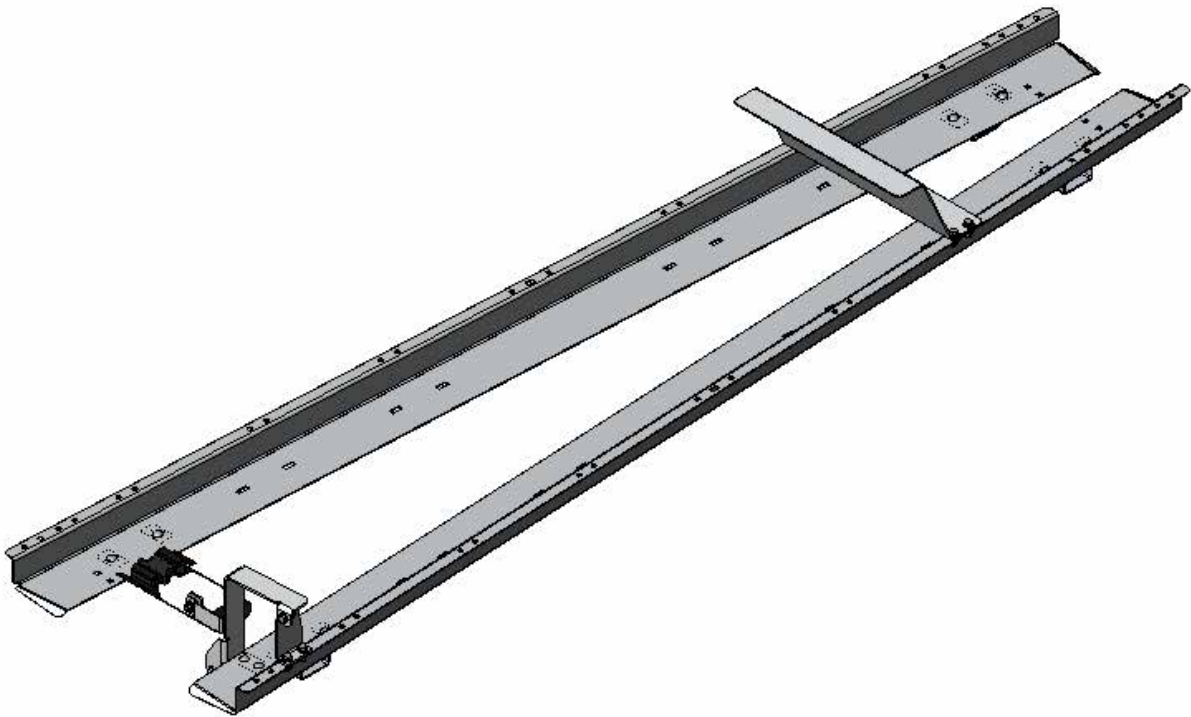


# INSTALLATION GUIDE



## 16-U1127 STEP LADDER KIT



Scan the QR for the latest Install-Guide.





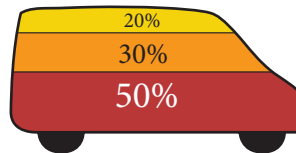
# BEFORE YOU BEGIN

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 at 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.

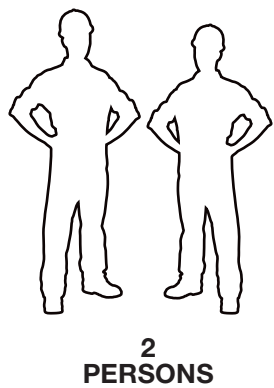
# QUICK START GUIDE

## Phase 1 - Assembly

<input type="checkbox"/> 1.1.1 SETUP ( VERIFY ALL PARTS ARE PRESENT ).....	4
<input type="checkbox"/> 1.2.1 ASSEMBLY.....	5

## REQUIRED ITEMS

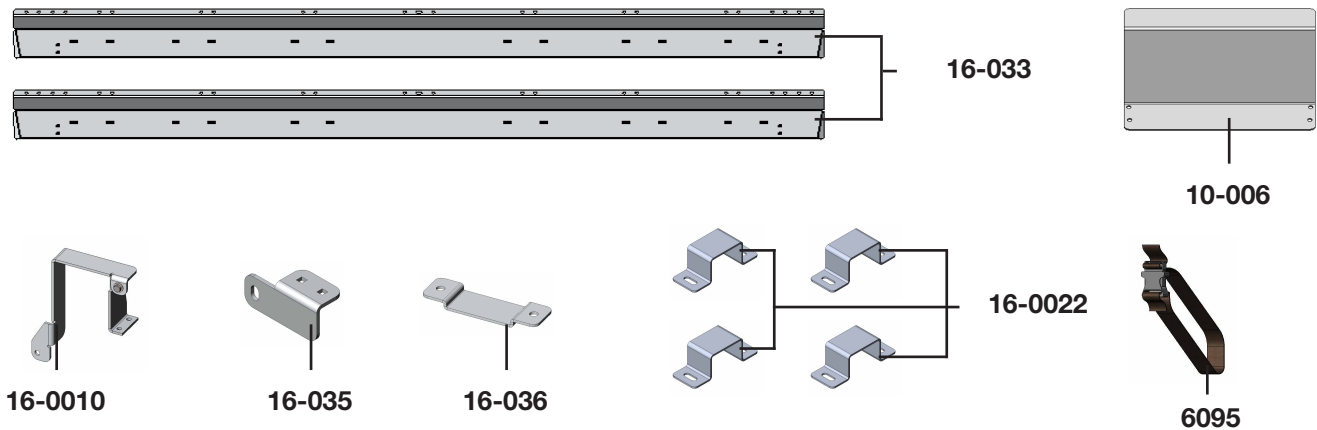
- ☐ Knife
- ☐ Tape Measure
- ☐ Marker
- ☐ Ladder
- ☐ Ratchet **2x**
- ☐ 1/2" Wrench
- ☐ 1/2" Socket **2x**



# PHASE 1 – ASSEMBLY

## 1.1 SETUP

1.1.1 Verify all parts are present.



### BILL OF MATERIALS

Item No.	Description	Qty.
6095	BUCKLE STRAP	1
10-006	STEP LADDER HOOD	1
16-0022	STEP RAIL BRACKET	4
16-033	STEP LADDER RAIL	2
16-035	STEP LADDER PADLOCK	1
16-036	BELT RETAINER	1
16-0010	LADDER LOCK	1
94-1127	CUSTOMER ASSEMBLY FASTENER KIT	1
96-1127	CUSTOMER INSTALL FASTENER KIT	1

# VERIFY ALL PARTS ARE PRESENT

FASTENER BAGS.

## 94-1127



6x		# 90-209	Hex Bolt 5/16" - 18 x 1" SS304
2x		# 90-487	Carriage Bolt 5/16"-18 x 3/4" SS304
2x		# 94-105	Hex Nut 5/16" SS316 WAX
6x		# 94-111	Lock Nut 5/16" SS304 WAX
14x		# 98-117	Flat Washer 5/16" OD, 3/4" SS18-8
2x		# 98-123	Lock Washer 5/16" SS304

## Fastener Assembly

6x



#90-209 Hex Bolt 1"



#98-117 Flat Washer 5/16"



#98-117 Flat Washer 5/16"



#94-111 Lock Nut 5/16"

2x



#90-487 Carriage Bolt 3/4"



#98-117 Flat Washer 5/16"



#98-123 Lock Washer 5/16"



#94-105 Hex Nut 5/16"

## 96-1127



8x		# 90-487	Carriage Bolt 5/16"-18 x 3/4" SS304
2x		# 90-491	Carriage Bolt 5/16"-18 x 1" SS304
10x		# 98-117	Flat Washer 5/16" OD, 3/4" SS18-8
10x		# 98-123	Lock Washer 5/16" SS304
10x		# 94-105	Hex Nut 5/16" SS316 WAX
2x		# 16-011	Insert Plate

## Fastener Install

8x



#90-487 Carriage Bolt 3/4"



#98-117 Flat Washer 5/16"



#98-123 Lock Washer 5/16"



#94-105 Hex Nut 5/16"

2x



#90-491 Carriage Bolt 1"



#16-011 Insert Plate



#98-117 Flat Washer 5/16"



#98-123 Lock Washer 5/16"



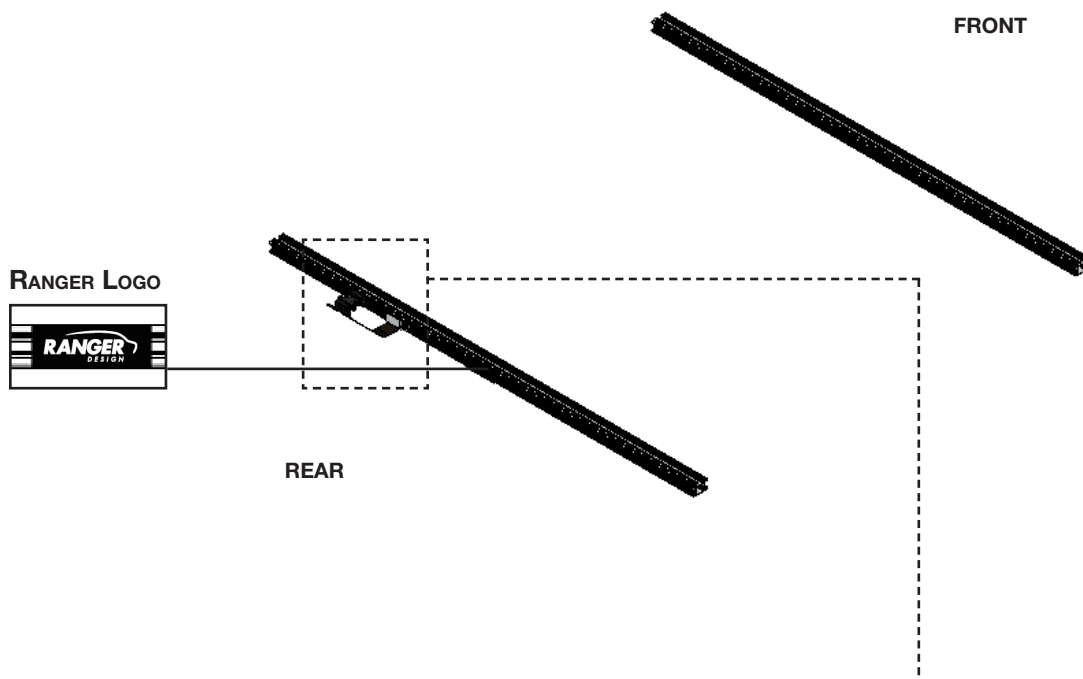
#94-105 Hex Nut 5/16"

# PHASE 1 – ASSEMBLY

## 1.2 ASSEMBLY

- 1.2.1**
- Attach the belt retainer with buckle strap to the rear crossbar.
  - Slide 2 carriage bolt insert plates with carriage bolts first in the crossbar to attach the belt retainer.

**NOTE:** Crossbars are not included in the kit.








### TOOLS

- ☐ Ratchet
- ☐ 1/2" Socket

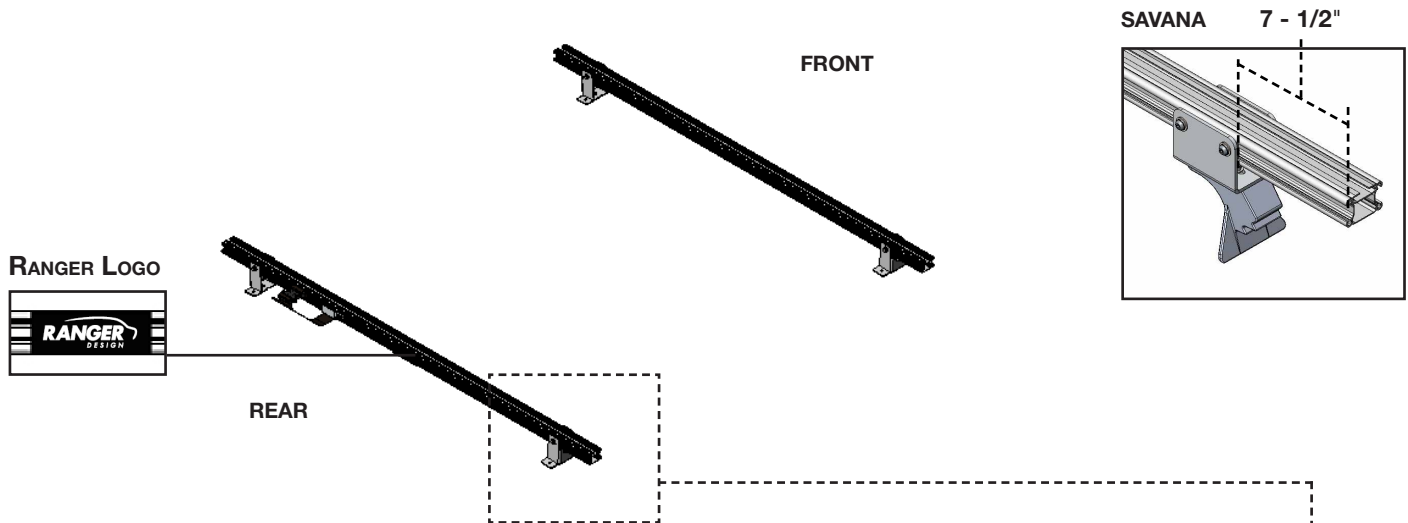
### FASTENERS USED

**2x HAND-TIGHTEN**

- |  |                           |
|--|---------------------------|
|   | #90-491 Carriage Bolt 1"  |
|  | #16-011 Insert Plate      |
|   | #98-117 Flat Washer 5/16" |
|   | #98-123 Lock Washer 5/16" |
|   | #94-105 Hex Nut 5/16"     |

### 1.2.2 Attach the feet to the crossbars.

- NOTE:**
- Crossbars, feet and necessary hardware are not included in this kit.
  - Savana has different feet.



#### FOOT PLACEMENT GUIDE

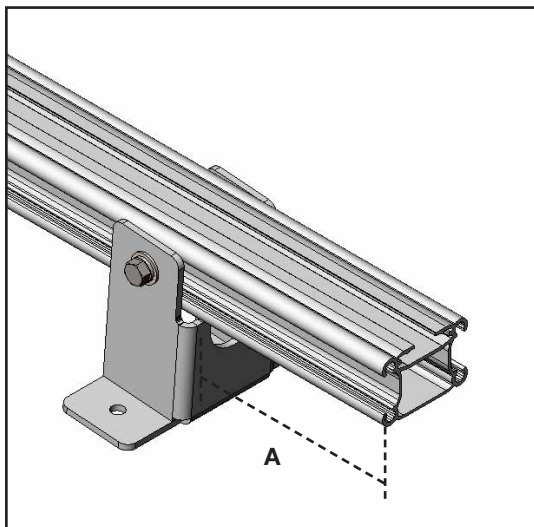
VEHICLE	DIMENSION ( A )
NISSAN NV	5 - 3/4"
SPRINTER	8 - 3/4" <sup>HR</sup> , 5 - 1/4" <sup>LF</sup>
TRANSIT	7 - 7/16"
PROMASTER	5 - 1/2"

**CROSSBAR LENGTH: 72" using 16-UCD72**

#### FOOT PLACEMENT GUIDE

VEHICLE	DIMENSION ( A )
METRIS	4 - 5/8"
PROMASTER CITY	8 - 5/8"
TRANSIT CONNECT	8 - 1/4"
NV200	10 - 3/4"

**CROSSBAR LENGTH: 66" using 16-UCD66**



#### TOOLS

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

#### FASTENERS USED

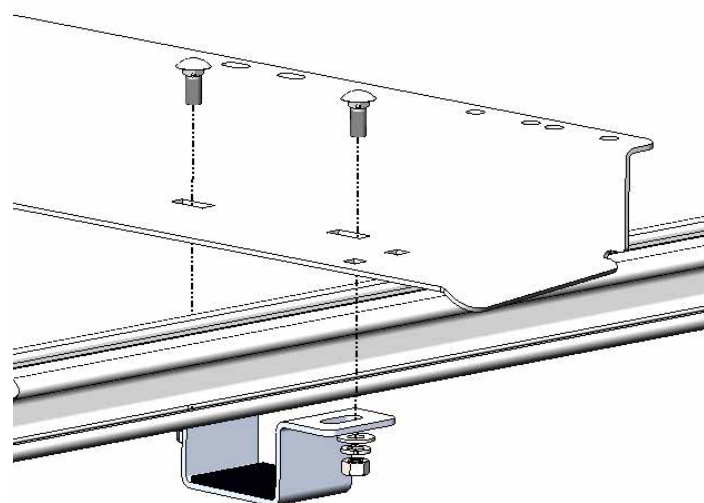
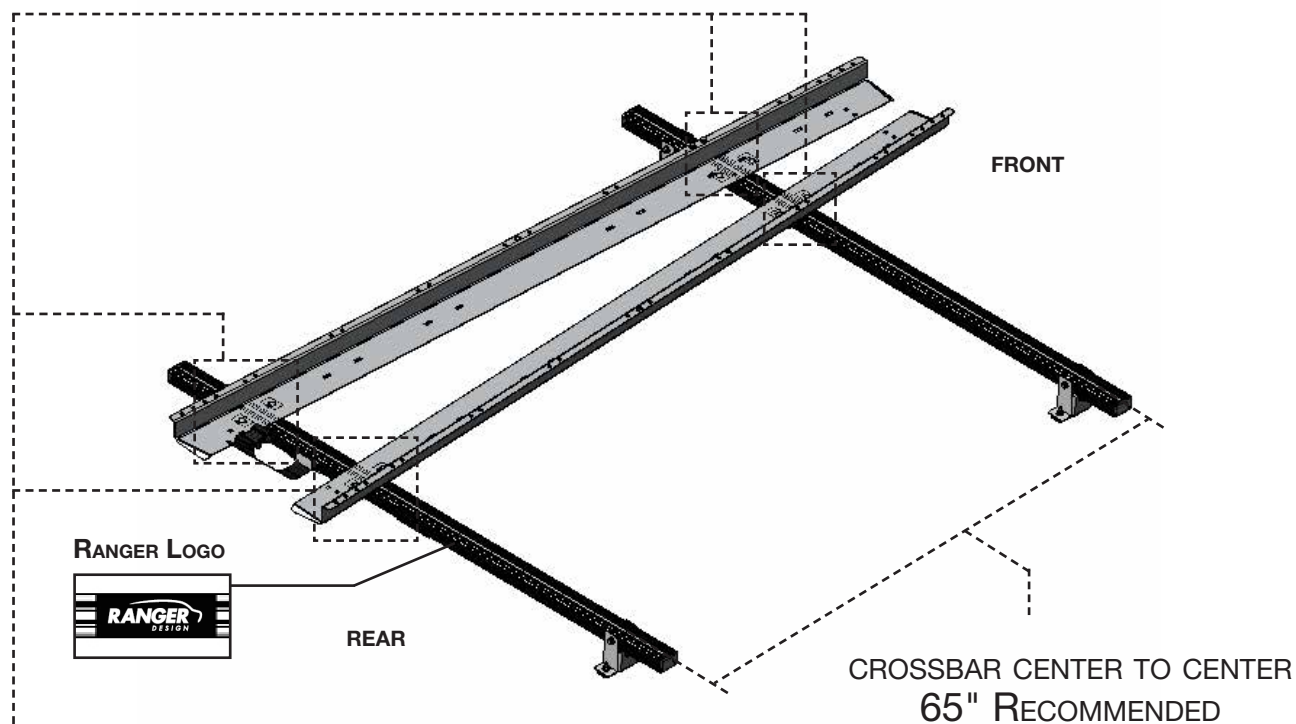
**8x ( CROSSBAR FASTENER KIT ) ( 11 lbs • ft )**



- #90-203 Hex 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 step ladder rail onto the crossbar as shown.

**NOTE:** Hand-tighten the bolts.



**FASTENERS USED**  
**8x HAND-TIGHTEN**



#90-487 Carriage Bolt 3/4"

#98-117 Flat Washer 5/16"

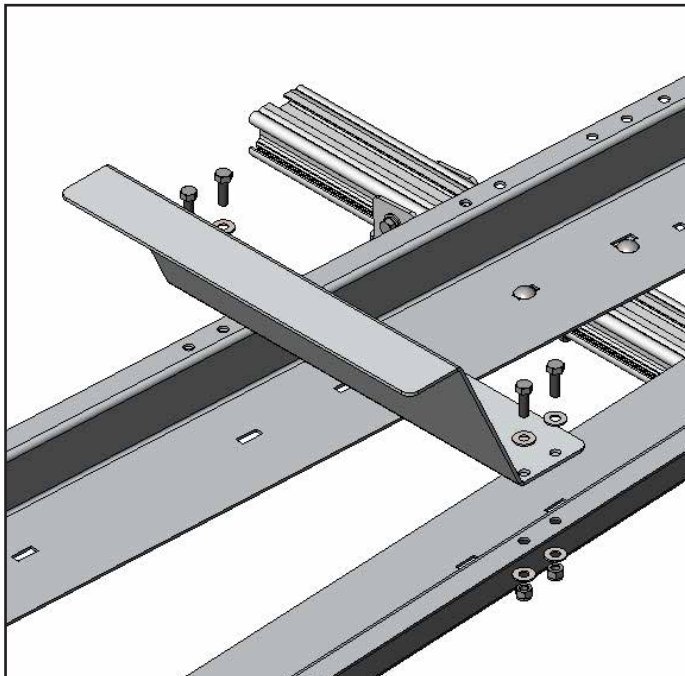
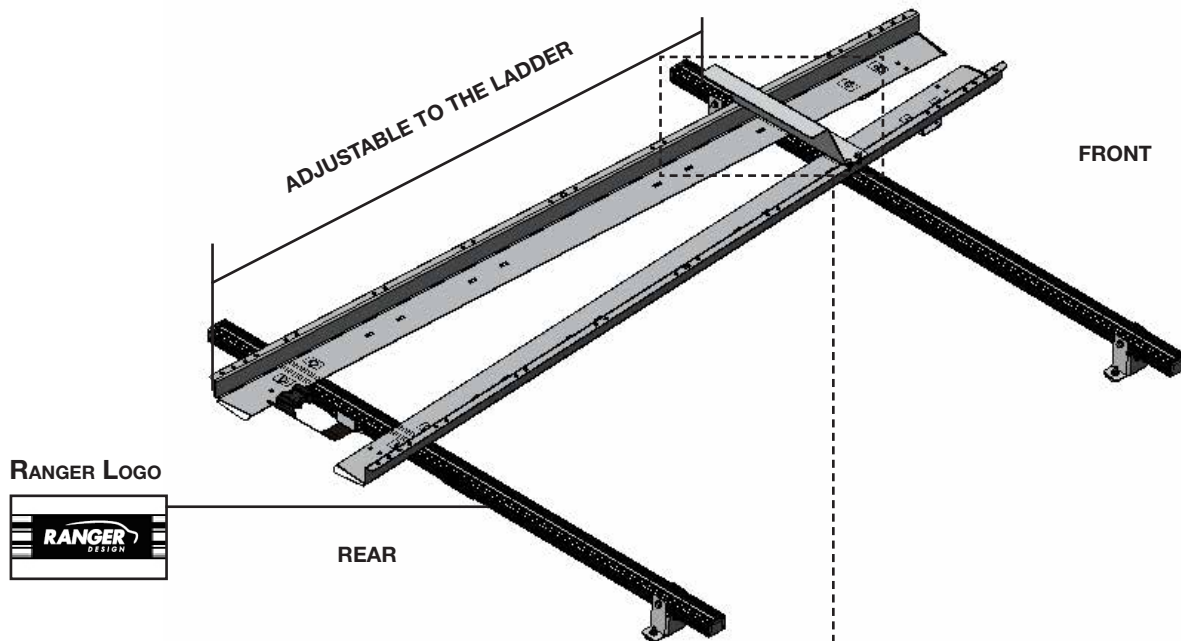
#98-123 Lock Washer 5/16"

#94-105 Hex Nut 5/16"



#### 1.2.4 Attach the step rail hood to the step ladder rail.

**NOTE:** The step rail plate position is depend on the step ladder size.



#### TOOLS

- Ratchet 2x
- 1/2" Socket 2x

#### FASTENERS USED

4x ( 11 lbs • ft )



#90-209 Hex Bolt 1"



#98-117 Flat Washer 5/16"



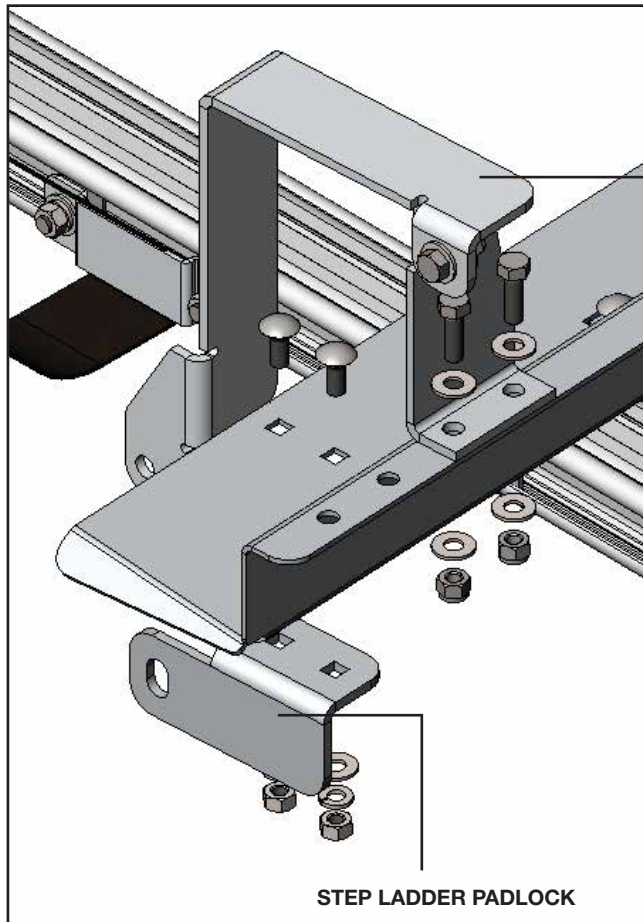
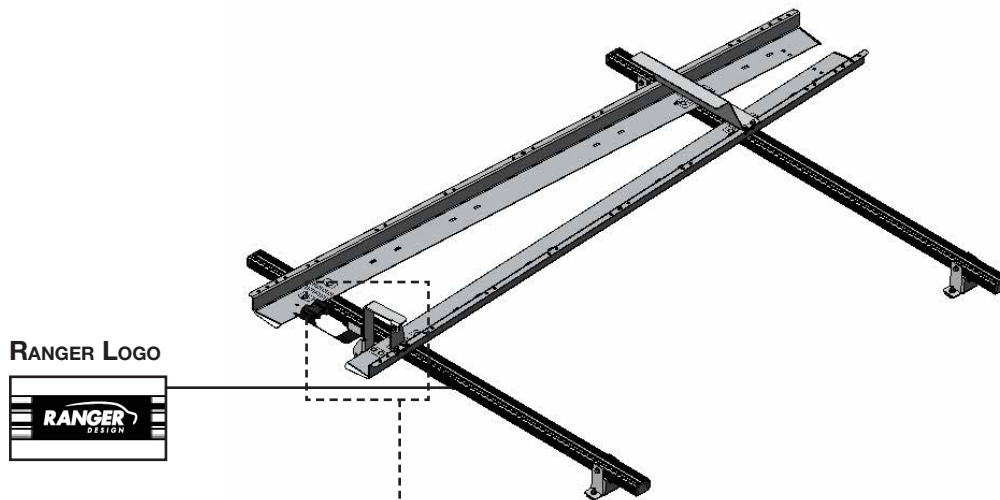
#98-117 Flat Washer 5/16"



#94-111 Lock Nut 5/16"

**1.2.5** Attach the step ladder padlock and ladder lock to the step ladder rail.

**NOTE:** You can attach the ladder padlock onto the left or right step ladder rail.



#### TOOLS

- Ratchet 2x
- 1/2" Socket 2x

#### FASTENERS USED

**2x ( FOR LADDER LOCK ) ( 11 lbs • ft )**



- #90-209 Hex Bolt 1"
- #98-117 Flat Washer 5/16"
- #98-117 Flat Washer 5/16"
- #94-111 Lock Nut 5/16"

#### FASTENERS USED

**2x ( FOR STEP LADDER PADLOCK ) ( 11 lbs • ft )**

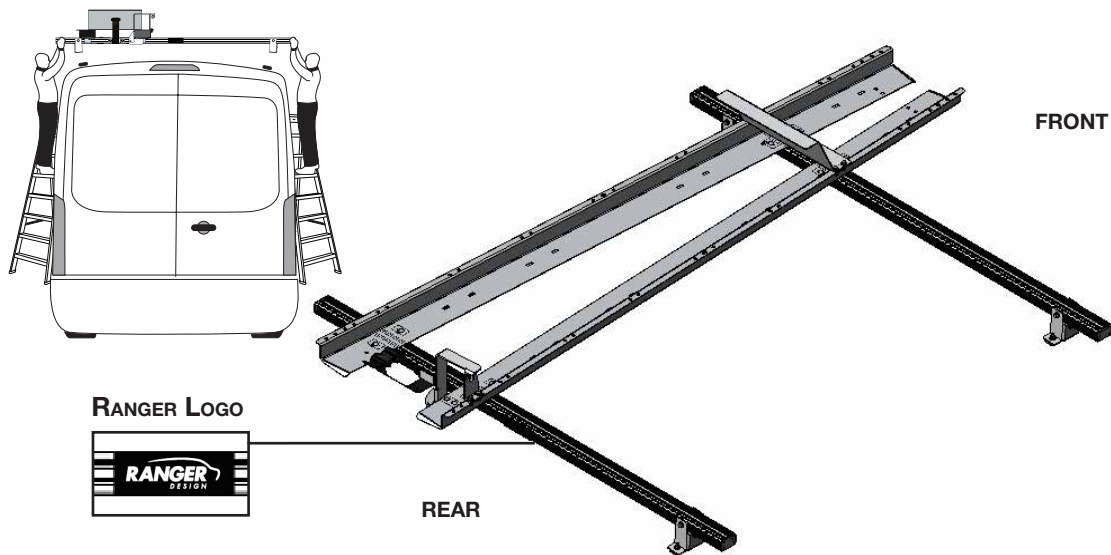


- #90-487 Carriage Bolt 3/4"
- #98-117 Flat Washer 5/16"
- #98-123 Lock Washer 5/16"
- #94-105 Hex Nut 5/16"

**1.2.6** Lift the step ladder kit with the crossbar on the roof, then attach the feet to the mounting tracks.

**NOTE:** • Mounting tracks have separate install guides.

- The hardware required to attach the feet to the mounting track is in the crossbar kit.



**FOR MOST VEHICLES**

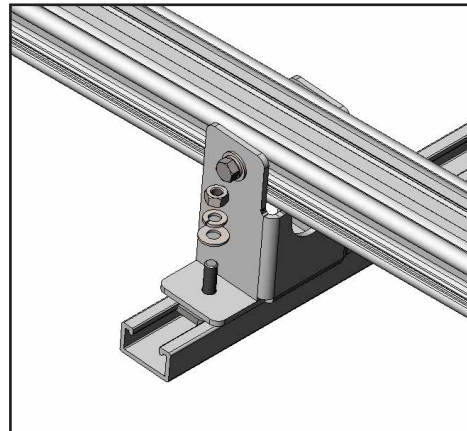
**TOOLS**

- ☐ Ratchet
- ☐ 1/2" Socket

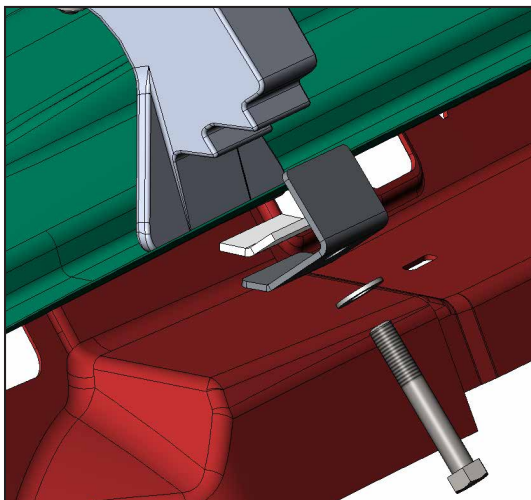
**FASTENERS USED**

**4x ONE CROSSBAR ( 11 lbs • ft )**

- #94-105 Hex Nut 5/16"
- #98-123 Lock Washer 5/16"
- #98-117 Flat Washer 5/16"



**FOR A SAVANA ONLY**



**TOOLS**

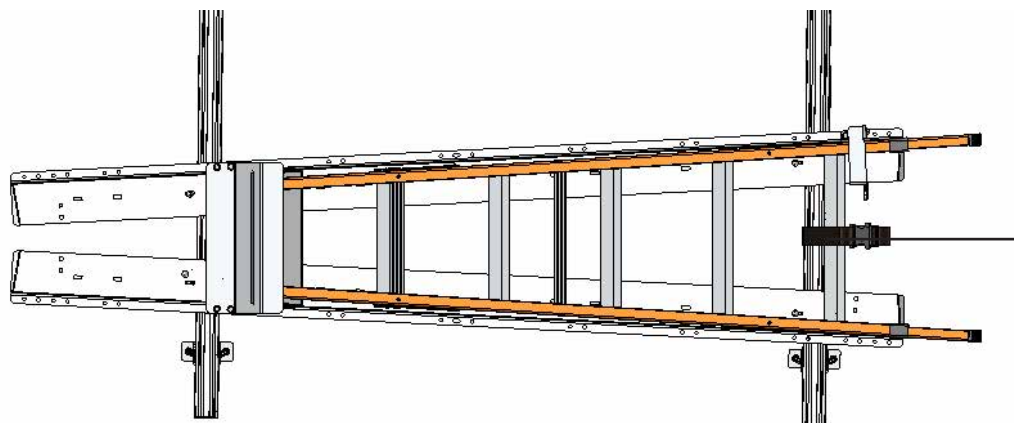
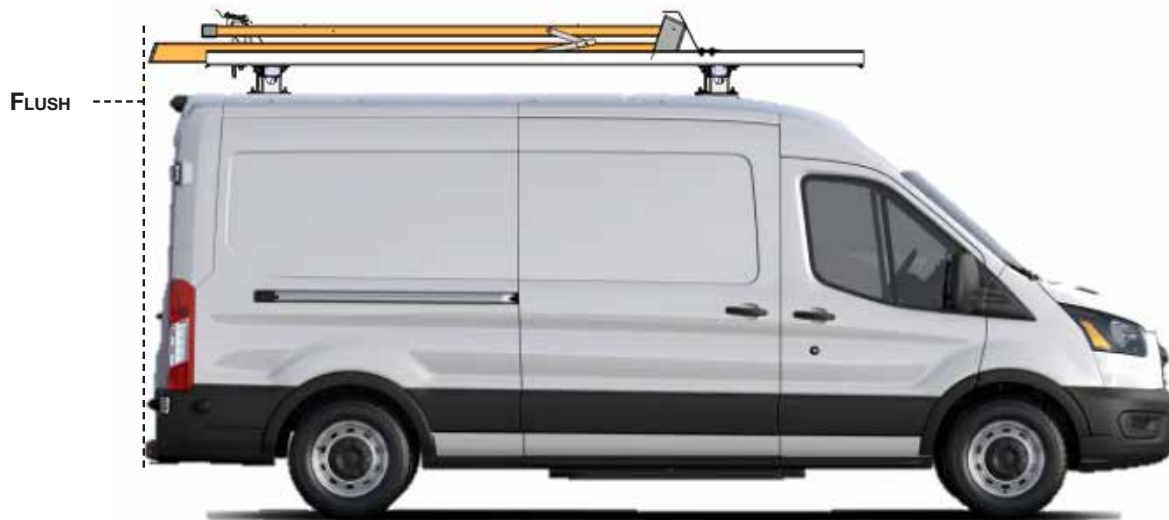
- ☐ Ratchet
- ☐ 9/16" Socket

**FASTENERS USED**

**2x PER CROSSBAR ( 17 lbs • ft )**

- #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

1.2.7 Load a step ladder in the step ladder kit, adjust the ladder hood and then tighten all the bolts.

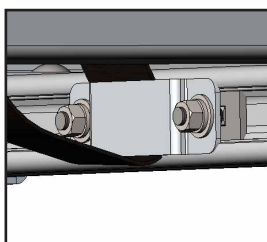


LOCATE IN THE CENTER OF  
THE RUNG

#### TOOLS

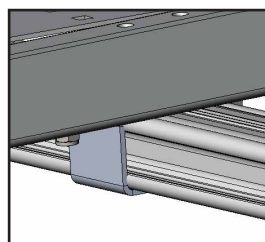
- ❑ Ratchet
- ❑ 1/2" Socket

( 11 lbs • ft )



**NOTE:** Move the belt retainer to the center of the rung, then tighten the bolts

( 11 lbs • ft )



**NOTE:** Move the ladder hood in place, then tighten the bolts in the bracket.



**“Congratulations, you have successfully installed your  
Step Ladder Kit on your vehicle!**

**Thank you for doing business with us.”**

For any feedback or suggestions you might have, please contact: [cs@rangerdesign.com](mailto:cs@rangerdesign.com)

