



VAN STORAGE SOLUTIONS
FOR THE WAY YOU WORK™

INSTALLATION MANUAL

Models 223-3-01 & 224-3-01 Quick Clamp Van Racks

ATTENTION: PLEASE READ AND UNDERSTAND ALL INSTRUCTIONS AND WARNINGS BEFORE ASSEMBLING, INSTALLING OR USING THIS PRODUCT.



PLAN YOUR VAN (TIPS FOR FASTER INSTALLATION)

- Before drilling for the blind fasteners, check for electrical wiring and air-bag system components.
- Vehicle manufacturer's provided mounting features must be used when available.
- Follow vehicle manufacturer's guidelines on roof loading and do not overload the roof of your vehicle.

HARDWARE KIT

Description	223-3-01	224-3-01
1/4-20 x 1/2" Taptite Screw SS	2	2
5/16-16 x 7/8" SS Carriage Bolt	32	36
5/16-18 x SS Nylon Lock Nut	30	40
5/16 SS Flat Washer	46	56
1/4-20 x 2-1/4" Blk. Ox. Bolt	1	1
1/4-20 x 1-1/2" SS Hex Hd. Bolt	8	8
1/4" SS Lock Washer	4	4
1/4-20 Blind Fastener	4	4
Installation Tool	1	1
Spacer - 1/8" thick	8	8
Nylon Bearing	2	4
1 oz. Tube E-6000 Sealant	1	1

PARTS LIST

Description	223-3-01	224-3-01
Universal Mounting Base	4	4
Mounting Foot Bracket	4	4
Front Crossmember w/ Airfoil	1	1
Rear Crossmember	1	1
Ladder Guide	2	4
Top Adjustable Clamp	2	4
Bottom Adjustable Angle	1	2
Passenger Side Front Rail	1	1
Driver Side Front Rail	1	1
P.S. Rear Rail w/ handle plate	1	1
D.S. Rear Rail w/ bolt plate	1	-
D.S. Rear Rail w/ handle plate	-	1
P.S. Handle Assembly	1	1
D.S. Handle Assembly	-	1
Mounting Level Plate	4	4
Mounting Foot Bolt Plate	4	4



WARNING

This product is only intended for, and only safe for, transporting ladders, lumber, pipe and other similar materials. It is the responsibility of the user to secure these materials to the rack before transporting. Any modifications made to this product, or use of this product for any other purpose than its intended use, could create hazardous condition that can cause serious personal injury or property damage.

Ladders must be secured per ANSI standard A14.2-2007 paragraph 8.4.4. Ladder damage may occur from road shock and vehicle vibration if the ladder is not properly secured to the ladder rack. Bouncing and side to side motion of a improperly secured ladder may cause wear and shorten the service life of the ladder. Using a damaged ladder could result in a serious injury or death.

TOOLS REQUIRED

- Electric Drill
- 9/32", 13/32" drill bit
- Ratchet Wrench
- 3/8, 7/16", 1/2" Socket
- 1/2" Socket (deep well suggested)
- 3" Socket Extension
- Ruler
- 7/16" Open or Box End Wrench
- Thread locking adhesive

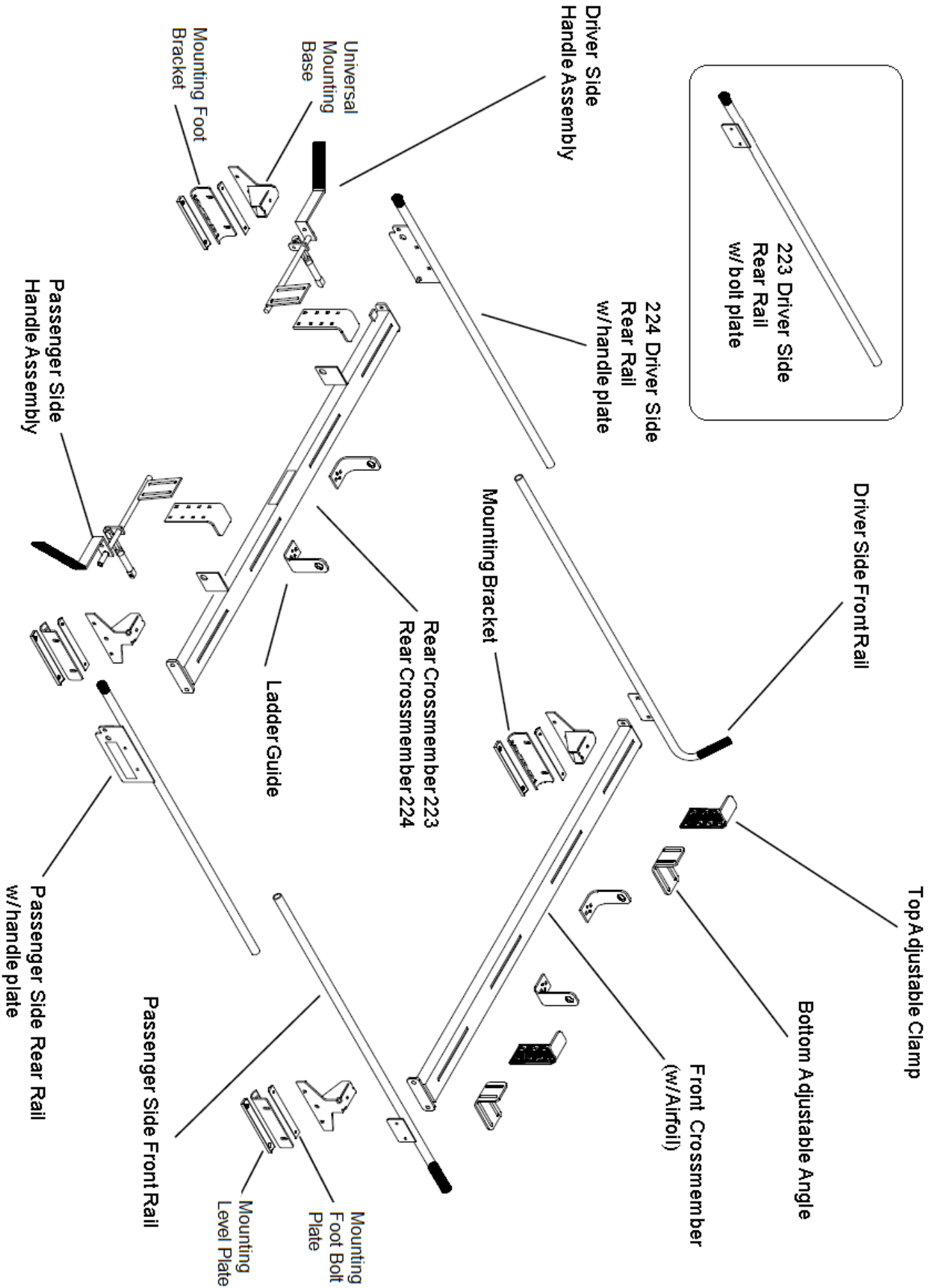


Figure 1—Parts Identification

1. Crossmember / Rail Assembly

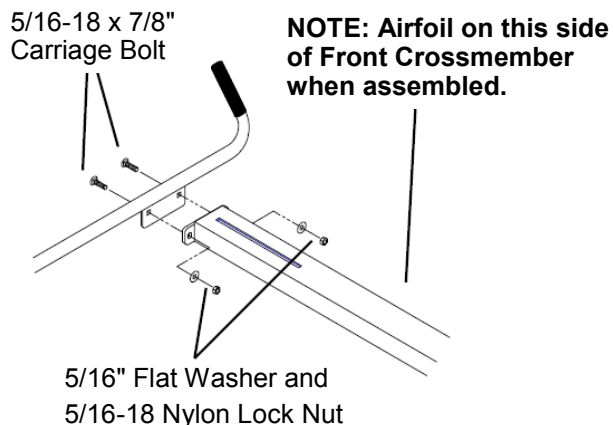


Figure 2. Front Crossmember / Front Rail Assembly

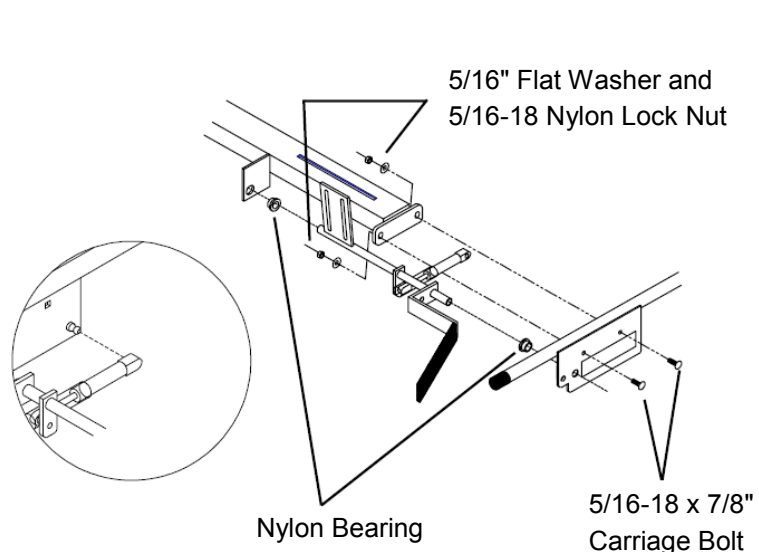


Figure 3. Rear Crossmember / Rear Rail / Handle Assembly

2. Rack Assembly

NOTE: If installing a Model 225, assemble it at this time.

Insert the Rear Rail into the Front Rail but leave loose. When properly positioned on top of the vehicle, insert the fastener using a drop of thread locking adhesive on the 1/4-20 x 1/2" Taptite screws (repeat on opposite side).

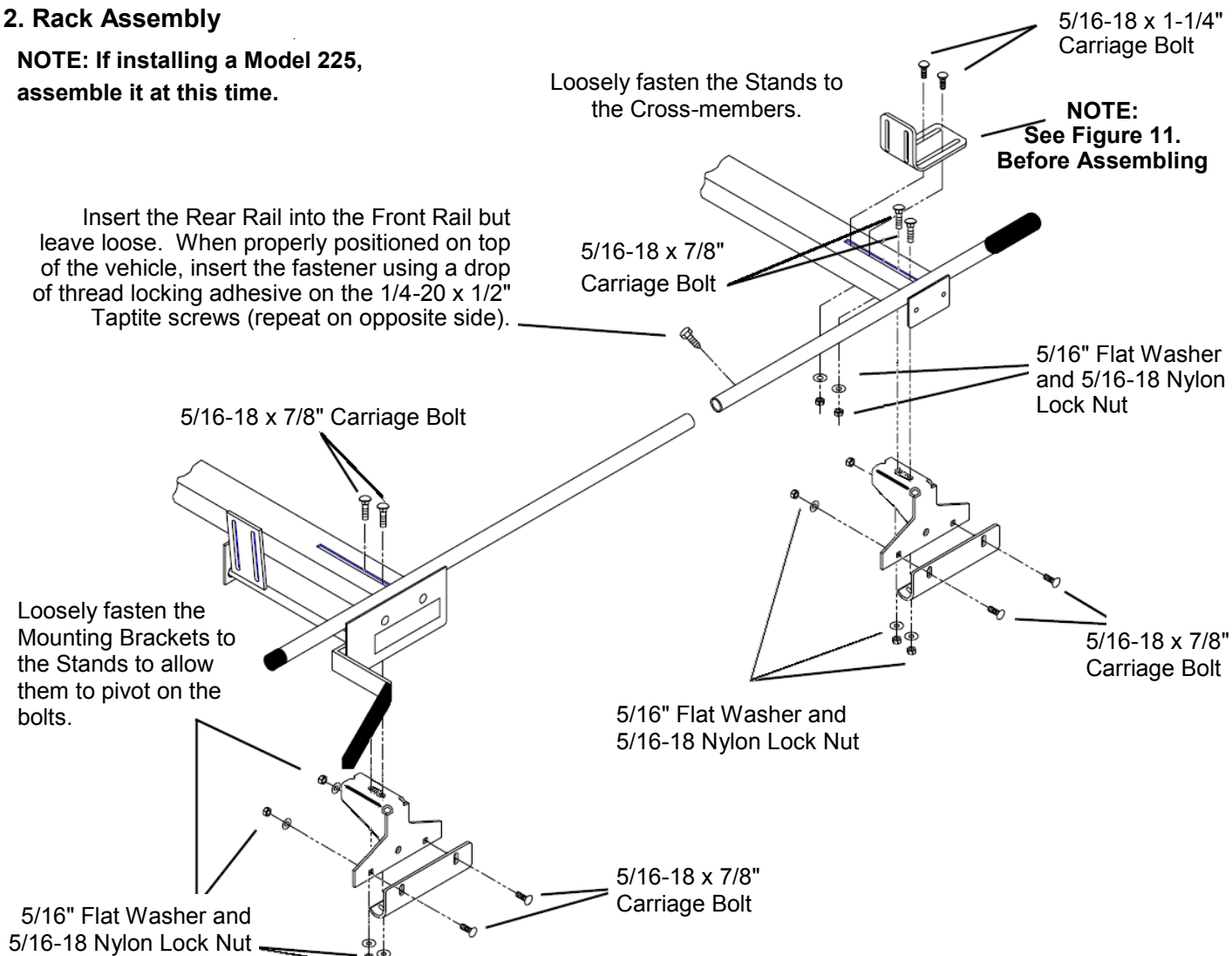
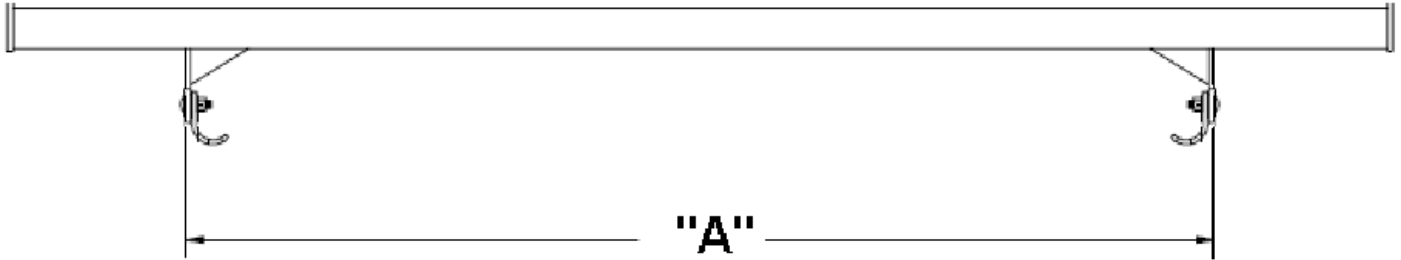


Figure 4. Side Rail / Stand Assembly

3. Mounting foot Alignment

"A" spacing is to the outside edges of the mounting feet before attaching the curved mounting plates. In most applications the curved plates will face in to the center of the vehicle, but in some applications they will need to face out.

Adjust then tighten the Stand Assemblies to the following dimensions. Vehicle dimensions are subject to change and may differ on your specific vehicle, verify fit before fully tightening fasteners.



VEHICLE	"A" Spacing
Ford Transit Low-, Mid-, High-Roof	55-11/16 in
Ford Transit Connect 2014—front	46-3/8 in
Ford Transit Connect 2014—rear	47-3/8 in
Nissan NV200	45-9/16 in
Chevy City Express	45-9/16 in
Nissan NV Low Roof and High Roof	56-1/2 in

4. Roof Rack Mounting

The vehicle manufacturer provided mounting points are in reinforced sections of the vehicle and are the only approved way to mount this rack to the van roof.

With the help of others, lift the rack and position it on the vehicle. Locate the rear of the rack on the roof centered side to side and aligned with vehicle manufacturer provided mounting holes.

The vehicle manufacturer provided mounting holes may have protective covers that need to be removed prior to installation. Select the front and rear mounting holes based on the size of the ladders that you will be carrying.

If no holes are provided by the vehicle manufacturer, position the rack with a minimum gap "B" of 2 inches between the door and the rack. Mark through the obrounds in the Mounting Brackets at the point where the Mounting Bracket radius meets the roof.

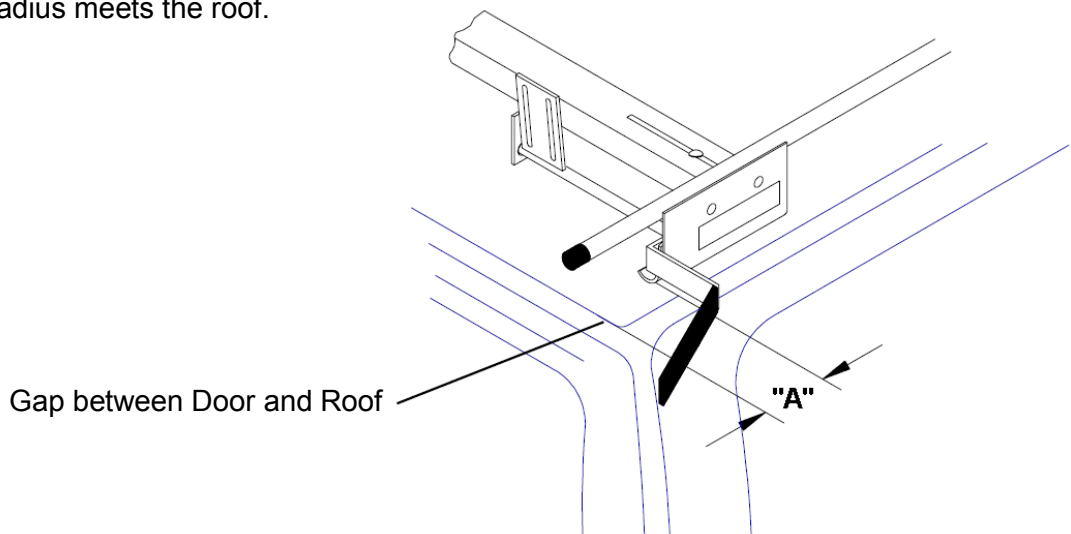


Figure 6. Roof Rack Placement

5. Roof Rack Installation

If weld nuts are not provided in the roof, you may need to install blind fasteners. The holes provided by the vehicle manufacturer may need to be enlarged or you may need to drill the holes marked in the last step. Drill the marks at the rear of the roof with a 9/32" drill bit. If you are using a blind fastener open the hole with a 13/32" bit. Install Blind Fasteners following the installation instructions below.

Before drilling, check to make sure you have sufficient clearance and will not be cutting wires, especially anything related to the vehicle's supplemental restraint system. Do not apply too much pressure when drilling. Too much pressure may cause dimples in the roof around the holes. Also, there may be a danger of penetrating the interior head liner. To keep debris out of your eyes when drilling, always wear protective eyewear. Only install blind fasteners into reinforced sections of the van roof.

Once you are ready to mount the roof rack to the van, either with weld nuts or blind fasteners, apply E-6000 Sealant to the roof around each hole and fill the top of the Blind Fastener holes with E-6000 Sealant. Fasten the rack as shown in Figure 7. Mounting hardware is provided if you choose not to use blind fasteners.

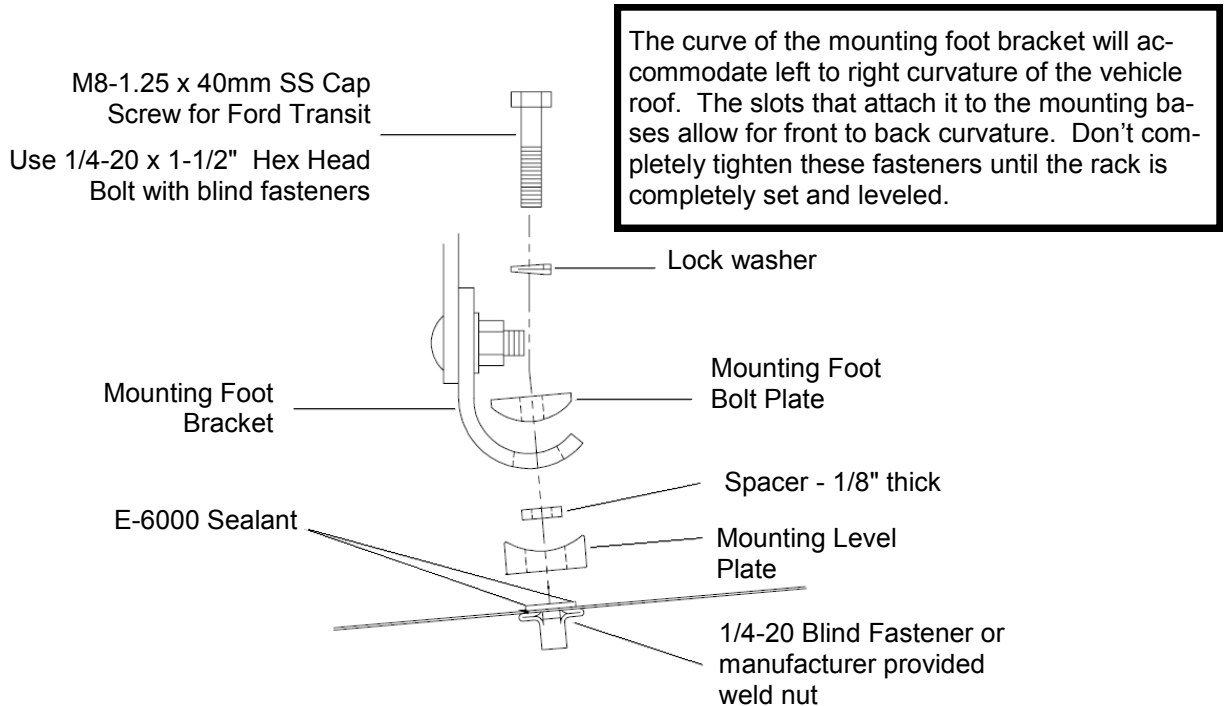


Figure 7. Roof Rack Installation

INSTALLATION PROCEDURE USING BLIND FASTENERS	
<p>Black Oxide Bolt</p> <p>Flat Washer</p> <p>9/16 Wrench</p> <p>Installation Tool</p> <p>Blind Fastener</p>	<p>Place a drop of oil on the black oxide bolt before assembling as shown on right.</p> <p>Place the Blind Fastener in the hole and use a 1/2" or 7/16" socket and driver to tighten the black hex bolt until the blind fastener is fully seated.</p> <p>When setting black hex bolt, it will start out hard. As the Blind Fastener "bulbs" out it will get easier, until it bottoms out or sets.</p> <p>Make sure the Blind Fastener and Installation Tool do not turn during installation.</p> <p>Before drilling for blind fasteners, check to make sure you won't be damaging wiring, gas lines, brake lines or other critical vehicle systems.</p> <p>Too much pressure while drilling or setting the blind fasteners may cause dimples in the roof around the holes.</p>

6. Clamp Assembly

Loosely fasten the Top Adjustable Clamp to the Front and Rear Assemblies.

To adjust Clamps, place the ladder on the rack and adjust the clamps forward or back / up or down to capture the nearest ladder rung.

Tighten the bolts.

Repeat with the rear clamp on the other side of the van.

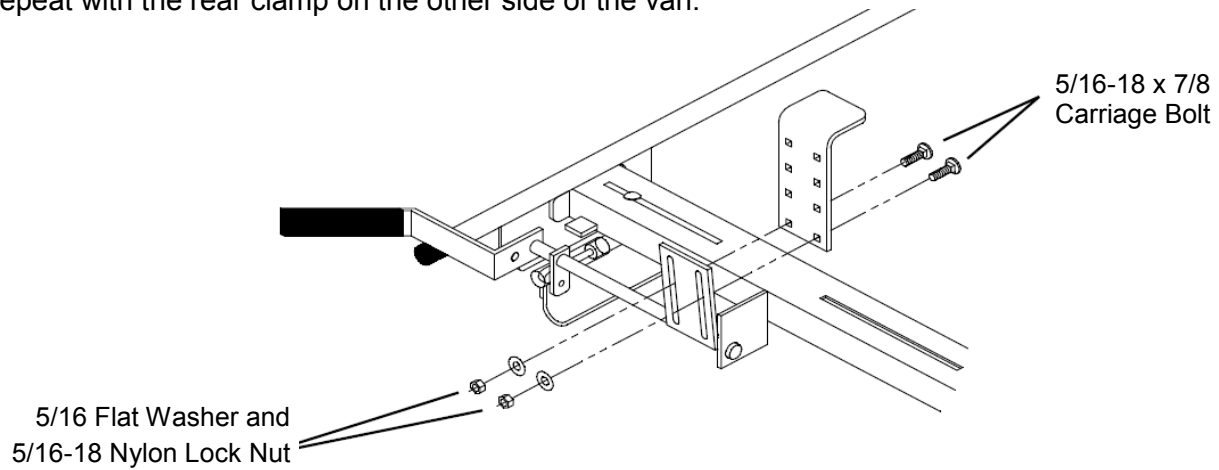


Figure 9. Rear Driver Side Clamp

Mount Bottom Adjustable Angle this way for most standard Extension ladder applications.

5/16 Flat Washer and 5/16-18 Nylon Lock Nut

Mount Bottom Adjustable Angle this way for Dead-head ladders and some Step ladder applications.

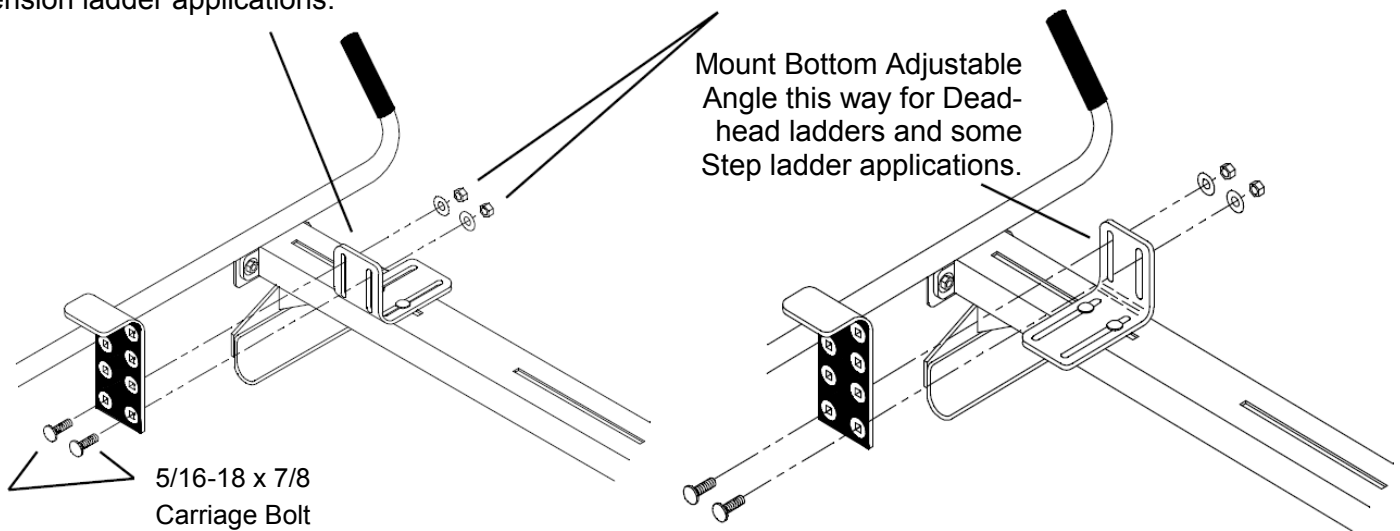


Figure 10. Front Driver Side Clamp

Repeat with the front clamp on the other side of the van.

7. Ladder Guide Assembly

Assemble the Ladder Guides through the slots of the Cross-members and slide up to the ladder.
Tighten Fasteners.

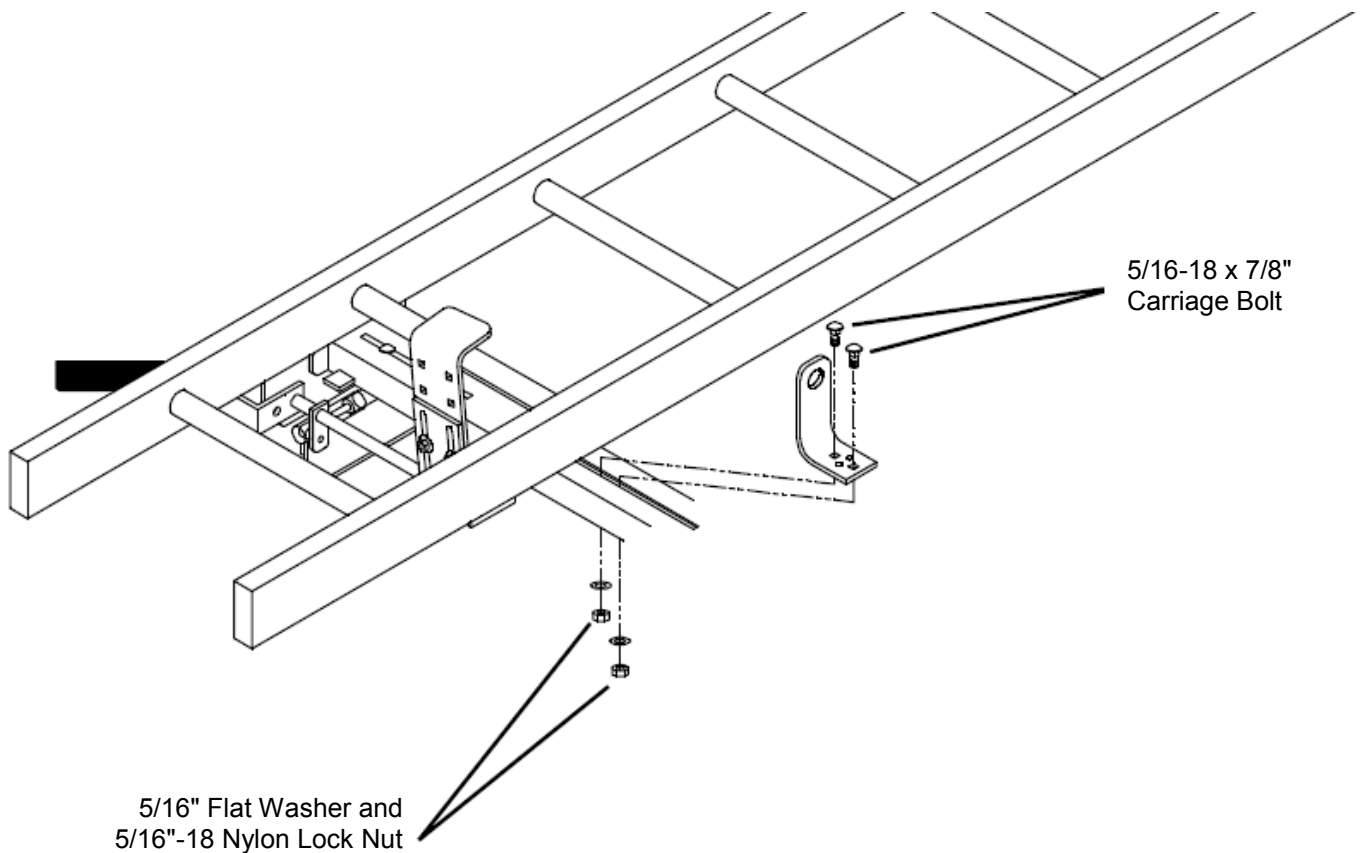


Figure 11. Clamp Adjustment and Ladder Guide Installation

Repeat with the front ladder guide, and on the other side of the van rack.

Mounting Long Ladders on Compact Vans

Ladders transported on a vehicle should be properly supported and the overhang of the ladders beyond supporting points should be limited. Transporting a ladder with excessive overhang can result in reduced ladder life. Inspect your ladder before each use. Follow ANSI 14.2-2007 for direction on securing ladders to ladder racks.

In most applications, one bolt and properly installed blind fastener per mounting foot is sufficient to securely attach the ladder rack to a vehicle. Additional mounting hardware is provided for special cases where there may be excessive overhang past the end of the roof rack or the installer feels that an extra mounting connection is needed.

Follow manufacturer's guidelines for maximum allowable roof load. Do not overload the vehicle's roof.