



VAN EQUIPMENT
FOR THE WAY YOU WORK™

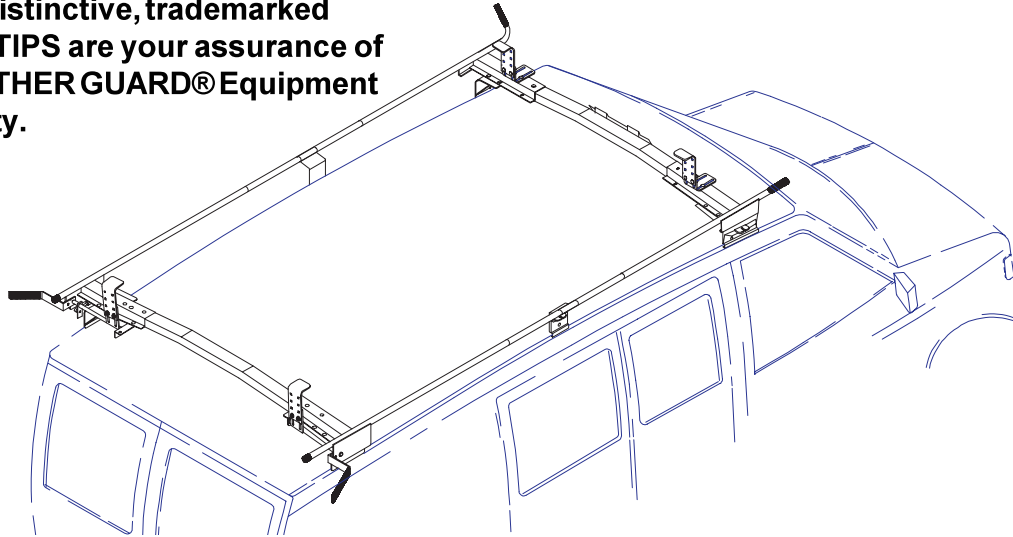
INSTALLATION MANUAL

MODELS 234-3-01 / 236-3-01

(Model 236-3-01, Curbside clamping only and Model 234-3-01, Streetside and Curbside clamping)

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

The distinctive, trademarked **RED TIPS** are your assurance of **WEATHER GUARD®** Equipment quality.



WARNING

This product is only intended and safe for use in storing and transporting small tools, equipment and other similar materials. These instructions are to be followed using the parts and fasteners supplied for proper installation. Any modifications or improper installation of this product will create a hazardous condition that could result in death, serious personal injury and/or property damage.

Ladders must be secured per ANSI standard A142.2-1990 paragraph 8.4.4. Ladder damage will 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 an improperly secured ladder will cause wear and weaken the ladder. Using a damaged ladder could lead to a structural collapse and could result in a serious injury or death.

Failure to comply could result in death or serious body injury.

CAUTION

Prior to drilling, so as not to cut electric wires, fuel lines, brake lines, etc., check behind and underneath drilling and mounting locations. To keep debris out of your eyes when checking the underside of the vehicle, or when drilling, always wear protective eye wear.

Failure to heed this warning may result in moderate injury.

– NOTICE –

Any modification or unintended use of this product shall immediately void all manufacturers warranties. Manufacturer disclaims all liability for injuries to persons or property resulting from any modification to, or unintended use of this product.

INSTALLATION TIME


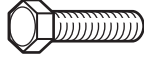






Approximate installation time: 234-3-01: 1 hour 20 min. per unit (1.3 hrs.) 236-3-01: 1 hour 12 min. per unit (1.2 hrs.) depending on van equipment installation experience

TOOLS REQUIRED

- Ruler
- 3/8" Socket
- Ratchet Wrench
- 3" Socket Extension
- Loctite® thread locker
- Electric Drill w/ 5/16" & 3/8" drill bits
- 7/16" Open or Box End Wrench (2)
- 1/2" Socket (deep well preferred)

BOLT KITS

Bolt Kit #32-0159 with Model 236-3-01 and Bolt Kit #32-0157 with Model 234-3-01. Check these bolt kits to be sure the following parts are included:

	32-0159	32-0157	
1/4-20 x 1/2" Taptite Screw	4	4	
1/4-20 x 3/4" Hex Hd. Bolt	3	3	
5/16" Flat Washer	33	42	
5/16-18 x 1-1/4" Carriage Bolt	4	6	
5/16-18 x 7/8" Carriage Bolt	25	32	
5/16-18 Nylon Lock Nut	33	42	
1/4-20 Nylon Lock Nut	3	3	
5/16-18 x 2" Carriage Bolt	6	6	

PARTS LIST

	234-3-01	236-3-01		234-3-01	236-3-01
Crossmembers	2	2	D.S. Front Ass'y.	1	1
Ladder Guides	4	2	Airfoil	1	1
Top Adj. Clamp	4	2	8" Mtg. Clamps	4	4
Bottom Adj. Angle	2	1	4" Mtg. Clamps	2	2
P.S. Rear Ass'y.	1	1	Bulk Cushion Strip	1	1
D.S. Rear Ass'y.	1	1	Center Support	2	2
P.S. Front Ass'y.	1	1	Center Rails	2	2

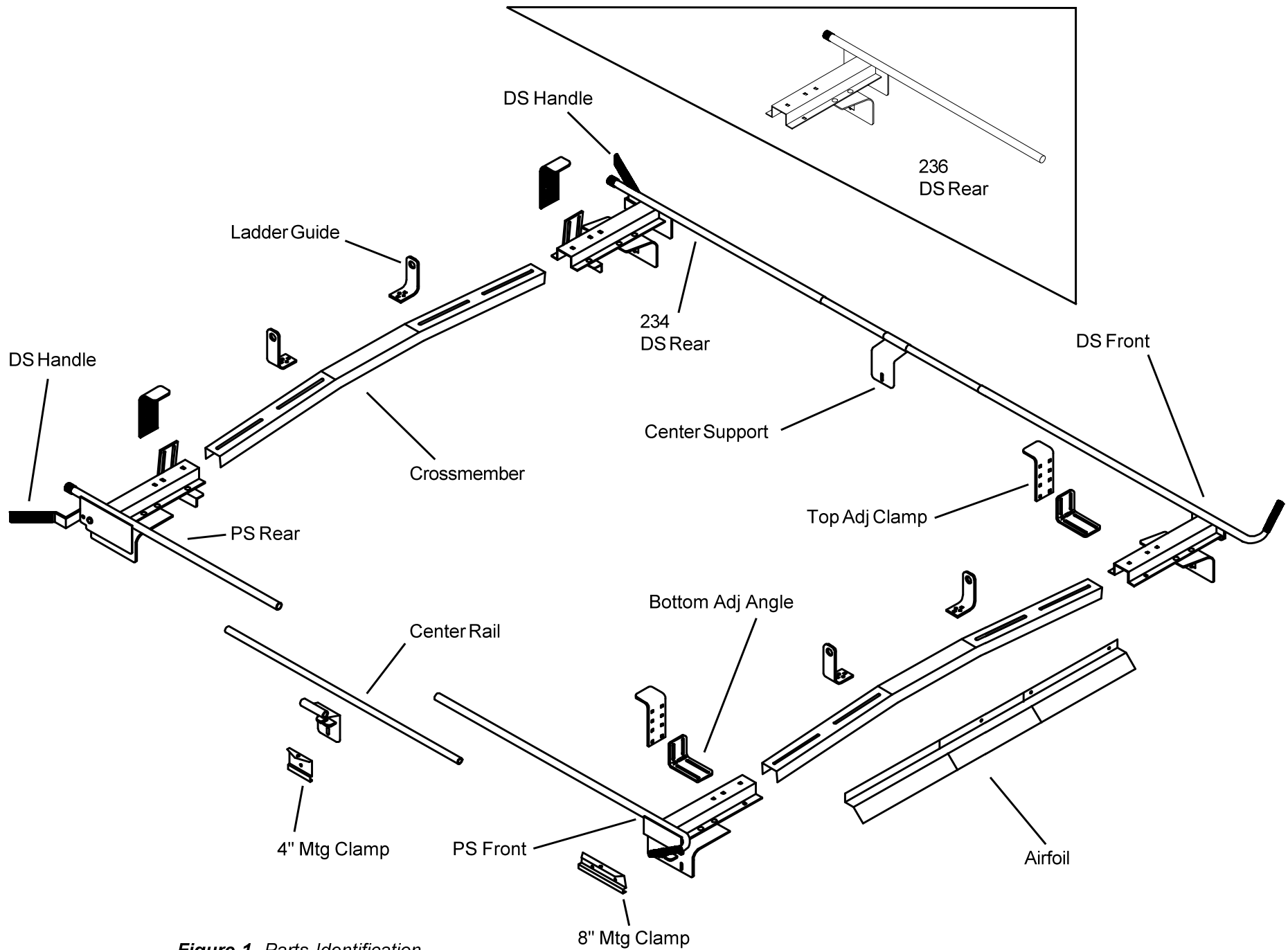


Figure 1. Parts Identification

ASSEMBLY INSTRUCTIONS

STEP 1. Airfoil to Front Crossmember Assembly

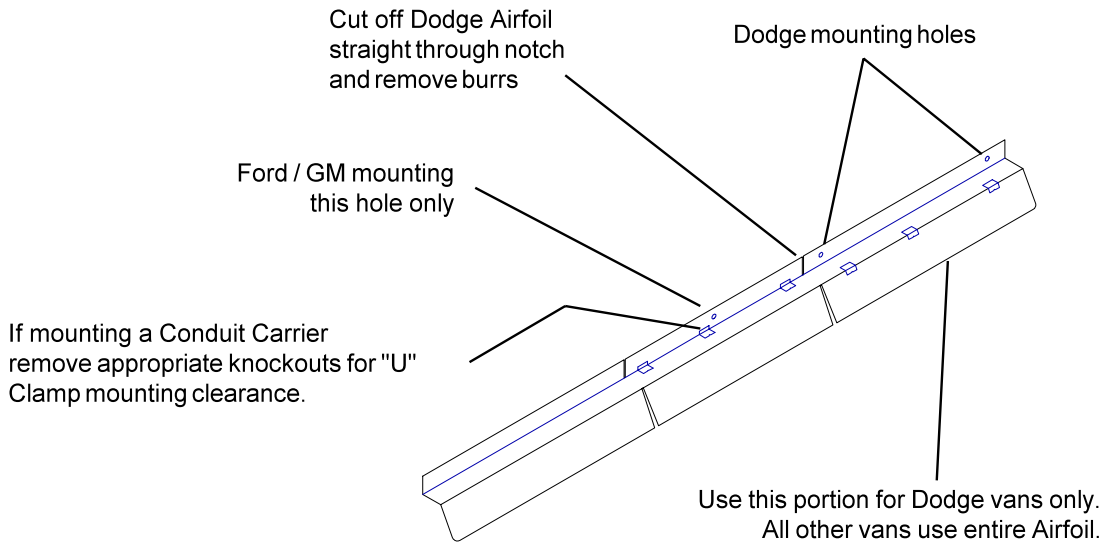


Figure 2. Airfoil

Center the Airfoil side to side on the Crossmember. Mark the center mounting hole and drill a 5/16" hole.

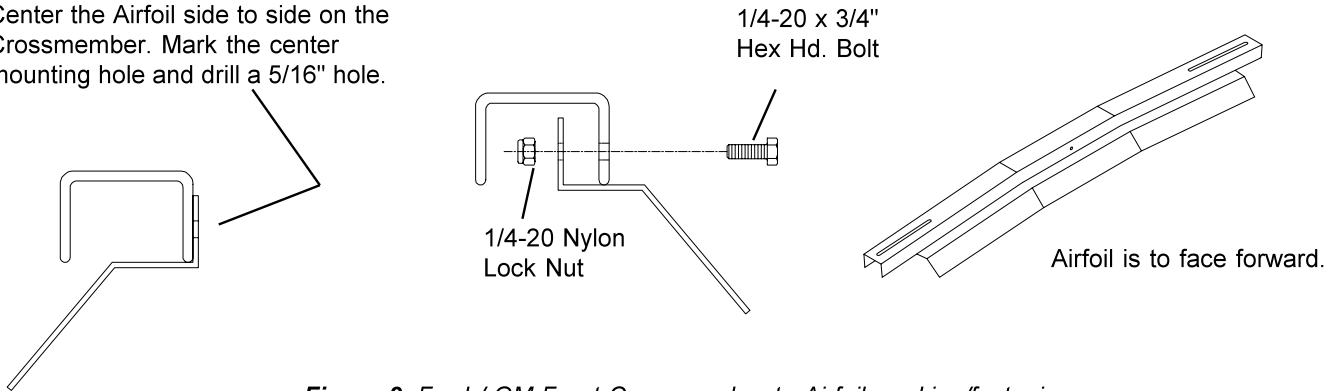


Figure 3. Ford / GM Front Crossmember to Airfoil marking/fastening

Center the Airfoil side to side on the Crossmember. Mark the mounting holes on the top and drill the 5/16" holes.

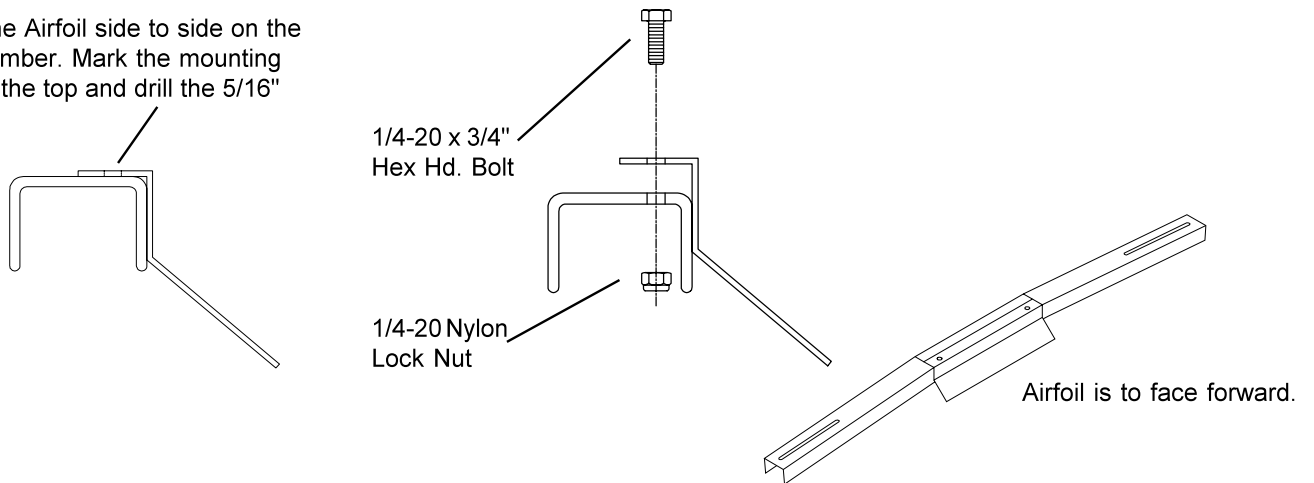


Figure 4. Dodge Ram Front Crossmember Airfoil marking/fastening

STEP 2. Rack Assembly

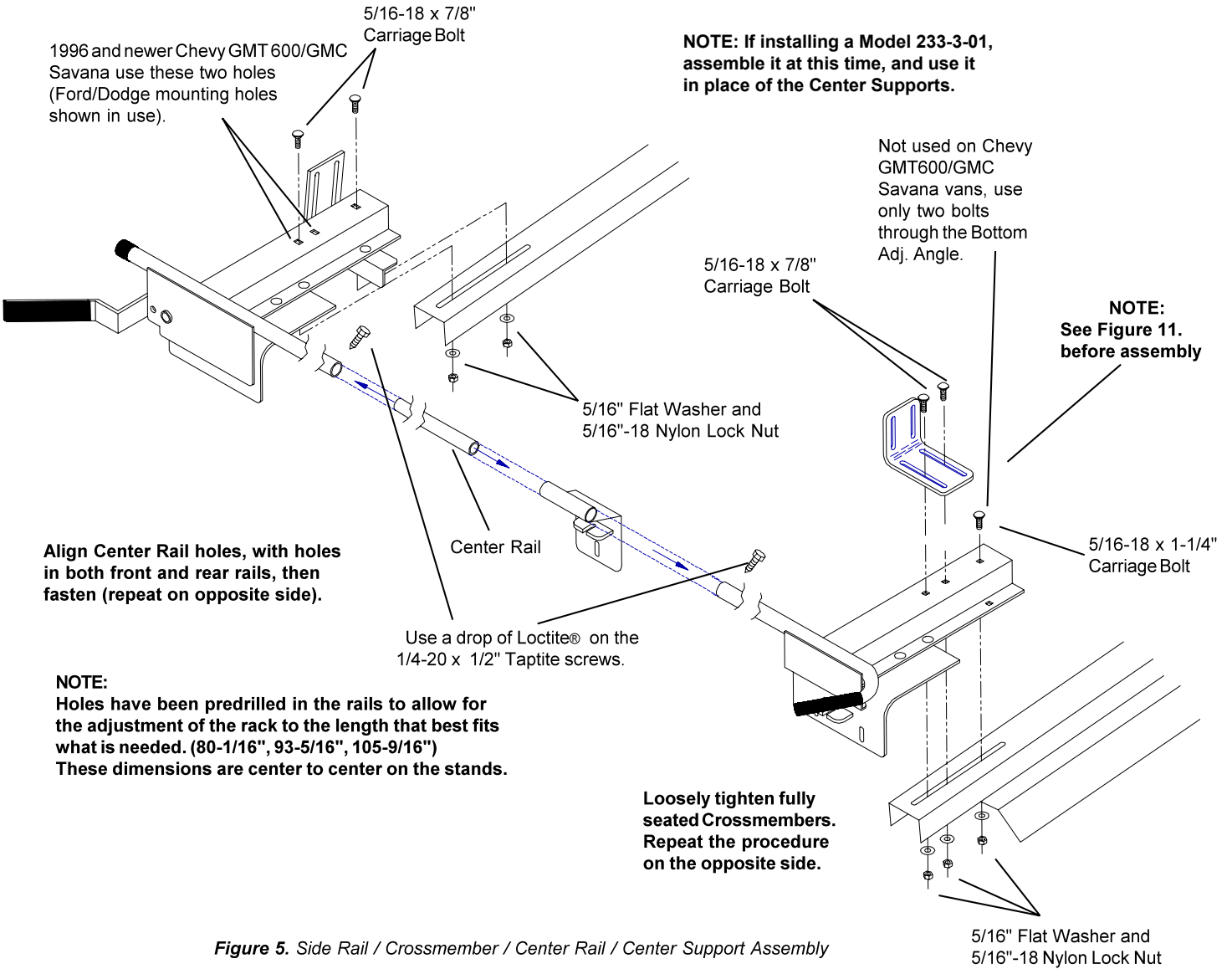


Figure 5. Side Rail / Crossmember / Center Rail / Center Support Assembly

STEP 3. Mounting Cushion Installation

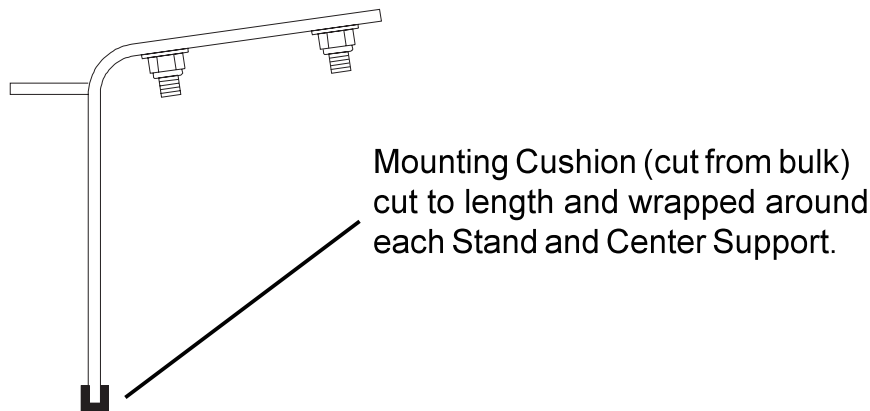
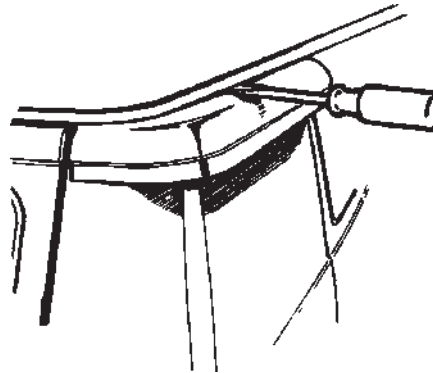


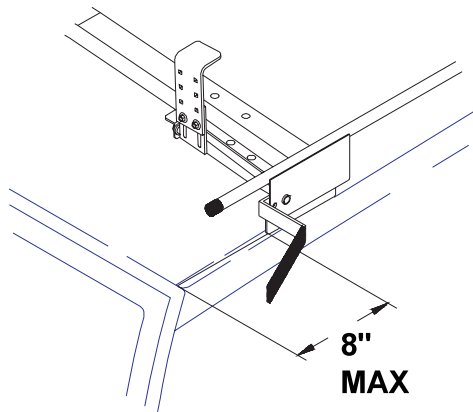
Figure 6. Mounting Cushion Installation

STEP 4. Adjust the stands to the approximate gutter width dimensions below. With the help of others, lift the rack and position it on the vehicle. For proper clamping on all vans except the 1996 and newer Chevy GMT600/GMC Savana, locate the stands as close as possible to the roof. Make sure the Crossmembers are centered between the stands before tightening the Crossmember/Socket bolt.



NOTE: If van has a sliding door with a guard, it may be necessary to remove and notch the guard to accept the mounting clamp. If the guard is spot welded, simply place the blade of a common screwdriver at the weld and strike with a hammer. This will give the guard flexibility to insert the Clamp under the rain gutter.

Figure 7. Breaking spot weld



8" Max dimension is from the rear edge of the rear Stand to the rear of the gutter.

Figure 8. Rear Stand Location

Approximate Gutter Widths

	Front	Center	Rear
Ford	64-1/4"	64-1/4"	62-3/4"
Dodge	65-1/4"	64-7/8"	64-1/2"
GM*	66-1/8"	66-3/4"	64-3/4"
GM**	58-3/4"	58-3/4"	57-3/8"

* - 1996 and older GM vans

** - 1996 and newer Chevy GMT600/ GMC Savana vans

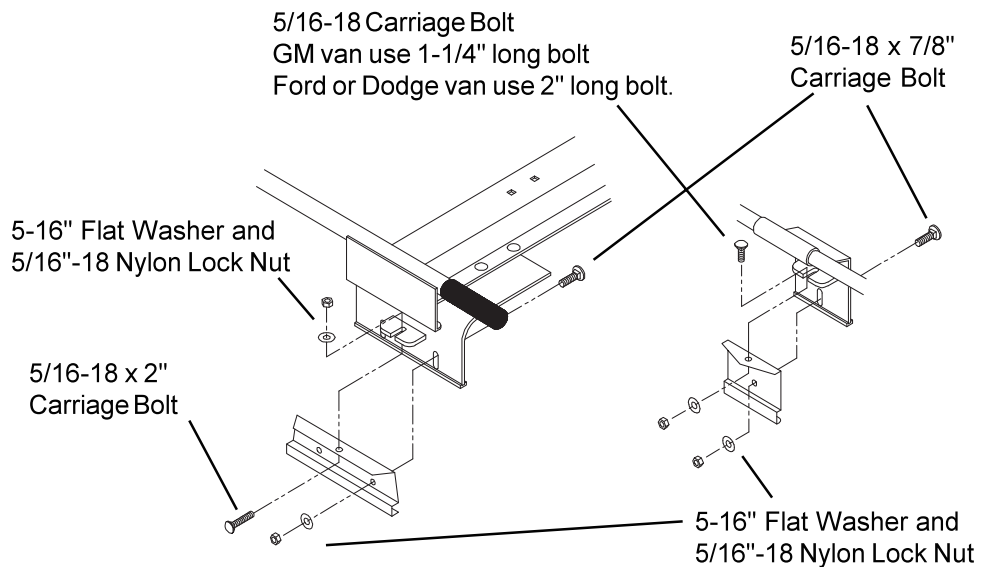
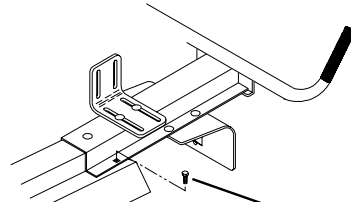


Figure 9. Clamp Installation

STEP 5. Airfoil to Socket Drilling and Fastening

Drill 5/16" holes in Airfoil using holes in socket flange as a guide.

1/4 -20 Nylon Lock Nut



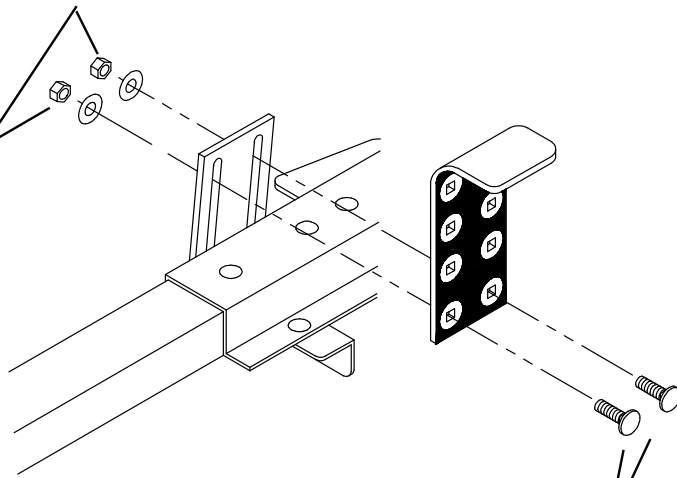
NOTE: Be careful not to thrust the drill into the vehicle roof. A block of wood held under the Crossmember will help avoid this.

1/4-20 x 3/4" Hex Hd. Bolt

Figure 10. Airfoil/Socket

STEP 6. Loosely fasten the Top Adj. Clamp to the Front and Rear Assemblies. To adjust Clamps, place the ladder on the rack (Figure 13.), and adjust the clamps forward or back / up or down to capture the nearest ladder rung. Tighten the bolts.

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



5/16-18 x 7/8" Carriage Bolt

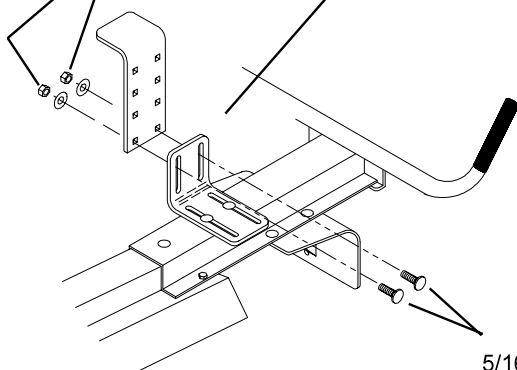
Figure 11. Rear DS Clamp

STEP 7.

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

This application is used for standard Extension ladders.

This application will be needed for Dead-head ladders and some Step ladders.



5/16-18 x 7/8" Carriage Bolt

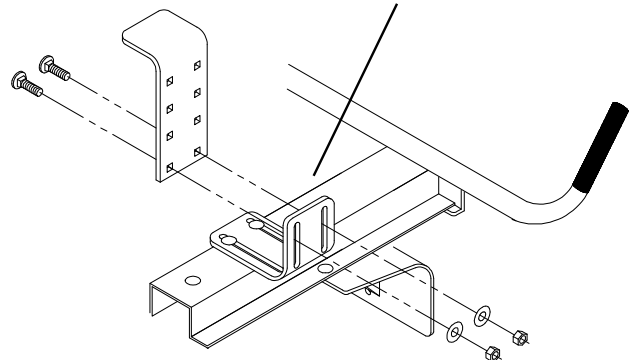


Figure 12. Front DS Clamp

STEP 8.

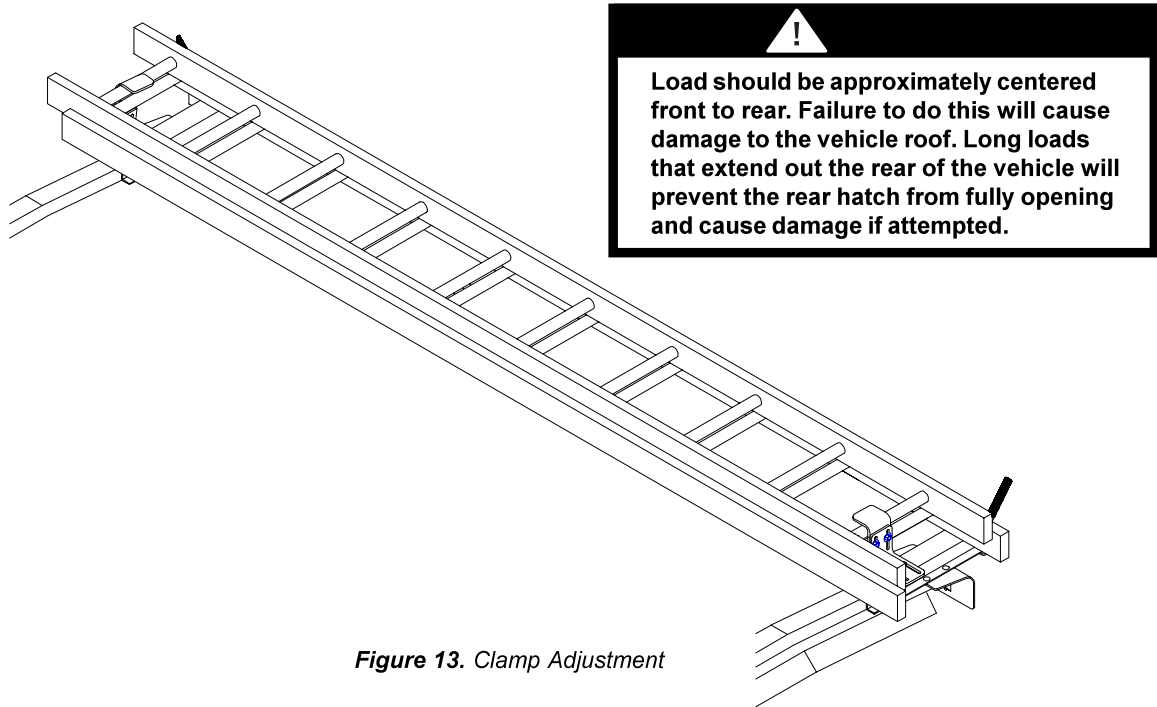


Figure 13. Clamp Adjustment

STEP 9.

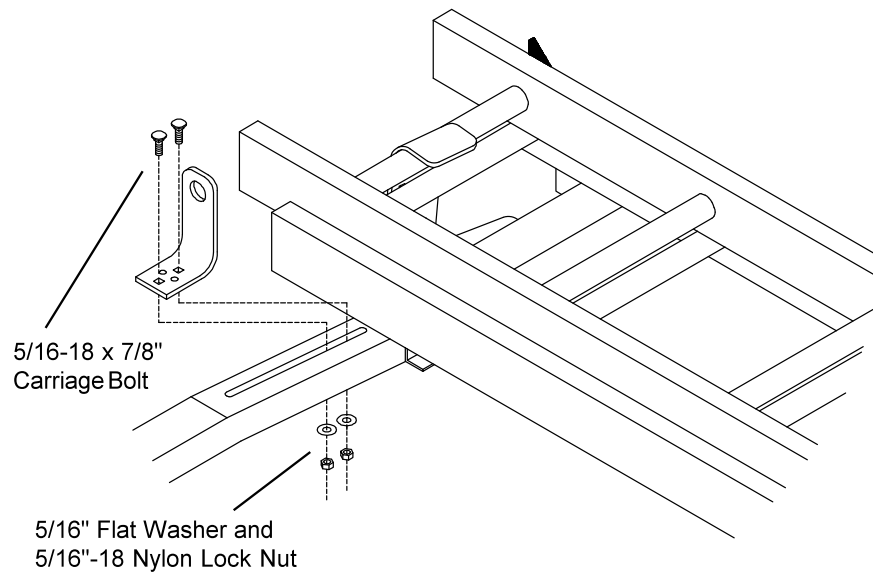


Figure 14. Ladder Sway Brace

WEATHER GUARD® PRODUCT REFINISHING PROCEDURES

All WEATHER GUARD® products are finished with a polyester powder coating, and it is important to follow these procedures to get proper adhesion. As Knaack LLC cannot control the finishing of the products, the warranty for WEATHER GUARD® Products on paint is not applicable on refinished products.

1. Sand the surface to be painted with 180-200 grit sand paper to rough up the surface. This should be followed by wet sanding with a 400 grit wet or dry paper.
2. Wipe down the sanded surface with ketone based thinner. This removes the dust and softens the powder coating for better paint adhesion.
3. Wipe sanded area with a tack rag to remove loose dust and particles before painting.

NOTE: Do not use a lacquer