



## Reference Manual - Installation

**Product :** Lateral Lightweight Ladder *for Modular Roof Rack Series*

**Application :** RAM PROMASTER HR (2014+)

**Difficulty :** 1 2 **3** 4 5

**Installation time :** 1.5 to 2 hours

**Make the road your home.**

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## Preparation

### Precautions & recommendations

#### **A few precautions for a smooth installation**

\* We recommend that you protect your vehicle's body with a blanket or piece of cardboard to prevent scratching your paint or trim pieces during installation.

\* In order to considerably reduce installation time, we recommend the use of a good quality 8'+ stepladder.

\* At any time, if you have any doubts about the installation, stop immediately and contact our customer service department.

## Preparation

### Warnings



### Warnings

! Remora co Lateral Lightweight Ladders are designed and exclusively intended for lateral installation on our Modular Roof Rack Series (Side of Vehicle). Any modification or adaptation of the product for installation on any other product or area not intended by Remora co is strictly forbidden and will void the warranty.

! Some components of the product have sharp edges. Please handle with care and remain aware of your surroundings to avoid any scratching or damage to your vehicle.

! Tighten all hardware by hand using a torque wrench or torque adaptor. Since the components are made of aluminum, the use of an “impact”, battery or electric screwdriver could damage the threads of the components and render the product unusable.

! For any hardware that does not use “NyLock” type nylon lock nuts, apply a drop of blue Loctite (provided in your hardware box) on the bolt threads. (Wind fairing hardware for deflector & crossbar hardware)

! Under road, wind and pothole vibration, the product and its components may slightly move and self-adjust. Perform a regular check once every season change to ensure the good condition and correct positioning of the components. Check the anchoring hardware and installation hardware after the first 20 and 200 kilometers traveled and adjusting the hardware torque if needed. Also perform a routine check of all product hardware yearly.

! Remora co ladders are not designed nor intended for heavy offroading and underwater use. Be advised, using the ladder in wet offroading conditions (in and out of puddles, rivers and underwater environments) will void the warranty and might affect the rigidity of the product.

! Installation and removal of the ladder should be performed by two people, or at least monitored by an abled assistant. You will be working under a heavy vehicle. Use proper lifting jacks, jack standard and security devices.

! Any modification or alteration of the *Lightweight Ladder* not approved by Remora co, or addition of components not designed or manufactured by Remora co may void the product warranty.

! At any time, if you have any doubts about the installation, stop immediately and contact us or an authorized installer.

## Preparation

Required tools and supplies

### Recommended supplies for installation

- Large blanket or large carton to protect the vehicle's body
- 8'+ stepladder

### Tools required for installation (not included)

- Ratchet torque wrench (5Nm to 25Nm), extension & 1/2" & 9/16" deep sockets
- 5/32" & 3/16" & 7/32" "Allen" (Allen socket) bits for ratchet wrench
- Otherwise, "Allen" keys 5/32", 3/16" & 7/32"
- Wrench 1/2" and 9/16"
- Electric drill
- 1/8" metal pre-drill bit
- 11/32" metal bit
- "Sharpie" felt pen
- Isopropyl alcohol 99%
- Clean rags
- Automotive Primer
- Touch-up paint (vehicle color match)
- Aerosol based antirust spray / treatment

Recommended :

- Drilling fluid for hardened steel

## Installation steps

## Installation steps

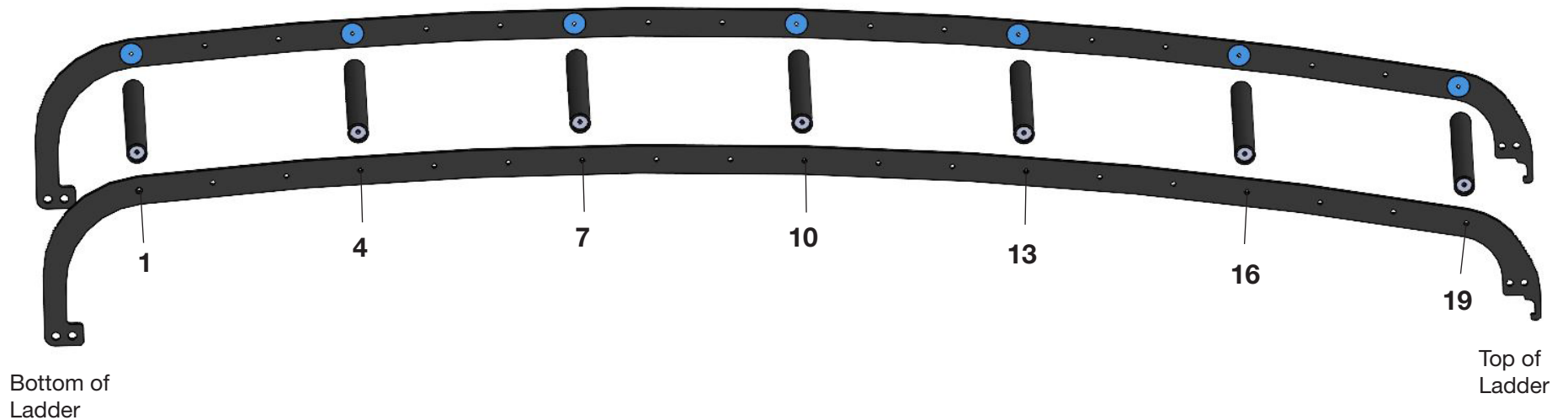
### Ladder Assembly

#### A. Ladder Assembly (side plates & steps)

**A1.** Put both “Ladder Side Plates” on a large flat surface, with the belly facing upwards. Distribute the steps evenly starting from one end, leaving 2 mounting holes between each step position.

**A2.** Stick the large “Sealing washers” included in the “Step Hardware kit” on the inside of both Side Plates, where the ladder steps will be installed. If your Sealing Washers do not have an adhesive backing, simply apply them between the Side Plates and Steps when torquing down at step #A4. They will compress when torqued down.

Fig. A1 & A2



## Installation steps

### Ladder Assembly

#### A. Ladder Assembly (side plates & steps)

**A3.** Apply a drop of Loctite Blue on the end of the 1/4 x 1 1/4" screws from the "Step Hardware" kit.

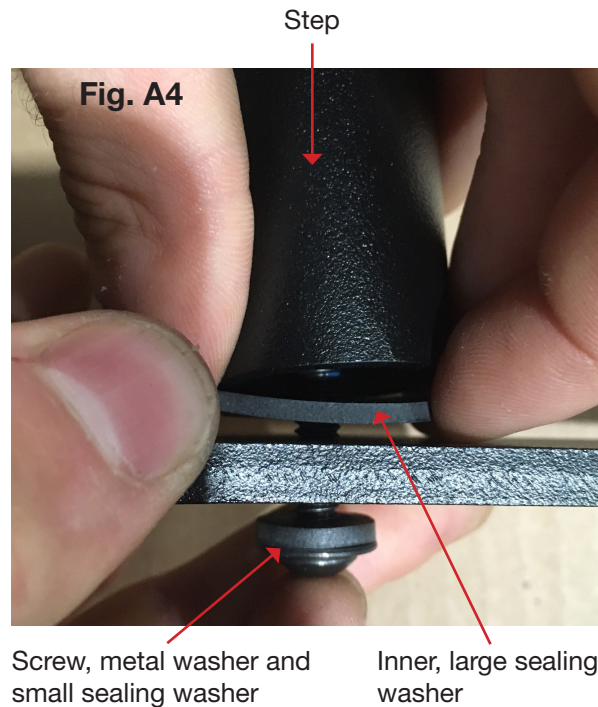
**A4.** Use the "Step Hardware" (in order : 1/4-20 screws, metal washers, small sealing washers and large sealing washers) provided and lightly tighten the screws down as shown on Figure A4.

**A5.** Once all the steps are lightly screwed in. **Torque to 6Nm** by hand. The large "internal" and small "external" sealing washers will compress.



#### WARNING !

\*\* DO NOT OVERTORQUE \*\*. Torque by hand only, to 6Nm max. Torquing this hardware more than 6Nm or using power tools to torque may cause the internal hardware to shift or dislodge. The Loctite will provide sufficient holding power for this hardware.





## Installation steps

### Ladder Assembly

## B. Mounting Bracket installation

**B1.** Turn the half-assembled ladder on the other side, so that the belly is now facing downwards.

**B2.** Install the top and bottom mounting brackets in the correct orientation, following Figures B2.

The small arrow on both brackets should point upwards, toward the top hooks. Using the hardware in the “Top Mounting Bracket Kit” (3/8 x 1” bolts, washers and Locknuts) and “Lower Mounting Bracket Kit” (3/8 x 1 1/4” bolts, washers and Locknuts) provided, lightly tighten the screws down as shown on Figures B2.

**B3.** Once the mounting plates are lightly screwed in and well positioned, **torque to 20Nm** by hand using a torque wrench and wrench.

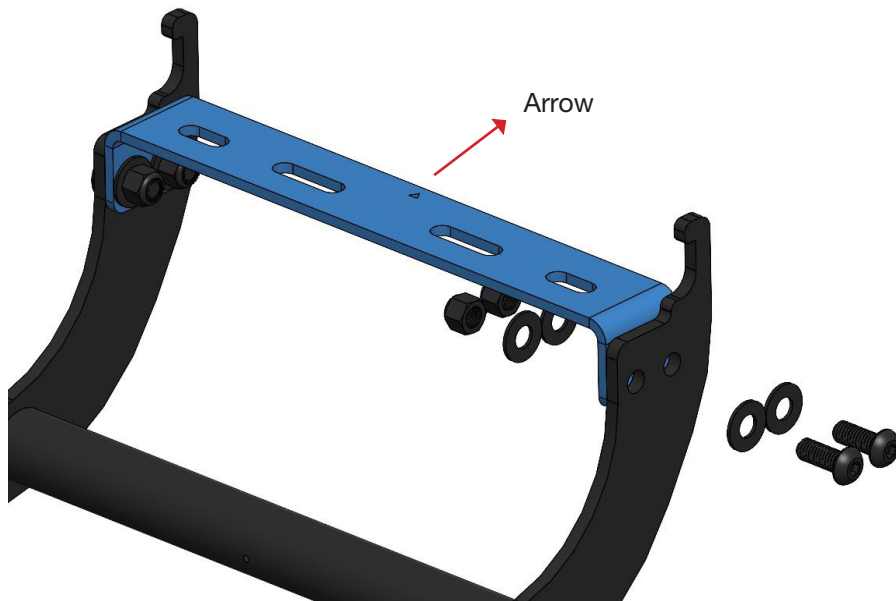


Fig. B2-Top

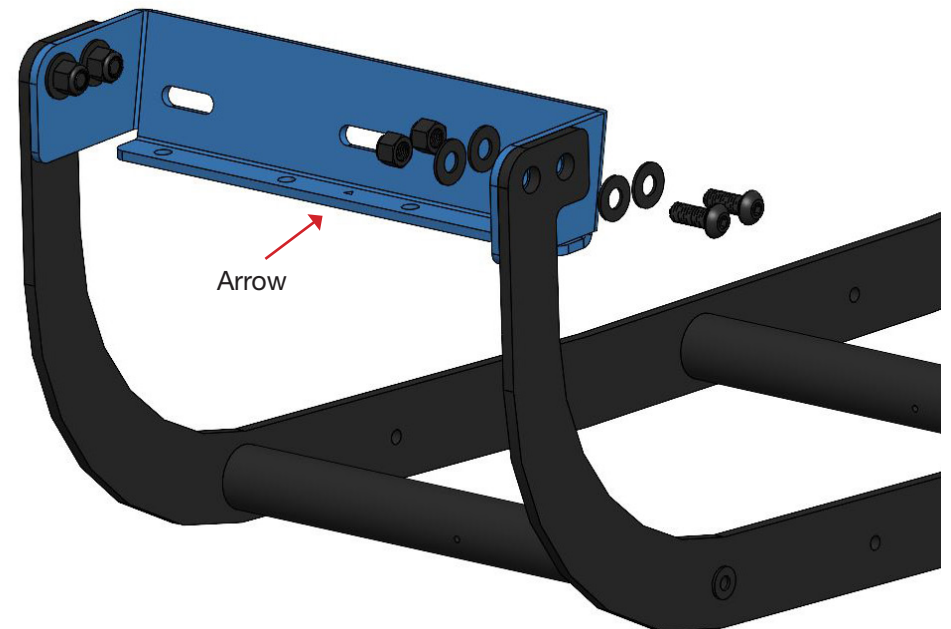


Fig. B2-Bottom

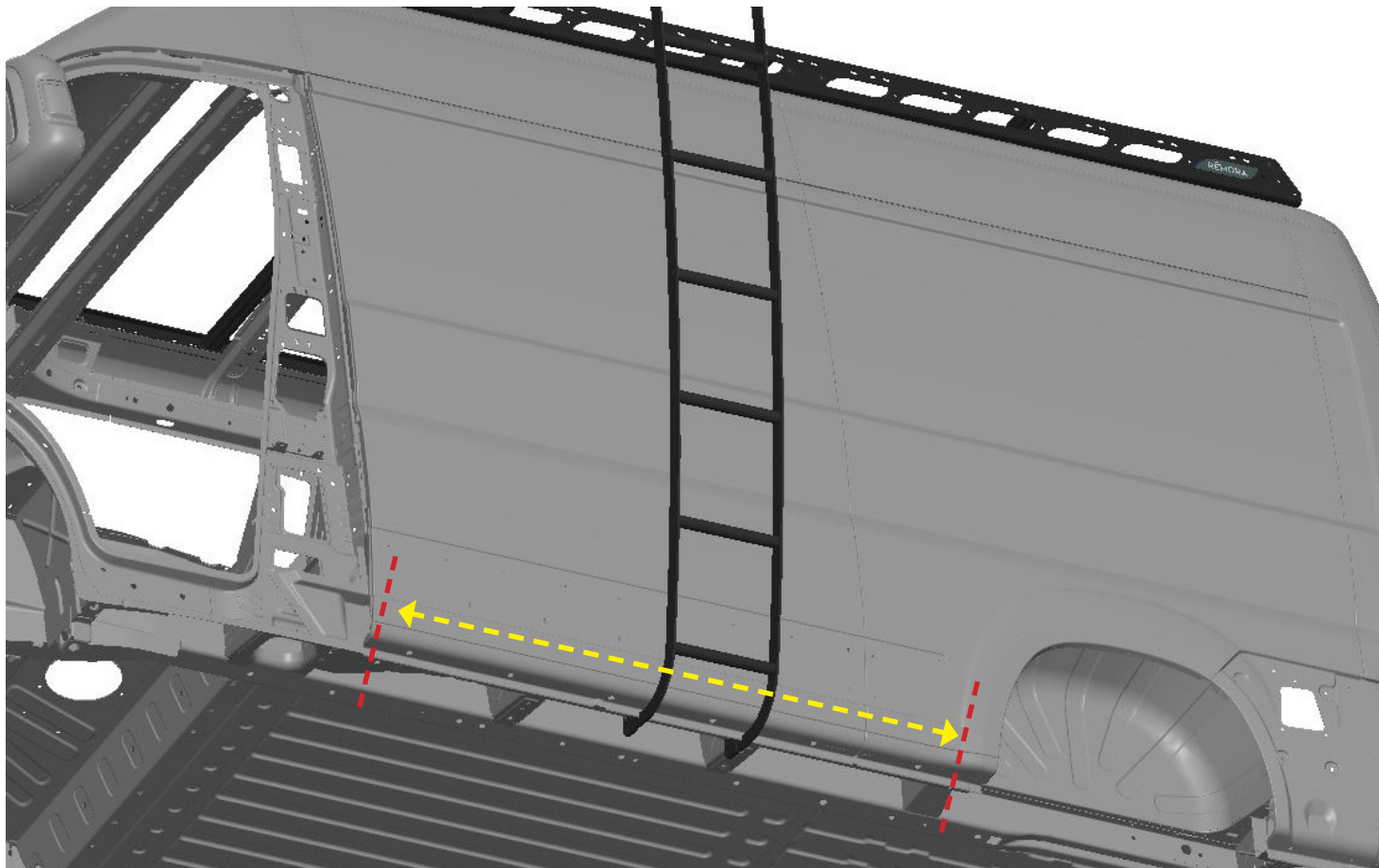
## Installation steps

### Ladder Installation

#### C. Ladder Installation

**C1.** The Lateral Lightweight Ladder must be installed between the driver's door and the front of the rear wheel well, exclusively on the driver's side of the vehicle. We recommended using the existing top holes of the Modular Roof Rack to help you position your ladder, so that you don't have to drill an extra set of holes on the Roof Rack for your ladder installation.

**C2.** When you have decided of your ladder's position on the side of the vehicle, carefully inspect the underside of the vehicle and backside of the "pinch-weld" where the bottom bracket will be positioned, to insure that no existing or future component of accessory might interfere.



## Installation steps

### Ladder Installation

#### C. Ladder Installation

**C3.** Pivot the bottom of the ladder below the vehicle. Pull the bottom bracket towards you so that it locks behind the lower “pinch-weld” of the vehicle. Once the bottom bracket is securely locked under the “pinch-weld”, push the top of the ladder towards the vehicle. The top hooks should fit over the top bend of the roof rack. It is okay to use a little force for insertion. The hooks at the top of the ladder should “click” above the rack. A slight adjustment of the top bracket may be necessary to facilitate the “click” of the hooks. To do this, loosen the 4 bolts & nuts & tighten the top bracket once the ladder has clicked on the rack.

**C4.** Level the ladder, secure the bottom plate using a Vise Grip or a clamp (take care to protect the paint with a cloth or piece of wood.)



## Installation steps

### Ladder Installation

#### C. Ladder Installation

**C5.** You can then mark or “punch” the position of the lower mounting holes to be made on the “pinch-weld”, for the installation of the bottom bracket. (We recommend marking and temporarily removing the ladder for drilling.) If you’ve decided to install your ladder at a certain position that doesn’t align with the Roof Rack installation holes, you will need to manually drill those new holes on the Roof Rack.

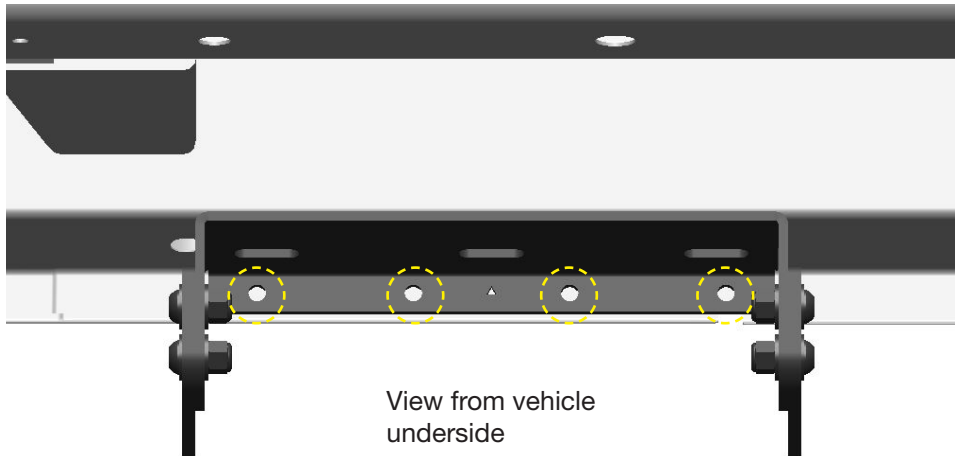
**C6.** Making sure you have enough space for the screw heads, washers and nuts on the other side (exterior side), drill the 4 installation holes in the pinch weld with a 1/8” pre-drill bit, finishing off with a 11/32” drill bit. It is recommended to use drilling fluid.



#### **WARNING !**

**\*\* DO NOT DRILL TOO CLOSE TO THE EDGE \*\*.** Leave at least 3/16” of material between your hole and the lower edge of the “pinch-weld”.

**C7.** Clean the holes thoroughly with Isopropyl alcohol. Apply a touch up of automotive primer and paint (2 coats recommended). When dry, apply a good coat of antirust spray in the holes. It is recommended to temporarily remove the ladder for this step.



**Fig. C5 & C6**



**Fig. C7**

## Installation steps

### Ladder Installation

#### C. Ladder Installation

**C8.** Using the hardware included in the “Assembly Hardware Bottom of Rack” kit (4X 5/16 x 1” bolts, washers and Locknuts), bolt down the Lower Mounting Bracket with the screw heads facing the exterior of the vehicle. **Torque to 20Nm** by hand using a torque wrench and wrench.

**C9.** Level the ladder one last time. Using the hardware included in the “Assembly Hardware Top of Rack” kit (2X 3/8” x 1” bolts, washers and Locknuts), bolt down the Upper Mounting Bracket through the Roof Rack with the screw heads facing the exterior of the vehicle. **Torque to 25Nm** by hand using a torque wrench and wrench.

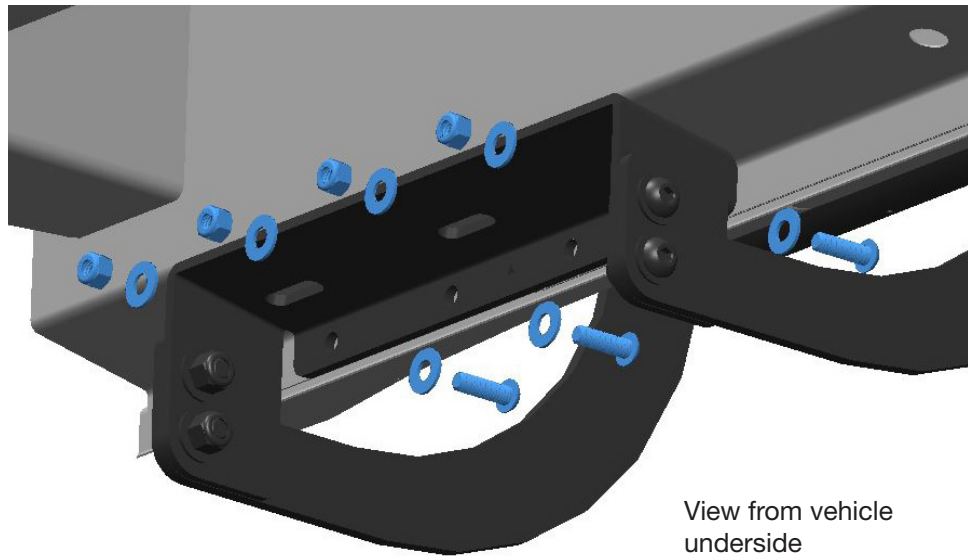


Fig. C8

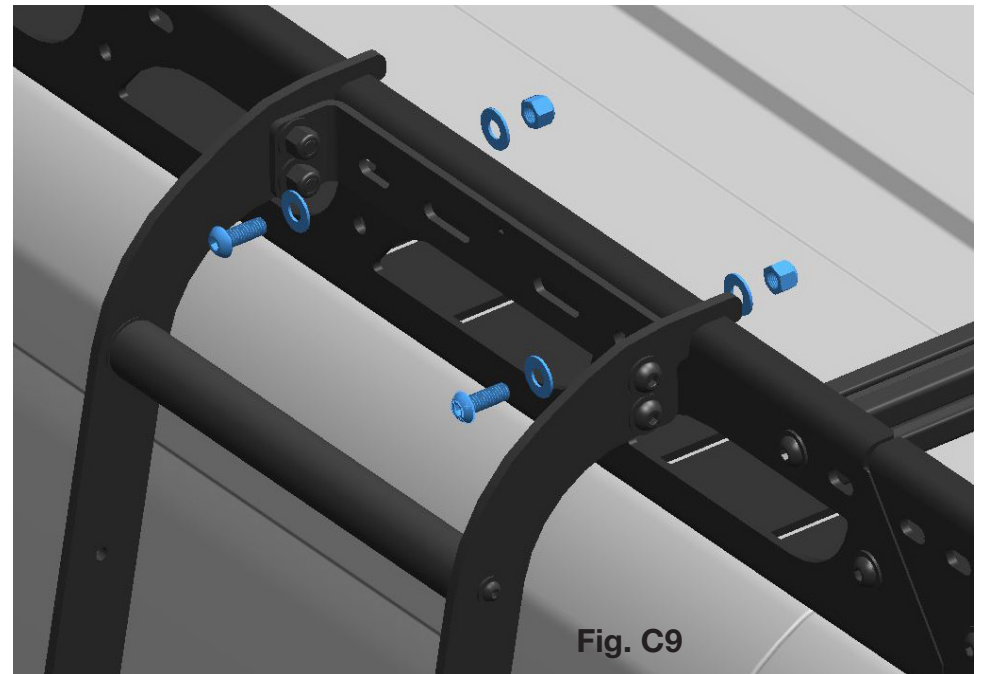


Fig. C9

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