



## RAM 1500 DT 2019+

### Scout Roof Rack

### FITTING INSTRUCTION

#### **IMPORTANT! – READ BEFORE INSTALLATION**

- This product must be installed exactly as per these instructions using only hardware supplied.
- Take a few moments to read instructions thoroughly before beginning work.
- In the event of damage to any bar component please contact OFFROAD ANIMAL to arrange repair/replacement of components.
- Do not use this product for any vehicle make or model other than that specified on these instructions.
- Do not remove labels from this product.
- This product and its fixings must not be modified in any way unless stated in these fitting instructions.
- The installation of this product is recommended for trained personnel.
- These instructions are correct at time of publication. OFFROAD ANIMAL cannot be held responsible for the impact of any changes subsequently made by the vehicle manufacturer. If you find something has changed please contact us to let us know!
- During installation it is the duty of the installer to check correct operation/clearances of all components.
- If Instructions are to be printed for reference in the workshop, it is recommended that they are printed in colour, for best legibility.

**Vehicle roof rated to 100kg on road and 66kg offroad**  
**Rack weight = 27kg**  
**Load Capacity = 73kg on road and 39kg off road**



## GENERAL CARE AND MAINTENANCE

Only wash the product with a PH neutral car wash to prevent paint damage and discolouration.

Plastic parts may be maintained with silicone spray.

Do not use acidic or alkaline based cleaning products.

It is important to perform regular checks (pre trip or on an annual basis) on the installed product. Checks include:

- Visual inspection for damage (eg. cracks, chips, dents etc.)
- Electrical wiring is not rubbing anything or worn out
- Bolts are torqued to correct specification (see torque guide below)

For touching up small stone chips, Offroad Animal recommends the following paint products:

- Dupli-Color Trim & Bumper Paint Black (TB101)
- VHT Hood, Bumper & Trim Paint Black (SP27)

## BOLT TORQUE SETTINGS

Use the following bolt torques on all general fasteners, unless otherwise specified.

GENERAL FASTENERS	
Size	Torque Nm
M5	5 Nm
M6	9 Nm
M8	22 Nm
M10	44 Nm
M12	77 Nm

Use the following bolt torques on all structural front bar mount and tow point fasteners, and rear towbar fasteners, unless otherwise specified.

FRONT BAR MOUNTS AND TOW POINTS + REAR TOWBAR	
Size	Torque Nm
M10	57 Nm
M12	100 Nm
M14	164 Nm
M16	248 Nm

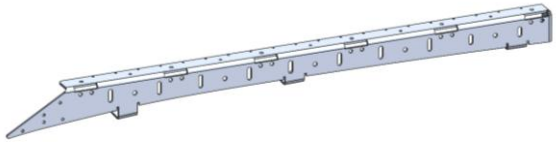
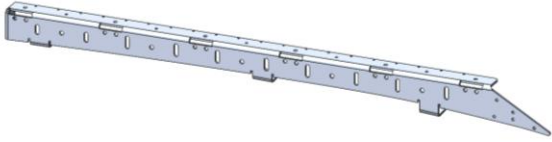
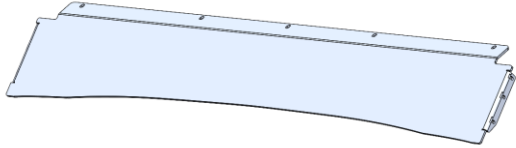
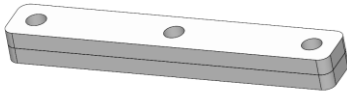
**Always use a torque wrench to set correct torque settings. Ensure torque wrench is set to Nm unit of measurement. Otherwise perform conversion to lb-ft.**



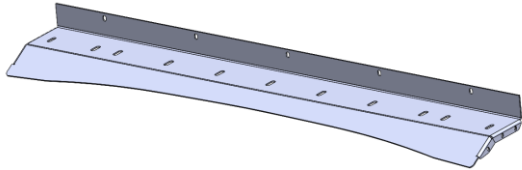
## PARTS LISTING

**IMPORTANT:** Check all parts are present before beginning work! Contact OFFROAD ANIMAL if something is missing.

### Main Parts – In the Box

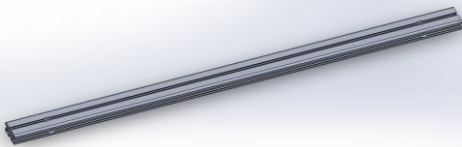
Qty	Part Number	Description	Image
1	B-0616L	Scout Roof Rack Side Rail - RAM 1500	
1	B-0616R	Scout Roof Rack Side Rail - RAM 1500	
1	B-0617	Scout Roof Rack Std Wind Deflector - Ram	
6	RR-IDM-RG 21-SCT- ASM2	SCOUT RACK-MOUNTING BLOCK	

### Optional Light Bar Kit – Purchased Separately

Qty	Part Number	Description	Image
1	B-0618	Scout Roof Rack Light Bar Wind Deflector - RAM	



## Cross Bar Kit

Qty	Part Number	Description	Image
6	E-0006-1375	Scout Roof Rack – Cross Bar Extrusion 1375MM	

## Small Parts – Contained in Small Parts Kit Bag

QTY.	PART NO.	DESCRIPTION
17	M8 X 16 BHCS BZP	SCREW, BUTTON HEAD CAP, M8X16X1.25 GR12.9 BLACK ZP
41	M8 FLAT WASHER- BLACK ZINC	M8 FW- BLACK ZINC
17	M8 NUT	Hex Nut, M8x1.25 G8.8 ZP
24	M8 X 20 BHCS BZP	SCREW, BUTTON HEAD CAP, M8X20X1.25 GR12.9 BLACK ZP
6	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
6	M6 FLAT WASHER BLACK ZINC	M6 FW BLACK ZP
6	M6x20 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X20X1 GR12.9 BLACK ZP
12	M8 Nutsert	M8 Nutsert
6	M8 X 25 HEX	Bolt Hex, M8X25X1.25, 8.8 Grd
12	M8 FLAT WASHER	M8 FW
12	M8 SW	M8 Spring washer
6	M8 FLANGE NUT	Flange Nut, M8x1.25 G8.8 ZP
12	M8 x 35 Hex	M8 x 35 x 1.25 Hex bolt Grd 8.8
2	OFA-LOGO	OFFROAD ANIMAL METAL LOGO







## TOOLS REQUIRED

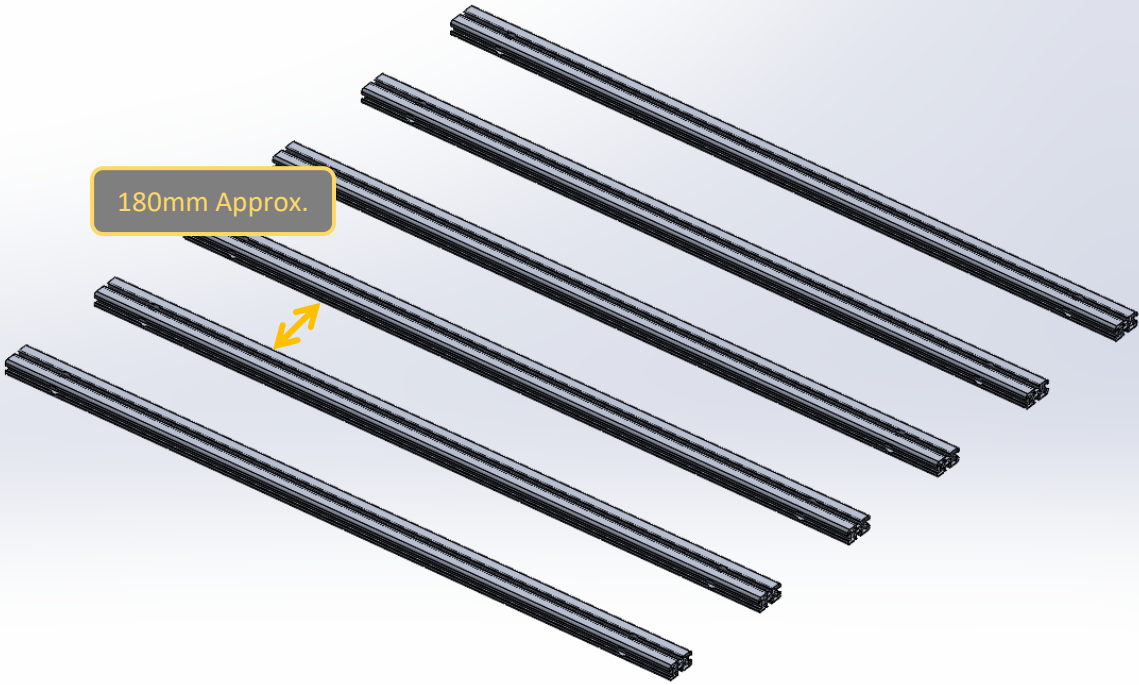
The following tools will be required to install the product.

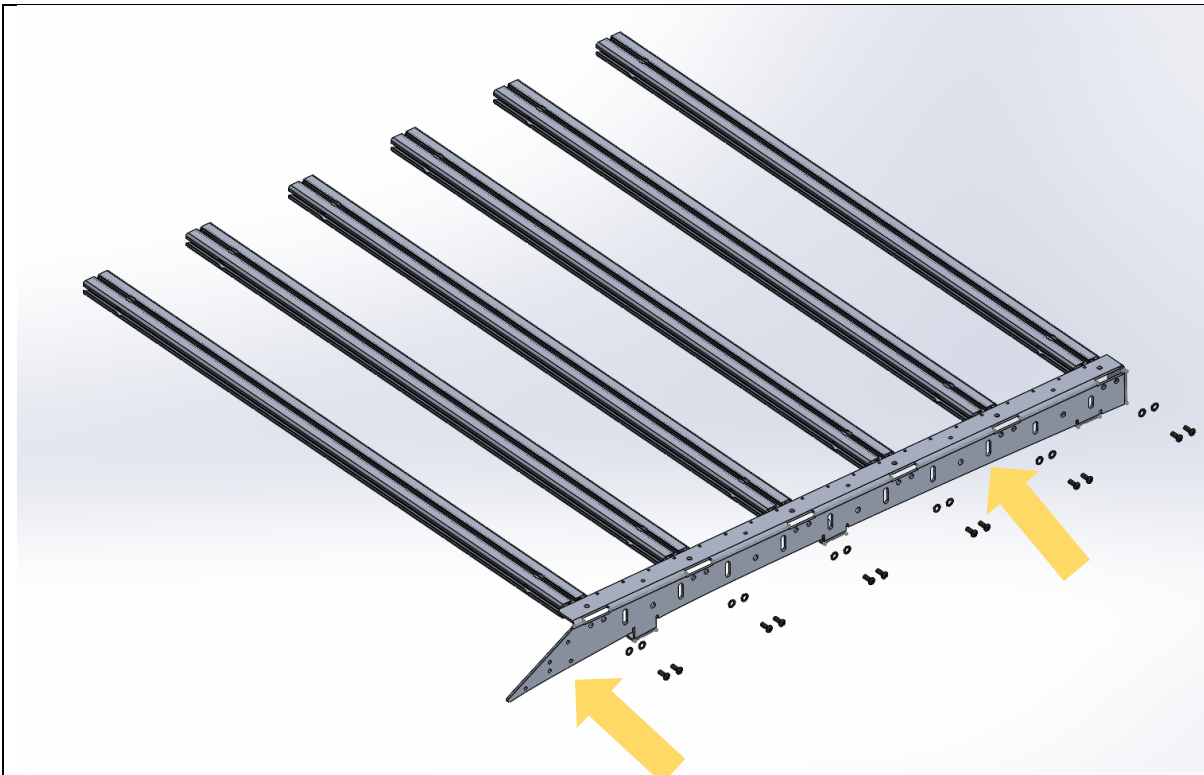
Hand Tools	Power Tools	Workshop Supplies
Metric Socket Set 8-19mm Socket Extension Bar Metric Spanner Set 10-19mm Hex (Allen) Key Set 4-6mm Marker Pen Centre Punch De-Burring Tool Trim Tool Nutsert Tool M8x1.25p Nutsert Mandrel	5mm Drill Bit 9mm Drill Bit 11mm Drill Bit Electric Drill Angle Grinder w Cutoff Wheel	Soft Blanket Rag Isopropyl Alcohol Automotive grade sealant (Sikaflex 227 Recommended) Masking Tape

## WORKSHOP SAFETY

It is the responsibility of the installer to always complete works in a safe manner. Make sure the following safety equipment is available and precautions are observed whilst fitting this product.

<p>Hearing Protection</p> 	<p>Always wear ear protection when using power tools.</p>
<p>Eye Protection</p> 	<p>Ensure eye protection is always worn when cutting or drilling.</p>
<p>Manual Handling</p> 	<p>Do not attempt to lift bar assemblies or rock sliders on your own.</p> <p>Always use two people to lift or use mechanical Lifting aid such as hydraulic lifting trolley.</p>
<p>Vehicle Support</p> 	<p>Always ensure vehicle is properly supported when working on it. Do not attempt to fit products whilst suspension work is being carried out. Do not work under a vehicle supported only by a jack.</p>

		
<p>1. Assemble the roof rack. Start by setting out the 6 extrusion cross bars on a table. Position them so they sit approximately 180mm apart (edge to edge).</p>	<p><b>TOOLS REQUIRED</b></p>	
	<p><b>FASTENERS</b></p>	



2. Fit the side rail to the extrusion,

This is easiest to do when the ends of the extrusions are hanging over the edge of a table / workbench.

3. Secure with M8x20mm Button head bolts and M8 Flat Washers as shown.
4. Complete for other side of rack also.

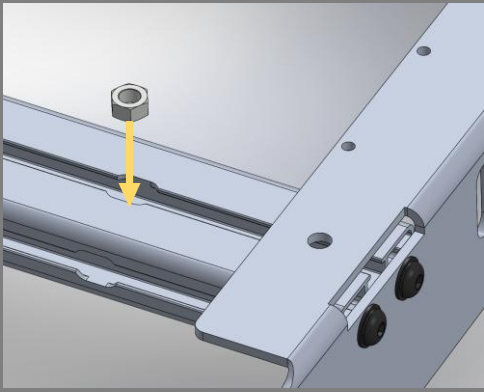
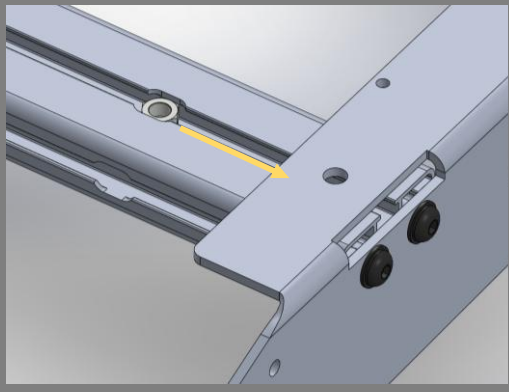
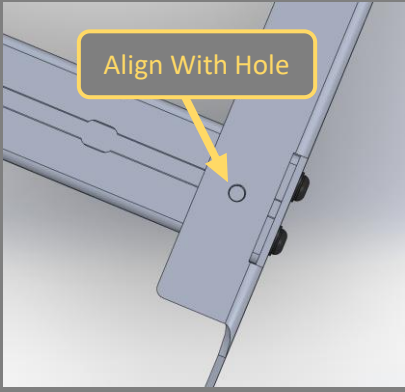

#### TOOLS REQUIRED

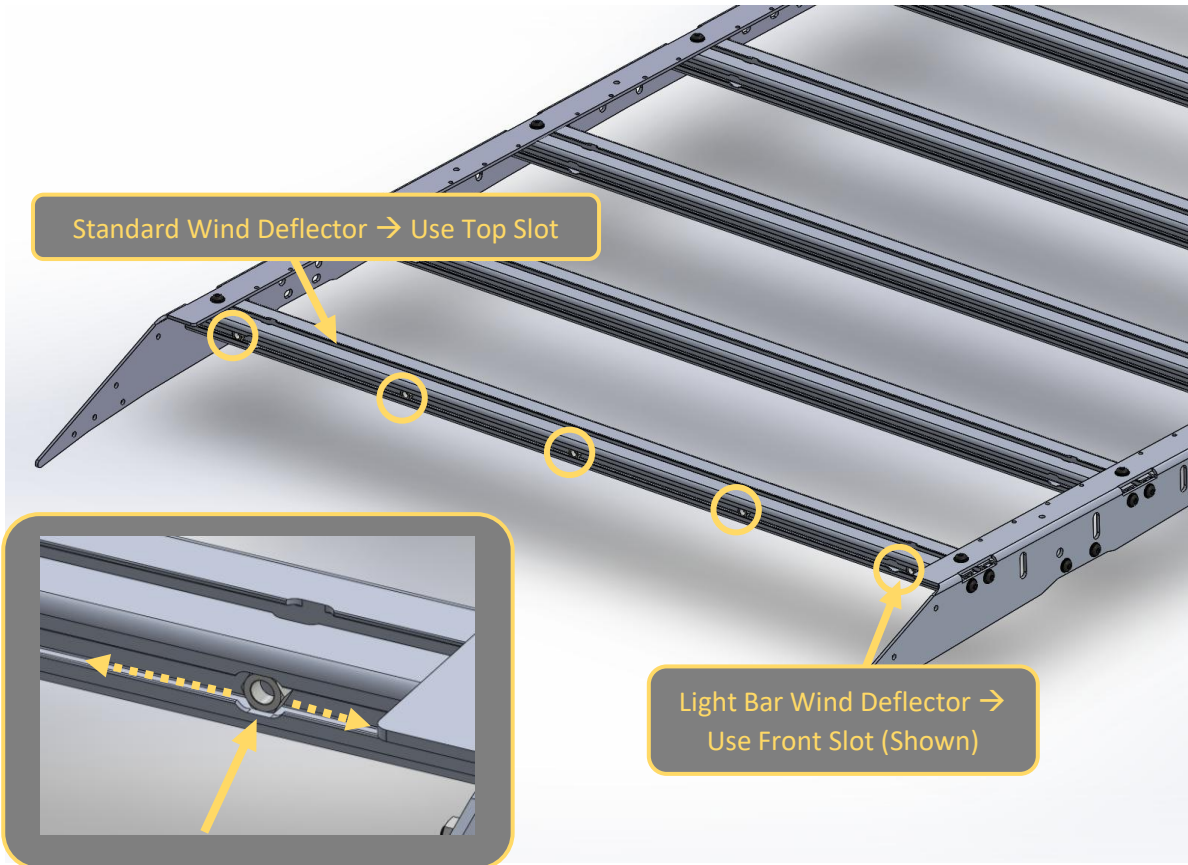
5mm Hex Key

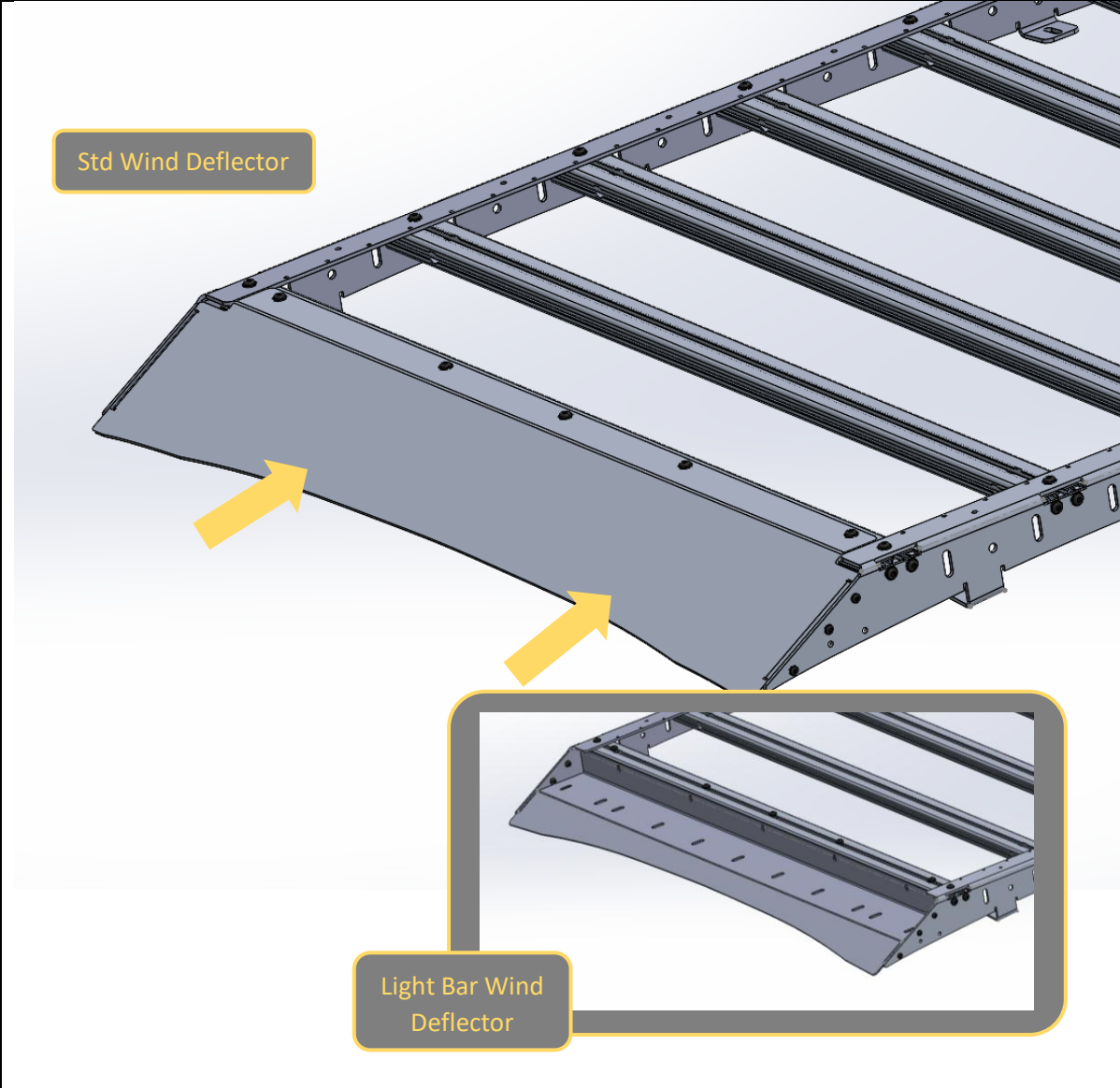
#### FASTENERS

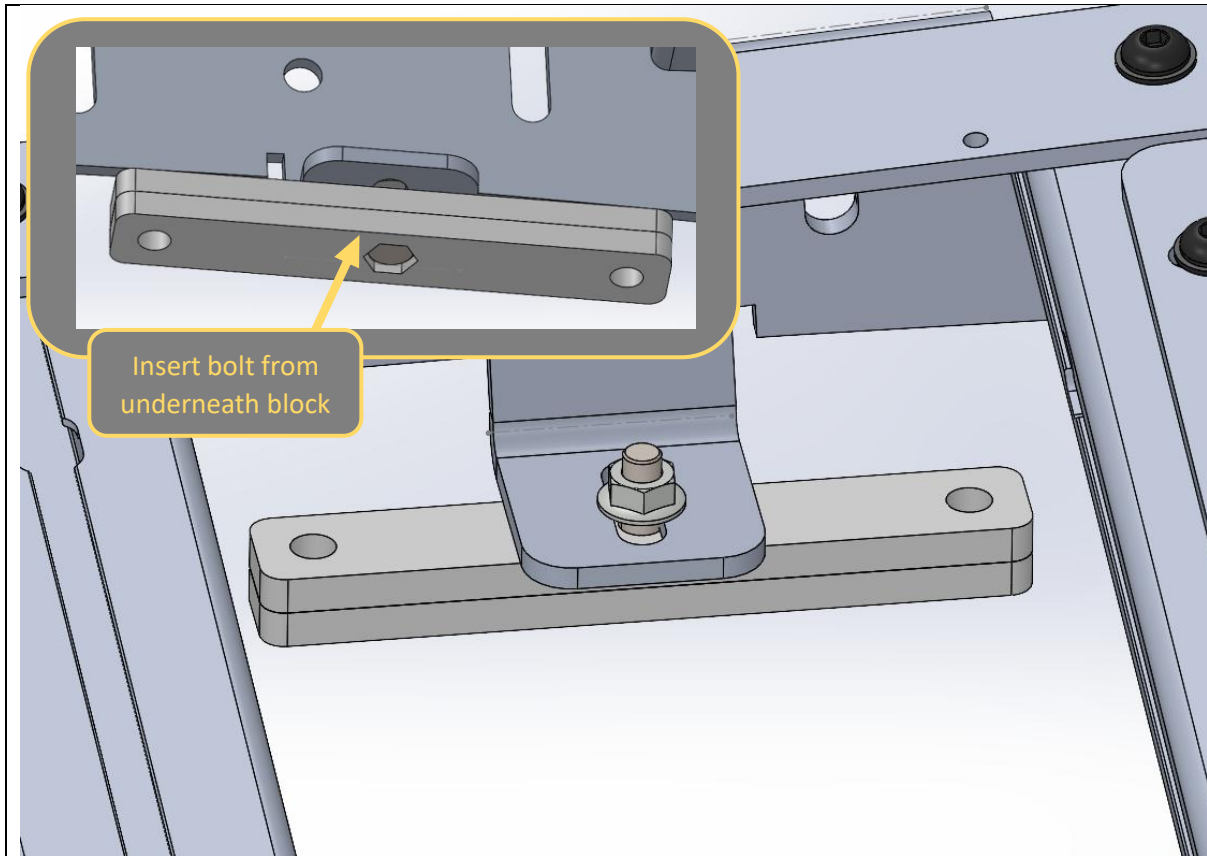
M8x20 BHCS and Flat Washers



	
	
<ol style="list-style-type: none"> <li>5. Insert M8 Nut into each track for securing top face of side rail.</li> <li>6. Drop nut into slot in extrusion, then slide nut sideways in slot and align with hole in the side arm.</li> <li>7. Secure with M8x16 Button head bolt and washer.</li> <li>8. Complete steps for the other side of the rack assembly to fit the other side rail.</li> </ol>	<p><b>TOOLS REQUIRED</b></p> <p>5mm Hex Key</p>
	<p><b>FASTENERS</b></p> <p>M8x16 Button head bolts. M8 Flat Washers</p>

	
<p>9. Fit the 5x M8 in nuts to the Top (for Standard wind deflector) OR Front (for Light Bar wind deflector) slot of the front most extrusion member.</p> <p>10. Move nuts side to side using screwdriver to move nuts into correct positions. Gravity should hold the nut in position.</p>	<p><b>TOOLS REQUIRED</b></p> <p>Screwdriver</p>
	<p><b>FASTENERS</b></p> <p>5x M8 Nuts</p>

	
<ol style="list-style-type: none"> <li>Fit the wind deflector to the rack assembly. The deflector should sit inside the side rails in front of the first extrusion member.</li> <li>Secure the wind deflector to the side rails with M6x20 button head bolts, Flat washers, and flange nuts.</li> <li>Secure the wind deflector to the extrusion with M8x16 button head bolts and Flat washers into the pre fitted drop in nuts.</li> <li>Once fitted, ensure all bolts are tightened.</li> </ol>	<p><b>TOOLS REQUIRED</b></p> <p>4mm Hex Key 5mm Hex Key</p>
	<p><b>FASTENERS</b></p> <p>6x M6x20 Button head bolt. 6x M6 Flat Washer 6x M6 Flange Nut 5x M8x16 Button head bolt 5x M8 Flat Washer</p>



15. Temporarily fit the mounting blocks to the roof rack feet, using M8x25 Hex Bolts M8 Flange Nuts
16. Position the mounting blocks parallel to the edge of the foot and approximately centered in the slot. Tighten nuts finger tight to keep block in position.

#### TOOLS REQUIRED

#### FASTENERS

6x M8x25 Bolt  
6x M8 Flange Nut



17. Place soft blanket or similar on center of the roof, ensure the black plastic gutter trims remain exposed.

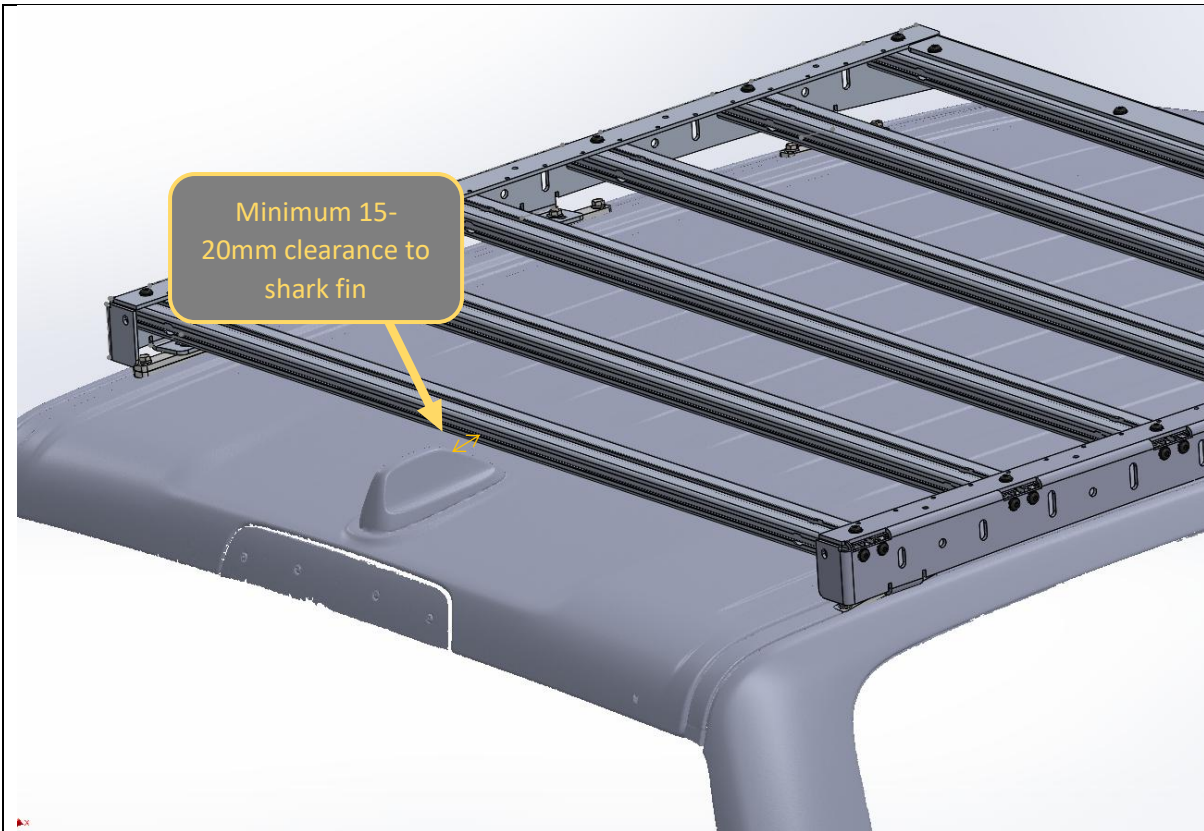
18. With the assistance of a tall friend, lift the assembled roof rack onto the vehicle. Set it down with the mounting blocks sitting on the rubber gutter track.

#### TOOLS REQUIRED

Tall Friend  
Blanket

#### FASTENERS





19. Adjust the position of the roof rack on the roof. Ensure the rack is sitting centered, and the rear cross bar is approximately 15-20mm forward of the shark fin antenna
20. Ensure the mounting blocks are sitting on the rubber roof channel trim.
21. Once happy with positioning, use a marker to mark the front and rear edge of each mount on the rubber roof channel.
22. With care remove the rack from the roof, then remove the mounting blocks from the rack.

#### TOOLS REQUIRED

Marker Pen

#### FASTENERS



23. Apply masking tape to the roof adjacent to the marked mount locations.
24. Using a marker pen, transfer the mounting block locations on to the masking tape.

#### TOOLS REQUIRED

Masking Tape  
Marker Pen

#### FASTENERS



25. Using a trim tool carefully pry up and remove the rubber roof ditch covers.
26. Take care to ensure you do not scratch or mark the roof paint.

#### TOOLS REQUIRED

Trim Tool

#### FASTENERS

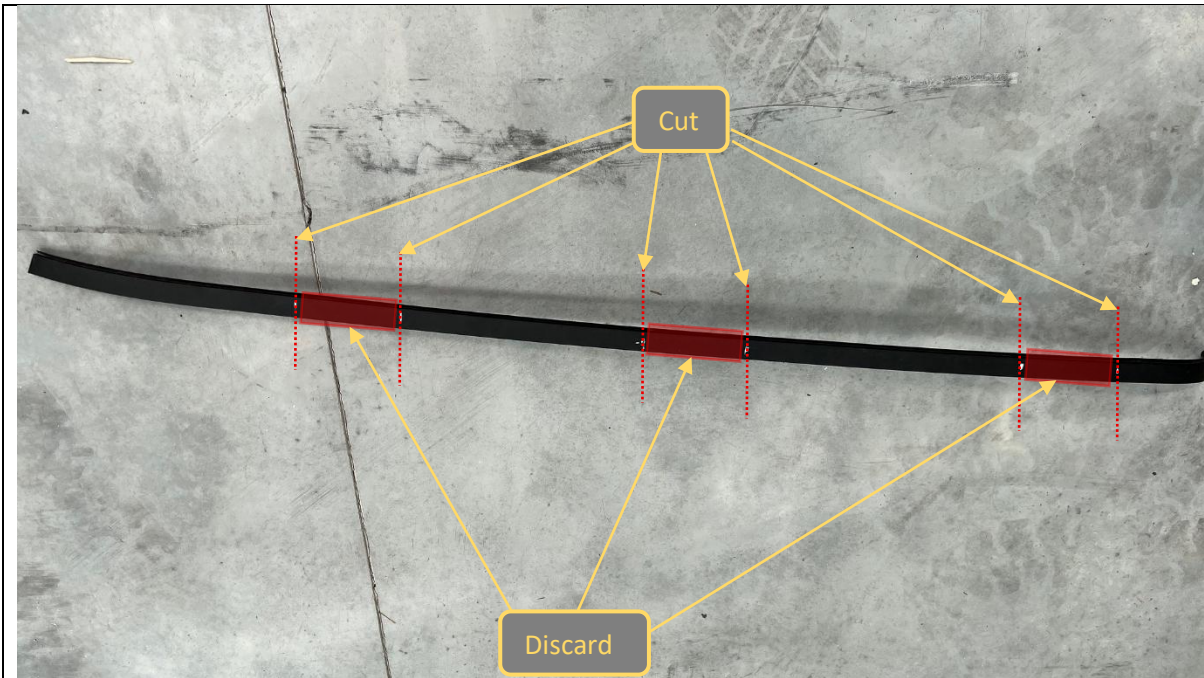




27. Once trim is removed, remove any remaining retaining clips from the mushroom studs in the roof ditch and re-fit them to the corresponding positions on the rubber ditch finisher trim.

#### TOOLS REQUIRED

#### FASTENERS



28. Using an angle grinder cut the trim piece into sections along the marked lines. Make sure the cut is made ON the marking to ensure correct clearance.
29. Discard the 3x sections where the mounting blocks will fit.
30. Clean up trim edges using deburring tool or utility knife.

#### TOOLS REQUIRED

Angle Grinder  
Deburring Tool

#### FASTENERS



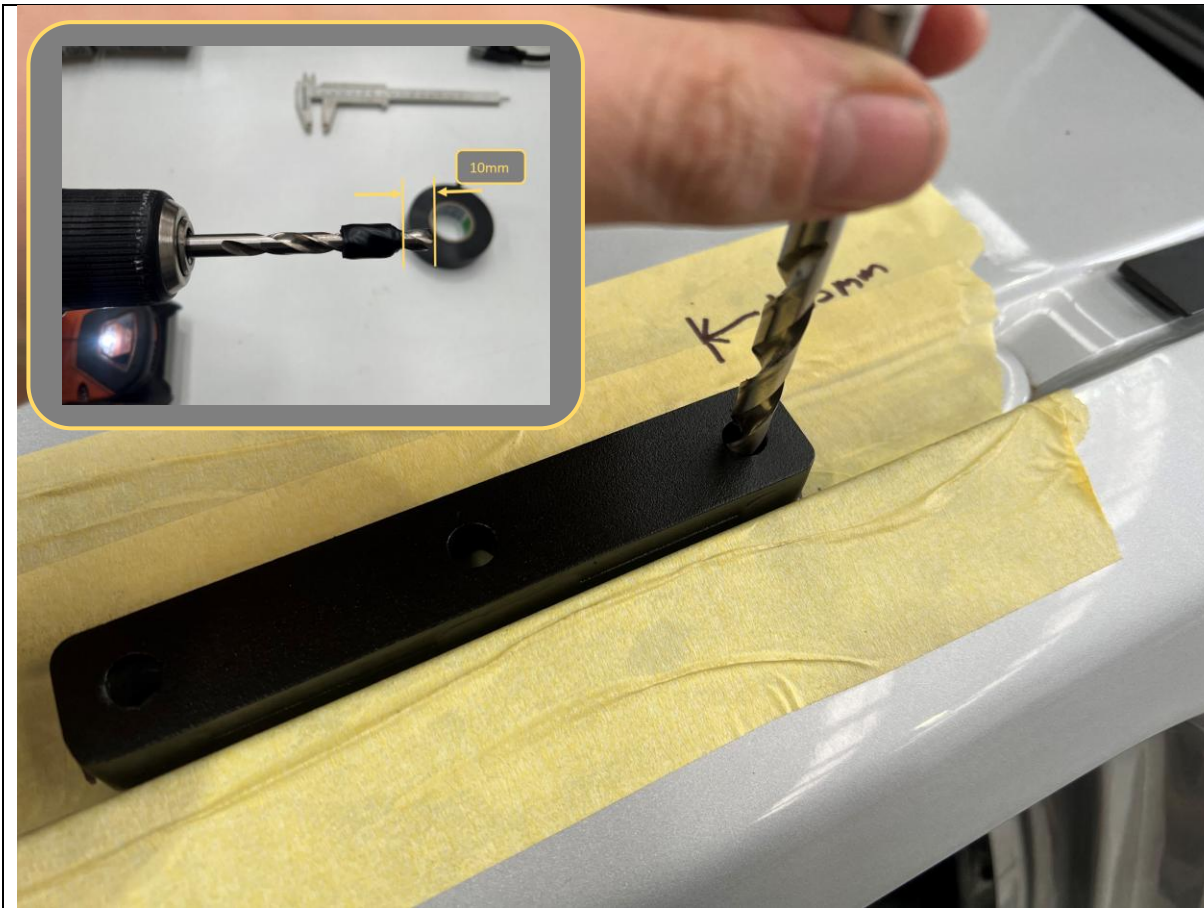
31. Re-Fit the 3x cut down sections of trim to the roof, re-clipping to the original mushroom studs in the roof gutter. Use the marking on the masking tape to help guide the correct pieces into the correct positions.

32. Complete for both sides of the vehicle.

**TOOLS REQUIRED**

**FASTENERS**



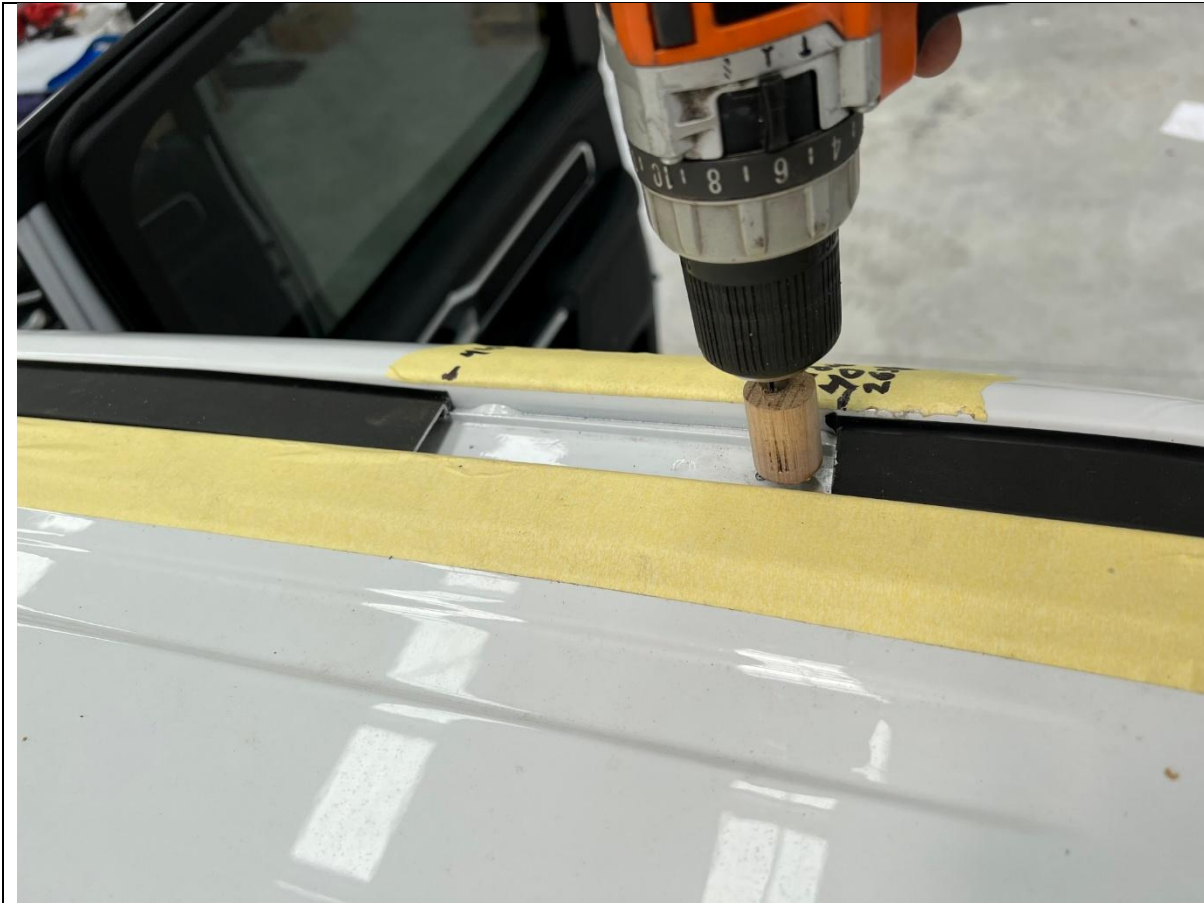


33. Apply masking tape to the roof ditches in the mounting block locations.
34. Place the 6x mounting blocks in the gaps from the gutter sections.
35. **IMPORTANT:** Double check if the block positioning is correct, by lifting and placing the rack on the blocks to ensure the center holes of the block and slots of the rack line up
36. Use 9mm drill bit and spin it by hand to mark the centre spot in the tape. Then remove and use a centre punch to mark the drill locations on roof (the outside holes on each block)
37. For all drilling operations ensure you use a drill stop or create one by wrapping many layers of tape on the drill bit so you can ensure only 10mm of drill bit pokes through the roof

#### TOOLS REQUIRED

9mm Drill Bit  
Centre Punch  
Drill Stop  
Masking Tape

#### FASTENERS



38. Drill through the roof in the confirmed marked locations.
39. Start with 5mm pilot hole, then enlarge to 11mm. You may need to drill through 2x layers of steel.
40. Check supplied M8 Nutsert fits snugly and to full depth in each hole.
41. Complete drilling procedure for all mounting hole locations.

#### TOOLS REQUIRED

5mm Drill Bit  
11mm drill bit  
Drill Stop  
Power Drill

#### FASTENERS

M8 Nutserts (for test fitting)



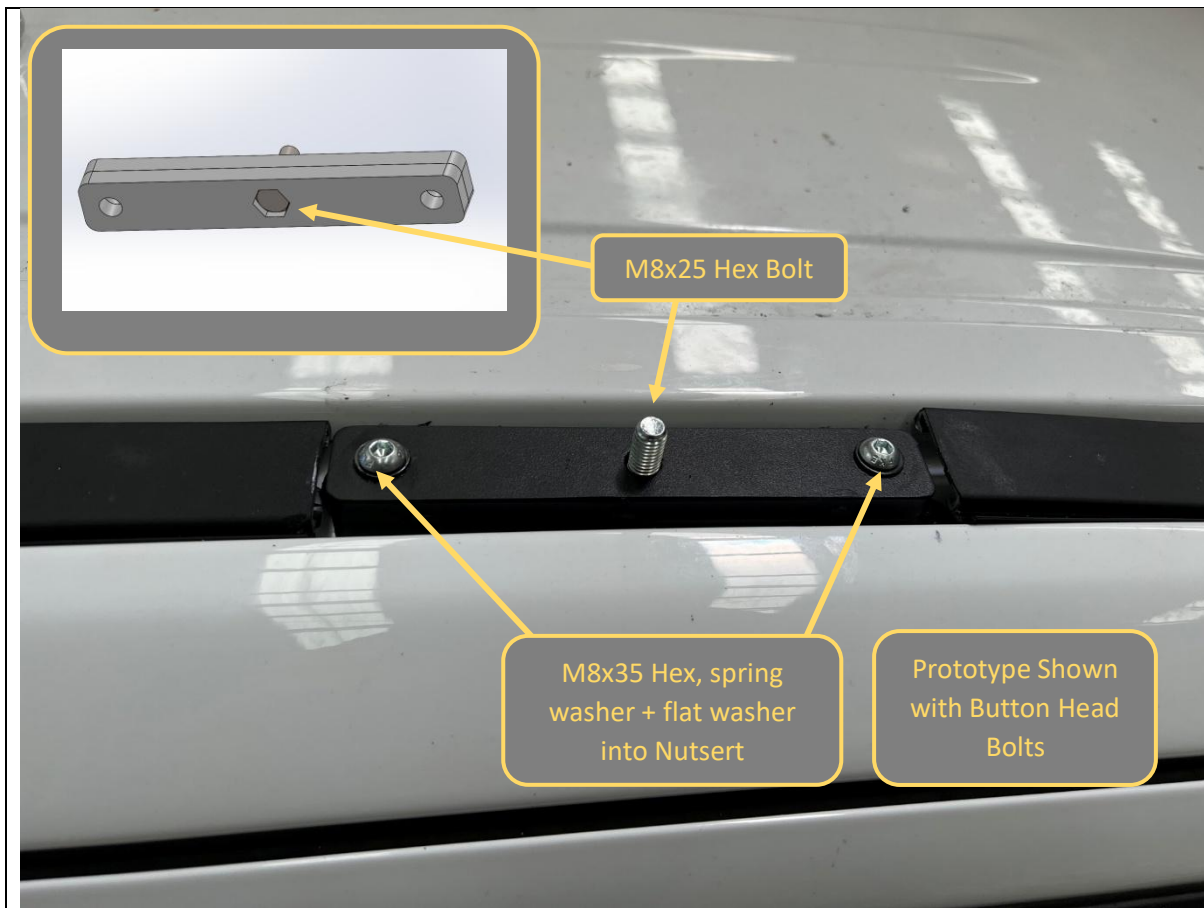
42. Set supplied M8 Nutserts in each hole location using Nutsert tool.
43. Ensure each Nutsert is tight but not over-set.
44. Complete Nutsert fitting for all mounting hole locations.

#### TOOLS REQUIRED

Nutsert Tool  
M8x1.25p Nutsert Tool Mandrel

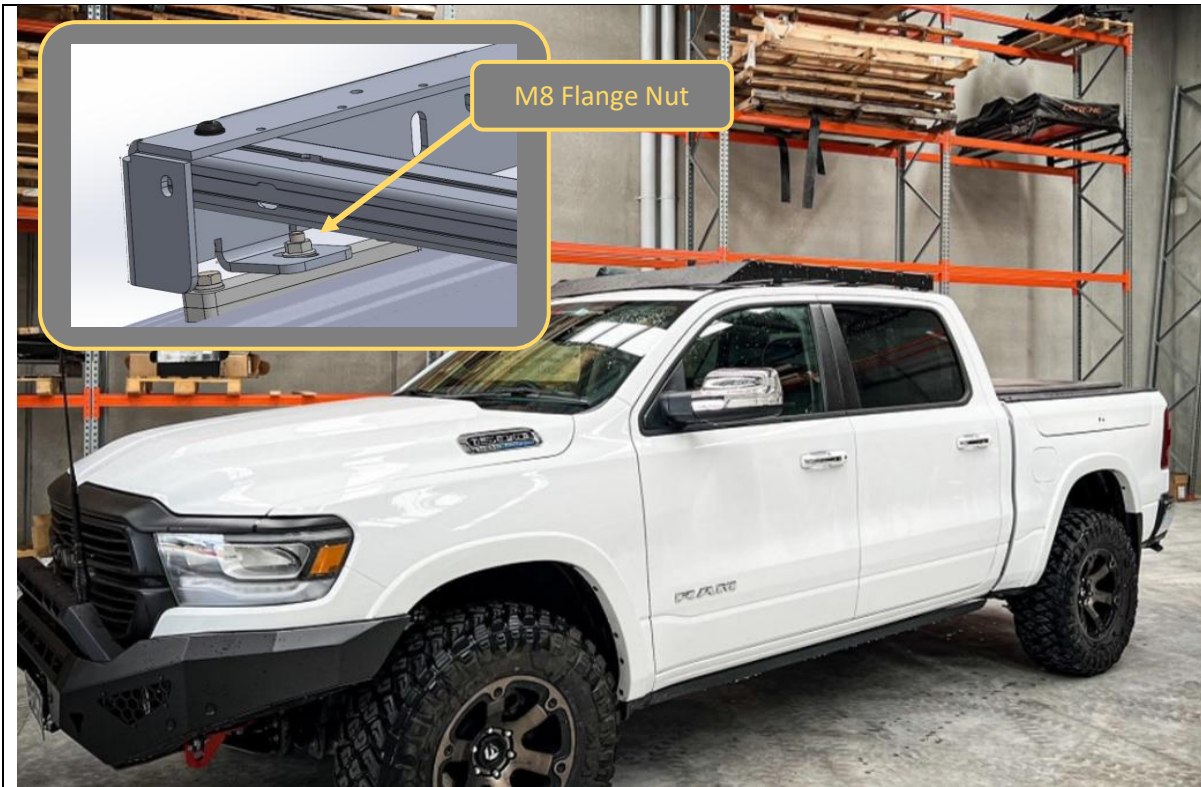
#### FASTENERS

6x M8 Nutserts  
  
Per Side



<p>45. Fit M8x25 Hex bolt into the mounting block.</p> <p>46. Apply generous beads of automotive sealant, such as Sikaflex 227 around each Nutsert location and along the length of the block</p> <p>47. Fit the block to the roof, securing to the Nutsert with M8x35 hex bolts, M8 spring washers and flat washers.</p> <p>48. Complete mounting block fitment procedure for all mounting blocks.</p>	<p><b>TOOLS REQUIRED</b></p> <p>13mm Socket / Spanner</p>
	<p><b>FASTENERS</b></p> <p>3x M8x25 hex bolt 6x M8x35 hex bolt 6x M8 spring washer 6x M8 flat washer</p> <p>Per Side</p>





49. With the help of a tall friend, lift the roof rack on to the roof for the final time.

50. Set the rack down, such that it sits with all of the protruding M8 bolts in the slots on the rack feet.

51. Secure the rack to the blocks using M8 Flange Nuts.

52. Ensure the rack does not touch the body /roof of the vehicle in any location (other than the mounting feet).

53. Tighten all M8 Nuts using 13mm spanner or socket.

#### TOOLS REQUIRED

Tall Friend  
13mm Socket / Spanner

#### FASTENERS





54. Double Check all Fasteners are tight.
55. Fit the Offroad Animal logo plates to the rack – using the adhesive backing. We recommend putting them on the side near the front mount.
56. With That you are done! Head Bush and Enjoy your new rack!

**For contact details see [www.offroadanimal.com](http://www.offroadanimal.com)**