



**TRUCK AND VAN EQUIPMENT**

# INSTRUCTION AND REPAIR PARTS MANUAL

MODEL 253 EZ-GLIDE™ SYSTEM

GM / CHEVY MINI VAN

ALUMINUM DROP DOWN LADDER RACK

## -ATTENTION-

Read and understand all instructions and warnings before operating or using this product.

## ! WARNING

This product is only intended and only safe for transporting ladders. It is the responsibility of the user to secure these materials to the rack before transporting.

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 structural collapse resulting in serious injury or death. Place ladder in a raised position before transporting. Driving with rack in lowered position may cause serious injury or damage to vehicle, ladder, rack or persons.

## -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.

## ! CAUTION

Never load your rack to exceed the safe capacity of your vehicle. Heavy loads when carried high can dangerously alter the center of gravity.

Loads should be approximately centered front to rear. Failure to do this will cause damage to the vehicle roof. Long loads that extend out the rear of the vehicle will prevent the rear hatch from fully opening and cause damage if attempted.

## ASSEMBLY INSTRUCTIONS

### TOOLS REQUIRED

- Open or Box End Wrenches  
9/16" - 1/2" - 7/16"
- 3/8" Drive Sockets  
9/16" - 1/2" - 7/16"
- 3/8" Drive Ratchet
- 5/16" Drill Bit
- Electric Drill
- Phillips Screwdriver (Large)
- Needle Nose Pliers
- 3/8" Drive Torque Wrench (in. lbs.)
- Tape Measure
- Flat Scwdriver (small)

### PARTS LIST

See Page 2

- 2 - Cross-Members
- Rear Rotation Assembly
- Front Rotation Assembly
- 2 - Pivot Arm Assemblies
- Rear Drive Tube/Handle Assembly
- Front Drive Tube
- Center Drive Tube
- Cylinder
- 4 - Mounting Brackets
- 2 - Ladder Supports
- 2 - Ladder Stops
- 2 - Drivers Side End Stops
- 2 - White Plastic Bushings
- 2 - Black Plastic Bushings
- 1 - Tube E-6000 Sealant
- 15- 1" Dia. Vinyl Hole Covers
- 1 - Tube Loctite 290

Approximate assembly and Installation time:

120 min. per unit (2 hrs.) depending on van equipment and installer experience.

### IMPORTANT BEFORE YOU BEGIN

Read these instructions and warnings completely before installation.

## HARDWARE KITS

See Page 3

Check these kits to be sure the following parts are included.

### 1 ROTATION KIT:

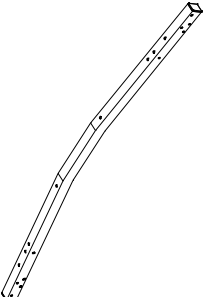
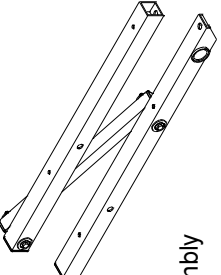
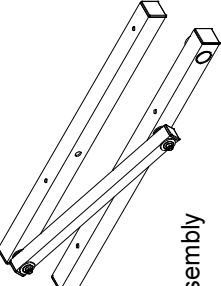
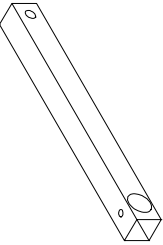
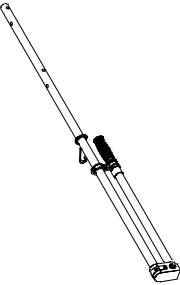
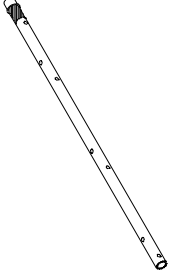
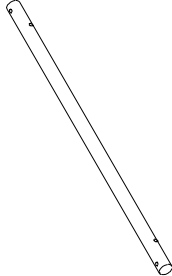
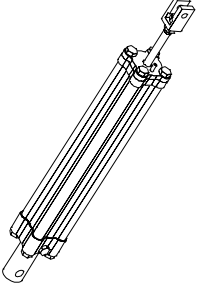
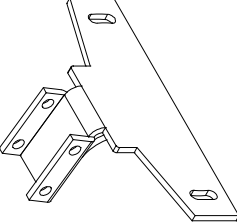
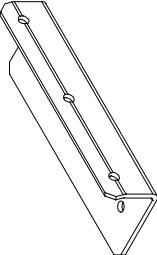
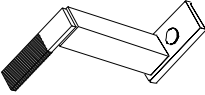
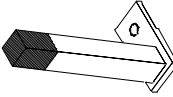
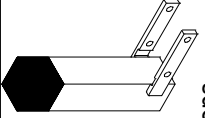

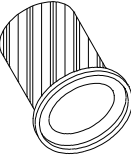
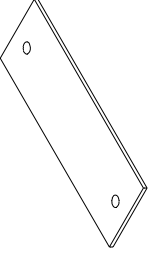
- 2 3/8-16 x 2-1/4" Hex Hd. Bolt
- 2 3/8-16 Nylon Lock Nut
- 11 3/8" Flat Washer
- 4 5/16-18 x 2" Hex Hd. Bolt
- 9 5/16-18 Nylon Lock Nut
- 12 5/16" Flat Washer
- 3 5/16-18 x 4-1/2" Hex Hd. Bolt
- 2 5/16-18 x 2-3/4" Hex Hd. Bolt
- 8 Flat Plastic Bushings
- 1 Aluminum Bushing
- 1 Clevis Pin
- 1 Cotter Pin
- 1 Bushing Lubricant Tube

### 2 GUTTERLESS KITS:

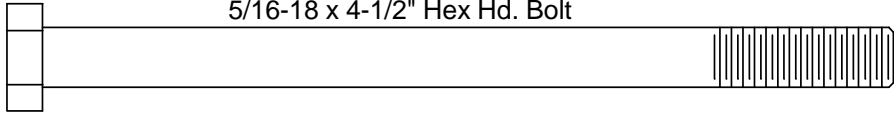
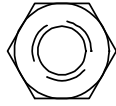
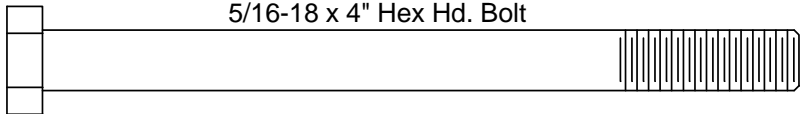

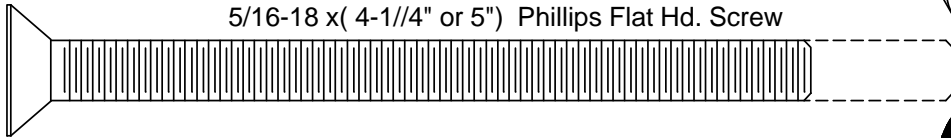

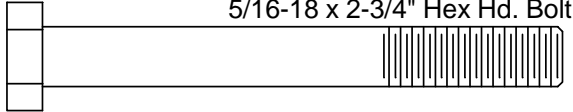
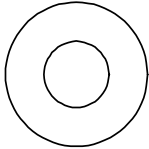
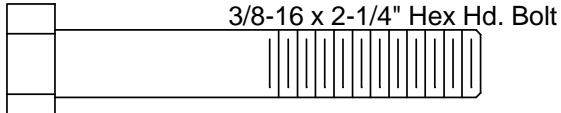
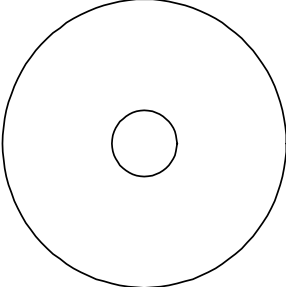

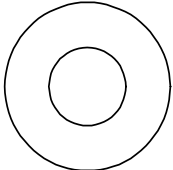
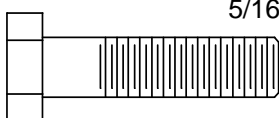
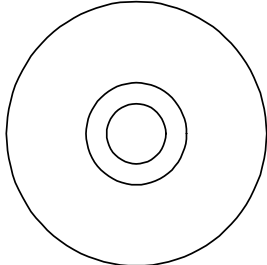
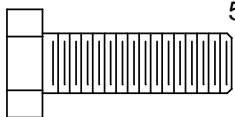
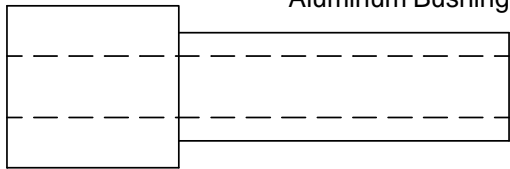
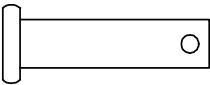
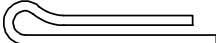
- 6 5/16-18 x 2-3/4" Hex Hd. Bolt
- 4 5/16-18 x 1" Hex Hd. Bolt
- 4 5/16-18 x 1-1/4" Hex Hd. Bolt
- 14 5/16-18 Nylon Lock Nut
- 24 5/16" Flat Washer
- 4 5/16" Rubber Washer
- 4 1-1/2" O.D. Fender Washer
- 2 Mounting Pad-Rubber See Page 2
- 2 Mounting Bases-See Page 2

### 1 RETRO ROTATION KIT:

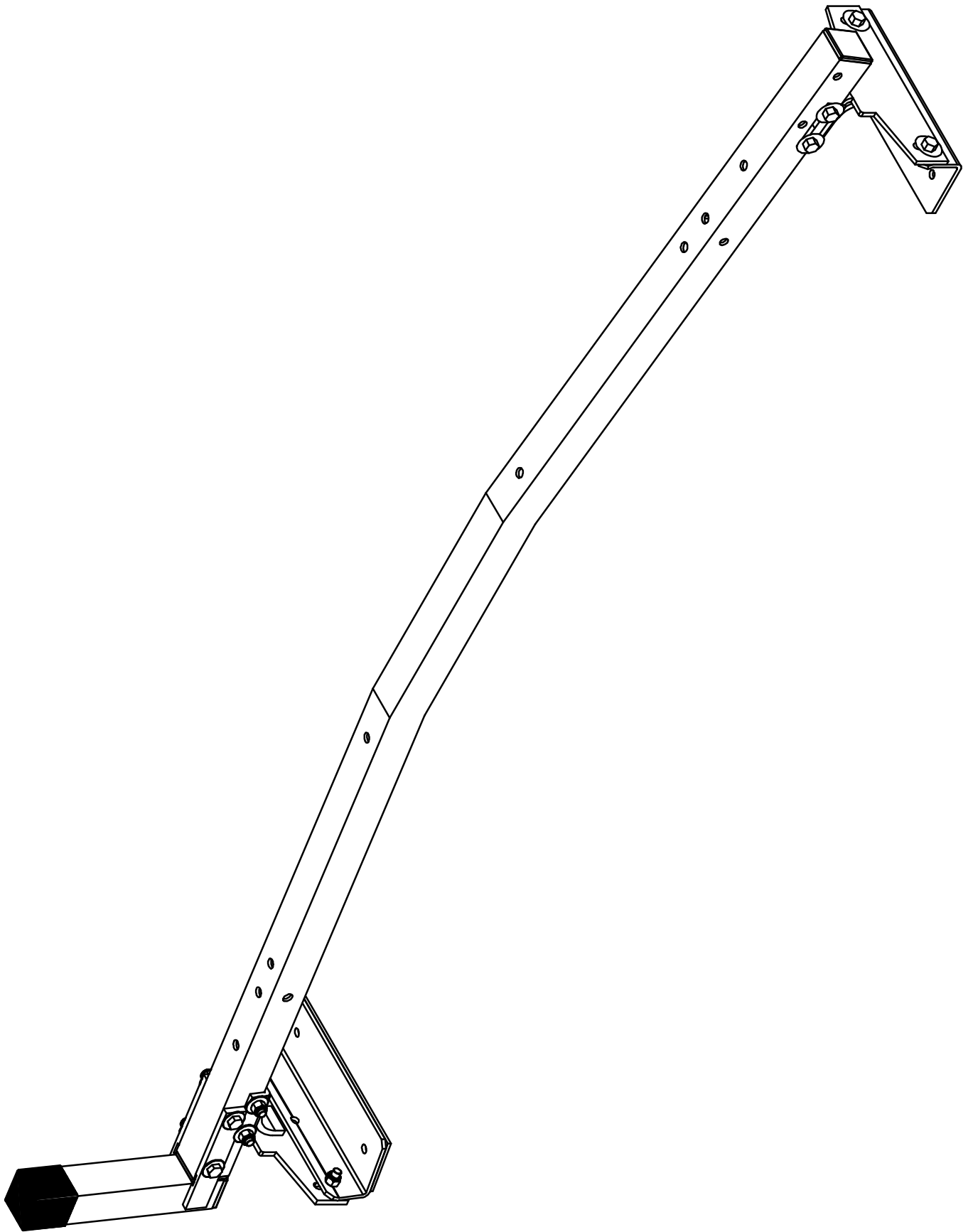
- 2 5/16-18 x (4-1/4" or 5") Phillips Flat Hd. Screw
- 2 5/16-18 x 4" Hex Hd. Bolt
- 4 5/16-18 Nylon Lock Nut
- 6 3/8" Flat Washer

 <p>Crossmembers Qty. 2</p>	 <p>Rear Rotation Assembly Qty. 1</p>	 <p>Front Rotation Assembly Qty. 1</p>
 <p>Pivot Arms Qty. 2</p>	 <p>Rear Drive Tube/Handle Assembly Qty. 1</p>	 <p>Front Drive Tube Qty. 1</p>
 <p>Center Drive Tube Qty. 1</p>	 <p>Cylinder Qty. 1</p>	 <p>Mounting Brackets Qty. 4</p>
 <p>Mounting Bases Qty. 4</p>	 <p>Ladder Supports Qty. 2</p>	 <p>Ladder Stops Qty. 2</p>
 <p>Drivers Side End Stops Qty. 2</p>	 <p>White Plastic Bushings Qty. 2</p>	 <p>Black Plastic Bushings Qty. 2</p>
 <p>Mounting Pads-Rubber Qty. 4</p>		

# FASTENER CHART

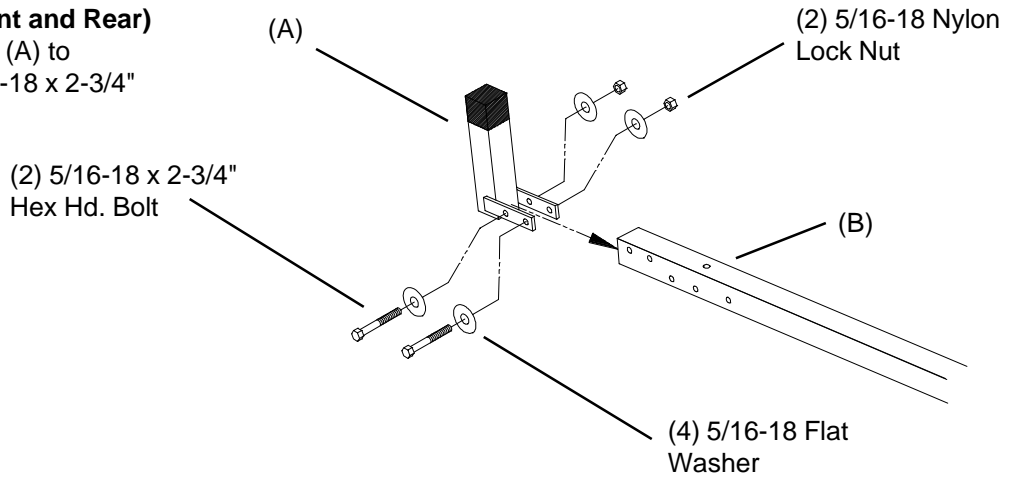
 <p>5/16-18 x 4-1/2" Hex Hd. Bolt</p>			<p>5/16-18 Nylon Lock Nut</p>
 <p>5/16-18 x 4" Hex Hd. Bolt</p>			<p>3/8-16 Nylon Lock Nut</p>
 <p>5/16-18 x ( 4-1/4" or 5" ) Phillips Flat Hd. Screw</p>			<p>5/16" Rubber Washer</p>
 <p>5/16-18 x 2-3/4" Hex Hd. Bolt</p>			<p>5/16" Flat Washer</p>
 <p>3/8-16 x 2-1/4" Hex Hd. Bolt</p>			<p>1-1/2" OD Fender Washer</p>
 <p>5/16-18 x 2" Hex Hd. Bolt</p>			<p>3/8" Flat Washer</p>
 <p>5/16-18 x 1-1/4" Hex Hd. Bolt</p>			<p>Flat Plastic Bushing</p>
 <p>5/16-18 x 1" Hex Hd. Bolt</p>			
 <p>Aluminum Bushing</p>			
 <p>Clevis Pin</p>	 <p>Cotter Pin</p>		

CROSS-MEMBER ASSEMBLY



**STEP 1 (DRIVER SIDE Front and Rear)**

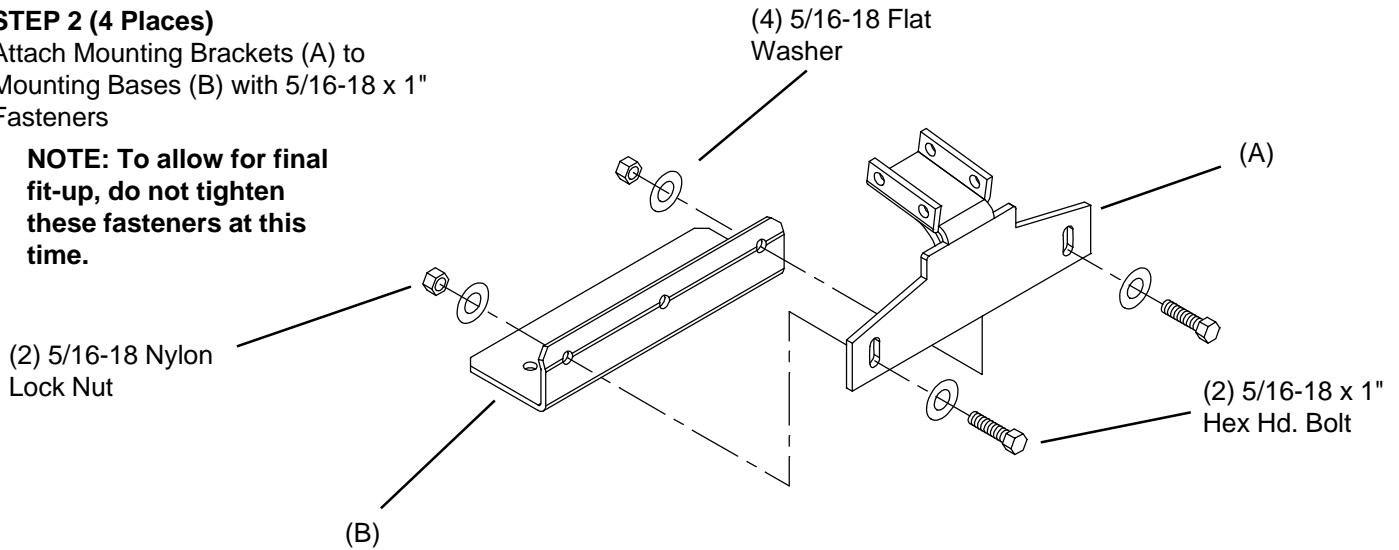
Attach Driver Side End Stop (A) to Cross-Member (B) with 5/16-18 x 2-3/4" Fasteners.



**STEP 2 (4 Places)**

Attach Mounting Brackets (A) to Mounting Bases (B) with 5/16-18 x 1" Fasteners

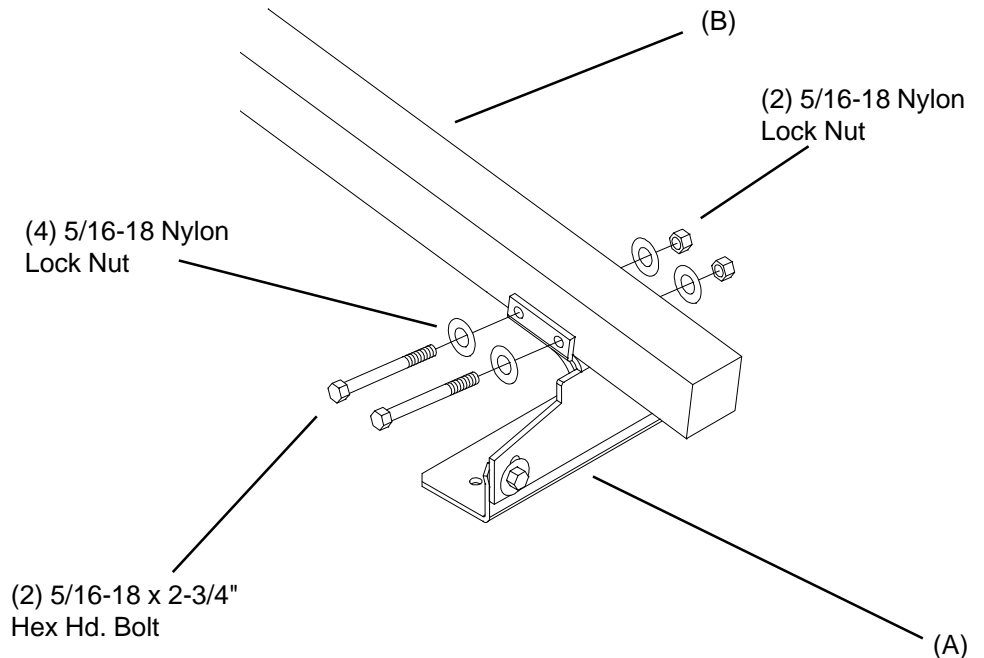
**NOTE: To allow for final fit-up, do not tighten these fasteners at this time.**



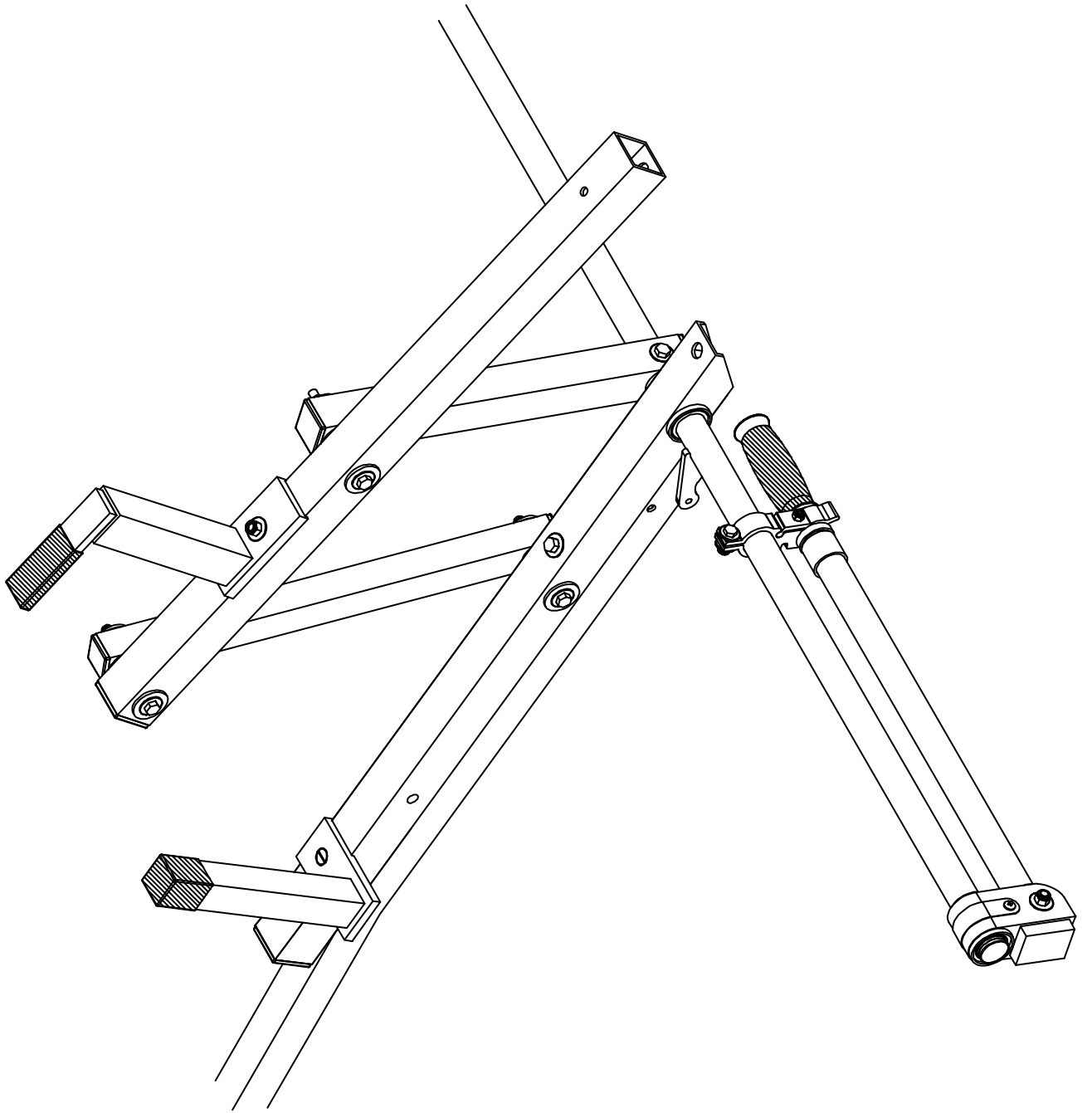
**STEP 3 (4 Places)**

Attach Mounting Brackets (A) to Cross-Members (B) with 5/16-18 x 2-3/4" Fasteners

**NOTE: To allow for final fit-up, do not tighten these fasteners at this time.**

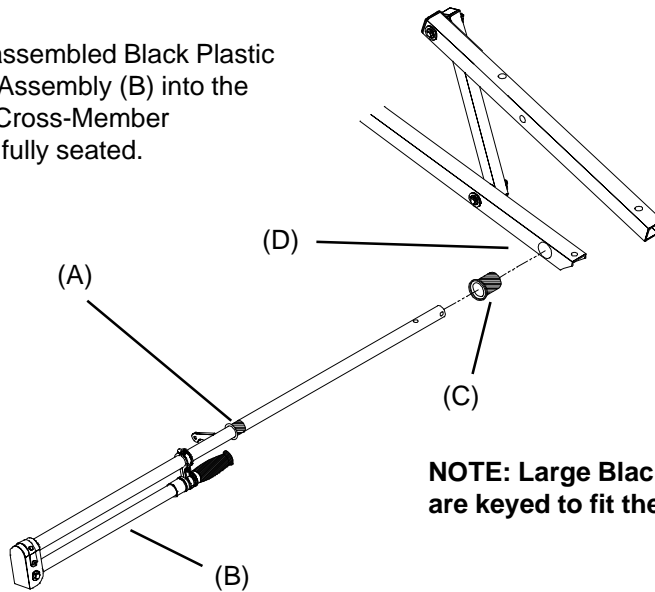


REAR ROTATION ASSEMBLY



#### STEP 4

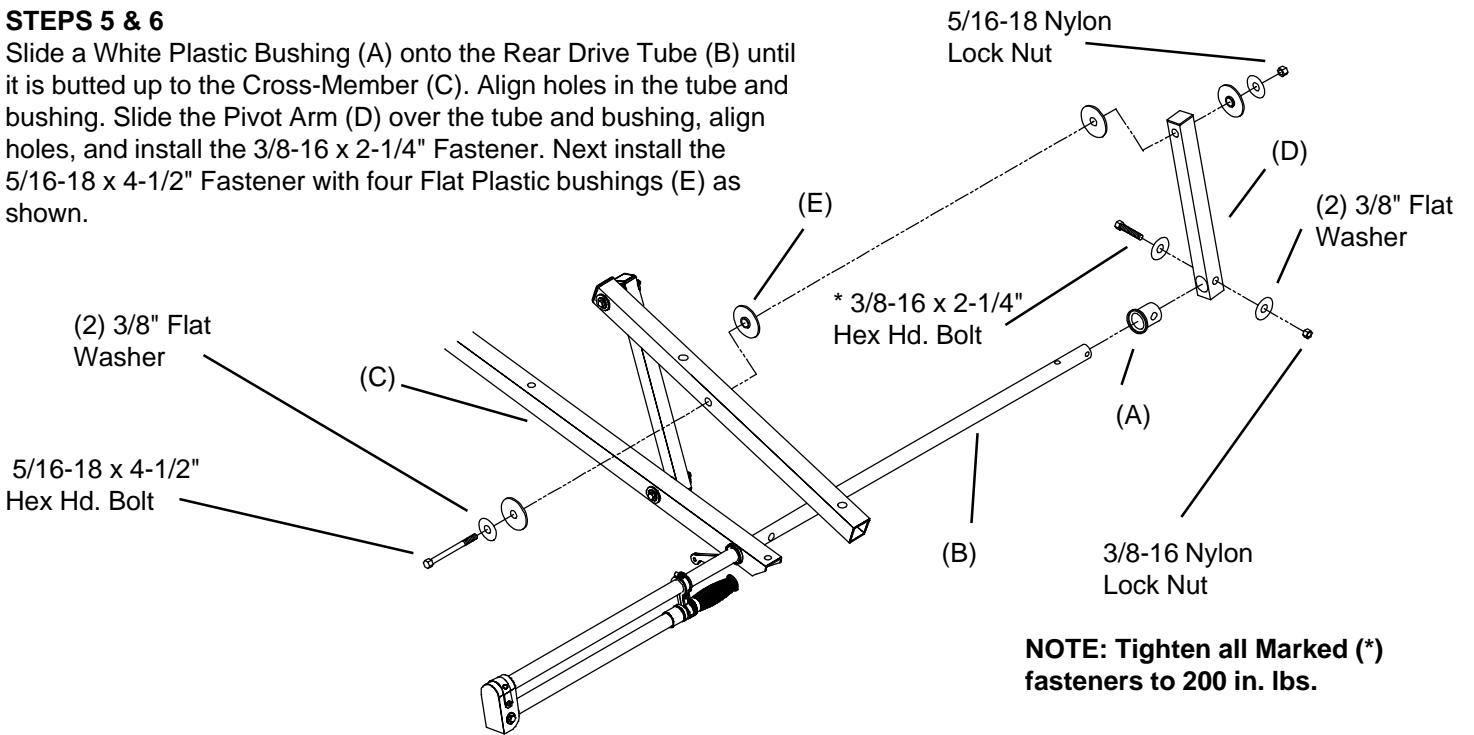
Use the supplied lubricant and coat the pre-assembled Black Plastic Bushing (A). Insert Rear Drive Tube/Handle Assembly (B) into the larger Black Plastic Bushing (C) in the Rear Cross-Member Assembly (D) so that the black bushings are fully seated.



**NOTE: Large Black Plastic Bushings are keyed to fit the Cross-Members**

#### STEPS 5 & 6

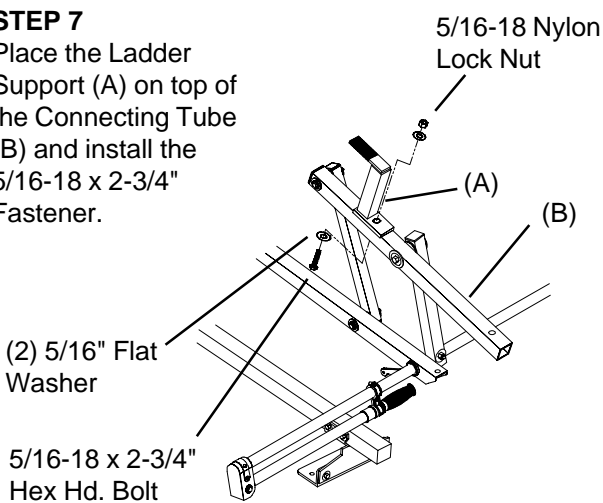
Slide a White Plastic Bushing (A) onto the Rear Drive Tube (B) until it is butted up to the Cross-Member (C). Align holes in the tube and bushing. Slide the Pivot Arm (D) over the tube and bushing, align holes, and install the 3/8-16 x 2-1/4" Fastener. Next install the 5/16-18 x 4-1/2" Fastener with four Flat Plastic bushings (E) as shown.



**NOTE: Tighten all Marked (\*) fasteners to 200 in. lbs.**

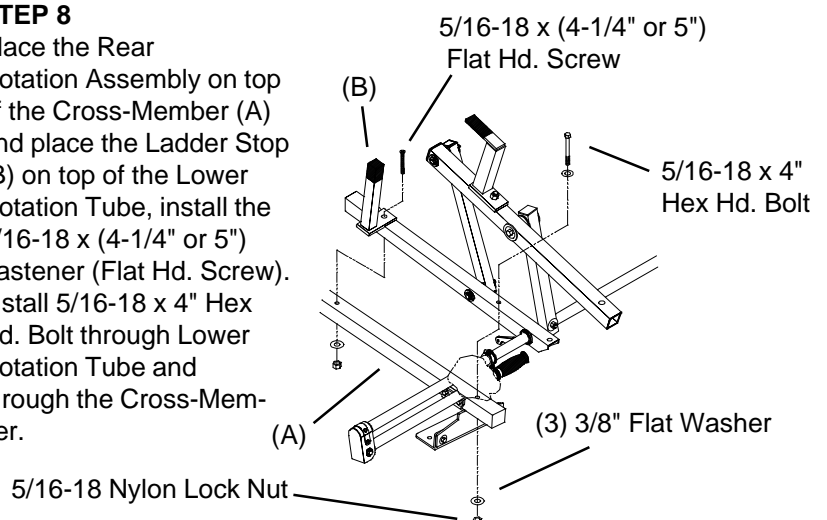
#### STEP 7

Place the Ladder Support (A) on top of the Connecting Tube (B) and install the 5/16-18 x 2-3/4" Fastener.

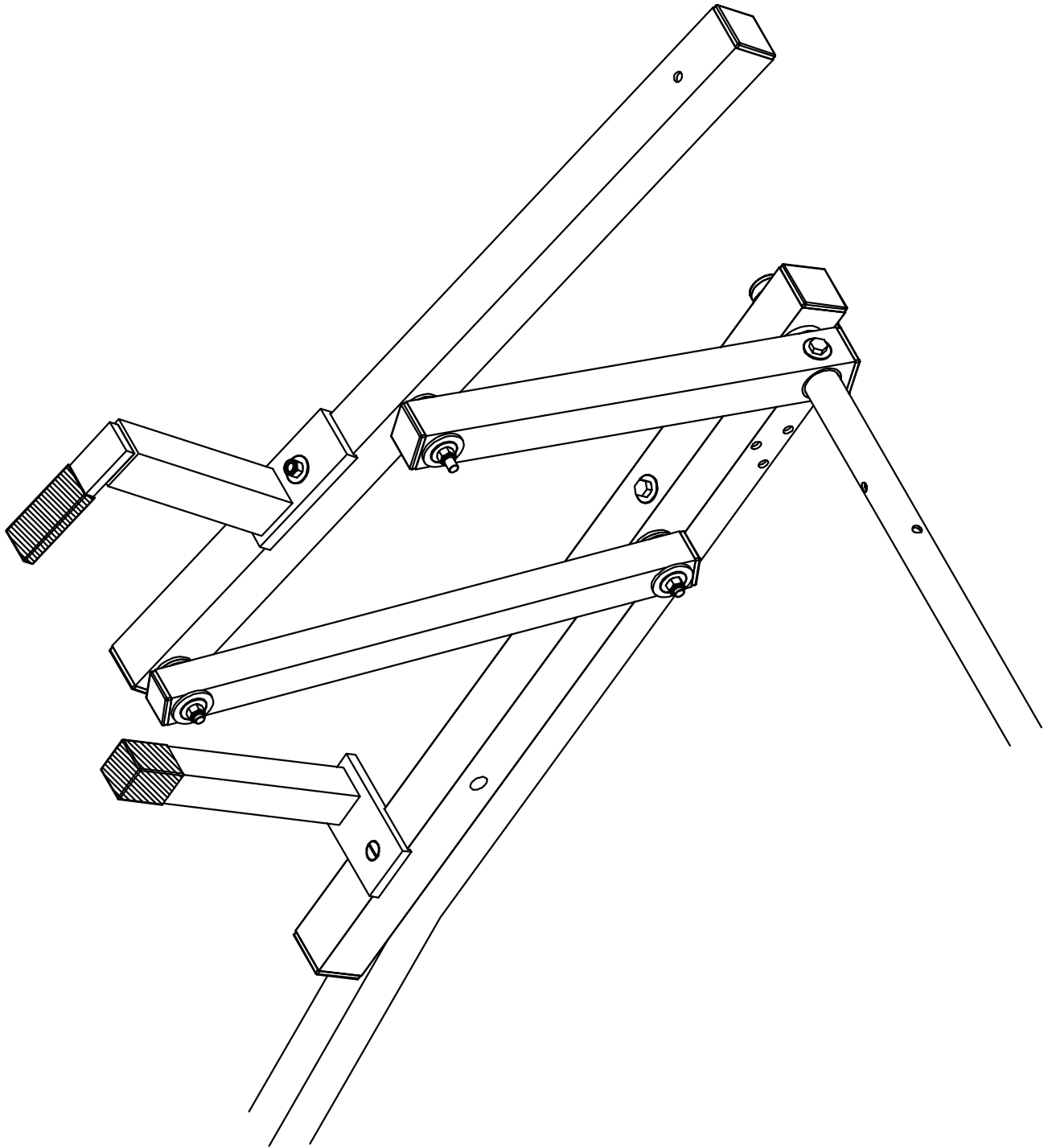


#### STEP 8

Place the Rear Rotation Assembly on top of the Cross-Member (A) and place the Ladder Stop (B) on top of the Lower Rotation Tube, install the 5/16-18 x (4-1/4" or 5") Fastener (Flat Hd. Screw). Install 5/16-18 x 4" Hex Hd. Bolt through Lower Rotation Tube and through the Cross-Member.



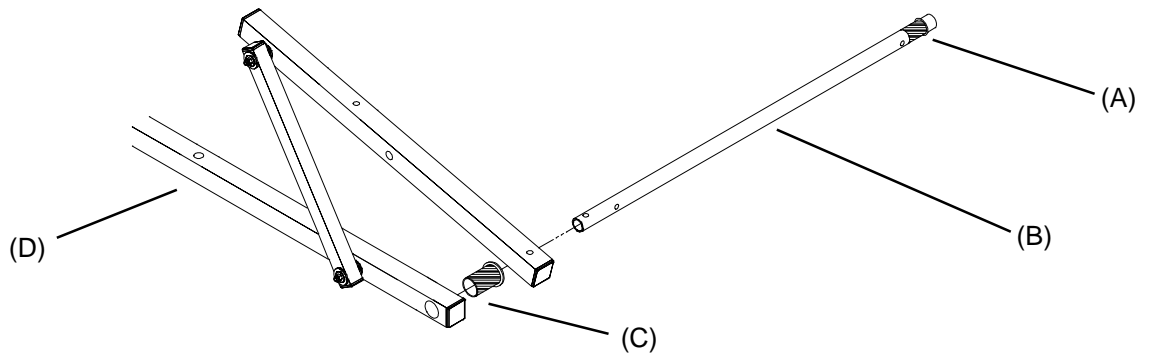
**FRONT ROTATION ASSEMBLY**





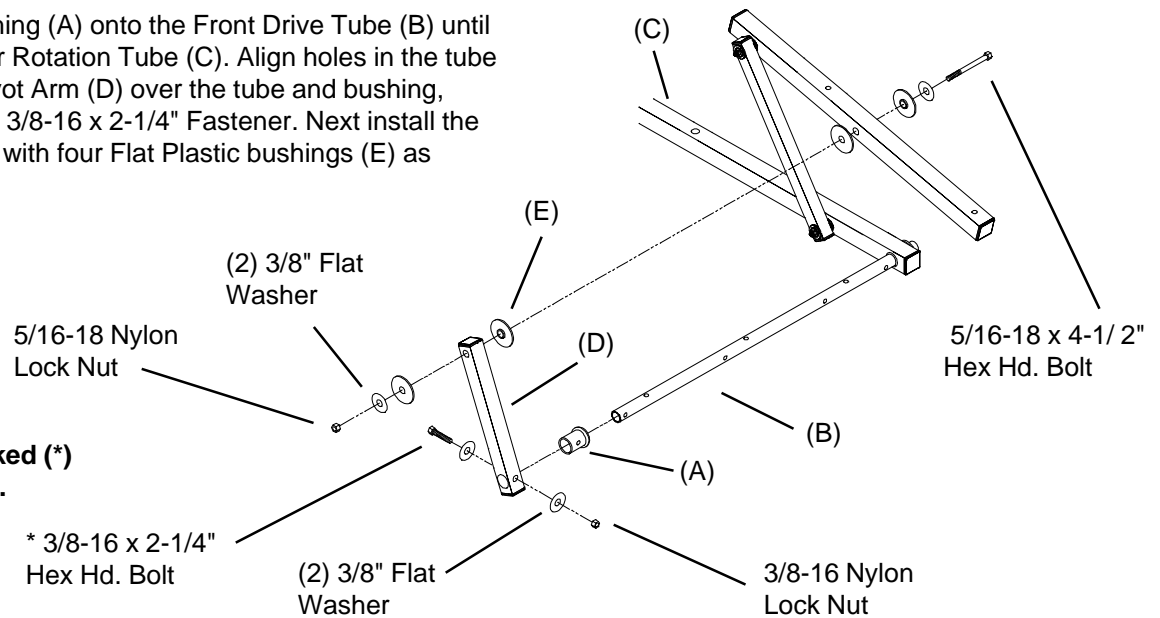
### STEP 9

Use the supplied lubricant and coat the pre-assembled Black Plastic Bushing (A). Insert Front Drive Tube (B) into the larger Black Plastic Bushing (C) in the Front Crossmember Assembly (D) so that the black bushings are fully seated.



### STEPS 10 & 11

Slide a White Plastic Bushing (A) onto the Front Drive Tube (B) until it is butted up to the Lower Rotation Tube (C). Align holes in the tube and bushing. Slide the Pivot Arm (D) over the tube and bushing, align holes, and install the 3/8-16 x 2-1/4" Fastener. Next install the 5/16-18 x 4-1/2" Fastener with four Flat Plastic bushings (E) as shown.



**NOTE: Tighten all Marked (\*) fasteners to 200 in. lbs.**

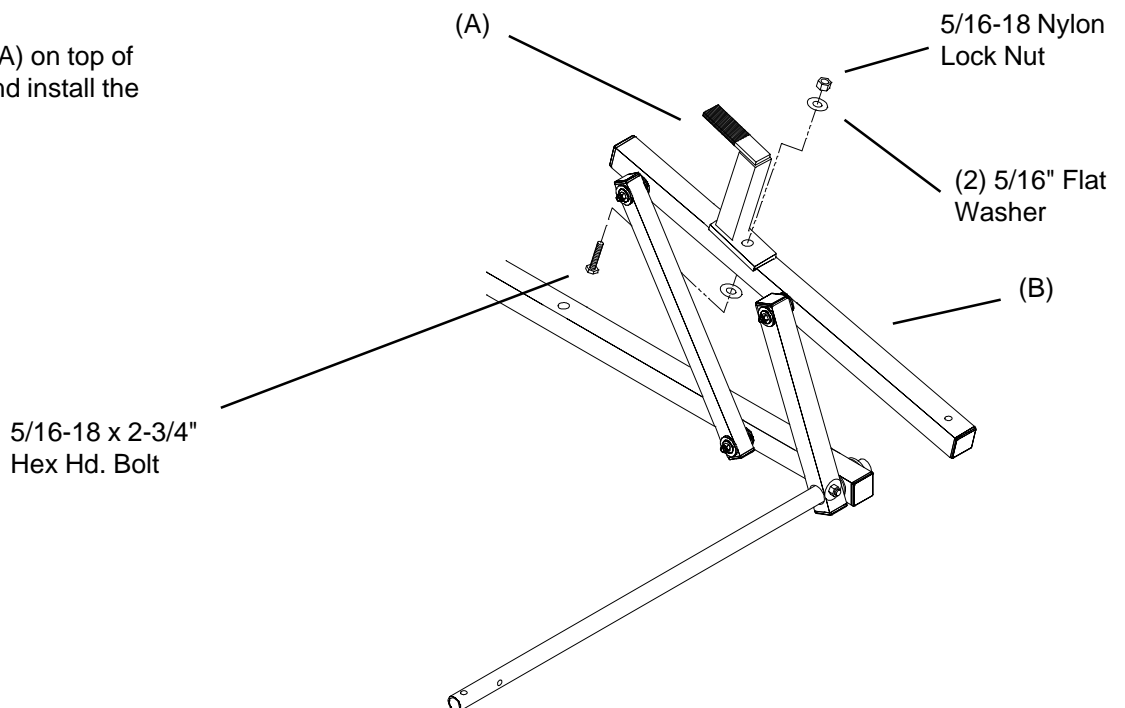
\* 3/8-16 x 2-1/4"  
Hex Hd. Bolt

(2) 3/8" Flat  
Washer

3/8-16 Nylon  
Lock Nut

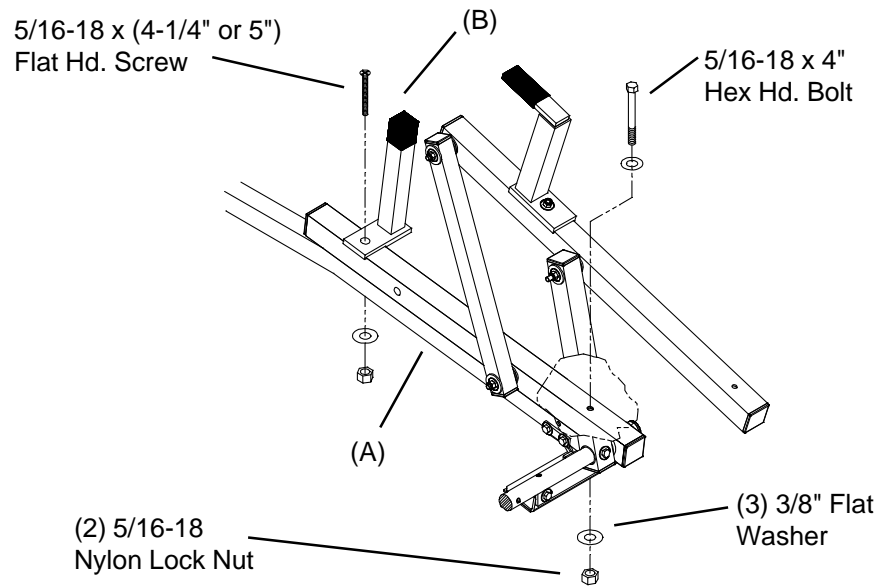
### STEP 12

Place the Ladder Support (A) on top of the Connecting Tube (B) and install the 5/16-18 x 2-3/4" Fastener.

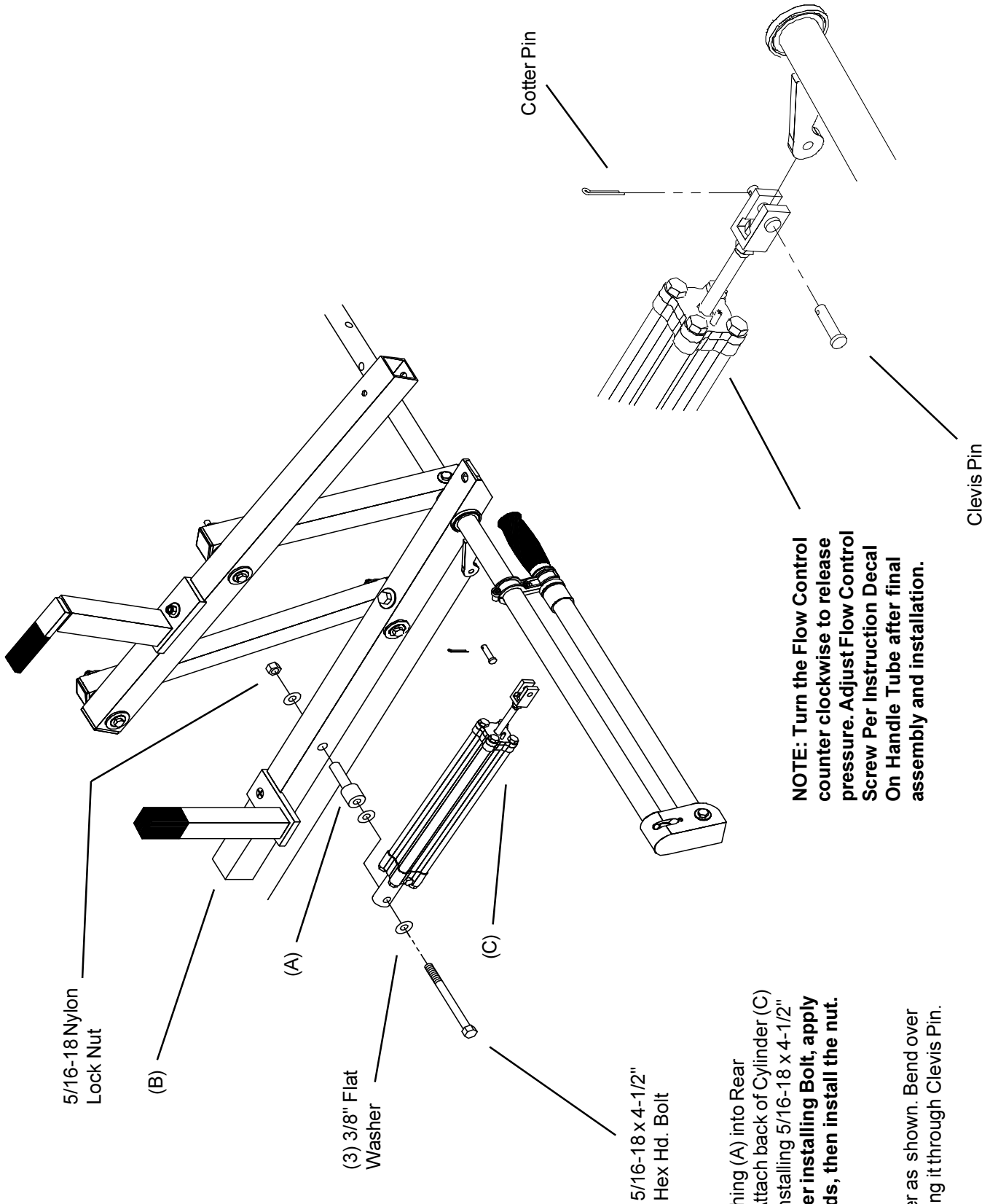


**STEP 13**

Place the Front Rotation Assembly on top of the Cross-Member (A) and place the Ladder Stop (B) on top of the Lower Rotation Tube, install the 5/16-18 x (4-1/4" or 5") (Flat Hd. Screw). Install 5/16-18 x 4" Hex Hd. Bolt through Lower Rotation Tube and through the Cross-Member.



**CYLINDER INSTALLATION**



5/16-18 Nylon  
Lock Nut

(B)

(A)

(3) 3/8" Flat  
Washer

(C)

5/16-18 x 4-1/2"  
Hex Hd. Bolt

Cotter Pin

Clevis Pin

**NOTE:** Turn the Flow Control counter clockwise to release pressure. Adjust Flow Control Screw Per Instruction Decal On Handle Tube after final assembly and installation.

**STEP 14**

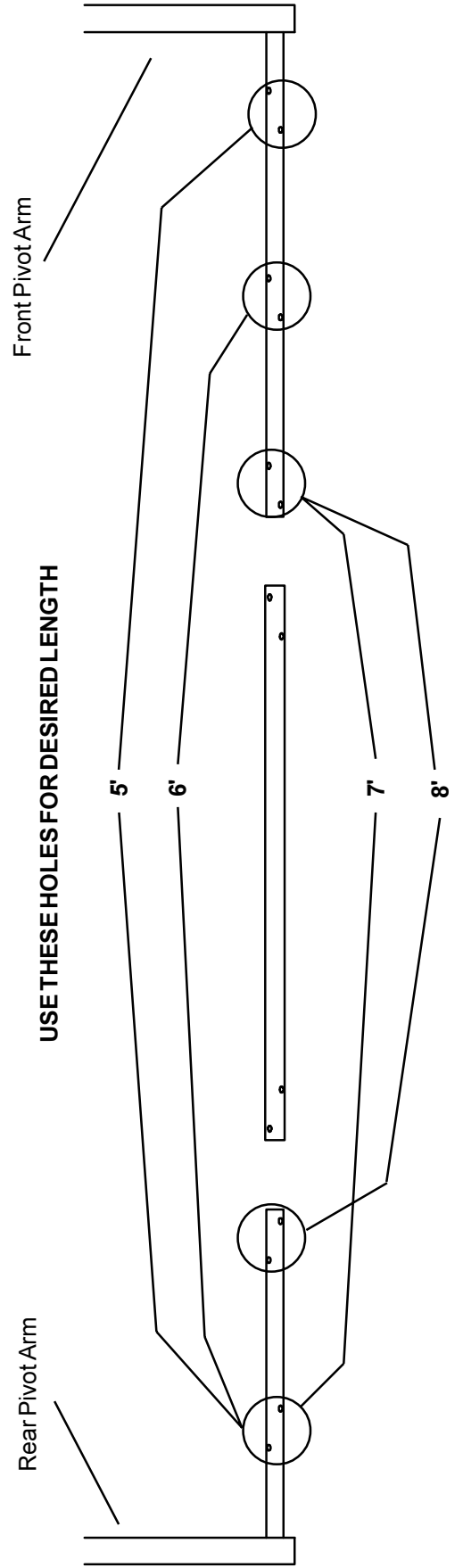
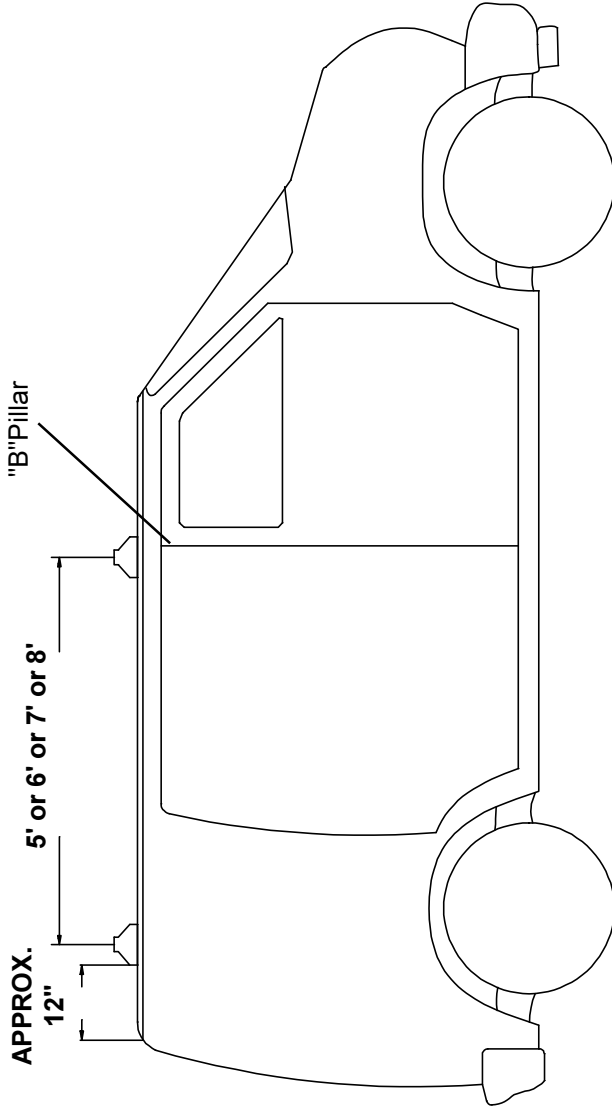
Insert Aluminum Bushing (A) into Rear Cross-Member (B). Attach back of Cylinder (C) to crossmember by installing 5/16-18 x 4-1/2" Fastener. **NOTE: After installing Bolt, apply Loctite 290 to threads, then install the nut.**

**STEP 15**

Attach front of Cylinder as shown. Bend over Cotter Pin after inserting it through Clevis Pin.

## HOW TO DETERMINE RACK LENGTH FOR YOUR VAN

Center a Mounting Base over the "B" pillar behind the front door. Next set a Mounting Base approx. 12" from the rear of the vanroof to the rear of the base. Measure the distance between the bases (center to center) round to the nearest foot dimension. The rack is predrilled at 5', 6', 7', and 8' lengths.



**FRONT TO REAR DRIVE TUBE ASSEMBLY**

**STEP 16**  
Locate desired front to rear length  
(5' or 6' or 7' or 8') and install  
5/16-18 x 2" Fasteners  
**(Tighten fasteners to 200 in. lbs.)**

(4) 5/16-18  
Nylon Lock  
Nut

(8) 5/16" Flat  
Washer

(4) 5/16-18 x 2"  
Hex Hd. Bolt

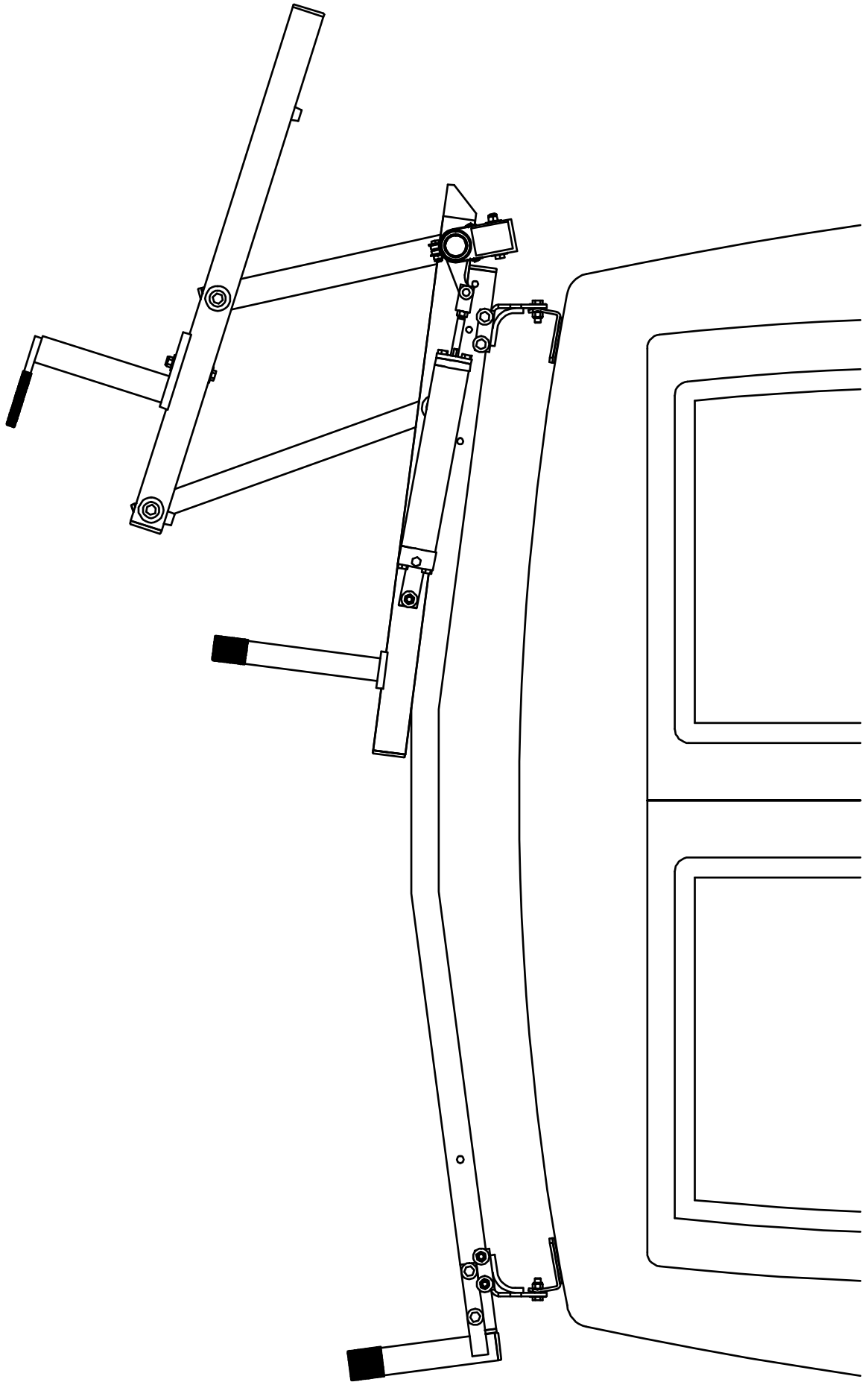
**STEP 17**

Cover any exposed holes on Front and Rear Drive Tubes with  
the 1" Dia. Vinyl Hole Covers

**STEP 18**

Seal the ends of the Center Drive Tube, the four 5/16-18 Fasteners,  
and the two 3/8-16 Fasteners with the tube of sealant supplied.

**VEHICLE MOUNTING PROCEDURE**



**STEP 19**

**WITH HELP!** Place entire unit on vehicle in desired position. Check to verify that the Handle clears the rear of the van. It may be necessary to move the rack to the rear.

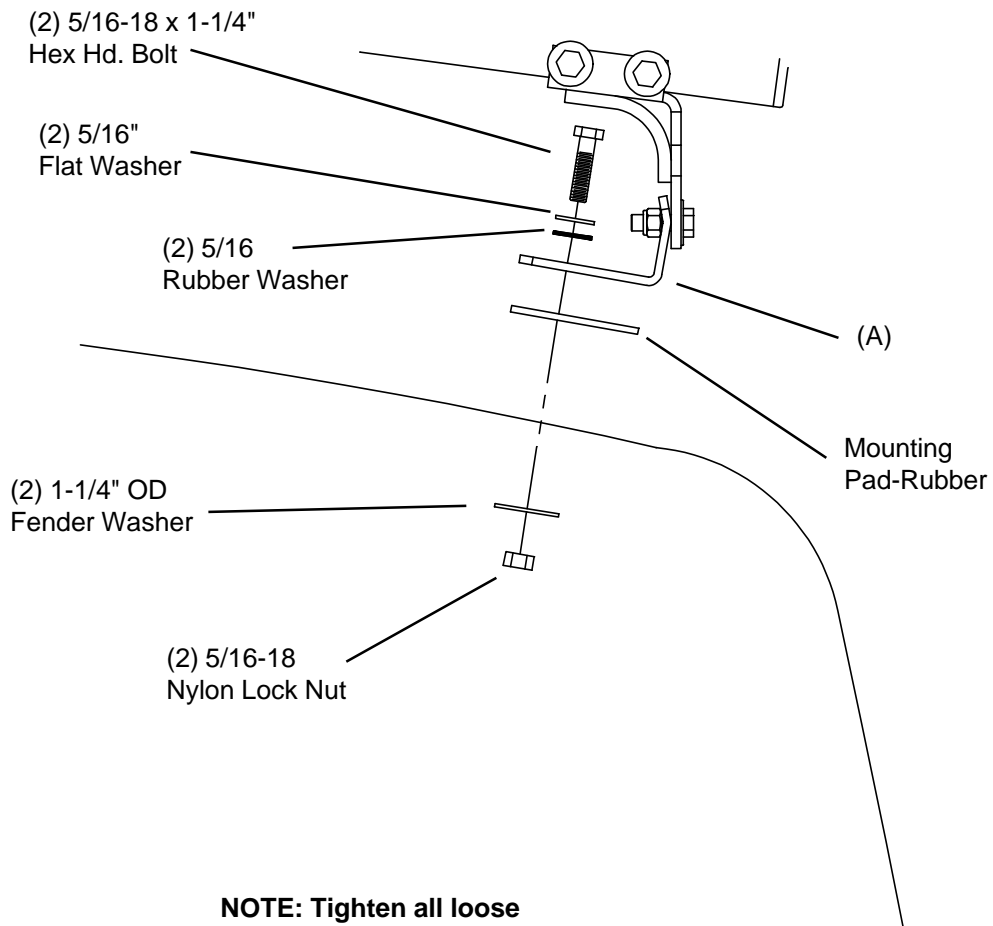
**STEP 20 (4 Places)**

With unit centered side to side, mark the holes in the Mounting base (A). Move the unit out of the way enough to drill the holes. Reposition unit and secure to the van roof with the 5/16-18 x 1-1/4" Fasteners.

**⚠ CAUTION**

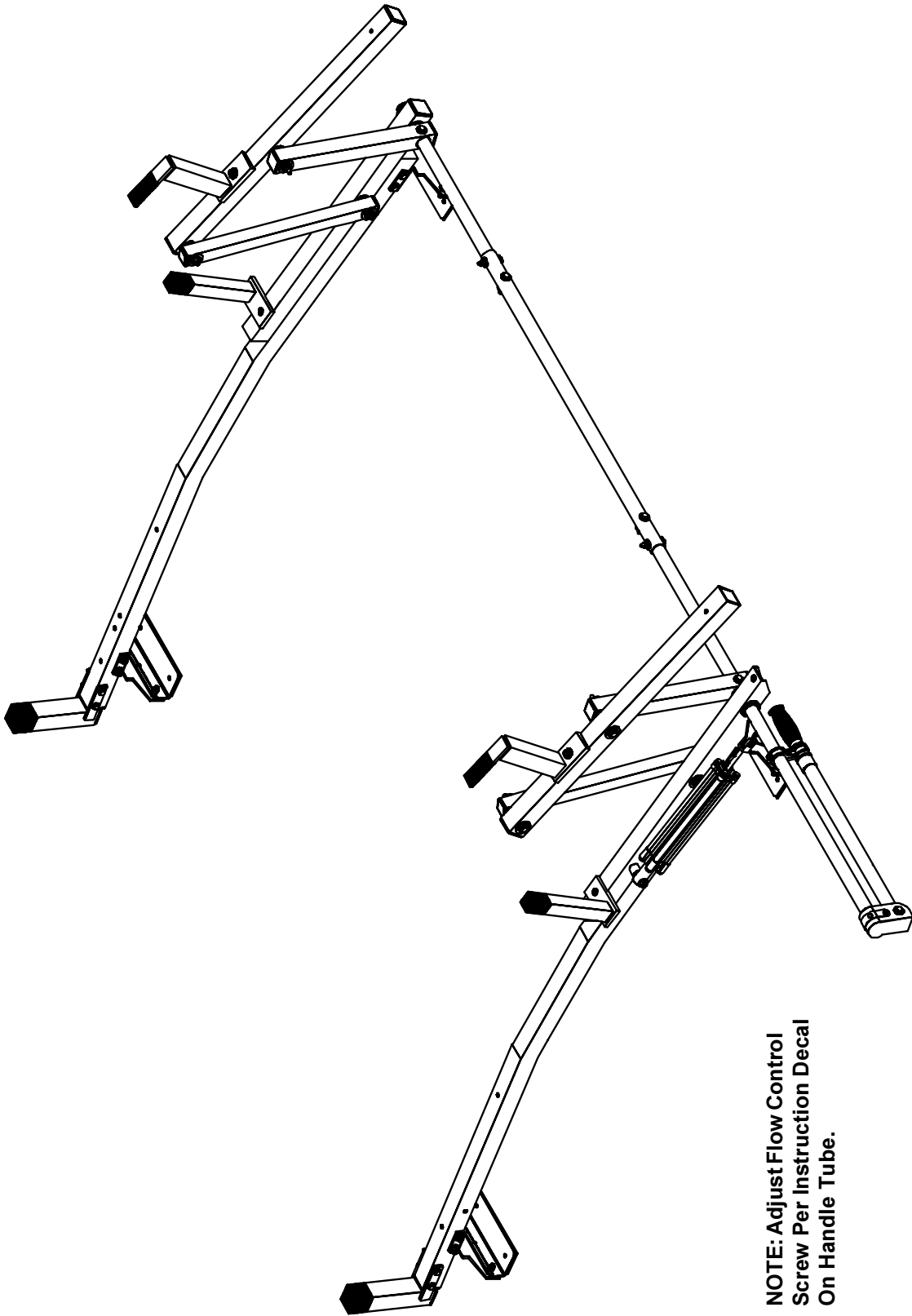
To keep debris out of your eyes when drilling, always wear protective eyewear.

**NOTE: Seal the top of the bolts that go through the roof with the sealant that is supplied.**



**NOTE: Tighten all loose fasteners at this time.**

FINAL ASSEMBLY

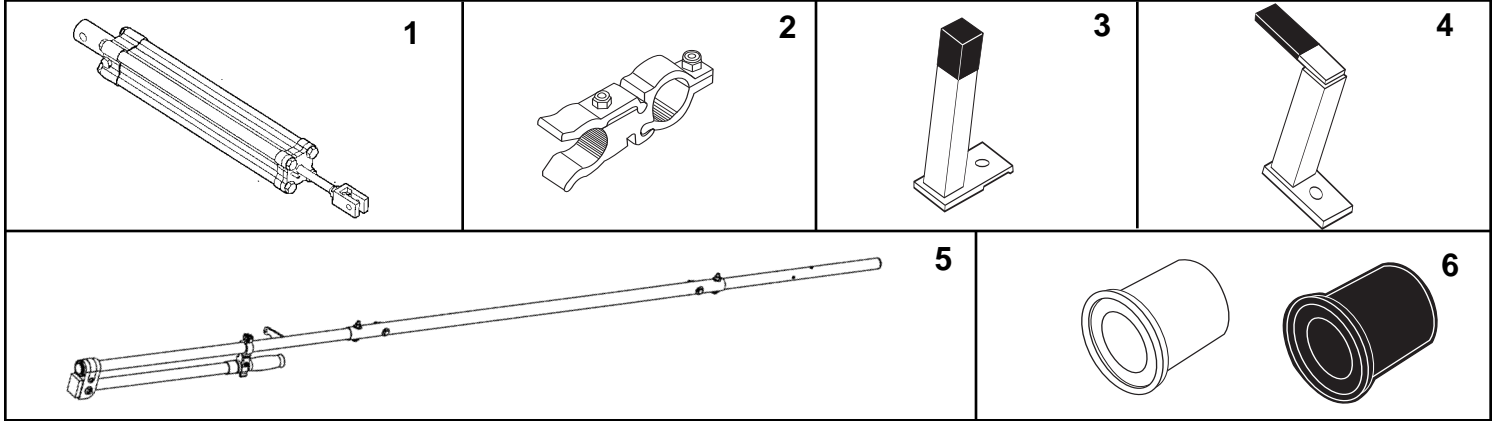


**NOTE: Adjust Flow Control  
Screw Per Instruction Decal  
On Handle Tube.**



## REPLACEMENT PARTS

ID#	PART NUMBER	DESCRIPTION	USE WITH	QUANTITY
1	7360	Hydraulic Cylinder	All Models Except 254	1
2	7361	Handle Clamp	All Models Except 254	1
3	7363	Ladder Stop	251, 252, 253, 255, 256, 257	1
4	7364	Ladder Support	251, 252, 253, 255, 256, 257	1
5	7365	PS Drive Shaft & Arm	251, 252, 253, 256,	1
6	7366	Bushing Kit	251, 252, 253, 255, 256, 257	1



## ACCESSORIES

PART NUMBER	DESCRIPTION	USE WITH	QUANTITY
254	Driver Side Clamp Kit	251, 252, 253	1
255	Driver Side Drop Down Kit	251, 252, 253	1
2501	Warning Light Holder	251, 252, 253	1
2502	Mirror Holder	251, 252, 253	1
2503	Two Velcro Straps	251, 252, 253	2
2504	Mirror	2502	1
2511	Accessory Cross Member	251	1
2521	Accessory Cross Member	252	1
2531	Accessory Cross Member	253	1