



Toyota Landcruiser Prado 150 Series MY2018+ (Second Facelift) Predator Front Bar Fitting Instruction

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.

PARTS LISTING

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

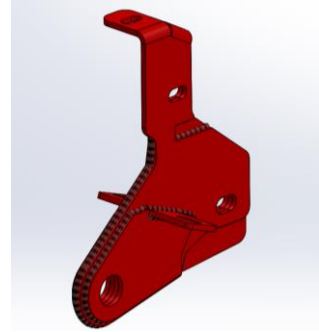
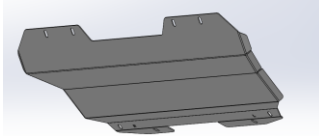
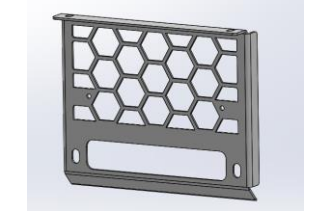
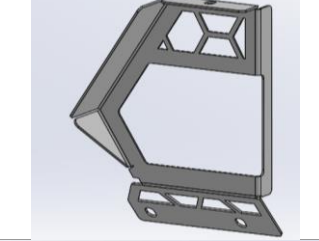
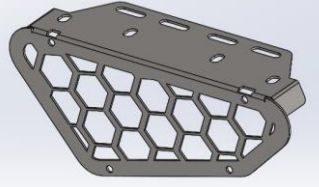
Main Parts – In the Box

Qty	Part Number	Description	Image
1	FB-TPR-150-18-PR-ASM1	Toyota Prado 150 18+ Predator Front Bar Weldment	
Or			
1	FB-TPR-150-18-TOR-ASM1	Toyota Prado 150 18+ Toro Front Bar Weldment	
1	FB-TPR-150-18-PR-ASM2L	Toyota Prado 150 Series Impact Assy	
1	FB-TPR-150-18-PR-ASM2R	Toyota Prado 150 Series Impact Assy	
1	FB-TPR-150-18-PR-ASM3L	Toyota Prado 150 Tow Point Assy	



FB-TPR-150-18-PR-ASMO
Fitting Instruction

2018+ Toyota Prado 150
Predator Front Bar

1	FB-TPR-150-18-PR-ASM3R	Toyota Prado 150 Tow Point Assy	
1	U-0030	Prado 150 Predator- Center Under panel	
1	U-0029L	Prado 150 Predator- Side Under panel	
1	U-0029R	Prado 150 Predator- Side Under panel	
1	M-0014	DMax Predator Center Fairlead Mesh	
1	M-0014L	DMax Predator Side Mesh	
1	M-0014R	DMax Predator Side Mesh	
1	M-0002L	Light Cover Mesh	



FB-TPR-150-18-PR-ASMO
Fitting Instruction

2018+ Toyota Prado 150
Predator Front Bar

1	M-0002R	Light Cover Mesh	
1	B-0185L	Toyota Style Fog Lamp Bracket LHS	
1	B-0185R	Toyota Style Fog Lamp Bracket RHS	
1	NPF-COM-SM-ASMO	Number plate flip asm Small	
1	B-0424L	Prado 150 Predator - Headlight Infill	
1	B-0424R	Prado 150 Predator - Headlight Infill	
1	B-00704	Prado 150 Predator – Pan Brace	



Predator Small Parts – Contained in Small Parts Kit Bag

QTY.	PART NO.	DESCRIPTION
2	FB-TPR-150-18-PR-ASM4	Headlight Washer Plug Assy - Prado 150
10	M8 FLAT WASHER- BLACK ZINC	M8 FW- BLACK ZINC
4	M8 X 16 BHCS BZP	SCREW, BUTTON HEAD CAP, M8X16X1.25 GR12.9 BLACK ZP
6	M8 X 20 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M8X20X1.25 BLACK ZP
14	M8 FLANGE NUT	Flange Nut, M8x1.25 G8.8 ZP
2	M8 X 30 HEX	Bolt Hex, M8X30X1.25, GR8.8 ZP
4	M8 HD FLAT WASHER	M8 FLAT WASHER - High Tensile 19x8x1.9mm
6	M10 x 25	Bolt Hex, M10X25x[1.5], GR8.8 ZP
6	M10 FLANGE NUT	Flange Nut, M10x1.5 G8.8 ZP
6	M10 FW LHD	WASHER, FLAT M10X28.5X2.5
2	M12X40x1.25	Bolt Hex, M12X40x1.25, GR8.8 ZP
18	M12 FW LHD	M12 FW Large Heavy Duty
8	M12X30	Bolt Hex, M12X30x1.75, GR8.8 ZP
8	M12 Nyloc nut	M12 NYLOC NUT
2	M8 X 30 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M8X30X1.25 BLACK ZP
22	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
29	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9 BLACK ZP
3	M6x12 BHCS	SCREW, BUTTON HEAD CAP, M6X12X1 GR12.9 ZP
10	M6CN3MM	CAGE NUT M6x2.6-3.5
32	M6 FLAT WASHER BLACK ZINC	M6 FW BLACK ZP
8	M8 X 20 HEX	Bolt Hex, M8X20x1.25, GR8.8 ZP
8	M8 FLAT WASHER	M8 FW
4	M5X15 BHCS	SCREW, BUTTON HEAD CAP, M5X15X0.8 GR12.9 ZP
4	M5 FLANGE NUT	Flange Nut, M5x0.8 G8.8 ZP
4	M5 Flat washer	M5 FW
4	SPFM18	Clip, 18mm Hole, Black Nylon, Essentra Components SPFM18



Torro Small Parts Kit – Contained in Small Parts Kit Bag

QTY.	PART NO.	DESCRIPTION
2	FB-TPR-150-18-PR-ASM4	Headlight Washer Plug Assy - Prado 150
14	M8 FLAT WASHER- BLACK ZINC	M8 FW- BLACK ZINC
4	M8 X 16 BHCS BZP	SCREW, BUTTON HEAD CAP, M8X16X1.25 GR12.9 BLACK ZP
10	M8 X 20 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M8X20X1.25 BLACK ZP
14	M8 FLANGE NUT	Flange Nut, M8x1.25 G8.8 ZP
2	M8 X 30 HEX	Bolt Hex, M8X30X1.25, GR8.8 ZP
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10	M6CN3MM	CAGE NUT M6x2.6-3.5
32	M6 FLAT WASHER BLACK ZINC	M6 FW BLACK ZP
8	M8 X 20 HEX	Bolt Hex, M8X20x1.25, GR8.8 ZP
8	M8 FLAT WASHER	M8 FW
4	M5X15 BHCS	SCREW, BUTTON HEAD CAP, M5X15X0.8 GR12.9 ZP
4	M5 FLANGE NUT	Flange Nut, M5x0.8 G8.8 ZP
4	M5 Flat washer	M5 FW
4	SPFM18	Clip, 18mm Hole, Black Nylon, Essentra Components SPFM18
2	B-0429	Prado Torro - Antenna Bracket



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	Electric Drill 6mm Drill Bit Air Hacksaw or Angle Grinder Electric/Air Impact Driver (Optional)	Double Sided Adhesive Tape Panel Stand or Soft Blanket Cable Ties Masking Tape Black Automotive paint Scotch Brite or Fine Sandpaper Automotive Sealant/Adhesive Bucket Hose Clamp

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>



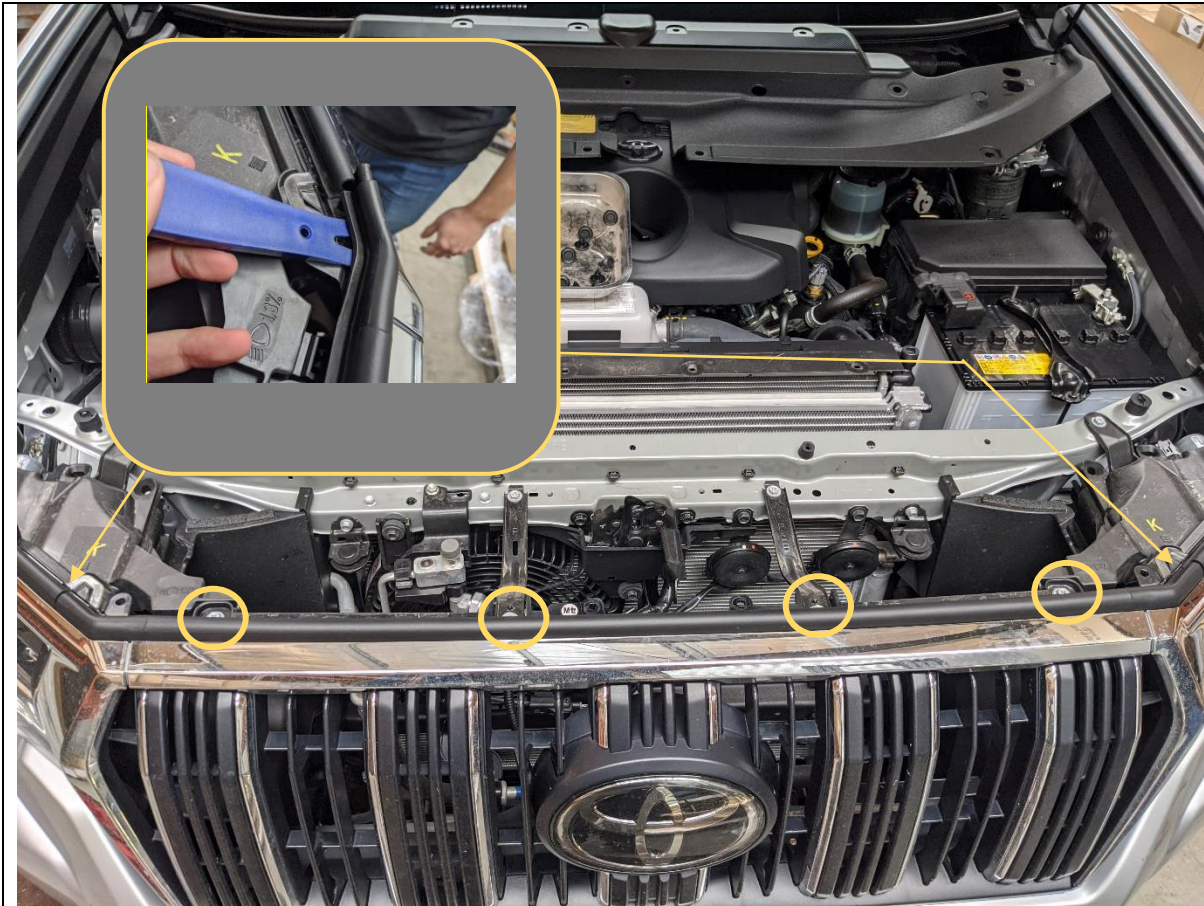
1. Open the Bonnet,
2. Remove clips securing the top radiator cowling. Press down on the center button of clip to unlock, then remove clip with trim tool.
3. Retain all clips for reassembly

TOOLS REQUIRED

Trim Tool

FASTENERS

Retain Factory



4. Remove the 4x Bolts securing top of grille to body using 10mm socket.
5. Using Trim tool carefully lever out the seal over the top of the grille to headlight joint to uncouple the rubber seal.

TOOLS REQUIRED

10mm socket.

FASTENERS

Retain Factory

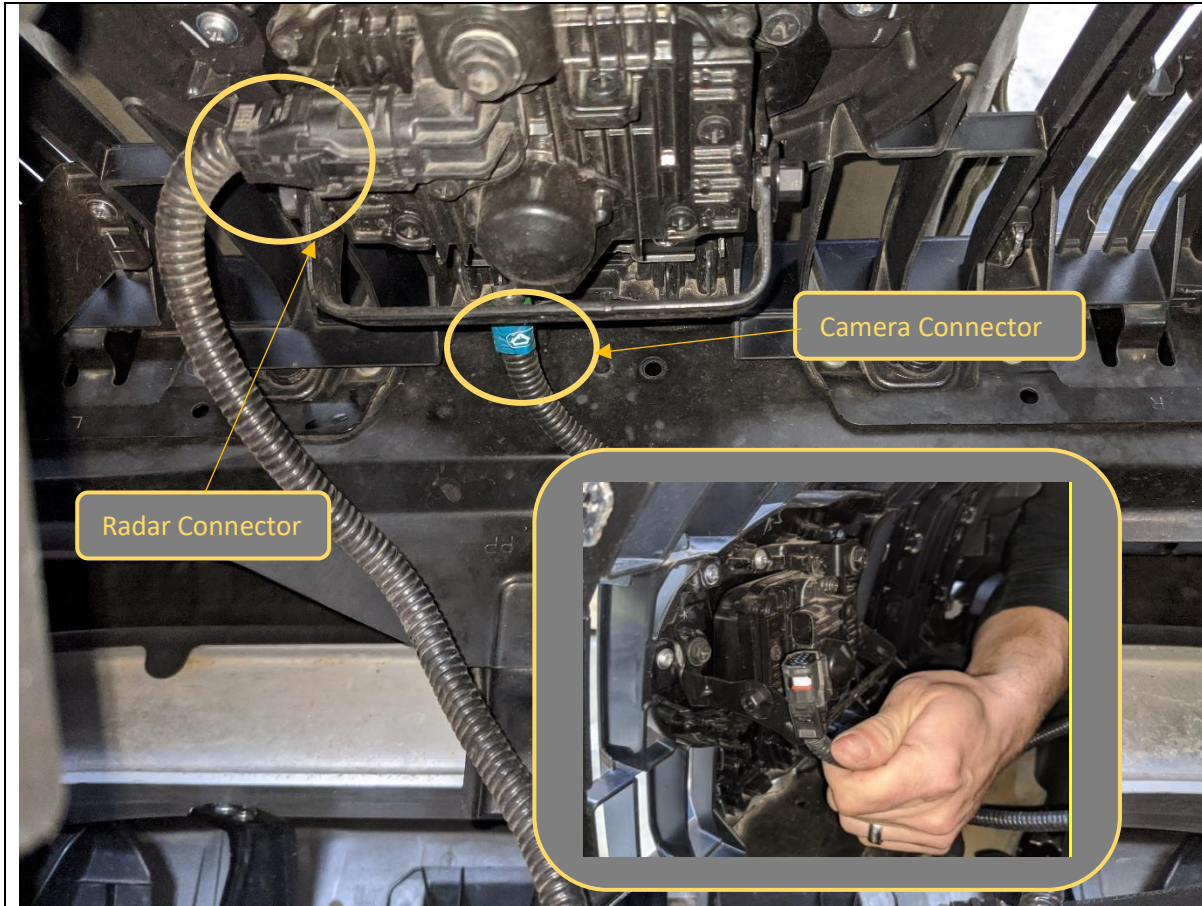


6. Using a rag or plastic tool to protect the chrome finish, carefully pry the L shape headlight trim to release the clips.
7. Complete for both sides of the vehicle.

TOOLS REQUIRED

Trim Tool

FASTENERS



8. For Vehicles equipped with Adaptive cruise radar sensor and / or front camera, Disconnect the electrical harness connectors located on the back of the sensors.

TOOLS REQUIRED

FASTENERS



9. Using a trim tool pry open the clips securing the bottom of the grille to the bumper.
10. Remove the grille from the vehicle and set aside for refitment later

TOOLS REQUIRED

Trim Tool

FASTENERS



11. Remove the 4x Clips securing the bumper to the body crossmember

TOOLS REQUIRED

Trim Tool

FASTENERS

Factory Clips (Discard)



12. Remove the 10mm head screws securing the bumper to the underbody bash plate.
13. Remove the center lock clips that also secure the bumper.

TOOLS REQUIRED

10mm socket
Trim Tool

FASTENERS

Factory Bolts (Discard)



14. Remove the 10mm / Phillips screws securing bumper to the wheel arch liner.

15. Complete on both sides of the vehicles

TOOLS REQUIRED

Phillips screwdriver or M10 Socket

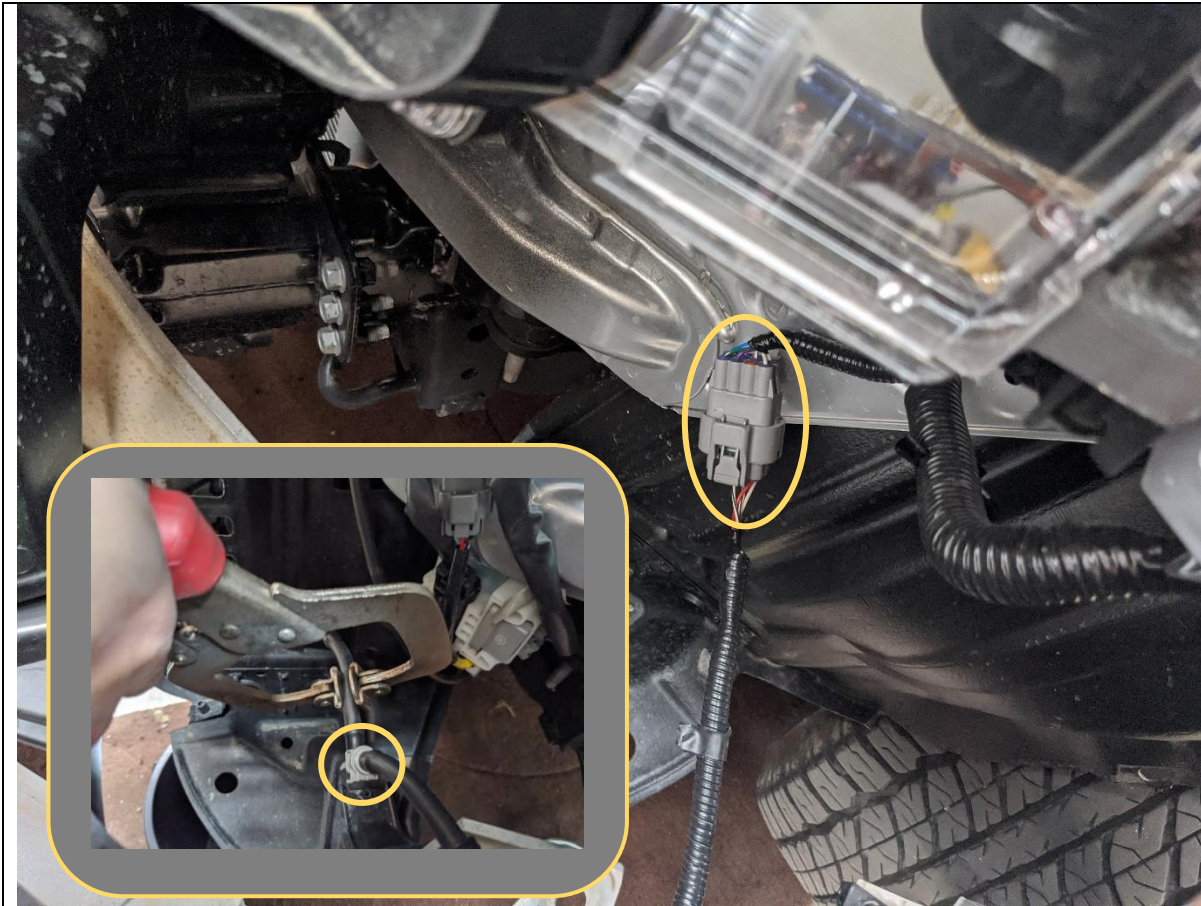
FASTENERS



16. Starting from the wheel arch, carefully pull the bumper away from the body of the vehicle to release the clips.

TOOLS REQUIRED

FASTENERS



17. Disconnect the main electrical harness, located on the LHS of vehicle under headlight.

18. For vehicles equipped with headlight washers, disconnect the headlight washer hose at the quick connect fitting.

If there is any washer fluid in the reservoir it will spill out. Have a bucket on hand to drain the washer fluid or use a hose clamp to prevent the fluid from leaking

19. Once both are disconnected continue removing bumper. Once all clips are released, carefully lift the bumper from the car and set aside on a soft surface.

TOOLS REQUIRED
Bucket or Hose Clamp

FASTENERS



20. Re-Fit grille to vehicle, Secure the top of grille using the factory fasteners removed earlier.
21. Ensure the grille is located correctly on the locating lugs just above the bolt hole.
22. Secure the bottom of the grille using cable ties around the bumper support cross member as shown.

TOOLS REQUIRED

10mm Socket
Cable Ties

FASTENERS

Re-Use Factory



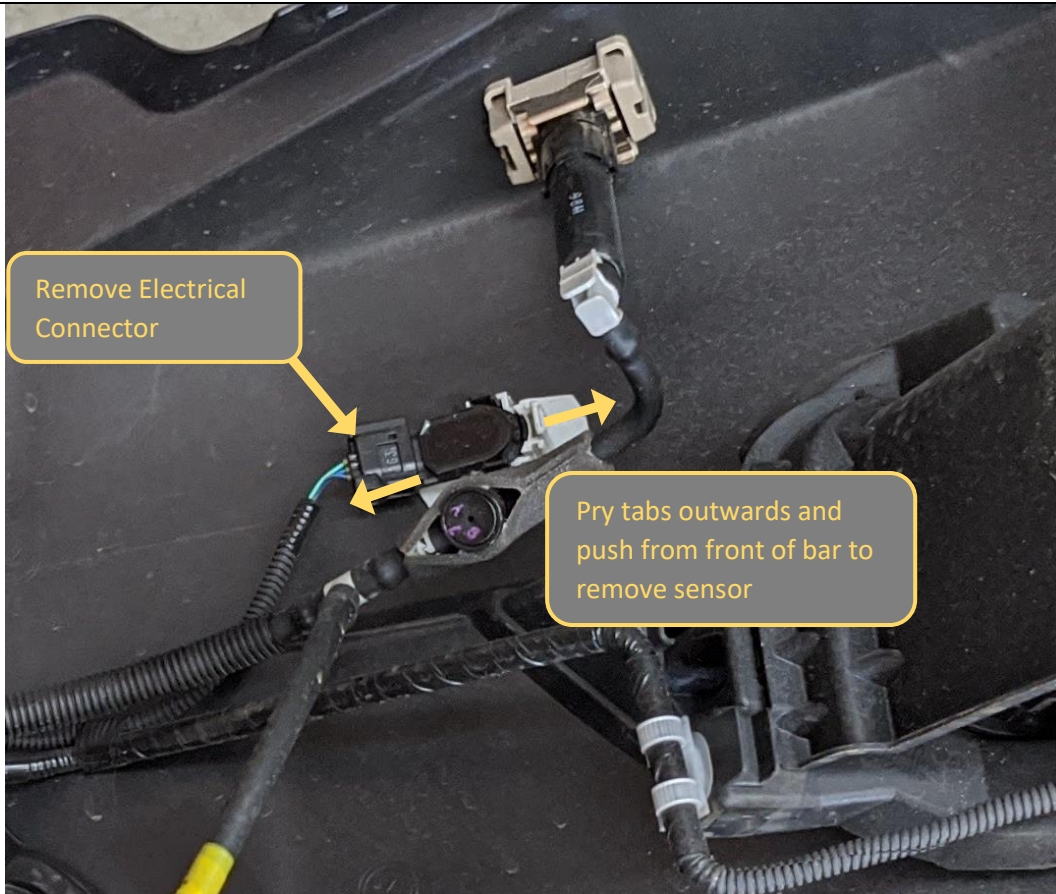
23. Disconnect the Fog light harness from the fog light.
24. Remove the fog lights from the bumper, by removing the three Philips head screws.
25. Remove both the electrical harness, and headlight washer pipes from the bar, by prying out the clips using trim tool.
26. Complete on both sides of bumper.

TOOLS REQUIRED

Phillips head Screwdriver
Trim tool

FASTENERS

Discard Factory Screws



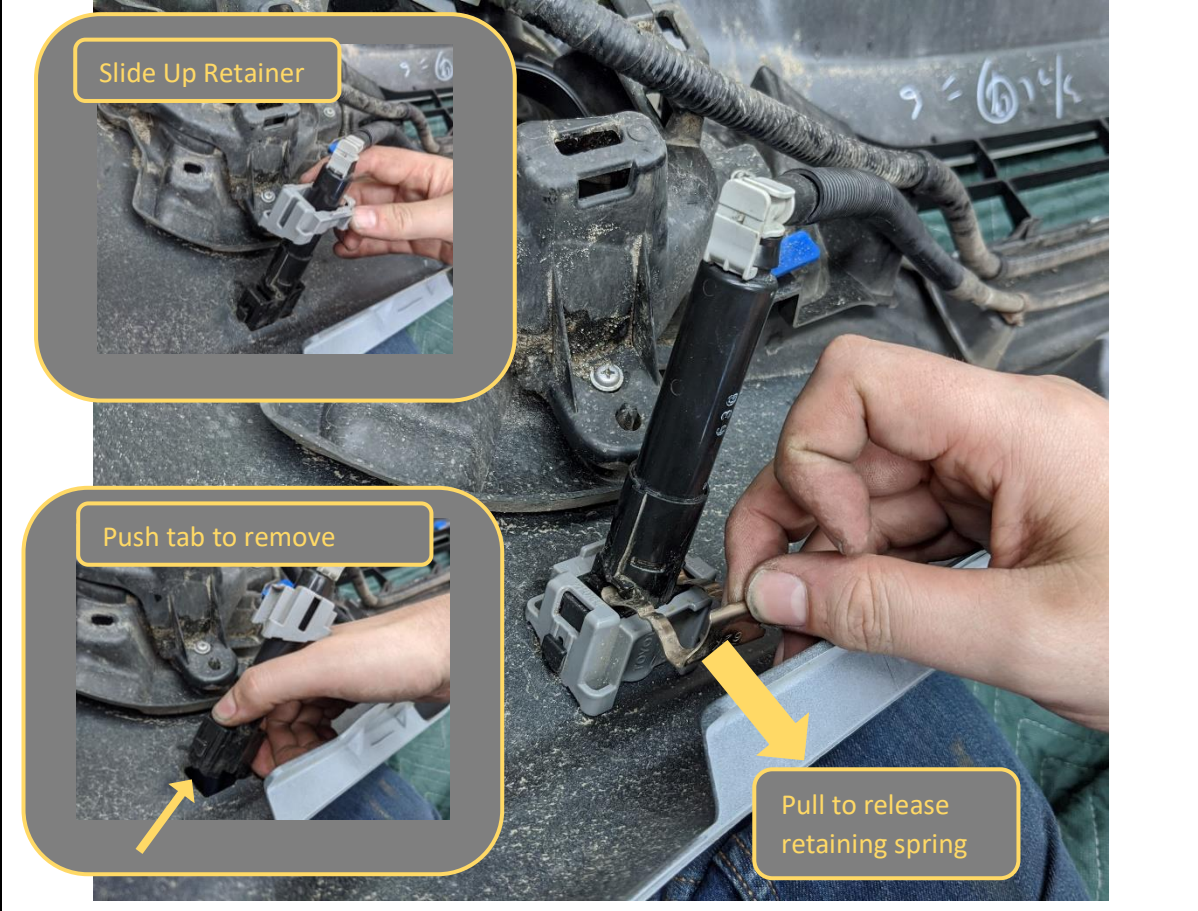
27. If car equipped with parking sensors Disconnect the parking sensors from the loom by squeezing the tab, then pulling to disconnect the multi plug connector.

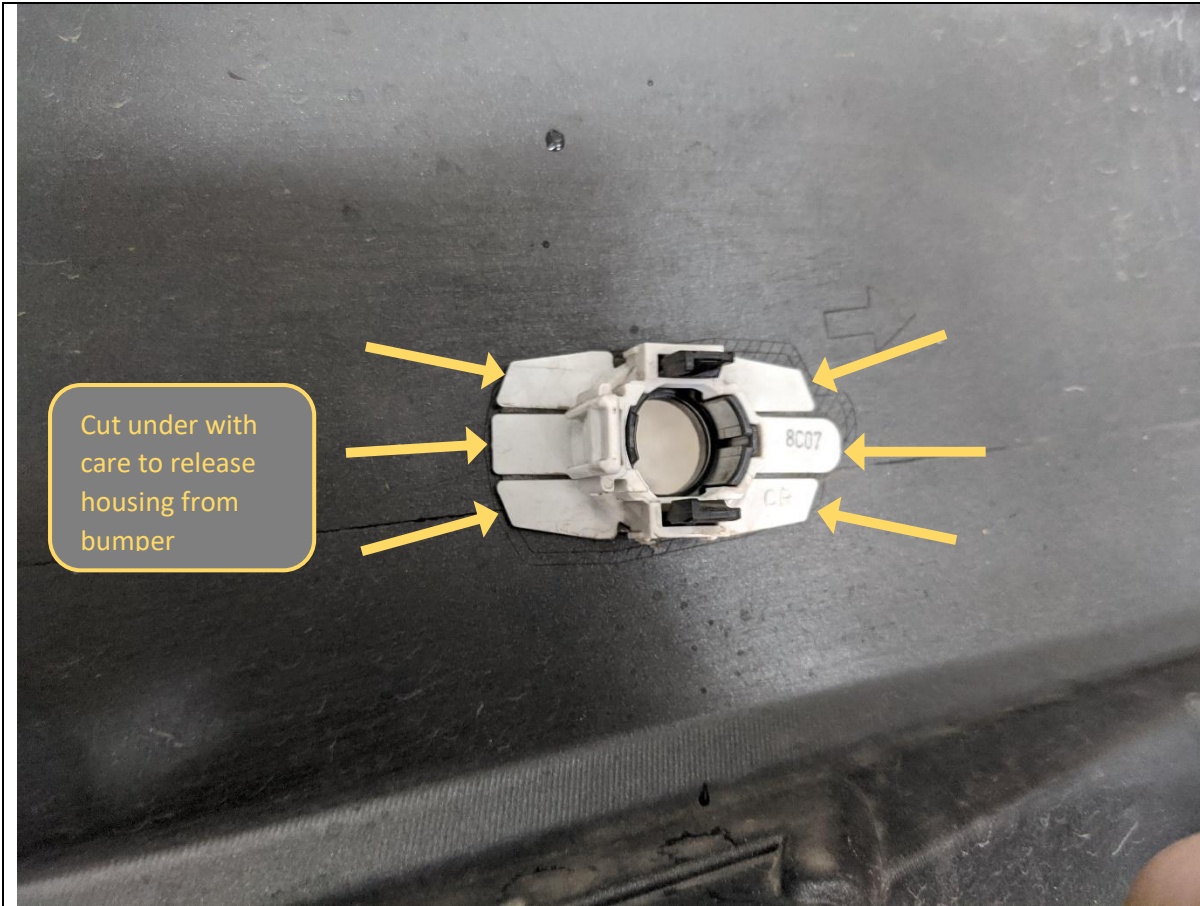
28. Pry the two grey retaining tabs on the sensor housing outwards whilst applying pressure to the face of the sensor from the front side of the bumper. The sensor should release from the housing. Remove from the rear side of the bumper.

Take care to ensure the rubber isolation rings remain in place with the sensor

TOOLS REQUIRED

FASTENERS

	
<p>29. If vehicle is equipped, remove headlight washers from the bumper. Start by disconnecting the supply hose.</p> <p>30. Release the retaining spring by firmly pulling it as shown in the image.</p> <p>31. Next slide up the plastic retainer.</p>	<p>TOOLS REQUIRED</p>
<p>32. Once loose pull on the small retaining tab on the side of the washer assembly to remove.</p>	<p>FASTENERS</p>

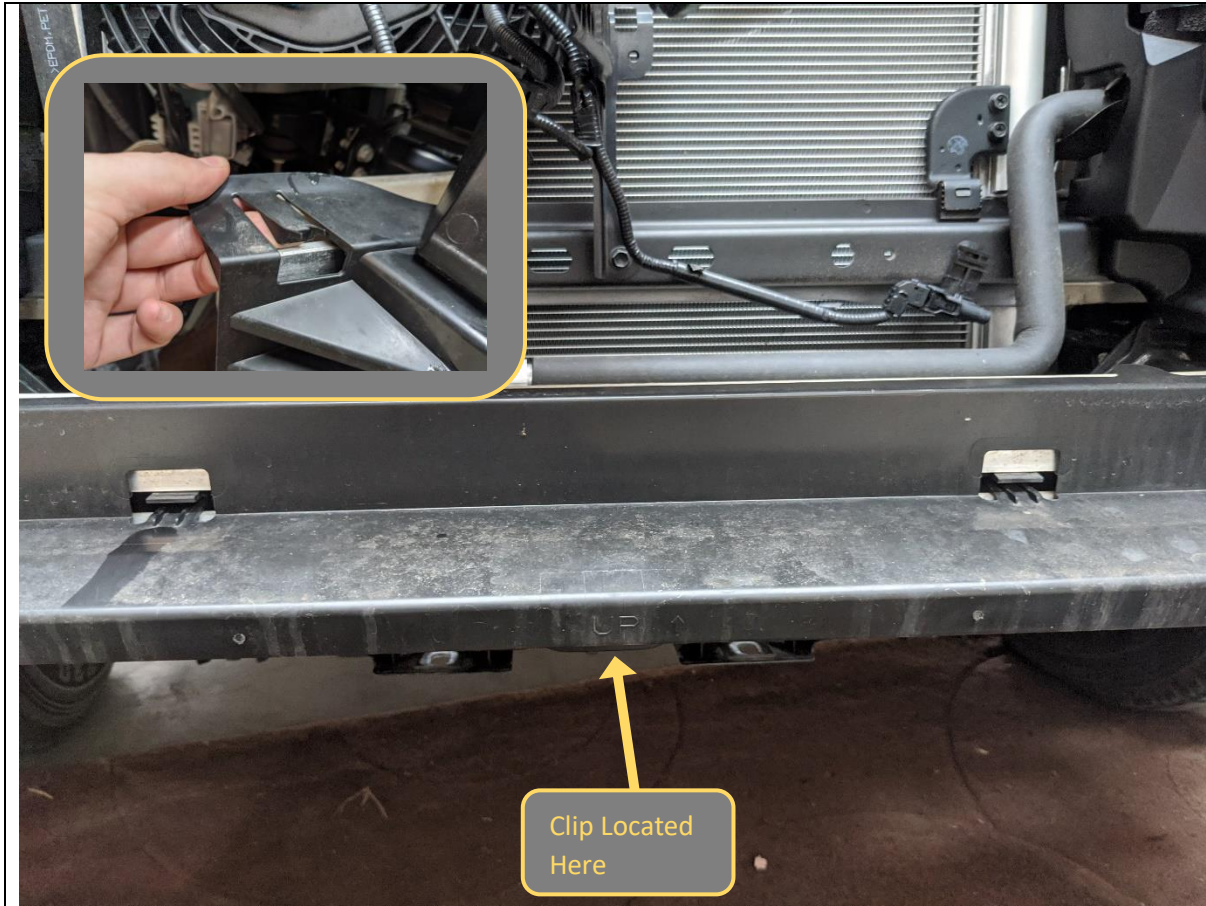


33. Remove the sensor housing from the bumper for refitment to the bar
34. Using a utility knife and trim tool carefully cut through the adhesive under the grey parts of the sensor housing and pry it from the bumper
35. Set aside housings taking care to note the correct positions for refitment

TOOLS REQUIRED

Utility Knife
Trim Tool

FASTENERS



36. Remove the Plastic covering the impact beam.
37. The plastic is secured by 3x molded clips in the front face, and clips on either end of the beam
38. Remove and set aside the plastic impact beam.

TOOLS REQUIRED

FASTENERS



39. Remove the 6x 14mm head Nuts holding the impact beam to the impact beam brackets.
40. Remove and set aside the aluminum impact beam.

TOOLS REQUIRED

14mm Socket
Extension Bar

FASTENERS

6x 14mm Head factory Flange Nuts



41. Remove the plastic bumper retainers by removing the Philips head and 10mm head screw, then prying out the large clip from behind using trim tool

TOOLS REQUIRED

Phillips head screwdriver
10mm Socket
Trim Tool

FASTENERS

Phillips Head screw.



42. Remove the plastic bumper retainers under the headlight by removing the 2x Phillips head screws.

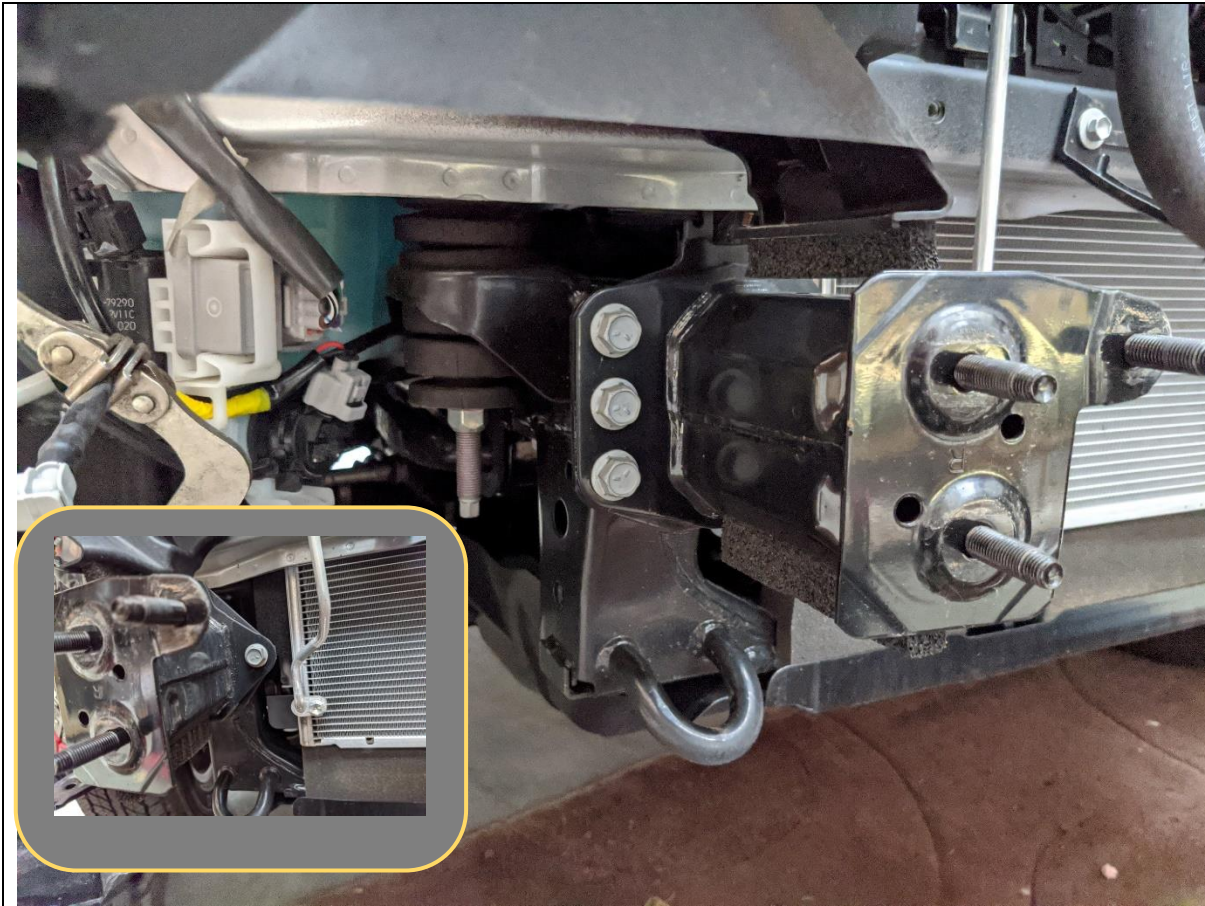
43. Complete on both sides of the vehicle.

TOOLS REQUIRED

Phillips head screwdriver

FASTENERS

Phillips Head screw.
Discard



44. Remove Steel impact beam mounts by removing the 5x 14mm head flange bolts on each side.

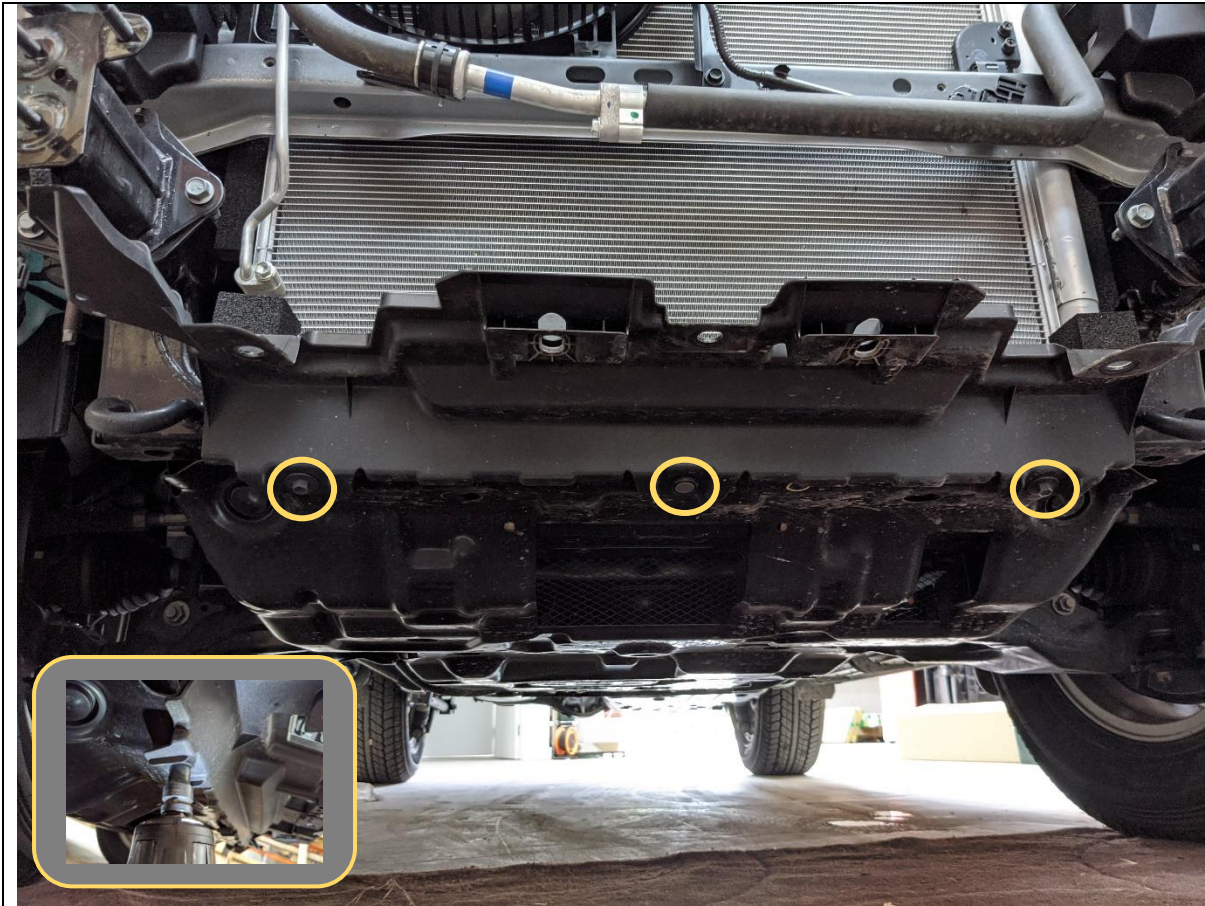
45. Retain bolts for fitment of bullbar mounts.

TOOLS REQUIRED

14mm Spanner / Socket

FASTENERS

14mm Head Factory Flange Bolts



46. Remove the Plastic undertray, by removing the 2x10 mm head factory bolts and center clip.

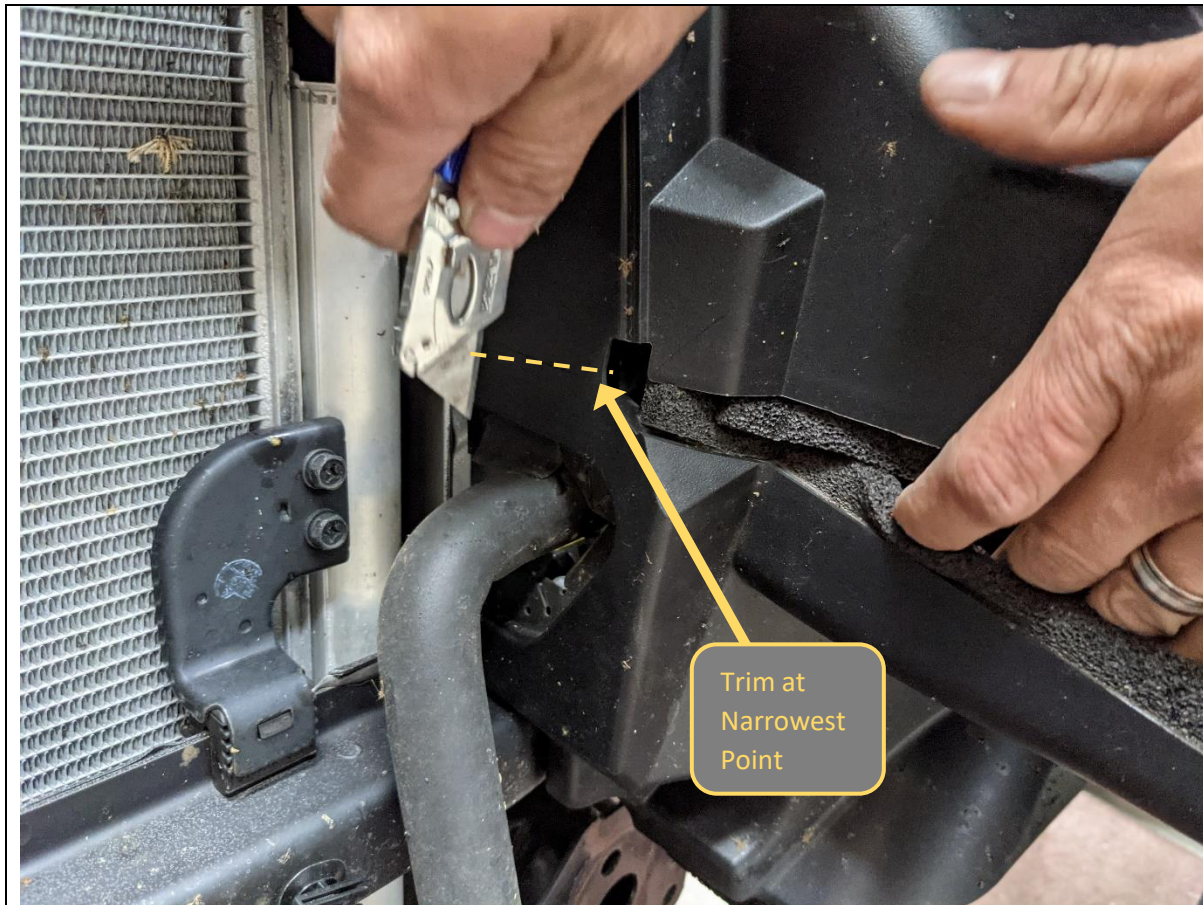
47. Retain bolts for fitment of bash plate.

TOOLS REQUIRED

10mm Socket

FASTENERS

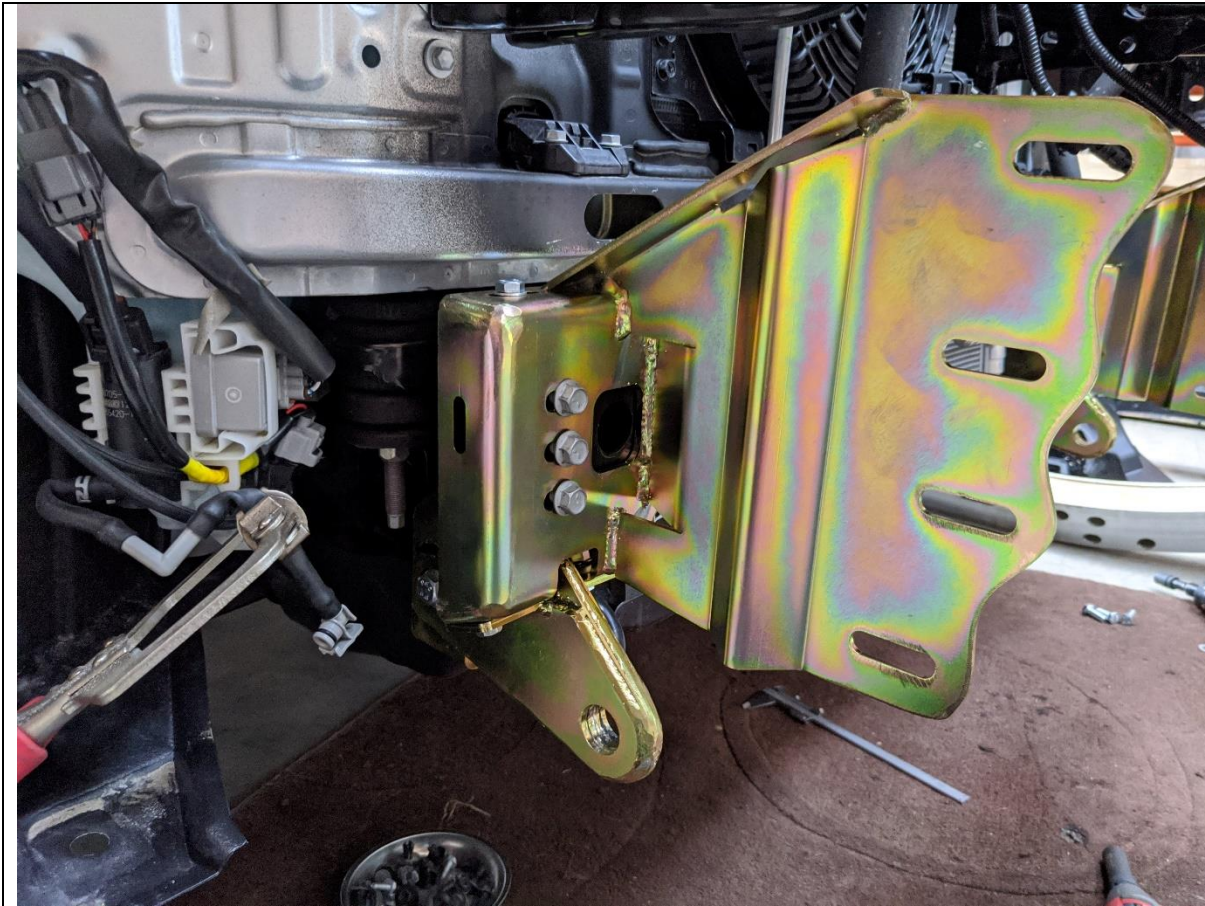
10mm Head Factory Bolts



48. Plastic air guides need to be trimmed to allow clearance for the bullbar mounts.
49. Using a sharp utility knife or an air hacksaw, cut along the narrowest section of the guide as shown in the image.
50. Repeat for both sides of the vehicle. The RHS of vehicle is much easier to cut if it is removed from the vehicle. Air guide is secured with 1x clip

TOOLS REQUIRED
Utility knife
Or
Air Hacksaw

FASTENERS



51. Loosely fit the Impact mounts to the chassis, re using the original factory flange Bolts.

52. Loosely fit the tow point to the chassis and impact mounts using M8x30 and M12x40x1.25 Bolts into captive nuts on chassis, and M10x30 Bolts, Washers and Flange Nuts to the impact bracket

Note: Captive threads in chassis can be tight. Ensure bolts are not cross threaded and drive in manually with socket. Do not tighten at this stage.

53. Leave bolts finger tight at this stage.

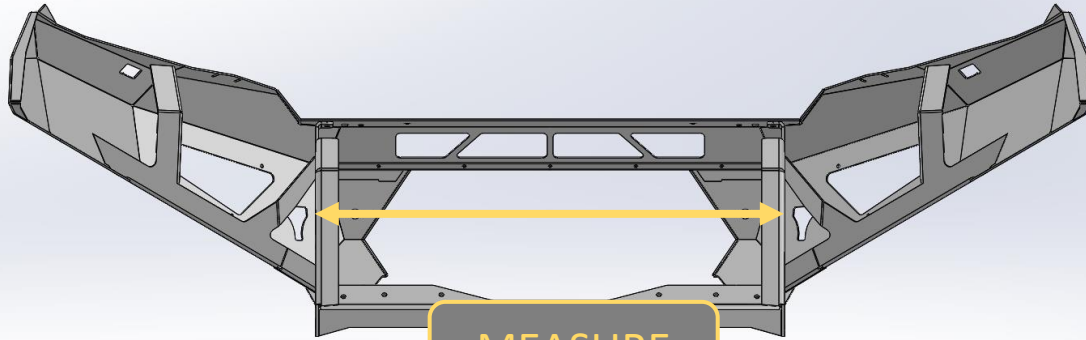
TOOLS REQUIRED

13,14,16 & 18mm Sockets

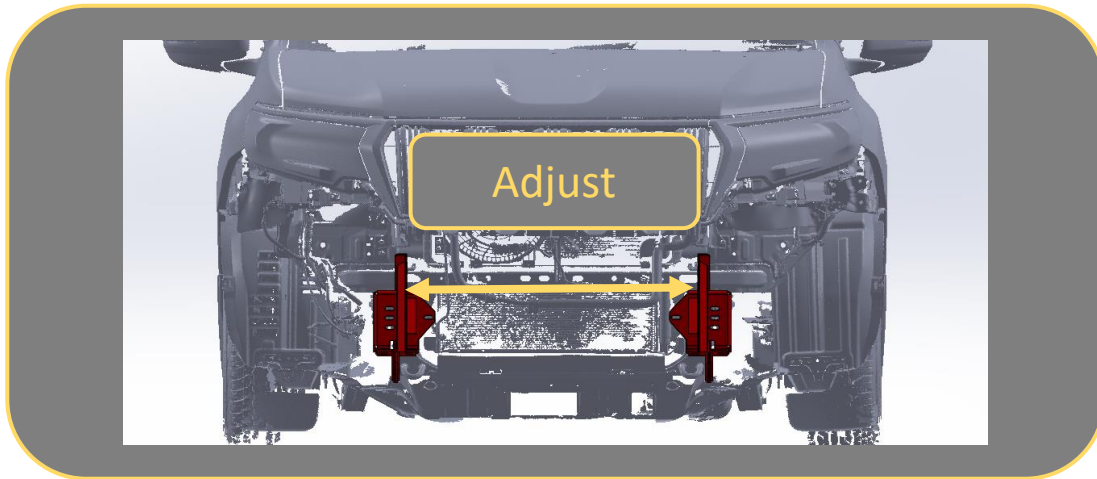
FASTENERS

1x M8x30 Hex Bolt
1x M12x40x1.25 Bolt
3x M10x30 Bolt
3xM10 Flat Washer
3xM10 Flat washers

Per side



MEASURE



Adjust

54. Measure Distance between outside edges uprights on bar using tape measure. Write distance below for reference if required.

Bar Upright Width = _____mm

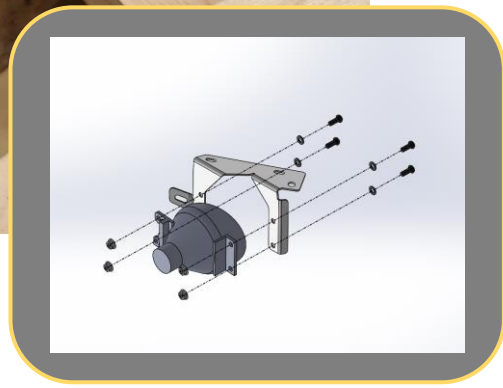
55. Adjust mounts by sliding mounts on slots, such that distance between outside edges of mounts is approximately 2mm less than bar.

56. Secure and tighten mounts. Tighten bolts that secure the Impact assembly to chassis first, then tow point to chassis bolts and finally impact assembly to tow point bolts.

TOOLS REQUIRED

TAPE MEASURE

FASTENERS



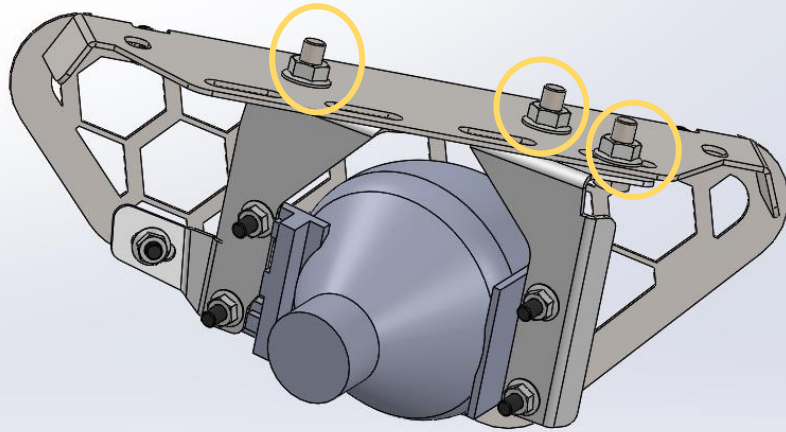
57. Re-Fit fog lamps to the Fog light brackets (B-0186L/R) using M6X16 Button head Bolts, Flat washers and Flange nuts from the Small Parts Kit.
58. Secure and tighten using 4mm Allen Key and 10mm Spanner

TOOLS REQUIRED

4mm Allen Key
10mm Spanner / Socket

FASTENERS

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



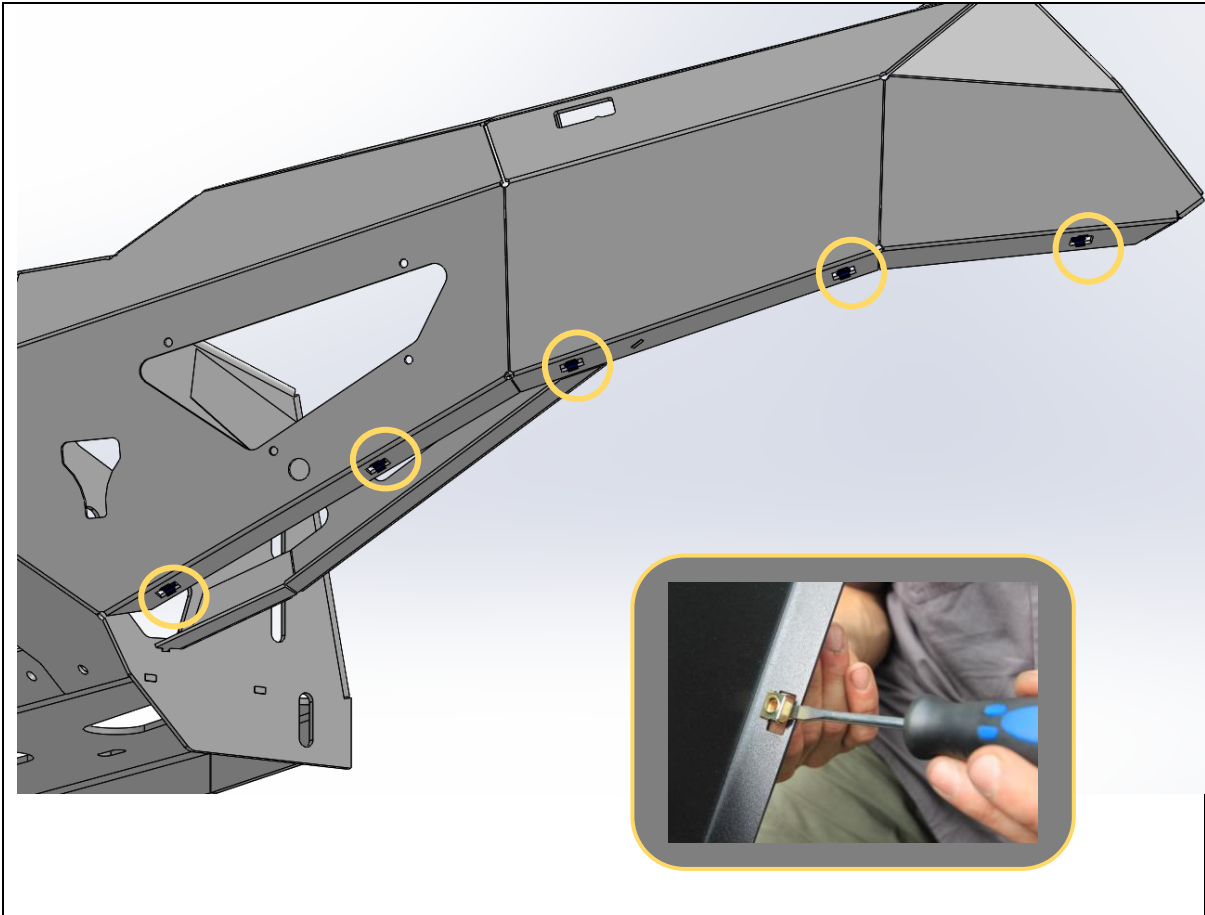
59. Fit fog light bracket, with fog light in place to the Mesh panel using 3x M8x25,
60. Secure and tighten using 13mm Spanner or socket.
61. Repeat for other side of bar.

TOOLS REQUIRED

4mm Allen Key
10mm Spanner / Socket
13mm Spanner / Socket

FASTENERS

3x M8x25 Hex
3x M8 Flat Washer
3x M8 Flange Nut



62. Fit 5x Cage nuts from small parts kit to rectangular slots in bottom of wing.

Use a small flat bladed screwdriver to push the edge of the cage to engage with the slot to aid fitting.

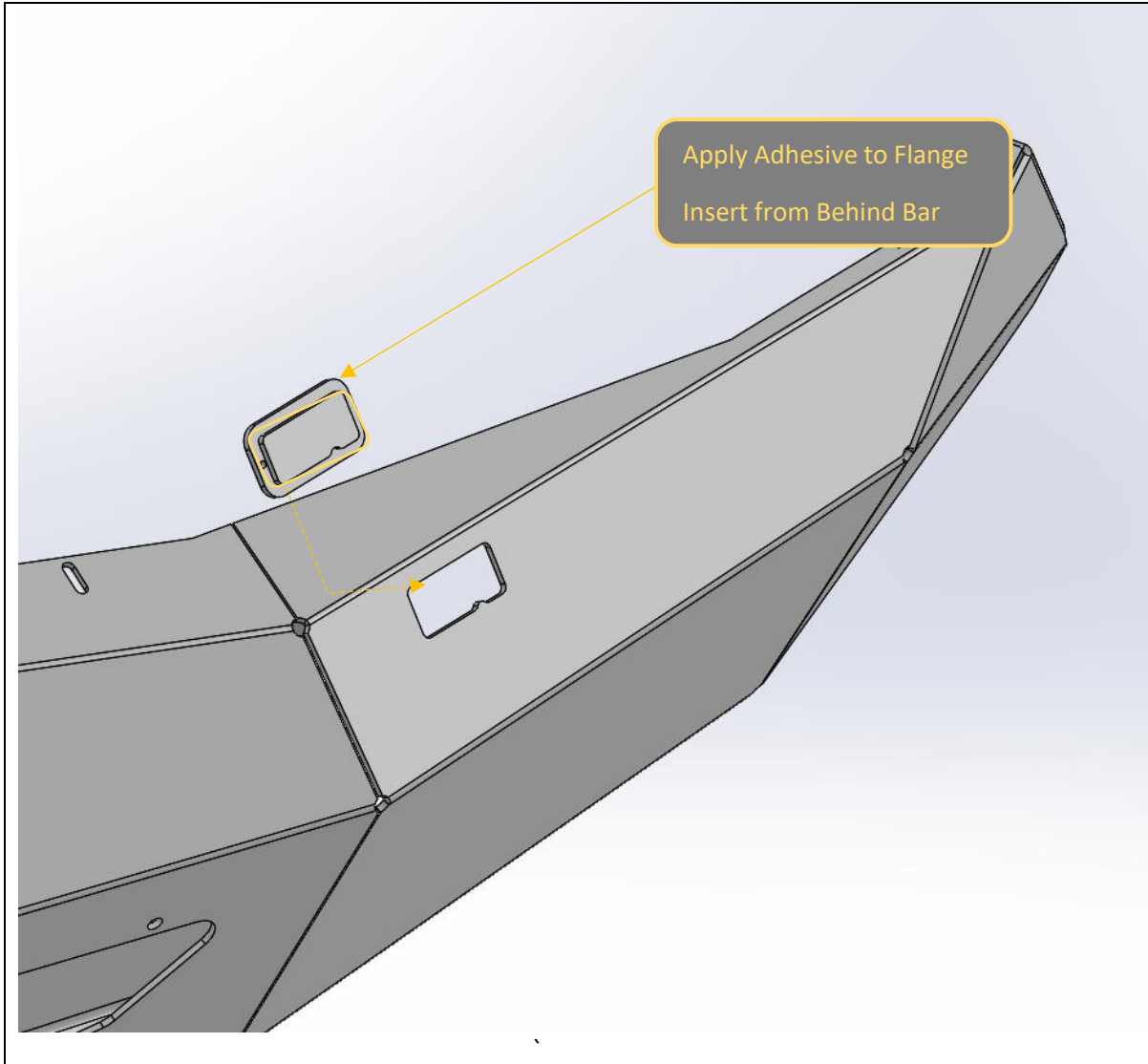
63. Repeat for other side of Bar

TOOLS REQUIRED

Small Flat Bladed Screwdriver

FASTENERS

5x M6 Cage Nut
Per side

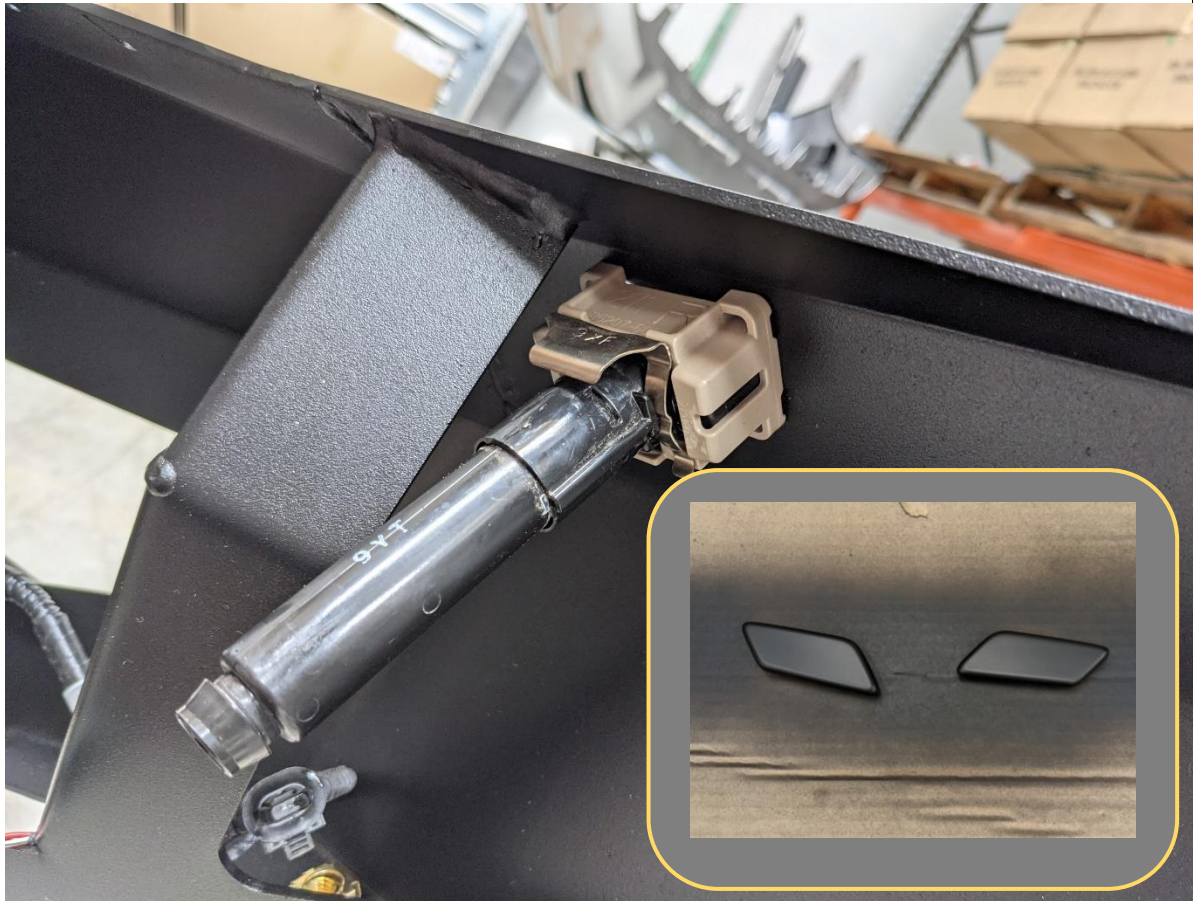


64. If not fitting headlight washers install supplied plug plates, using Automotive grade adhesive (Offroad Animal recommends Sikaflex227)

TOOLS REQUIRED

Automotive adhesive

FASTENERS



- 65. If Equipped Re fit headlight washers to bar.
Fitment procedure is reverse of removal
- 66. If the bar is not to be colour coded, paint the
headlight washer covers black before refitting
- 67. Once fitted pull out the washer assembly with long
nose pliers and adjust the washer nozzles to squirt
towards the headlights, final adjustment can be
performed when the bar is fitted to the car.

TOOLS REQUIRED

Long Nose Pliers
Scotch Brite / Sandpaper
Matte Black Paint

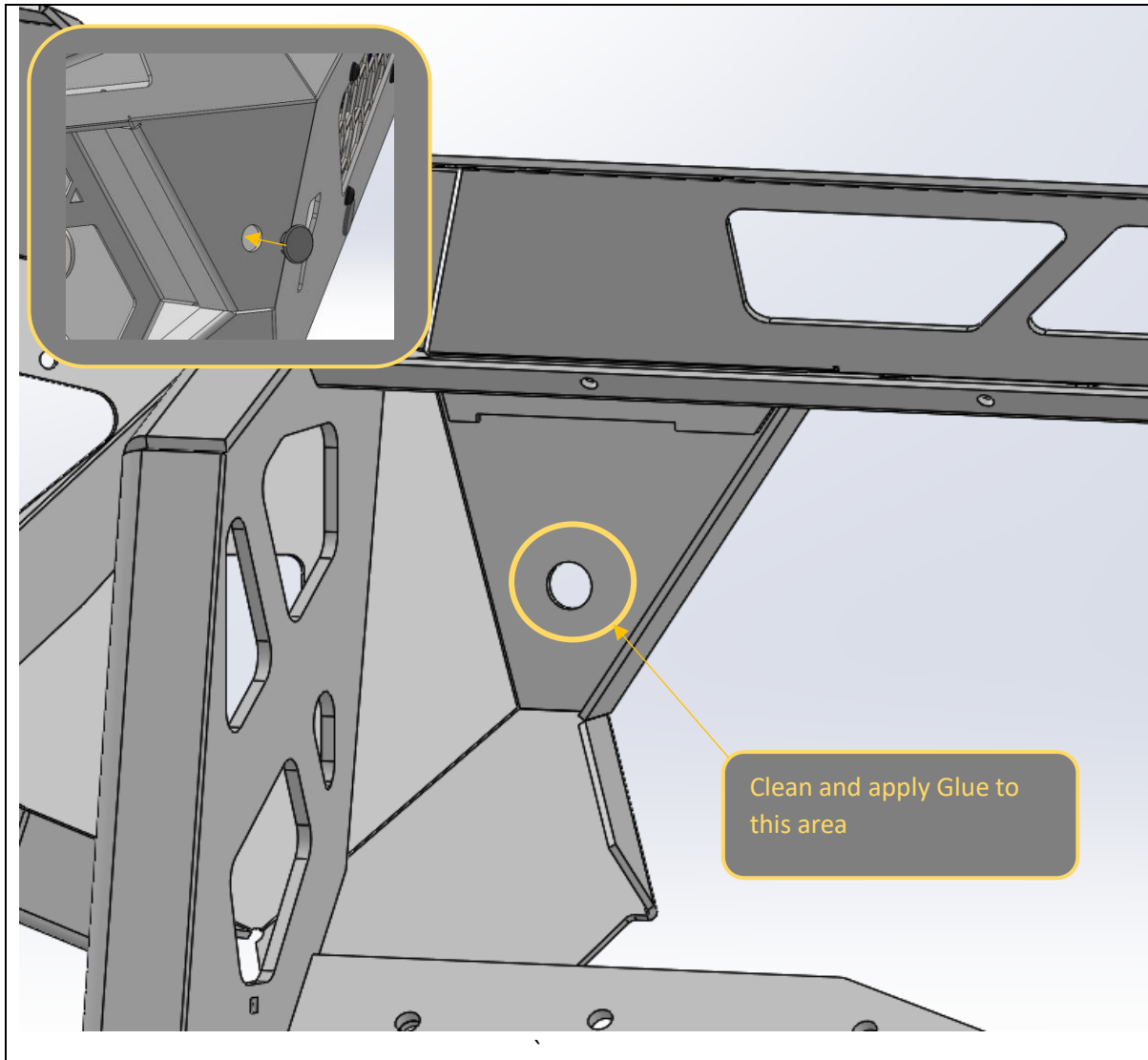
FASTENERS



68. Pre fit the headlight infill panels to the top face of the bar, using M5 Button head screws, M5 Flat washers, and M5 Flange nuts. Secure finger tight at this stage
69. Ensure the heads of the bolts are underneath and nuts on top as shown. This will make tightening on the vehicle much easier.

TOOLS REQUIRED

FASTENERS
4x M5x16 BHCS
4x M5 Washer
4x M5 Flange Nut



<p>70. Re Fit parking sensors to the bar.</p> <p>71. Clean area on back side of bar adjacent to sensor holes with isopropyl alcohol.</p> <p>72. Apply a small amount of automotive grade adhesive (ORA recommends Sikaflex227) around the hole and glue the sensor housings in place, in their original positions. Hold in place with tape until glue sets.</p> <p>73. Refit sensors to relocated housings once glue has set.</p> <p>74. Re fit electrical harness and Headlight washer hose to bar. Secure using cable ties.</p> <p>75. If parking sensor not fitted, fit cover pugs by pushing into hole.</p>	<p>TOOLS REQUIRED</p> <p>Automotive adhesive</p>
	<p>FASTENERS</p> <p>Cable Ties</p>



76. If fitting an integrated light bar, do so now. Leave bolts loose at this stage to allow fitment of mesh panels.

77. The bar is designed to fit an Offroad Animal 22in or STEDI ST3K 21.5 inch light bar. If fitting this light bar, assemble bar with legs inward, and it will line up with the slots in the center gusset. Secure with M8 Fasteners supplied with the light bar.

78. The bar can accommodate most other "20 inch" size light bars.

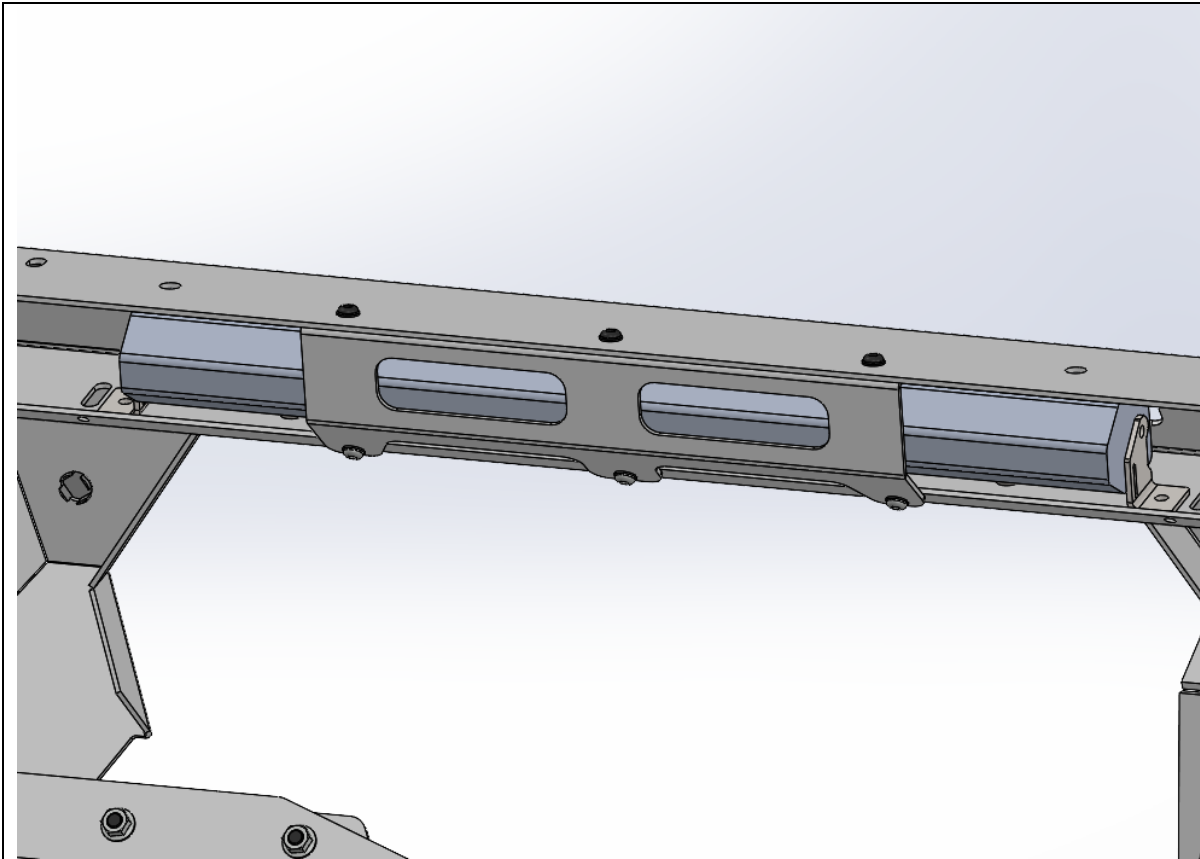
79. If fitting driving lights to the bar this is also the most convenient time to do so

TOOLS REQUIRED

13mm Spanner / Socket

FASTENERS

Supplied with Light Bar



80. Fit the Pan Brace between the center gusset and pan using the M6x16 Button heads, washers and Nuts on top and M6x12 Button heads, washers, and Nuts on bottom.

TOOLS REQUIRED

4mm Hex Key

FASTENERS

3xM6x16 Black BHCS
3xM6x12 BHCS
6x M6 Black Washer
6xM6 Flange Nut



81. With assistance, either from another person, or a lifting trolley, lift the bar onto the mounts on the vehicle.

82. Secure with 4x M12x30 Bolts, Heavy Duty washers and M12 Nyloc Nuts per side, Finger tight at this stage.

TOOLS REQUIRED

Lifting Trolley

FASTENERS

8x M12x30 Bolt
16x M12 Heavy Duty Large Washer
8x M12 Nyloc Nut



83. With assistance, from another person, Align the bar with the edges of the vehicle. Adjust such that the clearances are neat and even side to side.

Acceptable range of clearances shown in image above.

IMPORTANT: It is the installers responsibility to ensure clearances are set so that no part of the bar touches the vehicle. Remember that body is rubber mounted and will move relative to bar in use.

84. Once in position tighten the M12 Bolts using socket and spanner. An impact driver may be used to speed up this process.

TOOLS REQUIRED

Lifting Trolley
19mm Socket and Spanner

FASTENERS

8x M12x40 Bolt
16x M12 Heavy Duty Large Washer
8x M12 Nyloc Nut



85. Align the headlight infills with the headlights. Ensure that the headlight infills sit **IN FRONT OF**, not Underneath the headlights to avoid the infill panel touching the headlight.

IMPORTANT: It is the installers responsibility to ensure clearances are set so that no part of the bar touches the vehicle.

86. Once in position tighten the M5 button head bolts from underneath using a ball end Allen key.

87. Once tightened, re fit chrome headlight trims.

TOOLS REQUIRED

3mm Allen Key (Ball end)

FASTENERS



88. If Fitting a winch, do so now.

89. The bar is designed to fit most low mount winches, in foot down configuration. WARN ZEON 10 is largest winch confirmed to fit.

90. The control box can to be mounted on top of the winch. Winches usually come with a bracket to allow this. Refer to winch manufacturer.

91. Ensure clutch handle will be accessible through access hole in front mesh panel. Refer to winch instructions regarding changing clutch handle location.

TOOLS REQUIRED

Refer to winch fitting instructions

FASTENERS

Supplied with winch



92. If Required, Fit winch fairlead to Mesh Fairlead Mount (M-0014). Use M10 or 3/8" Fasteners supplied with winch. The bar is only compatible with Hawse type fairleads.

93. Fit the Mesh Fairlead Mount (M-0014) to the center of the bar, using M8x16 Button head (Top), M8x20 Hex (Bottom) M8 Flat washers and M8 Flange Nuts (Bottom Only).

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

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

TOOLS REQUIRED

13mm Spanner
5mm Allen Wrench

FASTENERS

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



96. Fit Mesh Infill Panels (M-0015L/R). Use M8x16 Button head bolt, M8 flat washer into the captive thread in the bullbar.
97. Don't fit any bolts to bottom holes at this stage.
98. Tighten top fasteners using 13mm socket / spanner and 5mm Allen Wrench.
99. Tighten side fasteners using 13mm socket / spanner and 5mm Allen Wrench. Reach through access hole in mesh panel to reach nut.

TOOLS REQUIRED

13mm Spanner
5mm Allen Wrench
10mm Spanner
4mm Allen Wrench

FASTENERS

2x M8x16 Button Head
2x M6x16 Hex Head
2x M8 Flange Nut
2xM8 Flat Washer
2xM6 Flange Nut
2xM6 Flat washer



100. Fit Light cover mesh to bar using 4x M6x16 Button head bolts, Flat washers and M6 Flange Nuts

101. Secure and tighten using 4mm Allen Key and 10mm Spanner

TOOLS REQUIRED

4mm Allen Key
10mm Spanner / Socket

FASTENERS

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



102. Re Connect Electrical Harness, fog lights and headlight washers. Make Sure to also reconnect Radar and Camera harnesses.

103. Replace upper radiator cowl using original clips.

TOOLS REQUIRED

FASTENERS

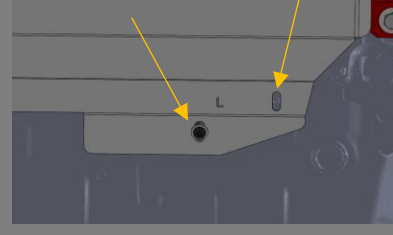
Factory clips (re-use)



Note: Prototype Shown, Missing M8x30 Button Head Bolts



Production Spec – Factory Bolt and M8x30 Button Head



104. Fit Center Bash Plate (U-0030) using, M8x20 button head, flat washer and flange nut to front face. Ensure these fasteners pass through the side mesh panels also.
105. Remove 2x factory bolts securing the front of the factory metal underbody pan.
106. Secure back of Center Bash Plate (U-0030) using 2x 10MM large flange factory bolts removed earlier to the outside points and supplied M8x30 Button head and HD Flat washer into the thread in the chassis.
107. Tighten Bottom fasteners using 5mm Allen wrench and 10mm spanner
108. Tighten front fasteners using 13mm socket / spanner and 5mm Allen Wrench. Reach through access hole in mesh panel to reach nut.

TOOLS REQUIRED

10, 13 mm Spanner
5 mm Allen Wrench

FASTENERS

2x M8x30 Button Head
2x M8 HD Flat Washer
4x M8x20 Button Head
4x M8 Flange Nut
4xM8 Flat Washer



109. Fit Side Under panels (U-0029L/R) using, M6x16 button head and flat washer into the cage nuts placed earlier.

110. Tighten with 4mm Allen wrench

111. Secure back of side under panel to mount using M8x20 Hex Bolt, Flat washer and M8 Flange Nut.

112. Leave finger Tight at this stage

TOOLS REQUIRED

FASTENERS

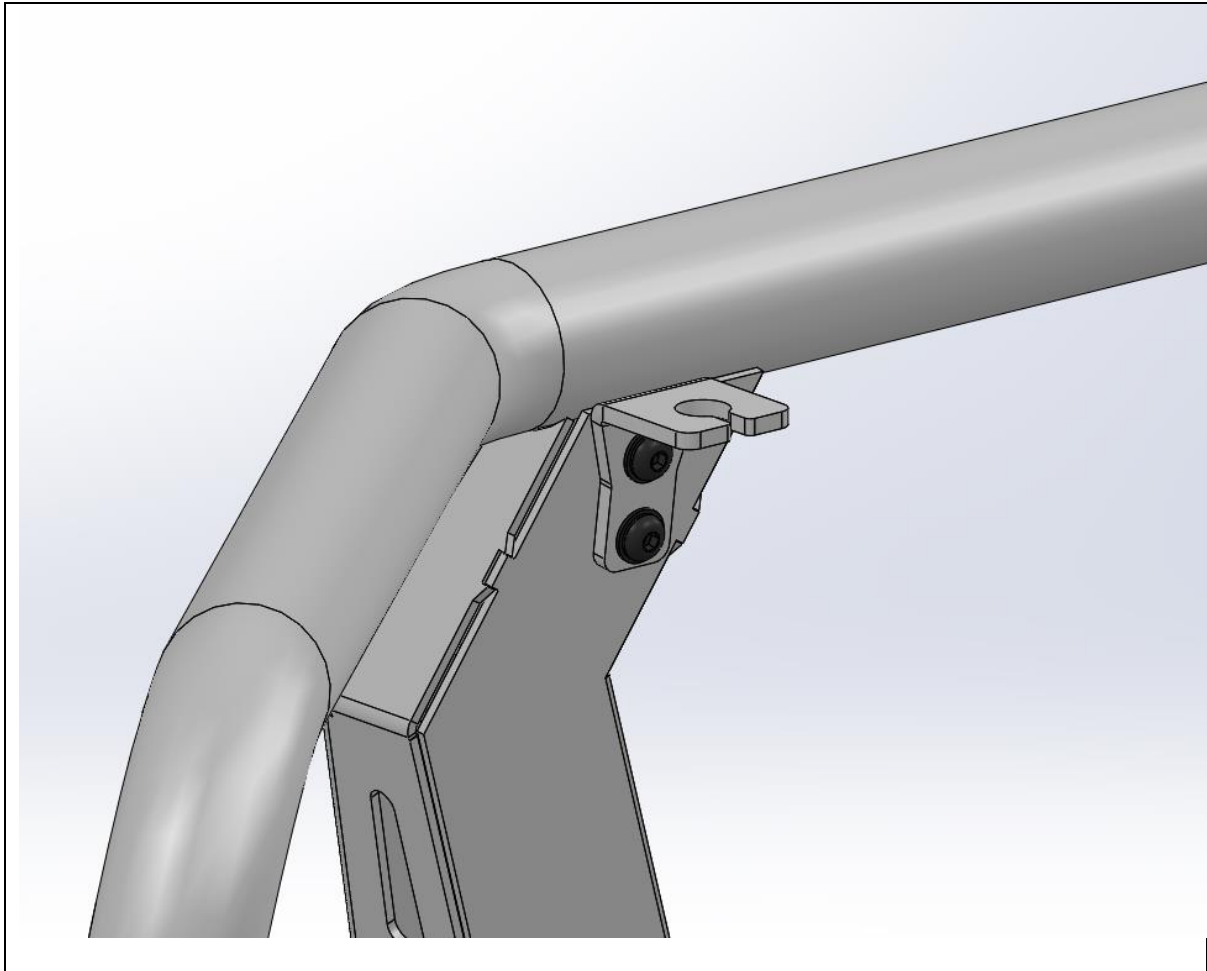
- 10x M6x16 Button Head
- 10x M6 Flat Washer
- 2x M8x25 Hex Head
- 2x M8 Flange Nut
- 2x M8 Flat Washer



113. Using the edge of the under panel as a guide mark the wheel arch liner, approximately 15mm beyond the intersection of the under panel.
114. Cut along line as marked using utility Knife
115. Tuck the wheel arch liner behind the flange on the under panel
116. Tighten all under panel bolts
117. Complete for other side of vehicle.

TOOLS REQUIRED
Utility Knife
13mm Spanner
5mm Allen Wrench
4mm Allen Wrench

FASTENERS



<p>118. If fitting antenna to Torro bar, fit the antenna brackets to the M8 Threaded inserts in the uprights..</p> <p>119. Tighten with 5mm Allen wrench</p> <p>120. Fit Antenna to the bracket as per antenna manufacturer's instructions</p> <p>121. Retain unused brackets for future use.</p>	<p>TOOLS REQUIRED</p> <p>5MM Allen Key</p>
	<p>FASTENERS</p> <p>2x M8x20 Button Head Screw 2x M8 Black Flat Washer</p>



122. Check all Fasteners are tight.
123. Re-Fit number plate to number plate flip.
124. Head Bush and Enjoy your newly protected Prado!

For contact details see www.offroadanimal.com