCH/SOCKET
+ 3/4" WRENCH/SOCKET	+ MEASURING TAPE
+ 9/16" WRENCH/SOCKET	+ 13/16" WRENCH/SOCKET

INSTALL INFO

TIME TO INSTALL THIS PRODUCT: 1-2 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.

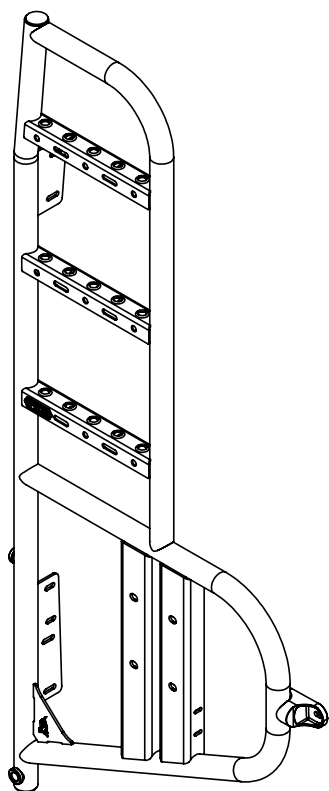
Contact us ASAP if anything is missing at:
support@flatlinevanco.com

BEFORE YOU START

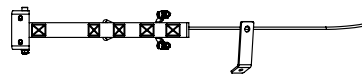
All Flatline Van Co products must be properly assembled and secured before attaching to your vehicle. Improper attachment could result in an automobile accident, and could cause serious bodily injury or death to you or to others involved. You are responsible for assembling and securing Flatline Van Co 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.



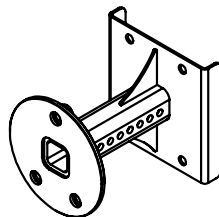
PACKAGE CONTENTS



TIRE CARRIER
QTY: 1



LIMIT STRAP ASSEMBLY
QTY: 1



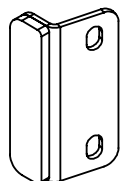
WHEEL BRACKET
QTY: 1



BACKER PLATES
QTY: 2



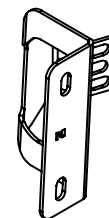
BOTTLE OPENER
QTY: 1



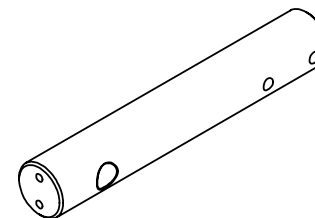
FRAME BRACE
QTY: 1



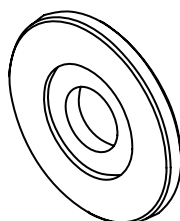
LOWER HINGE BRACKET
QTY: 1



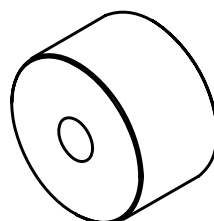
UPPER HINGE BRACKET
QTY: 1



LOCK ROD
QTY: 1



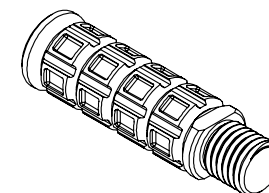
BUSHING CAP
QTY: 1



TALL BUSHING
QTY: 1

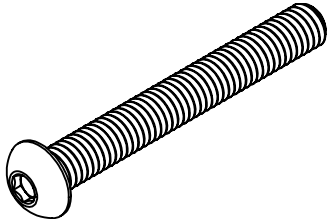


SHORT BUSHING
QTY: 1



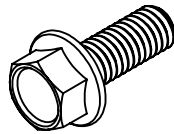
FOOT PEGS
QTY: 2

HARDWARE



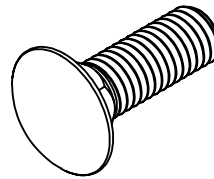
3/8-16 X 2.25 BUTTON
HEAD HEX DRIVE SCREW

QTY: 1



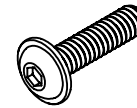
3/8-16 X 1 FLANGED HEX
HEAD SCREW

QTY: 8



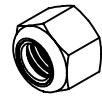
1/2-13 X 1.5 SQUARE NECK
CARRIAGE BOLT

QTY: 4



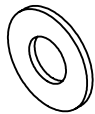
1/4-20 X 0.75 FLANGED
BUTTON HEAD HEX DRIVE
SCREW

QTY: 10



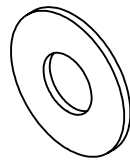
3/8-16 NYLON LOCKNUT

QTY: 8



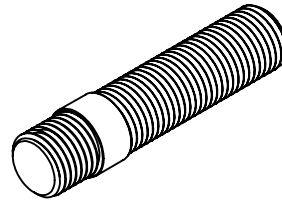
3/8 FLAT WASHER

QTY: 10



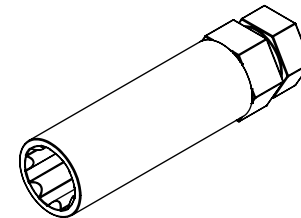
1/2 FLAT WASHER

QTY: 4



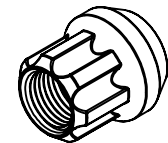
M14-1.5 X 65 WHEEL STUD

QTY: 3



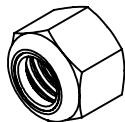
LUG NUT KEY

QTY: 1



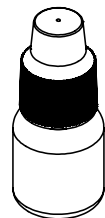
M14-1.5 LUG NUT

QTY: 3



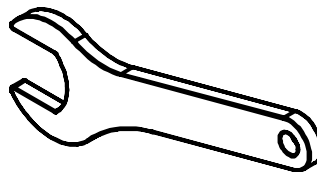
1/2-13 NYLON LOCKNUT

QTY: 4



THREAD LOCKER

QTY: 1



FOOT PEG WRENCH

QTY: 1

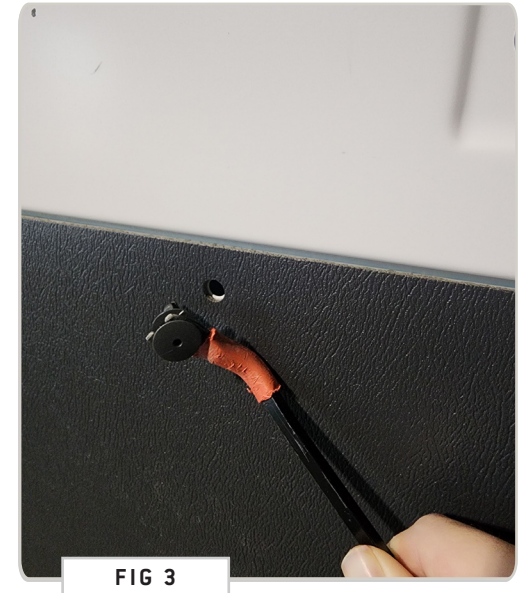
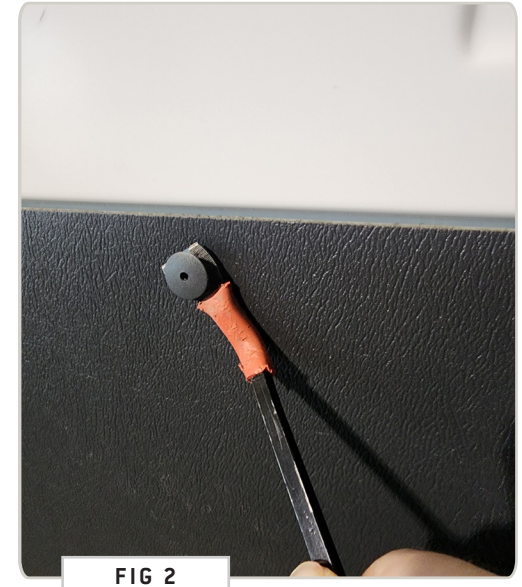
INSTALL

TOOLS REQUIRED FOR THIS STEP: + AUTO PANEL REMOVAL TOOL

STEP | 01 LAYOUT AND INSTALL PREP

1.1 Door Panel Removal: Remove the Lower Panel Trim (FIG 1) using plastic panel removal tools. Be gentle to avoid breaking the factory panel clips. If clips get stuck in the door, pop them out and slide them back into place on the trim panel.

NOTE- You may have any number of different door configurations- stock full trim, stock half trim, stock panel (Pictured FIG 1), upholstered wood, etc. Each require their own removal method.



STEP | 02 DRILL FOR THIRD MOUNT

2.1 Marking Front Drill Location: Use the **Front Drill Template** to mark the outside of the rear driver door. The arrow should align with the **Right Side Of The Door** as shown in FIG 4+5.

NOTE - The template aligns to the contours of the van body's **sheet metal** and **not the plastic trim** of the license plate cover. Be sure to keep the template tight against the van body.

2.2 Drill Front-Facing Third Mount: Drill out your mark with a **Pilot Bit** (3/16" sized or similar) as shown in FIG 6, then enlarge it with a **27/64" Drill Bit** (FIG 7).

TOOLS REQUIRED FOR THIS STEP:

- + MARKER
- + POWER DRILL
- + 3/16" DRILL BIT
- + 27/64" DRILL BIT



FIG 4

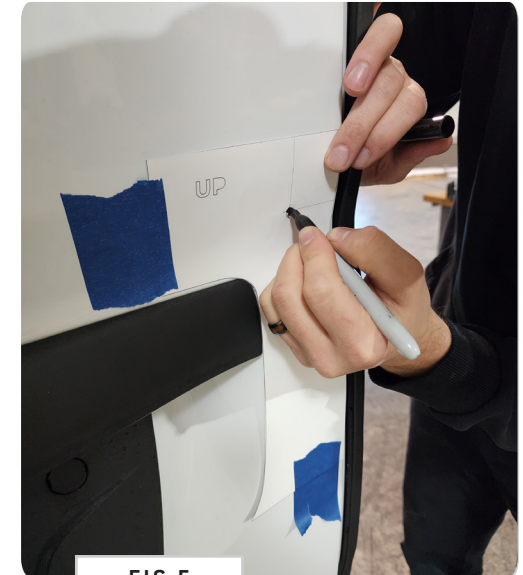


FIG 5



FIG 6



FIG 7

STEP | 03 PREP FOR CARRIER INSTALL

3.1 Paint Raw Edges: Debur and paint the exposed edges for rust prevention (FIG 8+9)

3.2 Side Drill Template: Drill out a clearance hole for the License Plate Relocation Bracket Wiring using a 1/4" or similar sized Drill Bit (FIG 10+11).

NOTE - Take care not to drill through the plastic housing that holds the license plate light in place.

TOOLS REQUIRED FOR THIS STEP:

- + PAINTER'S TAPE
- + RUST PREVENTATIVE PAINT
- + POWER DRILL
- + 1/4" DRILL BIT



FIG 8



FIG 9



FIG 10



FIG 11

STEP | 04 ASSEMBLE TIRE CARRIER

4.1 Assemble the Tire Carrier: Attach the **Wheel Bracket** to the **Tire Carrier Frame** using: (2) **Backer Plates**, (4) **1/2-13 X 1.5 Square Neck Carriage Bolts**, (4) **1/2 Screw Flat Washers**, And (4) **1/2-13 Nylon Insert Locknuts** and a **3/4" Wrench or Socket** (FIG 12).

4.2 Lock Rod (Optional): If you would like to run a lock to your wheel fasten the **Lock Rod** to the **Wheel Bracket** using (2) **3/8-16 X 1 Hex Head Screws with Flat Washers**, **Loctite** and a **9/16" Wrench or Socket**. The depth is adjustable to suit your specific wheel setup (FIG 13).

NOTE - The **Lock Rod** accomodates a **5/8" diameter hitch pin lock**, such as the **CURT 23518** (not included).

Optional: If you have locking lug nuts, skip the lock rod installation for a clean look.

TOOLS REQUIRED FOR THIS STEP: + 3/4" WRENCH/SOCKET
+ 9/16" WRENCH/SOCKET

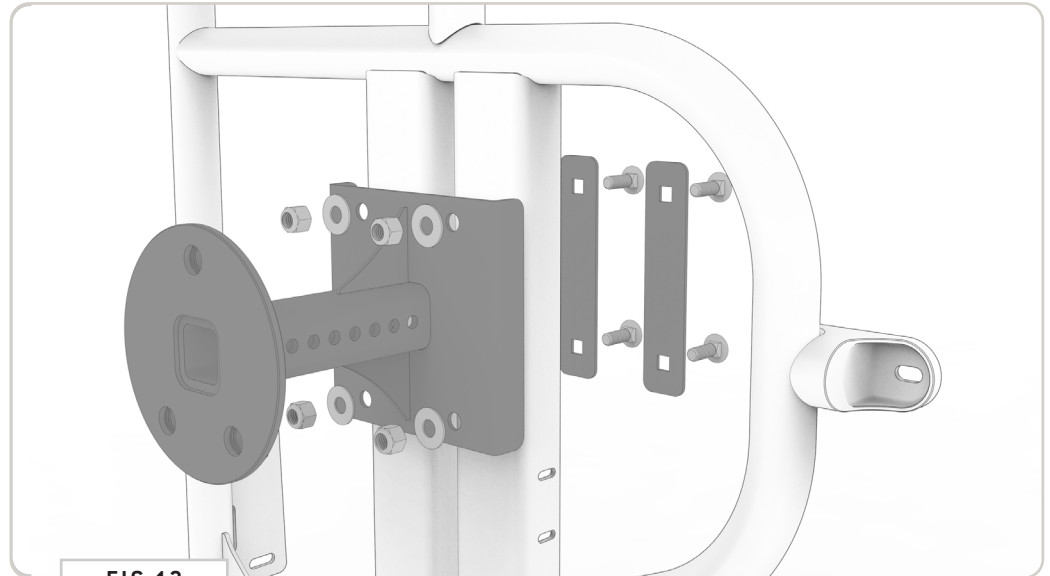


FIG 12

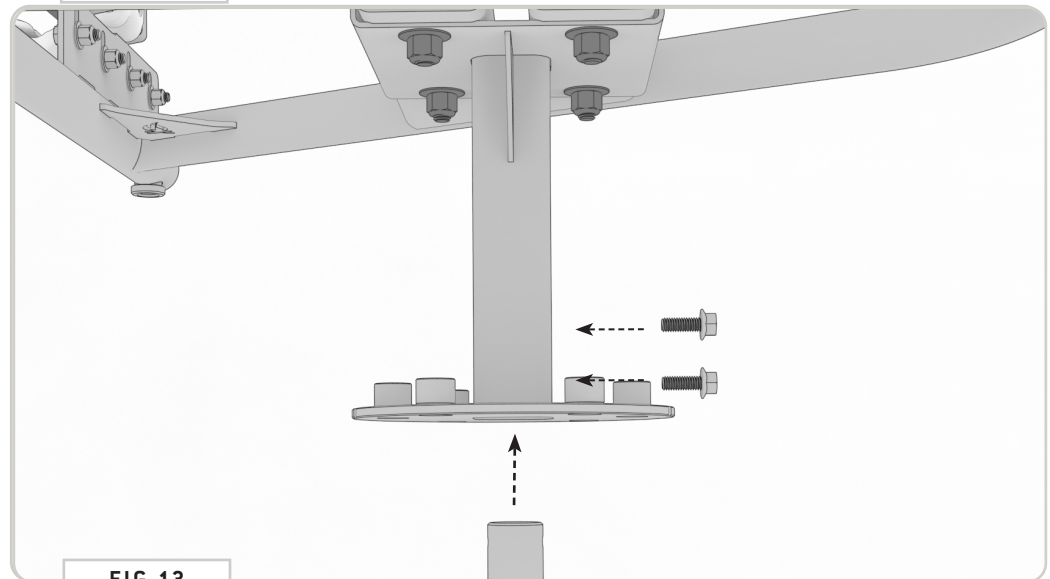


FIG 13

TOOLS REQUIRED FOR THIS STEP: + 5/32" ALLEN WRENCH

STEP | 04 ASSEMBLE TIRE CARRIER

4.3 Attach License Plate Relocation Bracket: Attach the **License Plate Relocation Bracket** to the **Tire Carrier Frame** using: **(4) 1/4-20 X 0.5 Flanged Button Head Screws** in the threaded locations shown in **FIG 14+15**

NOTE - There are multiple slots available on the **License Plate Relocation Bracket** to zip tie the wiring in place (**FIG 15**).

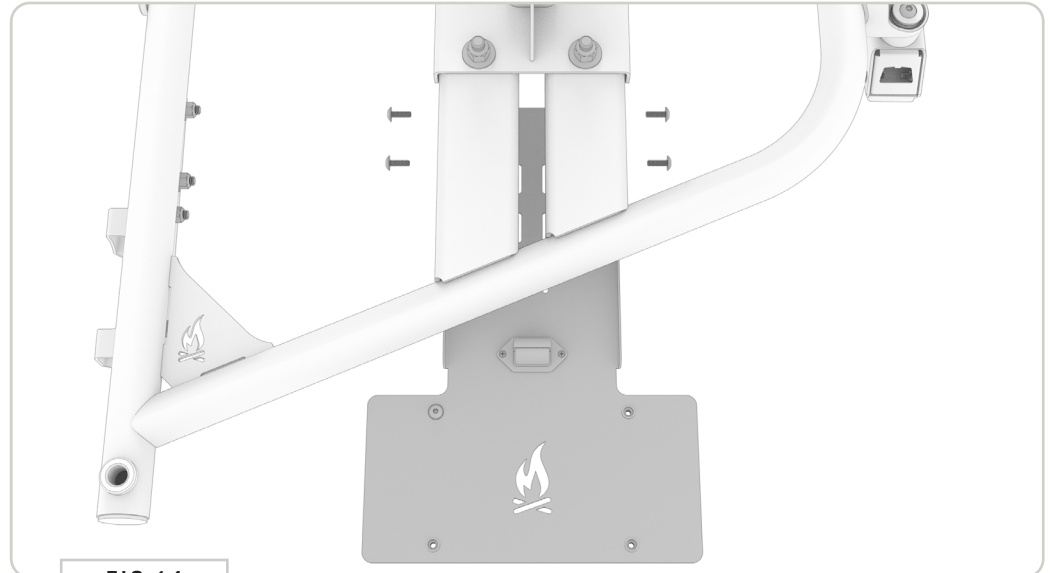


FIG 14

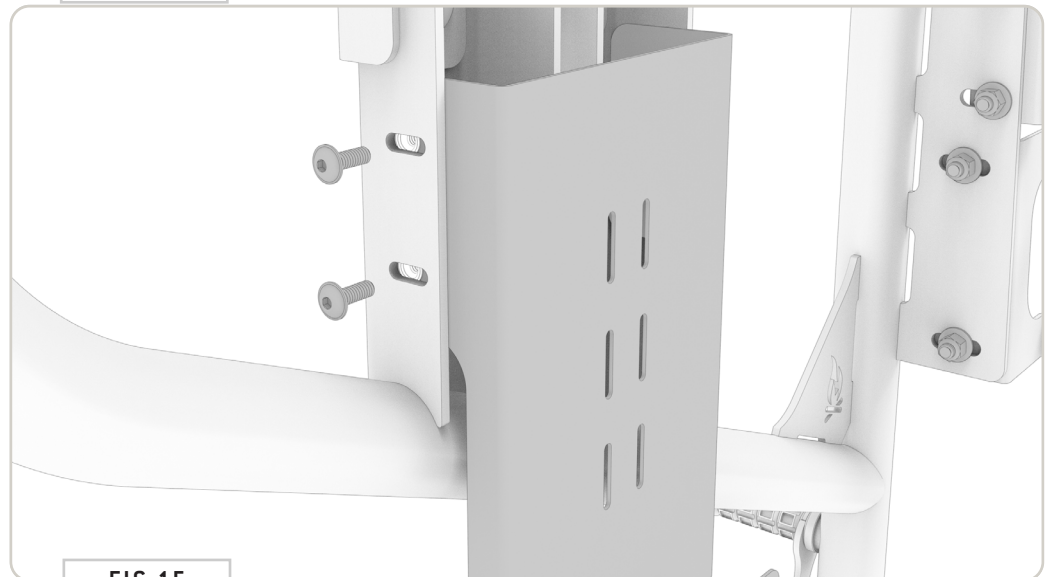


FIG 15

TOOLS REQUIRED FOR THIS STEP: + T40 TORX
+ MARKER
+ SCREWDRIVER

STEP | 05 INSTALL VAN MOUNTS

5.1 Bottom Hinge Alignment Marks: Begin by marking alignment points at the bottom hinge of the driver-side door (FIG 16).

5.2 Release Bottom Hinge: Remove the three factory bolts of the lower hinge using a T40 Torx (FIG 17).

NOTE - *Be very careful not to strip the head of the bolts. Do not use power tools! Very easy to cross thread!!*

5.3 Position D2 Hinge Bracket: Support the door while swinging the hinge back to slide the **D2 Hinge Bracket** over it (FIG 18).

5.4 Secure D2 Hinge Bracket Reinstall the factory bolts snugly, then check clearances by slowly closing the door before tightening the bolts (FIG 19).

PRO-TIP: *Use a punch or screwdriver inside one of the threaded holes to keep the door aligned while you thread them in to avoid cross-threading.*

5.5 Repeat for D1 Hinge Bracket: Repeat the process for the upper hinge with the **D1 Hinge Bracket**. Ensure the door is supported to prevent twisting during hinge removal. After installing the **D1 Hinge Bracket**, test door function to ensure there is no contact with the van's body during operation.

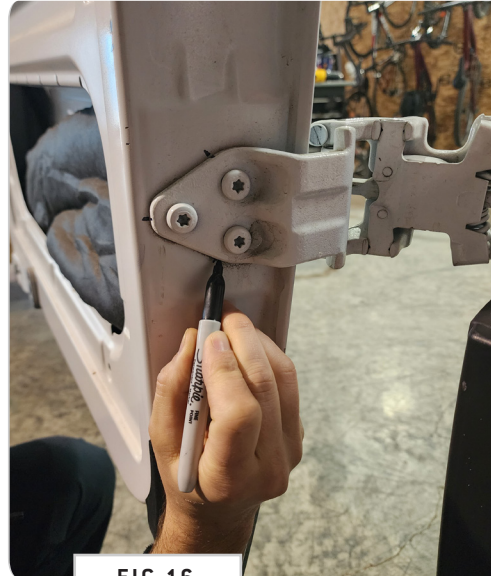


FIG 16

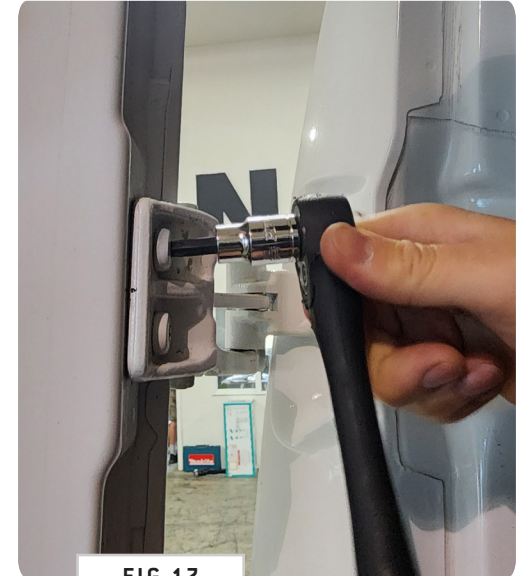


FIG 17



FIG 18

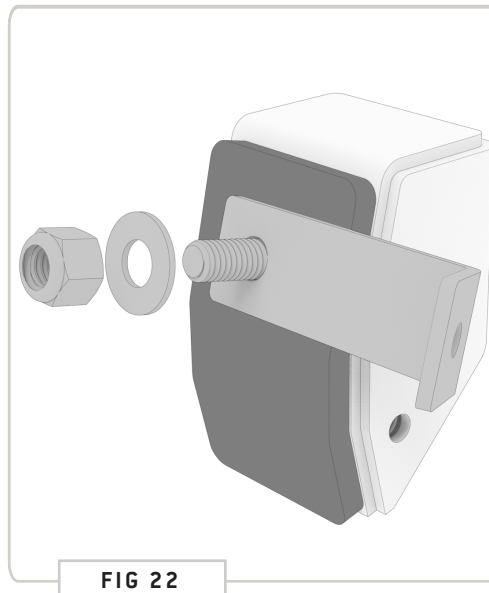
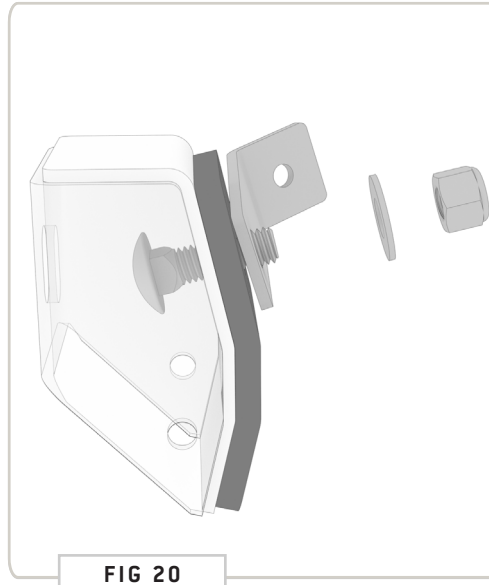


FIG 19

STEP | 05 INSTALL VAN MOUNTS

5.6 Third Mount: Install the **Third Mount** to the drilled hole using a **3/8" Carriage Bolt**, **Bungee Bracket**, **3/8" Flat Washer** and **Nylon Locknut** (FIG 20-23).

NOTE - Make sure that the **Bungee Bracket** is in the orientation as shown in FIG 23.



TOOLS REQUIRED FOR THIS STEP: + 9/16" WRENCH/SOCKET
+ 7/32" ALLEN WRENCH

STEP | 06 INSTALL TIRE CARRIER

6.1 Hinge Mounts: With assistance, raise the carrier up to the door and insert (2ea) 3/8" Flanged Hex Head Screws through the Upper (FIG 24) and Lower (FIG 25) Hinge Brackets. Loosely thread on (2ea) 3/8" Flat Washers and Nylon Locknuts.

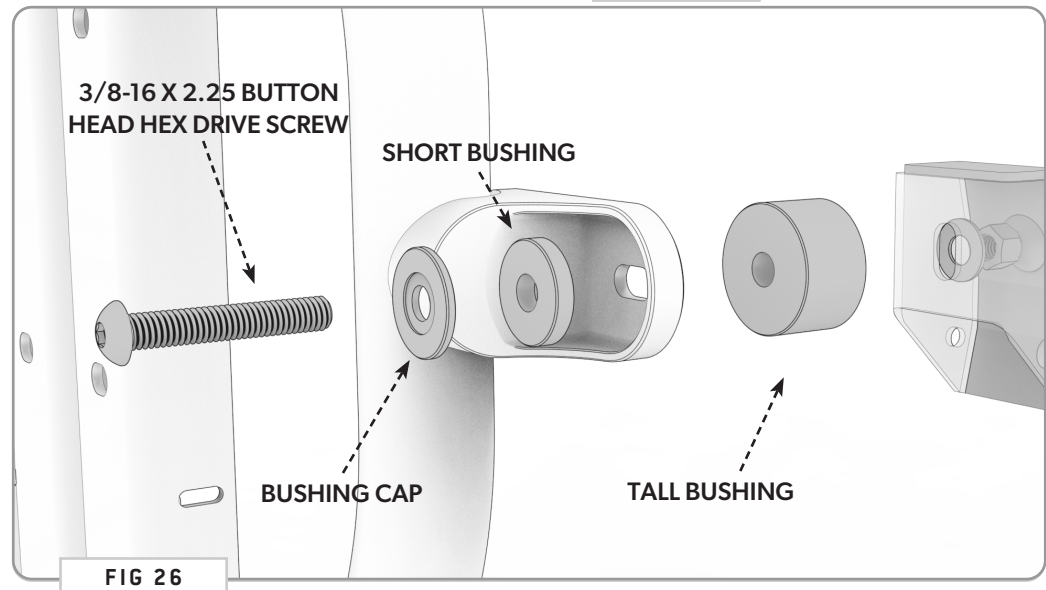
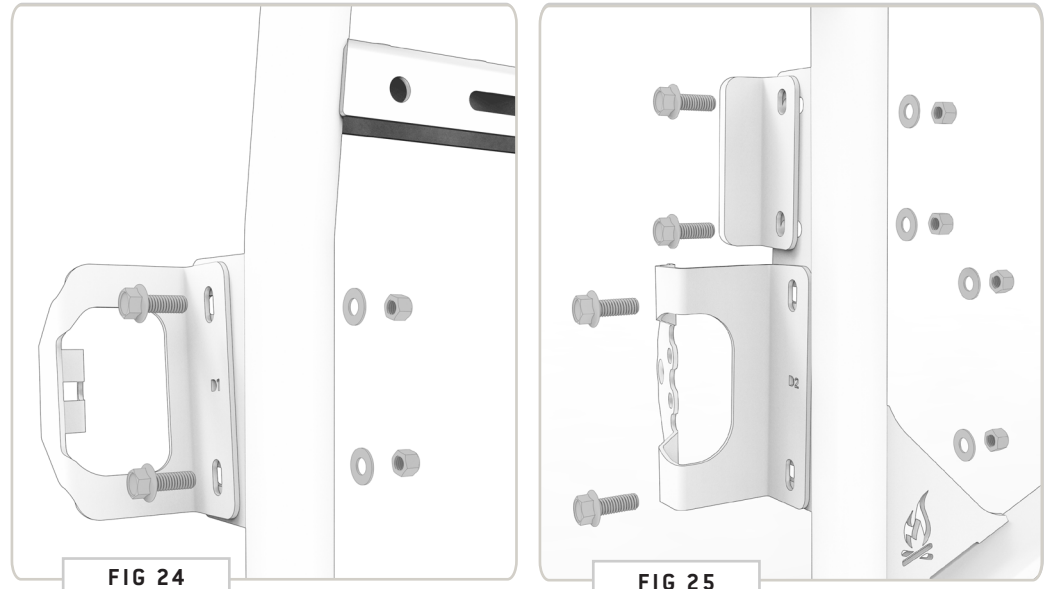
NOTE - Use extreme caution around factory rear windows while mounting carrier into position.

NOTE - Make sure that the "fins" of the **Tire Carrier** are on the inside of the **Hinge Brackets** as shown in FIG 24 and 25.

6.2 Third Mount: Insert the **Bushing Assembly** through the **Third Mount Bracket Hole** to center the carrier and secure using a 3/8" Flat Washer and Nylon Locknut. (FIG 26).

6.3 Lower Frame Brace: Use a 9/16" Wrench and Socket to attach the lower frame brace tightly to the door using (2ea) 3/8" Flanged Hex Head Screws and (2ea) 3/8" Flat Washers and Nylon Locknuts (FIG 25).

6.4 Checking Clearance: Ensure the third mount is secure, then operate the door to check for interference with mount brackets. If everything is lining up, tighten down all fasteners on the hinge mounts.



TOOLS REQUIRED FOR THIS STEP: + FLATHEAD SCREWDRIVER
+ 4MM ALLEN WRENCH
+ 5MM WRENCH/SOCKET

STEP | 07 INSTALL LIMIT STRAP

7.1 Remove Factory Cap and Sticker Covers: Use a flathead screwdriver to remove the factory plastic cap along the inside of the door (FIG 27) and the stickers that cover the threaded holes of the van body (FIG 28).

7.2 Layout Limit Strap Components: Notice the components of the **Limit Strap Assembly** in FIG 29. You will first need the **Limit Strap Bracket** in the next step.



FIG 27

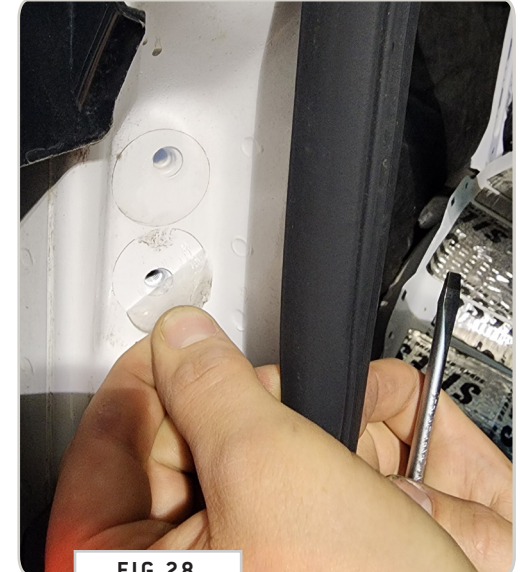


FIG 28

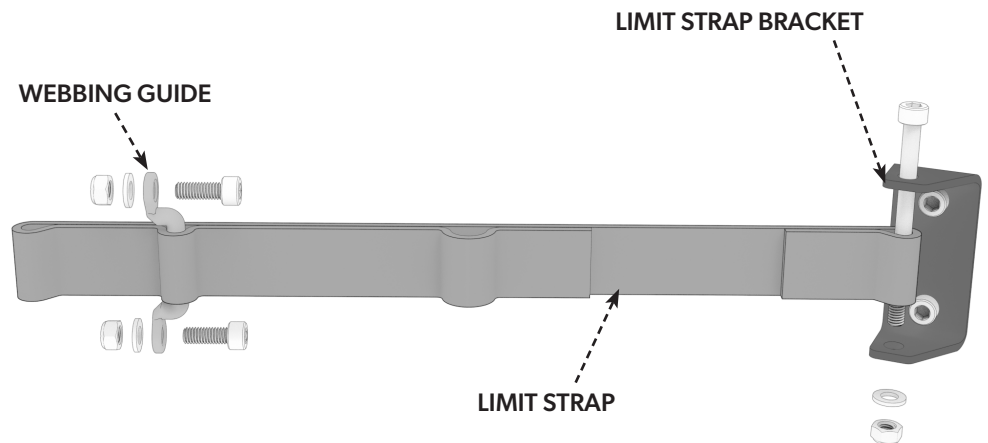


FIG 29

TOOLS REQUIRED FOR THIS STEP: + 4MM ALLEN WRENCH
+ 5MM WRENCH/SOCKET

STEP | 07 INSTALL LIMIT STRAP

7.3 Attach Limit Strap to Bracket: Attach the **Limit Strap Webbing** to the **Limit Strap Bracket** using the **longest M6 Socket Head Screw, Flat Washer and Nylon Locknut** (if it isn't attached already).

NOTE - Note the middle loop of the webbing is facing inward for bungee.

7.4 Install Limit Strap Bracket: Install the **Limit Strap Bracket** to the threaded locations on the inside of the door jam using the supplied **M6 Socket Head Screws** (FIG 30).

7.5 Install Webbing Guide: Attach **Limit Strap** to the **Webbing Guide** (if it isn't already) and install to the van in the location shown in FIG 32 using (2ea) **M6 Socket Head Screws, Flat Washers and Nylon Locknuts** (FIG 33).



FIG 30



FIG 31



FIG 32

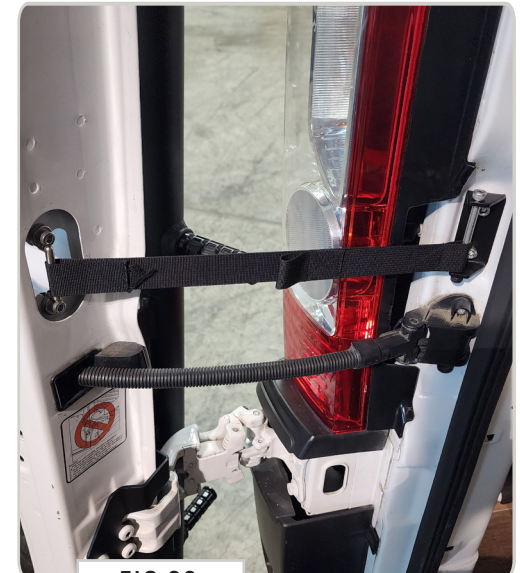


FIG 33

STEP | 07 INSTALL LIMIT STRAP

7.6 Layout Limit Strap Retraction Bungee: Run the **Limit Strap Retraction Bungee** through the sewn loop in the middle of the **Limit Strap** and tie off using an **Figure 8 Knot** (or similar) at about 14" long (**FIG 34**).

7.7 Tie to Bungee Bracket: Run the **Limit Strap Retraction Bungee** through the **Bungee Bracket**, pull until tight and tie off using a standard **Overhand Knot** (**FIG 35**).



FIG 34



FIG 35

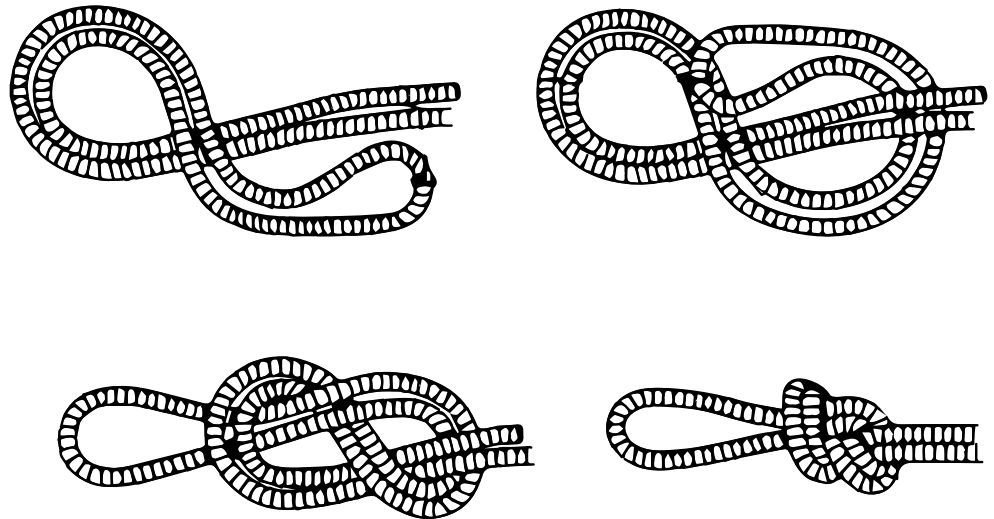


FIG 36

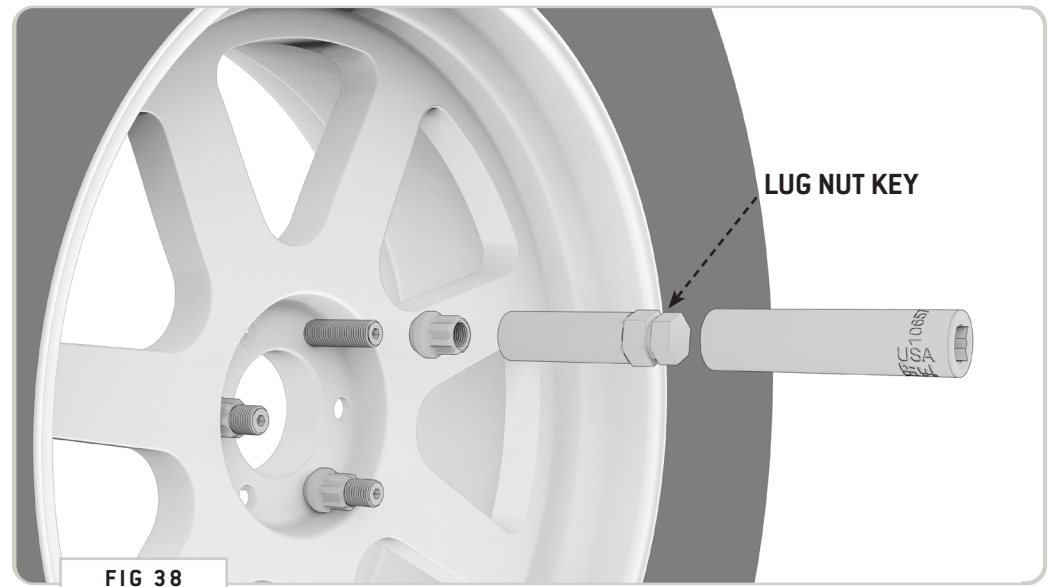
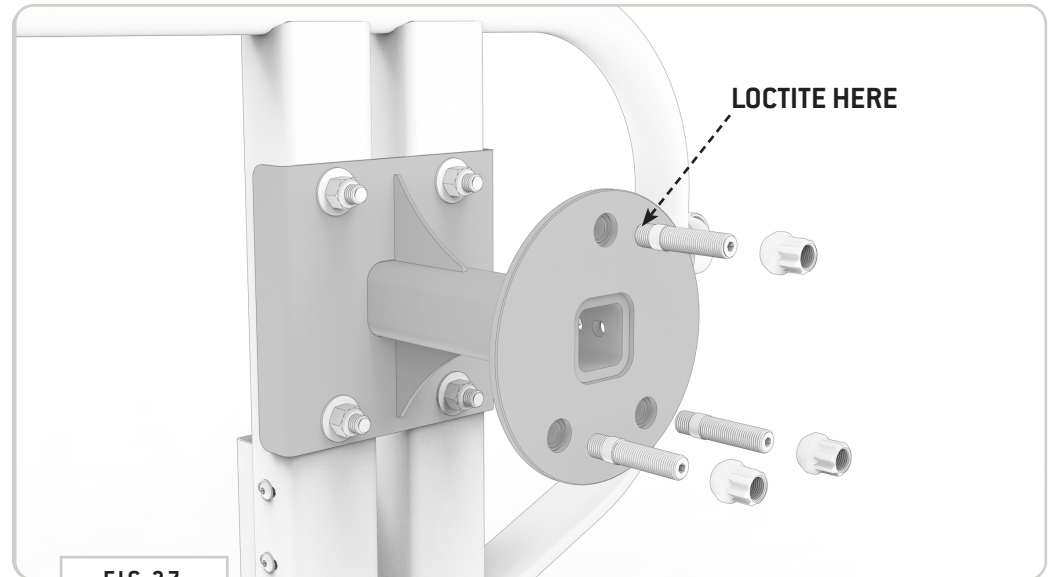
STEP | 08 ATTACH WHEEL

8.1 Wheel Studs and Lug Nuts: Apply Loctite to the **Wheel Studs** on the short end and screw them into the threaded locations on the **Wheel Bracket**. Tighten with a **6MM Allen Wrench** (FIG 37).

NOTE - The notched stud locations of the wheel bracket are for the 5x130 bolt pattern.

8.2 Attach the Wheel: Lift your wheel onto the carrier and fasten the **Lug Nuts** using the supplied **Lug Nut Key**. Tighten well with a **13/16" Socket** (FIG 38).

TOOLS REQUIRED FOR THIS STEP: + 6MM ALLEN WRENCH
+ 13/16" SOCKET



STEP | 09 FOOT PEGS & BOTTLE OPENER

9.1 Foot Pegs: Add Loctite to Foot Peg threads and install to locations shown in FIG 39 using the provided **Foot Peg Wrench**.

9.2 Bottle Opener: Attach the **Bottle Opener** to the **Third Mount Bracket** using (2) 1/4-20 x 0.75 Flanged Button Head Screws (FIG 40).

TOOLS REQUIRED FOR THIS STEP:

- + FOOT PEG WRENCH
- + LOCTITE
- + 5/32" ALLEN WRENCH

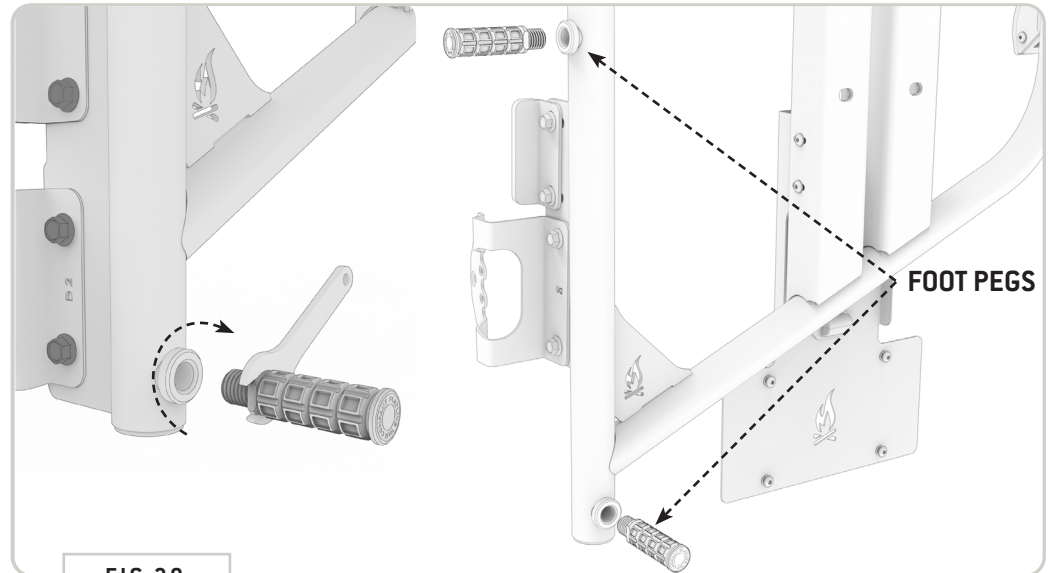


FIG 39

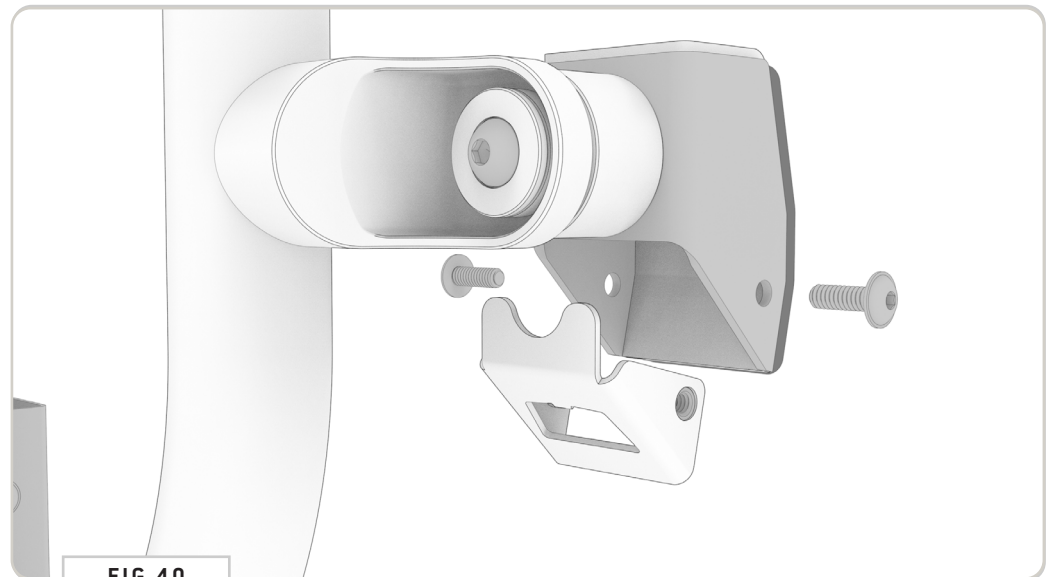


FIG 40

TOOLS REQUIRED FOR THIS STEP:

STEP | 10 LICENSE PLATE LIGHT WIRING

10.1 License Plate Relocation Wiring: Using your preferred method, splice in the **License Plate Light**. Be sure to wire the new light in *parallel* to your **Factory License Plate Light Harness**. (White to Red and Black to Black)

NOTE - We recommend sealing around the drill hole with *silicone* to prevent debris and moisture from entering the door cavity (**FIG 41**). There are multiple slots available on the **License Plate Relocation Bracket** to zip tie the wiring in place (**FIG 43**).

NOTE - This kit features an LED license plate light. Due to LED lights having a lower resistance compared to factory incandescent bulbs, some vehicles may display a “bulb out” warning on the dash. Installing an appropriate load resistor (not included) typically resolves this.



FIG 41

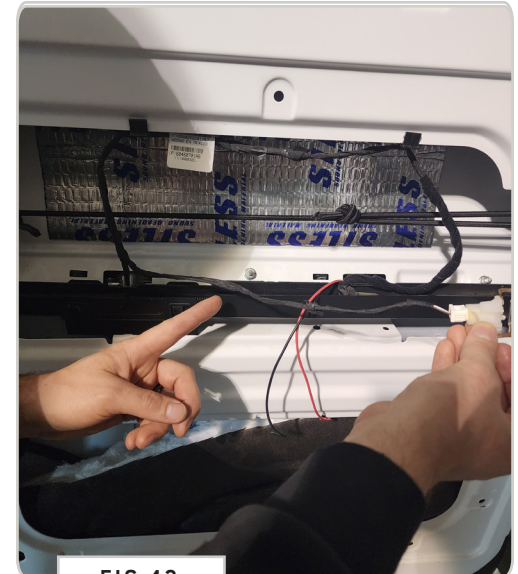


FIG 42



FIG 43



FIG 44

GET OUT AND EXPLORE!

+ LEAVE US A REVIEW

Happy with your new FVC product? We would love to hear (and see) from you! Head to the product page and click "Leave Review." Add a short review and upload a few photos to be showcased on the product page.

+ SHARE YOUR PICS

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+ NEED ANY HELP?

If you are having any issues with your product, please reach out, and we will make it right. FVC is a company of van and outdoor enthusiasts that design and use our own products, so we want you to be as stoked on your new parts as we are!



@FLATLINEVANCO