

INSTALLATION GUIDE



1510-M Standard Ladder Rack

RAM Cargo Van (Aluminum)



QUICK START GUIDE

Phase 1 - Assembly

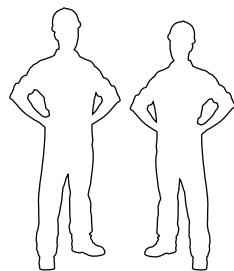
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Phase 2 - Installation

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REQUIRED ITEMS

NOTE: Use Sawhorses if possible, or use the box as a flat protective surface on the ground or table.



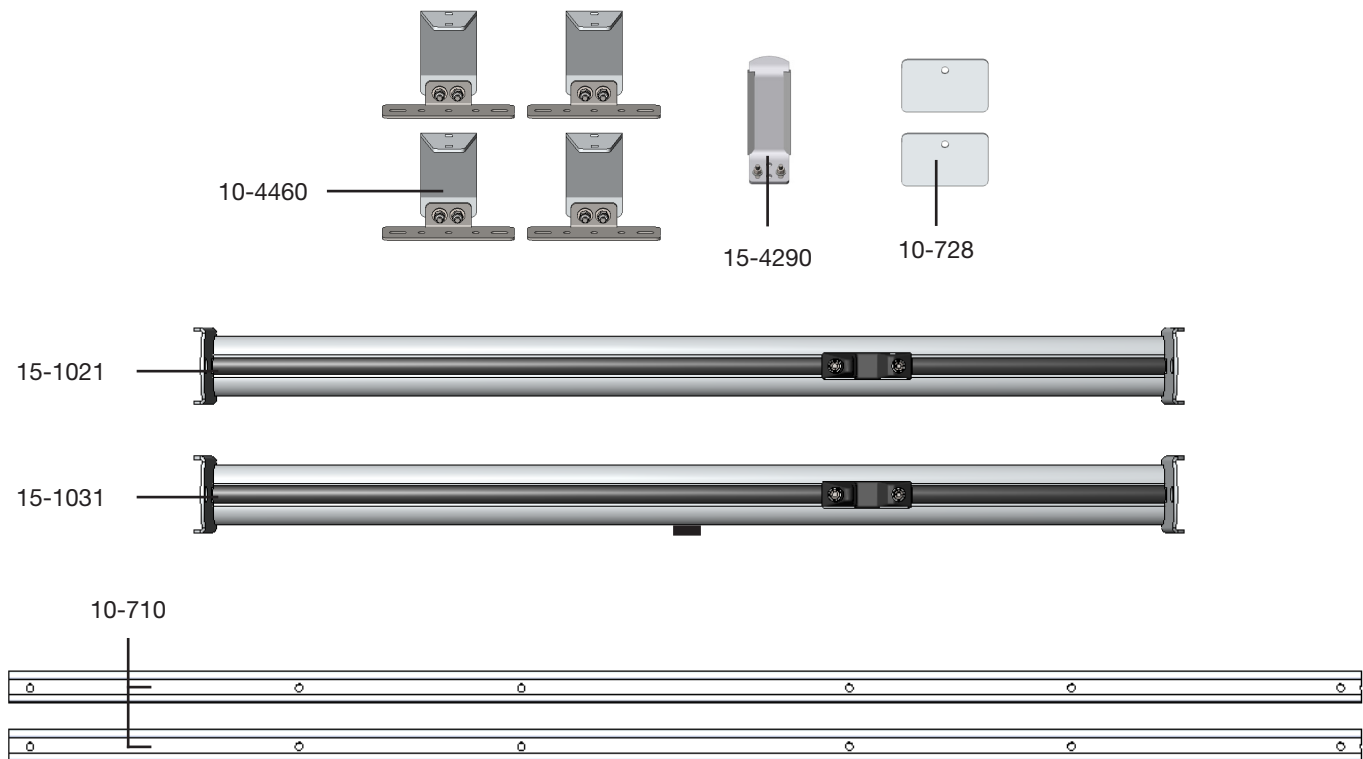
**2
PERSONS**

- ❑ Cordless Impact
- ❑ Ratchet
- ❑ Tape Measure
- ❑ Marker
- ❑ Ladder
- ❑ Cutter
- ❑ 1/2" Socket
- ❑ Sawhorse (Optional)
- ❑ Box
- ❑ Knife
- ❑ 1/2" Wrench
- ❑ 7/16" Socket
- ❑ Plusnut Tool
- ❑ Silicone

PHASE 1 – ASSEMBLY

1.1 SETUP

1.1.1 Unpack components; compare with the bill of materials.



1.1.2 Verify all parts are present.

BILL OF MATERIALS

Item No.	Description	Qty.
10-710	Mounting Track	2
10-728	Installation Plate	2
15-1021	Front Crossbow	1
15-1031	Rear Crossbow	1
15-4290	Front Hook	1
10-4460	“C” Foot	4
94-1008	Assembly Fastener Kit	1
96-1012	Install Fastener Kit	1





1.1.3 Fastener kits.

94-1008 Fastener Kit

8x		# 90-491	Carriage Bolt 5/16"-18 x 1" SS304
8x		# 94-105	Hex Nut 5/16"-18 SS316wax
8x		# 98-117	Flat Washer 5/16", O.D 3/4" SS18-8
8x		# 98-123	Lock Washer Regular 5/16" SS304

Fastener Assembly

8x





	#90-491 Carriage Bolt 5/16" x 1"
	#98-117 Flat Washer
	#98-123 Lock Washer
	#94-105 Hex Nut

96-1012 Fastener Kit





8x		# 90-209	Hex Bolt 5/16"-18 x 1" SS304
8x		# 90-115	Hex Bolt 1/4"-20 x 1" SS304
4x		# 90-217	Hex Bolt 5/16"-18 x 1-1/2" SS304
4x		# 94-111	Lock Nut 5/16" SS304wax
8x		# 94-130	Plusnut .250
8x		# 94-150	Channel Nut 5/16"
8x		# 98-113	Flat Washer 1/4", O.D. 5/8" SS18-8
16x		# 98-117	Flat Washer 5/16", O.D. 3/4" SS18-8
8x		# 98-119	Lock Washer 1/4" SS304
8x		# 98-123	Lock Washer 5/16" SS304

Fastener Assembly





8x

	#90-209 Hex Bolt 5/16" x 1"
	#98-123 Lock Washer
	#98-117 Flat Washer
	#94-150 Channel Nut

4x

	#90-217 Hex Bolt 5/16" x 1-1/2"
	#98-117 Flat Washer
	#98-117 Flat Washer
	#94-111 Lock Nut

8x

	#90-115 Hex Bolt 1/4" x 1"
	#98-119 Lock Washer
	#98-113 Flat Washer
	#94-130 Plusnut .250

PHASE 1 – ASSEMBLY

1.2 LADDER RACK ASSEMBLY

1.2.1 Slide carriage bolts on the bottom face of the crossbows.

NOTE: The track plug must be removed from the underneath of the front crossbow, and reinstalled after the feet have been installed in the final position.

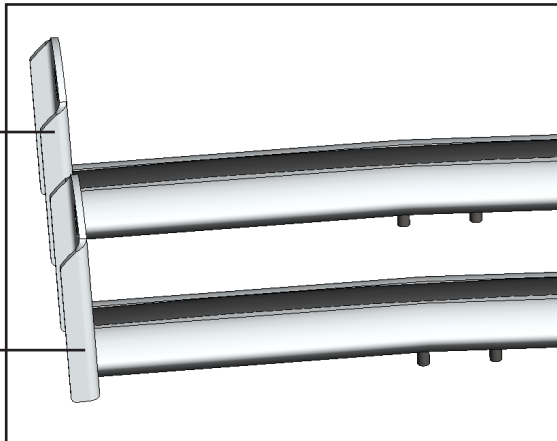
TIPS: Use tape to keep the bolts from sliding off.



DRIVER SIDE

Front crossbow

- Slide 2 pcs. of 1" carriage bolts.



Rear crossbow

- Slide 2 pcs. of 1" carriage bolts.

HARDWARE USED

4x

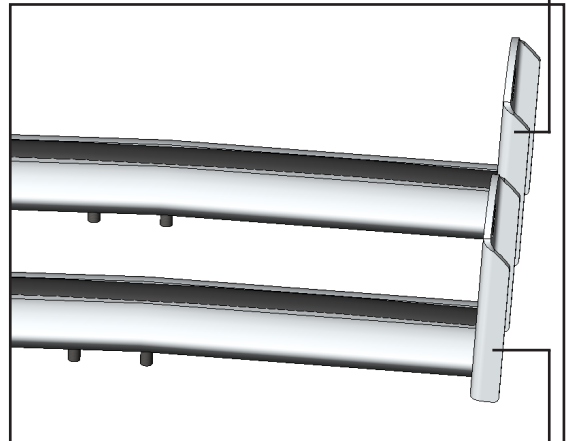


#90-491 Carriage Bolt
5/16" x 1" SS304

PASSENGER SIDE

Front crossbow

- Slide 2 pcs. of 1" carriage bolts.



Rear crossbow

- Slide 2 pcs. of 1" carriage bolts.

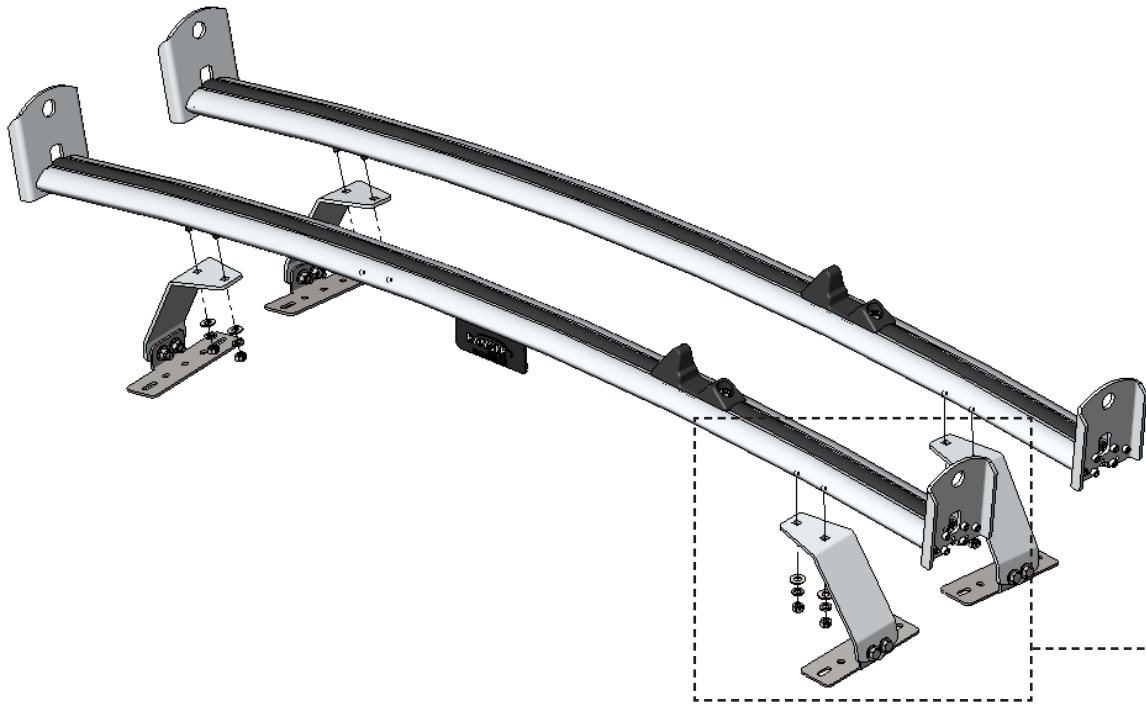
HARDWARE USED

4x



#90-491 Carriage Bolt
5/16" x 1" SS304

1.2.2 Install the feet on the Front, and Rear Crossbows.



HARDWARE USED

8x HAND-TIGHTEN THE NUTS.



Carriage bolts are already on the crossbows.



#98-117 Flat Washer

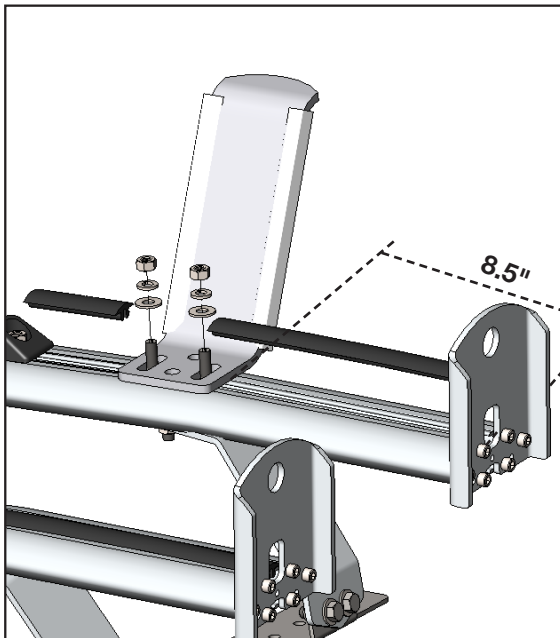
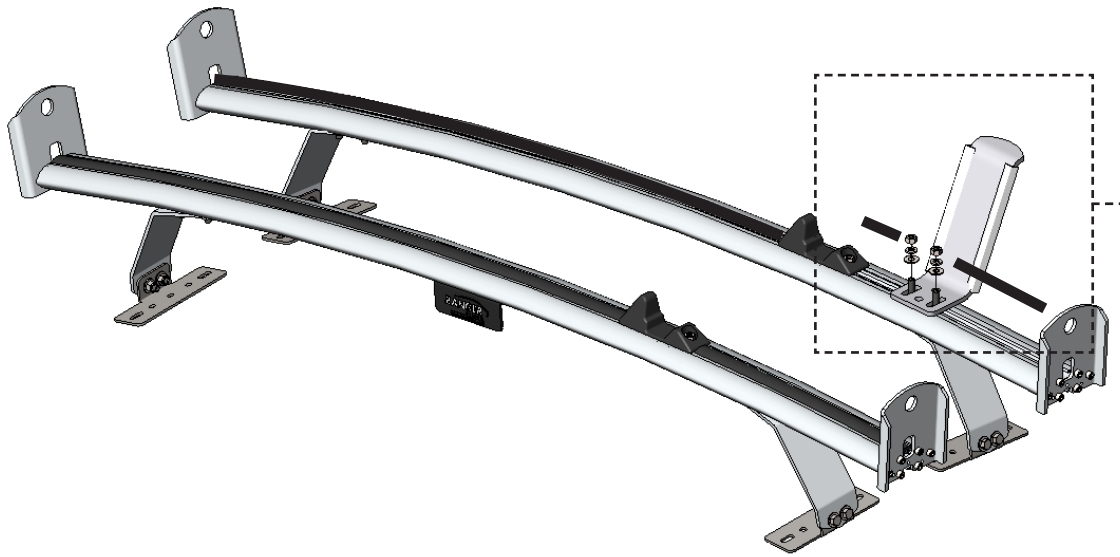


#98-123 Lock Washer



#94-105 Hex Nut

- 1.2.3**
- Pull out the 14.5" track plug on the passenger side of the front crossbow.
 - Remove the pre-assembled hardware on the front hook and slide the bolts onto the passenger side of the front crossbow, and attach the front hook in the position shown below.
 - Cut the track plug, then attach it back to the crossbow.







TOOLS

- ☐ Marker
- ☐ Tape Measure
- ☐ Cordless Impact
- ☐ 1/2" Socket

HARDWARE USED

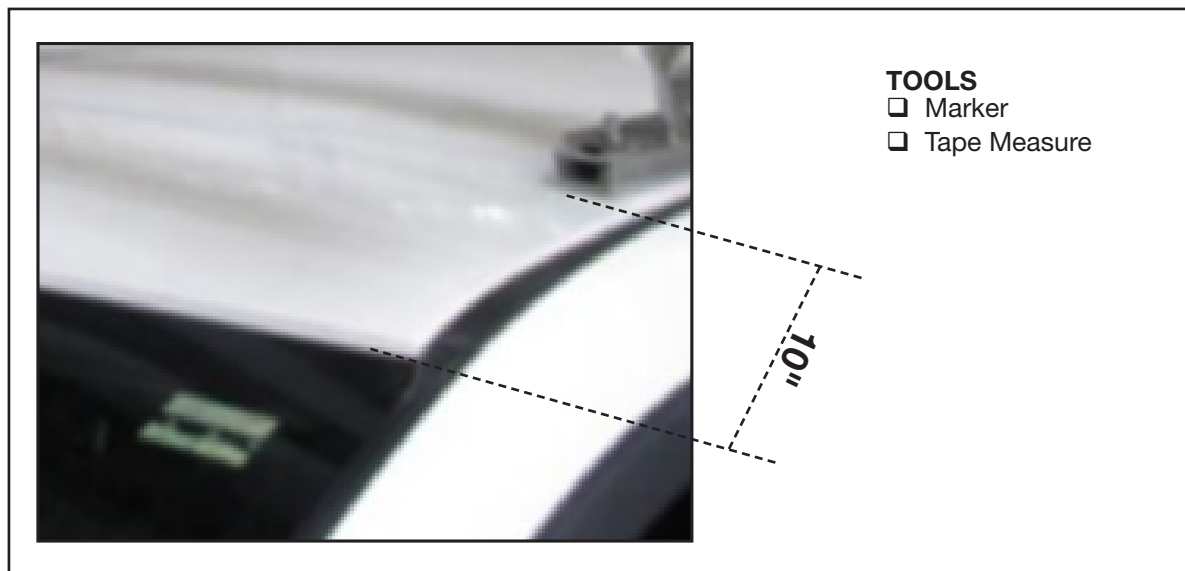
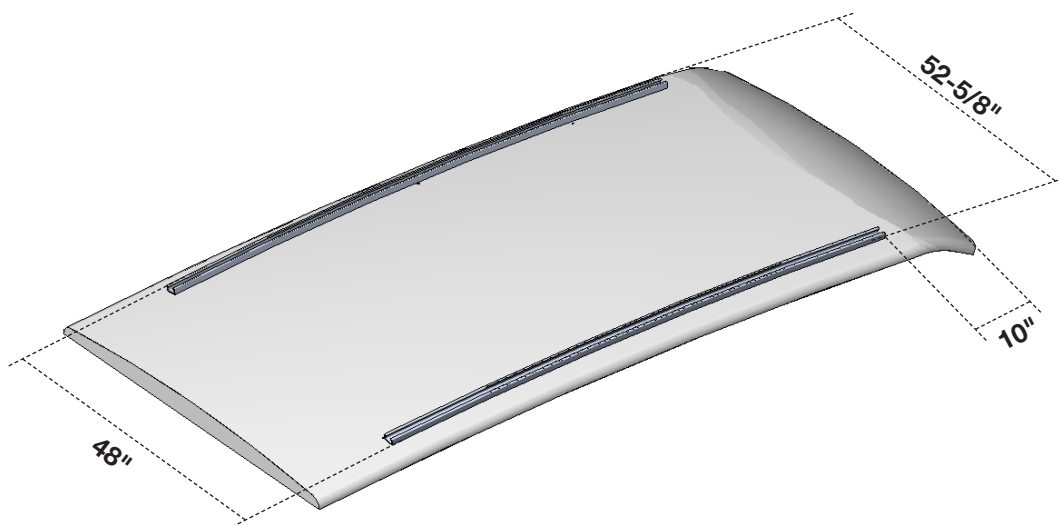
2x HARDWARE IS PRE-ASSEMBLED.

- | | |
|---|----------------------------------|
|  | #90-491 Carriage Bolt 5/16" x 1" |
|  | #98-117 Flat Washer |
|  | #98-123 Lock Washer |
|  | #94-105 Hex Nut |

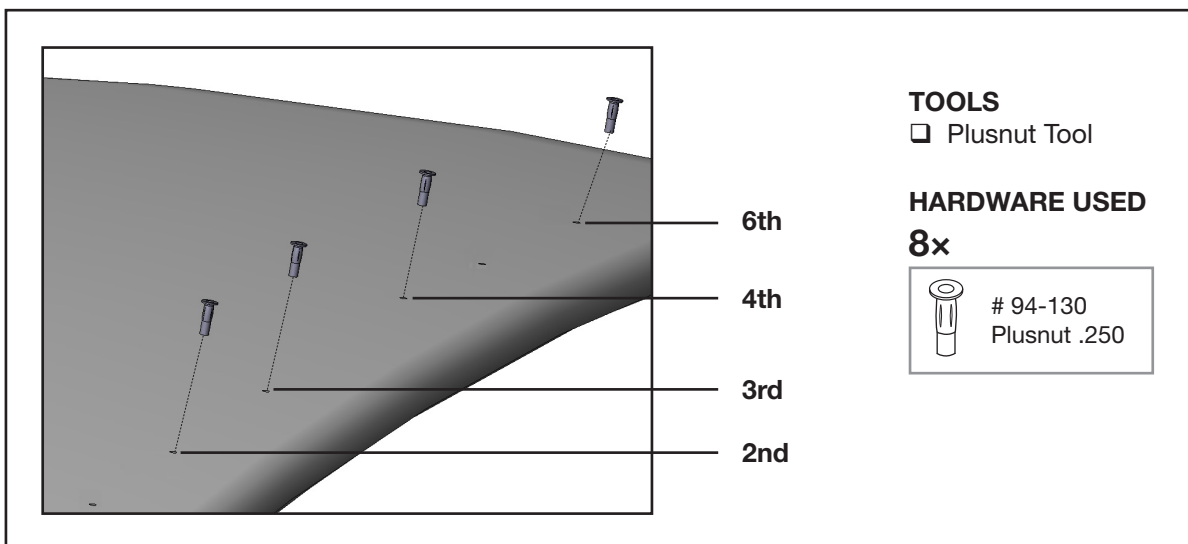
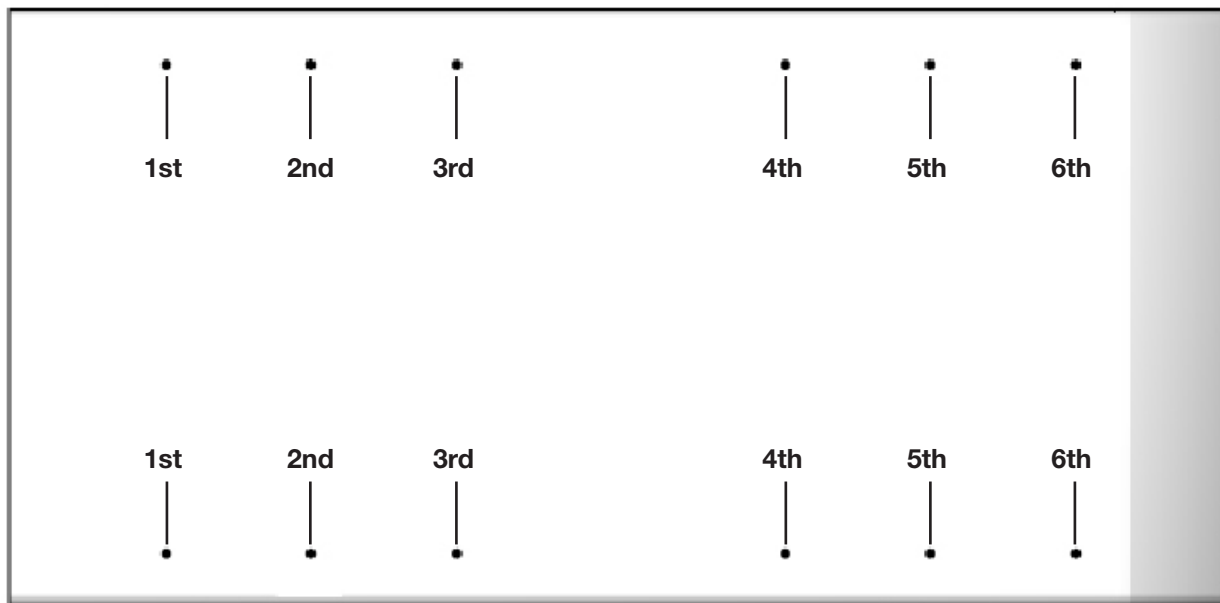
PHASE 2 – INSTALLATION

2.1 MOUNTING TRACKS INSTALLATION

2.1.1 Position and align the tracks, 10" from the windshield, 52-5/8" outside tracks in the front and 48" outside tracks to the rear of the vehicle, then mark all 12 holes from the mounting tracks to the roof.



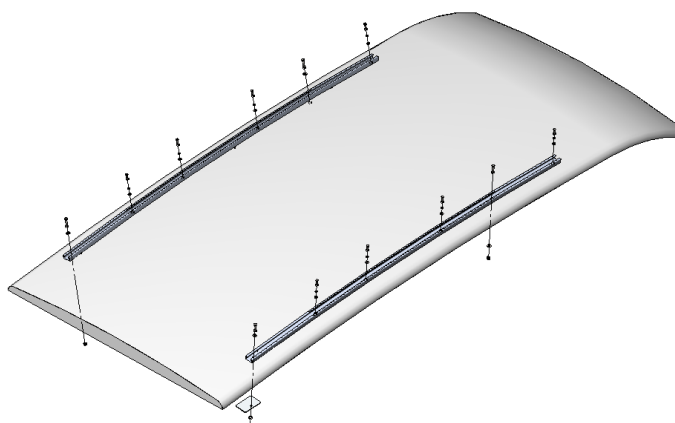
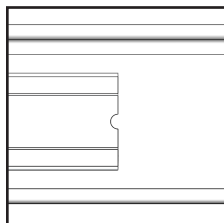
- 2.1.2**
- Drill all marks by 3/8" dia. The 5th hole from the rear will be drilled through to the sliding door opening.
 - Apply a bead of silicone around the each hole.
 - Attach plusnuts in the 2nd, 3rd, 4th and 6th holes.



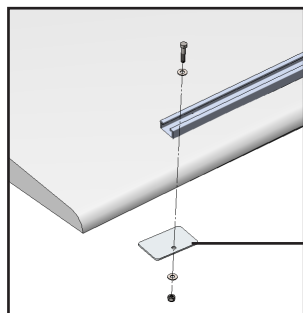
2.1.3 Install the mounting track to the vehicle.

NOTE: The ends of the mounting tracks with the half-circles go to the front of the vehicle.

FRONT



1st holes



TOOLS

- ☐ Cordless Impact
- ☐ 1/2" Socket
- ☐ 1/2" Wrench

Install the installation plate inside between the roof and the headliner.

HARDWARE USED

2x



#90-217 Hex Bolt 5/16" x 1-1/2"



#98-117 Flat Washer

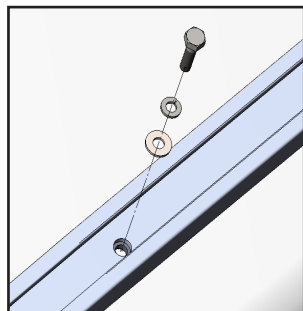


#98-117 Flat Washer



#94-111 Lock Nut

2nd, 3rd, 4th and 6th holes



TOOLS

- ☐ Cordless Impact
- ☐ 7/16" Socket

HARDWARE USED

8x



#90-115 Hex Bolt 1/4" x 1"



#98-119 Lock Washer

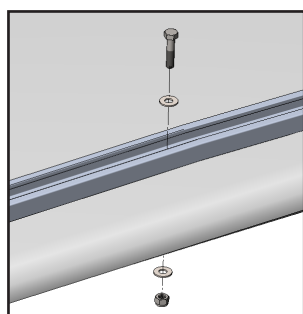


#98-113 Flat Washer



#94-130 Plusnut .250

5th holes



TOOLS

- ☐ Cordless Impact
- ☐ 1/2" Socket
- ☐ 1/2" Wrench

HARDWARE USED

2x



#90-217 Hex Bolt 5/16" x 1-1/2"



#98-117 Flat Washer



#98-117 Flat Washer



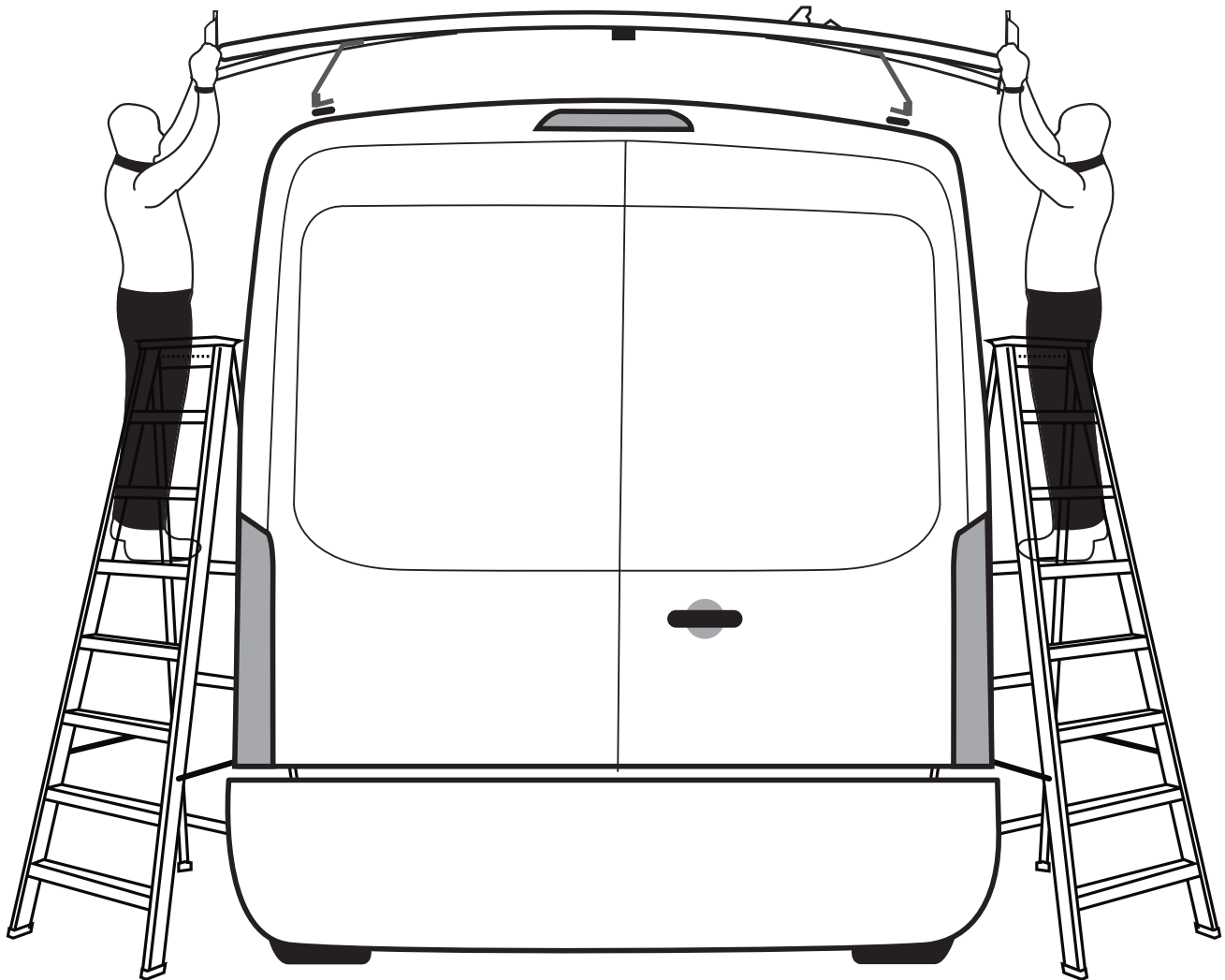
#94-111 Lock Nut

PHASE 2 – INSTALLATION

2.2 LADDER RACK INSTALLATION

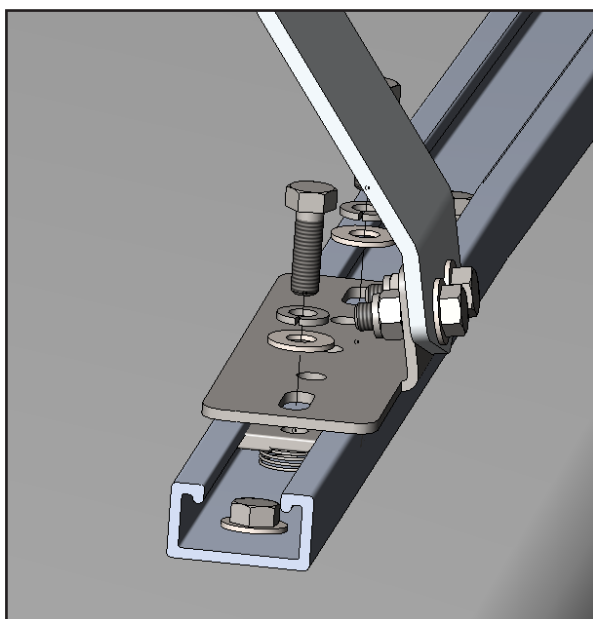
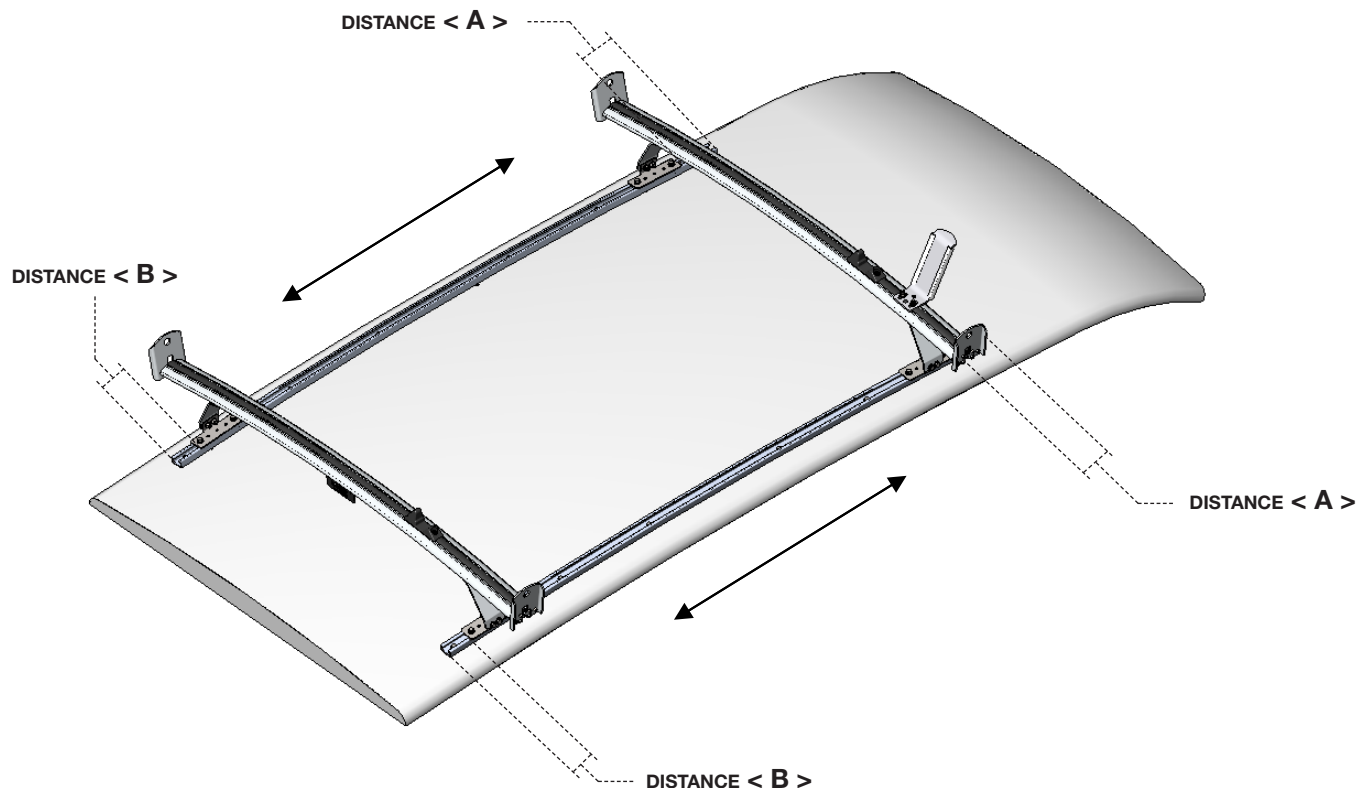
2.2.1 Position the front and rear crossbows (**minimum two persons**) on the vehicle so that the feet are on the tracks.

Ladder Rack



- 2.2.2** • While making sure the crossbows are parallel to each other, slide the rack to the appropriate position, then attach all the “C” feet to the mounting tracks.
- Tighten the bolts that attach the foot plate to the ladder rack leg.

DISTANCE < FOOT TO END OF TRACK >







TOOLS

- ☐ Ratchet
- ☐ 1/2" Socket
- ☐ Tape Measure

FASTENERS USED

8x

- | | |
|---|-----------------------------|
|  | #90-209 Hex Bolt 5/16" x 1" |
|  | #98-123 Lock Washer |
|  | #98-117 Flat Washer |
|  | #94-150 Channel Nut |

2.2.3 Center the crossbows on the vehicle, then tighten all the “C” feet to the crossbows.

NOTE: The ladder cannot extend beyond the rear bumper of the vehicle.

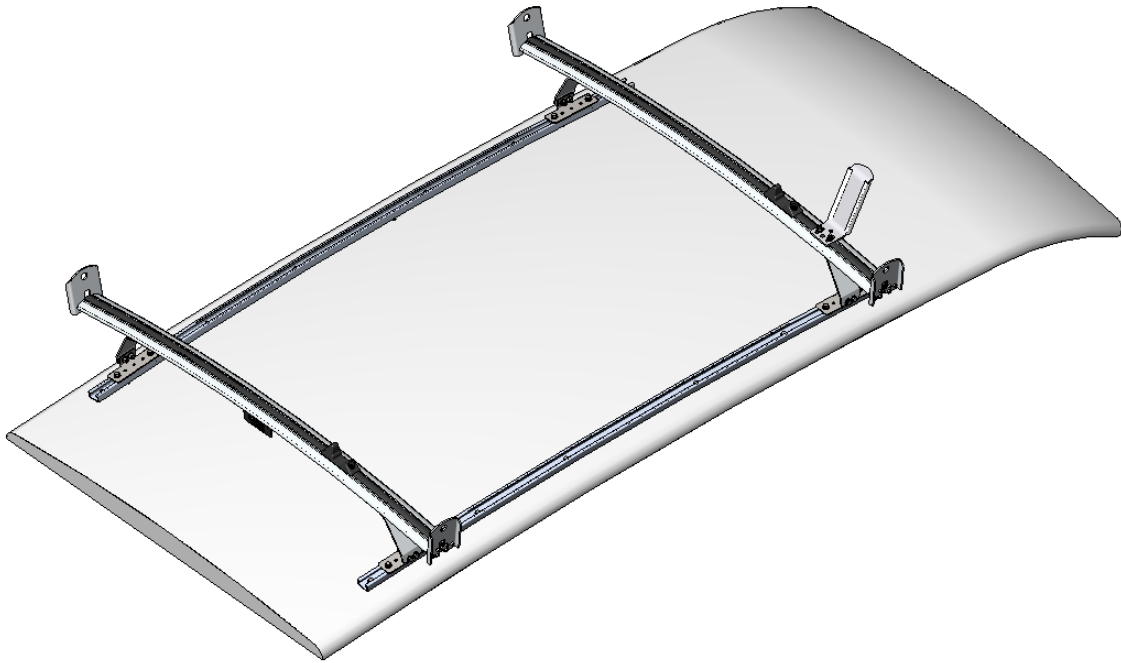
IMPORTANT:

- After installation is complete, cut the track plug underneath the front crossbow to fill all the unused space.
- Place the ladder rack warning label on a visible area, recommended on a partition.



TOOLS

- ☐ Ratchet
- ☐ 1/2" Socket
- ☐ Tape Measure



**“You have successfully installed your
1510-M Ladder Rack**

Thank you for doing business with us.”

For any feedback or suggestions you may have, please contact: cs@rangerdesign.com

