

# DuraRac<sup>®</sup>

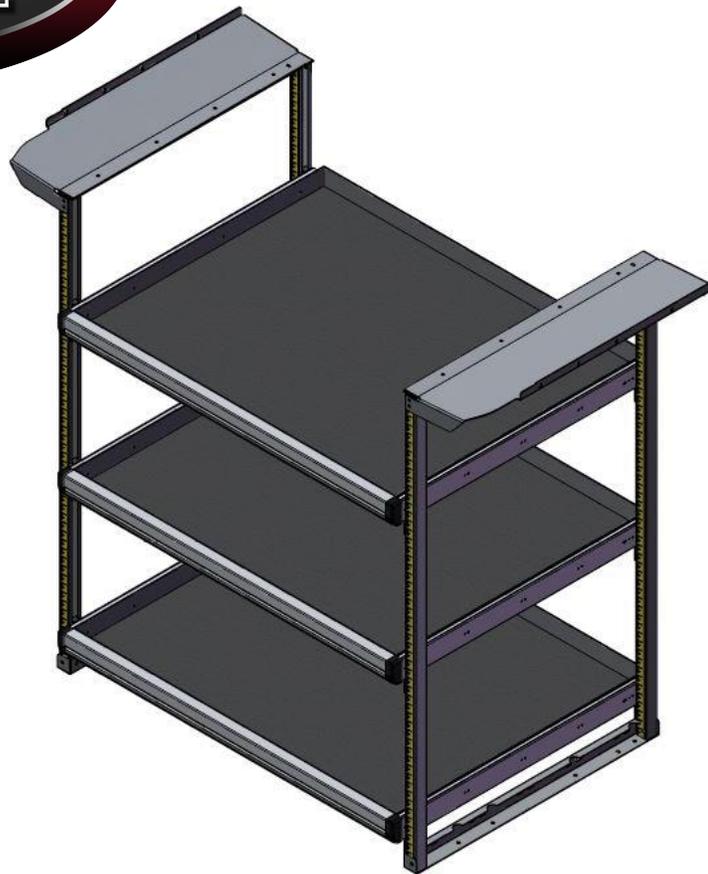


## Rear DuraRac Installation Instructions

Ram ProMaster Low/High Roof - 118"/136"/159" WB

Frame Kit Part #: CRC 23-1000-001

V1.0.12.26.18



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**IMPORTANT INSTALLATION STEPS ARE DENOTED USING A STOP SIGN. THESE STEPS MUST BE PERFORMED IN THE SPECIFIED ORDER TO ENSURE PROPER INSTALLATION AND MUST BE FOLLOWED IN ORDER TO MAINTAIN YOUR PRODUCT WARRANTY!**

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**CRITICAL INFORMATION PERTAINING TO USER AND/OR VEHICLE SAFETY IS DENOTED USING A CAUTION SIGN. SAFETY ITEMS MUST BE STRICTLY ADHERED TO IN ORDER TO ENSURE A SAFE WORKING ENVIRONMENT!**

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## **WARNING**

**THE USE OF DRILLS WITH INTEGRAL DRILL STOPS ALONG WITH PROPER INSPECTION FOR GAS TANK, GAS LINES, BRAKE LINES AND ELECTRICAL LINES PRIOR TO DRILLING ANY MOUNTING HOLES IS STRONGLY RECOMMENDED TO ENSURE THAT VEHICLE DAMAGE IS AVOIDED!**



**THE USE OF AIR OR ELECTRIC IMPACT TOOLS FOR THE ASSEMBLY OF FASTENERS COULD CAUSE FASTENER FAILURE!**



**THE USE OF NON-STANDARD FASTENERS AND/OR DEVIATING FROM THE FASTENERS SPECIFIED IN THESE INSTRUCTIONS MAY VOID YOUR PRODUCT WARRANTY!**



**ALL DRILLED HOLES IN THE VEHICLES SHOULD HAVE THE RAW METAL EDGES SEALED WITH A SELF-ETCHING PRIMER TO RESIST CORROSION AND POTENTIAL FASTENER POINT FAILURE!**



*DuraRac Installation Instructions – TOOL LIST*



Safety glasses **MUST** be worn at all times!

TOOLS			
<p><b>Drill</b></p> 	<p><b>Drill Bits</b></p>  <p>3/8" &amp; 1/2"</p>	<p><b>Drill Stop</b></p>  <p>1/2"</p>	<p><b>Ratchet Wrench</b></p> 
<p><b>Drill</b></p>  <p>7/16", 1/2" Socket; T45 TORX Bit with Misc. Extensions</p>	<p><b>10" Drift Punch</b></p>  <p>(Used in aligning bolt holes)</p>	<p><b>Box End Wrench</b></p>  <p>7/16", 9/16"</p>	<p><b>Rubber Mallet/ Steel Hammer</b></p> 

**RECOMMENDED TOOLS:**

- Inch-pound Torque Wrench
- Pneumatic Plus Nut Gun
- Impact Gun
- Leveling Gauge
- 1" Hole Saw



ALL VEHICLE CAD MODELS SHOW A HIGH ROOF MODEL VEHICLE.



## DuraRac Installation Instructions

### Hardware:

<b>FAS 37018</b> NYLOCK NUT, 1/4"-20 (QTY: 8)	<b>FAS 19903</b> SERRATED FLANGE BOLT, 1/4"-20 X 3/4" (QTY: 8)	<b>FAS 33078</b> FLAT WASHER, 1/4" X 5/8" O.D. (QTY: 8)	<b>FAS 48603</b> 3/8"-16 STRUT NUT, TALL SPRING (QTY: 4)	<b>FAS 37341</b> SERRATED FLANGE NUT, 3/8" (QTY: 4)	<b>FAS 33221</b> FENDER WASHER, 3/8" (QTY: 4)	<b>FAS 10140022</b> TORX HEAD SCREW 3/8"-16 X 0.75" L (QTY: 8)

### Step 1: Assemble Side Frame Subassemblies

Notes:

*If pre-assembled from manufacturer proceed to Step 2.*

- A. Assemble strut channels, angle, and baseplates into subassemblies. 1/4"-20 hardware is used at the top, and 3/8"-16 hardware is used at the bottom



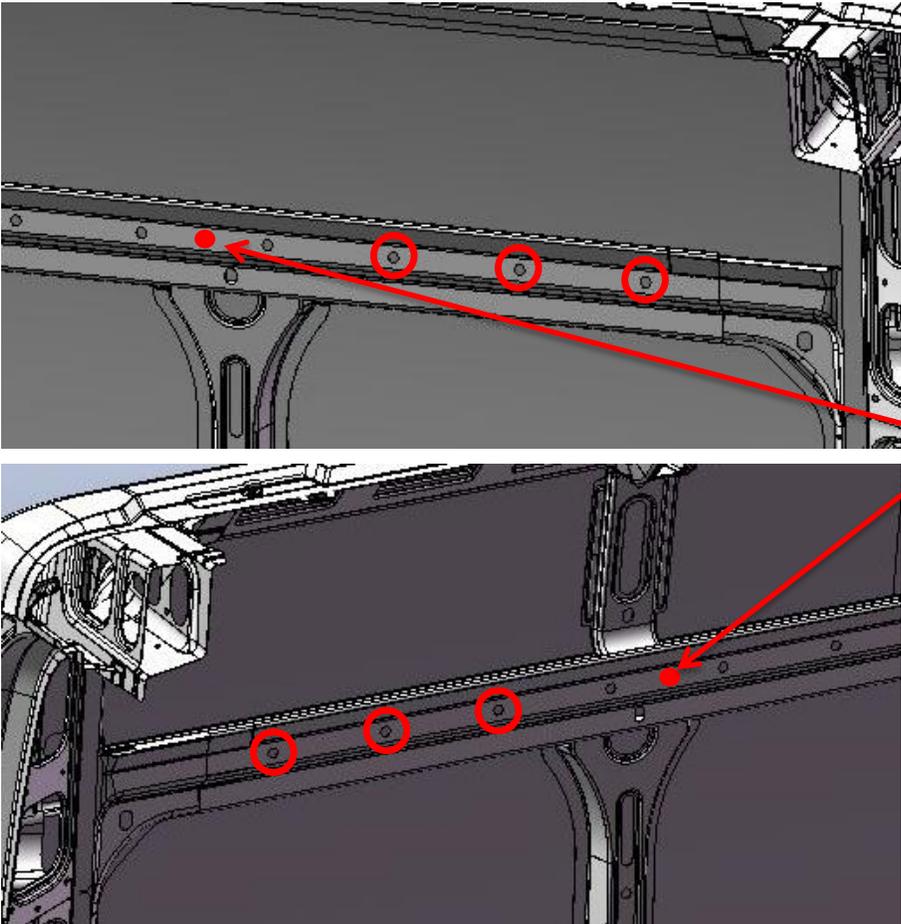
Continually check that the frame is square during assembly.

Baseplates have Curbside and Streetside callouts.

## DuraRac Installation Instructions

### Hardware:

 <p><b>FAS 13007</b> 1/4"-20 HEX BOLT, 1.25" L (QTY: 8)</p>	 <p><b>FAS 33618</b> WASHER LOCK, 1/4" (QTY: 8)</p>	 <p><b>FAS 33078</b> FLAT WASHER, 1/4" X 5/8" O.D. (QTY: 8)</p>	 <p><b>FAS 12319-00491</b> 1/4"-20 PLUS NUT (QTY: 8)</p>
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Step 2: Install Upper Mounting Brackets		Notes:
A.	<p>Drill through specified holes using 3/8" drill bit. Insert (8) 1/4"-20 plus nuts into drilled out holes.</p> <p><b>**On the Low Roof Model there will be a 4<sup>th</sup> OEM holes that lines up with the upper mounting bracket, but the High Roof Model will need to have a marked hole that is then drilled through and insert a plus nut as you do for the other holes.**</b></p>  <p><b>Curbside</b></p> <p><b>Non OEM holes to be drilled on High Roof Model</b></p> <p><b>Roadside</b></p>	<p>Use drill stop when drilling into vehicle.</p> <p>Use rust blocker or any other form of rust protection spray on drilled out holes.</p> <p>Refer to the next page on how to install plus nuts.</p>

**Step 2: Install Upper Mounting Brackets, CONT'd.** **Notes:**

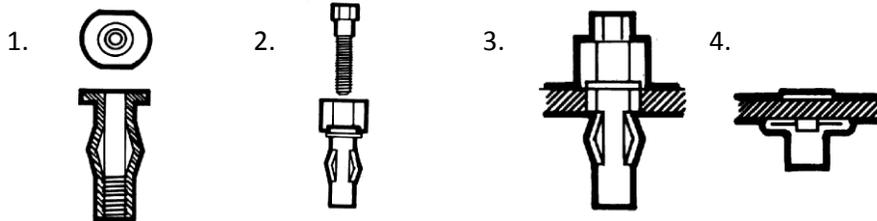


Before drilling check all mounting locations to prevent penetration of:  
*Gas Lines, Gas Tanks, Break Lines, Wiring or any other vehicle structure.*



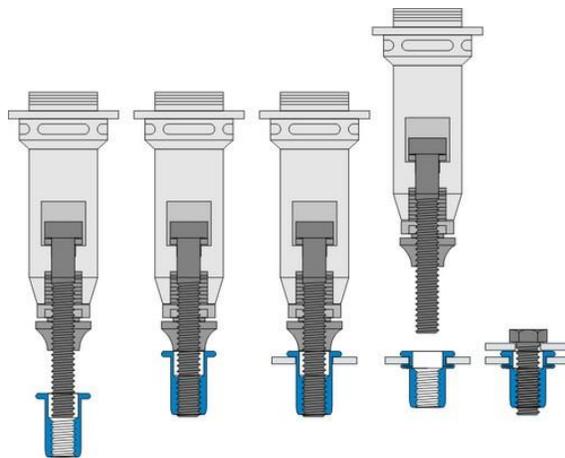
**There are 2 methods for installing the Plus Nuts: Manual & Automatic (They are both listed below)**

**C. First Method: Manual**



1. The Plus Nut is Pre-bulbed for easy installation.
2. The Plus Nut is pre-assembled with hex cap and hex bolt, then inserted into pre-drilled hole.
3. As the bolt is tightened the Plus Nut expands holding in place.
4. Full tightened Plus Nut provides reliable nut plate for fastening.

**Second Method: Automatic (Requires Pneumatic Plus Nut Gun)**



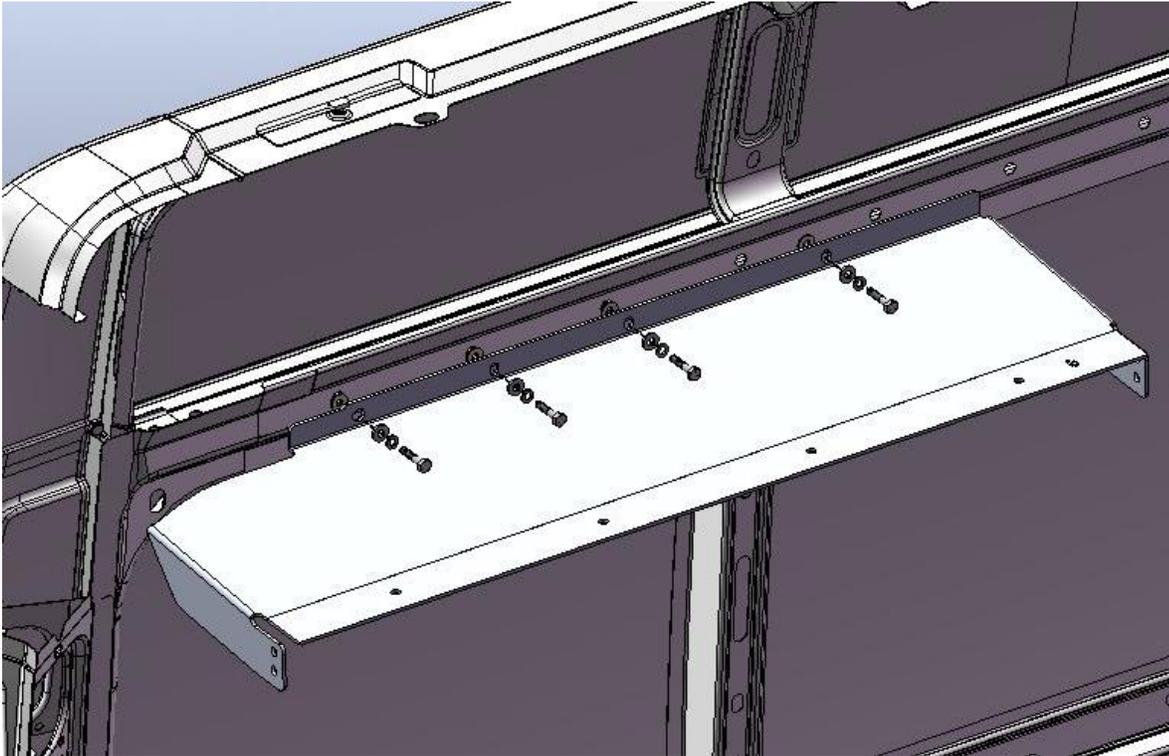
1. Thread Plus Nut onto Plus Nut Gun.
2. Screw Plus Nut into Hole.
3. When Plus Nut is fully tightened remove Plus Nut Gun.

*DuraRac Installation Instructions*

**Step 2: Install Upper Mounting Brackets, CONT'd.**

**Notes:**

- D. Loosely fasten 1-4"-20 hex bolts into the installed plus nuts.



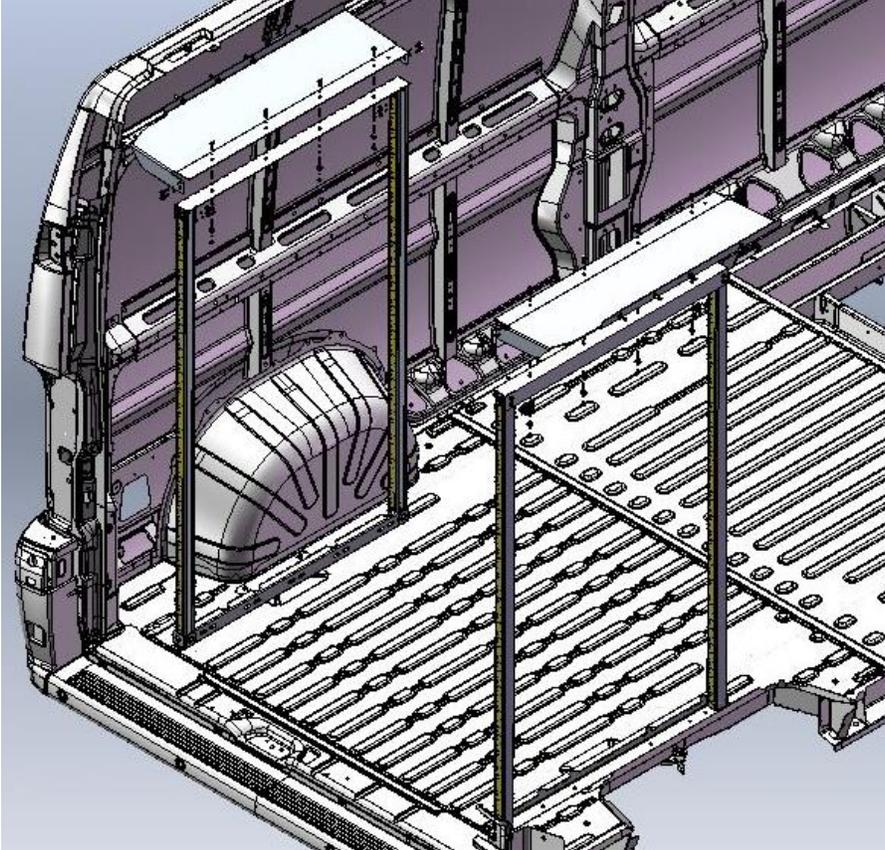
Upper mounting brackets have callouts for Streetside and Curbside.

Include flat and lock washers when fastening FAS 13007.

## DuraRac Installation Instructions

### Hardware:

		
<p><u>FAS 37018</u> NYLOCK NUT, 1/4"-20 (QTY: 16)</p>	<p><u>FAS 19903</u> SERRATED FLANGE BOLT, 1/4"-20 X 3/4" (QTY: 16)</p>	<p><u>FAS 33078</u> FLAT WASHER, 1/4" X 5/8" O.D. (QTY: 16)</p>

Step 3: Assemble Frame Kit to Upper Mounting Brackets		Notes:
A.	Insert frame kit subassemblies into the vehicle. Using callouts on the baseplate put the subassemblies on the Roadside and Curbside, respectively.	
B.	Loosely fasten frame kit to upper mounting brackets using (8) 1/4"-20 serrated bolts on the top side of upper mounting bracket. Once in proper position, mark the holes on the sides of the upper mounting brackets and then drill through the struts at the marked holes with a 3/8" drill bit. Then fasten at the drilled through holes using (8) 1/4"-20 serrated bolts.	
		

## DuraRac Installation Instructions

### Hardware:

 <p><u>FAS 12319-00492</u> 5-16"-18 PLUS NUT (QTY: 8)</p>	 <p><u>AUST EQFLATWASHER164</u> SPACER, 3/8" THICK, 1" O.D. X .4375" I.D. (QTY: 8)</p>	 <p><u>FAS 0144550</u> 5/16" 18 HEX BOLT, 2" L (QTY: 8)</p>	 <p><u>FAS 33620</u> 5/16" LOCK WASHER (QTY: 8)</p>	 <p><u>FAS 33006</u> 5/16" FLAT WASHER (QTY: 8)</p>
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### Step 4: Mount Frame Kit to the Floor

Notes:

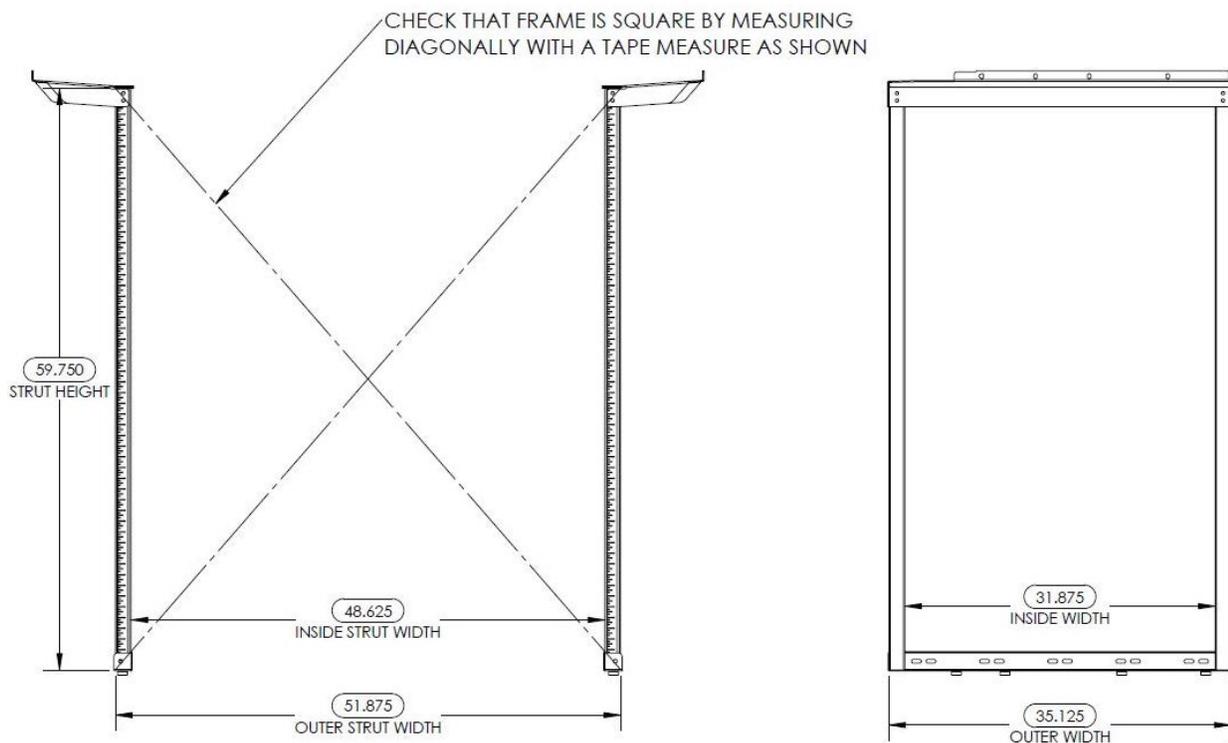
### IMPORTANT!



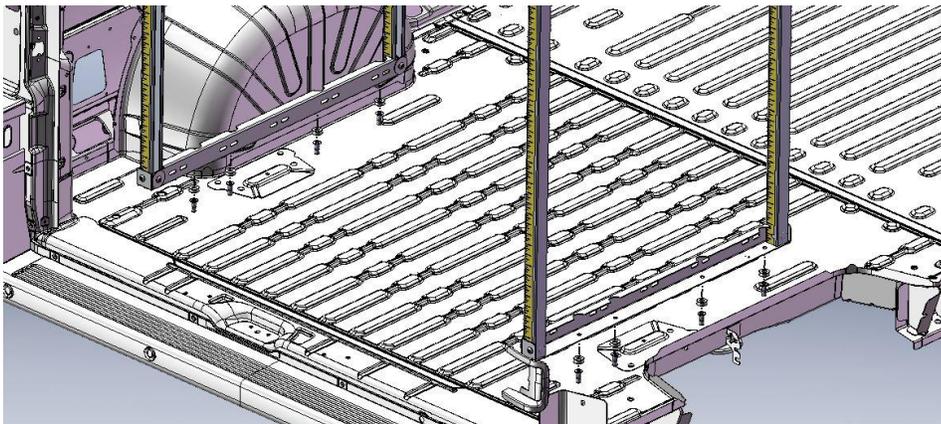
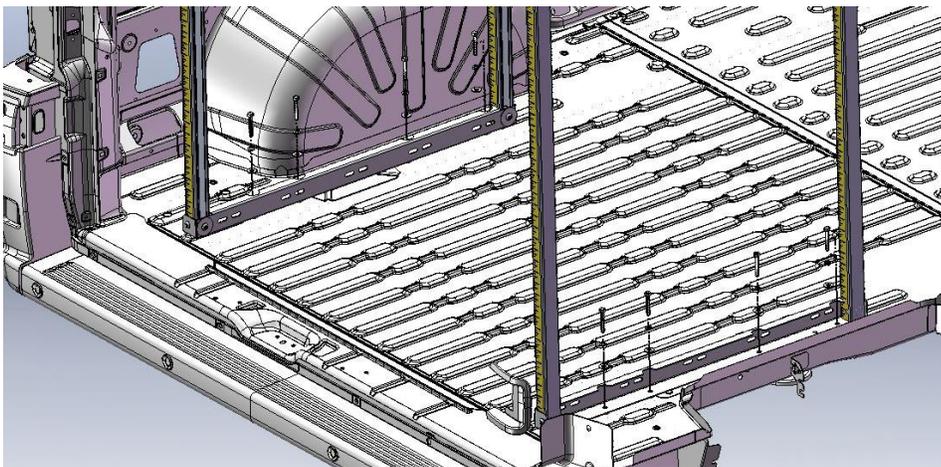
**BEFORE MOUNTING BASEPLATES, SQUARE UP THE FRAME KIT AND MAINTAIN 48.625" IN BETWEEN THE STRUTS IN BOTH THE CURBSIDE AND ROADSIDE, AS WELL AS AT THE TOP AND BOTTOM OF THE STRUTS**



- A. Frame kit subassemblies are to be centered between wheelbases. Use a leveling gauge to confirm that the frame kit is square and confirm the following dimensions below.

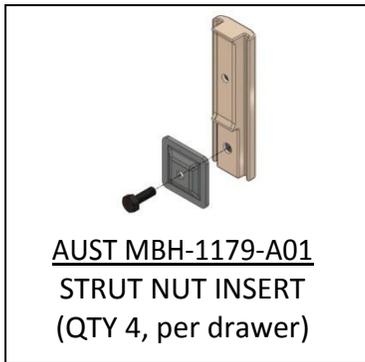


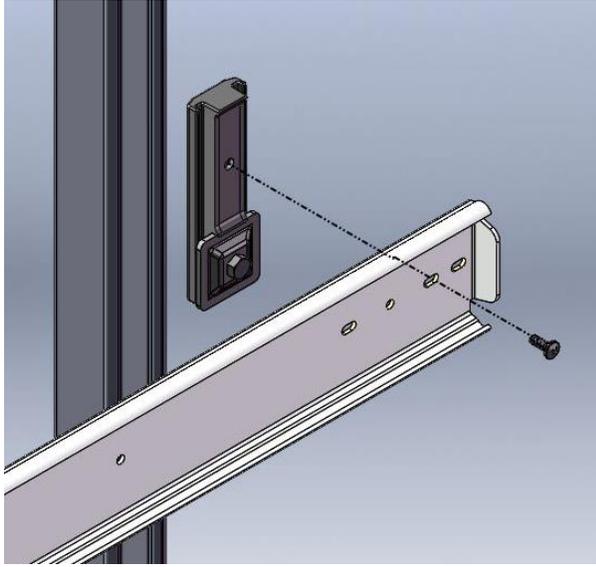
## DuraRac Installation Instructions

Step 4: Mount Frame Kit to the Floor, <i>CONT'd.</i>		Notes:
B.	Once dimensions are confirmed, mark the (8) hole locations on the floor.	
C.	Shift the frames off to the side so that they are out of the way of the marked holes, remove the frame kit from the vehicle if need be.	
D.	If there's a floor mat, use a 1" hole saw and drill through the floor mat until you reach the sheet metal floor.	
E.	Once floor mat is removed from hole locations, drill through those (6) holes using a 1/2" drill bit.	Use drill stop when drilling into vehicle.
F.	Insert a 5/16" plus nut into each of the holes drilled out. Place (1) spacer on top of each plus nut. For (8) total spacers. 	Refer to page 6 on how to install plus nuts.  Use rust blocker or any other form of rust protection spray on drilled out holes.
G.	Place baseplates back over hole locations. Use leveling gauge and confirm dimensions of the overall frame kit. Once confirmed, fasten the baseplates with (8) FAS 0144550. 	Include flat and lock washers when fastening FAS 0144550.
H.	With baseplates fastened, use leveling gauge and confirm dimensions of the overall frame kit again, and fasten all the bolts on the upper mounting brackets and frame kit tight.	

## DuraRac Installation Instructions

### Hardware:



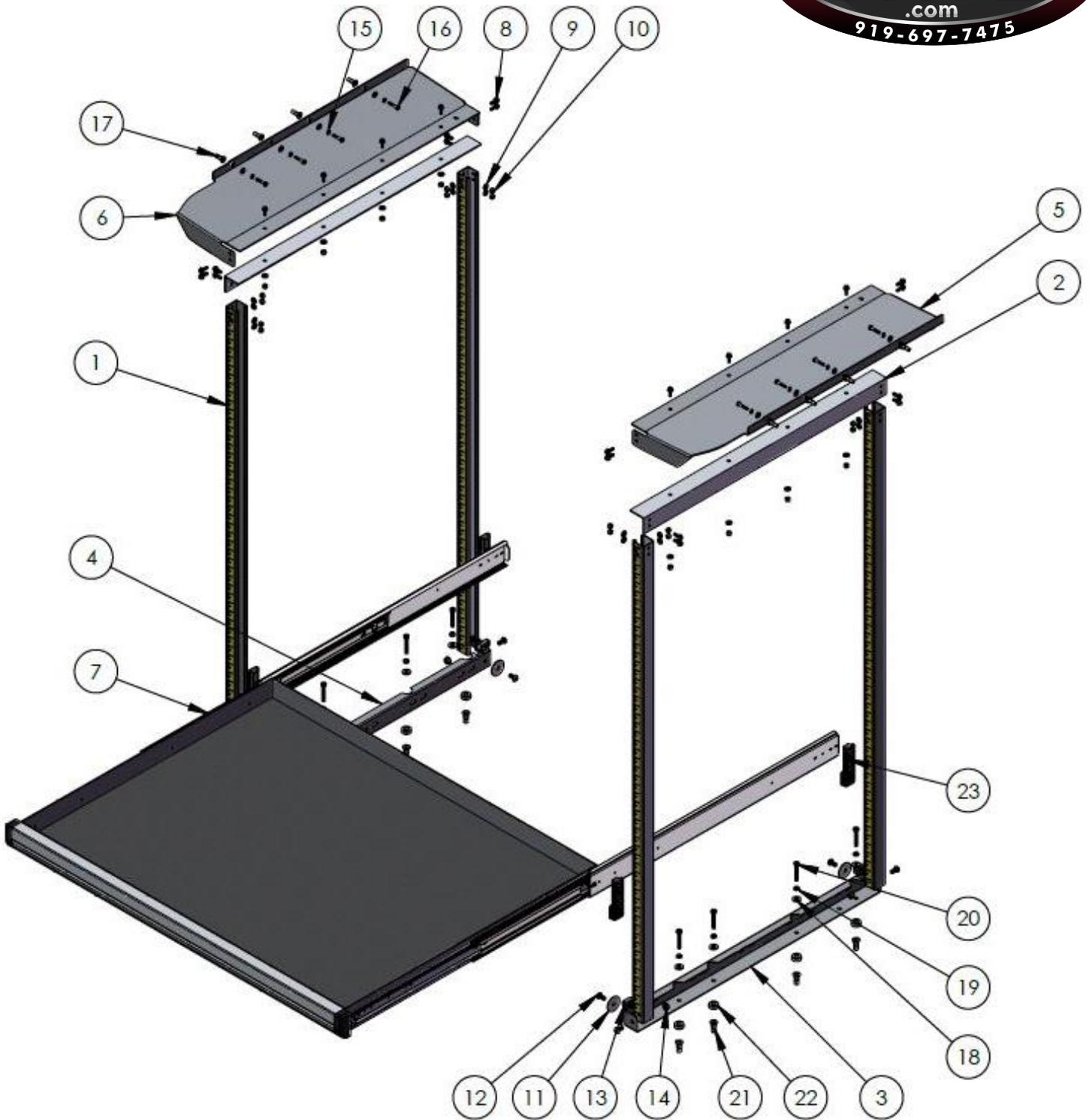
Step 5: Drawer Installation		Notes:
A.	Insert the Strut Nut assemblies into the strut channel at the exact same height and snug down ¼"-20 hex bolts with wrench.	Align all 4 Strut Nut inserts vertically.
B.	Extend drawer fully to the locked out position. Using the (4) #10-32 Pan Head Screws supplied with strut nut, securely attach slide to inserts. 	One bolt at each strut nut kit at each vertical strut
C.	Place Drawer back to the closed position (at your desired shelf height) and tighten the ¼"-20 hex bolts to 100 in-lbs.	To adjust the shelving height, loosen ¼"-20 hex bolts. Moving drawer parallel to floor with a second person to keep level.
D.	Repeat steps A, B, and C for each additional drawer you wish to add.	

## DuraRac Installation Instructions – Bill of Material

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	AUST TB9002	STRUT CHANNEL, 59.75"L	4
2	CRF 10-5400-001	UPPER FRAME ANGLE	2
3	CRF 23-1100-001	BASEPLATE, CS	1
4	CRF 23-1100-002	BASEPLATE, RS	1
5	CRF 23-1100-003	TOP ATTACHMENT BRACE, CS	1
6	CRF 23-1100-004	TOP ATTACHMENT BRACE, RS	1
7	CRC 21-2100-001	REAR DURARAC DRAWER	TBD
8	FAS 19903	SERRATED FLANGE BOLT, 1/4"-20 X 3/4"	24
9	FAS 33078	FLAT WASHER, 1/4" X 5/8" O.D.	32
10	FAS 37018	NYLOCK NUT, 1/4"-20	24
11	FAS 33221	FENDER WASHER, 3/8" I.D. X 1.75" O.D.	4
12	FAS 10140022	BOLT, TORX, 3/8"-16 X 3/4"	8
13	FAS 48603	3/8"-16 STRUT NUT, TALL SPRING	4
14	FAS 37341	3/8"-16 SERRATED FLANGE NUT	4
15	FAS 33618	WASHER, LOCK, 1/4"	8
16	FAS 13007	1/4"-20 HEX BOLT, 1.25"L	8
17	FAS 12319-00491	1/4"-20 PLUS NUT	8
18	FAS 33006	WASHER, FLAT, 5/16"	8
19	FAS 33620	WASHER, LOCK, 5/16"	8
20	FAS 0144550	5/16"-18 HEX BOLT, 2"L	8
21	FAS 12319-00492	5/16"-20 PLUS NUT	8
22	AUST EQFLATWASHER164	SPACER, 3/8" THICK, 1" OD, 7/16" ID	8
23	AUST MBH-1179-A01	STRUT NUT INSERT (4 PER DRAWER)	TBD



DuraRac Installation Instructions – Technical Drawing



*DuraRac Installation Instructions – Inspection Dimensions*

