

INSTALLATION GUIDE



1510-NL Standard Ladder Rack

Nissan NV 140" Wheelbase Low Roof (Aluminum)



QUICK START GUIDE

Phase 1 - Assembly

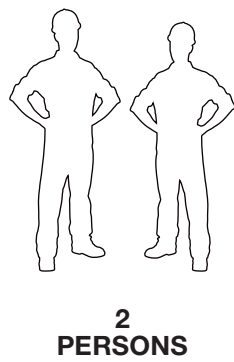
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Phase 2 - Installation

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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.

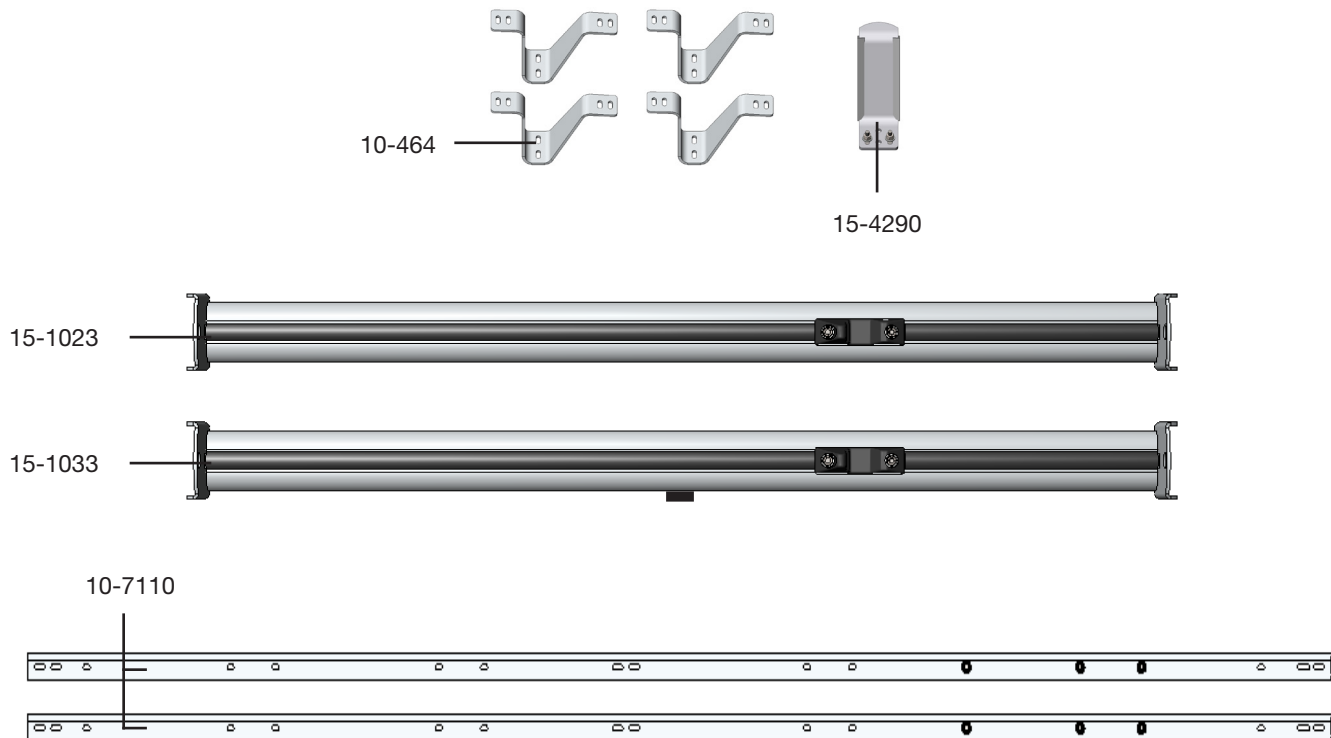


- ❑ Cordless Impact
- ❑ Ratchet
- ❑ Tape Measure
- ❑ Marker
- ❑ Ladder
- ❑ Cutter
- ❑ 1/2" Socket
- ❑ Sawhorse (Optional)
- ❑ Box
- ❑ Knife
- ❑ 1/2" Wrench

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.
10-464	“V” Foot	4
15-1023	Front Crossbow	1
15-1033	Rear Crossbow	1
15-4290	Front Hook	1
10-7110	Mounting Track	2
94-1007	Assembly Fastener Kit	1
96-1011	Install Fastener Kit	1

1.1.3 Fastener kits.

94-1007 Fastener Kit


16x



90-491

Carriage Bolt
5/16"-18 x 1"
SS304


16x



94-105

Hex Nut
5/16"-18
SS316wax


16x



98-117

Flat Washer
5/16", O.D 3/4"
SS18-8

16x




98-123

Lock Washer
Regular 5/16"
SS304

Fastener Assembly

16x



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


#98-117 Flat Washer

#98-123 Lock Washer

#94-105 Hex Nut

96-1011 Fastener Kit


20x



90-203

Hex Bolt
5/16"-18 x 5/8"
SS304


8x



90-209

Hex Bolt
5/16"-18 x 1"
SS304


28x



94-150

Channel Nut
5/16"


28x



98-117

Flat Washer
5/16", OD 3/4"
SS18-8

28x




98-123

Lock Washer
5/16"
SS304

Fastener Assembly

20x



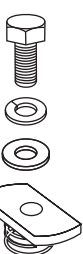
#90-203 Hex Bolt 5/16" x 5/8"

#98-123 Lock Washer

#98-117 Flat Washer

#94-150 Channel Nut

8x



#90-209 Hex Bolt 5/16" x 1"

#98-123 Lock Washer

#98-117 Flat Washer

#94-150 Channel Nut

RANGER
DESIGN

For technical support, contact us at 1-800-565-5321

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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.

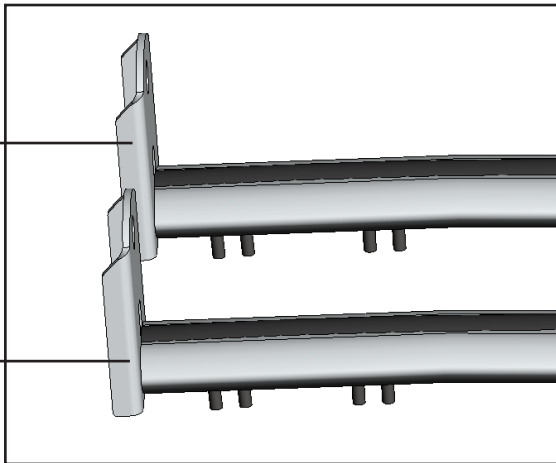
TIPS: Use tape to keep the bolts from sliding off.



DRIVER SIDE

Front crossbow

- Slide 4 pcs. of 1" carriage bolts.



Rear crossbow

- Slide 4 pcs. of 1" carriage bolts.

HARDWARE USED

8x

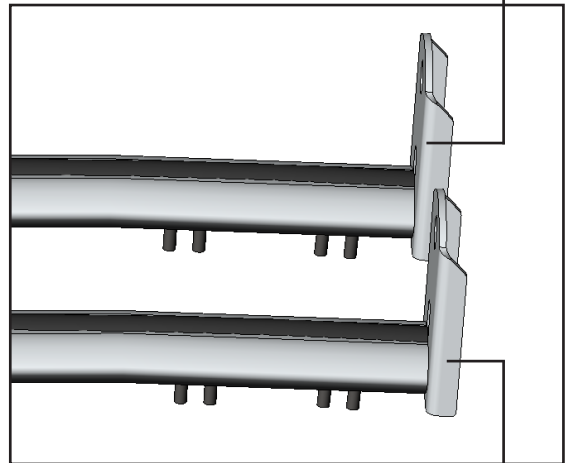


#90-491 Carriage Bolt
5/16" x 1" SS304

PASSENGER SIDE

Front crossbow

- Slide 4 pcs. of 1" carriage bolts.



Rear crossbow

- Slide 4 pcs. of 1" carriage bolts.

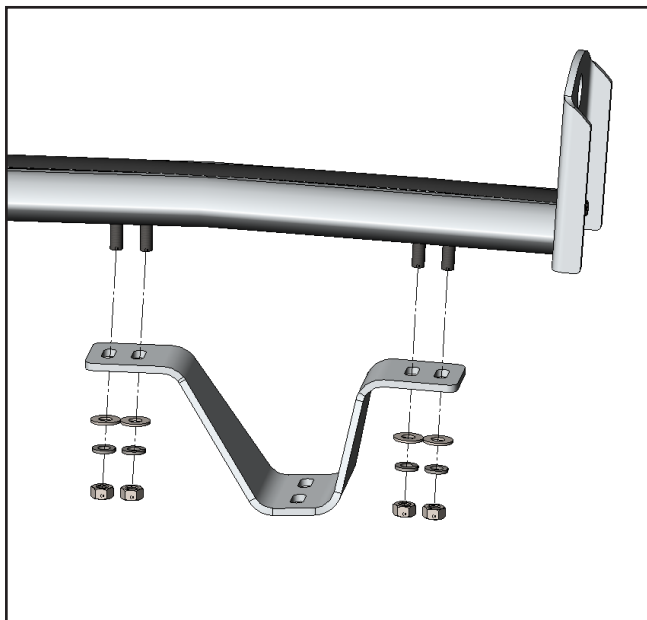
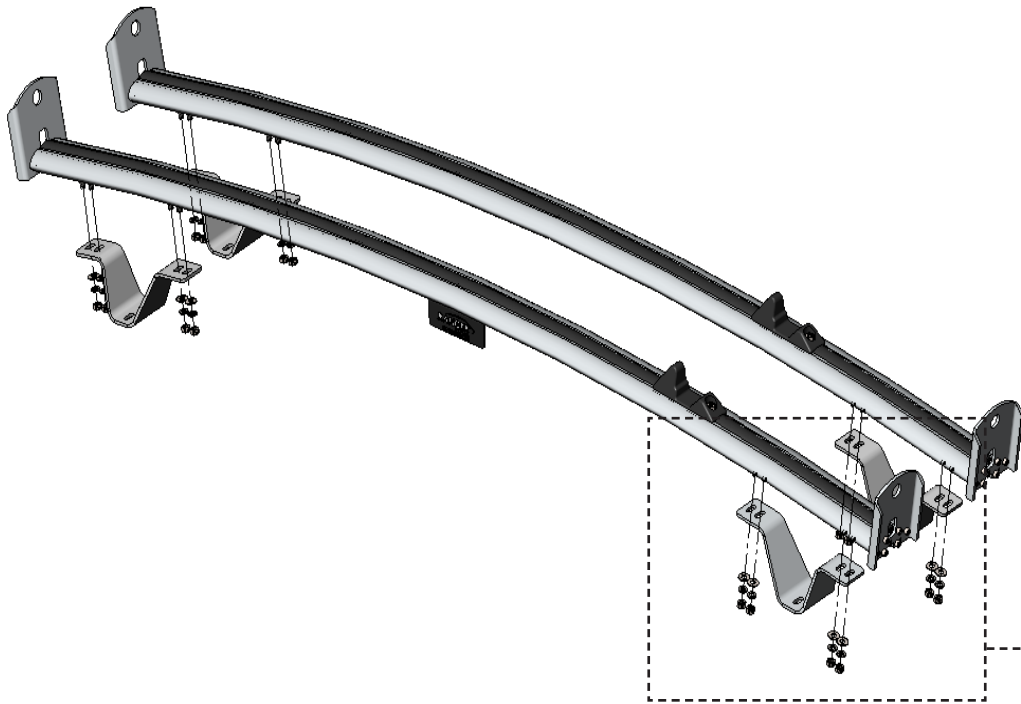
HARDWARE USED

8x



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

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



HARDWARE USED

16x HAND-TIGHTEN THE NUTS.



Carriage bolts are already on the crossbows.



#98-117 Flat Washer

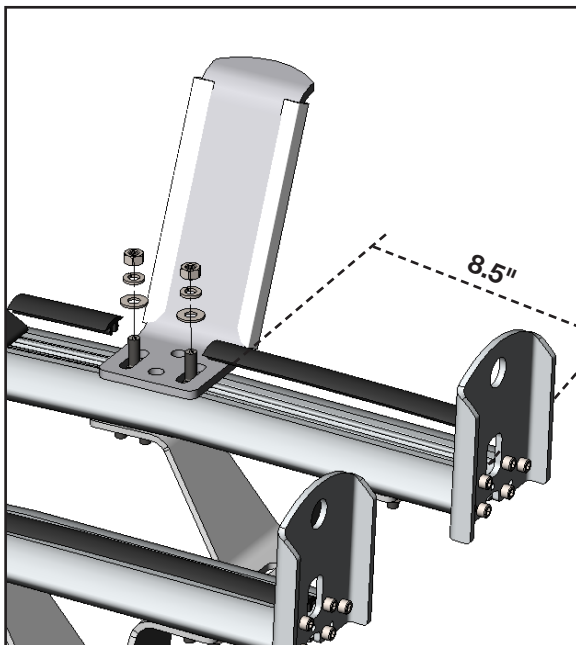
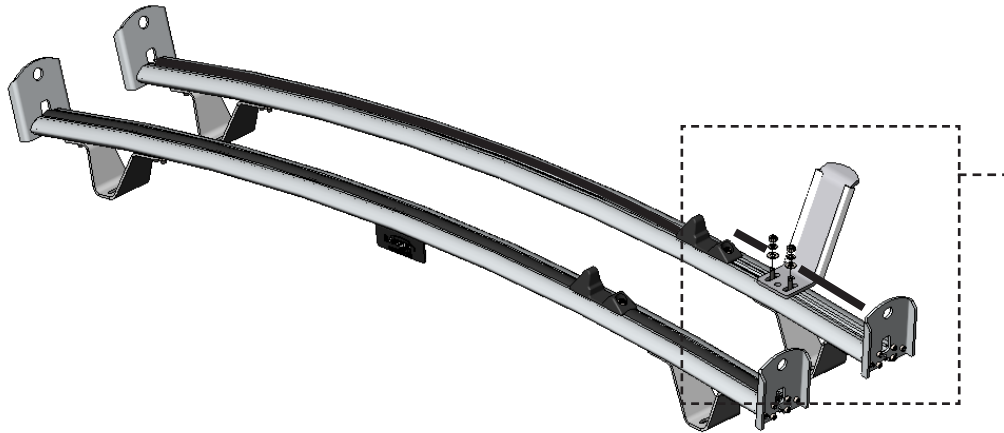


#98-123 Lock Washer



#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

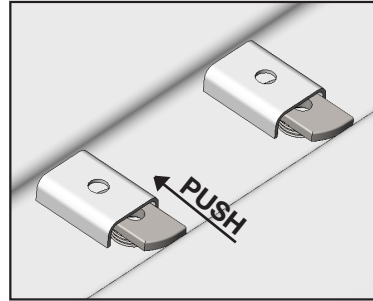
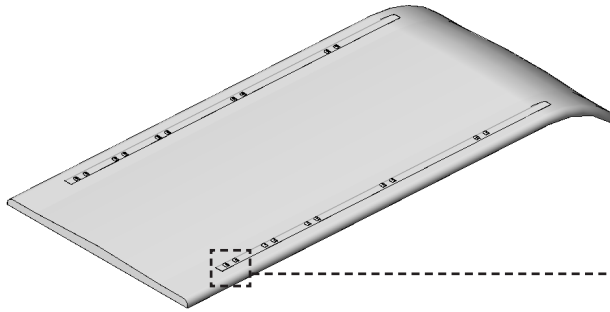
2x HARDWARE IS PRE-ASSEMBLED.

- | | |
|---|----------------------------------|
|  | #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 Install the channel nuts in the roof.



FASTENERS USED

20x

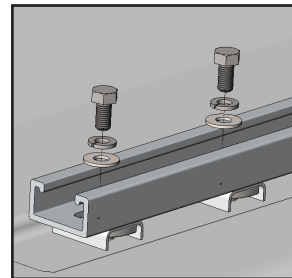
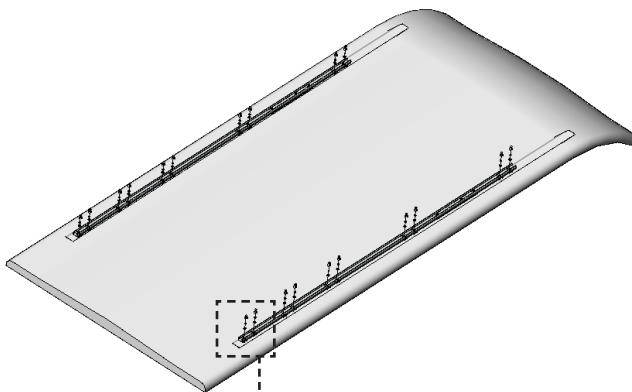
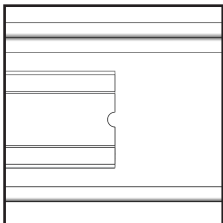


#94-150 Channel Nut

2.1.2 Install the mounting tracks onto the roof of the van by aligning the holes to the channel nuts.

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

FRONT



TOOLS

- ☐ Cordless Impact
- ☐ 1/2" Socket

FASTENERS USED

20x



#90-203 Hex Bolt 5/16" x 5/8"



#98-123 Lock Washer



#98-117 Flat Washer



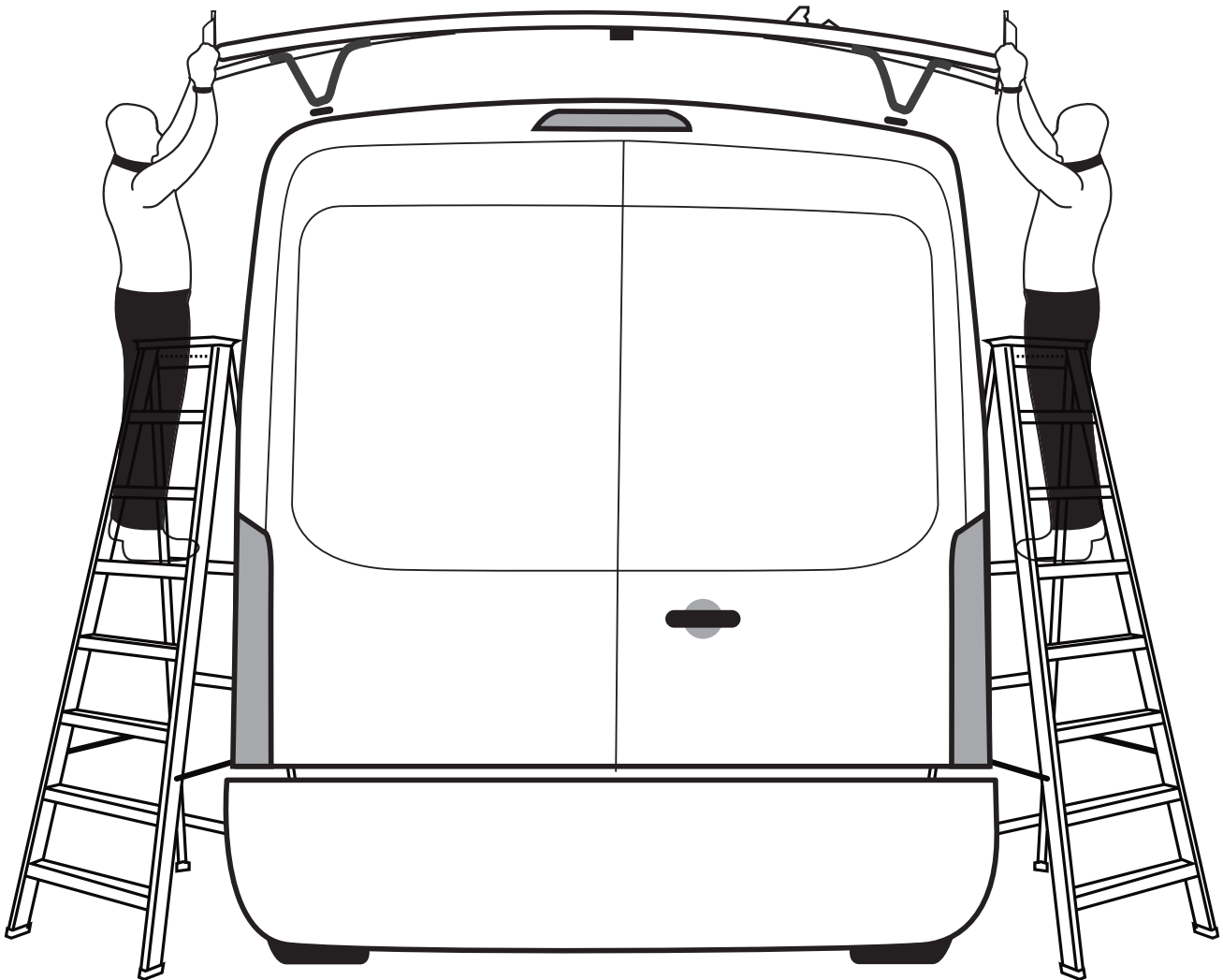
Channel Nuts are already on the van.

PHASE 2 – INSTALLATION

2.2 LADDER RACK INSTALLATION

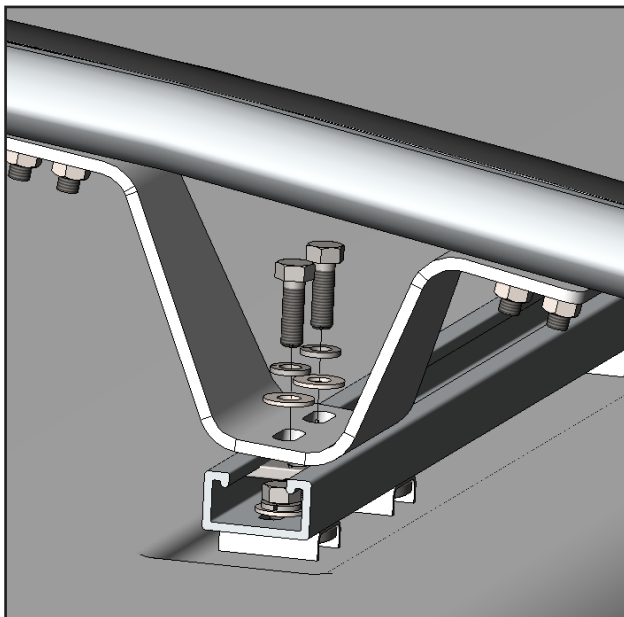
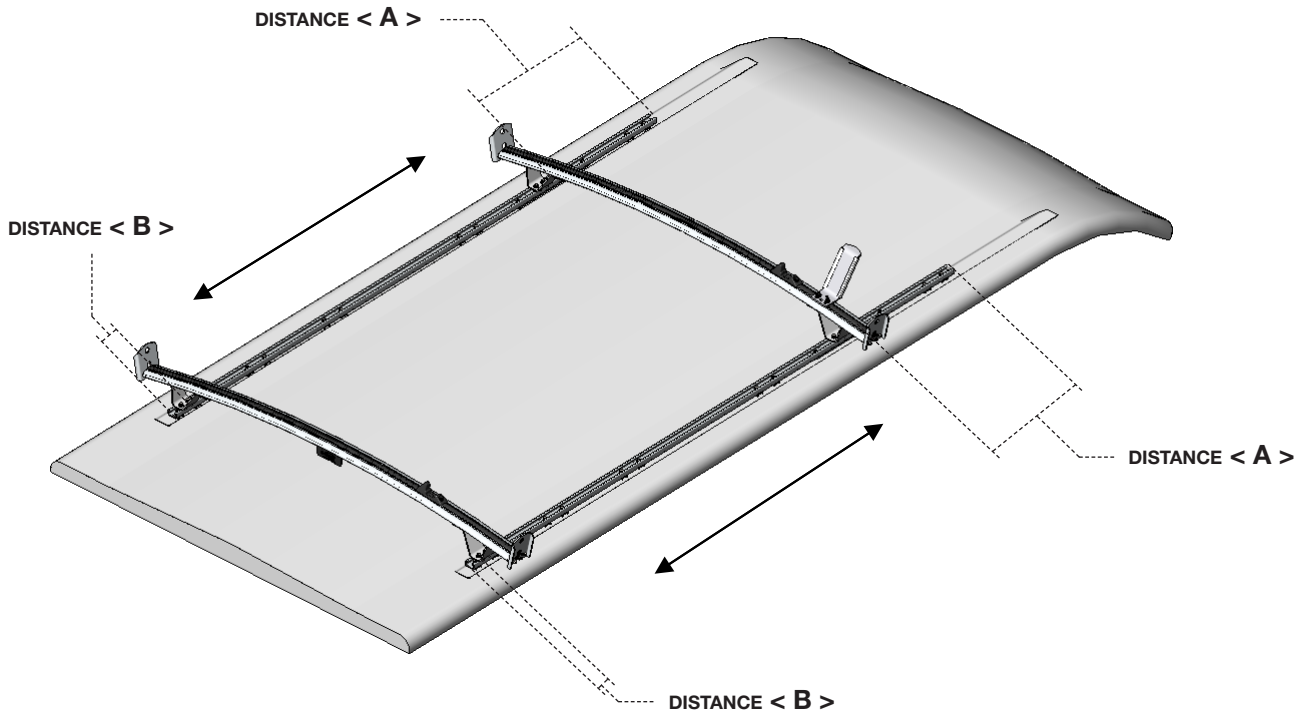
2.2.1 Position the front and rear crossbows (**minimum two persons**) on the vehicle so that the feet are on the tracks.

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 “V” feet to the mounting tracks.

DISTANCE < FOOT TO END OF TRACK >

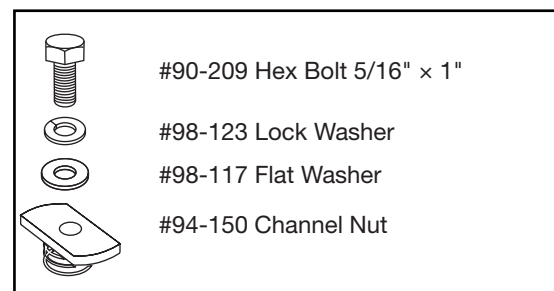


TOOLS

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

FASTENERS USED

8x

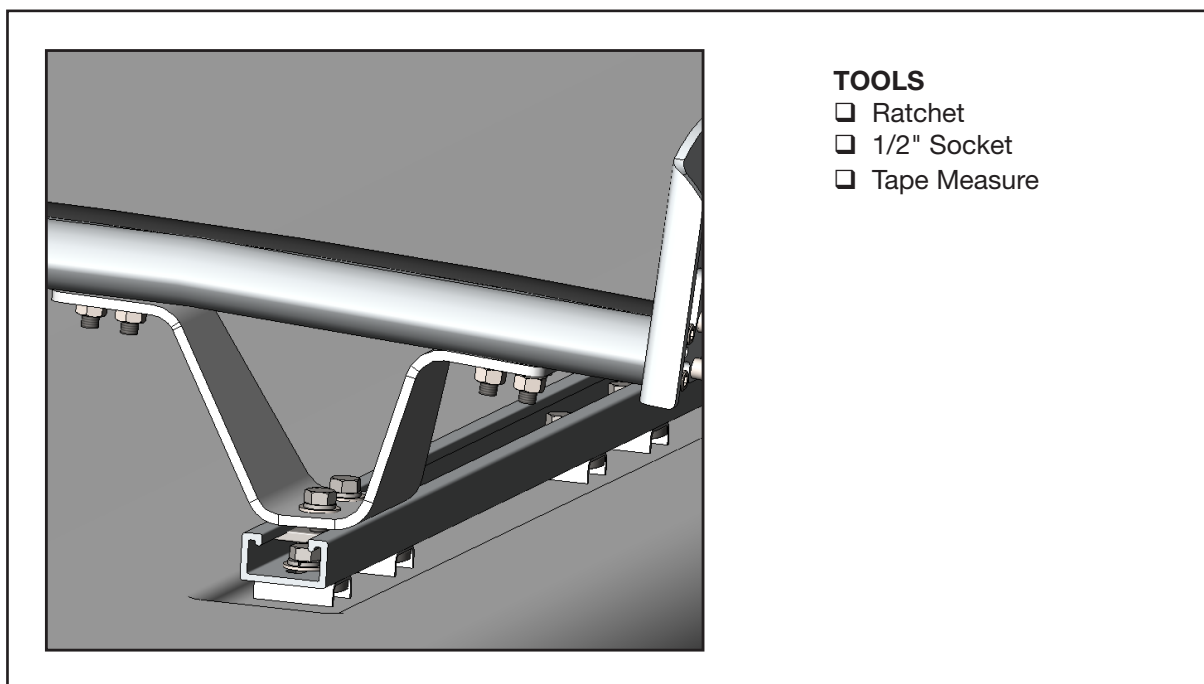
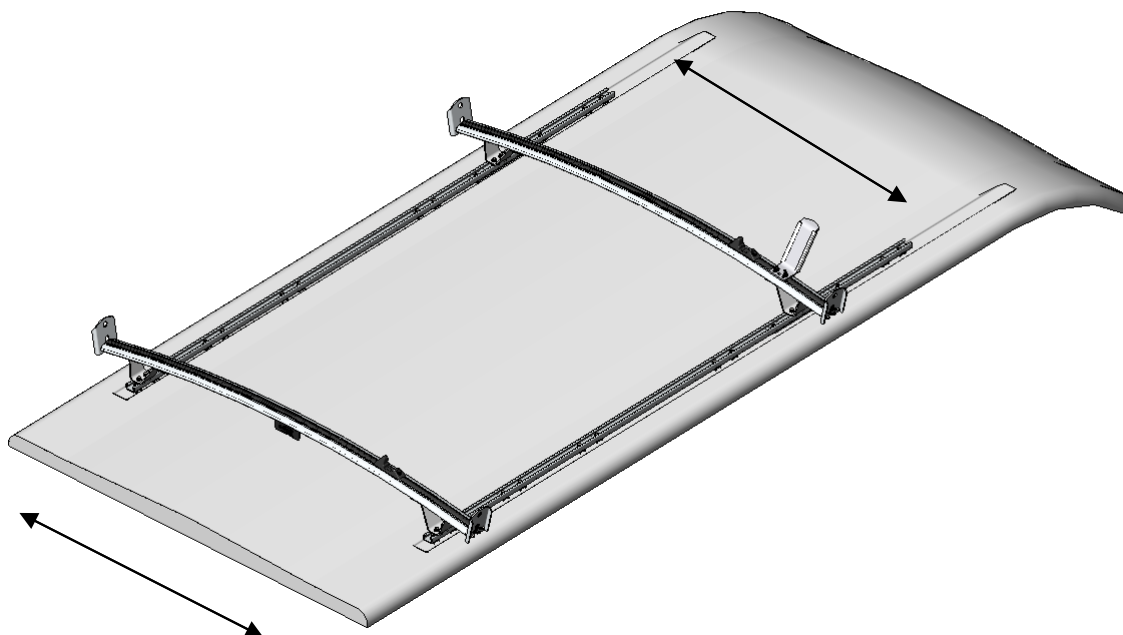


2.2.3 Center the crossbows on the vehicle, then tighten all the “V” feet to the crossbows.

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

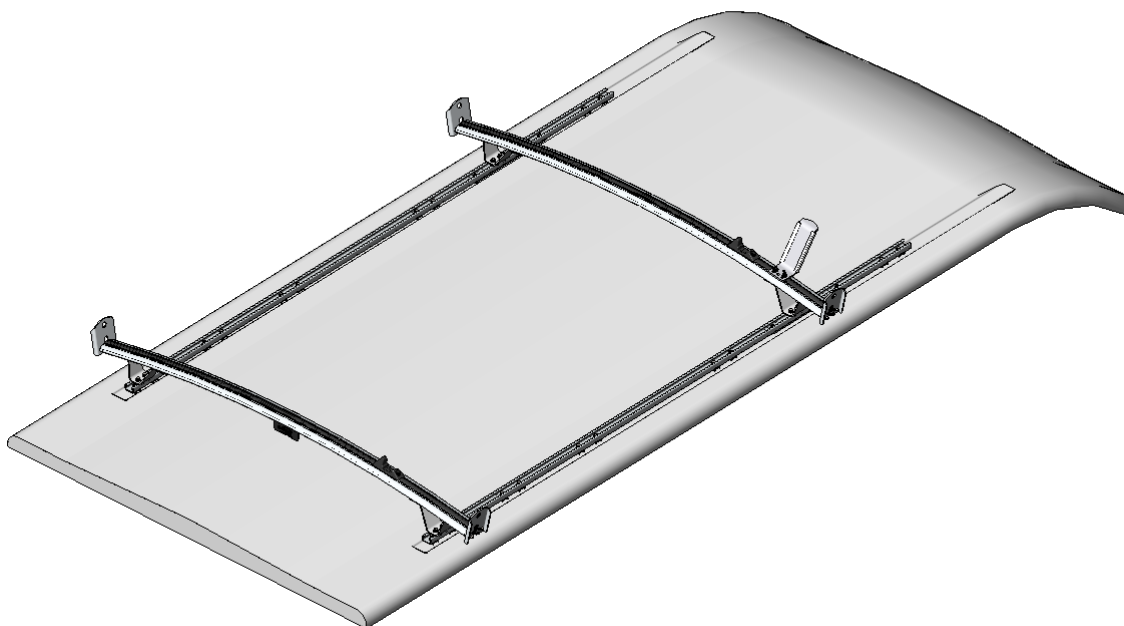
IMPORTANT:

- 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-NL Ladder Rack**

Thank you for doing business with us.”

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



INSTALLATION GUIDE

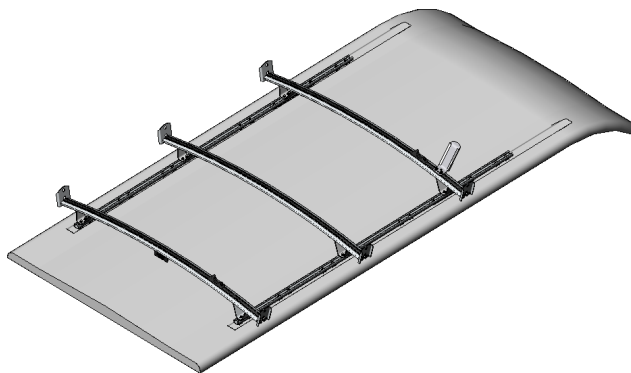


15-U1055 THIRD CROSSBOW

Nissan NV 140" Wheelbase Low Roof and High Roof (Aluminum)



STANDARD LADDER RACK WITH THIRD CROSSBOW



1510-NL3 STANDARD LADDER RACK

Nissan NV 140" Wheelbase Low Roof (Aluminum)



1510-NH3 STANDARD LADDER RACK

Nissan NV 140" Wheelbase High Roof (Aluminum)



QUICK START GUIDE

Phase 1 - Assembly

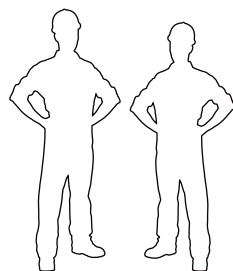
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❑ 1.2 Third Crossbow Assembly.....	6 - 7

Phase 2 - Installation

❑ 2.1 Channel Nut Installation.....	8
❑ 2.2 Third Crossbow Installation.....	9 - 11

REQUIRED ITEMS

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



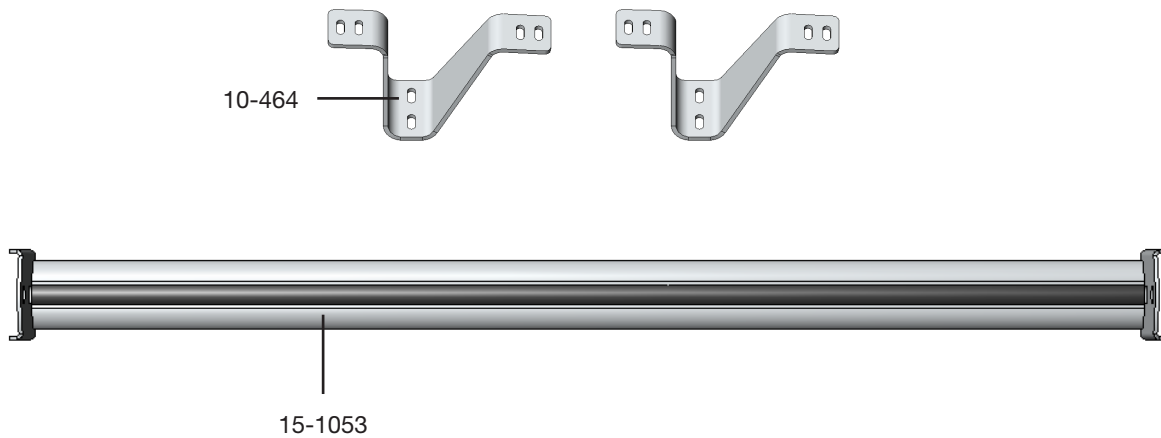
**2
PERSONS**

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

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.
10-464	"V" Foot	2
15-1053	Third Crossbow	1
94-1008	Assembly Fastener Kit	1
96-1021	Install Fastener Kit	1

1.1.3 Fastener kits.


94-1008 Fastener Kit




Fastener Assembly

- 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


8x




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



#98-117 Flat Washer



#98-123 Lock Washer



#94-105 Hex Nut


96-1021 Fastener Kit




Fastener Assembly

- 4x  # 90-209 Hex Bolt 5/16"-18 x 1" SS304
- 4x  # 94-150 Channel Nut 5/16"
- 4x  # 98-117 Flat Washer 5/16", OD 3/4" SS18-8
- 4x  # 98-123 Lock Washer 5/16" SS304


4x




#90-209 Hex Bolt 5/16" x 1"



#98-123 Lock Washer



#98-117 Flat Washer



#94-150 Channel Nut

PHASE 1 – ASSEMBLY

1.2 THIRD CROSSBOW ASSEMBLY

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

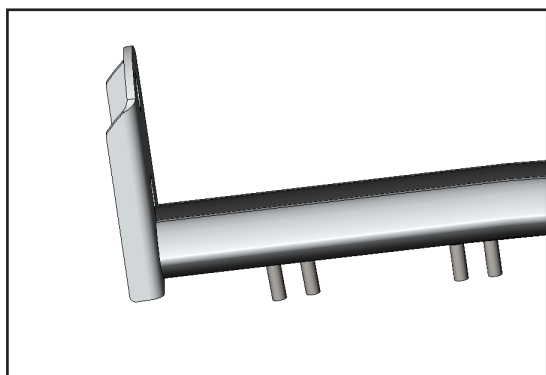
NOTE: The track plug must be removed from the underneath of the crossbow, and reinstalled after the feet have been installed in the final position.

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



DRIVER SIDE

- Slide 4 pcs. of 1" carriage bolts.



HARDWARE USED

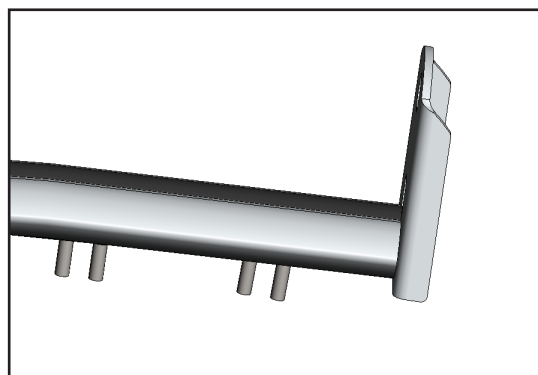
4x



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

PASSENGER SIDE

- Slide 4 pcs. of 1" carriage bolts.



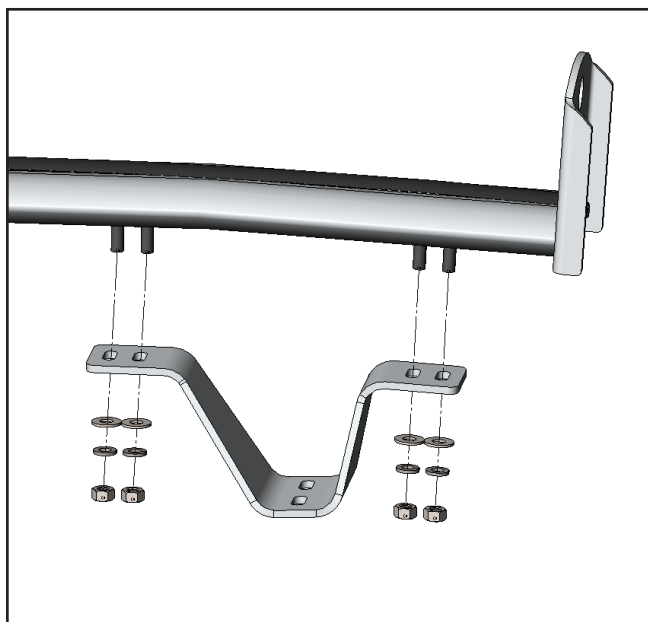
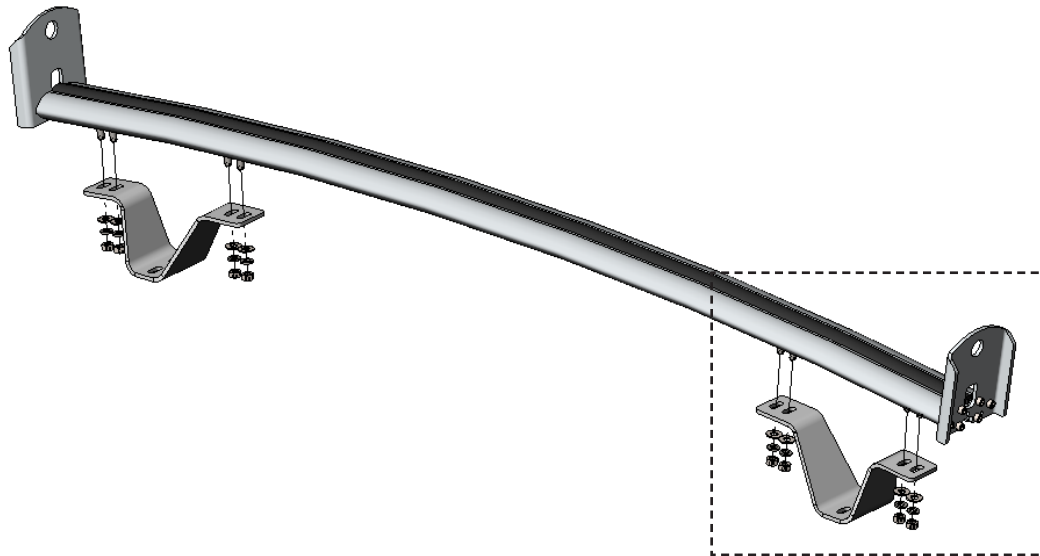
HARDWARE USED

4x



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

1.2.2 Install the feet on the crossbow.



HARDWARE USED

8x HAND-TIGHTEN THE NUTS.



Carriage bolts are already on the crossbows.



#98-117 Flat Washer



#98-123 Lock Washer



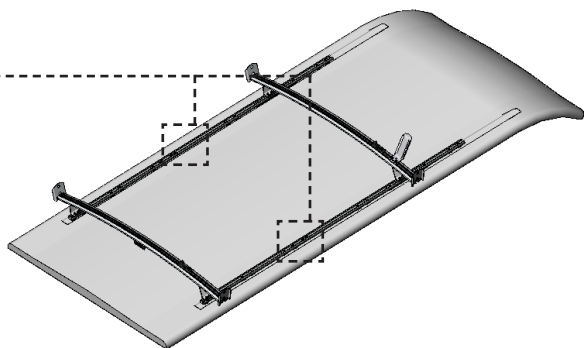
#94-105 Hex Nut

PHASE 2 – INSTALLATION

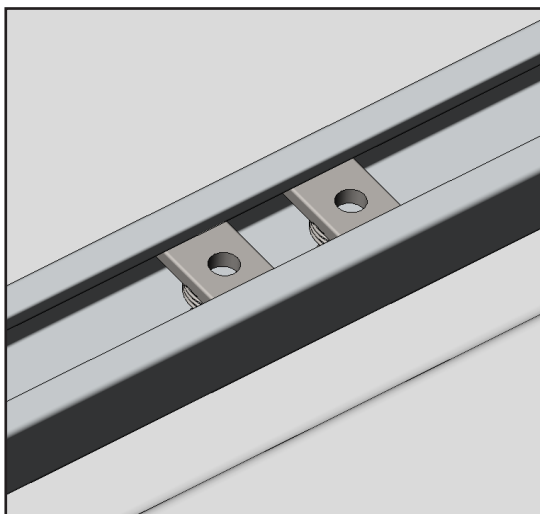
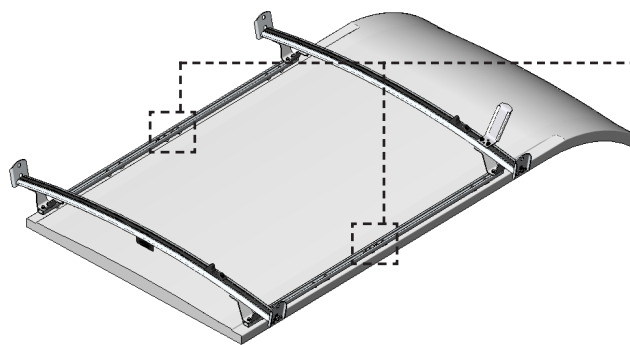
2.1 CHANNEL NUT INSTALLATION

2.1.1 Attach two channel nuts on each mounting track.

LOW ROOF



HIGH ROOF



HARDWARE USED

4x



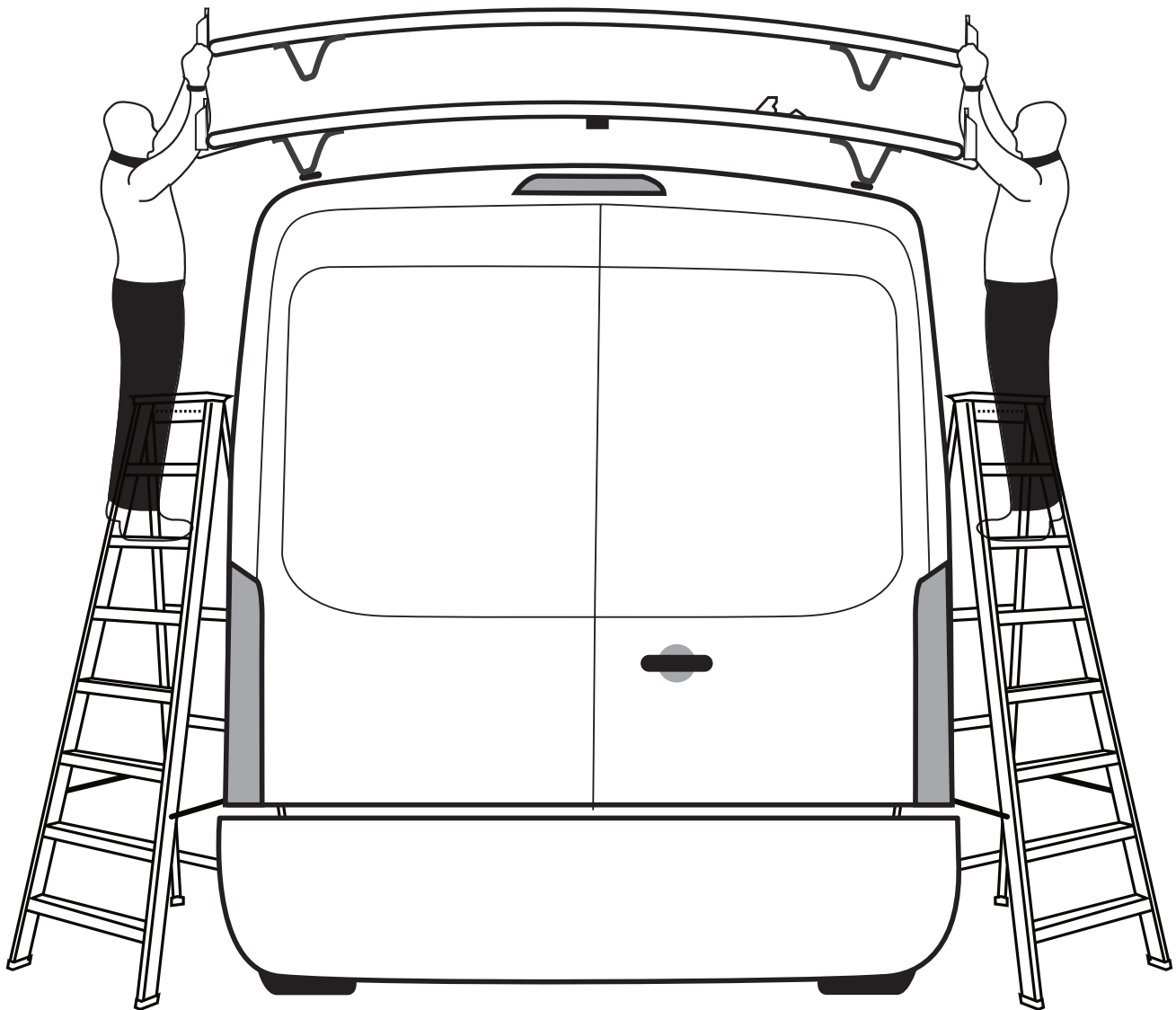
#94-150 Channel Nut

PHASE 2 – INSTALLATION

2.2 THIRD CROSSBOW INSTALLATION

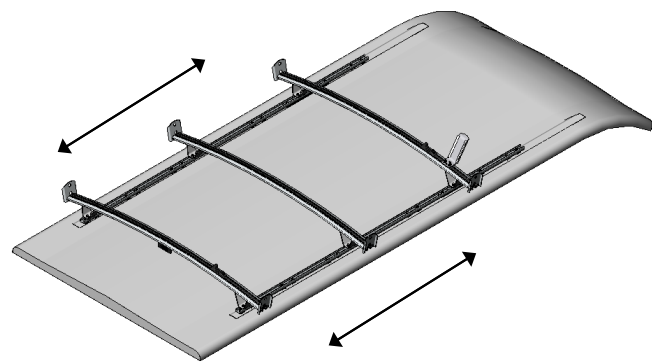
2.2.1 Position the third crossbow (**minimum two persons**) on the vehicle so that the feet are on the tracks.

Ladder Rack

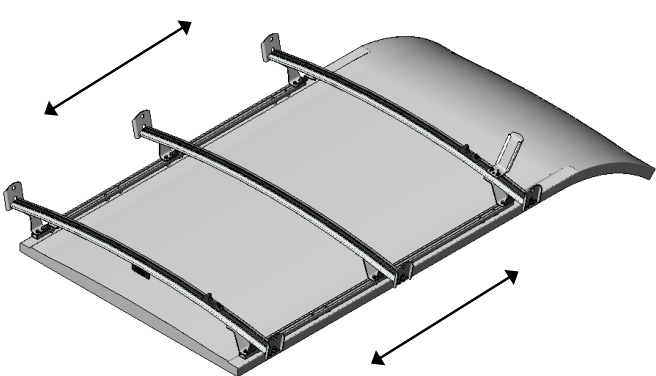


2.2.2 While making sure the crossbow are parallel to the front and rear crossbows, place the crossbow in the appropriate position, then attach all the “V” feet to the mounting tracks.

LOW ROOF



HIGH ROOF







TOOLS

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

FASTENERS USED

4x

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

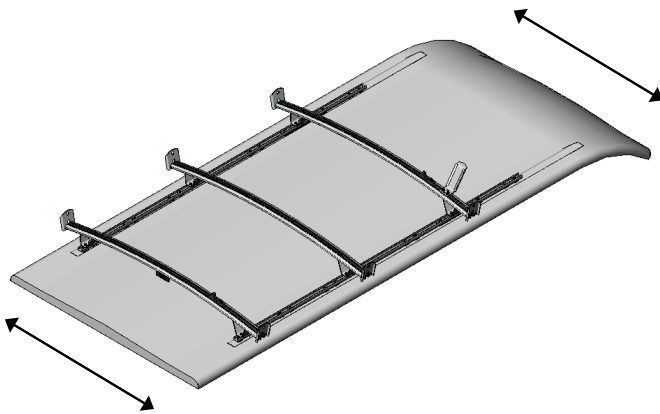
2.2.3 Center the crossbow on the vehicle, then tighten the “V” feet to the crossbow.

NOTE:

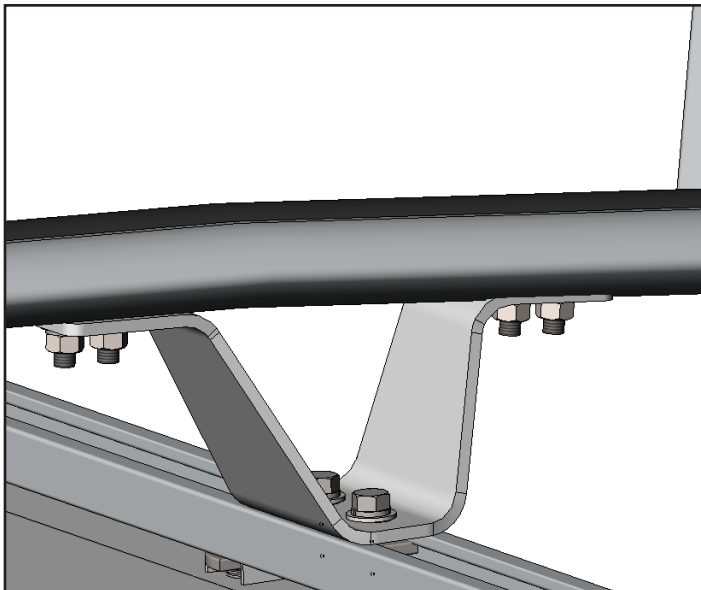
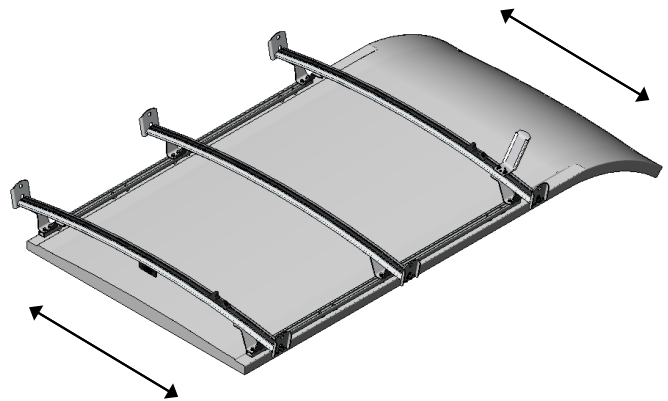
- The ladder cannot extend beyond the rear bumper of the vehicle.
- The center of the ladder must be behind the front crossbow when the ladder is loaded.

IMPORTANT: After installation is complete, cut the track plug underneath the crossbow to fill all the unused space.

LOW ROOF



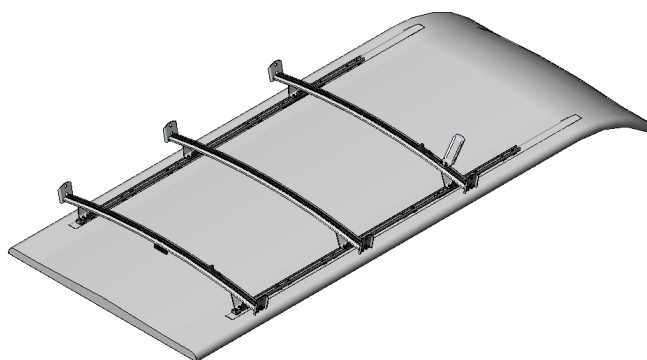
HIGH ROOF



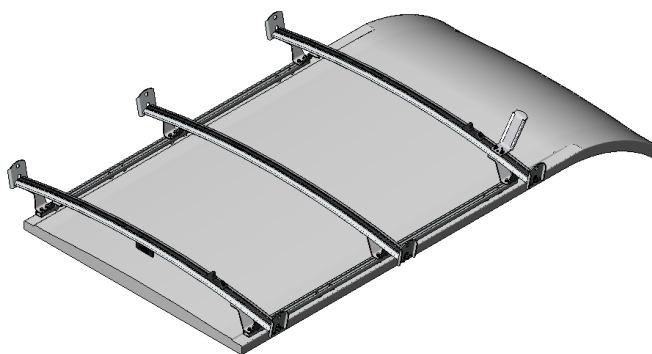
TOOLS

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

LOW ROOF



HIGH ROOF



**“You have successfully installed your
Third Crossbow**

Thank you for doing business with us.”

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

