**RAM 1500 DS****2017 – 2023****PREDATOR & TORO FRONT BAR****IMPORTANT! – READ BEFORE INSTALLATION**

- When installed in accordance with these instructions, the front protection bar does not affect the operation of the vehicles SRS airbags.
- 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.

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.

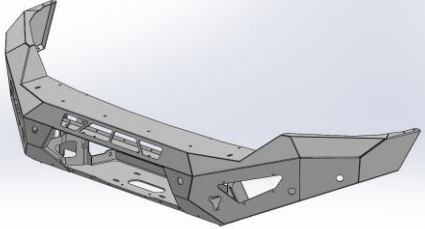
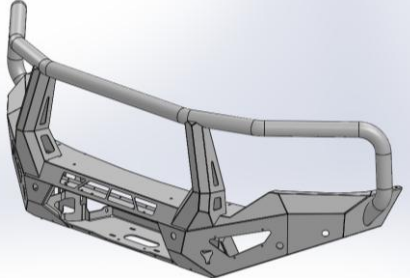
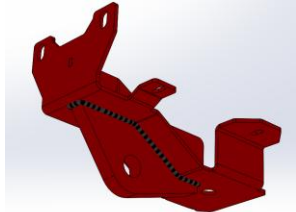
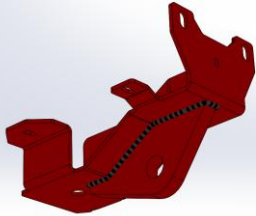
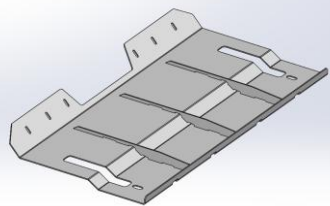
FRONT BAR MOUNTS AND TOW POINTS + REAR TOWBAR	
Size	Torque Nm
M10	57 Nm
M12	100 Nm
M14	164 Nm
M16	248 Nm

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.

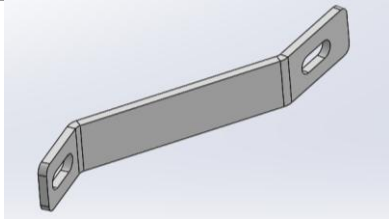
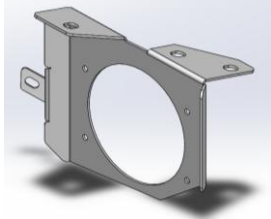
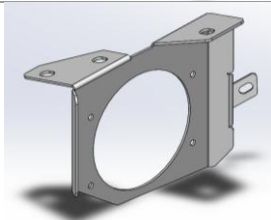

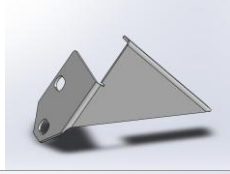
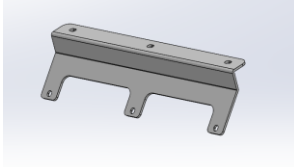


PARTS LISTING

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	FB-R15-DS-17-PR-ASM1	RAM 1500 DS PREDATOR WELDED BAR ASSY	
OR			
1	FB-R15-DS-17-TOR-ASM1	RAM 1500 DS TORO WELDED BAR ASSY	
1	FB-R15-DS-17-ASM2L	RAM1500 Tow Point Assy	
1	FB-R15-DS-17-ASM2R	RAM1500 Tow Point Assy	
1	FB-R15-DS-17-ASM3	RAM1500 Bash Plate Assy	

1	M-0016	RAM 1500 Predator Fairlead Mesh	
1	M-0017L	RAM 1500 Predator Side Mesh	
1	M-0017R	RAM 1500 Predator Side Mesh	
1	M-0002L	Light Cover Mesh	
1	M-0002R	Light Cover Mesh	
1	U-0025L	RAM 1500 Predator Wing Under panel	
1	U-0025R	RAM 1500 Predator Wing Under panel	

2	B-0387	RAM 1500 Predator Winch Brace	
1	B-0519L	Ram 1500 Halo Fog Light Bracket	
1	B-0519R	Ram 1500 Halo Fog Light Bracket	
1	B-0507L	RAM 1500 Headlight Infill Panel - Body Mounted	
1	B-0507R	RAM 1500 Headlight Infill Panel - Body Mounted	
1	B-0637	RAM1500 DS Front Bar - Center Section Brace	
1	NPF-COM-SM-ASM0	Number plate flip asm Small	
1	FB-R15-DS-17-PR-ADRC	ADR Compliance Plate RAM1500 DS	
6	CPHP020	Plastic Hole Insert, 28MM, Black, Tigerlink Hardware CPHP020	

Small Parts – Contained in Small Parts Kit Bag

Qty	Part Number	Description
10	M8 X 20 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M8X20X1.25 BLACK ZP
16	M8 FLAT WASHER- BLACK ZINC	M8 FW- BLACK ZINC
30	M8 FLANGE NUT	Flange Nut, M8x1.25 G8.8 ZP
14	M8 X 20 HEX	Bolt Hex, M8X20x1.25, GR8.8 ZP
14	M8 FLAT WASHER	M8 FW
6	M8 X 16 BHCS BZP	SCREW, BUTTON HEAD CAP, M8X16X1.25 GR12.9 BLACK ZP
4	M12X40	Bolt Hex, M12X40X1.75, GR8.8 ZP
6	M12 Nyloc nut	M12 NYLOC NUT
14	M12 FW LHD	M12 FW Large Heavy Duty
2	M12X30	Bolt Hex, M12X30x1.75, GR8.8 ZP
16	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
25	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9 BLACK ZP
28	M6 FLAT WASHER BLACK ZINC	M6 FW BLACK ZP
10	M6CN3MM	CAGE NUT M6x2.6-3.5
2	M10 x 25	Bolt Hex, M10X25x[1.5], GR8.8 ZP
4	M10 FLANGE NUT	Flange Nut, M10x1.5 G8.8 ZP
2	M10 Flat Washer	M10 FW
2	M10 X 130	Bolt Hex, M10X130X1.5, GR8.8 ZP
8	M10 FW LHD	WASHER, FLAT M10X28.5X2.5
2	M10 x 30	Bolt Hex, M10X30x[1.5], GR8.8 ZP
2	M10 NYLOC	M10 NYLOC
2	M12X40x1.5	Bolt Hex, M12X40x1.5, GR8.8 ZP
6	FB-FRA-PX-19-PR-ASM3	Sensor Cover Plate
8	M4 FLAT WASHER	Flat Washer M4, 8mmODx0.8mm T
8	M4 FLANGE NUT	Flange Nut, M4 8
8	M4X12 PAN	SCREW, PAN HEAD PHILLIPS, M4X12X0.7 GR4.6 ZP

ADDITIONAL PARTS TORO ONLY		
1	B-0392L	RAM 1500 Toro Antenna Bracket
1	B-0392R	RAM 1500 Toro Antenna Bracket
4	M8 X 20 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M8X20X1.25 BLACK ZP
4	M8 FLAT WASHER- BLACK ZINC	M8 FW- BLACK ZINC

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 Trim Puller Tool Flat Blade Screwdriver set Phillips Head Screwdriver set Utility Knife Side Cutters Pliers Wire Stripper	Electric Drill 6mm Drill Bit Air Hacksaw or Angle Grinder Electric/Air Impact Driver (Optional) Soldering Iron	Panel Stand or Soft Blanket Cable Ties Masking Tape Black Automotive paint Scotch Brite or Fine Sandpaper Automotive Sealant/Adhesive Automotive Wire

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>



NOTE: The following steps show the removal of the split chrome type bumper as fitted to Laramie Models.

Procedure for removal of full plastic bumper type as fitted to Express models, will be slightly different.

The fitment of the bullbar is the same for both models.

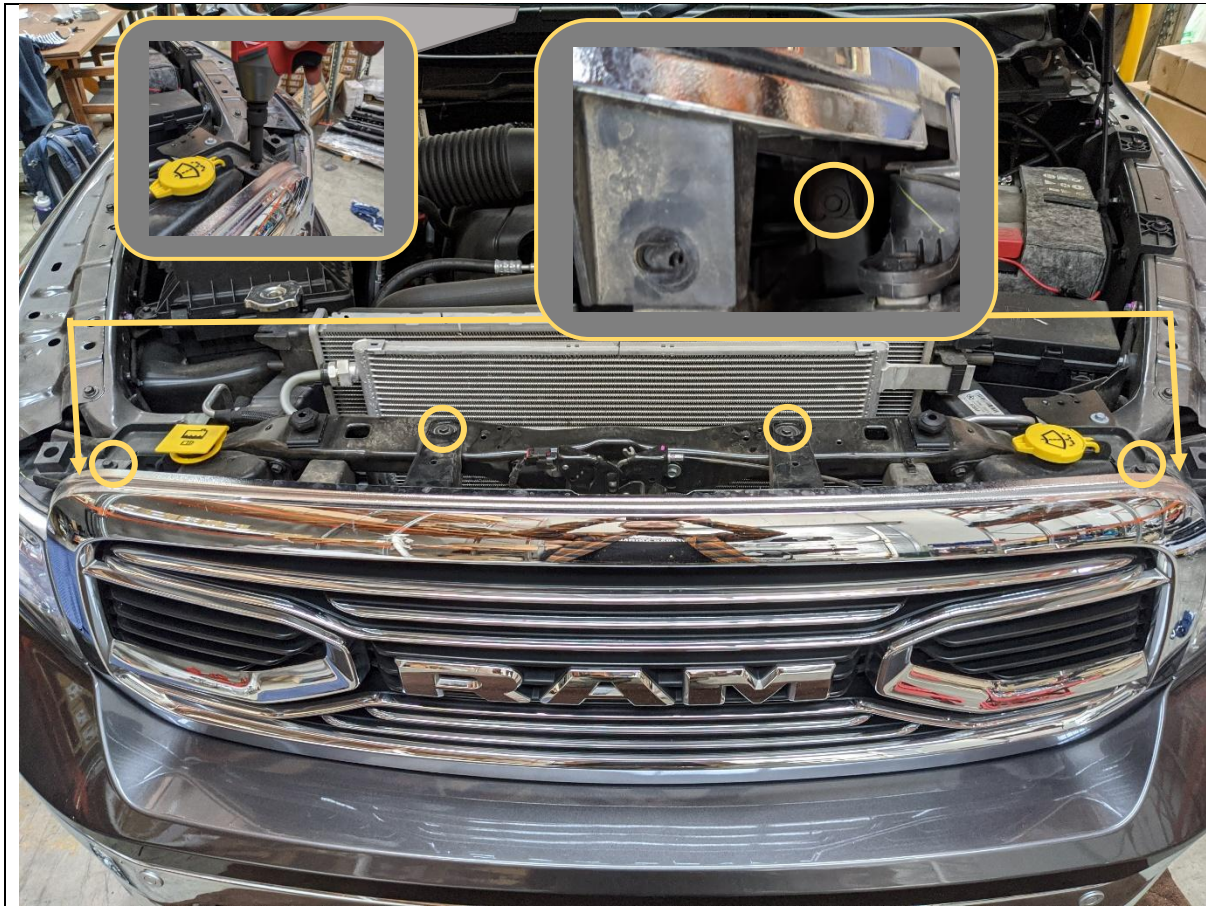
1. Open the bonnet.
2. Remove the 6x Christmas tree clips securing the Radiator Shroud using a trim tool
3. Remove the radiator shroud.

TOOLS REQUIRED

Trim tool

FASTENERS

Retain factory clips.



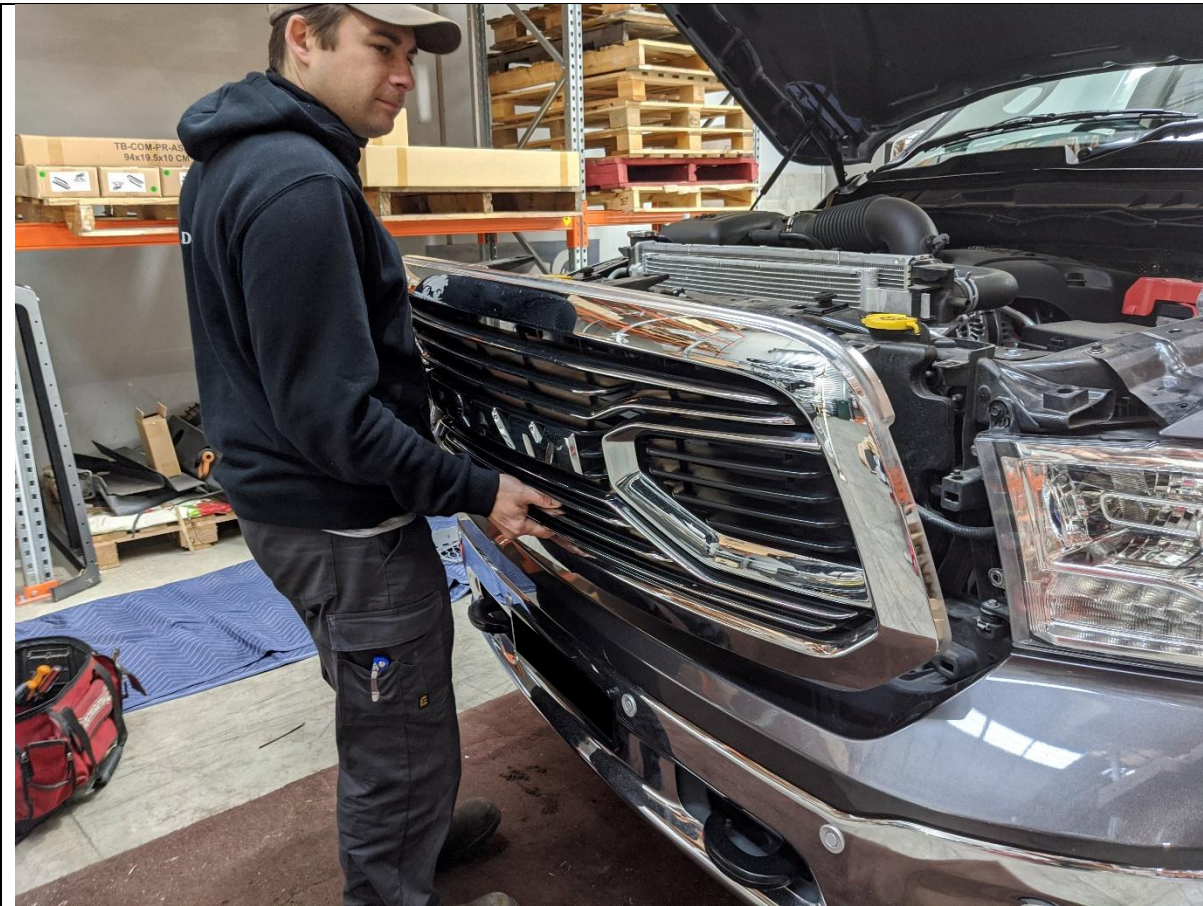
4. Remove the 4x 10mm head bolts securing the grille to the top crossmember.
5. Loosen, but don't remove the 2x recessed 8mm head bolts securing the side of the grille. An Extension bar will be required to access these bolts.

TOOLS REQUIRED

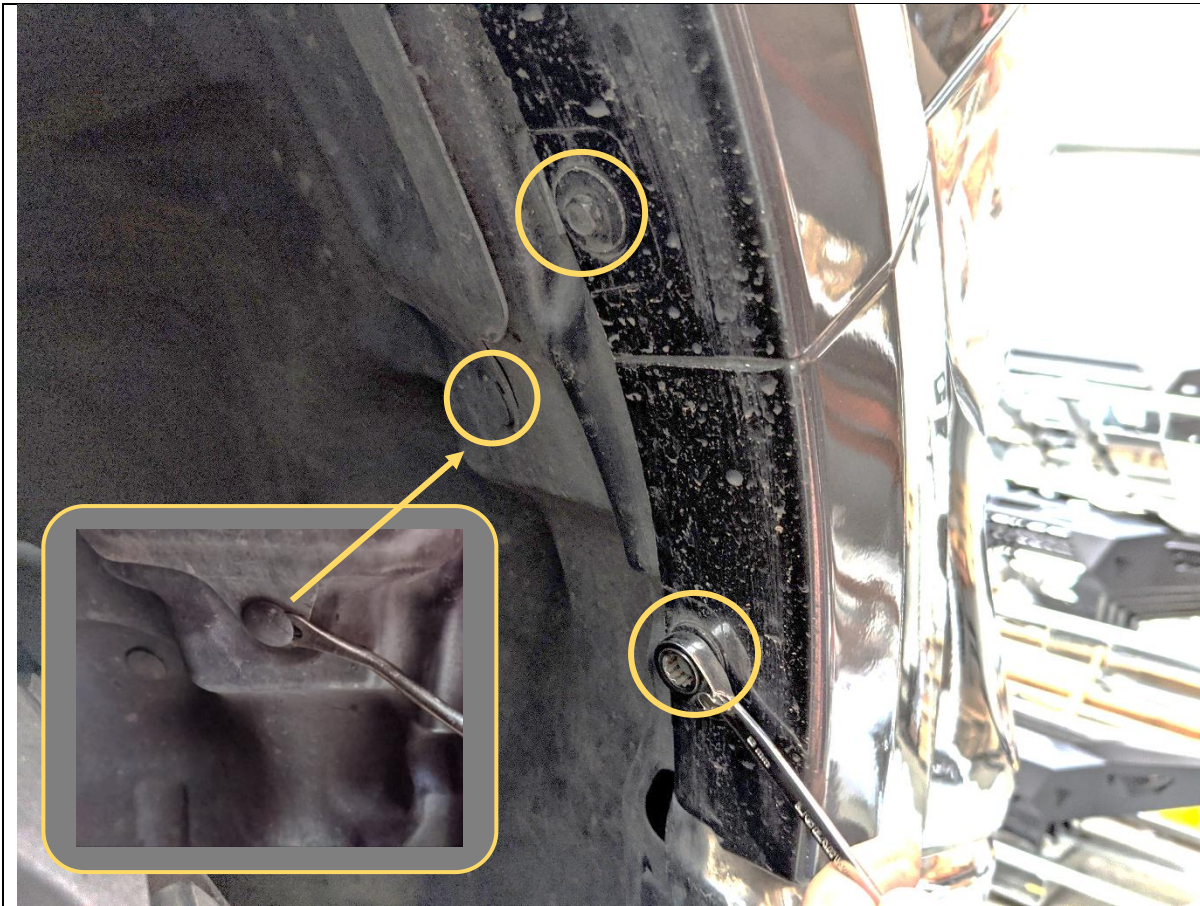
10mm Socket
8mm Socket
Extension bar

FASTENERS

Retain Factory



<p>6. Remove the grille, set aside on soft blanket to protect chrome finish.</p>	<p>TOOLS REQUIRED</p>
	<p>FASTENERS</p>



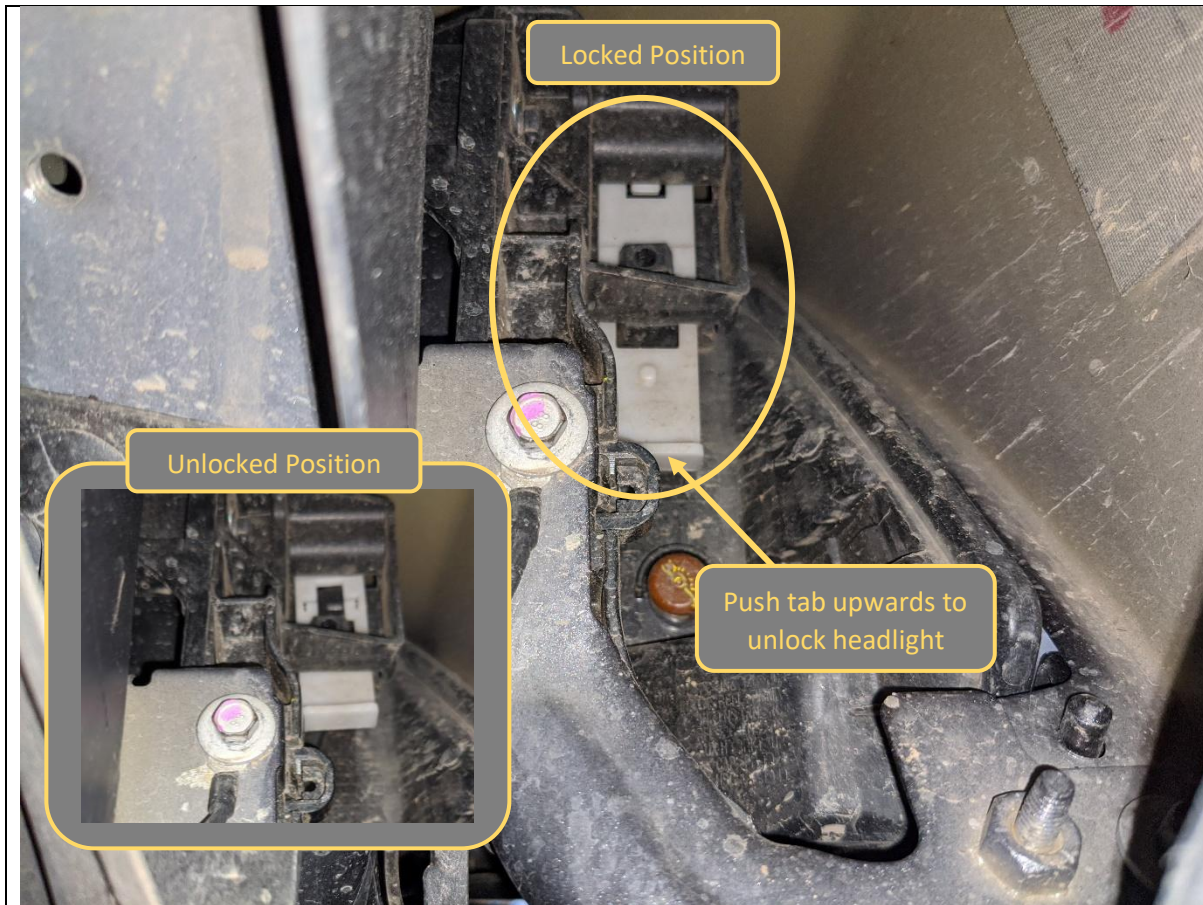
7. Remove 2x 8mm hex screws in wheel arch securing wheel arch flare (Laramie only) and inner guard liner.
8. Release the split clip that secures the headlight access hatch in the inner guard liner with trim tool.

TOOLS REQUIRED

8mm Spanner
Trim Tool

FASTENERS

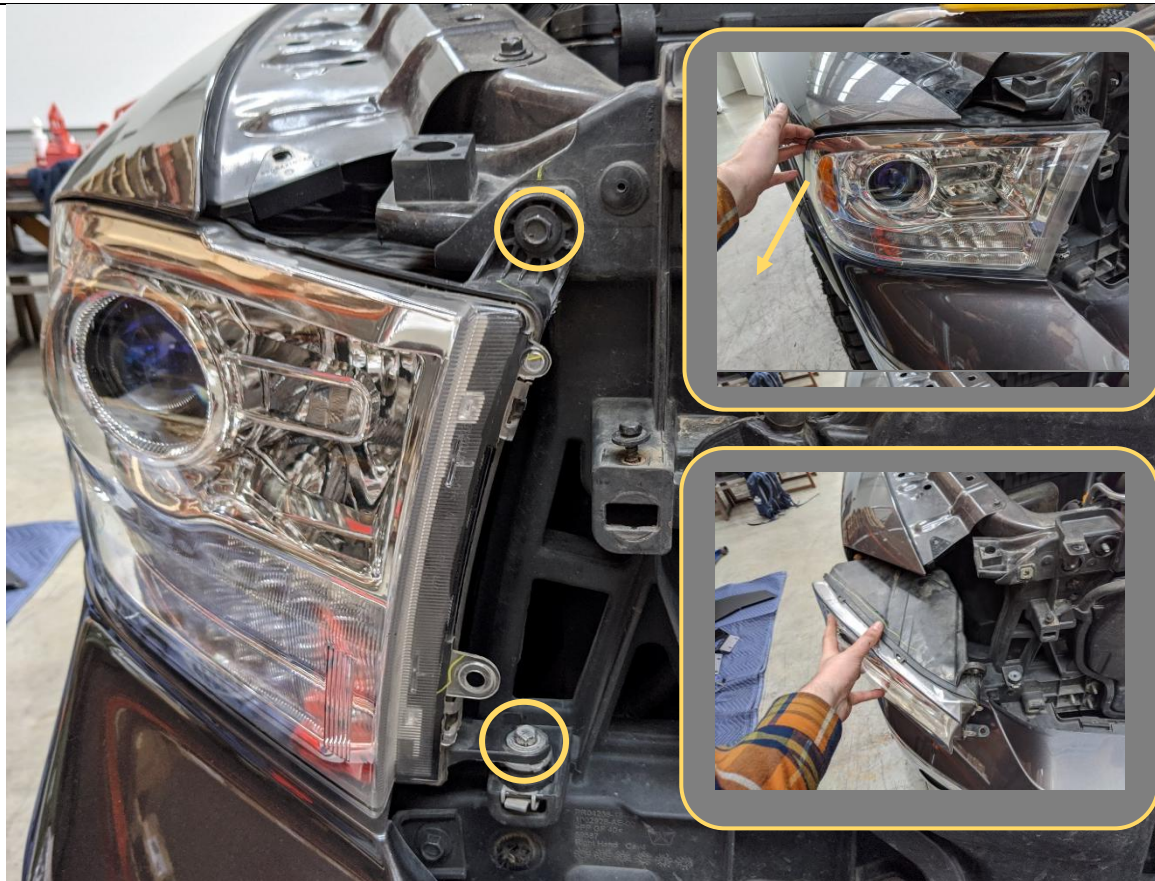
Factory Split Clip
Factory 8mm hex screw.



9. Reaching through the access hatch in the inner wheel arch liner, push up on the headlight securing tab to unlock the rear headlight mounting.

10. Complete steps 7-9 for other side of vehicle.

TOOLS REQUIRED**FASTENERS**



11. Remove the 2x 10mm hex bolts securing the headlight to the vehicle.

12. With care, remove the headlight from the vehicle.

Unplug harness and set aside in safe location.

Also unplug small two pin parker plug.

13. Repeat for other side of vehicle.

TOOLS REQUIRED

10mm Socket
Extension Bar or
10mm Spanner

FASTENERS

Factory 10mm hex bolts
Retain for reinstallation



<div>14. With access through the headlight opening, remove the 10mm head bolt securing the upper bumper trim.</div> <div>15. Complete for both sides of vehicle.</div>	<div>TOOLS REQUIRED</div> <div>10mm socket (1/4" Recommended) or 10mm Ratchet Spanner</div>
	<div>FASTENERS</div> <div>Discard</div>



<p>16. Using a Utility knife carefully cut the double-sided adhesive tape securing the wheel arch flare back to the bumper to guard joint in the body (see arrow in top left corner above).</p>	<p>TOOLS REQUIRED</p> <p>Utility Knife</p>
	<p>FASTENERS</p>



17. Remove the upper plastic bumper from the bumper supports.
18. Begin at the bumper to guard joint on both sides and work toward the middle, using a firm forward pull to release the clips.

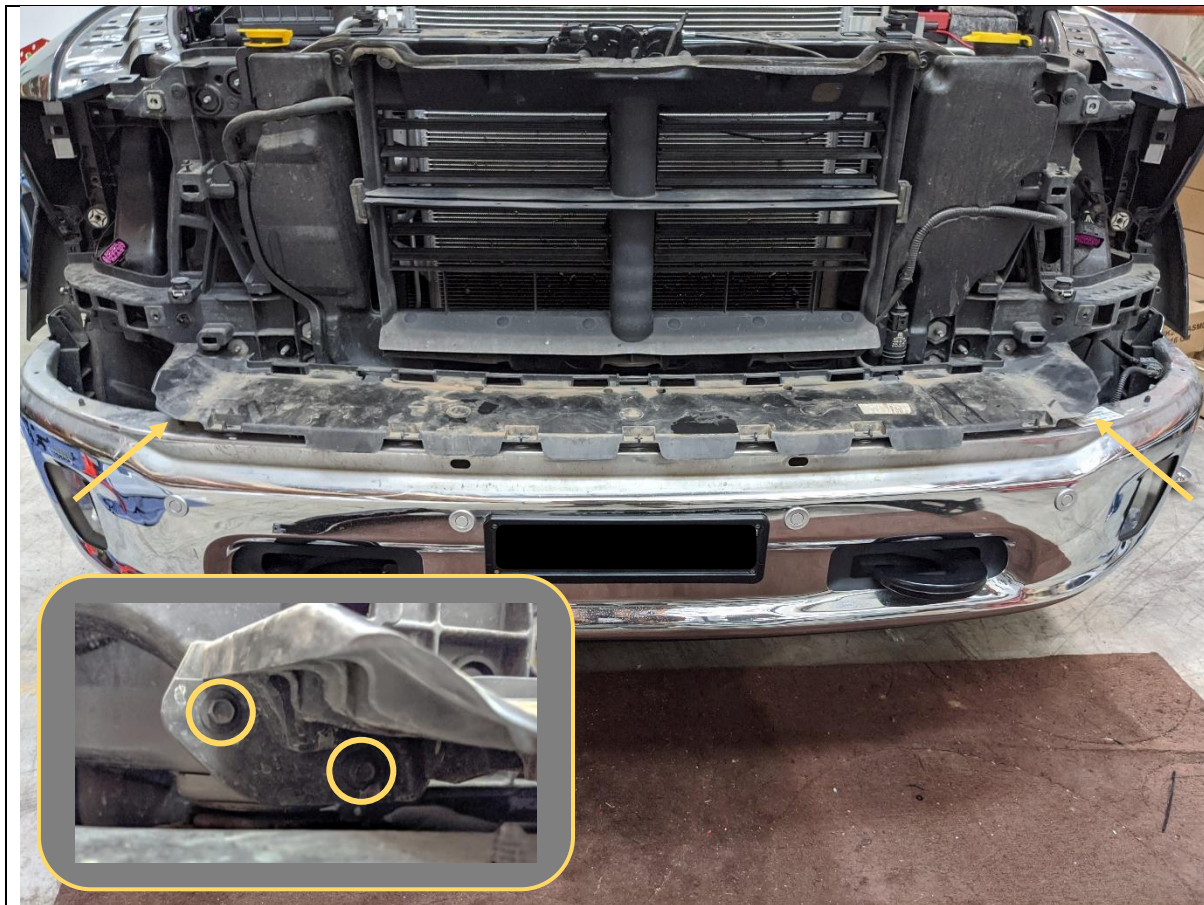
TOOLS REQUIRED**FASTENERS**



19. Once all clips are released remove the upper bumper from the vehicle.	TOOLS REQUIRED
	FASTENERS



<p>20. Remove the outer plastic bumper supports by removing the 3x 10mm hex screws securing it to the cross member.</p> <p>An extension bar will be required to reach the recessed holes.</p> <p>Complete for both sides of vehicle</p>	<p>TOOLS REQUIRED</p> <p>10mm Socket Extension Bar</p>
	<p>FASTENERS</p> <p>Discard</p>



21. Remove the 4x 10mm hex screws securing the center upper bumper support to the cross member.
22. These fasteners are easiest to remove with an extension bar and socket.

TOOLS REQUIRED

10mm Socket
Extension bar

FASTENERS

4x factory 10mm hex screws.

Discard



23. From underneath the car, remove the 3x Xmas Tree clips that secure the air guide from the radiator shroud using a trim tool.

TOOLS REQUIRED

Trim Tool

FASTENERS



24. Remove the upper bumper support and air guide.	TOOLS REQUIRED
	FASTENERS



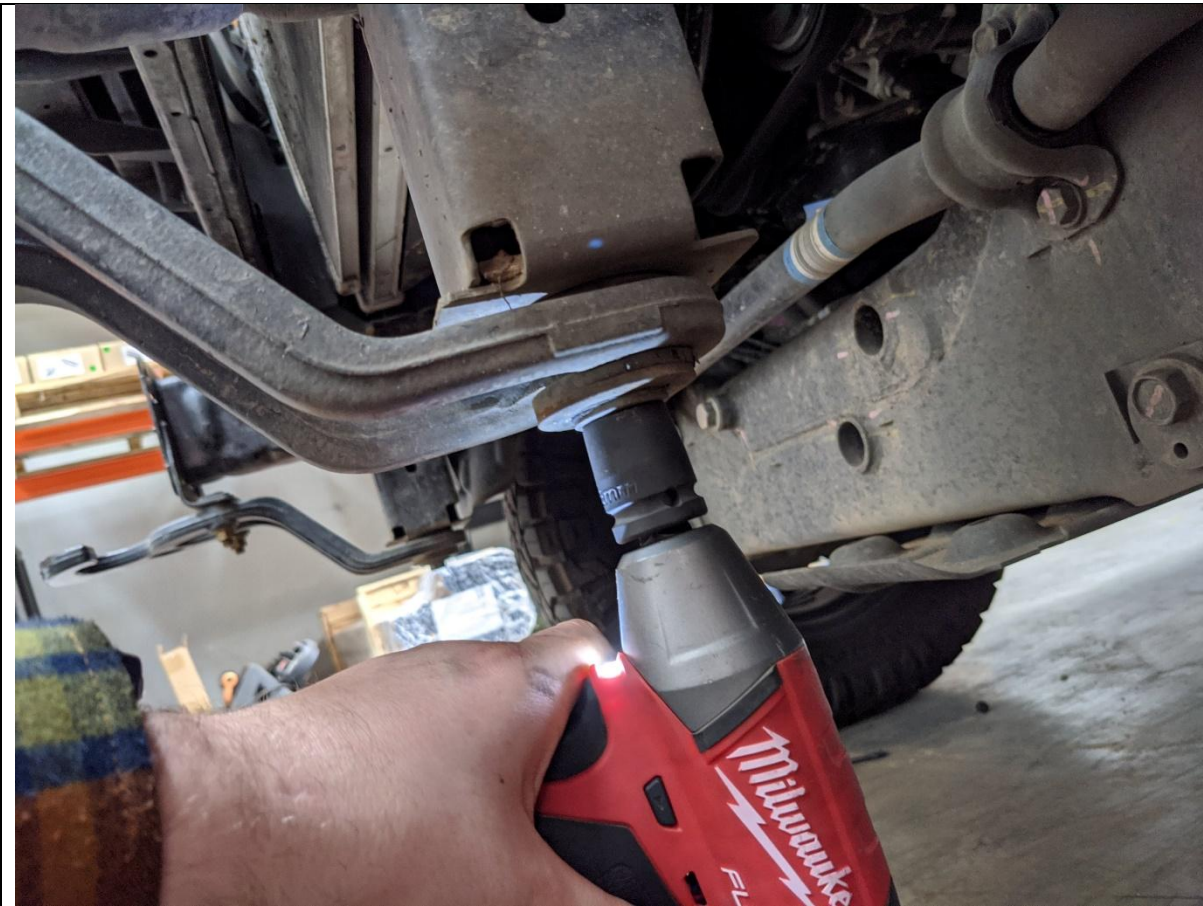
<div>25. Disconnect the fog light and parking sensor looms, located underneath the LH headlight.</div> <div>26. Pry harness plugs off the lower bumper using trim tool.</div> <div>27. Remove the 6x 18mm hex nuts securing the lower bumper to the chassis.</div>	<div>TOOLS REQUIRED</div> <div>Trim tool</div> <div>18mm spanner</div>
	<div>FASTENERS</div> <div>6x factory 18mm hex nuts</div> <div>Discard.</div>



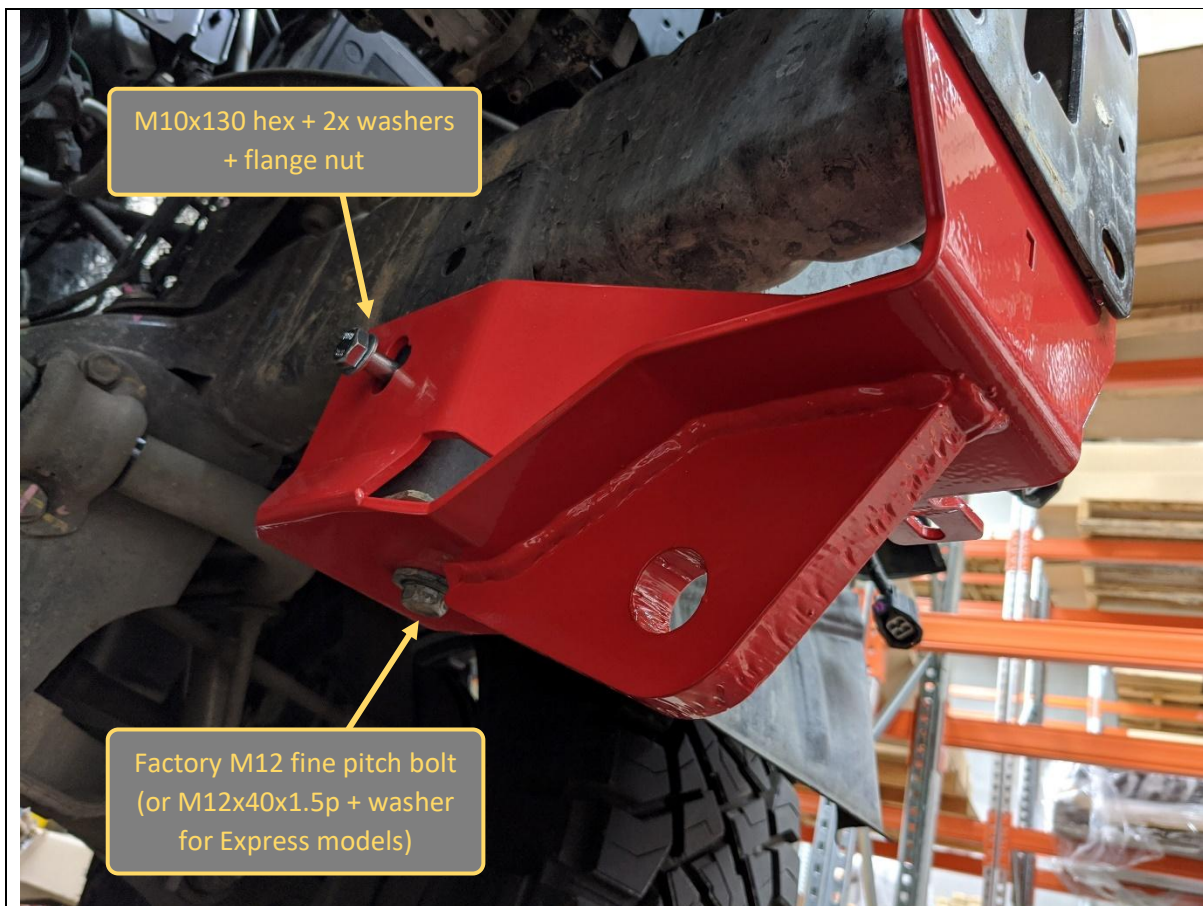
28. Remove front bumper by lifting forward off the car.

29. Set bumper aside and remove number plate.

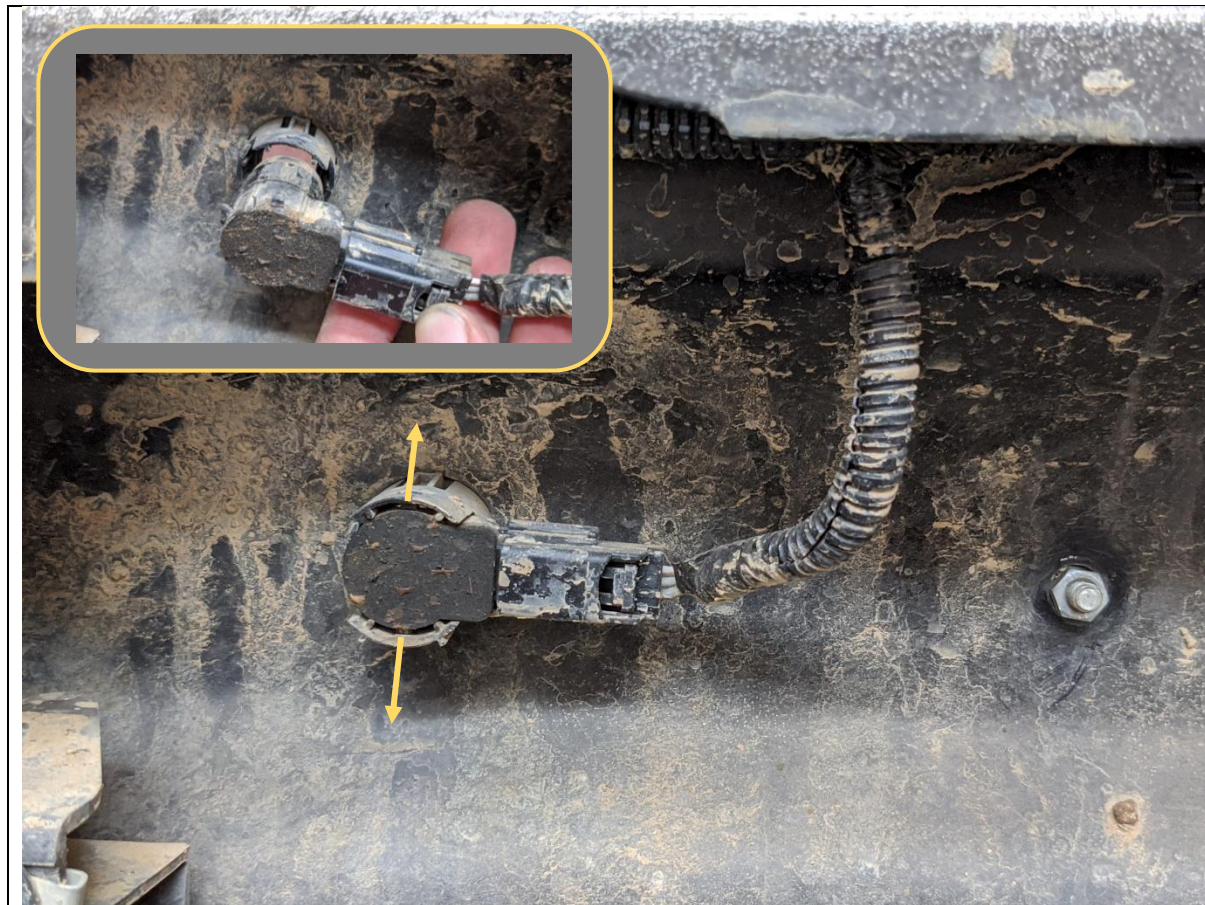
TOOLS REQUIRED**FASTENERS**



<p>30. Remove the factory tow hooks, by removing the M12 fine pitch bolt securing it to the chassis.</p> <p>Once this bolt is removed, lift tow hook off locating pin on front face of chassis.</p> <p>Complete for both sides of vehicle</p>	<p>TOOLS REQUIRED</p> <p>18mm socket</p>
	<p>FASTENERS</p> <p>Factory M12 fine pitch bolts</p> <p>Retain for re-use</p>



<p>31. Fit the tow point to the chassis.</p> <p>Secure through the side with 1x M10x130 hex bolt, 2x flat washers (both sides of tow point) and 1x M10 flange nut.</p> <p>Secure on the underside with 1x M12 fine pitch bolt – retained from tow points.</p> <p>Note: If fitting to Express model use M12x40x1.5p bolt supplied.</p> <p>32. Leave all bolts finger tight, complete for both sides of vehicle.</p>	<p>TOOLS REQUIRED</p>
	<p>FASTENERS</p> <p>1x Factory M12 fine pitch bolt or 1x M12x40x1.5p hex bolt 1x M12 flat washer</p> <p>1x M10x130 hex bolt 2x M10 flat washer 1x M10 flange nut</p> <p>Per side</p>

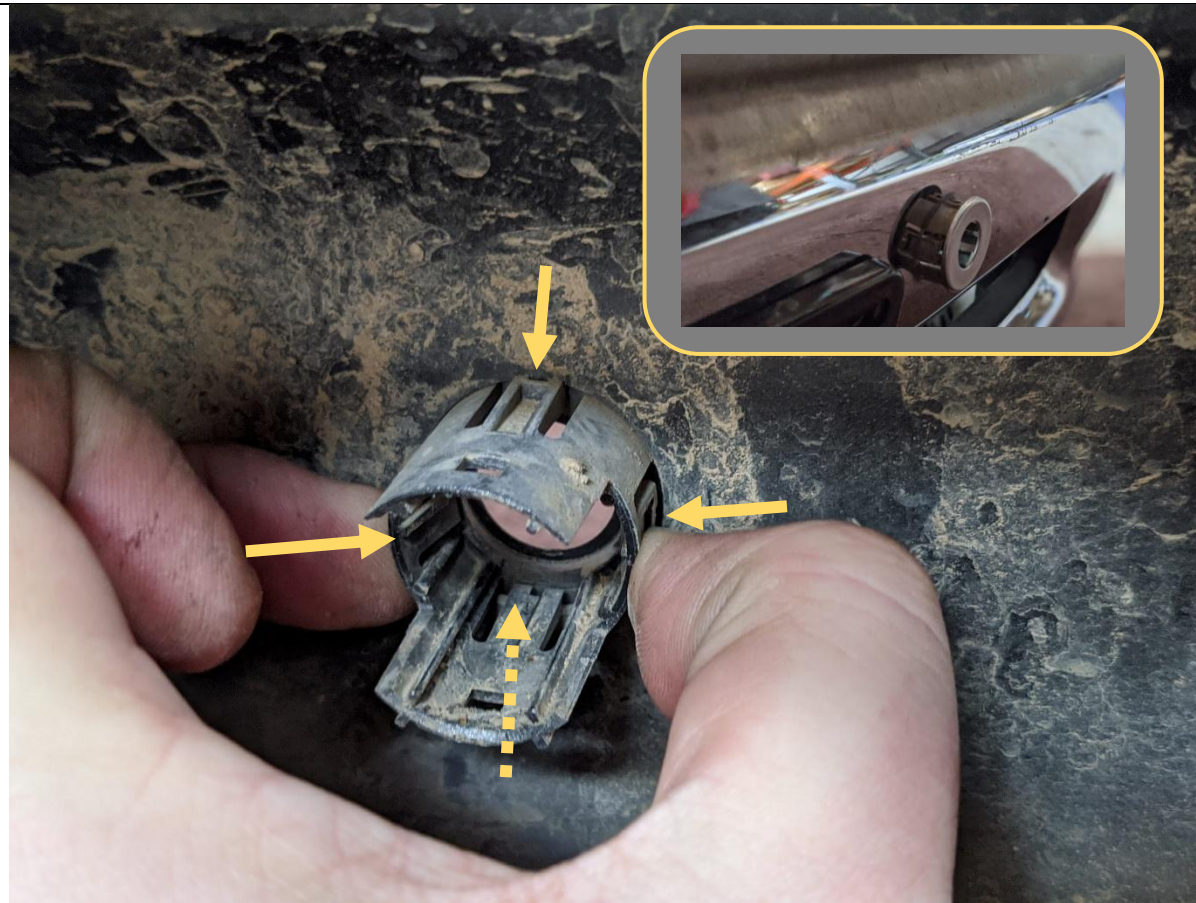


33. Remove parking sensors from housings. Gently pry apart housing, using a small flat screwdriver whilst pushing sensor through from the front side of the bar to release them.

TOOLS REQUIRED

Flat blade screwdriver

FASTENERS



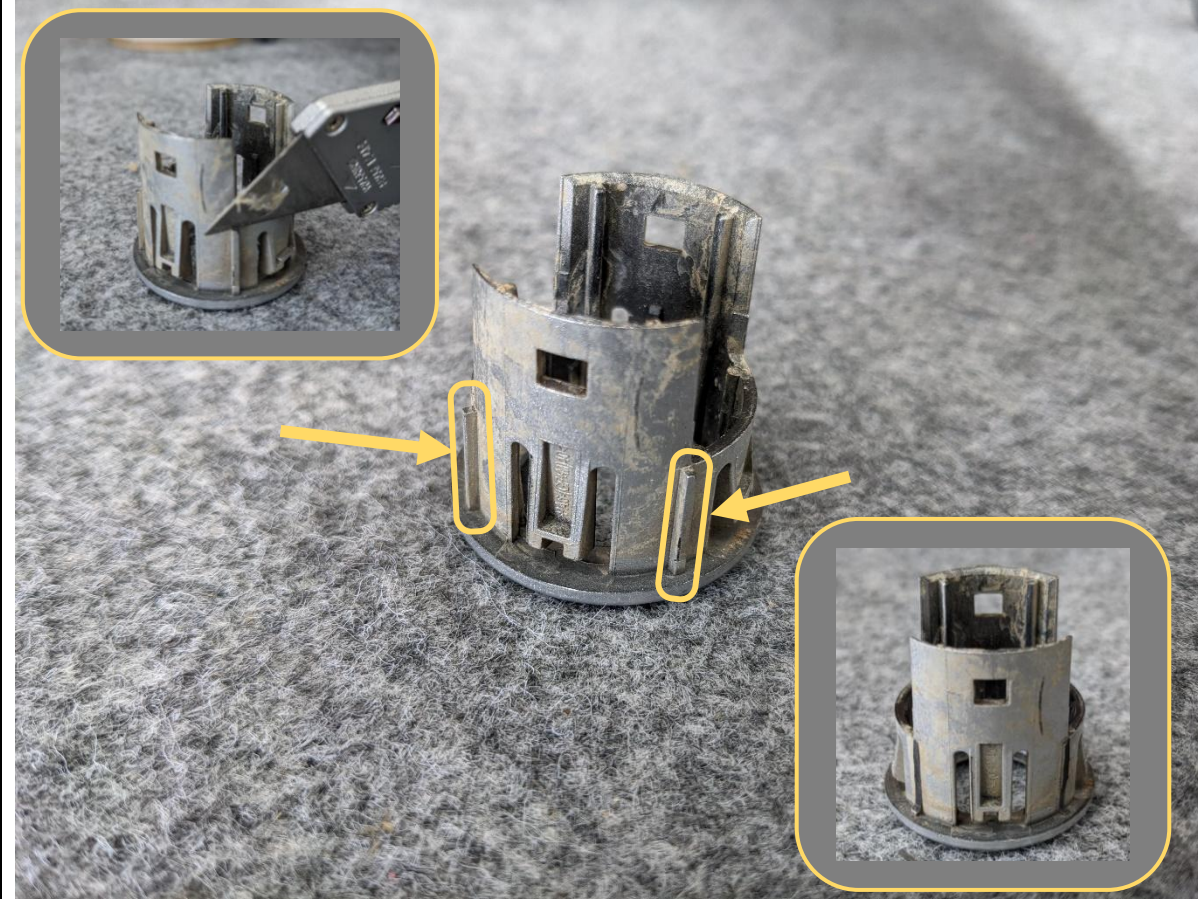
34. Remove sensor housings from front bumper. Squeeze on the 4x retaining tabs whilst pushing housing from back side of bumper to release.

35. Remove from front side of bumper.

Note position of sensor housings in bumper to ensure correct location for refitting to bullbar.

TOOLS REQUIRED

FASTENERS

	
<p>36. Sensor housings must be modified to fit in the Bullbar.</p> <p>37. Locate the two ribs on the outside of the housings, these are located at different locations on different housings.</p> <p>38. Using a utility knife cut the ribs off flush to the housing body.</p>	<p>TOOLS REQUIRED</p> <p>Utility knife</p>
	<p>FASTENERS</p>

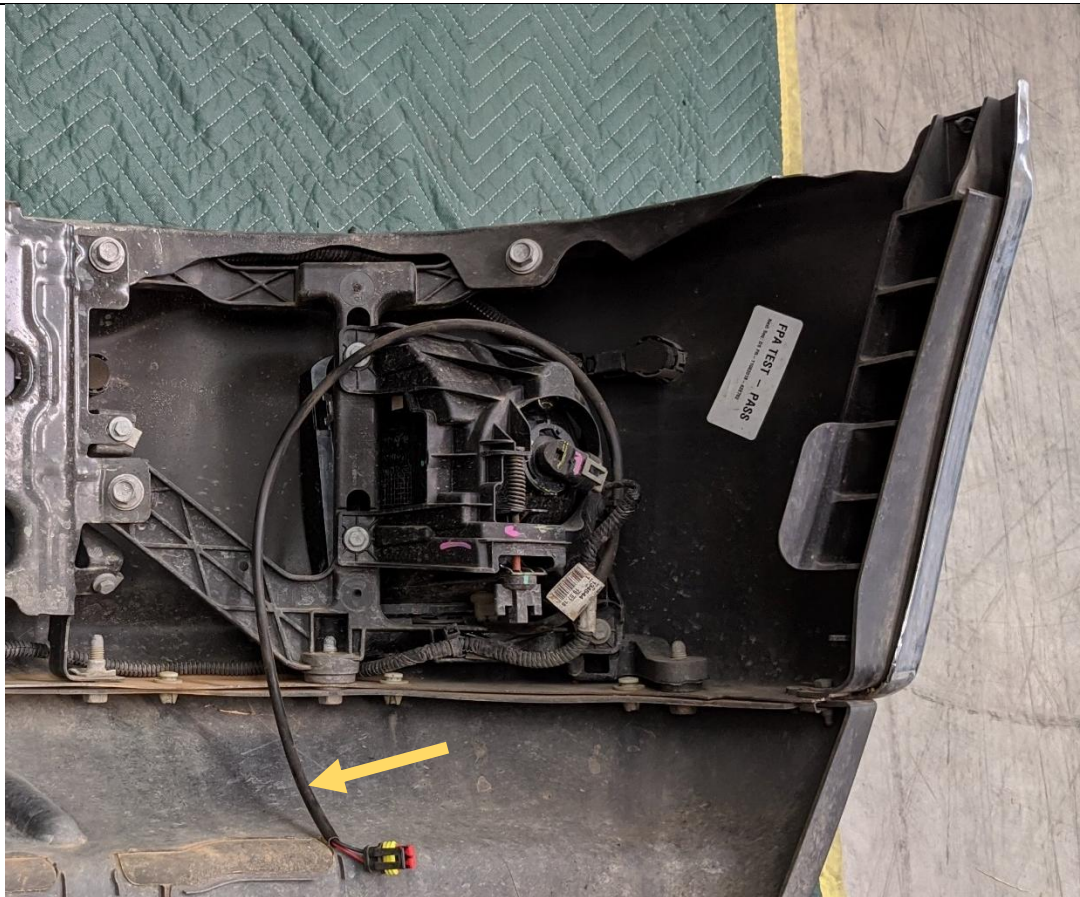


39. Remove the sensor loom from the lower bumper, by prying off all clips securing the loom to the bumper with a trim tool.
40. Remove the fog light loom from the lower bumper. First unplug the fog lights, then pry clips with trim tool.

TOOLS REQUIRED

Trim Tool

FASTENERS



41. Remove the parker light plug by cutting off close to factory parker location for re-use on Offroad Animal bar.

TOOLS REQUIRED

Trim Tool

FASTENERS



42. If fitting bar to Express model with no parking sensors, fit the supplied plastic blanking plugs to the sensor holes in the bar.

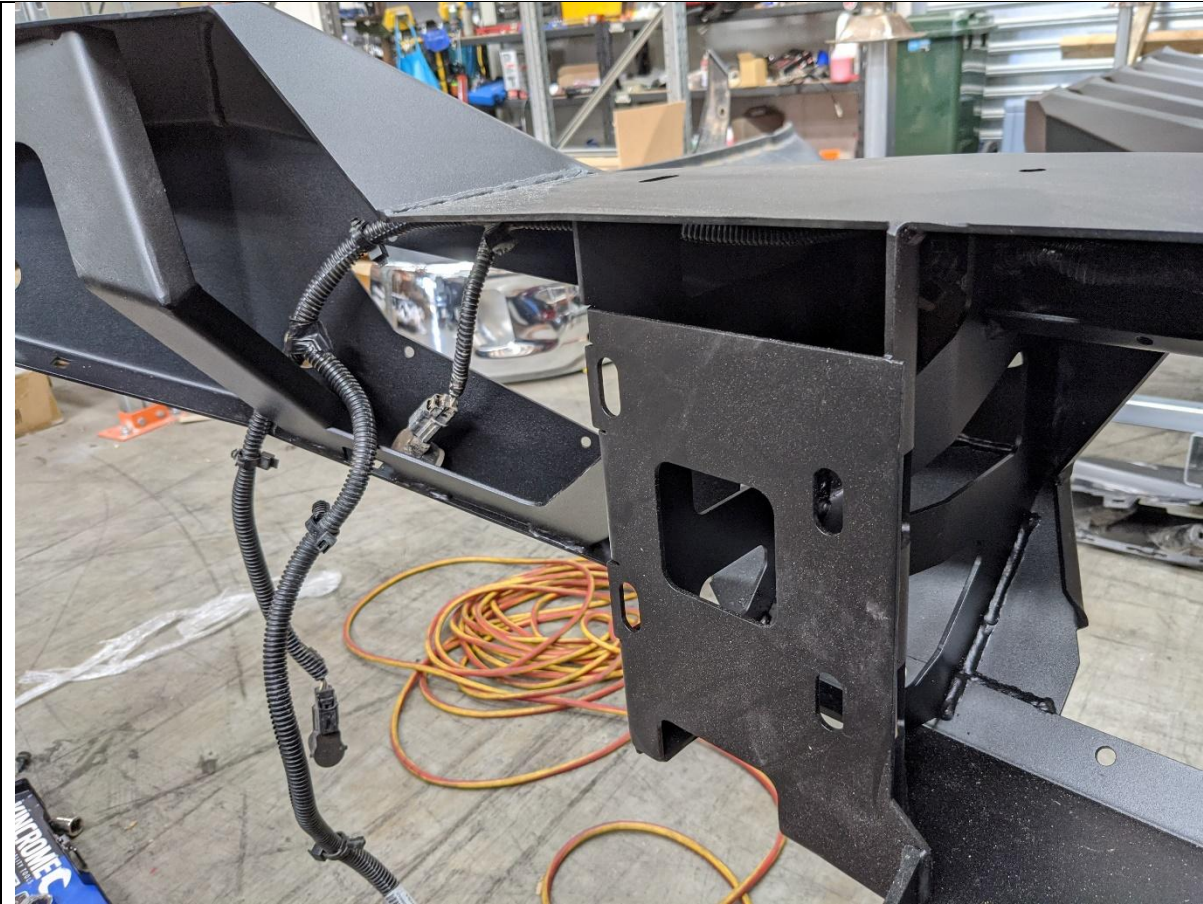
43. Skip all other steps related to parking sensor fitment

TOOLS REQUIRED**FASTENERS**

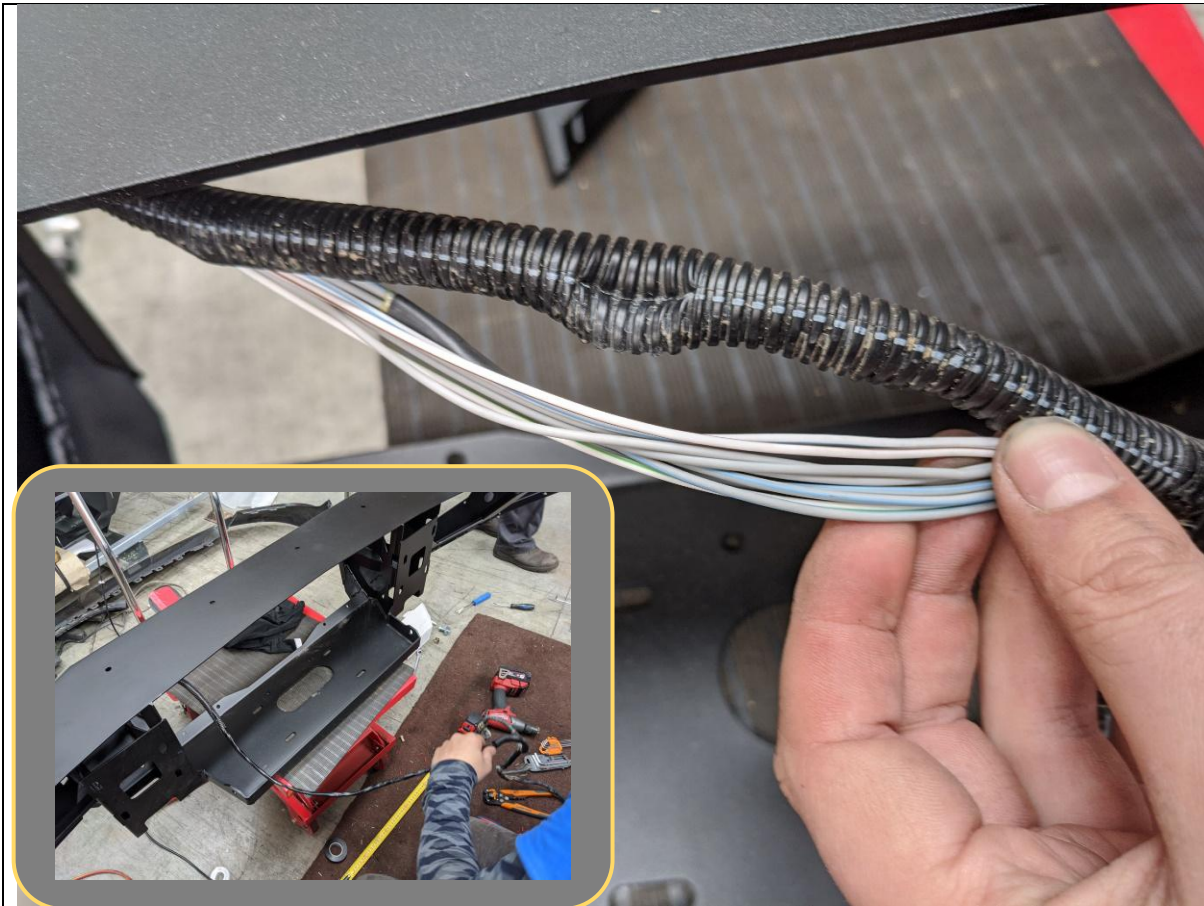


44. Fit sensor modified sensor housings into the bullbar, by pressing into holes in bar from the front side.
45. Take care to ensure that housings are inserted in original location.

TOOLS REQUIRED**FASTENERS**



46. Pass wiring loom through bar uprights, starting from the left-hand side of the bar.	TOOLS REQUIRED
	FASTENERS



47. The wiring harness for the parking sensors needs to be extended.
48. Loom extension of 600mm is required.
49. It is recommended to extend the loom one wire at a time.
50. Cut each wire, and solder in 600mm extension. Ensure all connections are electrically sound and properly insulated. Heat shrink is recommended.
51. Once all wires extended, wrap extension in electrical tape and protect with split tubing.
52. Once loom extension is complete finish running sensor harness through the bar.

TOOLS REQUIRED

Wire cutters
Wire strippers
Soldering Iron
Tape
Corrugated Split Tubing

FASTENERS

Solder



53. Fit parking sensors into housings. Push sensors into housings until the retaining tabs hold each sensor in place.
54. Pressure may need to be applied to front side of housing whilst pushing in sensors to prevent it pushing through bar.
55. Plug in all sensors to sensor harness.

TOOLS REQUIRED**FASTENERS**



56. Fit 5x cage nuts to rectangle slots on the bottom edge of wing. Repeat for both sides of vehicle.

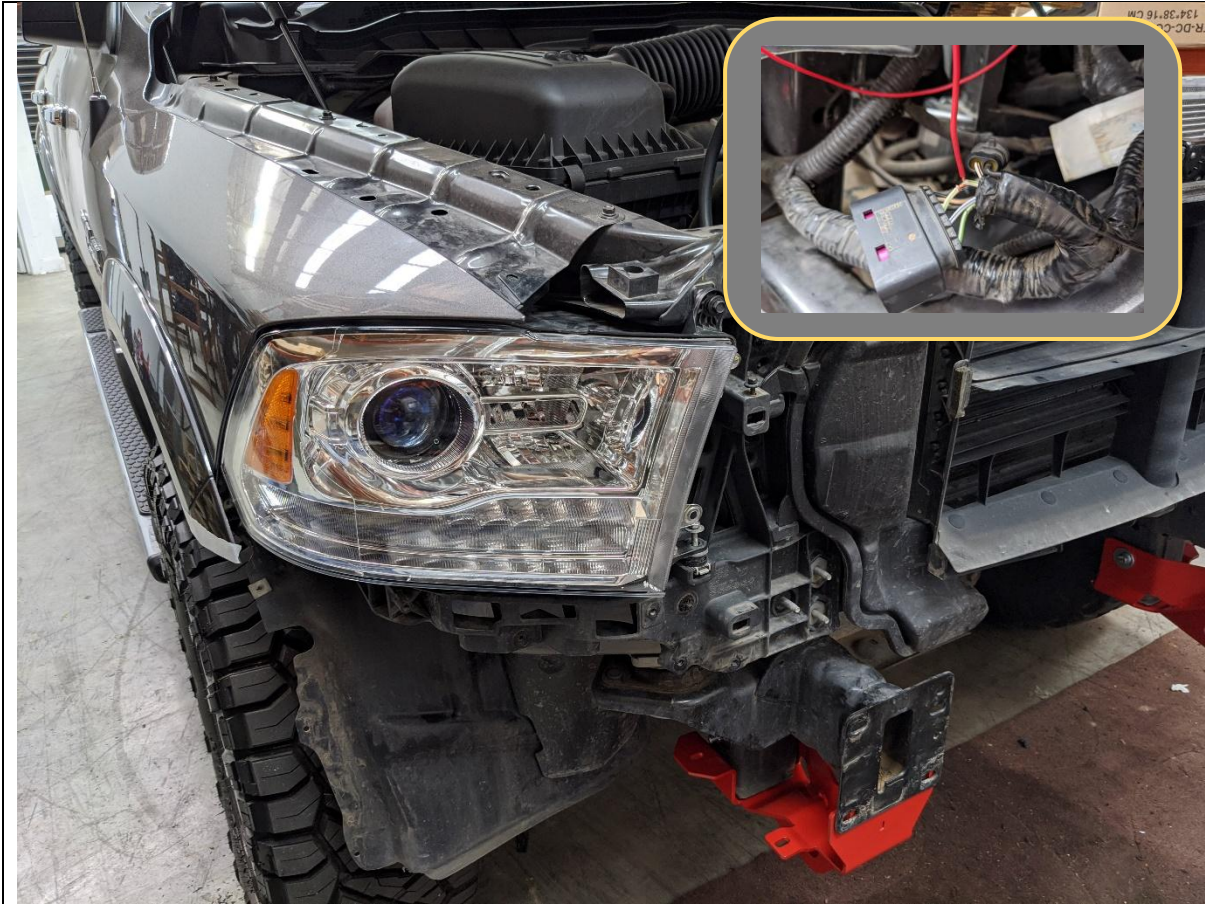
57. Use small flat blade screwdriver to assist in setting cage nuts in position

TOOLS REQUIRED

Small Flat screwdriver

FASTENERS

10x M6 Cage Nuts



58. If fitting driving lights, complete wiring for high beam pickup now, as wiring will not be easily accessible once bar is installed.
59. Fit parker lamp leads removed from bumper to twin pin plugs near headlight harness connector. Leave ends of leads in accessible location.
60. Re-fit headlights to vehicle. Process is reverse of removal, replace bolts and lock retainer clip accessed through hatch in wheel arch.

TOOLS REQUIRED

10mm Socket

FASTENERS

Re-use factory



61. For Warlock models, the grille needs to be trimmed to allow fitment of bar.
62. Cover trim area on bottom corners of grille in masking tape.
63. Mark position 85mm from corner in vertical direction. Mark position in line with crease in grille in horizontal direction.
64. Mark cut line vertically from inside point, up until the step in the grille height, then diagonally across to vertical position marked.
65. Trim along line marked with air hacksaw.
66. Once bar is fitted, assess gaps and adjust with extra trim as required to achieve uniform gap side to side.

TOOLS REQUIRED

Masking Tape
Air Hacksaw

FASTENERS



67. Re-fit grille to vehicle, replacing the 4x 10mm factory bolts.	TOOLS REQUIRED 10mm Socket 8mm Socket Extension Bar
	FASTENERS 4x Factory Bolts re used



68. For Laramie models or vehicles with flares, the wheel arch flare needs to be trimmed.

69. Place masking tape on flare in location shown.

70. Mark cut position in line with bottom of headlight, to the intersection of the molded bumper line then down as shown in image above.

71. Carefully cut the line as marked with an angle grinder or air hacksaw. Ensure cut is cleaned up afterwards so it looks neat.

TOOLS REQUIRED

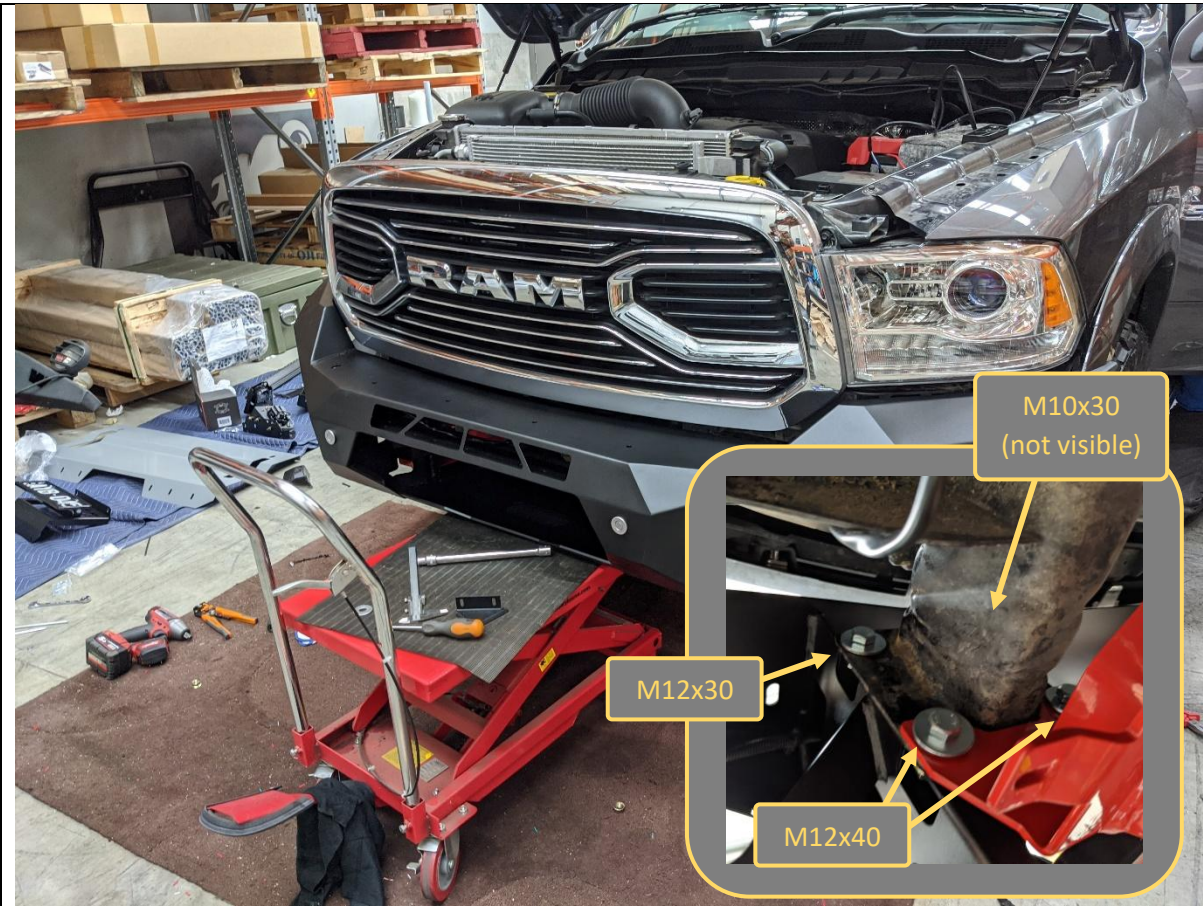
Masking tape
Marker pen

Angle Grinder
Or
Air Hacksaw

FASTENERS



<div>72. On vehicles without flares, fit the headlight infill panels to the two threaded points on the end of the fender, as shown.</div> <div>73. Secure with supplied M6x16 BHCS and washers.</div> <div>74. Align with headlight then tighten.</div>	<div>TOOLS REQUIRED</div> <div>4mm Allen Key</div>
	<div>FASTENERS</div> <div>4x M6x16 Button Head Bolt</div> <div>4x M6 Flat washer</div>



<p>75. Using a lift trolley fit the bar to the vehicle.</p> <p>76. Once in position fit secure with the main mounting bolts. Bottom bolts are M12x40 with 2x Large Flat washers and M12 Nyloc Nut.</p> <p>Top Outside bolt is M12x30 with 2x Large Flat washers and M12 Nyloc Nut</p> <p>Top Inside bolt is M10x30 with 2x M10 washers and M10 Nyloc Nut</p> <p>77. Ensure bar is centered and has even gap of approx. 10-15mm on both sides near headlight. Tighten all bolts to lock in place.</p>	<p>TOOLS REQUIRED</p> <p>16/17mm socket/spanner 18/19mm socket/spanner</p> <p>Lift Trolley</p>
	<p>FASTENERS</p> <p>4x M12x40 Hex Bolt 2x M12x30 Hex Bolt 2x M10x30 Hex Bolt 12x M12 Large Washer 4x M10 Flat Washer 6x M12 Nyloc Nut 2x M10 Nyloc Nut</p>



78. Fit the winch brace bracket.
79. First fit to winch cradle with M10x30 bolt, Flat washer and Flange Nut.
80. Next remove the M10x130 bolt through tow point and re-fit with brace in position.
81. Repeat for both sides of vehicle.
82. Tighten all bolts

TOOLS REQUIRED

16mm Spanner

FASTENERS

2x M10x30 hex bolt
2x M10 Flat washer
2x M10 Flange Nut



83. If fitting an integrated light bar, do so now. Leave bolts loose at this stage to allow fitment of mesh panels.
84. The bar is designed to fit a STEDI ST3K 21.5 inch light bar. If fitting this light bar, assemble bar with legs Outward, and it will line up with the slots in the center gusset.
85. The bar can accommodate most other "20 inch" size light (20-22 inch long) bars.
86. **IMPORTANT:** Fit the Pan brace after fitting the light bar. Use supplied M6 fasteners to secure to pan and gusset.
87. If fitting a winch, do so now.
88. The bar is designed to fit most low mount winches, in foot down configuration. WARN 16.5ti is largest winch confirmed to fit.
89. The control box can be mounted on top of the winch. Winches usually come with a bracket to allow this. Refer to winch manufacturer.

TOOLS REQUIRED

FASTENERS

3x M6x16 black button head bolt
 3x M6 black washer
 3x M6x12 button head bolt
 3x M6 washer
 6x M6 flange nut



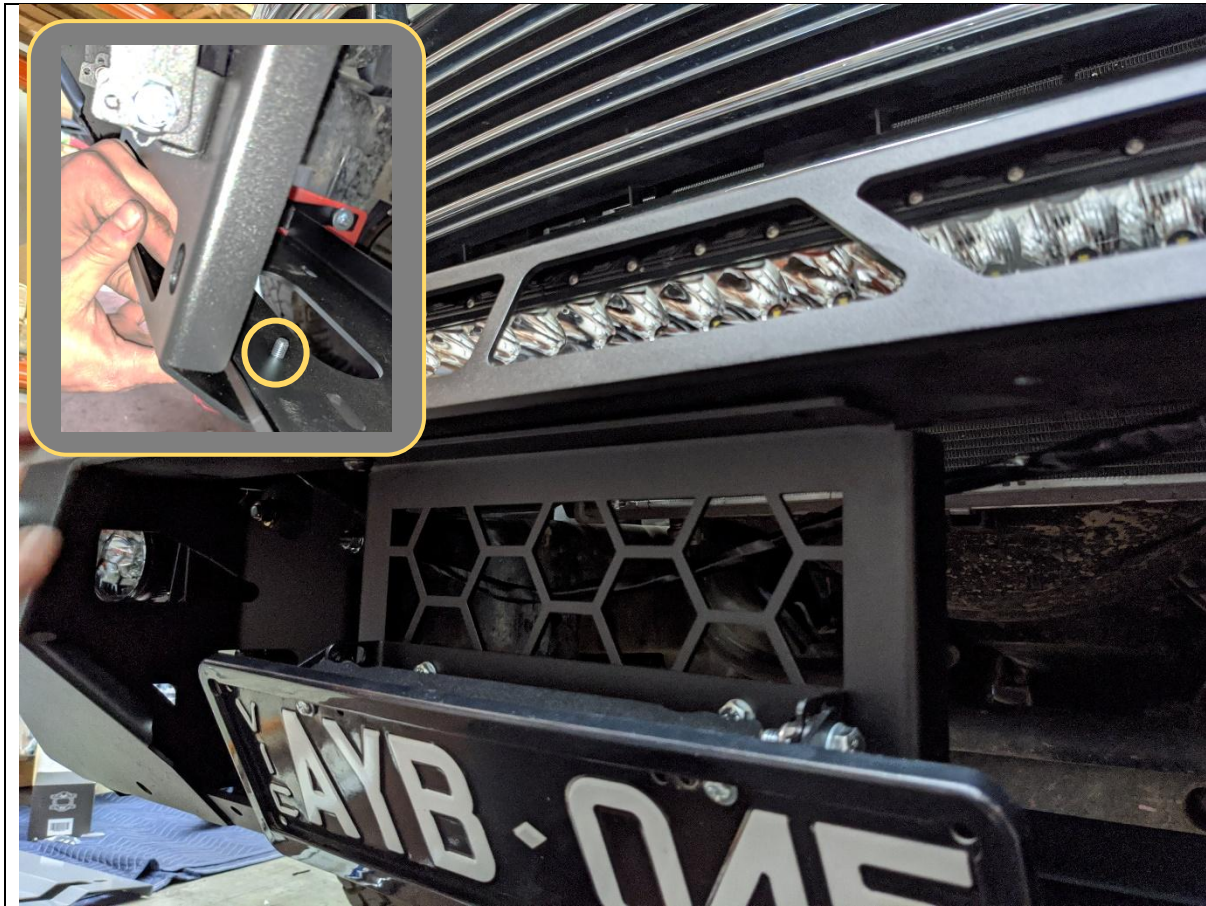
90. Prepare the Center mesh panel for fitment.

91. If Required, Fit winch fairlead to Mesh Fairlead Mount. Use M10 or 3/8" Fasteners supplied with winch. The bar is only compatible with Hawse type fairleads.

92. Fit Number plate flip kit to fairlead mount, using fasteners supplied in kit.

TOOLS REQUIRED

FASTENERS



93. Fit the Mesh Fairlead Mount to the center of the bar, using M8x16 Button head (Top), M8x20 Button Head (Bottom) M8 Flat washers and M8 Flange Nuts.

For the bottom bolts, have the bolt head on top and flange nut underneath, so winch rope doesn't get snagged.

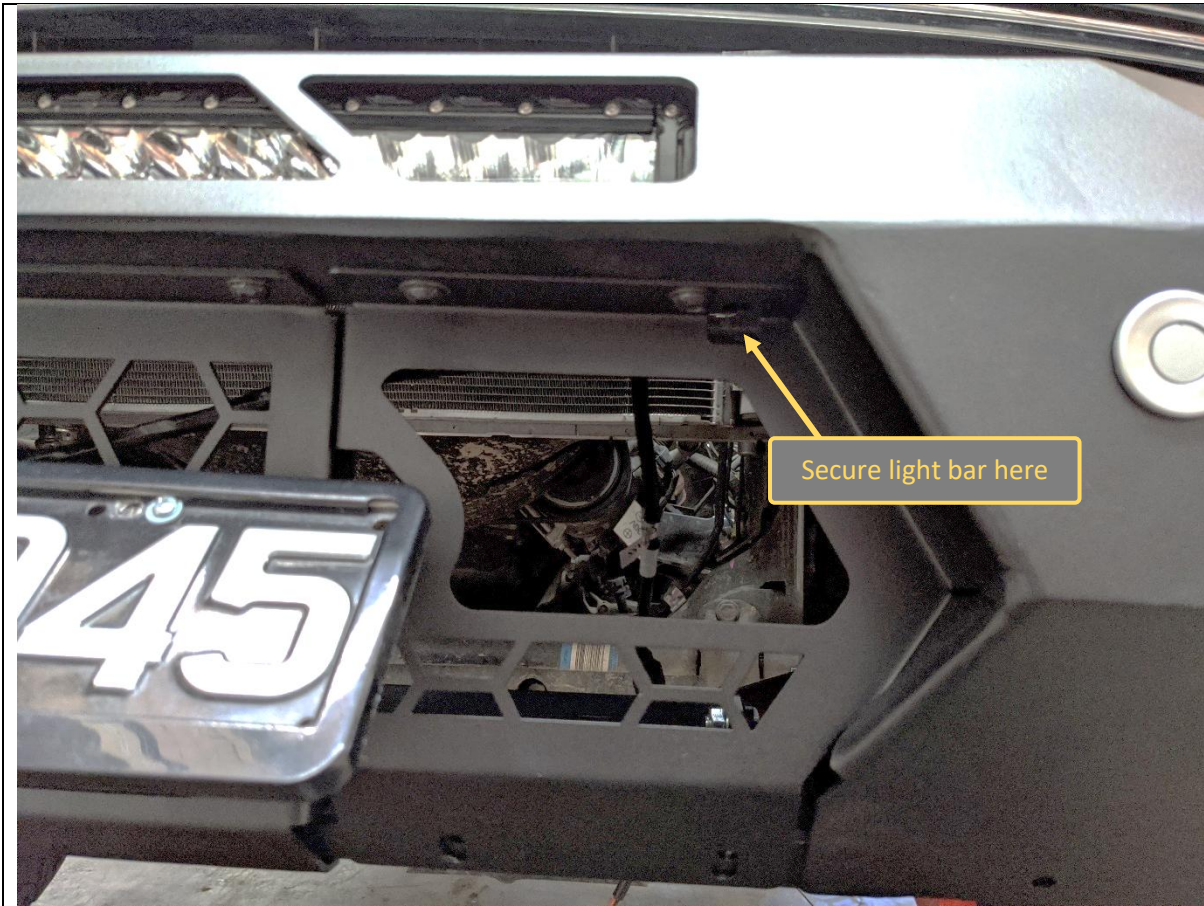
94. Tighten fasteners using 13mm socket / spanner and 5mm Allen Wrench.

TOOLS REQUIRED

13mm Spanner
5mm Allen Wrench

FASTENERS

2x M8x16 Button Head
2x M8x20 Button Head
4x M8 Flange Nut
4xM8 Flat Washer



95. Fit Mesh Infill Panels. Use 2x M8x16 Button head bolt, M8 flat washer and M8 flange nut for top mount.
96. Don't fit any bolts to bottom holes at this stage.
97. Tighten top fasteners using 13mm socket / spanner and 5mm Allen Wrench.
98. Once the top bolts are tightened, Use supplied M8x20 Button head bolt, Flat washer and Flange Nut to secure the integrated light bar.

TOOLS REQUIRED

13mm Spanner
5mm Allen Wrench

FASTENERS

4x M8x16 Button Head
2x M8x20 Button Head
6x M8 Flat Washer
6x M8 Flange Nut



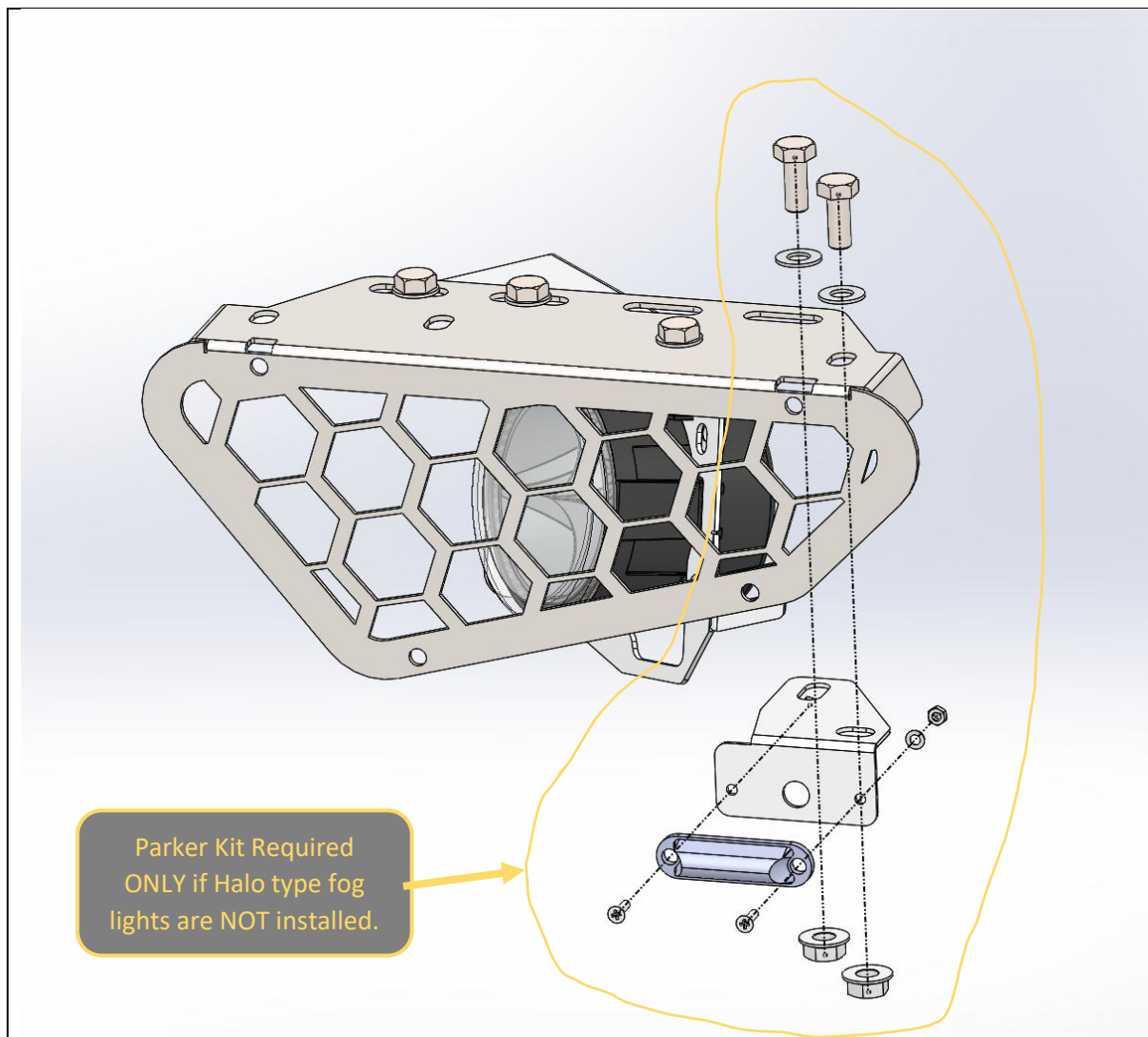
99. Remove the M12 fine pitch bolts on the bottom face of the tow point.
100. Fit Center Bash Plate using M8x20 button heads, flat washers and flange nuts to front face. Ensure these fasteners pass through the side mesh panels also.
101. Secure back of Center Bash Plate using the M12 Fine pitch bolts removed earlier.
102. Tighten Bottom fasteners using 18mm spanner or Socket.
103. Tighten front fasteners using 13mm socket / spanner and 5mm Allen Wrench. Reach through access hole in mesh panel to reach nut.

TOOLS REQUIRED

18mm Spanner
18mm Socket
5mm Allen Key
13mm spanner

FASTENERS

6x M8x20 Button Head
6x M8 Flange Nut
6xM8 Flat Washer



104. If fitting Halo style fog lights, fit them to the fog light brackets supplied. Note that the fog light brackets are handed. Use the screw supplied in the Kit and 4x M6 Flange Nuts

105. Fit the fog light brackets to the light mesh panels using 3x M8x20 bolts, flange nuts and flat washers per side.

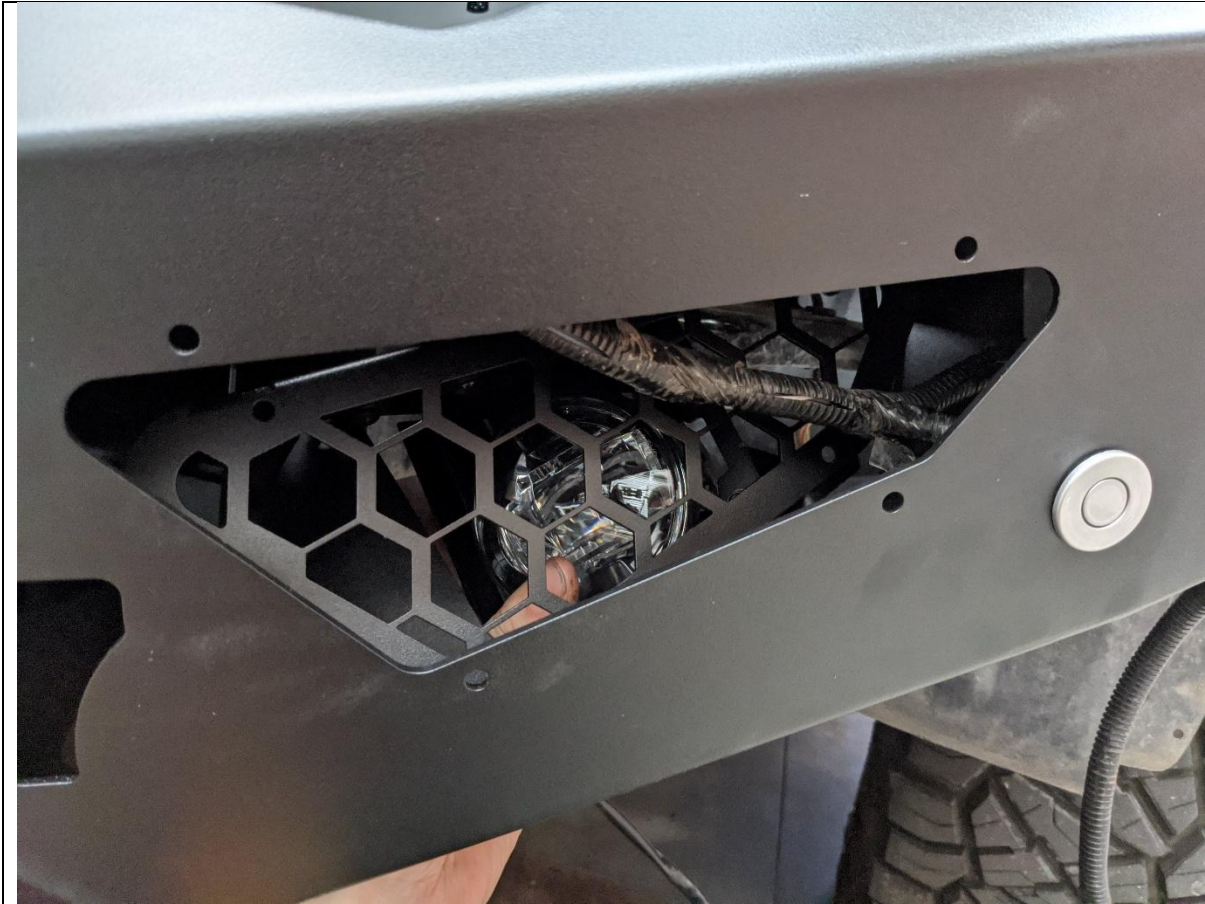
106. If alternate lighting (i.e any other lamps except the Halo fog lights) are fitted, the parker kit needs to be installed.

Install the parker lamps to the brackets, using supplied M3 Fasteners, then fit the parker lamp bracket to the Light mesh using 2x M8x20 bolts, flange nuts and flat washers per side.

TOOLS REQUIRED

Phillips Head Screwdriver
13mm Spanner / Socket

FASTENERS



107. Fit the light mesh to bar, position from underneath and securing with 4x M6x16 Button head bolts, Flat washers and M6 Flange Nuts.
108. Secure and tighten using 4mm Allen Key and 10mm Spanner
109. Run fog light harness removed from bumper through bar and Re Connect fog light wiring connectors.
110. Wire parkers to leads positioned in step 59.

TOOLS REQUIRED

4mm Allen Key
10mm Spanner / Socket

FASTENERS

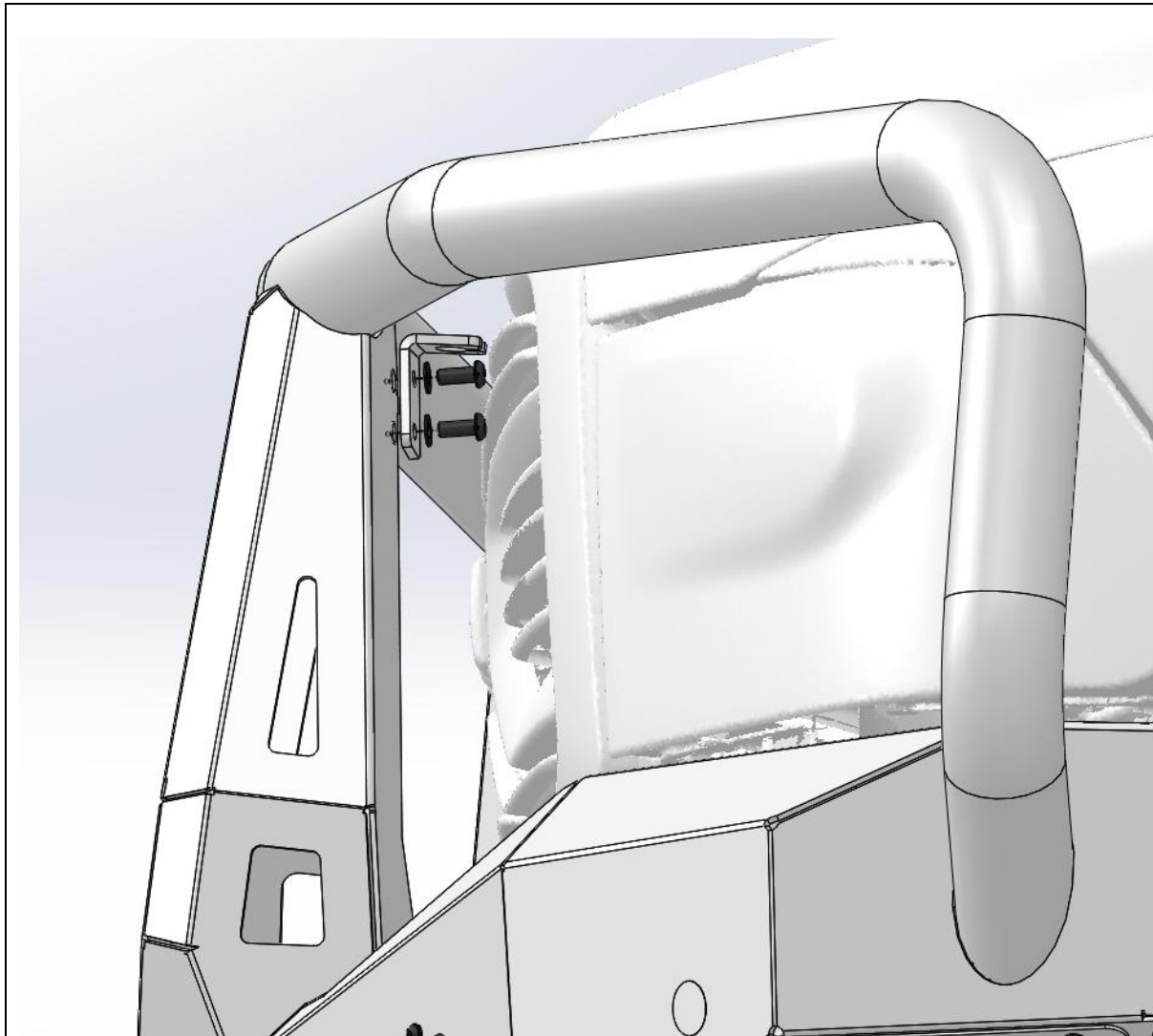
4x M6x16 BHCS – Black
4x M6 Flat Washer
4x M6 Flange Nut

Per side



111. If fitting stealth hoop, round hoop or rally hoop, do so at this stage, using fasteners supplied with stealth hoop kit.
112. Bolt locations can be reached from underneath the wing.

TOOLS REQUIRED**FASTENERS**



113. **Toro only.** If fitting antenna brackets, do so now.

114. **Toro only.** Fit antenna brackets to Toro uprights using M8x20 black button head bolts and black washers.

115. **Toro only.** Else fit the 2x M8x20 black button head bolts and black washers to the back of each bullbar upright, to protect nut threads in bar for future use.

TOOLS REQUIRED

5mm hex/Allen key

FASTENERS

4x M8x20 black button head bolts
4x M8 black flat washers

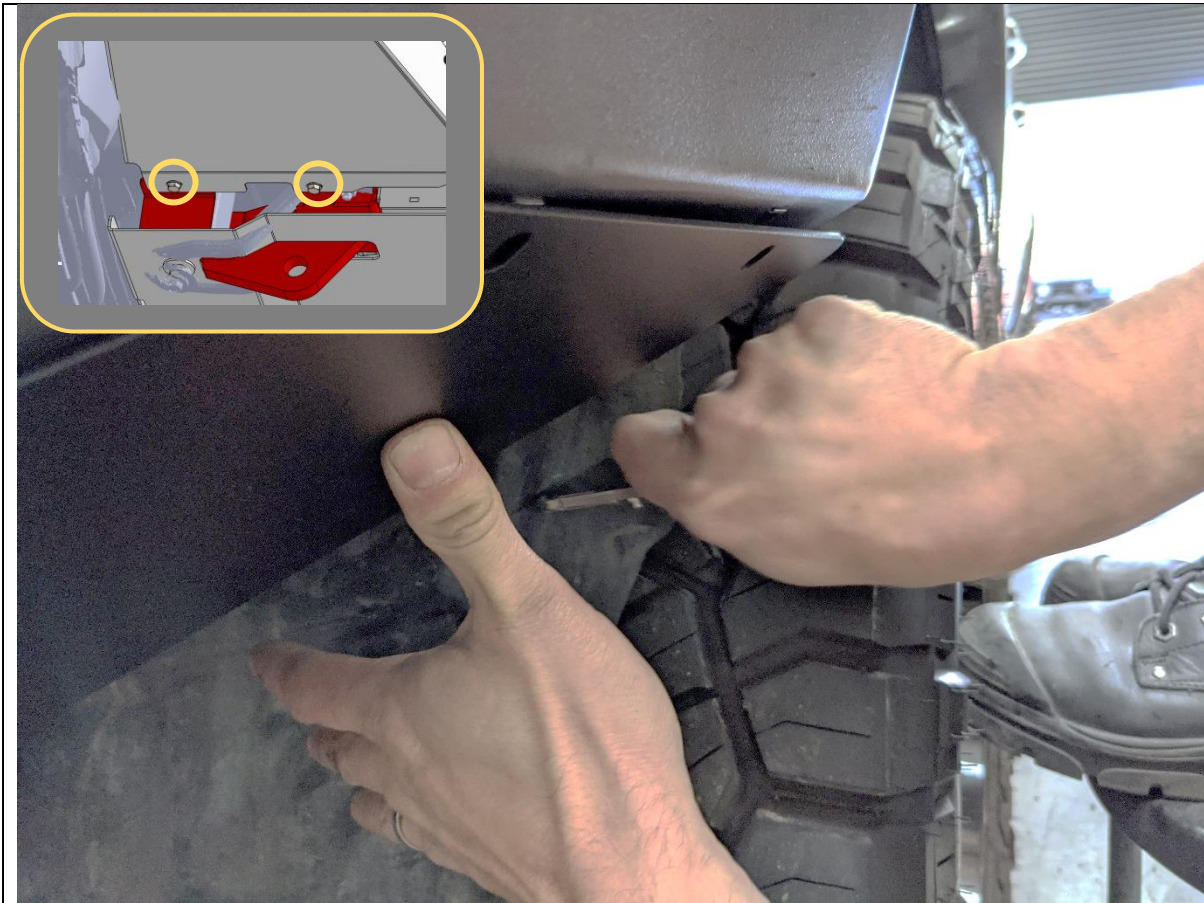


116. Loosely Fit side under panels using M6x16mm Socket head screws into the cage nuts in the wing, fitted earlier.

117. Complete for both sides of vehicle

TOOLS REQUIRED**FASTENERS**

10x M6x16 Button Head Screws
10x M6 Flat Washer



118. Using the edge of the under panel as a guide, trim the wheel arch liner to the profile of the under panel, with an approximate 20mm overhang.
119. Use a sharp utility knife to cut the wheel arch liner.
120. Tuck the wheel arch liner behind the flanges on the under panel.
121. Fit the bottom support M8x20 bolts to secure the under panel to the tow points
122. Tighten all bolts securing under panel.

TOOLS REQUIRED

Utility knife

4mm Hex Key
13mm Socket / Spanner**FASTENERS**4x M8x20 Bolt
4x M8 Flange Nut
4x M8 Flat Washer



Do not forget compliance plate

123. Re Check all Fasteners are tight.
124. Re-Fit Number Plate to number plate flip.
125. Fit the compliance plate in a visible location on the underside of the bar. We recommend placing it on the bottom of the centre bash plate.
126. Your done. Hit the tracks and enjoy your newly protected RAM!

TOOLS REQUIRED

FASTENERS