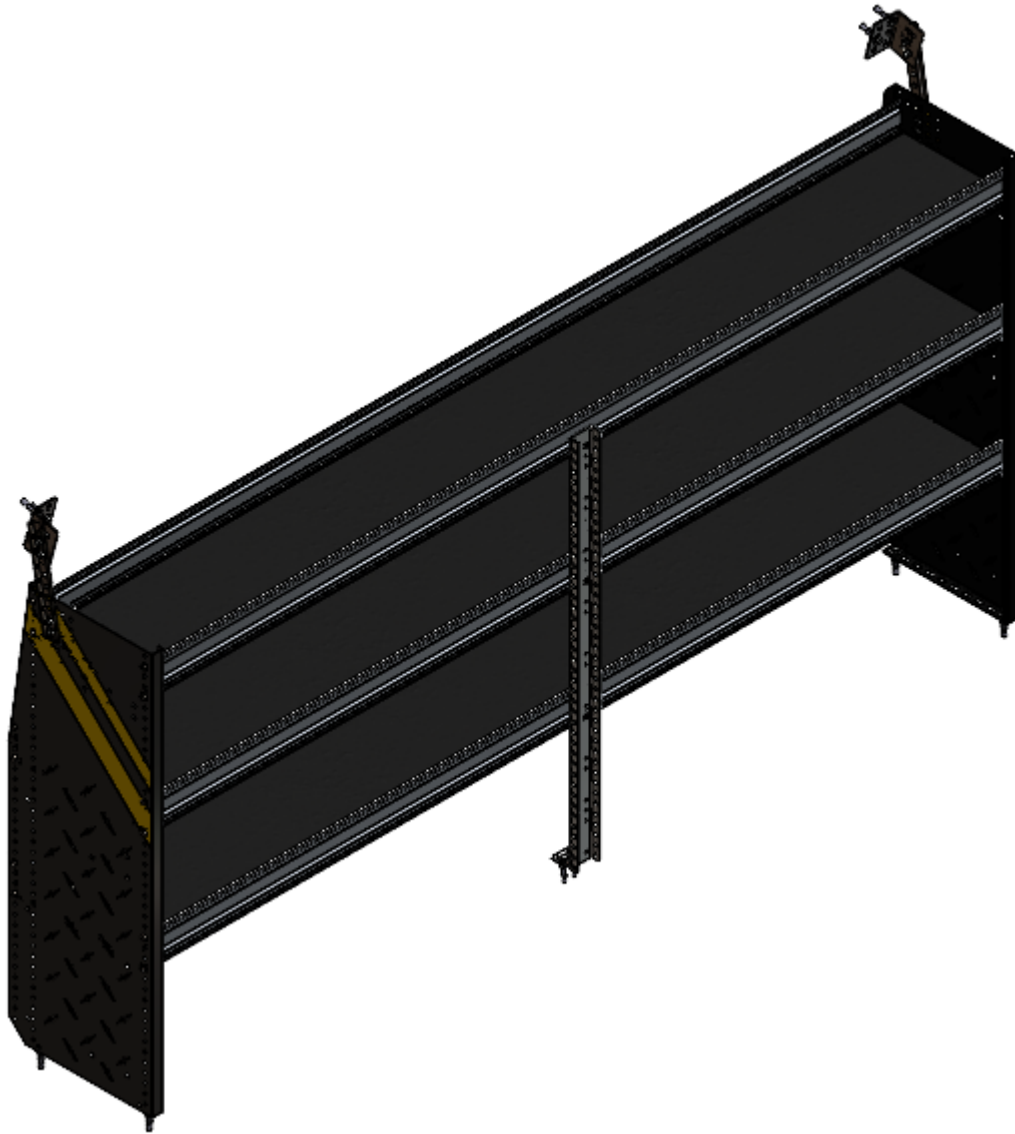


INSTALLATION GUIDE

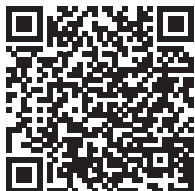


N4-RS96-3 Shelving (STEEL)

Transit Low Roof

Nissan NV Low Roof

GM Savana



Scan the QR for the latest Install-Guide.

RANGER
DESIGN



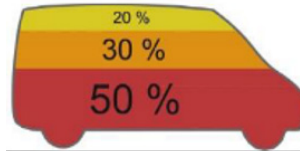
BEFORE YOU BEGIN

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

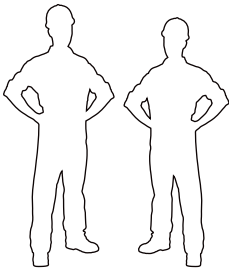
❑ 1.1 Setup.....	4
❑ 1.2 Shelf Assembly.....	6

Phase 2 - Installation

❑ 2.1 Attach Wall Brackets To The End Panels.....	9
❑ 2.2 Mark Holes For Plus Nuts.....	10
❑ 2.3 Attach Plus Nut.....	11
❑ 2.4 Attach Shelf Unit To the Floor.....	13
❑ 2.5 Attach Wall Brackets.....	15

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")

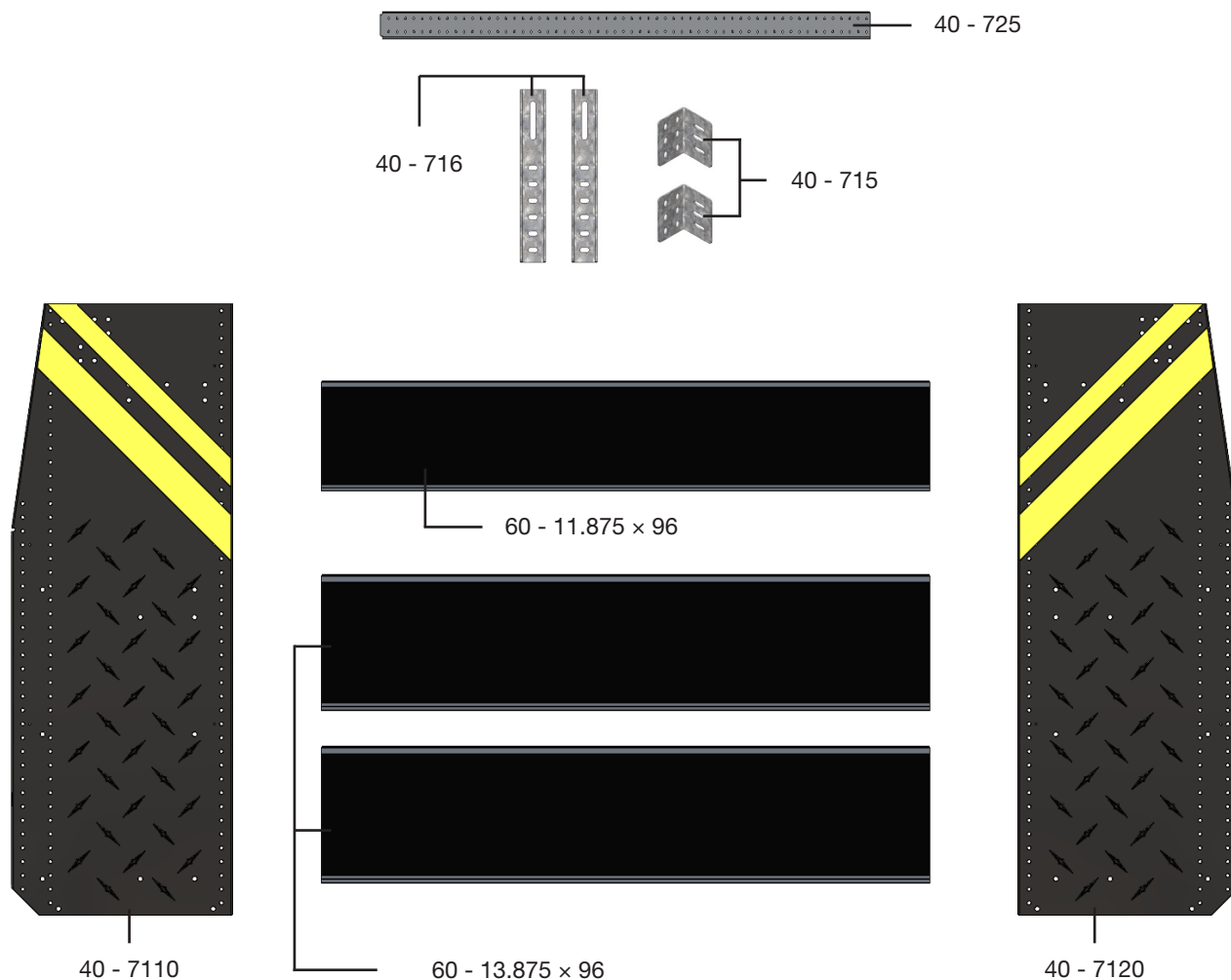


**2
PERSONS**

PHASE 1 – ASSEMBLY

1.1 SETUP

1.1.1 Unpack components; compare with the bill of materials.



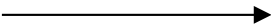
1.1.2 Verify all parts are present.

BILL OF MATERIALS

Item No.	Description	Qty.
40 - 725	Center Post, Low roof	1
40 - 715	Bracket head	2
40 - 716	Bracket arm	2
40 - 7110	End Panel (Left)	1
40 - 7120	End Panel (Right)	1
60 - 11.875 x 96	Shelf Tray, Black Plywood, Usable 12" x 96"	1
60 - 13.875 x 96	Shelf Tray, Black Plywood, Usable 14" x 96"	2
94 - 4028	Assembly Fastener Kit	1
96 - 4028	Install Fastener Kit	1

1.1.3 Fastener kits.




94 - 4028 Fastener Kit




Fastener Assembly

8x		# 90-204	Hex Bolt 5/16"-18 x 3/4" GR-5 ZINC
6x		# 92-200	Screw HFH #10 - 16 x 3/4" 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

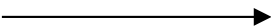
6x

	#92-200 Screw #10 - 16 x 3/4"
---	-------------------------------

24x

	#92-102 Screw #14 x 1"
---	------------------------


96 - 4028 Fastener Kit








Fastener Assembly

6x		# 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
10x		# 94-132	Plusnut 5/16"
10x		# 98-116	Flat Washer 5/16", O.D. 7/8" ZINC
10x		# 98-122	Lock Washer 5/16" ZINC
6x		# 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

6x

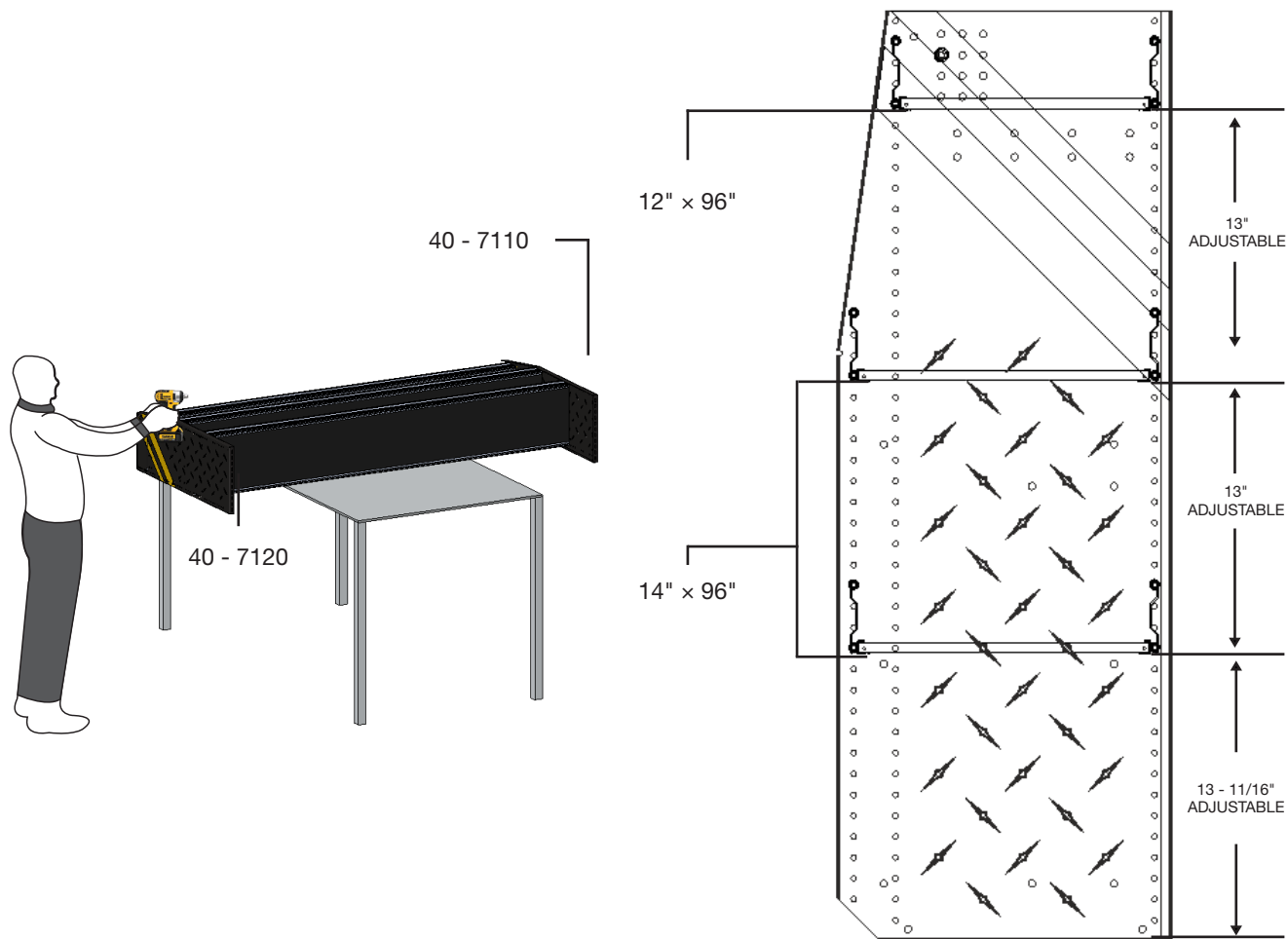
	#90-011 Hex Bolt 5/16" x 1-3/4"
	#98-122 Lock Washer
	#98-116 Flat Washer
	#98-157 Spacers (QTY = GAP BETWEEN FLOOR AND END PANEL)
	#94-132 5/16" Plusnut

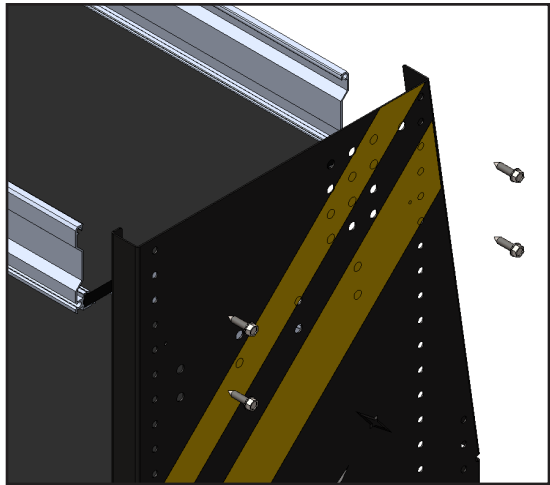
PHASE 1 – ASSEMBLY

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.






TOOLS

- Cordless Impact
- 3/8" Driver Bit

HARDWARE USED

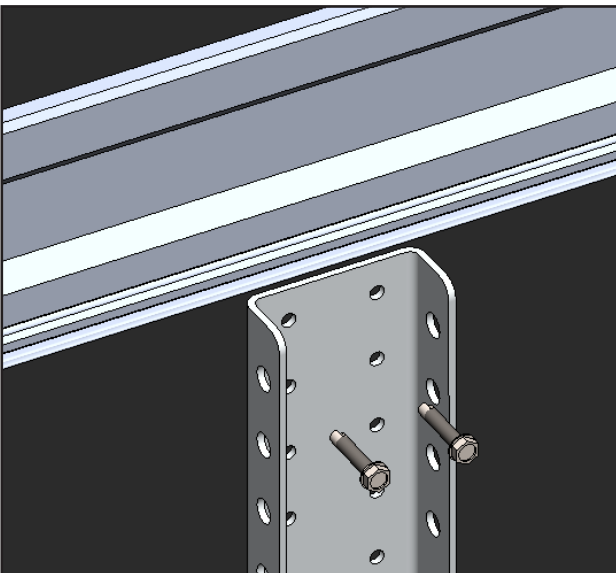
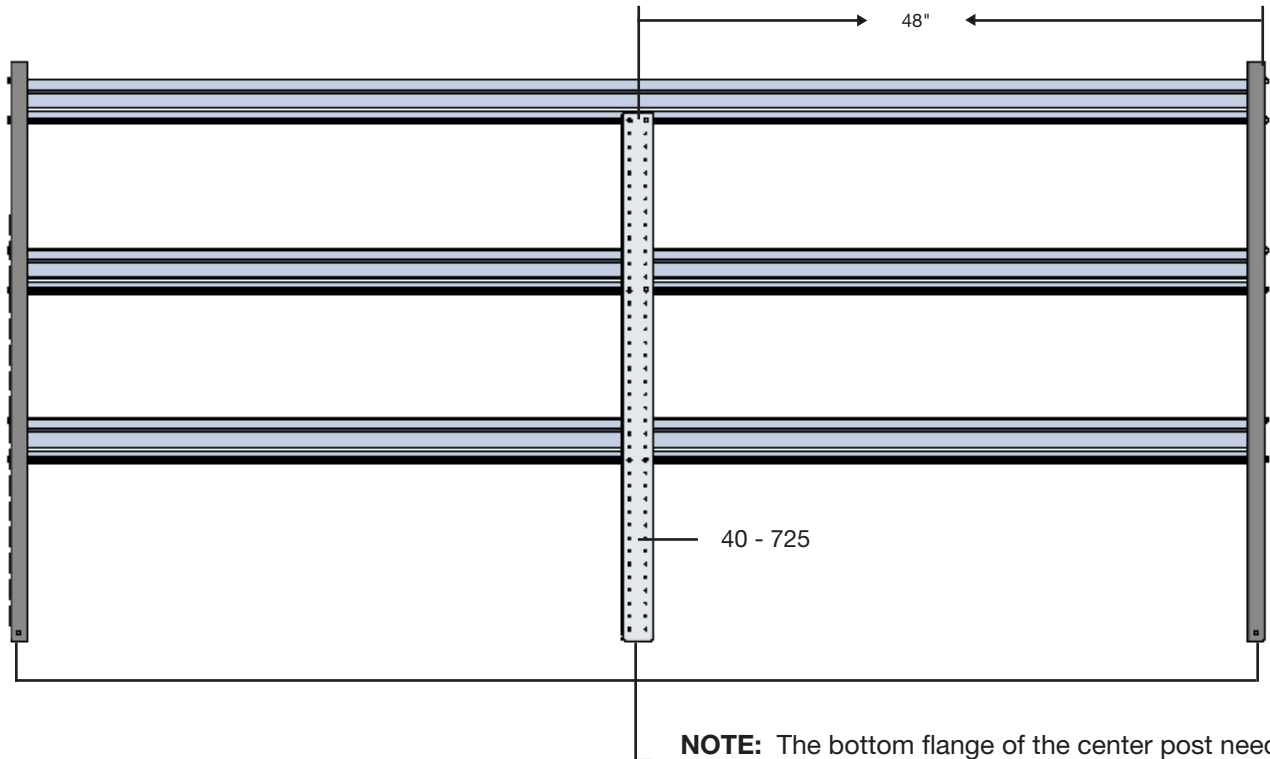
24x



#92-102 Screw #14 x 1"

1.2.2 Attach the center post to the center front face of the shelf.

IMPORTANT: The center post should be attached in the center of the shelf.



TOOLS

- ☐ Cordless Impact
- ☐ 3/8" Driver Bit

HARDWARE USED

6x

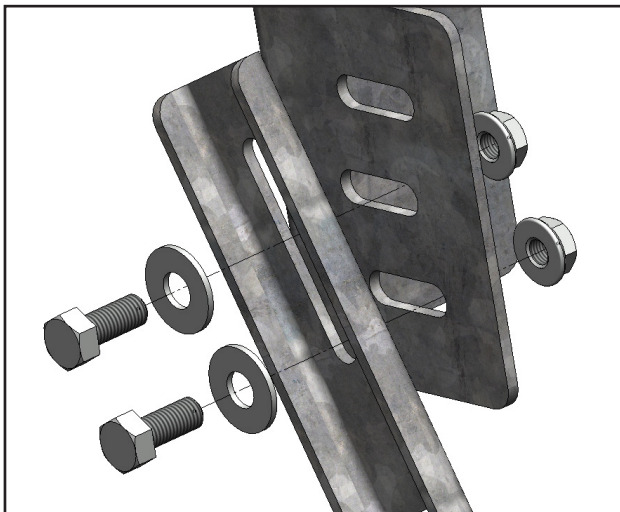
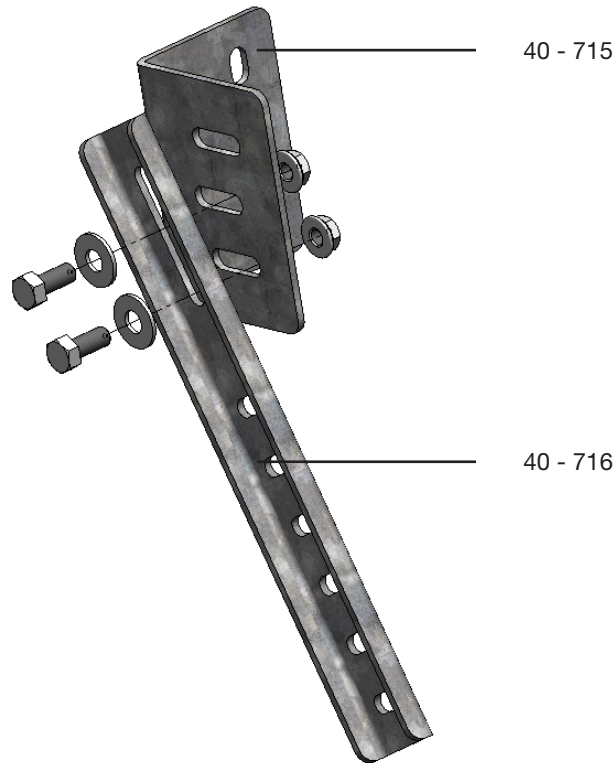


#92-200 Screw #10 - 16 x 3/4"

1.2.3 Attach the bracket head to the bracket arm.

NOTE: Hand-tighten the bolts for adjustment.

2x






TOOLS

- ☐ Cordless Impact
- ☐ 1/2" Socket

HARDWARE USED

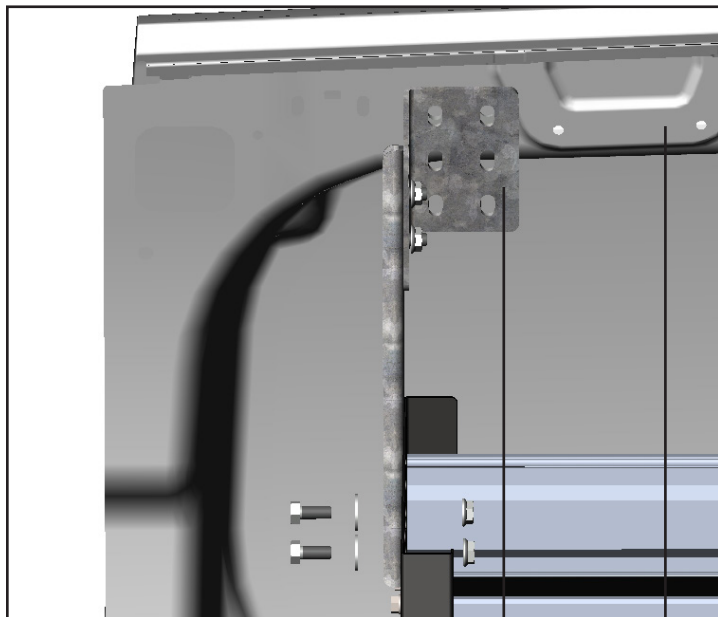
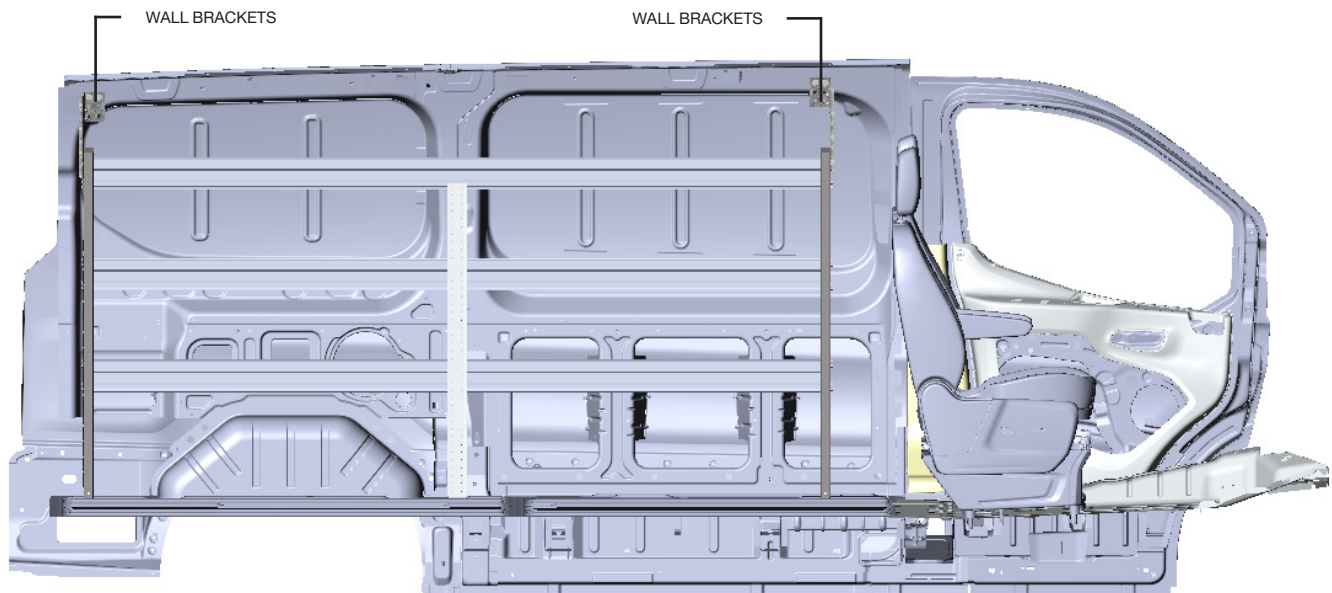
4x HAND-TIGHTEN THE BOLTS

- | | |
|--|-------------------------------|
|  | #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, then put it in place.
 - Attach the bracket arm to the panels aligning the bracket head to the horizontal rim of the vehicle.



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



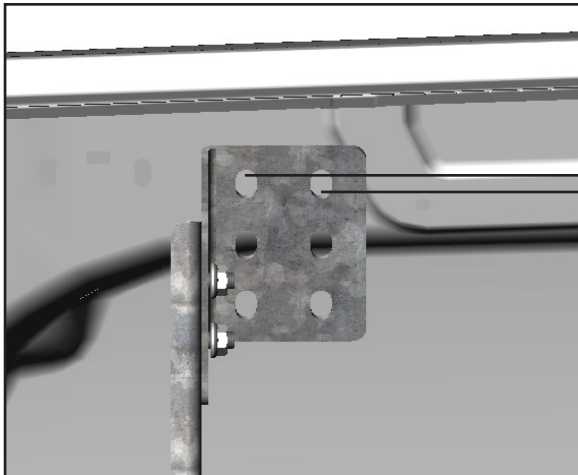
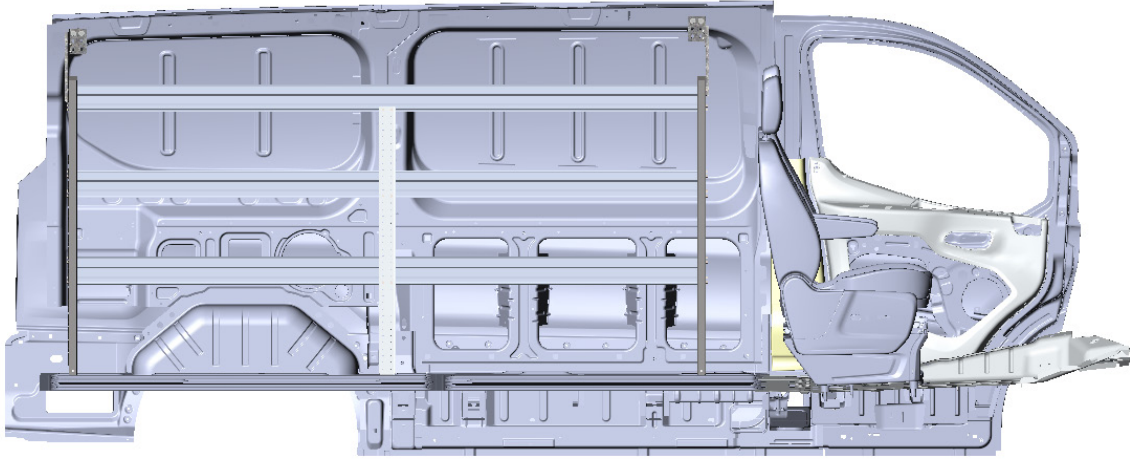
#94-116 Serrated Nut

BRACKET HEAD

HORIZONTAL RIM

2.2 MARK HOLES FOR PLUS NUTS

2.2.1 After attaching the brackets, mark the holes on the brackets, end panels and center post to the vehi-



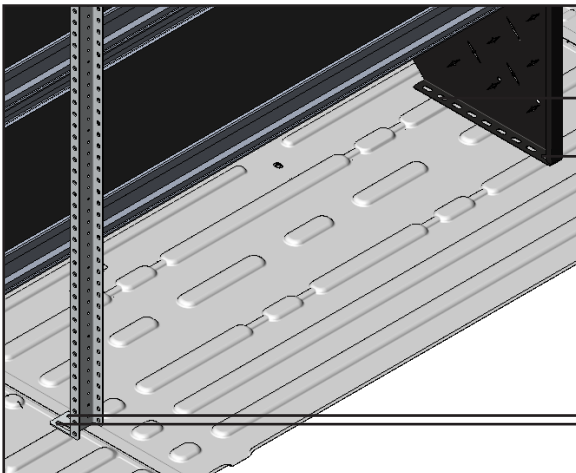
Mark 2 holes of the brackets head on the vehicle horizontal rim.

NOTE: If you are using Ranger wall kit, please go to **PAGE 15**.

TOOLS

□ Marker

MARK



Mark 2 holes of each end panel and mark also the 2 holes of the center post on the vehicle floor.

NOTE: If you are using Ranger floor, please go to **PAGE 13**.

TOOLS

□ Marker

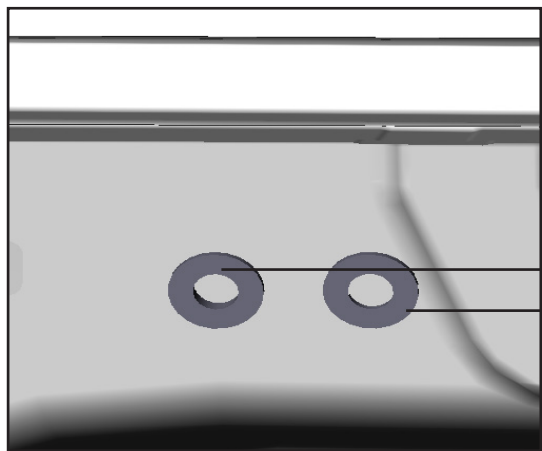
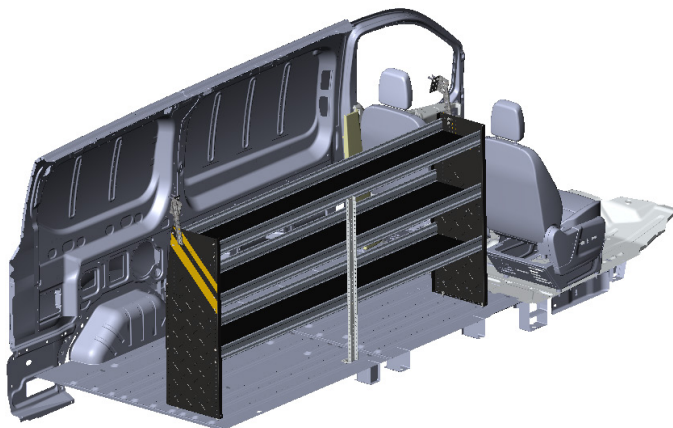
MARK

2.3 ATTACH PLUS NUTS

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

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

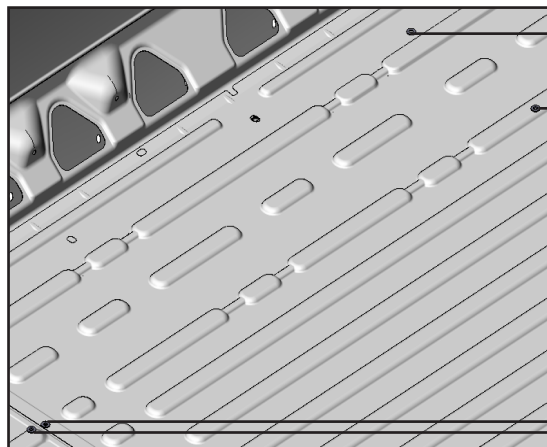
- ☐ Cordless Drill
- ☐ 1/2" Drill Bit w/ Drill Collar (Set at 1/2")
- ☐ Plus Nut Tool (5/16")

HARDWARE USED

10x



#94-132 Plus Nut

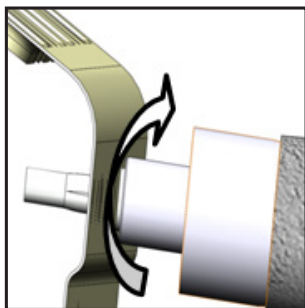


DRILL COLLAR
(SET AT 1/2")

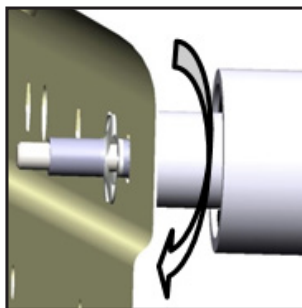
2.3.2 How to attach plus nut.

• 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

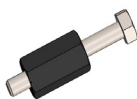


REVERSE



• USING THE 6491 PLUSNUT TOOL

NOTE: The hardware used for the 6491 plusnut tool is not included in the fastener bag.
The 6491 plusnut tool can be ordered separately upon demand at no charge.




6491



HARDWARE USED

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

TOOLS

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

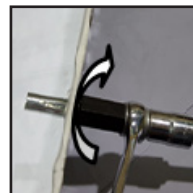
STEP 1:

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

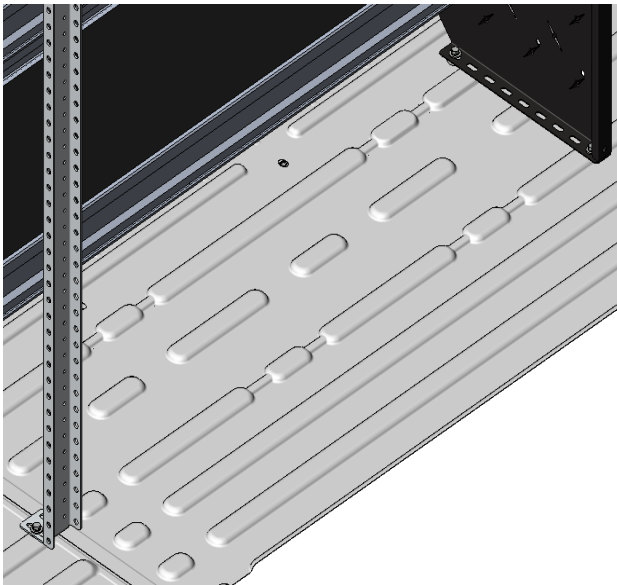
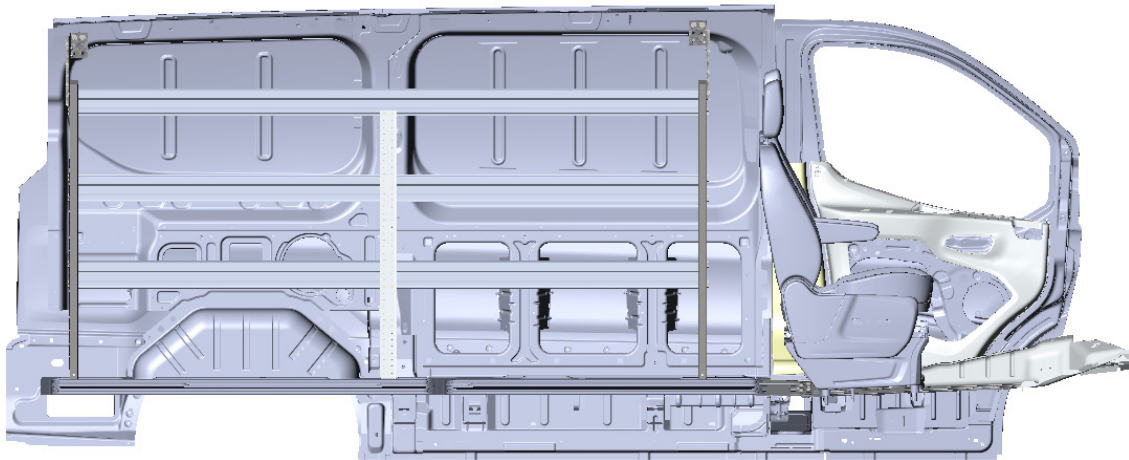


REVERSE

2.4 ATTACH SHELF UNIT TO THE FLOOR

WITHOUT RANGER FLOOR

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



TOOLS

- ☐ Cordless Impact
- ☐ 1/2" Socket
- ☐ Torque wrench

HARDWARE USED

6x [SUGGESTED TORQUE SPEC: 11 lbs • ft]



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



#98-122 Lock Washer



#98-116 Flat Washer



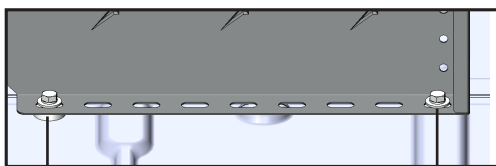
#98-157 Spacers

(QTY = GAP BETWEEN FLOOR AND END PANEL)



#94-132 5/16" Plusnut

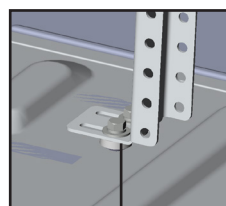
MOST VEHICLE USE 1 SPACER WHEN NOT



W/ Spacer

W/O Spacer

NOTE: Fastener should always be installed as close to the vertical face as possible.



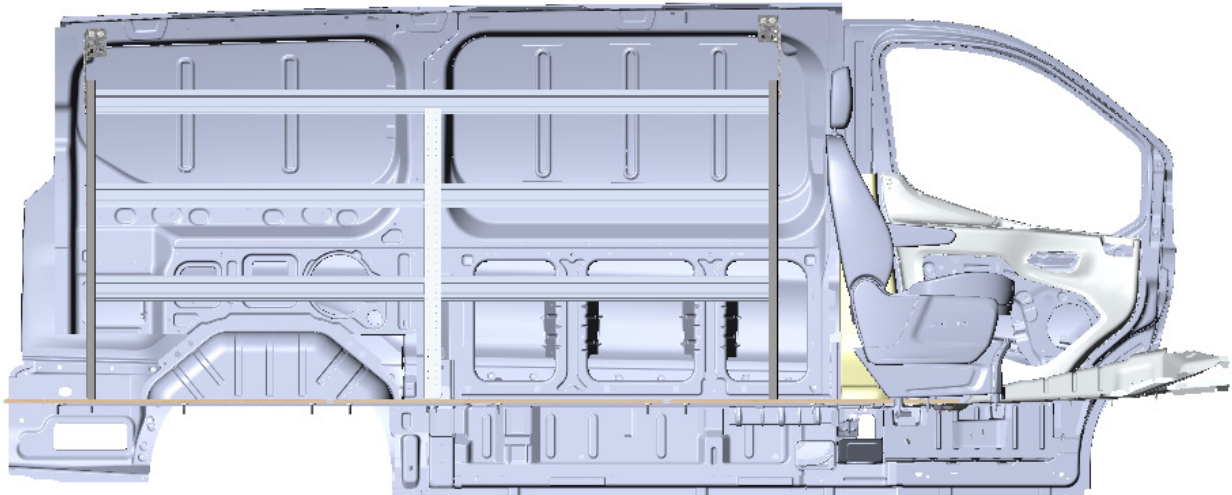
W/ Spacer



W/O Spacer

WITH RANGER FLOOR

- 2.4.2** Lift the shelving unit inside the van, then put it in place.
Install the shelving unit to the floor mounting track by sliding bolts in the mounting tracks, and putting screw in the last rear slot of the end panels of the shelving unit.



TOOLS

- ☐ Cordless Impact ☐ 3/8" Driver Bit
- ☐ 1/2" Socket
- ☐ Torque wrench

HARDWARE USED

2x FLOOR FASTENER KIT



#92-102 Screw 1"

HARDWARE USED: FLOOR FASTENER KIT

2x [SUGGESTED TORQUE SPEC: 11 lbs • ft]



#90-490 Carriage Bolt 5/16" x 1"



#98-116 Lock Washer



#98-122 Flat Washer



#94-104 Hex Nut

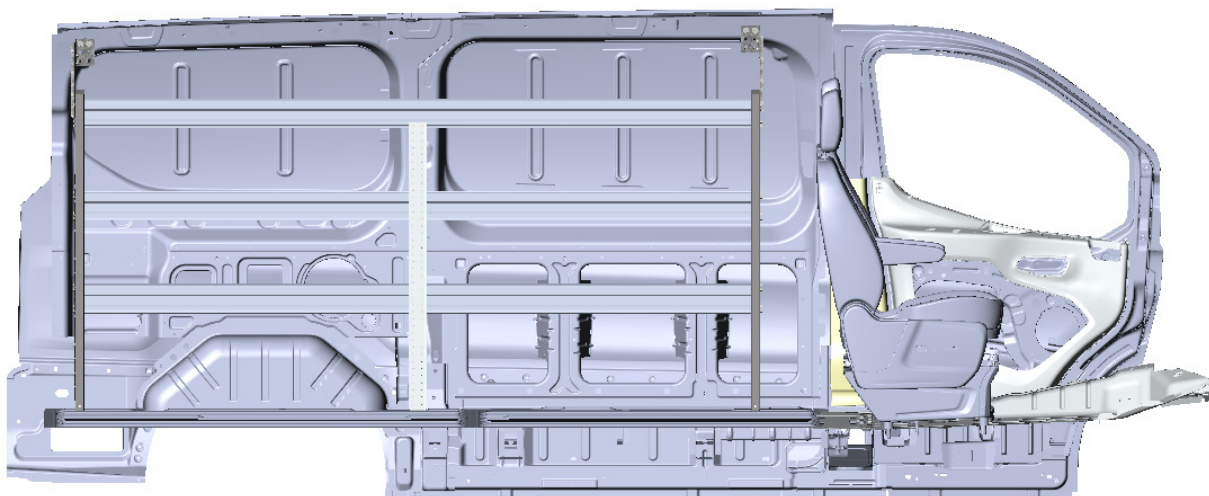
2.5 ATTACH WALL BRACKETS

WITHOUT RANGER WALL KITS

2.5.1 Align the wall brackets to the plus nuts, then install the wall brackets to the wall.

NOTE: First tighten the bolts on the wall bracket to van wall, then the bolts on the wall bracket to the end panel.

IMPORTANT: After installation is completed, ensure all bolts are tightened.



TOOLS

- ☐ Cordless Impact
- ☐ 1/2" Socket
- ☐ Torque wrench

HARDWARE USED

4x [SUGGESTED TORQUE SPEC: 11 lbs • ft]



#90-212 Hex Bolt 5/16" × 1-1/4"

#98-122 Lock Washer

#98-116 Flat Washer

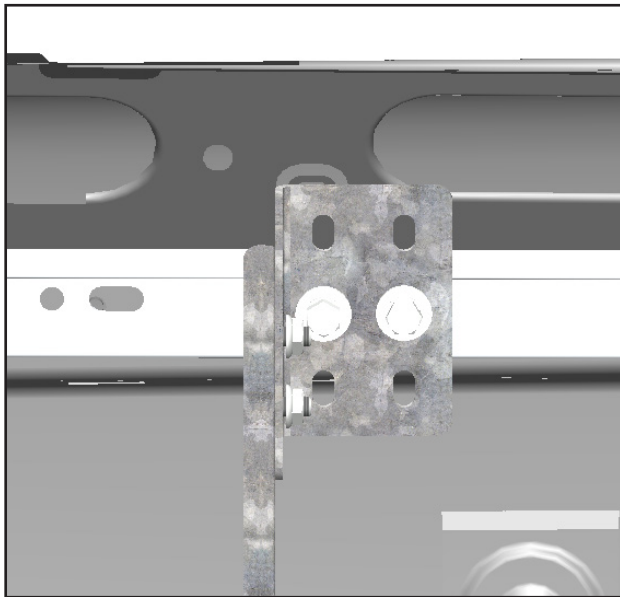
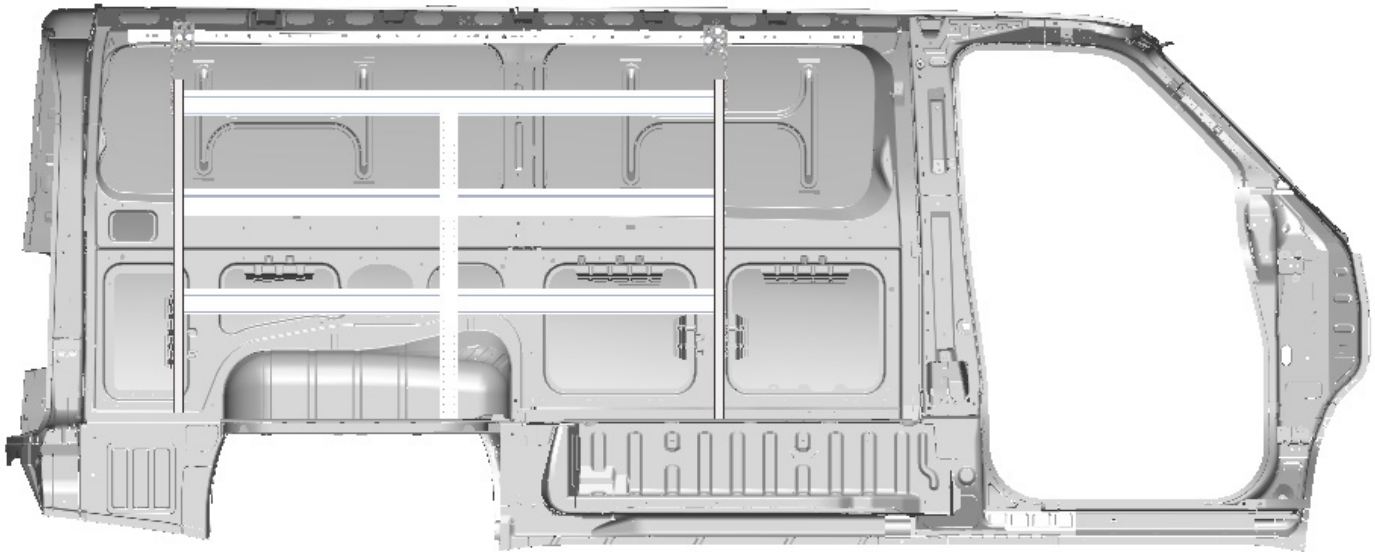
#94-132 5/16" Plusnut

WITH RANGER WALL KITS

2.5.2 Align the wall brackets to the wall mounting track kits, then install the wall brackets to the wall mounting track kits using channel nuts.

NOTE: First tighten the bolts on the wall bracket to the wall kit, then the bolts on the wall bracket to the end panel.

IMPORTANT: After installation is completed, ensure all bolts are tightened.

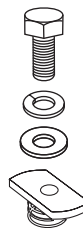


TOOLS

- ☐ Cordless Impact
- ☐ 1/2" Socket
- ☐ Torque wrench

FASTENERS USED: WALL KITS FASTENER KIT

4x [SUGGESTED TORQUE SPEC: 11 lbs • ft]



#90-208 Hex Bolt 5/16" x 1"

#98-122 Lock Washer

#98-116 Flat Washer

#94-150 Channel Nut

"You have successfully installed your Shelving Unit, thank you for doing business with us."

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