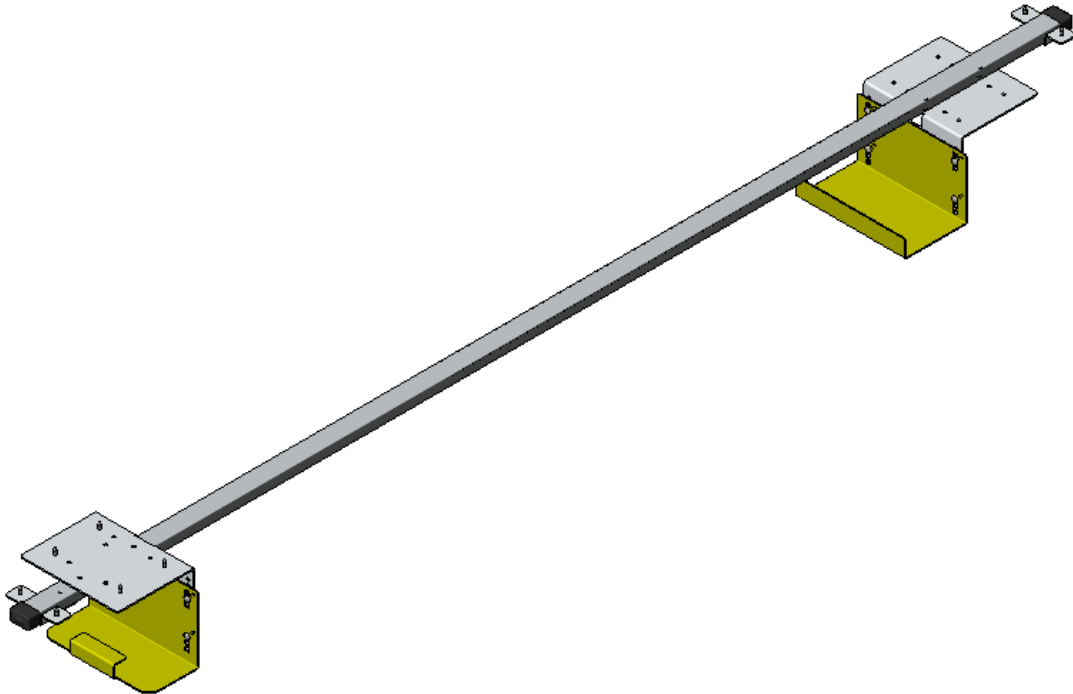
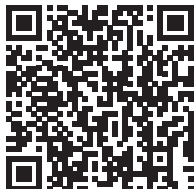


INSTALLATION GUIDE



1050-FS INSIDE LADDER CARRIER

Inside Ladder Carrier (Aluminum)



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.
- Do not install this product where it could ingress on the Transit Occupant Protection Zone. 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

- 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 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

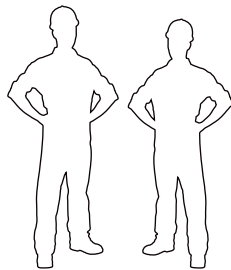
- 1.1 Setup..... 4
- 1.2 Ladder Carrier Assembly..... 6

Phase 2 - Installation

- 2.1 Ladder Carrier Installation..... 9

REQUIRED ITEMS

- Cordless Impact
- Tape Measure
- Ladder
- 1/2" Socket
- 7/16" Socket
- 3/8" Impact Bit
- Knife

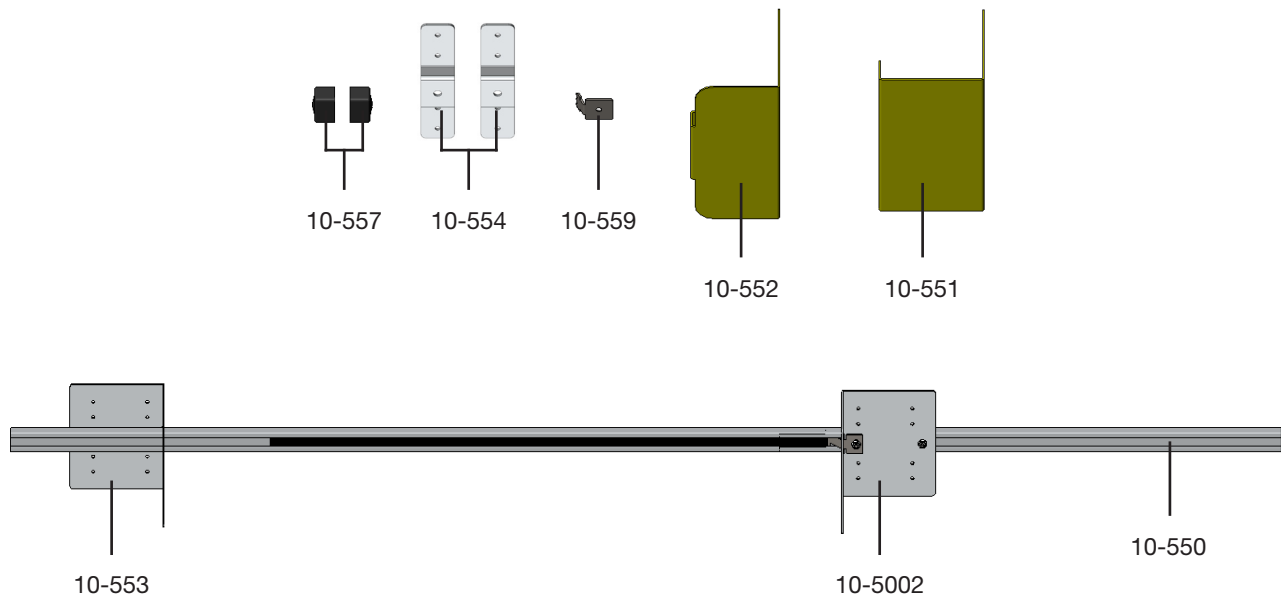


**2
PERSONS**

PHASE 1 – ASSEMBLY

1.1 SETUP

1.1.1 Unpack components; compare with the bill of materials.



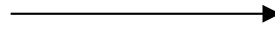
1.1.2 Verify all parts are present.

BILL OF MATERIALS




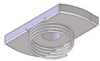



Item No.	Description	Qty.
10-550	Mounting Track (96" Long)	1
10-551	Front Support	1
10-552	Rear Support	1
10-553	Support Carrier	1
10-554	Channel Bracket	2
10-557	End Cap	2
10-559	Elastic Clamp	1
10-5002	Support Carrier Sub-Assembly	1
94-1018	Assembly Fastener Kit	1
96-1024	Install Fastener Kit	1

1.1.3 Fastener kits.




94-1018 Fastener Kit







Fastener Assembly

- 1x**  **# 90-208** Hex Bolt
5/16"-18 x 1"
ZINC
- 8x**  **# 90-392** Carriage Bolt
1/4"-20 x 3/4"
ZINC
- 8x**  **# 94-106** Lock Nut
1/4"
ZINC
- 1x**  **# 94-150** Channel Nut
5/16"
- 8x**  **# 98-106** Flat Washer
1/4"
ZINC
- 1x**  **# 98-116** Flat Washer
5/16", 7/8" OD
ZINC
- 1x**  **# 98-122** Lock Washer
5/16"
ZINC

8x

 #90-392 Carriage Bolt 1/4" x 3/4"
 #98-106 Flat Washer
 #94-106 Lock Nut

1x

 #90-208 Hex Bolt 5/16" x 1"
 #98-122 Lock Washer
 #98-116 Flat Washer
 #94-150 Channel Nut


96-1024 Fastener Kit




Fastener Assembly

- 4x**  **# 92-100** Hex Screw
#14 x 3/4"
ZINC
- 2x**  **# 92-102** Hex Screw
#14 x 1"
ZINC

4x

 #92-100 Hex Screw 3/4"

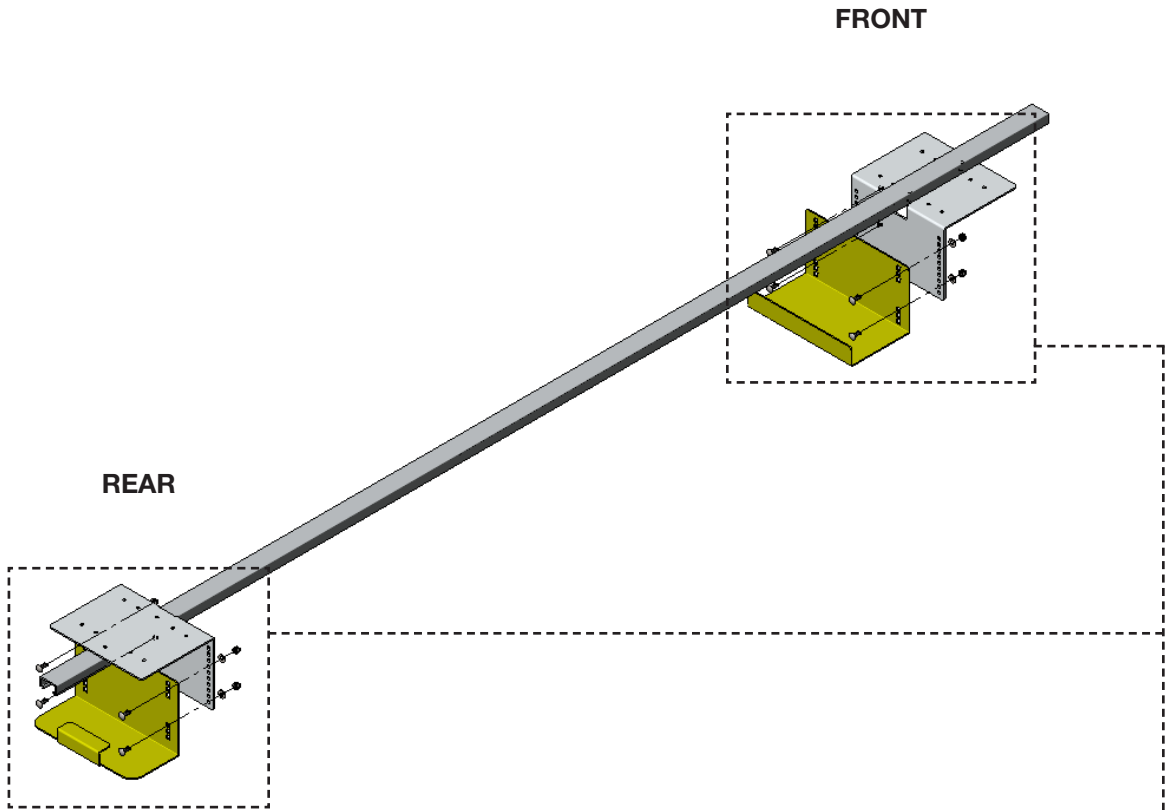
2x

 #92-102 Hex Screw 1"

PHASE 1 – ASSEMBLY

1.2 LADDER CARRIER ASSEMBLY




1.2.1 Attach the rear and front supports to the support carrier.



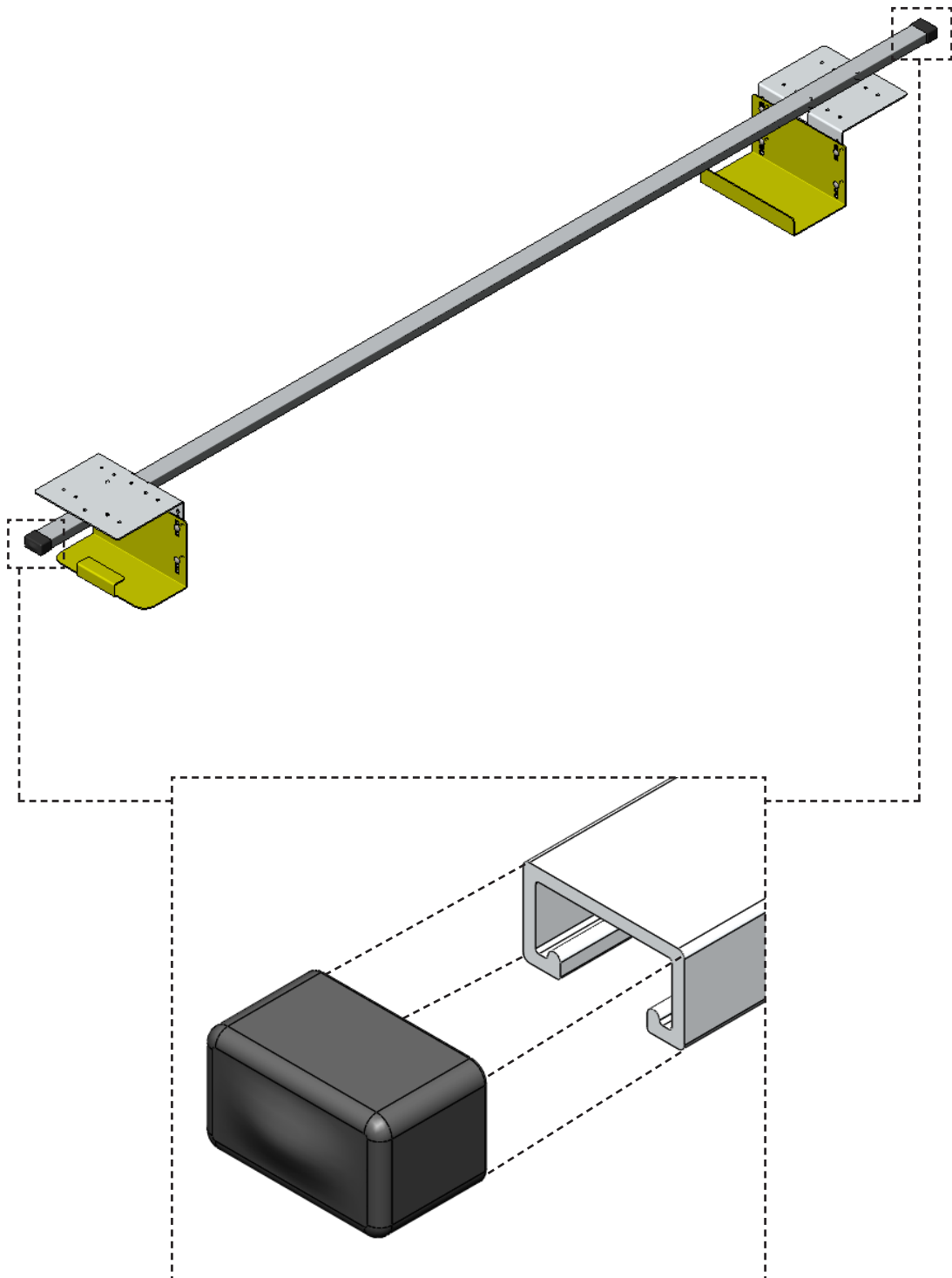
A close-up view of the hardware assembly on the support carrier. It shows a yellow support bracket being attached to a grey metal plate. The hardware includes carriage bolts, flat washers, and lock nuts. Dashed lines indicate the alignment of the hardware.

HARDWARE USED

8x HAND-TIGHTEN THE NUTS.

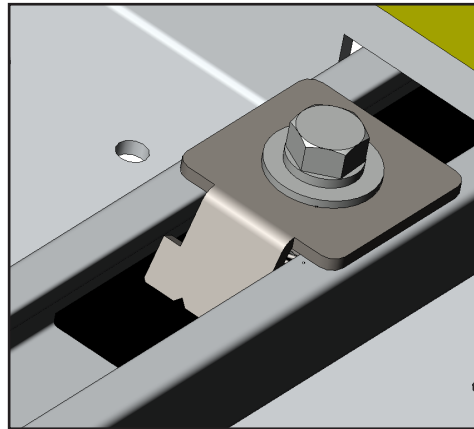
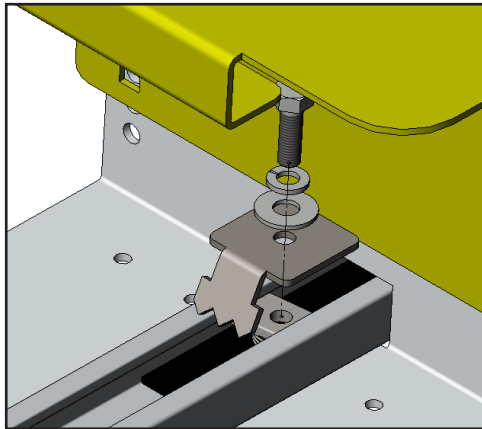
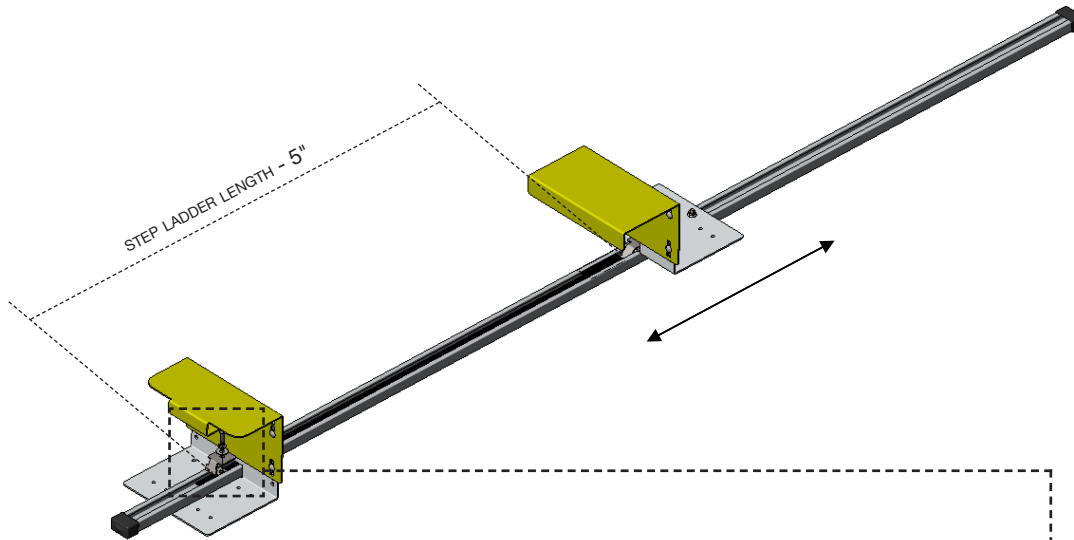
	#90-392 Carriage Bolt 1/4" x 3/4"
	#98-106 Flat Washer
	#94-106 Lock Nut

1.2.2 Attach the end caps on both ends of mounting track.







1.2.3 Clamp the loose end of the elastic strap to the mounting track, using the elastic clamp as shown.

NOTE: Elastic strap length = Step ladder length - 5" (MAX. 70")



HARDWARE USED

1x HAND-TIGHTEN THE NUTS.

-  #90-208 Hex Bolt 5/16" x 1"
-  #98-122 Lock Washer
-  #98-116 Flat Washer
-  #94-150 Channel Nut

TOOLS

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

PHASE 2 – INSTALLATION

2.1 LADDER CARRIER INSTALLATION

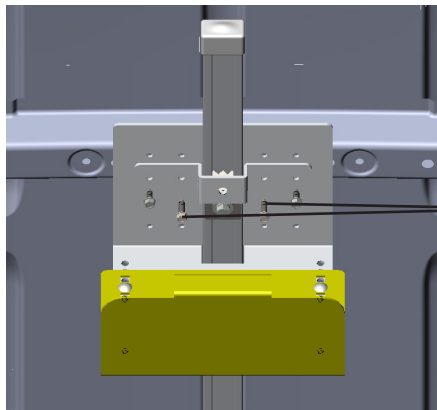
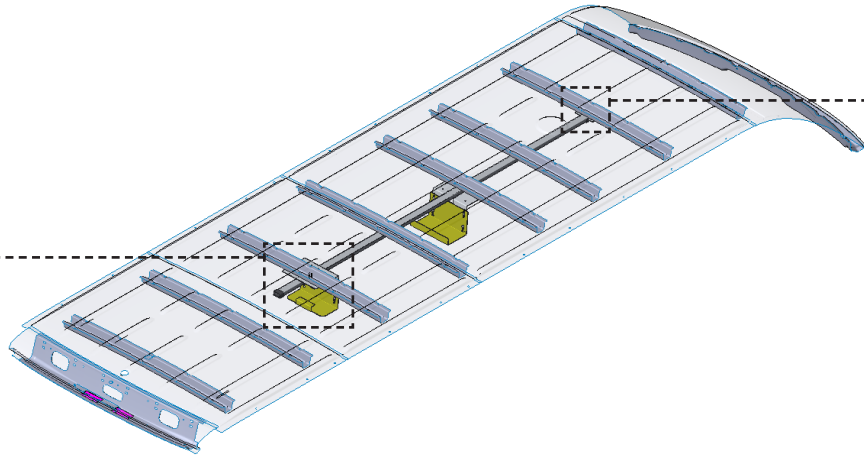
2.1.1 Install the ladder carrier on the roof beams with the channel bracket to hold the mounting tracks.

NOTE: Make sure that the mounting track is not blocking or touching the partition on the top.

REAR

PICTURE SHOWN SPRINTER ROOF

FRONT



TOOLS

- Cordless Impact
- 3/8" Impact Bit

HARDWARE USED

2x

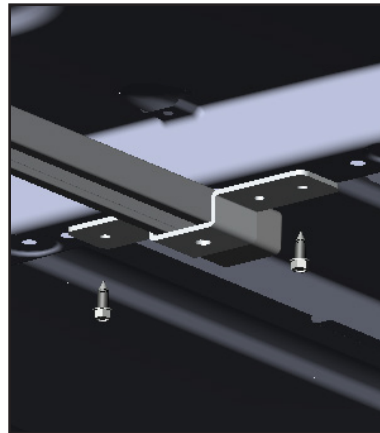


#92-100 Hex Screw 3/4"

2x



#92-102 Hex Screw 1"



TOOLS

- Cordless Impact
- 3/8" Impact Bit

HARDWARE USED

2x



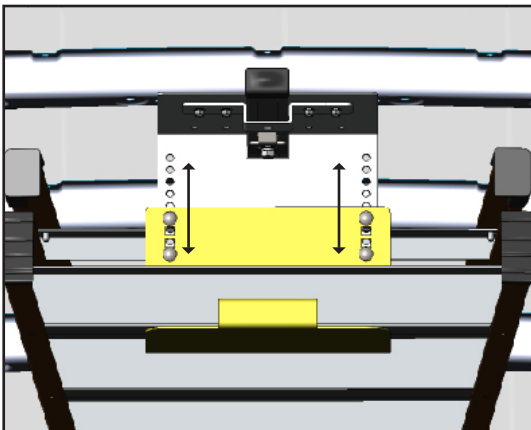
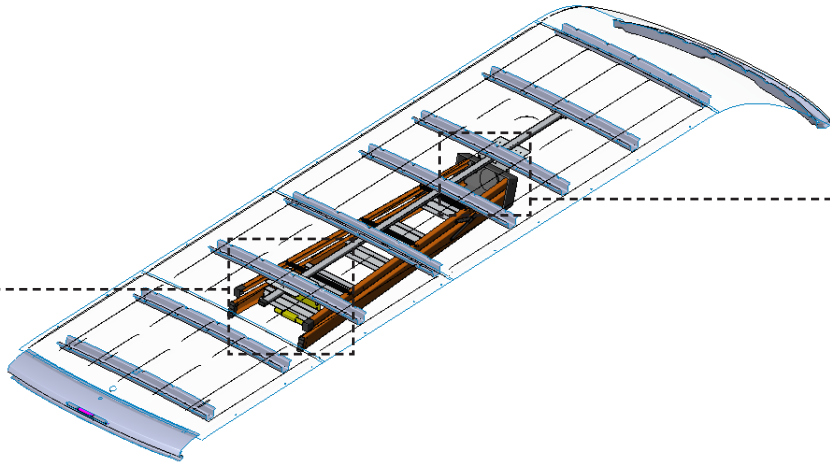
#92-100 Hex Screw 3/4"

2.1.2 Place the ladder on the carrier and adjust the supports as needed, then tighten the lock nut.

REAR

PICTURE SHOWN SPRINTER ROOF

FRONT






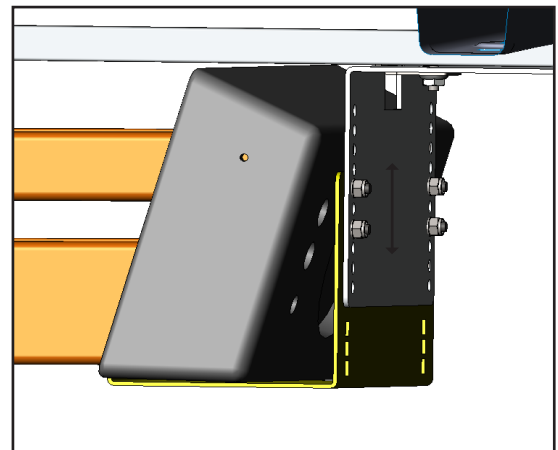
TOOLS

- Cordless Impact
- 7/16" Socket

HARDWARE USED

4x HARDWARE ARE ALREADY ATTACHED

-  #90-392 Carriage Bolt 1/4" x 3/4"
-  #98-106 Flat Washer
-  #94-106 Lock Nut






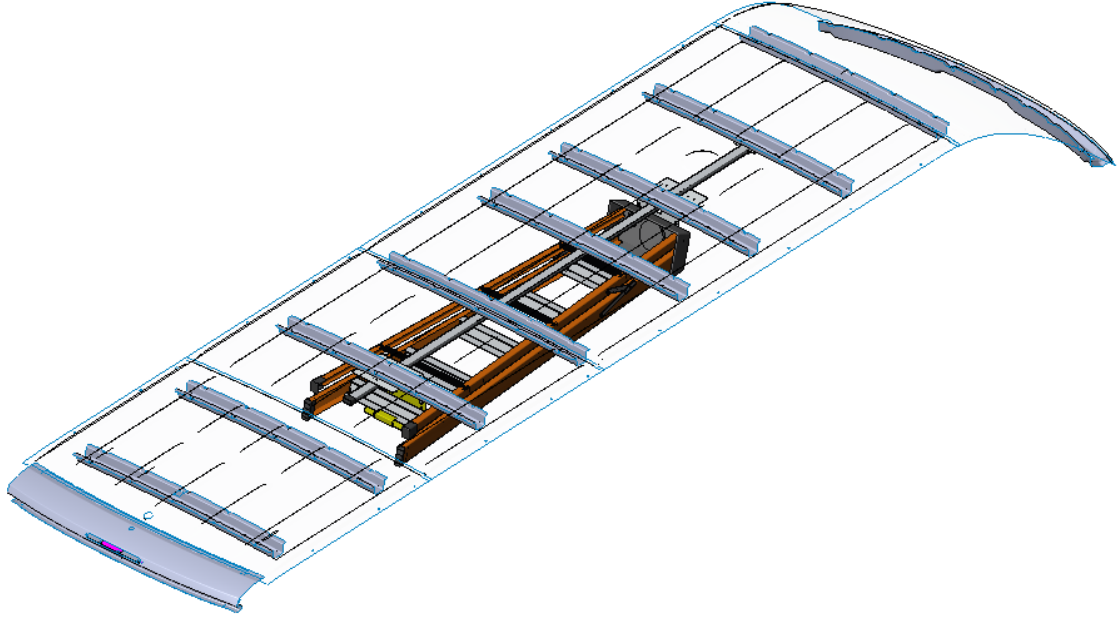
TOOLS

- Cordless Impact
- 7/16" Socket

HARDWARE USED

4x HARDWARE ARE ALREADY ATTACHED

-  #90-392 Carriage Bolt 1/4" x 3/4"
-  #98-106 Flat Washer
-  #94-106 Lock Nut



**“You have successfully installed your
Inside Ladder Carrier**

Thank you for doing business with us.”

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

