

# INSTALLATION GUIDE



## N5-LS16-1 LOCKER

(STEEL)



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**RANGER**  
DESIGN



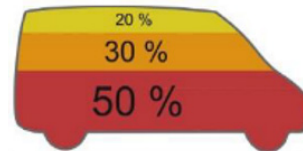
# BEFORE YOU BEGIN

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

- 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 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

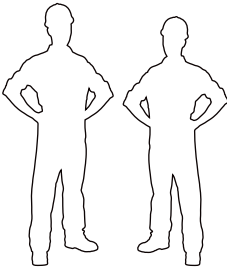
## Phase 1 - Assembly

- 1.1 Setup..... 4
- 1.2 Locker Assembly..... 7

## Phase 2 - Installation

- 2.1 Attach Wall Brackets To The End Panels..... 12
- 2.2 Mark Holes For Plus Nuts..... 13
- 2.3 Attach Plus Nut..... 14
- 2.4 Attach Locker Unit To the Floor..... 16
- 2.5 Attach Wall Brackets..... 18

# REQUIRED ITEMS



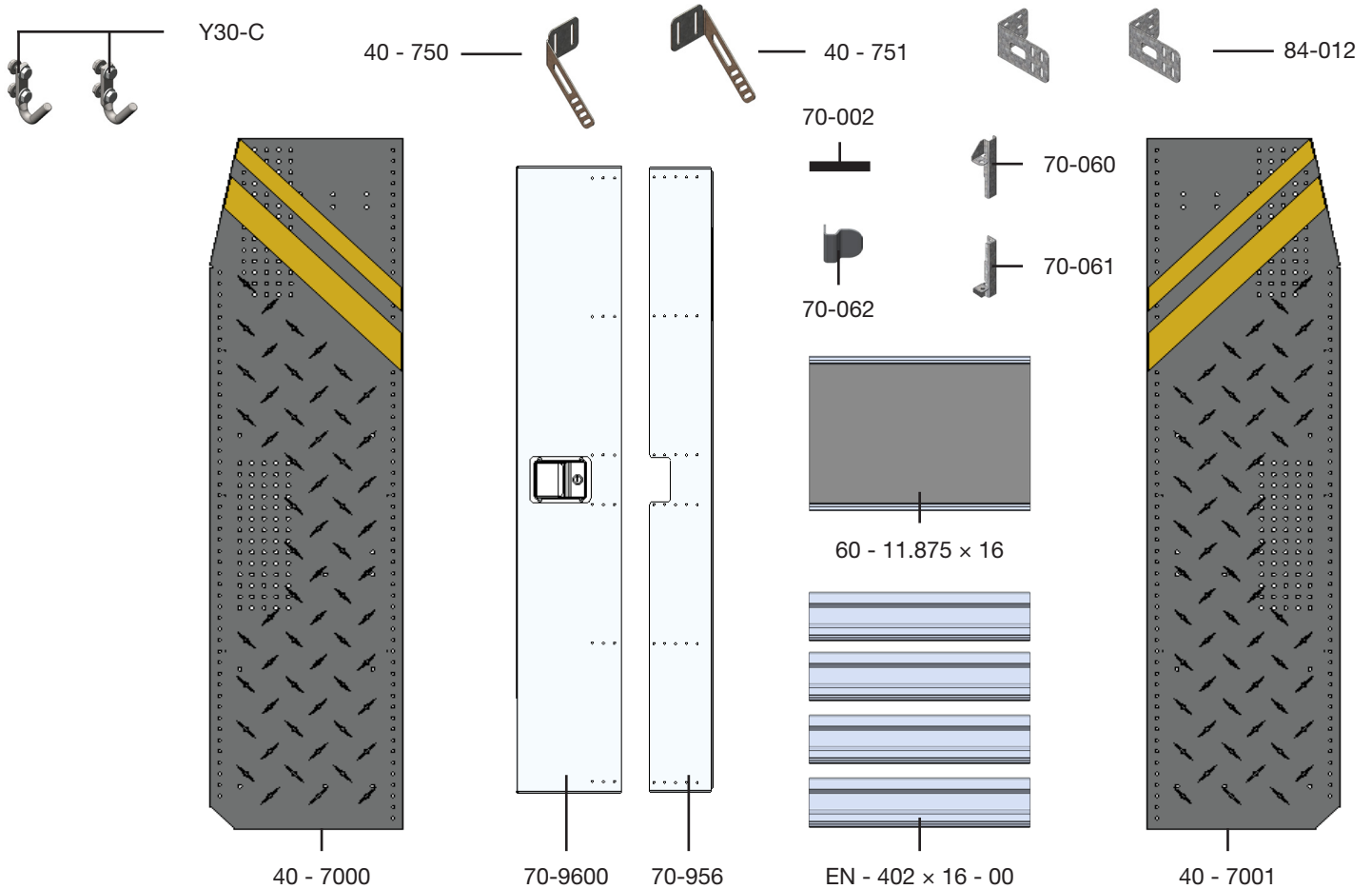
**2  
PERSONS**

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

# PHASE 1 – ASSEMBLY

## 1.1 SETUP

1.1.1 Unpack components; compare with the bill of materials.



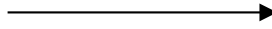
1.1.2 Verify all parts are present.

### BILL OF MATERIALS

Item No.	Description	Qty.
40-750	Bracket, N5 Series, Right	1
40-751	Bracket, N5 Series, Left	1
84-012	foldaway bracket - middle	2
40 - 7000	End Panel ( Left )	1
40 - 7001	End Panel ( Right )	1
60 - 11.875 x 16	Shelf Tray, Black Plywood, Usable 12" x 16"	1
Y30-C	Small hook	2
70-002	Foam Tape ( QTY IN INCH )	3
70-062	Locker Unit Striker Plate	1
70-060	Locker Unit Hinge, Top Right or Bottom Left	1
70-061	Locker Unit Hinge, Bottom Right or Top Left	1
70-9600	Door Assembly, 60"	1
70-956	Lower Door Panel 60"	1
EN - 402 x 16 - 00	Shelf Extrusion, 16"	4
96-4035	Install Fastener Kit	1
94-4035	Assembly Fastener Kit	1

1.1.3 Fastener kits.





**96 - 4035 Fastener Kit**








**Fastener Assembly**

- 4x**  **# 90-011** Hex Bolt  
5/16"-18 x 1-3/4"  
GR-5 ZINC
- 8x**  **# 90-212** Hex Bolt  
5/16"-18 x 1-1/4"  
GR-5 ZINC
- 12x**  **# 94-132** Plusnut
- 12x**  **# 98-116** Flat Washer  
5/16", O.D. 7/8"  
ZINC
- 12x**  **# 98-122** Lock Washer  
5/16"  
ZINC
- 4x**  **# 98-157** Spacer  
0.375" ID, x 1.0" OD x 0.25" LONG  
NYLON

**8x**

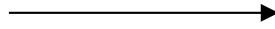
-  **#90-212 Hex Bolt 5/16" x 1-1/4"**
-  **#98-122 Lock Washer**
-  **#98-116 Flat Washer**
-  **#94-132 5/16" Plusnut**

**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**

### 1.1.3 Fastener kits.

#### 94 - 4035 Fastener Kit




#### Fastener Assembly


8x  # 90-204 Hex Bolt  
5/16"-18 x 3/4"  
ZINC


2x  # 90-206 Hex Bolt  
5/16"-18 x 7/8"  
ZINC

6x  # 90-700 Hex Bolt  
1/4"-20 x 1/2"  
ZINC

24x  # 92-102 Screw HWH  
#14 x 1"  
ZINC

2x  # 94-110 Lock Nut  
5/16"  
ZINC


6x  # 94-112 Serrated Nut  
1/4"-20  
ZINC

8x  # 94-116 Serrated Nut  
5/16"-18  
ZINC

12x  # 96-202 Closed Rivet  
3/16" x 1/4"  
ALUM/STEEL

10x  # 98-116 Flat Washer  
5/16", O.D. 7/8"  
ZINC

2x  # 98-132 Flat Washer  
NYLON

2x  # 98-134 Shoulder Washer  
5/16"  
Nylon

8x



#90-204 Hex Bolt 5/16" x 3/4"



#98-116 Flat Washer



#94-116 Serrated Nut

6x



#90-700 Hex Bolt 1/4" x 1/2"



#94-112 Serrated Nut

24x



#92-102 Screw #14 x 1"

12x



#96-202 Closed Rivet

2x



#90-206 Hex Bolt 5/16" x 7/8"



#98-134 Shoulder Washer



#98-132 Flat Washer



#98-116 Flat Washer

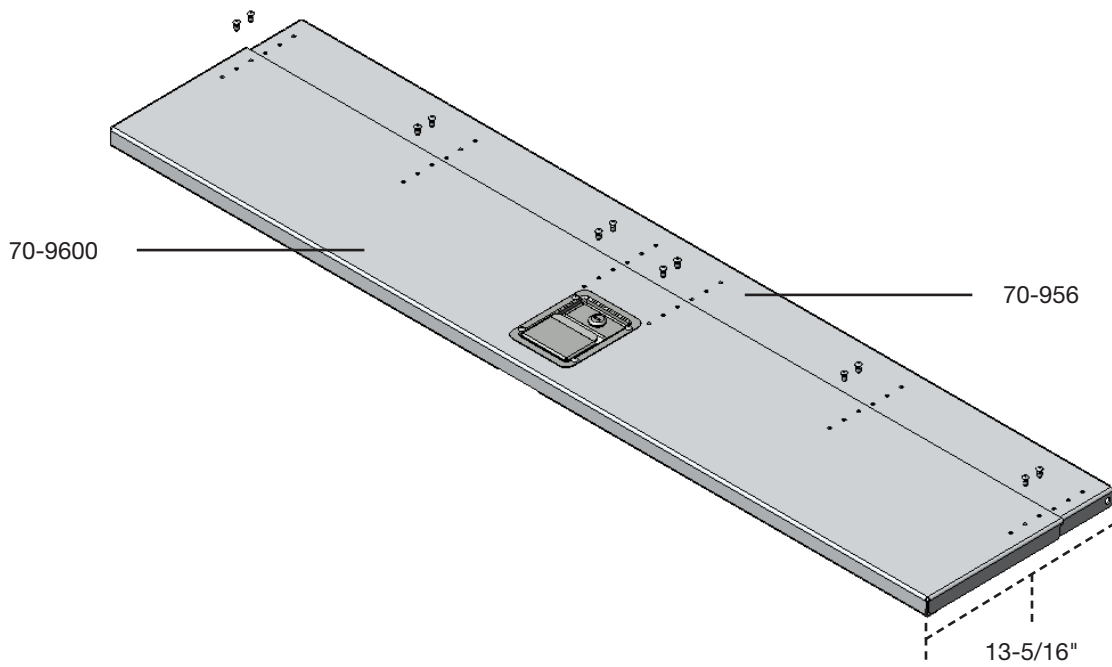


#94-110 Lock Nut

# PHASE 1 – ASSEMBLY

## 1.2 LOCKER ASSEMBLY

1.2.1 Attach the lower door panel to the upper door panel.



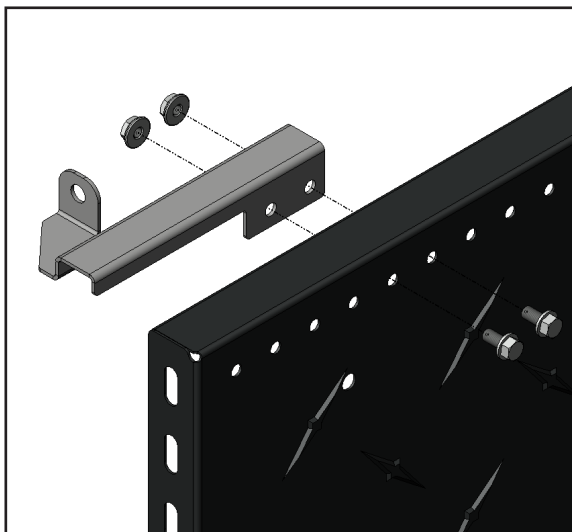
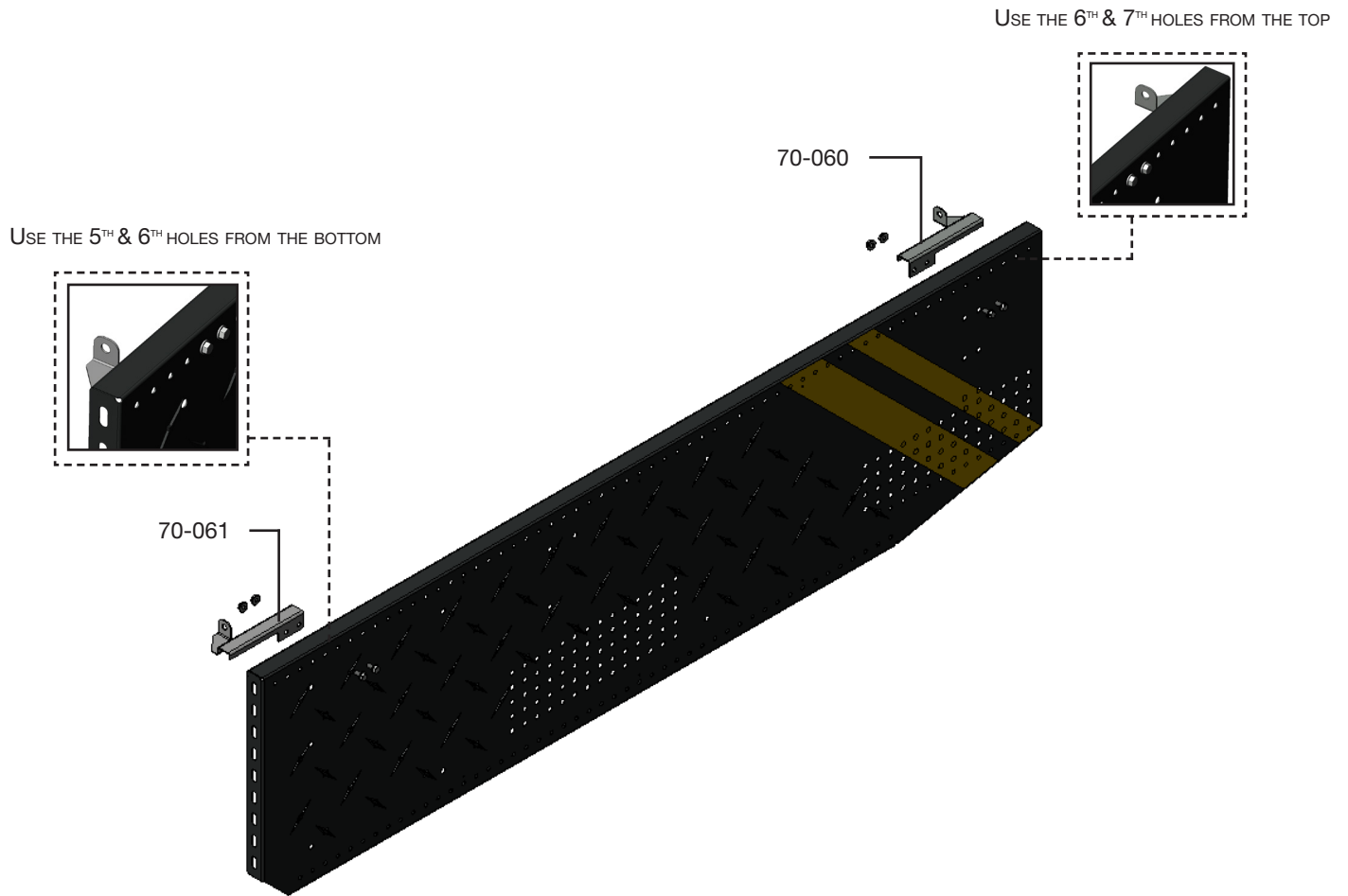
**TOOLS**  
□ Rivet Gun

**HARDWARE USED**  
**12x**

	#96-202 Closed Rivet
--	----------------------

This section contains a close-up diagram of the rivet attachment process. The diagram shows a corner of the door panel where a rivet is being inserted into a pre-drilled hole. A dashed line indicates the path of the rivet. To the right of the diagram is a list of tools and hardware. Under 'TOOLS', a square symbol indicates the use of a Rivet Gun. Under 'HARDWARE USED', the quantity '12x' is specified. Below this, a table lists the hardware: a closed rivet, represented by a small icon, with the part number '#96-202 Closed Rivet'.

**1.2.2** Attach the locker door unit hinge to the side panel.



**TOOLS**

- Cordless Impact
- 3/8" Driver Bit

**HARDWARE USED**

**4x**

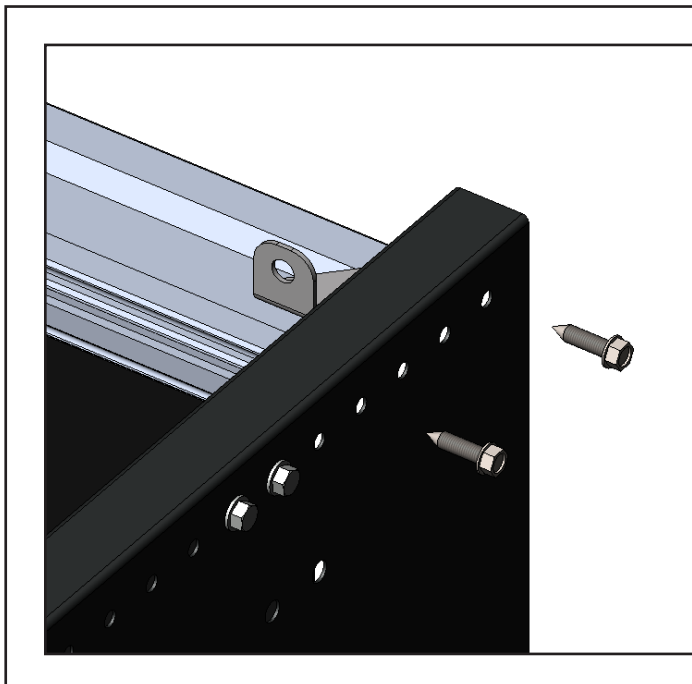
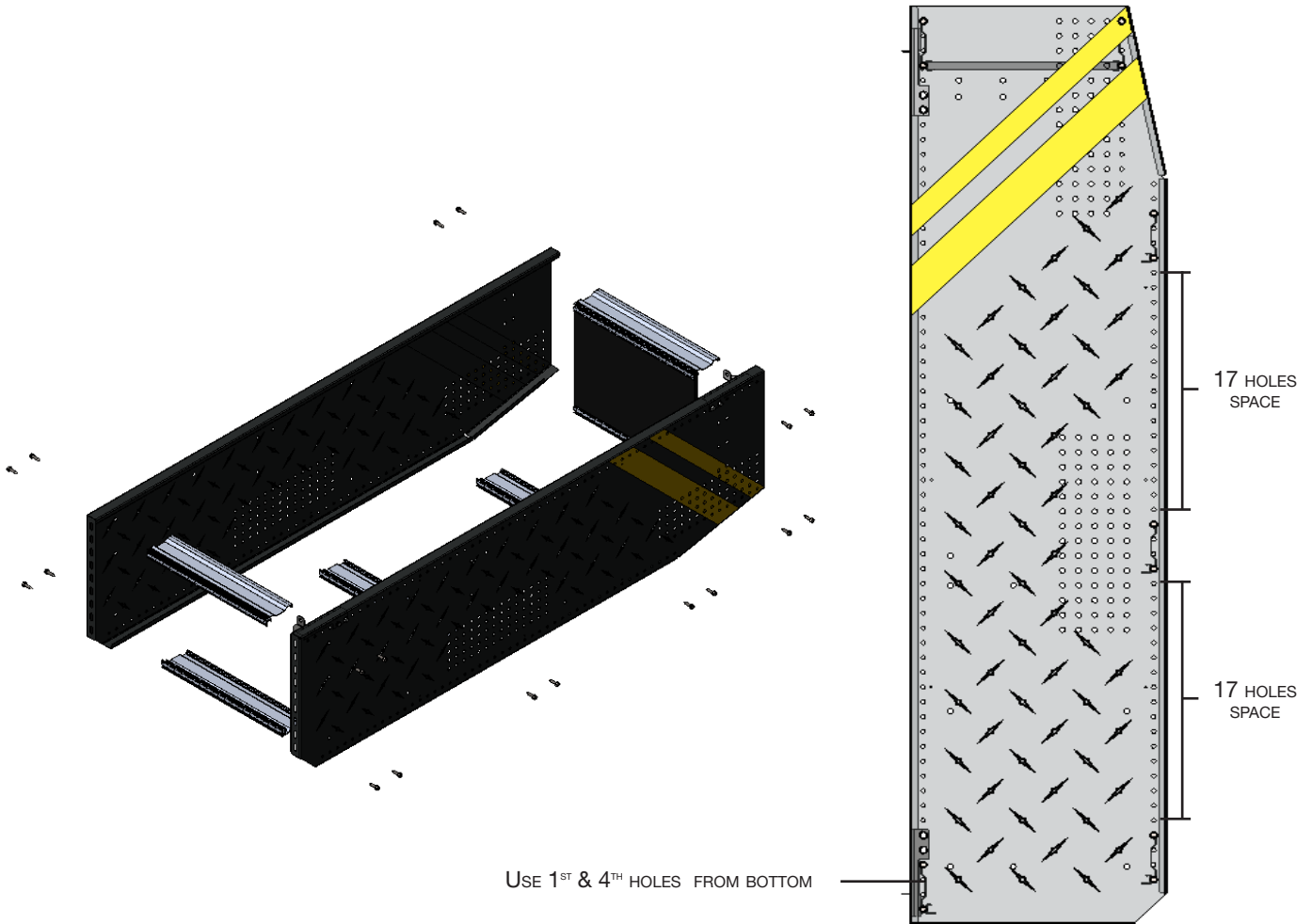


#90-700 Hex Bolt 1/4" x 1/2"



#94-112 Serrated Nut

1.2.3 Attach the locker door unit hinge to the side panel.



**TOOLS**

- Cordless Impact
- 3/8" Driver Bit

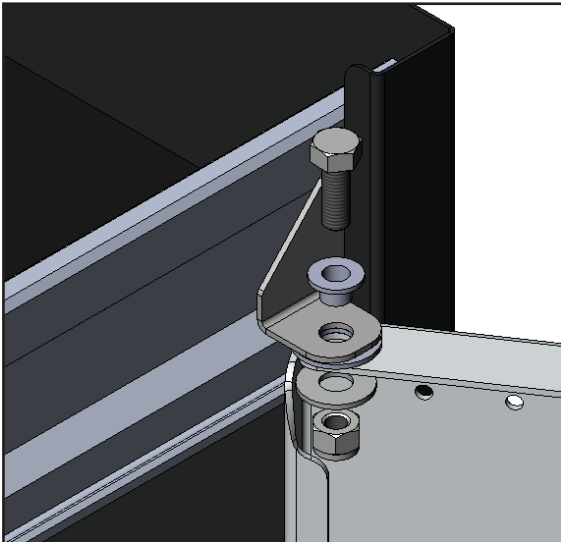
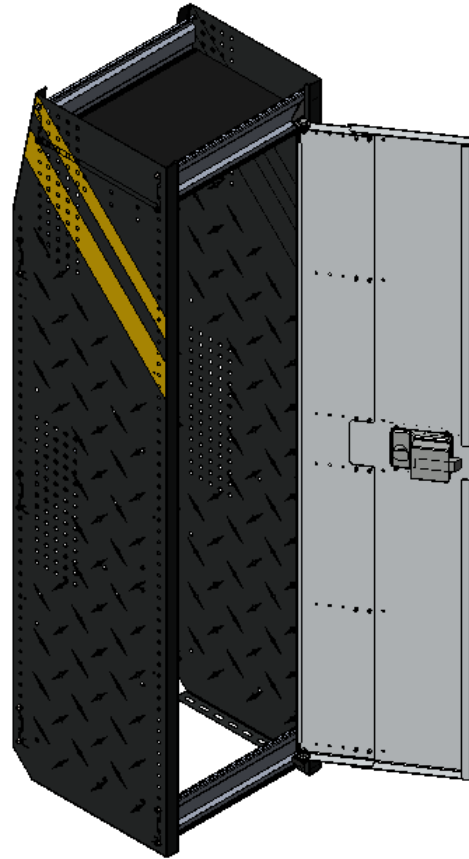
**HARDWARE USED**

**24x**



#92-102 Screw #14 x 1"

**1.2.4** Attach the assembled door to locker hinges.








**TOOLS**

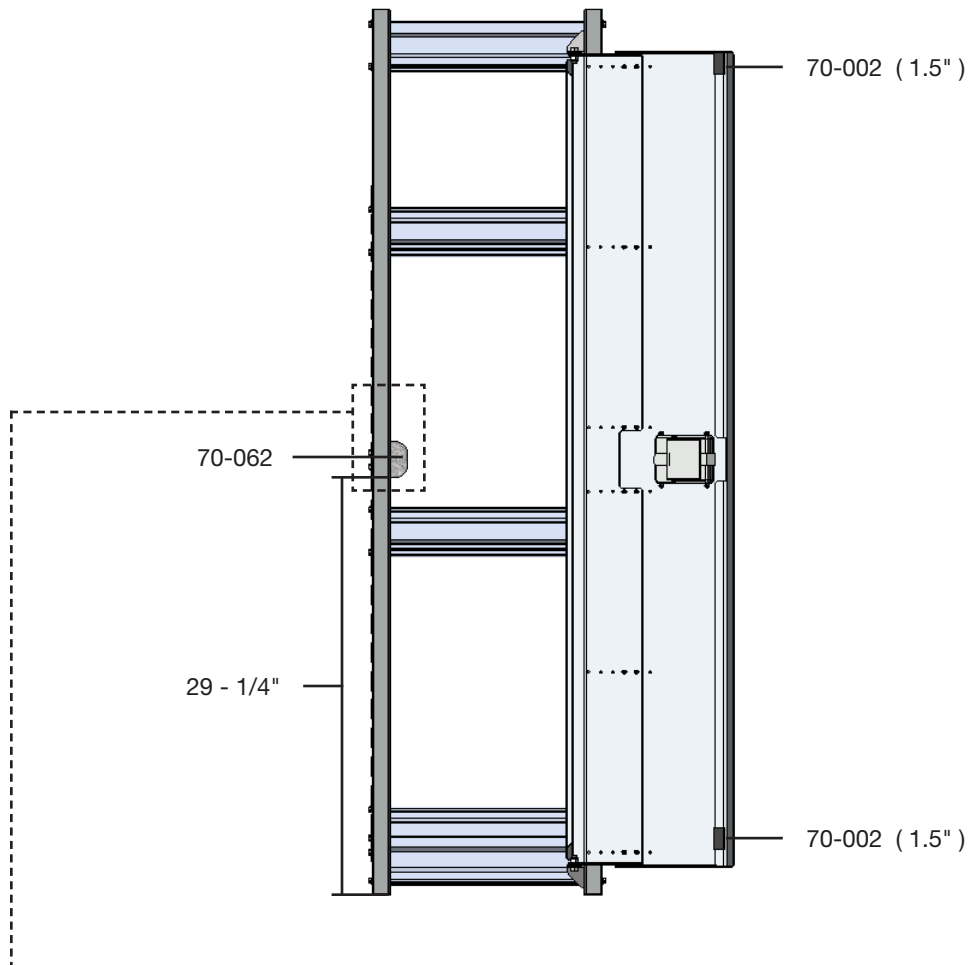
- 1/2" Wrench ( 2x )

**HARDWARE USED**

**2x**

	#90-206 Hex Bolt 5/16" x 7/8"
	#98-134 Shoulder Washer
	#98-132 Flat Washer
	#98-116 Flat Washer
	#94-110 Lock Nut

**1.2.5** Attach the assembled door to locker hinges.





A close-up photograph showing the installation of a hinge onto a locker door. The door is dark-colored with a grid of holes. A metal hinge is being attached to the door. Two screws are visible, securing the hinge to the door. The photograph is enclosed in a dashed-line border.

**TOOLS**

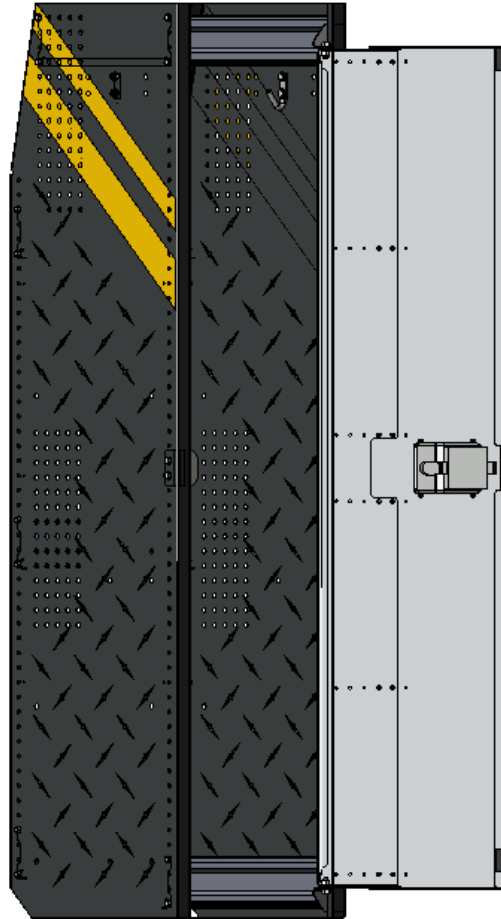
- Cordless Impact
- 3/8" Driver Bit










**HARDWARE USED**

**2x**

	#90-700 Hex Bolt 1/4" x 1/2"
	#94-112 Serrated Nut

1.2.6 Attach one hook on each side panel.



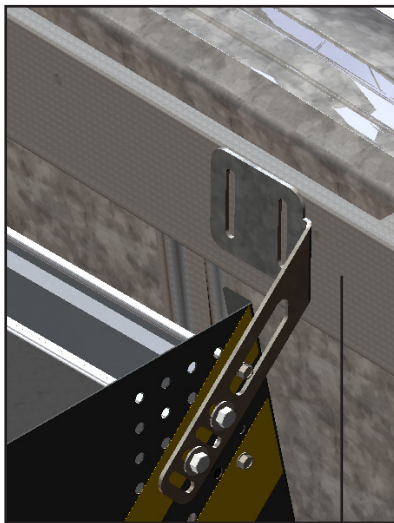
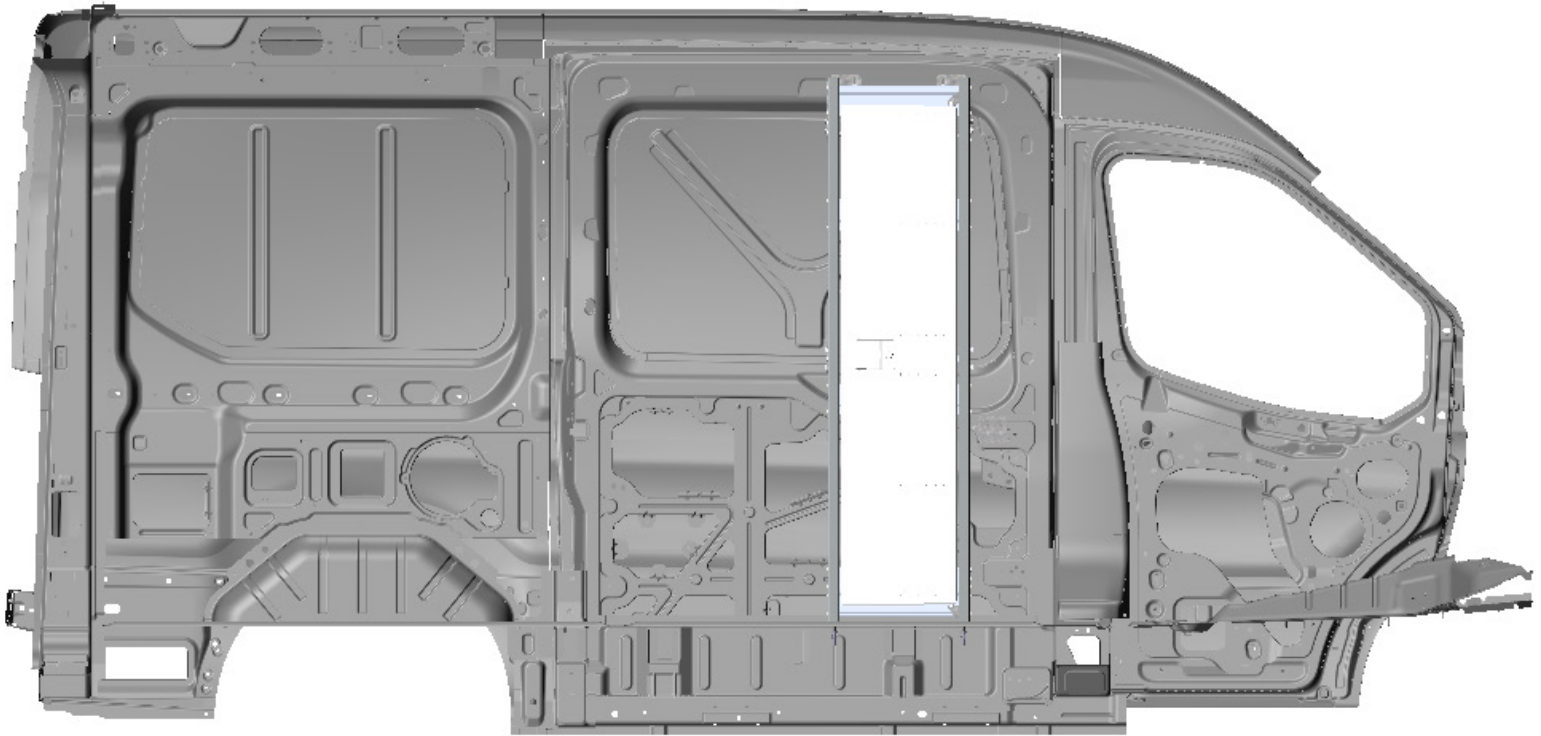
	<p><b>TOOLS</b></p> <ul style="list-style-type: none"><li><input type="checkbox"/> Cordless Impact</li><li><input type="checkbox"/> 1/2" Socket</li></ul> <p><b>HARDWARE USED</b></p> <p><b>4x Y30-C HARDWARE</b></p> <table border="1"><tr><td></td><td>#90-110 Hex Bolt 1/4" x 3/4"</td></tr><tr><td></td><td>#98-106 Flat Washer</td></tr><tr><td></td><td>#94-112 Serrated Nut</td></tr></table>		#90-110 Hex Bolt 1/4" x 3/4"		#98-106 Flat Washer		#94-112 Serrated Nut
	#90-110 Hex Bolt 1/4" x 3/4"						
	#98-106 Flat Washer						
	#94-112 Serrated Nut						

# PHASE 2 – INSTALLATION

## 2.1 ATTACH WALL BRACKETS TO THE END PANELS

**IMPORTANT:** For all **Box Trucks**, make sure that the shelving is securely fastened to the structure of the truck.

- 2.1.1**
- Lift the assembled shelf to the vehicle, then put it in place.
  - Attach the brackets to the panels aligning the brackets to the horizontal rim of the vehicle.



HORIZONTAL RIM




Attach the brackets to the panels aligning the brackets to the horizontal rim of the vehicle.

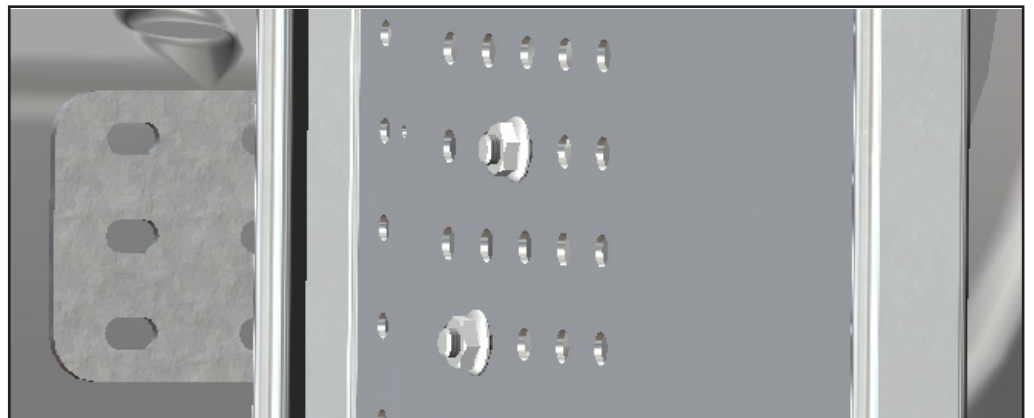
### TOOLS

- Cordless Impact
- 1/2" Socket

### HARDWARE USED

**8x** HAND-TIGHTEN THE BOLTS

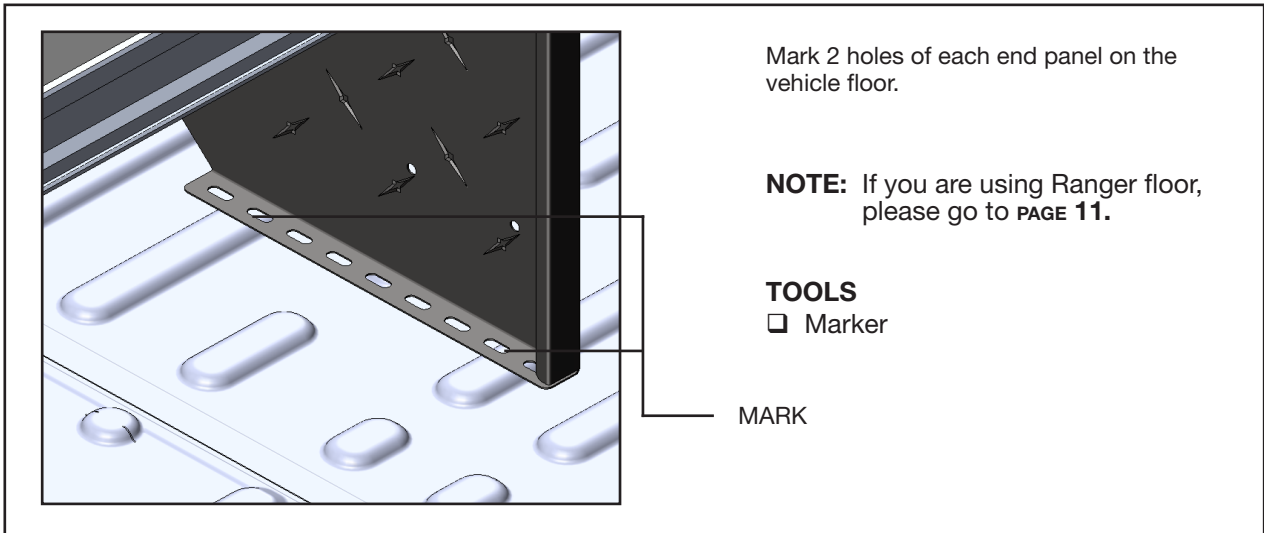
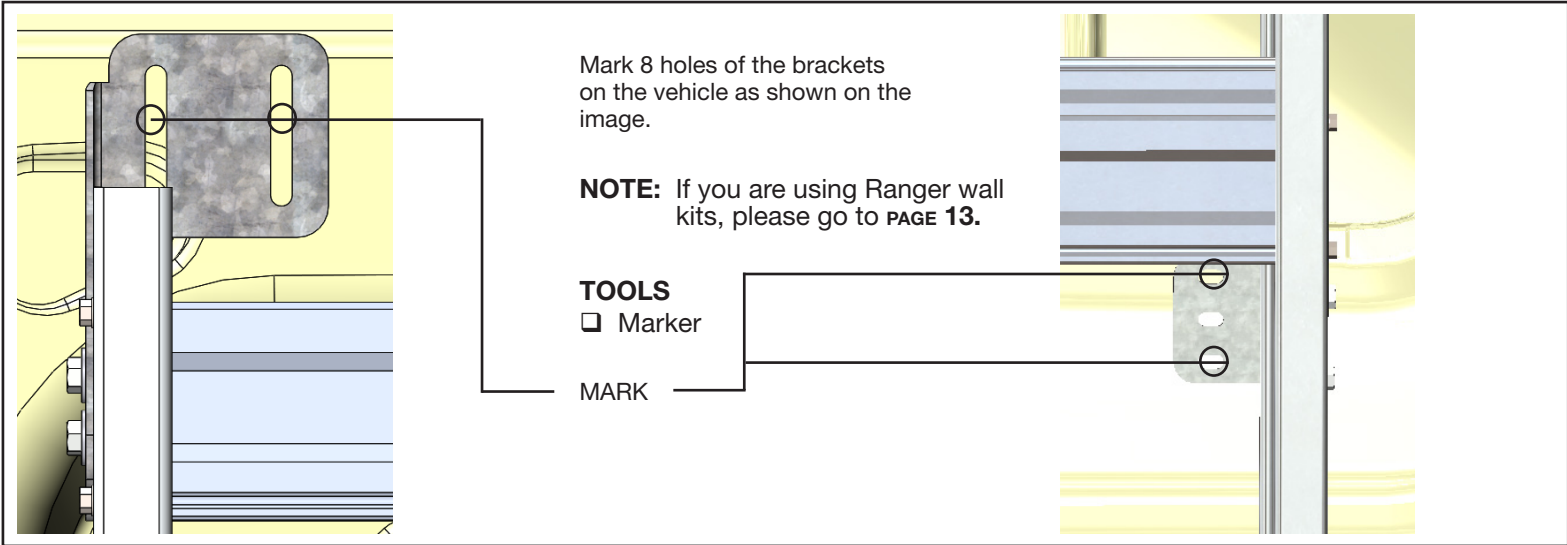
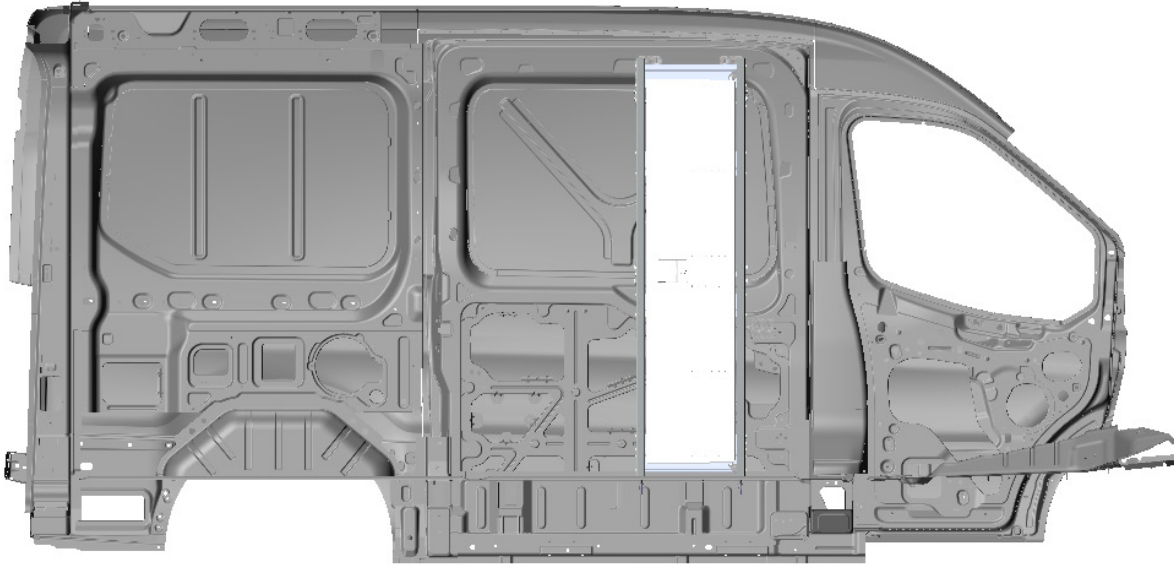
-  #90-204 Hex Bolt 5/16" x 3/4"
-  #98-116 Flat Washer
-  #94-116 Serrated Nut



# PHASE 2 – INSTALLATION

## 2.2 MARK HOLES FOR PLUS NUTS

2.2.1 After attaching the brackets, mark the holes from the brackets and bottom shelf to the vehicle.



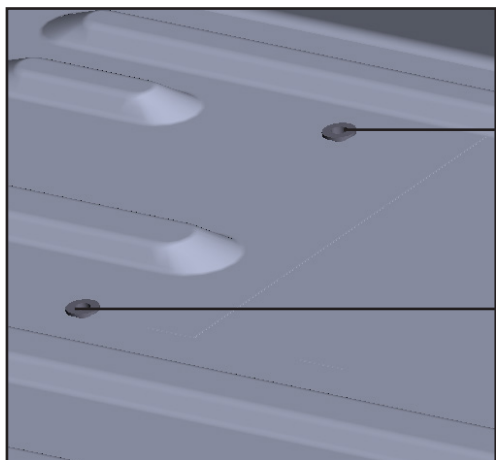
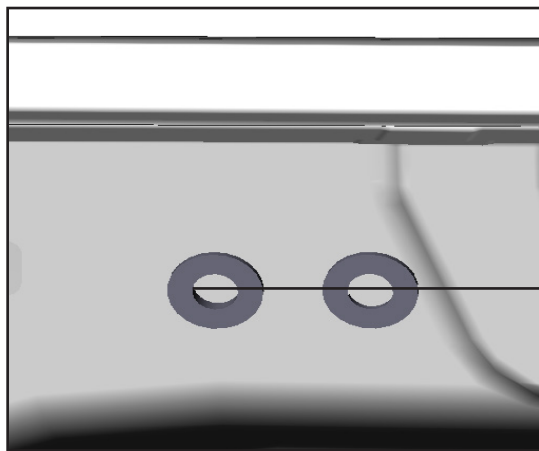
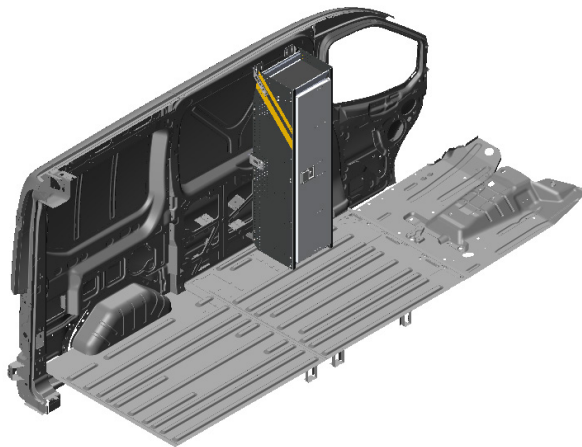
# PHASE 2 – INSTALLATION

## 2.3 ATTACH PLUS NUTS

- 2.3.1** • Remove the locker and put them 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" Socket
- 1/2" Drill Bit w/ Drill Collar ( Set at 1/2" )
- Plus Nut Tool ( 5/16" )

### HARDWARE USED

**12x**



#94-132 Plus Nut

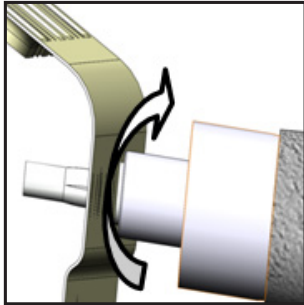


DRILL COLLAR  
( SET AT 1/2" )

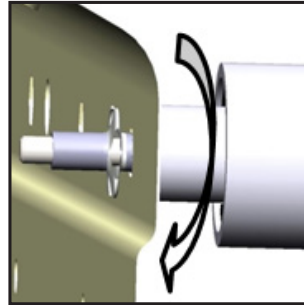
### 2.3.2 How to attach plus nut.

#### • 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.



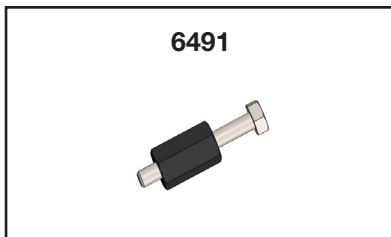
**FORWARD**



**REVERSE**



#### • USING THE 6491 PLUSNUT TOOL

**NOTE:** The hardware used for the 6490 plusnut tool is not included in the fastener bag.  
The 6491 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

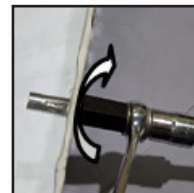
#### STEP 1:

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**



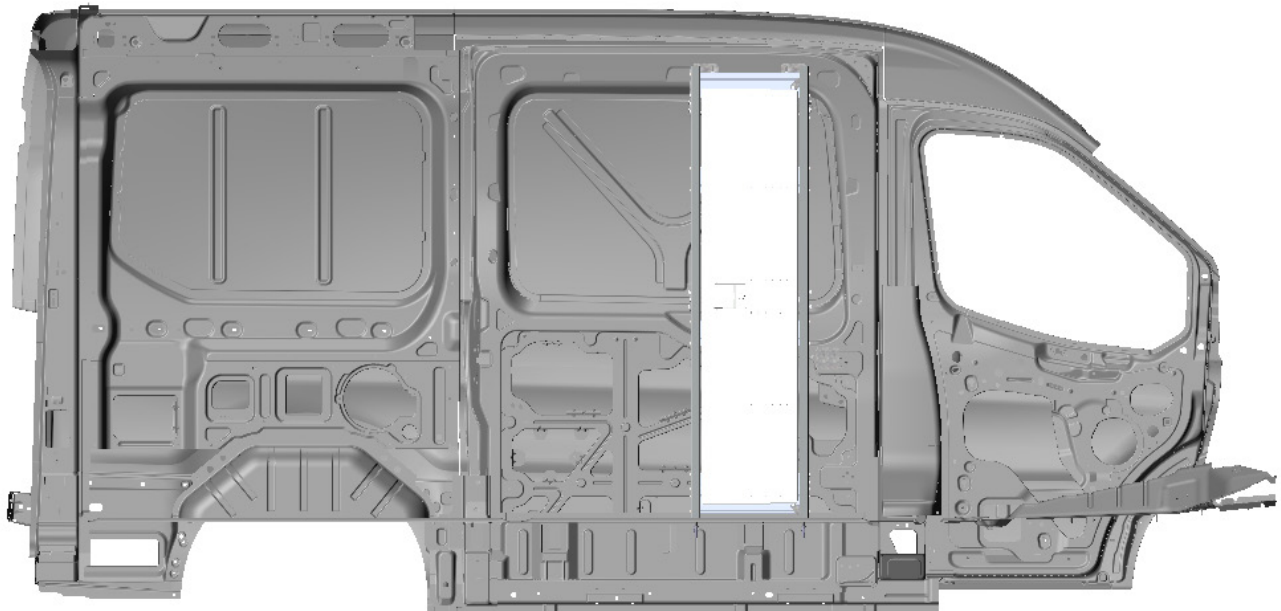
**REVERSE**

# PHASE 2 – INSTALLATION

## 2.4 ATTACH LOCKER UNIT TO THE FLOOR

### WITHOUT RANGER FLOOR

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








**TOOLS**

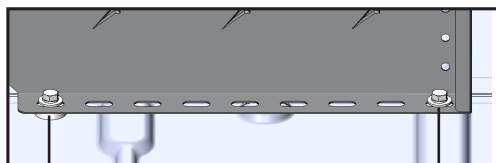
- Cordless Impact
- 1/2" Socket

**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

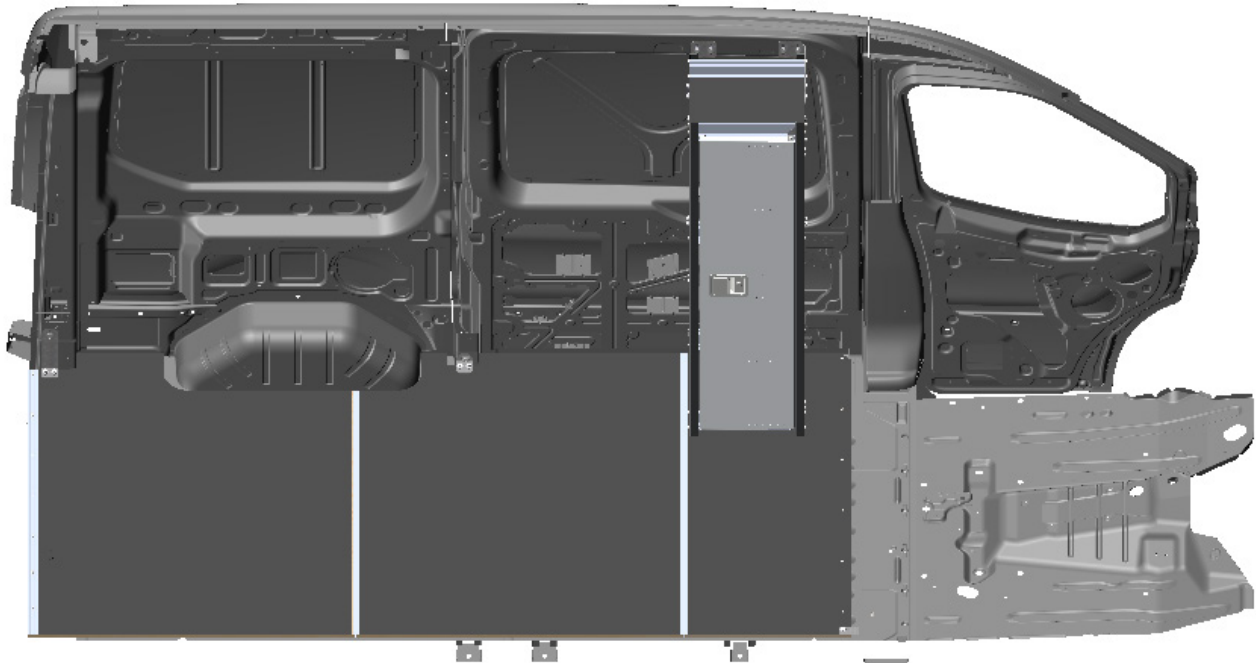


W/ Spacer

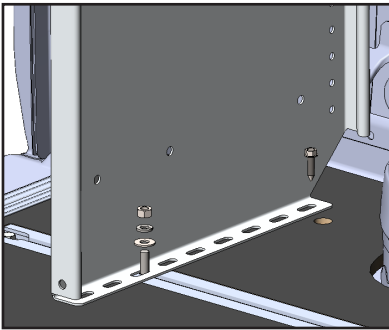
W/O Spacer

## WITH RANGER FLOOR

- 2.4.2**
- Lift the locker unit inside the van, then put it in place.
  - Install the locker 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 locker unit.



### STANDARD FLOOR



#### TOOLS

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

#### HARDWARE USED

**2x** FLOOR FASTENER KIT



#92-102 Screw 1"

#### HARDWARE USED

**2x** FLOOR FASTENER KIT



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



#98-122 Flat Washer

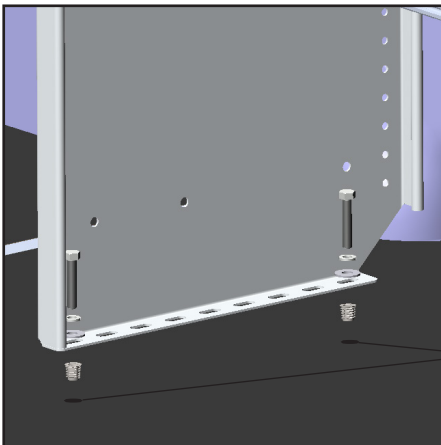


#98-116 Lock Washer



#94-104 Hex Nut

### E-FLOOR



#### TOOLS

- Marker
- 7/16" Drill Bit
- 1/2" Socket

7/16 drill hole

#### HARDWARE USED

**4x** HAND-TIGHTEN THE BOLTS



#90-204 Hex Bolt 5/16" x 3/4"



#98-116 Lock Washer



#98-116 Flat Washer



#99-114 Zinc Alloy Tapping Inserts for Softwood

# PHASE 2 – INSTALLATION

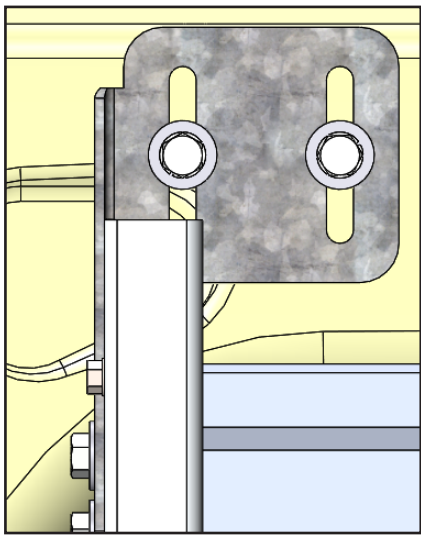
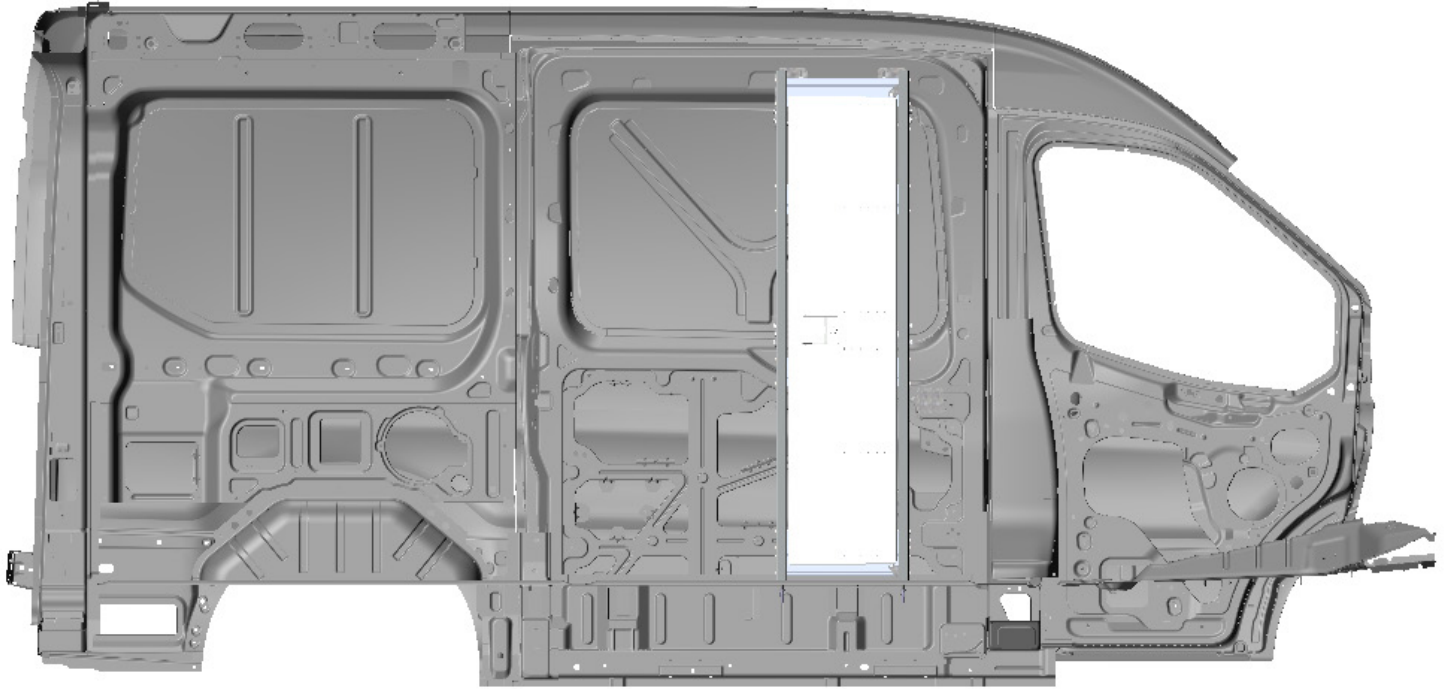
## 2.5 ATTACH WALL BRACKETS

### WITHOUT RANGER WALL KITS

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

**NOTE:** Tighten the bolts that attach the bracket to the wall or wall rails 1<sup>st</sup> before tightening the bolts from the brackets to the end panels.

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



#### TOOLS

- Cordless Impact
- 1/2" Socket

#### HARDWARE USED

8x

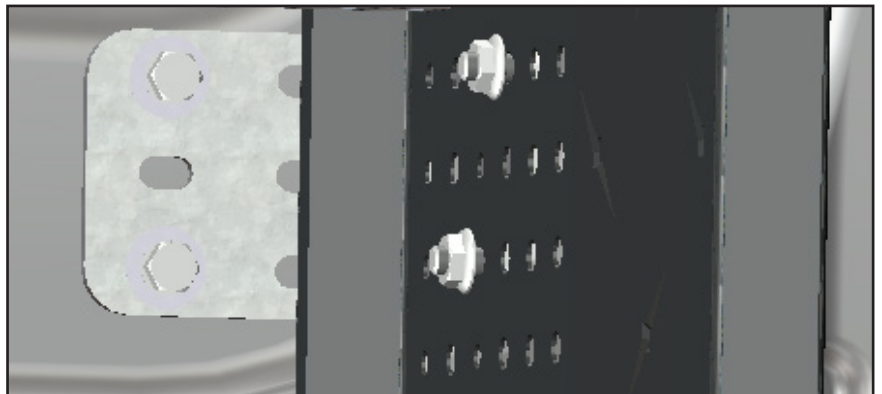


#90-212 Hex Bolt 5/16" x 1-1/4"

#98-122 Lock Washer

#98-116 Flat Washer

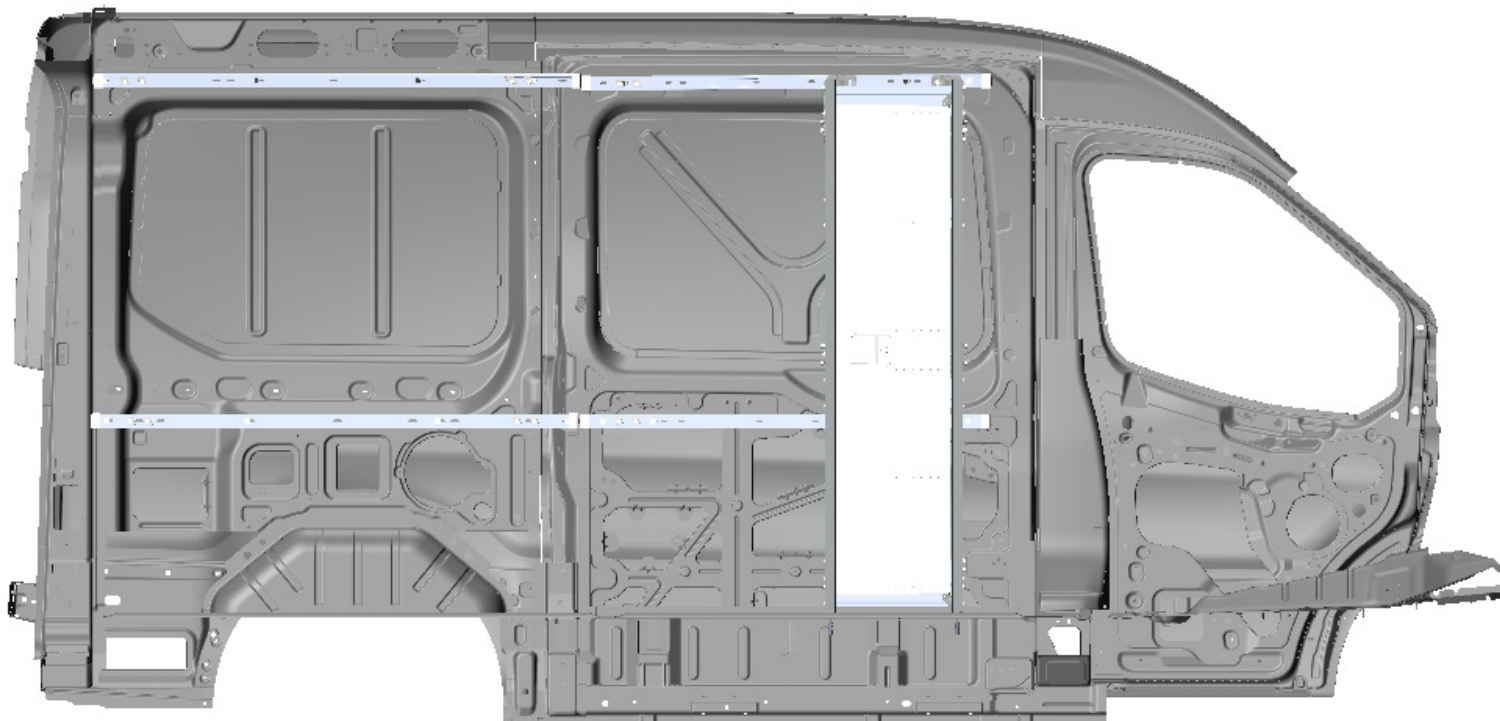
#94-132 5/16" Plusnut



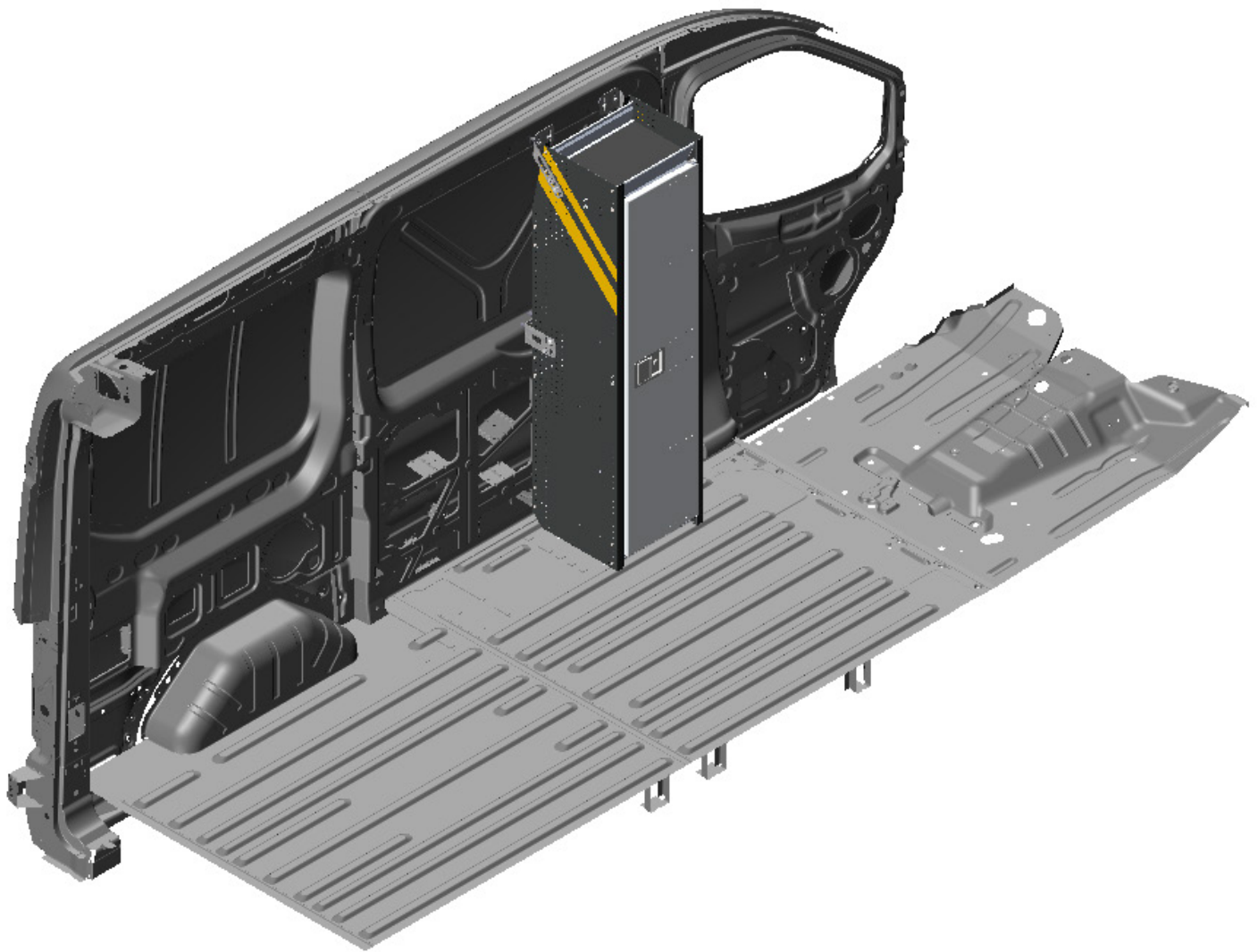
## WITH RANGER WALL KITS

**2.5.2** First align the wall brackets to the wall mounting track kits, then install the wall brackets to the wall mounting track kits using channel nuts.

**IMPORTANT:** First tighten the bolts that secure the wall bracket to the wall or wall kits, and then tighten the bolts that secure wall bracket to the end panels. After installation is completed, ensure all bolts are properly tightened.



	<b>TOOLS</b>							
	<ul style="list-style-type: none"><li><input type="checkbox"/> Cordless Impact</li><li><input type="checkbox"/> 1/2" Socket</li></ul>							
	<b>FASTENERS USED</b>							
	<p><b>8x</b> WALL KITS FASTENER KIT</p> <table border="1"><tr><td></td><td>#90-208 Hex Bolt 5/16" x 1"</td></tr><tr><td></td><td>#98-122 Lock Washer</td></tr><tr><td></td><td>#98-116 Flat Washer</td></tr><tr><td></td><td>#94-150 Channel Nut</td></tr></table>		#90-208 Hex Bolt 5/16" x 1"		#98-122 Lock Washer		#98-116 Flat Washer	
	#90-208 Hex Bolt 5/16" x 1"							
	#98-122 Lock Washer							
	#98-116 Flat Washer							
	#94-150 Channel Nut							



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LOCKER**

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

