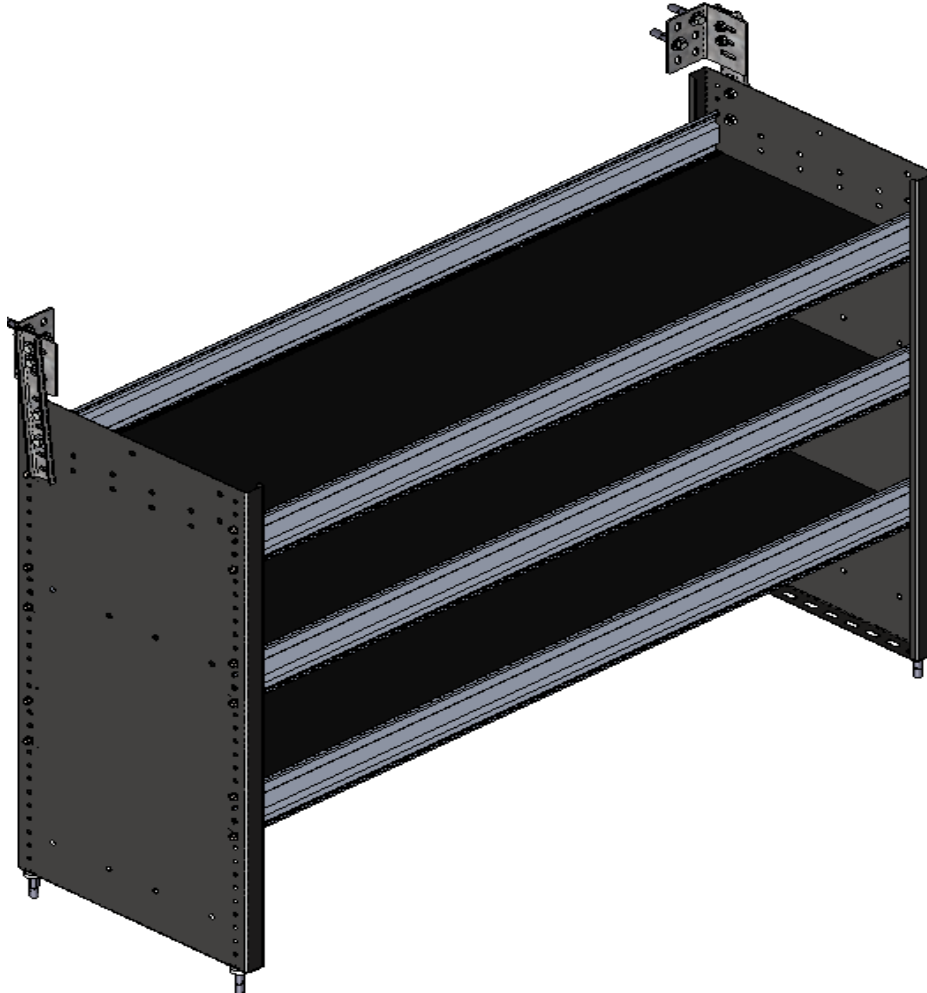


INSTALLATION GUIDE



S3-RS48-3 Shelving (STEEL)

Ram C/V

Box Truck / Trailer



Scan the QR for the latest Install-Guide.

RANGER
DESIGN



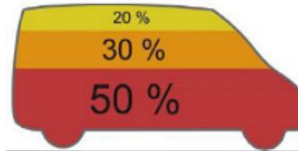
BEFORE YOU BEGIN

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.
- 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

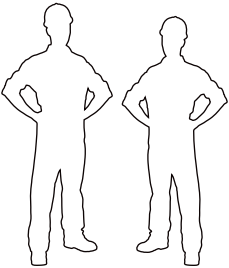
- 1.1 Setup..... 4
- 1.2 Shelf Assembly..... 6

Phase 2 - Installation

- 2.1 Attach Wall Brackets To The End Panels..... 8
- 2.2 Mark Holes For Plus Nuts..... 9
- 2.3 Attach Plus Nut..... 10
- 2.4 Attach Shelf Unit To the Floor..... 12
- 2.5 Attach Wall Brackets..... 13

REQUIRED ITEMS

- Cordless Impact
- Cordless Drill
- Tape Measure
- Marker
- 1/2" Socket
- 1/2" Drill Bit w/ Drill Collar (Set at 1/2")
- 3/8" Driver Bit
- Knife
- Plusnut Tool / Plusnut Gun (5/16")

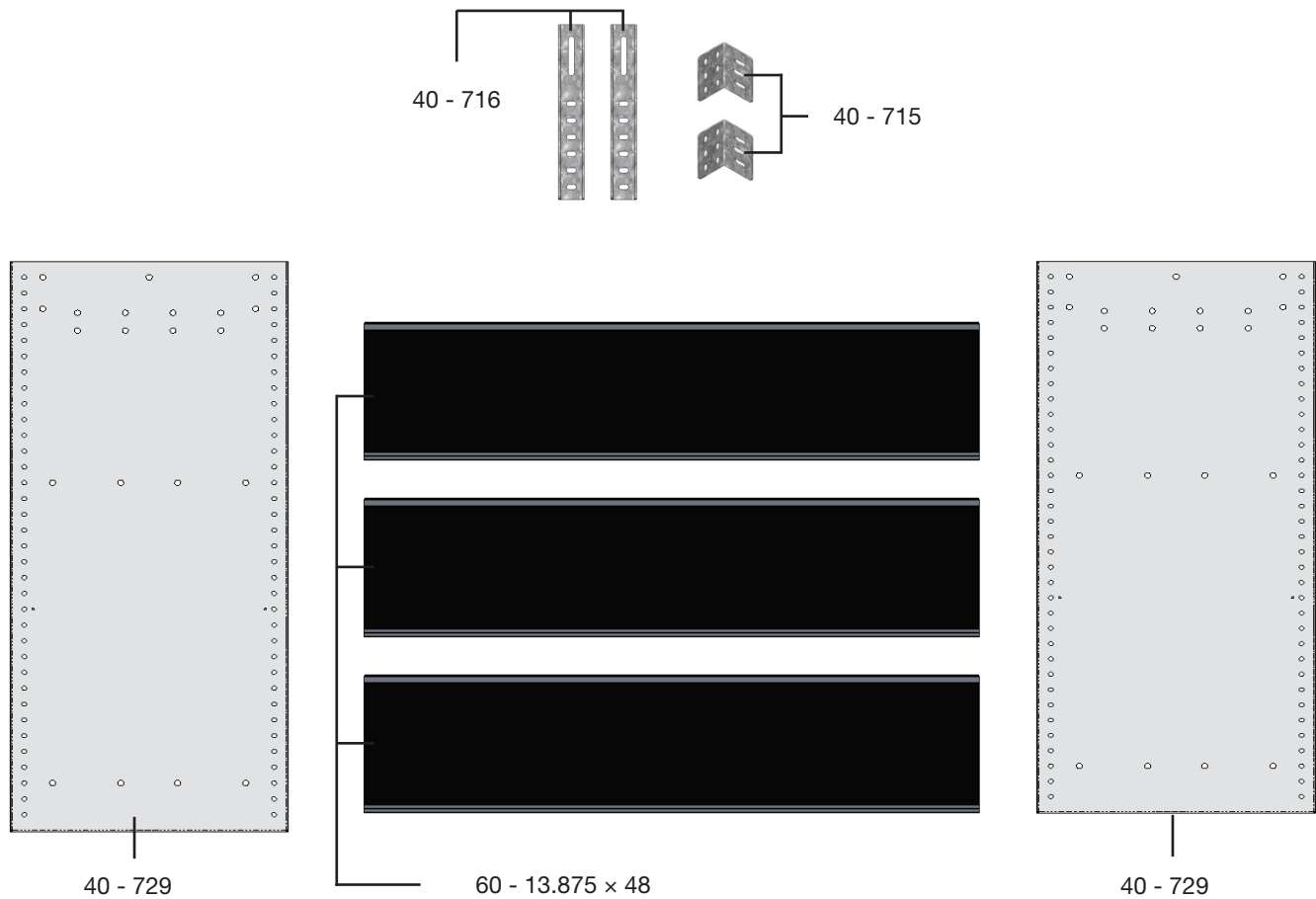


**2
PERSONS**

PHASE 1 – ASSEMBLY

1.1 SETUP

1.1.1 Unpack components; compare with the bill of materials.



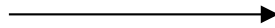
1.1.2 Verify all parts are present.

BILL OF MATERIALS

Item No.	Description	Qty.
40 - 715	Bracket head	2
40 - 716	Bracket arm	2
40 - 729	End Panel	2
60 - 13.875 × 48	Shelf Tray, Black Plywood, Usable 14" × 48"	3
94 - 4027	Assembly Fastener Kit	1
96 - 4027	Install Fastener Kit	1

1.1.3 Fastener kits.

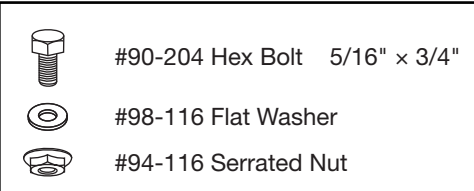
94 - 4027 Fastener Kit



Fastener Assembly

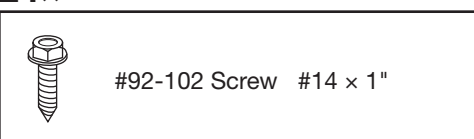
- 8x  # 90-204 Hex Bolt
5/16"-18 x 3/4"
GR-5 ZINC
- 24x  # 92-102 Screw HWH
#14 x 1"
ZINC
- 8x  # 94-116 Serrated Nut
5/16"-18
ZINC
- 8x  # 98-116 Flat Washer
5/16" - 18 x 1"
ZINC

8x



- #90-204 Hex Bolt 5/16" x 3/4"
- #98-116 Flat Washer
- #94-116 Serrated Nut

24x









- #92-102 Screw #14 x 1"


96 - 4027 Fastener Kit



Fastener Assembly

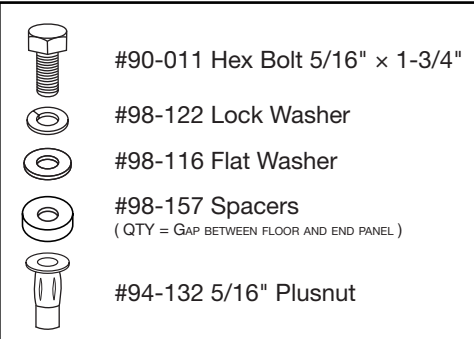
- 4x  # 90-011 Hex Bolt
5/16"-18 x 1-3/4"
GR-5 ZINC
- 4x  # 90-212 Hex Bolt
5/16"-18 x 1-1/4"
GR-5 ZINC
- 8x  # 94-132 Plusnut
- 8x  # 98-116 Flat Washer
5/16", O.D. 7/8"
ZINC
- 8x  # 98-122 Lock Washer
5/16"
ZINC
- 4x  # 98-157 Spacer
0.375" ID, x 1.0" OD x 0.25" LONG
NYLON

4x



- #90-212 Hex Bolt 5/16" x 1-1/4"
- #98-122 Lock Washer
- #98-116 Flat Washer
- #94-132 5/16" Plusnut

4x



- #90-011 Hex Bolt 5/16" x 1-3/4"
- #98-122 Lock Washer
- #98-116 Flat Washer
- #98-157 Spacers
(QTY = GAP BETWEEN FLOOR AND END PANEL)
- #94-132 5/16" Plusnut

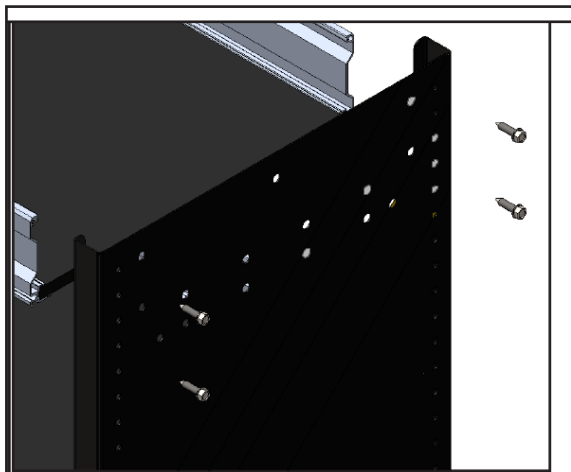
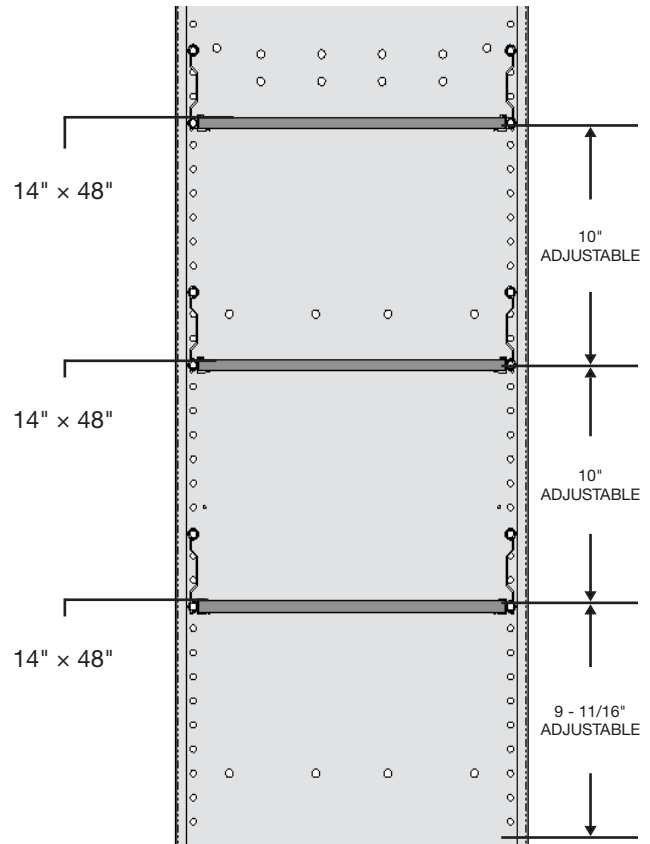
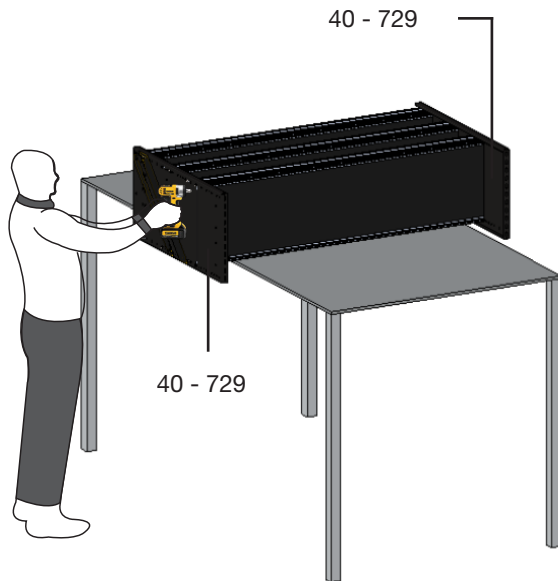
PHASE 1 – ASSEMBLY

1.2 SHELF ASSEMBLY

1.2.1 Attach both panels to the shelf trays.

NOTE: You can adjust the bottom shelf location to maximize or minimize your space over the wheel.

IMPORTANT: Always handle panels on a smooth, protected and clean surface to avoid unnecessary scratching.



TOOLS

- Cordless Impact
- 3/8" Driver Bit

HARDWARE USED

24x

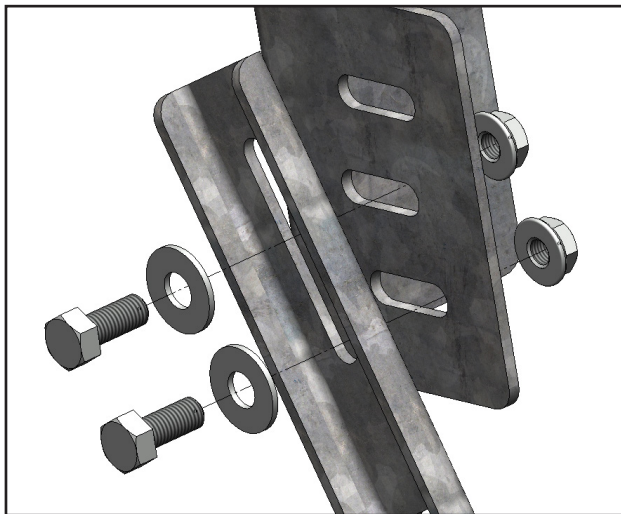
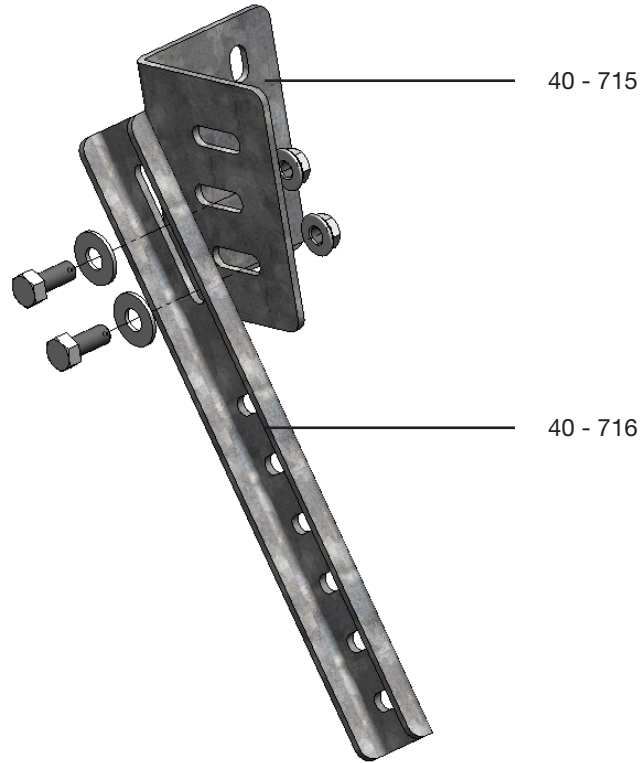


#92-102 Screw #14 x 1"

1.2.2 Attach the bracket head to the bracket arm.

NOTE: Hand-tighten the bolts for adjustment.

2x






TOOLS

- Cordless Impact
- 1/2" Socket

HARDWARE USED

4x HAND-TIGHTEN THE BOLTS

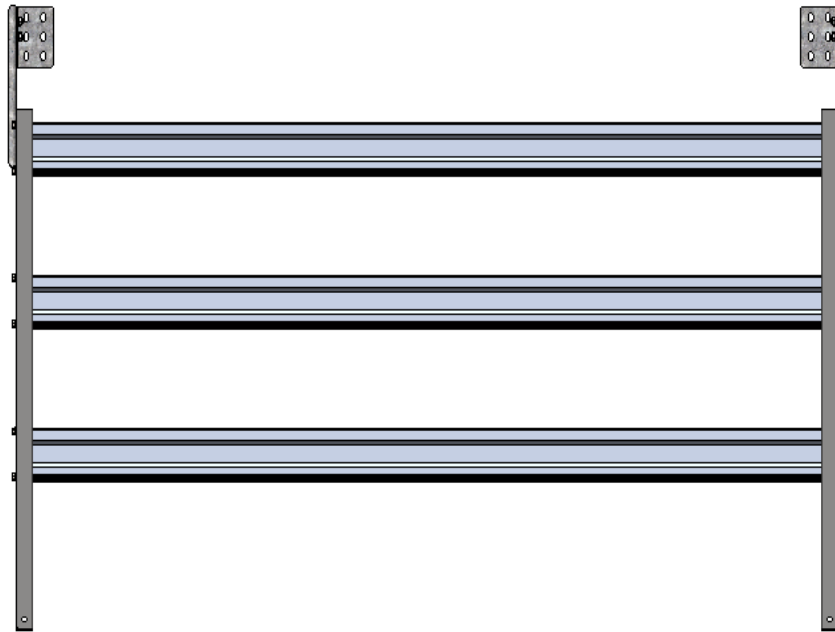
- | | |
|--|-------------------------------|
|  | #90-204 Hex Bolt 5/16" x 3/4" |
|  | #98-116 Flat Washer |
|  | #94-116 Serrated Nut |

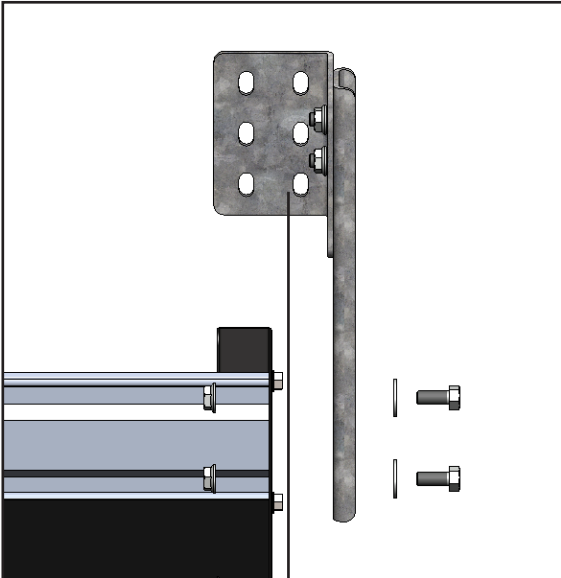
PHASE 2 – INSTALLATION

2.1 ATTACH WALL BRACKETS TO THE END PANELS

- 2.1.1 • Lift the assembled shelf to the vehicle with care, then put it in place.
• Attach the bracket arm to the panels aligning the brackets head to the structure of the van or truck.

IMPORTANT: For **Box Trucks** and **Ram C/V**, make sure that the shelving is securely fastened to the structure of the truck or van.








The diagram shows a close-up of the bracket head assembly. It includes a metal bracket head with four holes, a vertical arm, and two horizontal shelves. The bracket head is being attached to the end panel. The diagram also shows the hardware used for the assembly: two hex bolts, two flat washers, and two serrated nuts.

TOOLS

- Cordless Impact
- 1/2" Socket

HARDWARE USED

4x HAND-TIGHTEN THE BOLTS

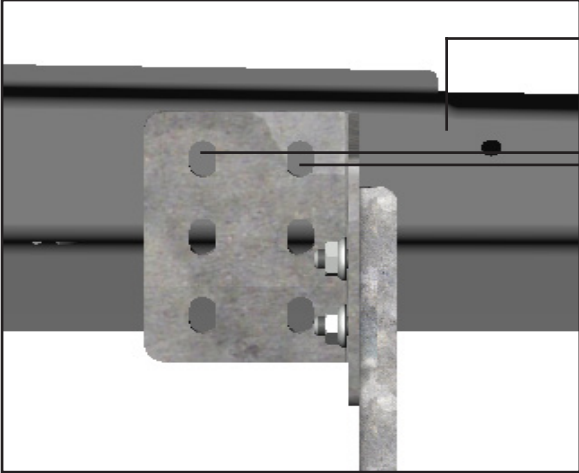
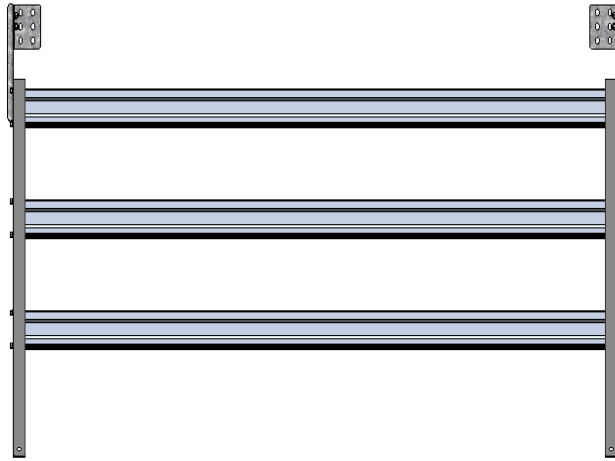
	#90-204 Hex Bolt 5/16" x 3/4"
	#98-116 Flat Washer
	#94-116 Serrated Nut

BRACKET HEAD

PHASE 2 – INSTALLATION

2.2 MARK HOLES FOR PLUS NUTS

2.2.1 After attaching the brackets mark the holes on the brackets and end panels to the structure of the truck or van.

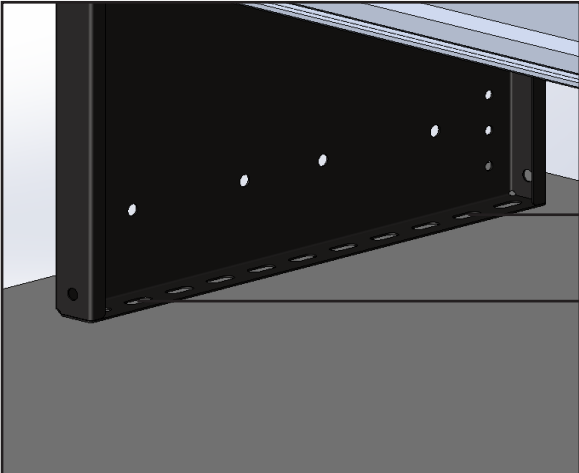


Structure of the truck or van.

Mark 2 holes of the brackets head on the vehicle horizontal rim.

TOOLS
☐ Marker

MARK



Mark 2 holes of each end panel on the vehicle floor.

TOOLS
☐ Marker

MARK

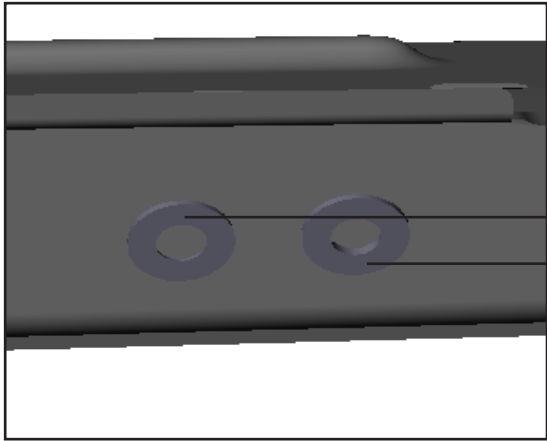
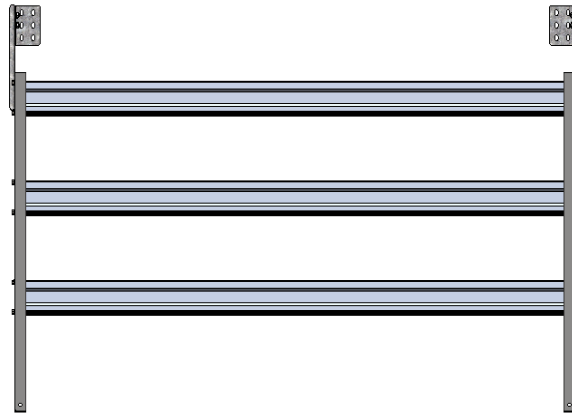
PHASE 2 – INSTALLATION

2.3 ATTACH PLUS NUTS

- 2.3.1**
- Lift the assembled shelf on the side.
 - Drill all the marks using 1/2" drill bit w/ drill collar, then attach plus nuts to the holes.

NOTE: Use 1/2" drill bit with drill collar to stop drill at 1/2" depth.

WARNING: Before drilling, ensure that you will not hit any critical parts of the vehicle like the **Gas tank**, **Wiring Harness** and **Hose**.



PLUSNUT

Drill all the marks then, attach plus nuts to the holes.

TOOLS

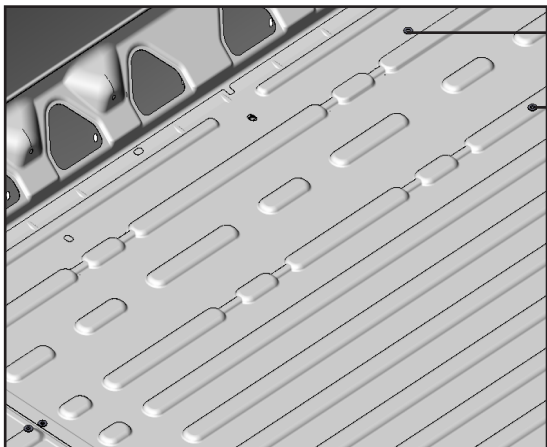
- Cordless Drill
- 1/2" Drill Bit w/ Drill Collar (Set at 1/2")
- Plus Nut Tool (5/16")

HARDWARE USED

8x



#94-132 Plus Nut

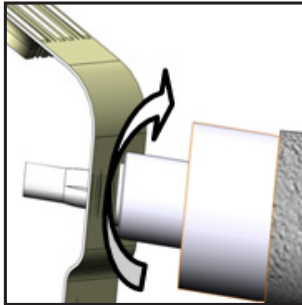


DRILL COLLAR
(SET AT 1/2")

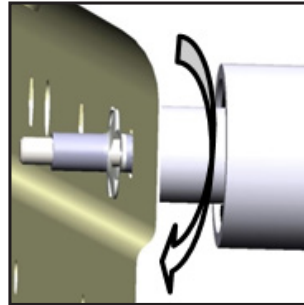
2.3.2 How to attach plus nut.

• USING PLUSNUT GUN

STEP: Put the plusnut on the plusnut gun, then attach the plus nut in the hole by turning the gun forward until the plus nut locks, then remove the gun by turning in reverse.



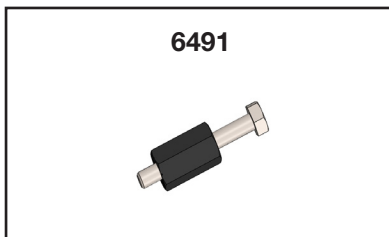
FORWARD



REVERSE



• USING THE 6491 PLUSNUT TOOL

NOTE: The hardware used for the 6490 plusnut tool is not included in the fastener bag. The 6490 plusnut tool can be ordered separately upon demand at no charge.



6491

HARDWARE USED

-  Flat washer 5/16"
-  Flat washer 5/16" BS x 7/8" OD

TOOLS

- Cordless Impact
- 1/2" Socket
- 9/16" Wrench

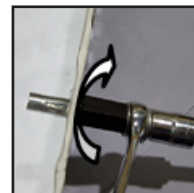
STEP 1:

Assemble the 6491 plusnut tool with the hardware needed, plus nut and the 9/16" wrench as shown.



STEP 2:

Attach the plus nut in the hole by turning the bolt forward using an impact with a 1/2" socket until the plusnut locks, then remove the bolt by turning the impact in reverse.



FORWARD

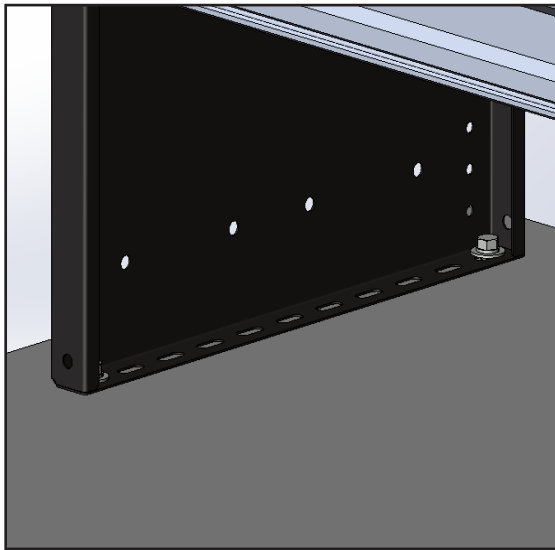
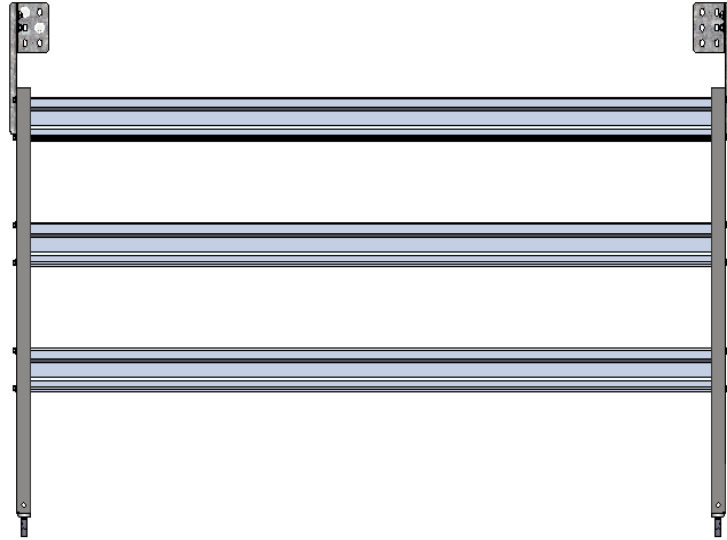


REVERSE

PHASE 2 – INSTALLATION

2.4 ATTACH SHELF UNIT TO THE FLOOR

2.4.1 Put the assembled shelf back in place aligning the holes to the plusnuts, then install the end panels to the plus nuts.



TOOLS

- ☐ Cordless Impact
- ☐ 1/2" Socket

HARDWARE USED

4x



#90-011 Hex Bolt 5/16" x 1-3/4"

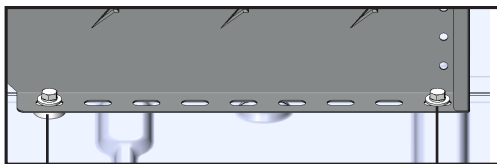
#98-122 Lock Washer

#98-116 Flat Washer

#98-157 Spacers
(QTY = GAP BETWEEN FLOOR AND END PANEL)

#94-132 5/16" Plusnut

MOST VEHICLE USE 1 SPACER WHEN NOT OVER RIBS



W/ Spacer

W/O Spacer

PHASE 2 – INSTALLATION

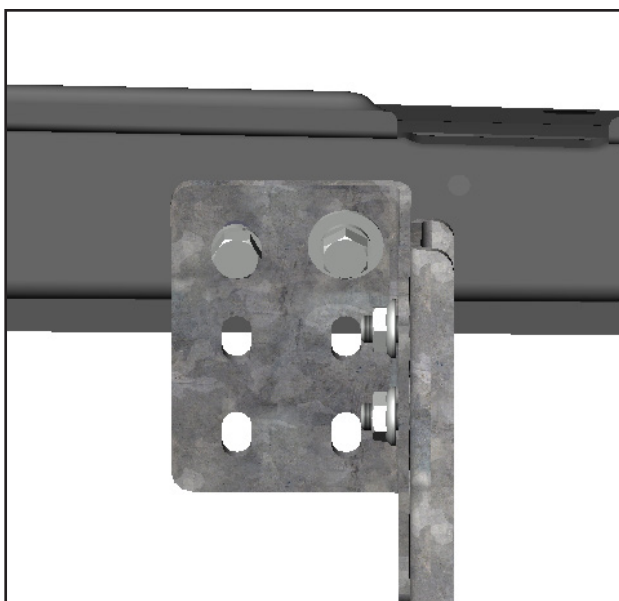
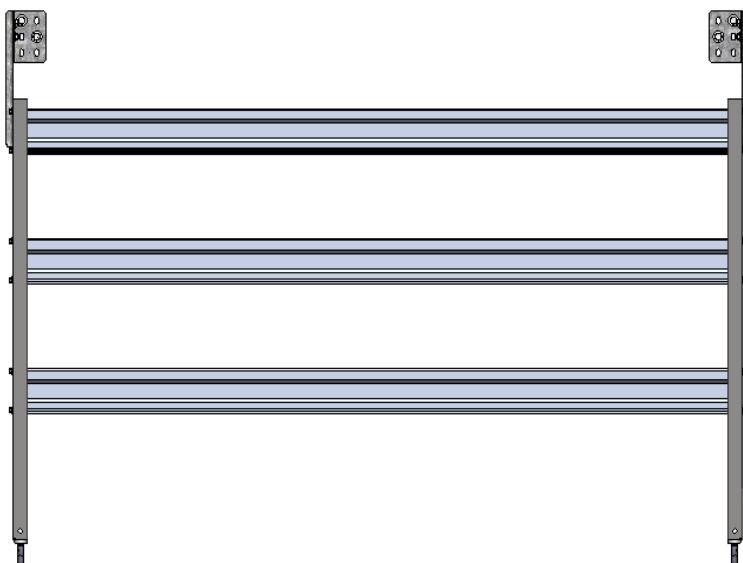
2.5 ATTACH WALL BRACKETS

2.5.1 Aligned the wall brackets to the plus nuts, then install the wall brackets to the structure of the truck or van.

NOTE: Tightened the bolts that used to attached the wall bracket to the structure of the truck or van 1st before the bolts that used to attached the wall bracket to the end panel.

IMPORTANT:

- For **Box Trucks** and **Ram C/V**, make sure that the shelving is securely fastened to the structure of the truck or van.
- After installation is completed, ensure all bolts are tightened.






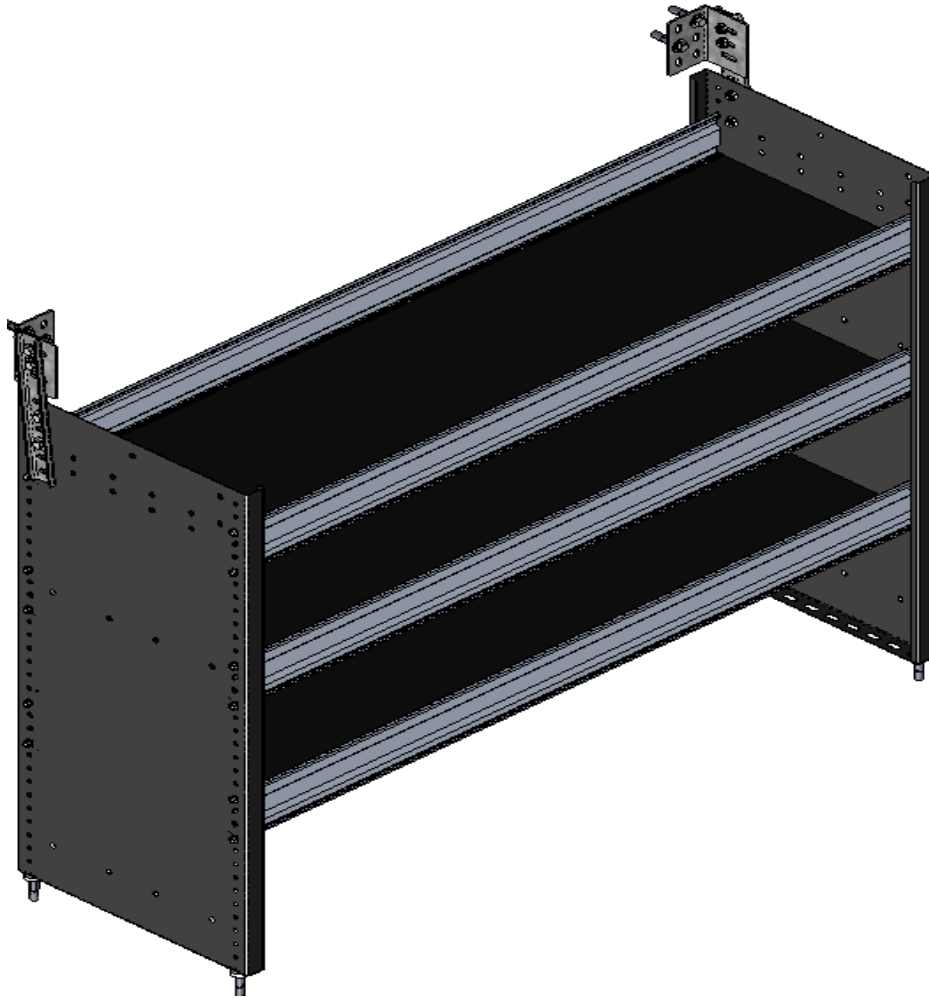
TOOLS

- Cordless Impact
- 1/2" Socket

HARDWARE USED

4x

- | | |
|--|---------------------------------|
|  | #90-212 Hex Bolt 5/16" x 1-1/4" |
|  | #98-122 Lock Washer |
|  | #98-116 Flat Washer |
|  | #94-132 5/16" Plusnut |



**“You have successfully installed your
S3-RS48-3**

Thank you for doing business with us.”

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

