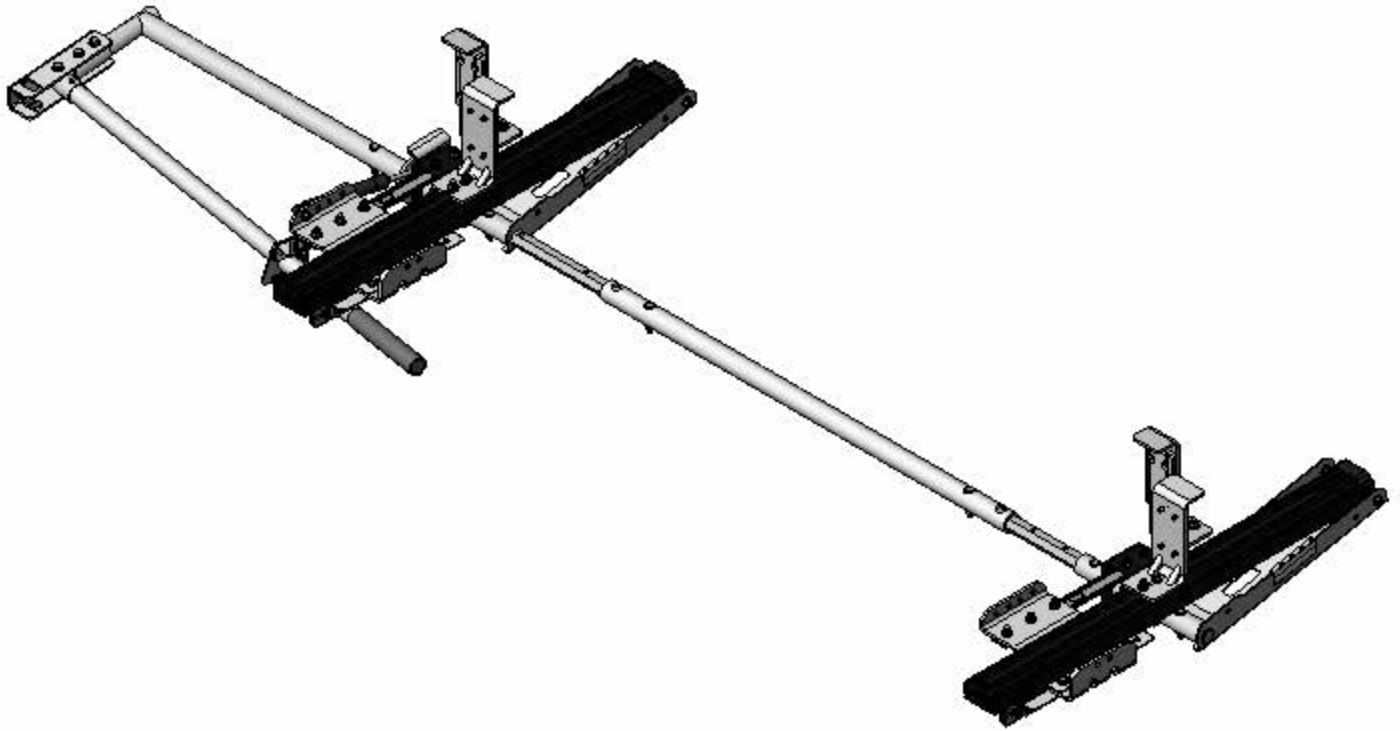
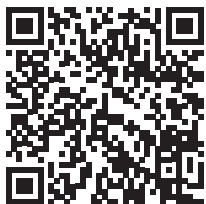


INSTALLATION GUIDE



18-U1820 Low Roof Max Rack Passenger Side



Scan the QR for the latest Install-Guide.

RANGER
DESIGN



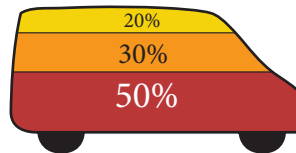
BEFORE YOU BEGIN

READ, UNDERSTAND, AND FOLLOW ALL WARNINGS AND INSTRUCTIONS BEFORE USING THIS PRODUCT. FAILURE TO FOLLOW THESE DIRECTIONS MAY RESULT IN PROPERTY DAMAGE, SERIOUS BODILY INJURY, AND/OR DEATH. RANGER DESIGN IS NOT RESPONSIBLE FOR ANY PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH THAT OCCURRED WHILE USING ANY RANGER DESIGN PRODUCTS.



WARNING

- Failure to use Ranger Design-provided fasteners, brackets, and proper installation guidelines could increase risk of serious personal injury and/or death.
- If drilling is required to complete this installation: improper drilling can cause property damage to vehicles and could lead to electric shock, fire, or even death.
- If drilling is required to complete this installation: Ensure that drilling is only performed on areas of the vehicle allowed by the vehicle's Original Equipment Manufacturer's Body Builders Layout Book (or equivalent document).
- Prior to installation, inspect the vehicle to ensure that installation will not interfere with, or cause obstruction of, any critical components such as electrical wiring, fuel tanks, fuel-cells, locks, latches, etc.
- The installer or manufacturer is responsible for ensuring anchorages are installed onto suitable wall and floor structures; wall and floor strength must meet applicable performance requirements.
- Do not install systems into any weak or unsound materials such as plastics, woods, thin-walled metals, etc. without proper reinforcement.
- Do not install this product where it could interfere with the deployment of airbags. Failure to comply could result in death or serious injury.
- Incorrect installation could cause water leaks, electric shock or fire.
- Any cargo vehicle with any cargo or equipment should use a certified partition. See Ranger Design website for some partition options. (<https://rangerdesign.com/>)
- Mountings rails are recommended for any attachment to the vehicle walls.
- All items in the cargo area should be properly secured and partition doors closed while the vehicle is in motion.
- Check your vehicle's tare weight and remaining load capacity with all the equipment installed. Never exceed the maximum Gross Vehicle Weight Rating (GVWR), Gross Axle Weight Ratings (GAWRs), or other maximum loads permitted by the vehicle's Original Equipment Manufacturer (OEM) and required by law.
- The heaviest items must be placed towards the bottom of the vehicle, while the lightest ones can be arranged upwards. Vehicle cargo loading weight proportion should follow the following guidelines:



- The final alterer and/ or modifier should review the warning sheet with the customer before the vehicle is released to the customer or for general use. These instructions should remain with the vehicles a all times.
- Any modification or unintended use of this product voids any warranty and could create a hazardous condition.
- Ranger Design provides recommended assembly and installation instructions which should be followed to ensure correct operation. Failure to do so could result in invalidating the product's compliance, warranty and cause injury. Notwithstanding, the final stage vehicle alterer and/or modifier is responsible for the integration, installation, and compliance of the product in its final location to all applicable regulations and standards. Failure to maintain compliance of the vehicle to applicable regulations and standards could be punishable by law. Alterers and/or modifiers should consult with all local authorities prior to commissioning.



CAUTION

- If drilling is required to complete this installation. Before drilling, ensure that you will not hit any critical parts of the vehicle like the gas tank, wiring harness, or hose. Consult the vehicle OEM documentation as necessary. When drilling, use a drill collar to reduce the risk of damage to the vehicle.
- Any materials, padding, or glazing installed in the vehicle must comply with FMVSS/CMVSS 201/205/302, as applicable.
- In the event of a motor vehicle accident or collision where a Ranger Design system has been installed, especially ones where the vehicle structure is damaged and/or the air bags deploy and/or the vehicle has been towed, the system must be inspected to ensure continued soundness and safety before returning the vehicle to service. Damaged components should be replaced as necessary.
- All system components should be regularly inspected, cleaned, and maintained pursuant to Ranger guidelines.

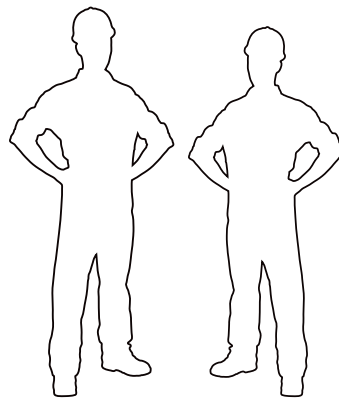
QUICK START GUIDE

Phase 1 - Assembly

<input type="checkbox"/> 1.1 SETUP (VERIFY ALL PARTS ARE PRESENT).....	4
<input type="checkbox"/> 1.2 ASSEMBLY (CROSSBAR ASSEMBLY).....	6

REQUIRED ITEMS

- Ratchet
- Tape Measure
- Marker
- Ladder
- Mallet
- Cutter
- 1/2" Wrench
- 1/2" Socket
- Sawhorse (Optional)
- Box
- 1/8" Slot Screwdriver or Pick

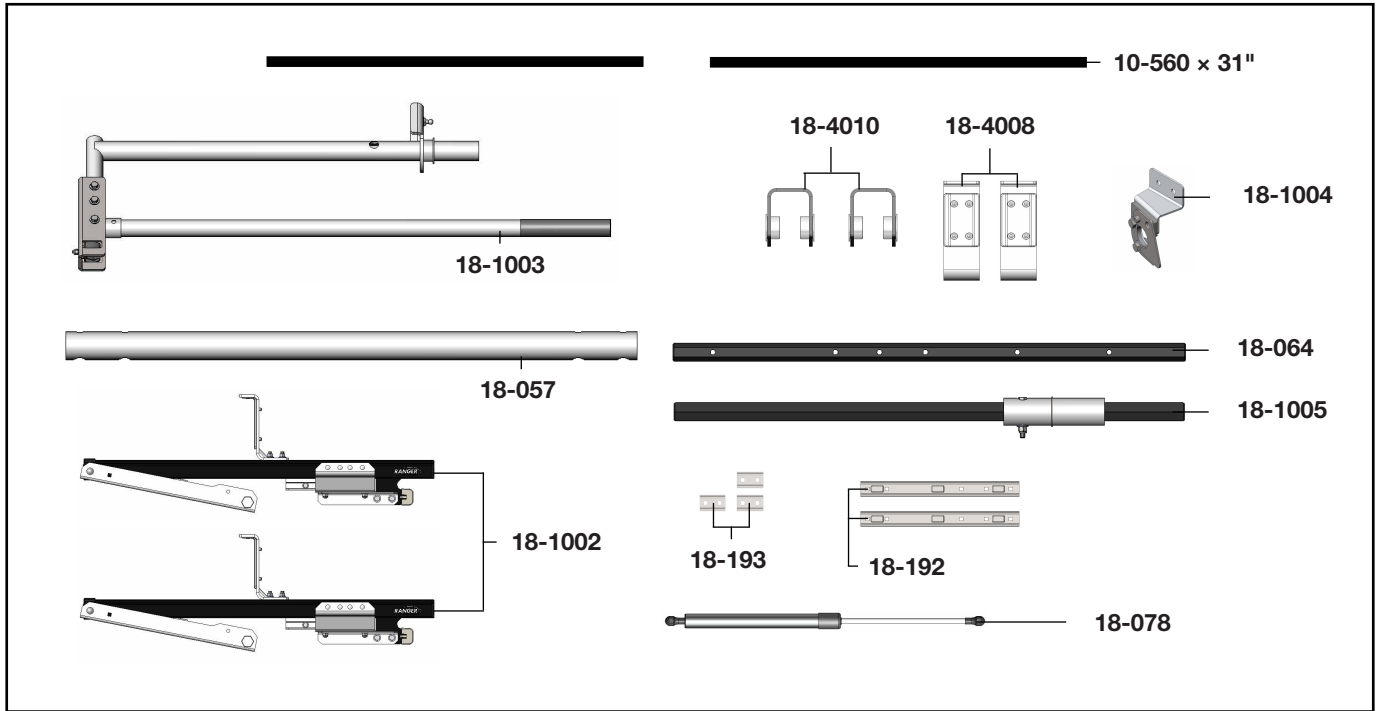


2
PERSONS

PHASE 1 – ASSEMBLY

1.1 SETUP

1.1.1 Verify all parts are present.



VERIFY ALL PARTS ARE PRESENT

Item No.	Description	Qty.
18-057	Center Tube	1
18-064	Hex Shaft	1
18-078	Low Roof Damper	1
18-192	Insert Plate, 5 Bolts	2
18-193	Insert Plate, 2 Bolts	3
18-1002	Passenger Side Mechanism	2
18-1003	Passenger Side Handle	1
18-1004	Passenger Side Clamp	1
18-1005	Front Hex Bar	1
18-4008	Tall Hook	2
18-4010	Shaft Support Bracket	2
10-560 x 31"	Track Plug (31")	2
94-0820	Fastener Kit	1

1.1.3 Fastener kits.

94-0820



Fastener Assembly

1x



40-665

Ball Stud
3/4"
Zinc Plated

1x

	#40-665 Ball Stud 3/4"
	#98-117 Flat Washer 5/16"
	#98-117 Flat Washer 5/16"
	#94-111 Lock Nut 5/16"

5x



90-225

Hex Bolt
5/16" - 18 x 2"
SS304

5x

	#90-225 Hex Bolt 2"
	#98-117 Flat Washer 5/16"
	#98-117 Flat Washer 5/16"
	#94-111 Lock Nut 5/16"

16x



90-491

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

12x

	#90-491 Carriage Bolt 1"
	#98-117 Flat Washer 5/16"
	#94-111 Lock Nut 5/16"

18x



94-111

Lock Nut
5/16"
SS304 WAX

4x



94-105

Hex Nut
5/16"
SS304 WAX

4x

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

28x



98-117

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

4x



98-123

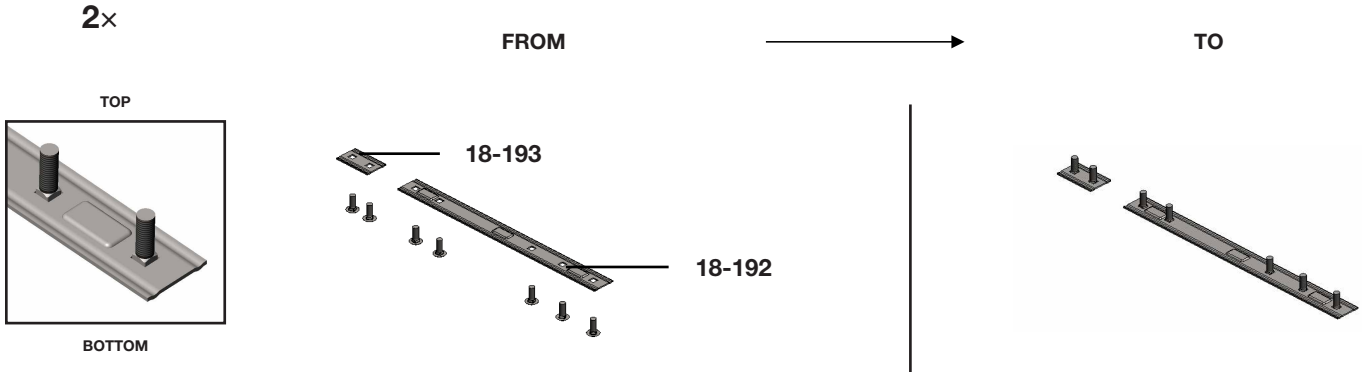
Lock Washer
5/16"
SS304

PHASE 1 – ASSEMBLY

1.2 CROSSBAR ASSEMBLY

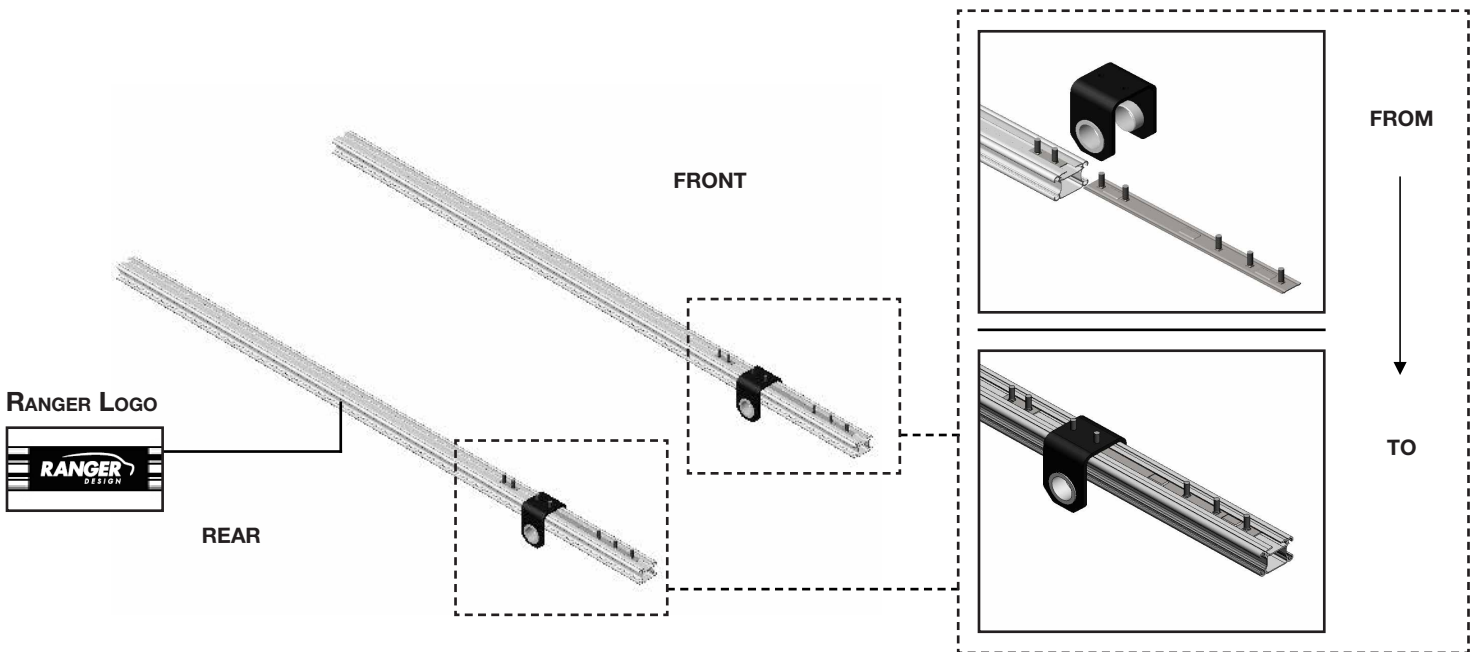
1.2.1 Slide the insert plate to the crossbar w/ shaft support bracket.

NOTE: The crossbar w/ Ranger logo should be the rear crossbar.



FASTENERS USED

14x



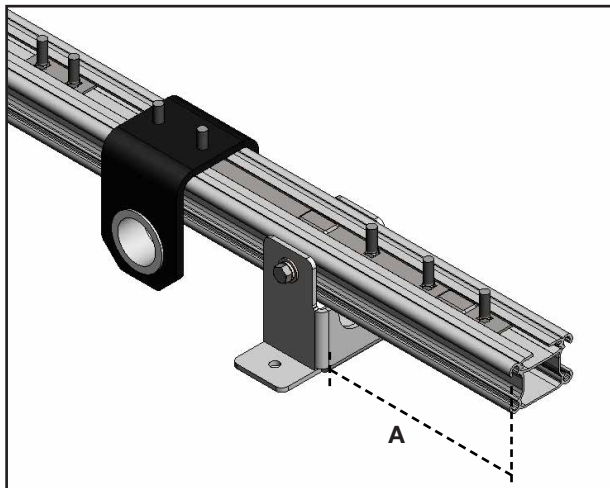
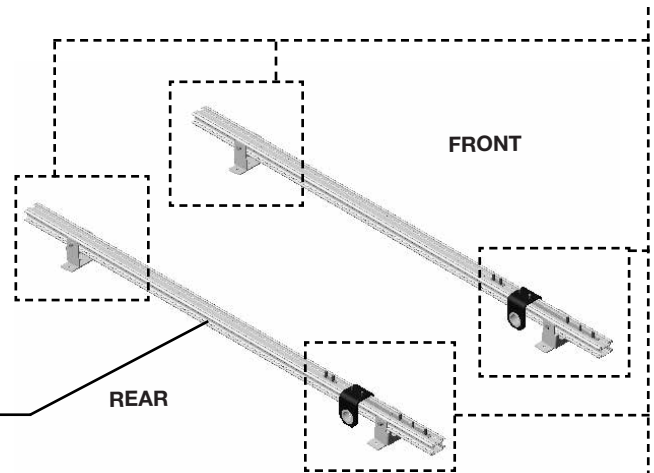
1.2.2 Attach 2 feet to each crossbar.

NOTE: Savana has different feet.

FOOT PLACEMENT GUIDE

VEHICLE	DIMENSION (A)
NISSAN NV	5 - 3/4"
SPRINTER	8 - 3/4" HR, 5 - 1/4" LF
TRANSIT	7 - 5/8"
PROMASTER	5 - 13/16"
METRIS	5"

RANGER LOGO







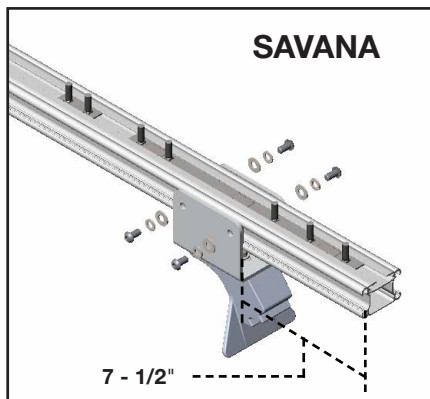
TOOLS

- Ratchet
- 1/2" Socket
- 1/8" Slot Screwdriver or Pick

FASTENERS USED

4x (CROSSBAR FASTENER KIT) (17 ft • lbs)

-  #90-203 Hex Bolt 5/8"
-  #98-123 Lock Washer 5/16"
-  #98-117 Flat Washer 5/16"
-  #94-250 Channel Nut 5/16"







TOOLS

- Ratchet
- 3/16" Hex Bit Socket

FASTENERS USED

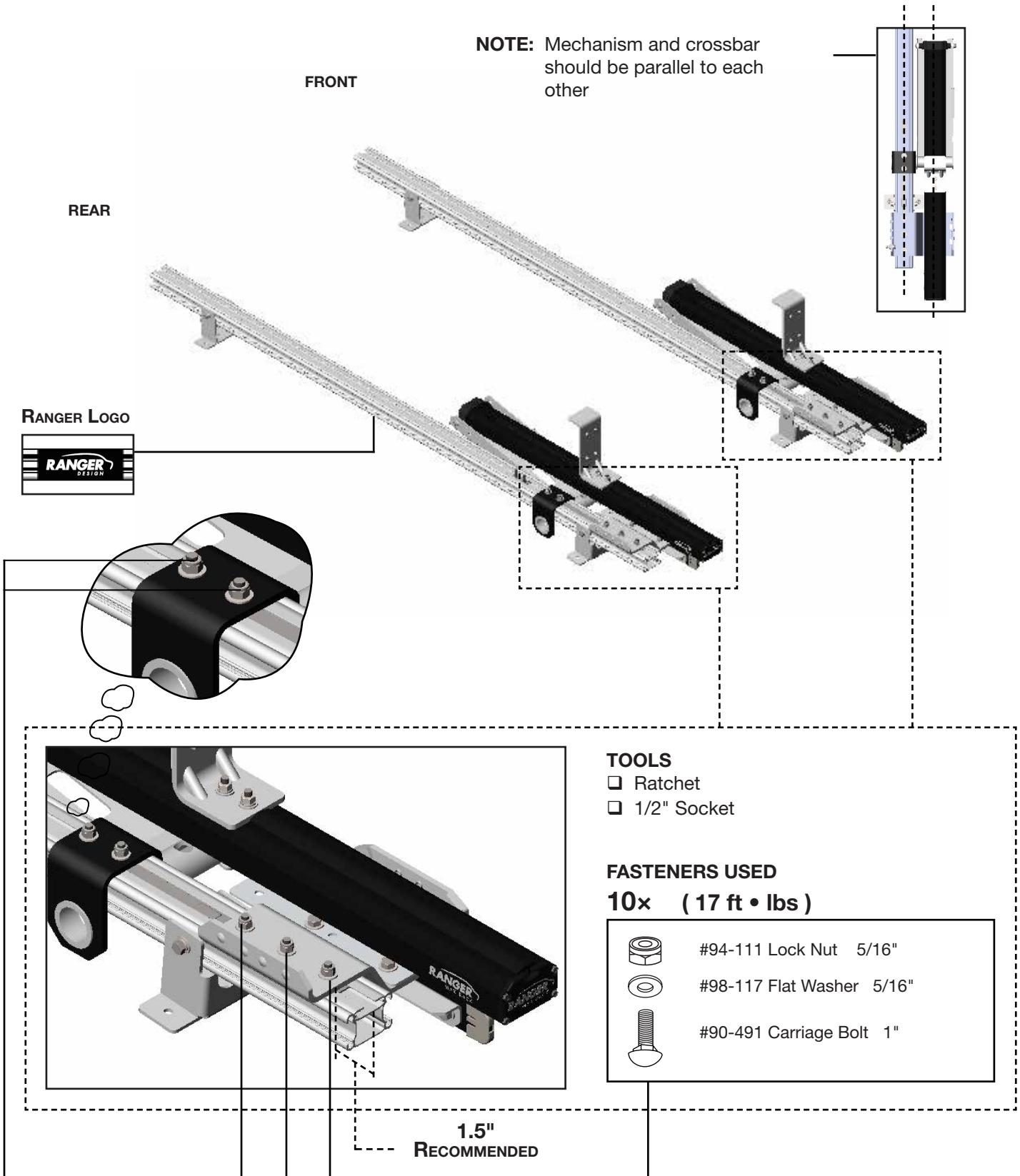
8x ONE CROSSBAR (17 ft • lbs)

-  #90-979 Hex Drive Bolt 5/8"
-  #98-123 Lock Washer 5/16"
-  #98-117 Flat Washer 5/16"
-  #94-250 Channel Nut 5/16"

1.2.3 Attach the passenger side mechanism to the crossbar using the insert plate w/ 5 holes, then add flat washers and lock nuts to the shaft support bracket.

NOTE: Both front and rear mechanism are identical.

NOTE: Mechanism and crossbar should be parallel to each other






TOOLS

- ☐ Ratchet
- ☐ 1/2" Socket

FASTENERS USED

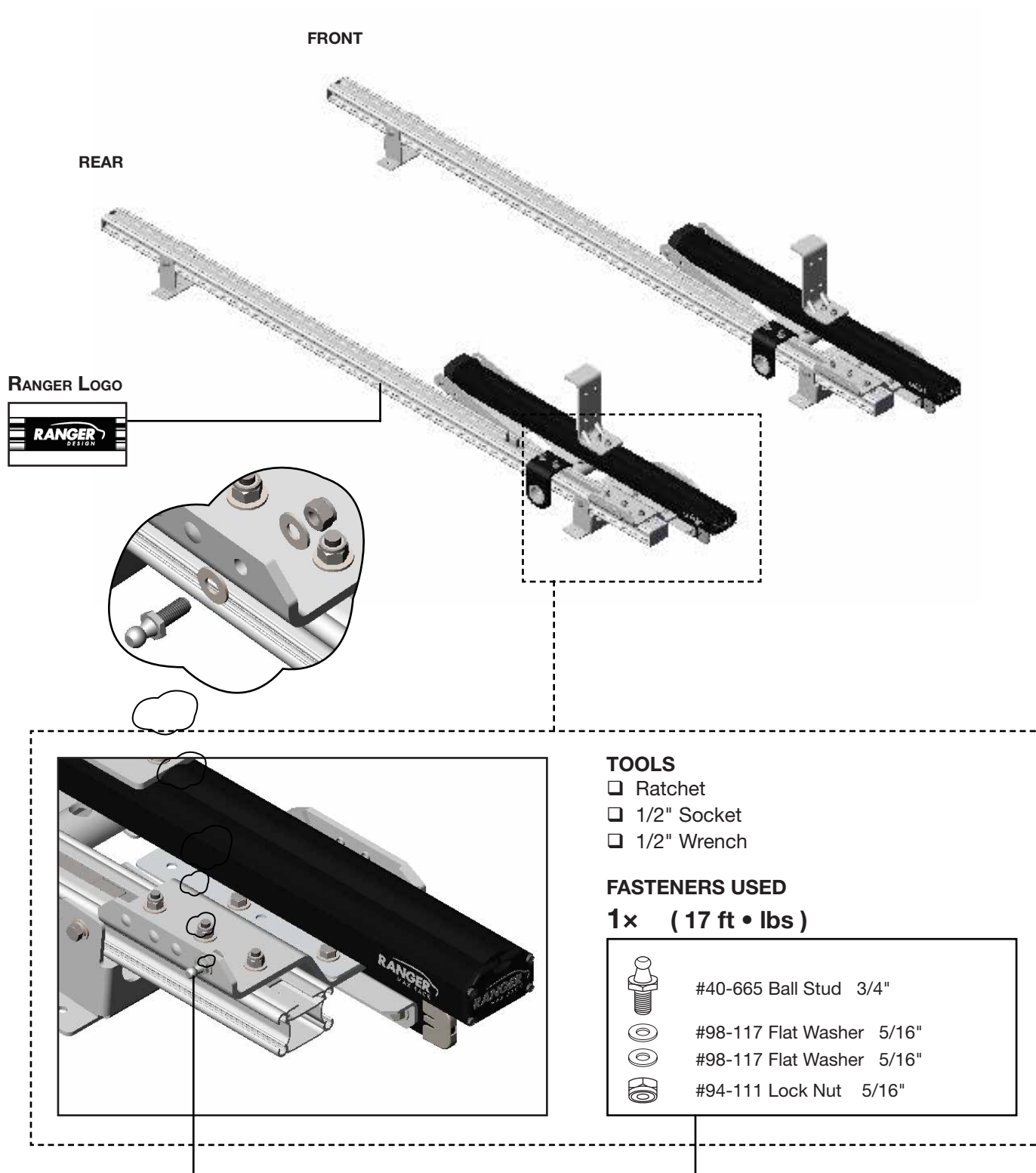
10x (17 ft • lbs)

- | | |
|--|---------------------------|
|  | #94-111 Lock Nut 5/16" |
|  | #98-117 Flat Washer 5/16" |
|  | #90-491 Carriage Bolt 1" |

1.5" RECOMMENDED

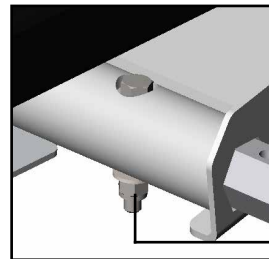
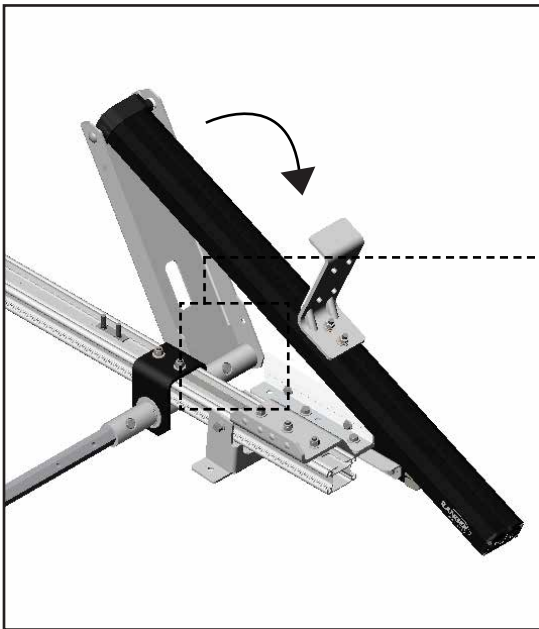
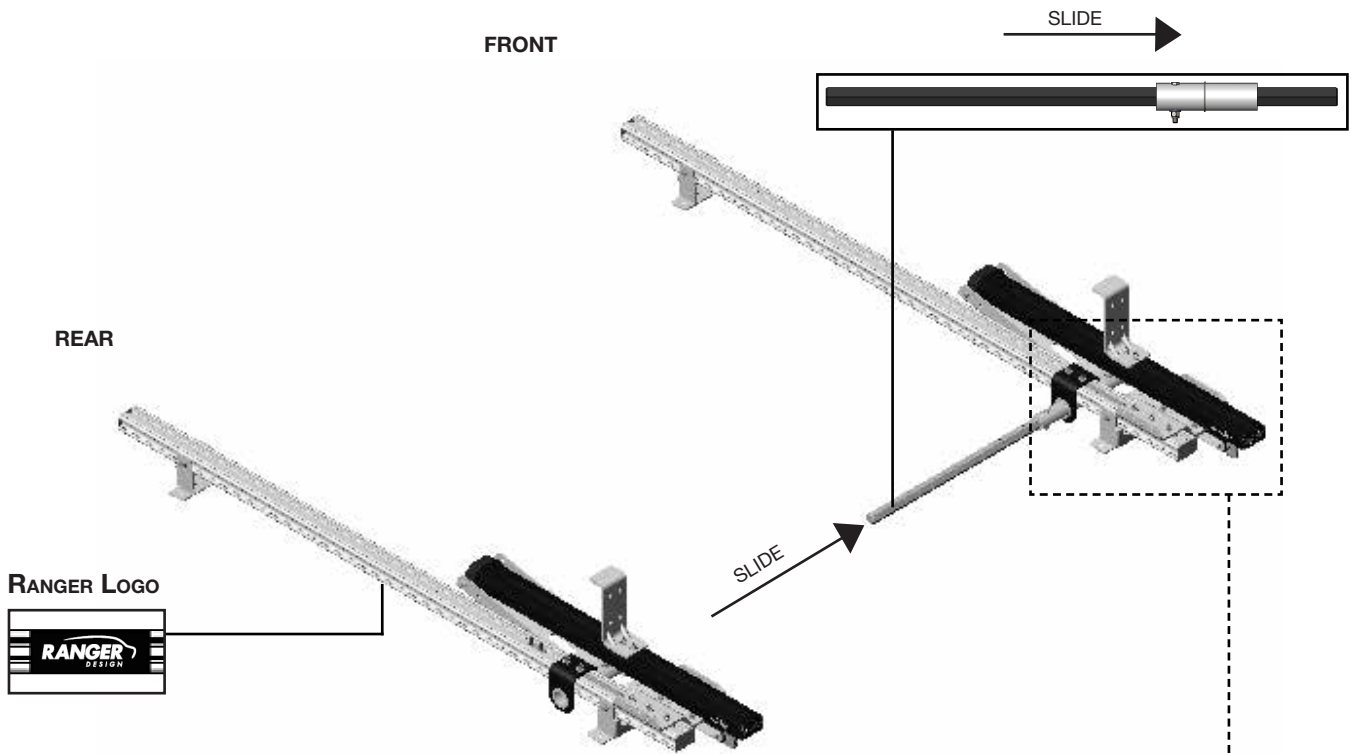
1.2.4 Remove the plastic plug, then attach ball stud to the rear mechanism frame.

NOTE: Attach ball stud in the rear mechanism only.



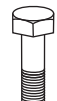



1.2.5 Slide the front hex bar through the shaft support bracket and arm, then attach the front hex bar to the arm.

NOTE: Line up the hole of the front pivot bar to the hole of the arm.

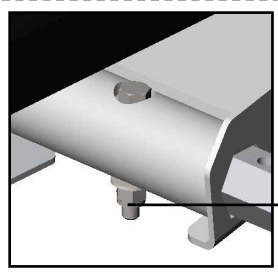
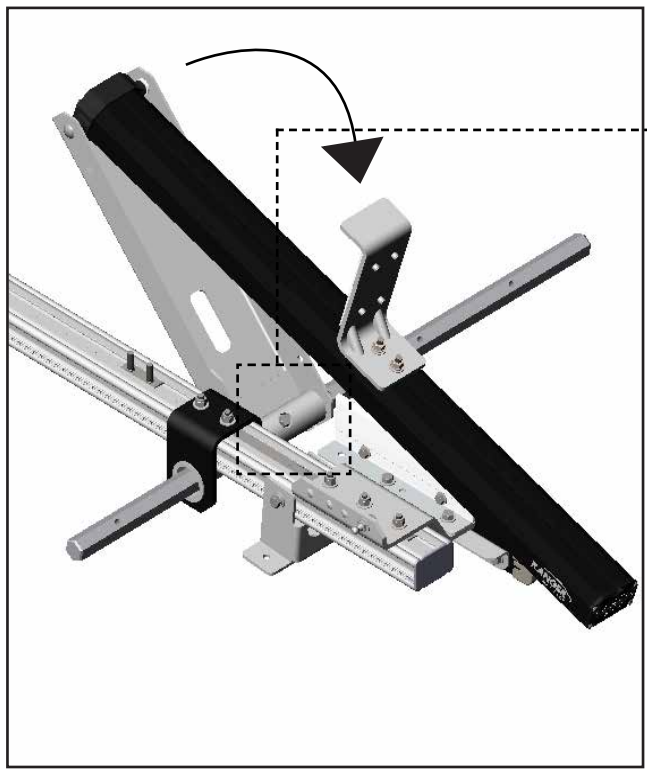
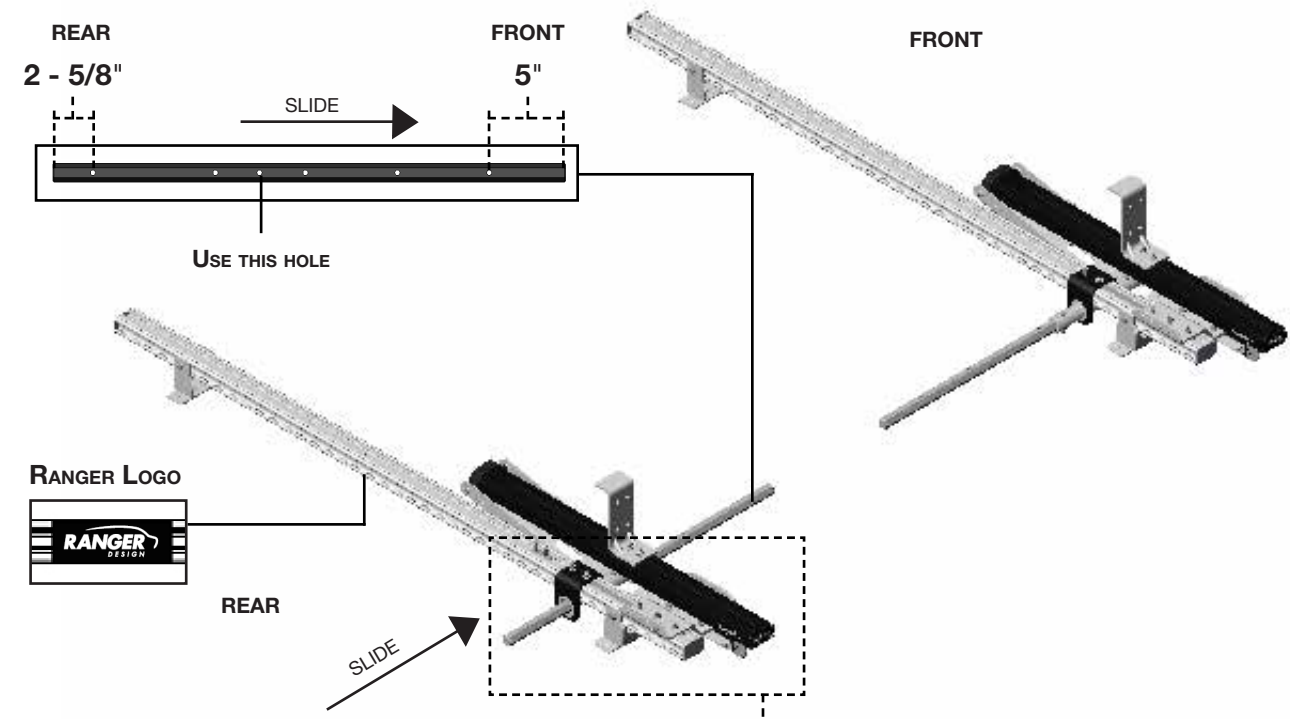


- TOOLS**
- Ratchet
 - 1/2" Socket
 - 1/2" Wrench

FASTENERS USED
1x (17 ft • lbs)

-  #90-225 Hex Bolt 2"
-  #98-117 Flat Washer 5/16"
-  #98-117 Flat Washer 5/16"
-  #94-111 Lock Nut 5/16"

1.2.6 Slide the hex shaft through the arm and shaft support bracket, then attach the hex shaft to the arm.

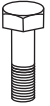





TOOLS

- Ratchet
- 1/2" Socket
- 1/2" Wrench

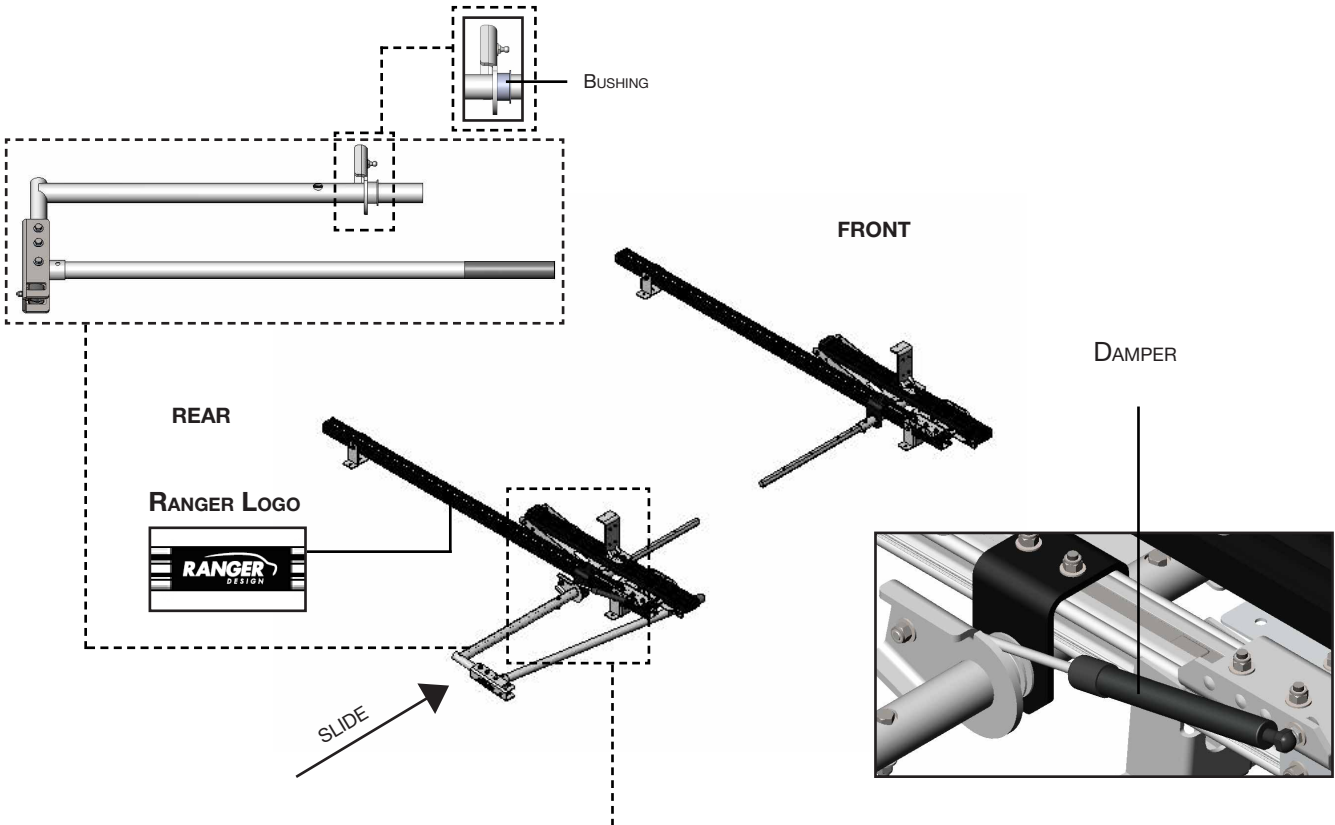
FASTENERS USED

1x (17 ft • lbs)

-  #90-225 Hex Bolt 2"
-  #98-117 Flat Washer 5/16"
-  #98-117 Flat Washer 5/16"
-  #94-111 Lock Nut 5/16"

- 1.2.7** • Slide the passenger side handle w/ bushing to the hex shaft through the shaft support bracket, then attach the passenger side handle to the hex shaft.
- Attach the damper after attaching the handle to the hex shaft.

NOTE: When installing the damper, ensure the rod is toward the center of the vehicle and cylinder is toward the side of the vehicle.

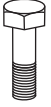





TOOLS

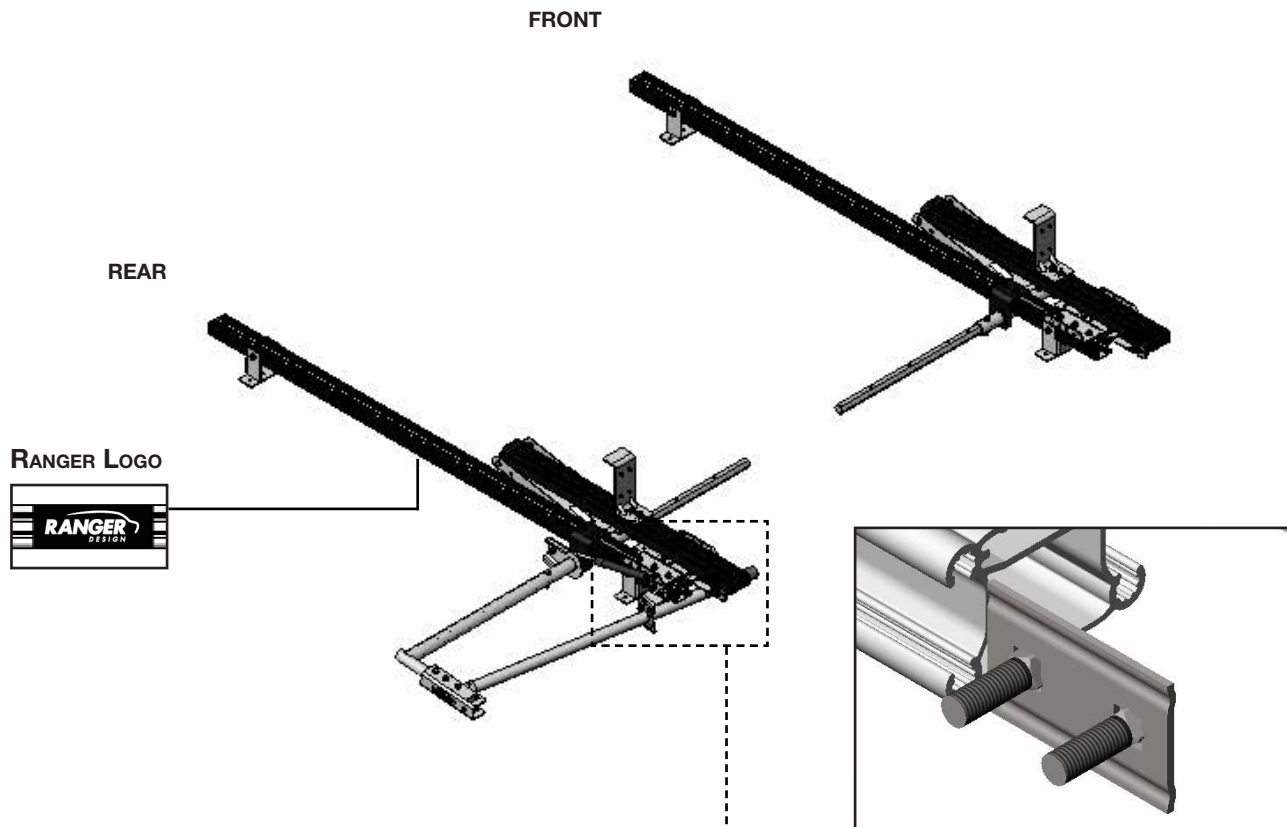
- Ratchet
- 1/2" Socket
- 1/2" Wrench

FASTENERS USED

1x (17 ft • lbs)

	#90-225 Hex Bolt 2"
	#98-117 Flat Washer 5/16"
	#98-117 Flat Washer 5/16"
	#94-111 Lock Nut 5/16"

1.2.8 Attach passenger side clamp to the rear crossbar.



$1 - \frac{1}{16}''$

TOOLS

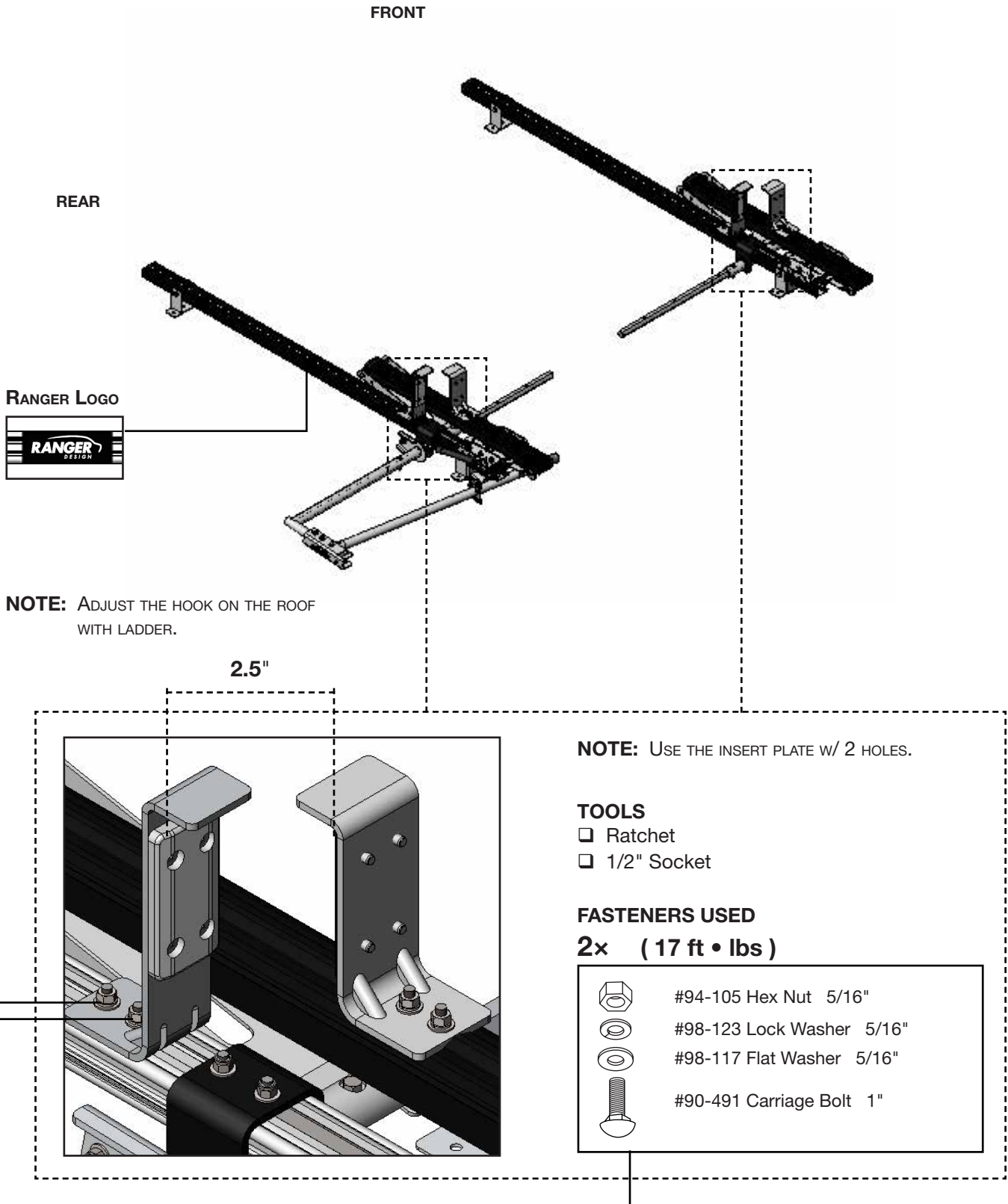
- Ratchet
- 1/2" Socket

FASTENERS USED

1x (17 ft • lbs)

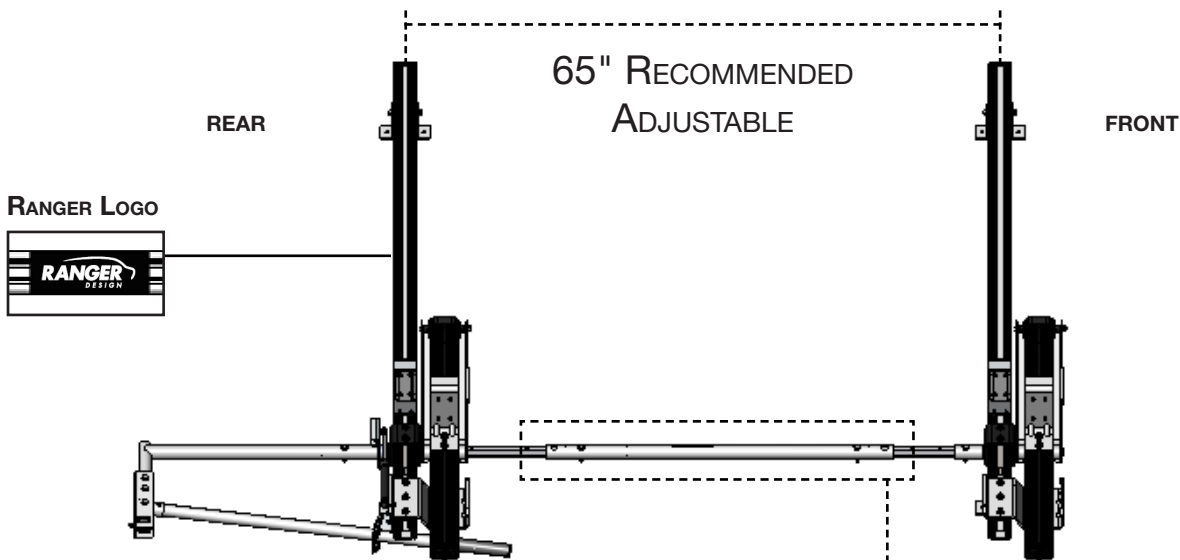
		#90-491 Carriage Bolt 1"
		#18-193 Insert Plate 2 Holes
		#98-117 Flat Washer 5/16"
		#94-111 Lock Nut 5/16"

1.2.9 Attach the tall hooks and end caps to the crossbar.

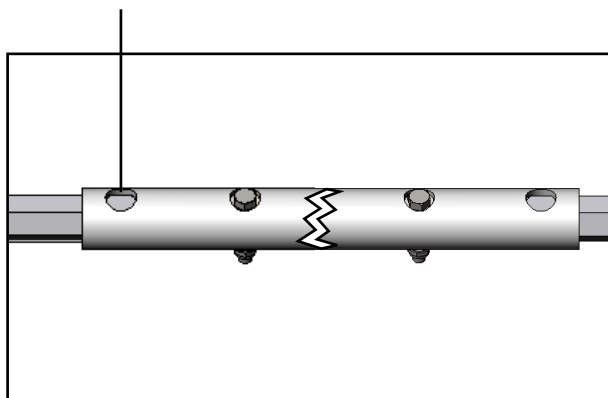


1.2.10 Attach the ends of the front hex bar and hex shaft to the center tube.

NOTE: • Large hole on top.
 • If you have double sided rack, repeat **CROSSBAR ASSEMBLY** (1.2.1 to step 1.2.10) for driver side rack.



NOTE: Large hole on top.



TOOLS

- Ratchet
- 1/2" Socket
- 1/2" Wrench

FASTENERS USED

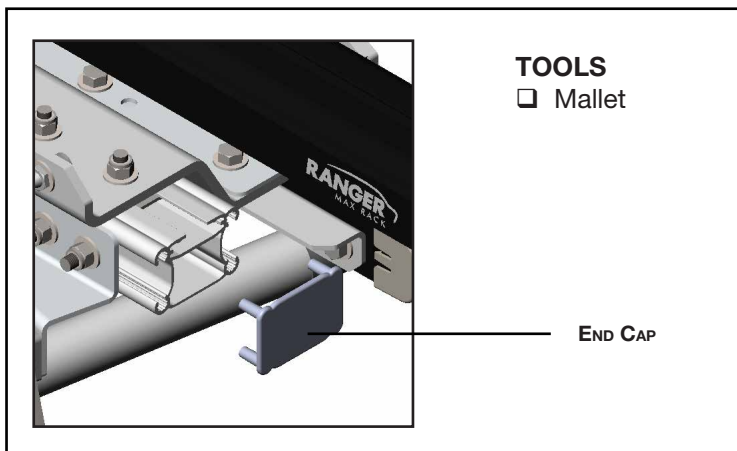
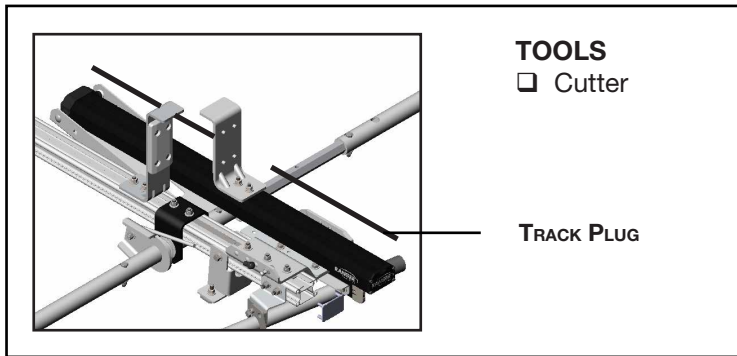
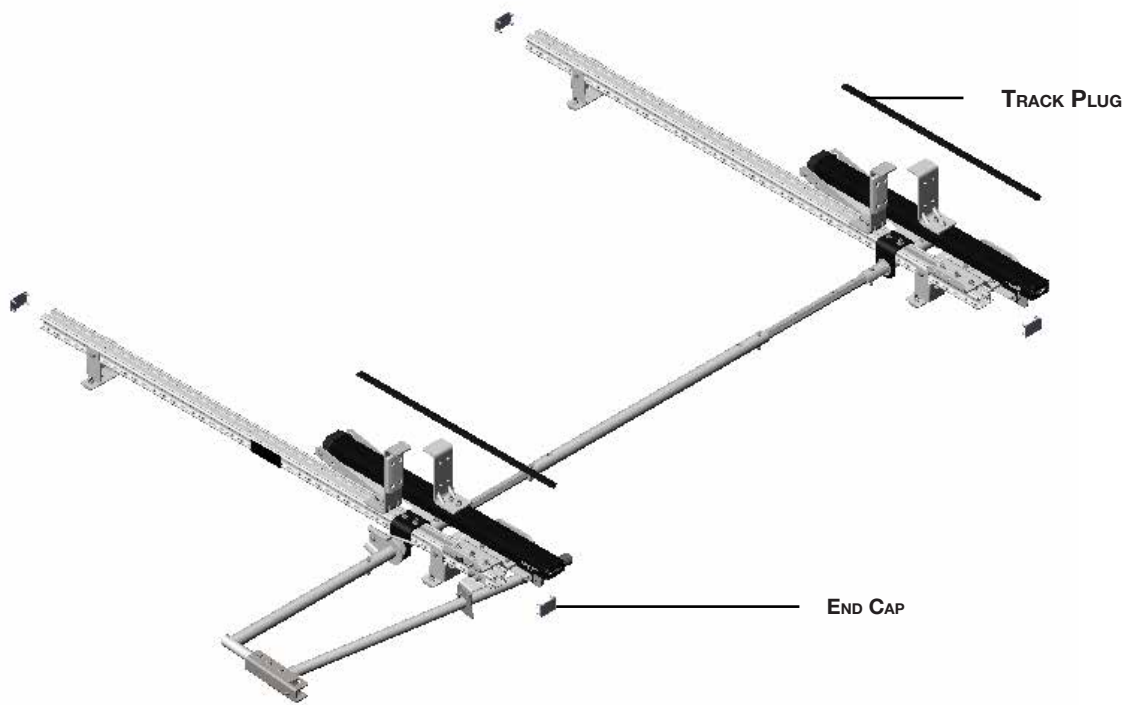
2x (17 ft • lbs)

	#90-225 Hex Bolt 2"
	#98-117 Flat Washer 5/16"
	#98-117 Flat Washer 5/16"
	#94-111 Lock Nut 5/16"

RECOMMENDED SET-UP

CROSSBAR CENTER TO CENTER DISTANCE	LADDER SIZE
53"	UP TO 6' STEP LADDER
65"	UP TO EXTENSION 28' & STEP 8' TO 10' ONLY
77"	UP TO EXTENSION LADDER 32'

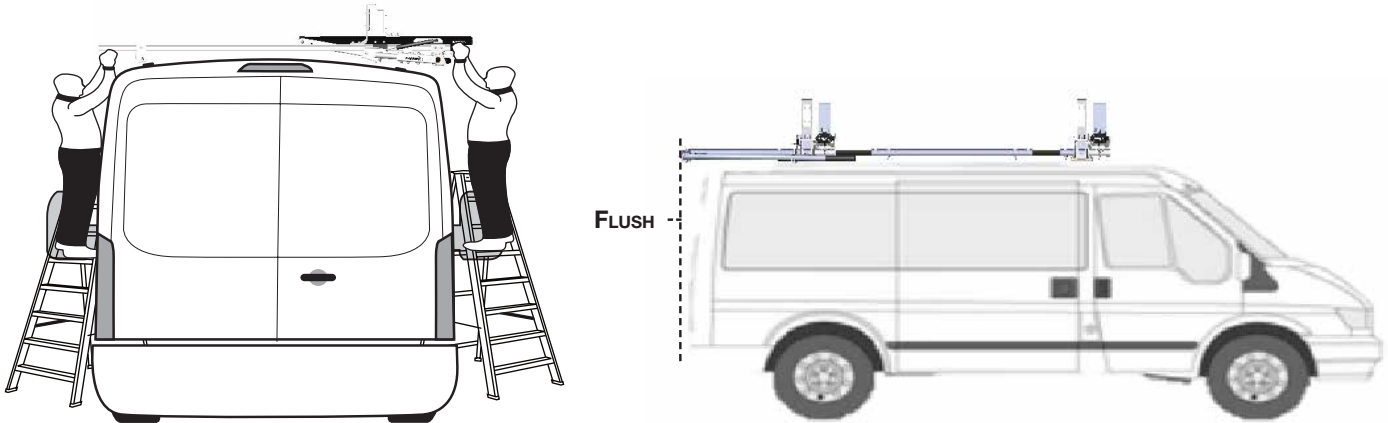
- 1.2.11**
- Cut to size, then attach the track plug to the mechanism.
 - Attach the 4 end caps to the end of the crossbars.



1.2.12 Lift the low roof max rack on the roof, then attach the feet to the mounting track.

NOTE: These condition must be respected:

- The handle cannot extend beyond the rear bumper of the vehicle.






TOOLS

- Ratchet
- 1/2" Socket

FASTENERS USED

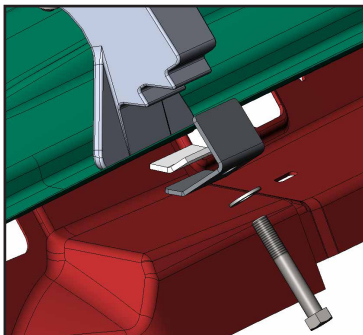
4x ONE CROSSBAR (17 ft • lbs)

-  #94-105 Hex Nut
-  #98-123 Lock Washer
-  #98-117 Flat Washer



18-191 (CROSSBAR SUB-UNIT)

SAVANA









TOOLS

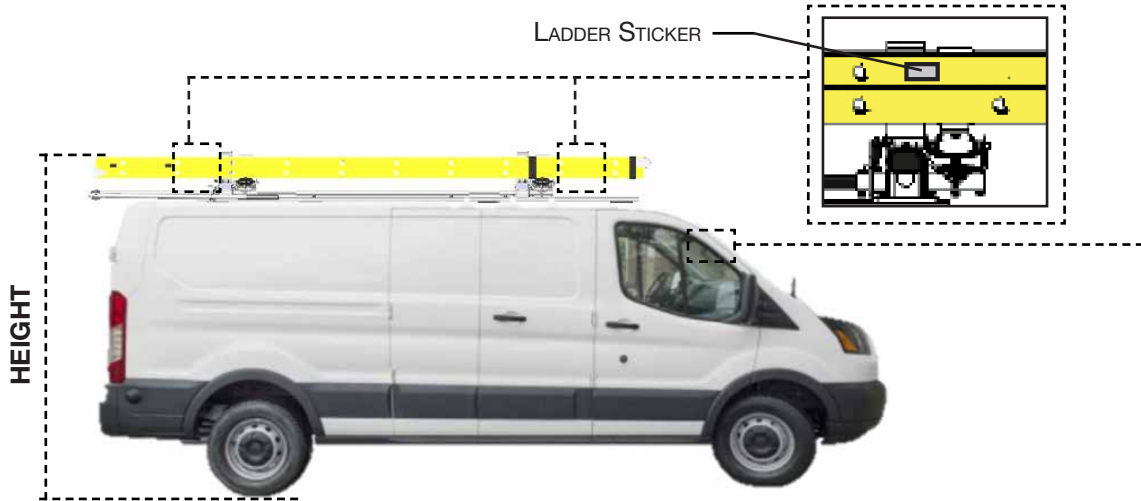
- Ratchet
- 1/2" Socket

FASTENERS USED

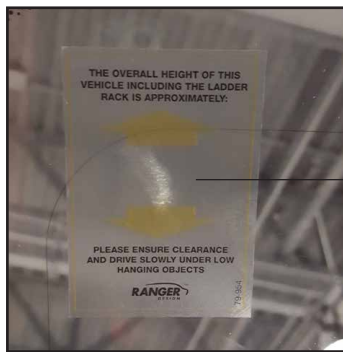
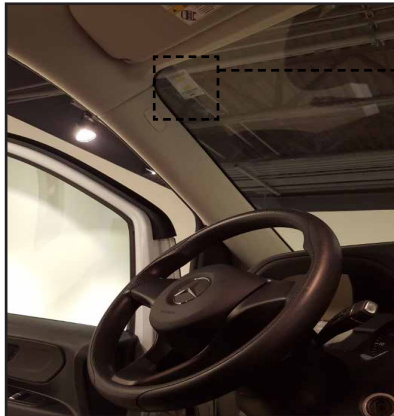
2x ONE CROSSBAR (17 ft • lbs)

-  #90-327 Hex Bolt 3/8" x 2-1/2"
-  #98-109 Flat Washer
-  #10-411 Gutter Clip
-  #10-602 Rubber Mat
-  #10-447 Feet
-  #94-109 Lock Nut

- NOTE:
- After installation be sure to put the Operator’s Manual in the cab for the end user.
 - If you don't have the ladder of the end user, explain to end user where to put the Ladder sticker.



**MAX RACK HEIGHT LABEL INSTALLATION
INSIDE**



NOTE: Make sure that the label doesn't block the driver's visibility while driving.

Write the height of the vehicle with the Max Rack here.

**“You have successfully installed
Low Roof Max Rack Passenger Side Mechanism!**

Thank you for doing business with us.”

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

