



FITTING INSTRUCTIONS

Part Number:	3440690
Product Description:	SUMMIT COMBINATION BULL BAR
Suited to vehicle/s:	FORD SUPER DUTY
Optional Fitting Kits:	3540480 – WINCH FIT KIT ZEON - FLA 3540490 – WINCH FIT KIT SUMMIT MKII 3540500 – CONDUIT KIT SUPER DUTY WINCH

WARNING

REGARDING VEHICLES EQUIPPED WITH SRS AIRBAG:

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

ALSO, NOTE THE FOLLOWING:

- ◆ This product must be installed exactly as per these instructions using only the hardware supplied.
- ◆ In the event of damage to any bull bar component, contact your nearest authorised ARB stockist. Repairs or modifications to the impact absorption system must not be attempted.
- ◆ Do not use this product for any vehicle make or model, other than those specified by ARB.
- ◆ Do not remove labels from this bull bar.
- ◆ This product or its fixing must not be modified in any way.
- ◆ The installation of this product may require the use of specialized tools and/or techniques.
- ◆ It is recommended that this product is only installed by trained personnel.
- ◆ These instructions are correct as at the publication date. ARB Corporation Ltd. cannot be held responsible for the impact of any changes subsequently made by the vehicle manufacturer.
- ◆ During installation, it is the duty of the installer to check correct operation/clearances of all components.
- ◆ Work safely at all times.
- ◆ Unless otherwise instructed, tighten fasteners to specified torque.
- ◆ Vehicle ignition must remain **OFF** until all sensors are relocated and reconnected in their final position.

ARB 4x4 ACCESSORIES

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GENERAL CARE AND MAINTENANCE

By choosing an ARB Bar, you have bought a product that is one of the most sought after 4WD products in the world. Your bar is a properly engineered, reliable, quality accessory that represents excellent value. To keep your bar in original condition it is important to care and maintain it following these recommendations:

- Prior to exposure to the weather your bar should be treated to a Carnauba based polish on all exposed surfaces. It is recommended that this is performed on a six monthly basis or following exposure to salt, mud, sand or other contaminants.
- As part of any Pre Trip Preparation, or on an annual basis, it is recommended that a thorough visual inspection of the bar is carried out, making sure that all bolts and other components are torqued to the correct specification. Also check that all wiring sheaths, connectors, and fittings are free of damage. Replace any components as necessary. This service can be performed by your local authorized ARB Stockist.

FITTING REQUIREMENTS

REQUIRED TOOLS FOR FITMENT OF PRODUCT:

BASIC TOOL KIT	ELECTRIC RIGHT ANGLE DRILL
OSCILLATING MULTI-TOOL WITH BLADE SUITABLE FOR PLASTIC	Ø6, Ø8 & Ø10MM DRILL BITS
FILE OR SAND PAPER	MASKING TAPE
BASIC MEASURING TOOLS	LARGE G-CLAMP
CORRIGATED SPLIT TUBE (7MM & 12MM)	TORQUE WRENCH 9-100 Nm CAPACITY
1m STEEL RULE	TORX KEYS
ELECTRICAL TAPE	LOCTITE 222
HEAT GUN	CRIMPING TOOL
DIGITAL SPIRIT LEVEL	SCISSORS

HAVE AVAILABLE THESE SAFETY ITEMS WHEN FITTING PRODUCT:

Protective eyewear		Hearing protection	
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NOTE: When installing ground terminals, please ensure the ground point is clean and secure with good contact. Do not stack more than one additional ground terminal onto any ground point. If adding a ground terminal to an existing ground point, please ensure the fastener is correctly tightened after installation.

NOTE: 'WARNING' notes in the fitting procedure relate to OHS situations, where to avoid a potentially hazardous situation it is suggested that protective safety gear be worn or a safe work procedure be employed. If these notes and warnings are not heeded, injury may result.

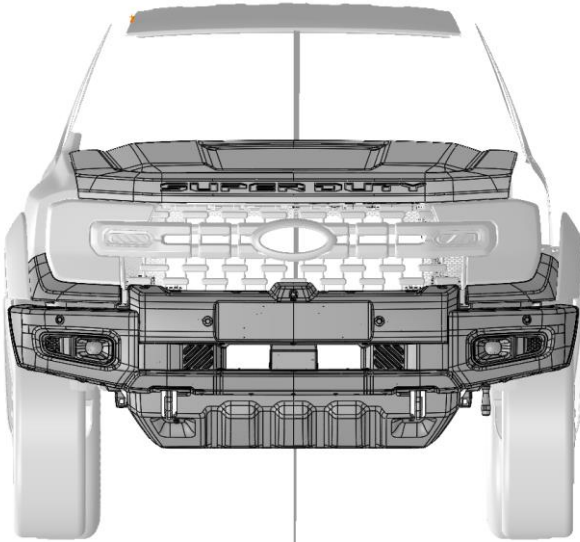
FASTENER TORQUE SETTINGS:

SIZE	PROPERTY CLASS	Torque Nm	Torque lbft
M6	8.8	9Nm	7lbft
M8	8.8	22Nm	16lbft
M10	8.8	44Nm	32lbft
M12	8.8	77Nm	57lbft
M12	10.9	92Nm	68lbft
M12	11.9	111Nm	82lbft
M14	10.9	125Nm	92lbft

PART NO.	DESCRIPTION	QTY
CHASSIS MOUNTS		
37500184R	CHASSIS BRACKET OUTER RHS	1
4655566R	WELD ASSY CHASSIS MOUNT RHS SUITS RANGER	1
4655567R	WELD ASSY INBOARD MOUNT RHS	1
37500184L	CHASSIS BRACKET OUTER LHS	1
4655567L	WELD ASSY INBOARD MOUNT LHS	1
4655566L	WELD ASSY CHASSIS MOUNT LHS SUITS RANGER	1
6152275	SCREW HXHD FL M14x2.0x50 PC10.9 ZAS1000 NYLON PATCH	4
6151680	BOLT HXHD M12x1.25x130 PC10.9 ZP	2
4722009	TUBE CRUSH 17x12.6x68.5	2
6151835	NUT HEX NYLOC M12x1.25 PC10.9	2
3197030	PLATE INBOARD CHAS SPACER	2
4584377	WASHER FLAT M12x30x5 ZNS480	6
6151528	NUT HEX NYLOC M12x1.75 PC10.9 ZP	2
6152092	BOLT HXHD M12x1.75x110 PC 10.9 ZAS1000	2
4584363	WASHER FLAT M12x26x4 HV300 TZP480	2
6152127	BOLT HXHD FL M12x1.75x30 PC8.8 ZNS480	2
6151965	BOLT HXHD FL M10x1.5x30 PC8.8 ZNB480	6
6151752	NUT FLANGE M10x1.5 PC8.8 BTZP480	4
6151321	NUT FLANGE M10x1.5 PC8.8 SERRATED	2
6151700	BOLT HXHD FL M12x1.25x35 PC8.8 TZP480	12
6151480	NUT FLANGE M12x1.25 PC8.8 TZP480 SERRATED	12
4654084	NUT PLATE M10X1.5	2
3194774	PLATE NUT ASSEMBLY TRITON	2
4655628R/L	NUT PLTE ABSORBER WELD ASSY RH	2
6152277	BOLT HXHD FL M12x1.75x40 PC8.8 ZNB480	10
6151974	SCREW HXHD FL M10x1.5x45 PC8.8 ZNB480	4
4655627	NUT PLTE ABSORBER WELD ASSY	2
3195931	PLATE ADJUSTMENT SHIM	6
6152008	BOLT HXHD FL M6x1.0x25 PC8.8 ZNB480	4
6151173	NUT FLANGE M6 ZNB480 SERRATED	4
5848548	CRUSH PAN PACKER SUIT RANGER	12
4654222	NUT PLATE ASSY M12x1.75 340mm	2
3197135	PLATE LOCATOR TAB	1
3195274	PLATE NUT WELD ASSY M12	2
HARNESS BRACKET		
37500214R	BRACKET HARNESS RHS SUITS FORD	1
37500214L	BRACKET HARNESS LHS SUITS FORD	1
6151213	BOLT M6 x 1.0 x 20 Gd8.8 BZ	4
4584329	WASHER FLAT M6x12.2x1.2 BTZP480	4
6151715	NUT CAGED M6 3.6-4.5 836-D	4
180302	CABLE TIE 4.8 X 180 MM BLACK	12
PAN DUCT		
6523663R	PAN DUCT RHS SUIT RANGER	1
6523663L	PAN DUCT LHS SUIT RANGER	1
6151213	BOLT M6 x 1.0 x 20 Gd8.8 BZ	4
4584329	WASHER FLAT M6x12.2x1.2 BTZP480	4
6151715	NUT CAGED M6 3.6-4.5 836-D	4
6191233	SEAL-BULB EPDM 300MM 9009452	4
CLOSE OUT PANEL		
6523667R	PANEL CLOSE OUT RH SUIT RANGER	1
6523667L	PANEL CLOSE OUT LH SUIT RANGER	1
6151384	SCREW ST PHD 5.2x16 PH PC8.8 BTZP480	4
CENTRE PANEL		
6523660	CENTRE DUCT SUIT RANGER	1
6523661	CENTRE SHROUD SUIT RANGER	1
6151459	SCREW BHD M6x16 BTZP480	12
4584329	WASHER FLAT M6x12.2x1.2 BTZP480	18
6151526	NUT CAGED M6 1.8-2.7 BZP480	12
6523659	CENTRE PANEL SMT SUIT RANGER	1
6151443	SCREW BHD M6x20 BZP	6
6151300	NUT CAGED M6 2.6-3.5 956-C	6
6151965	BOLT HXHD FL M10x1.5x30 PC8.8 ZNB480	2
4584400	WASHER FLAT M10x30x4 HV300 ZNB480	4
6152156	NUT HEX NYLOC M10x1.5 ZP	2
WING PANELS		
6523662R	WING PANEL RHS SUIT RANGER	1
6523662L	WING PANEL LHS SUIT RANGER	1
6151475	NUT U M6x1.0 TZP480 PR1.6-3.0 L13	12

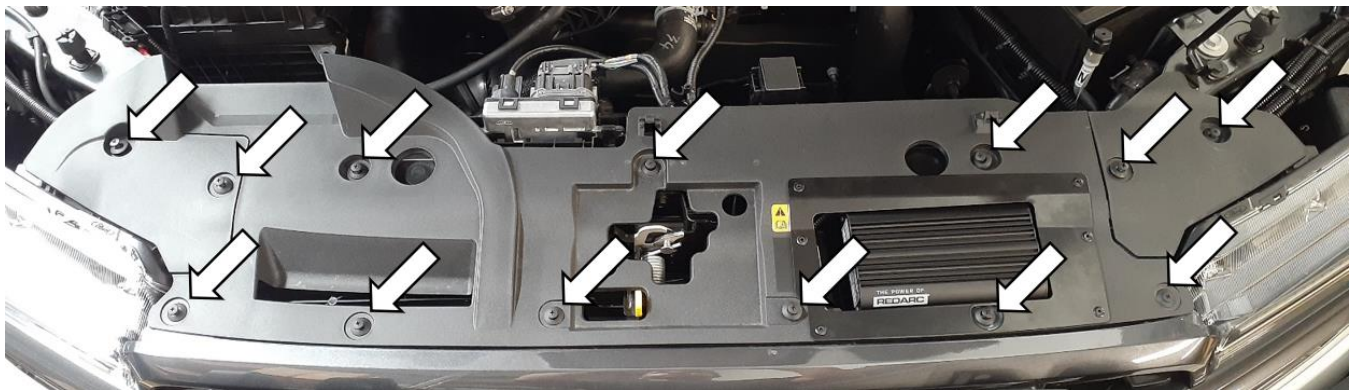
6151459	SCREW BHD M6x16 BTZP480	10
6151965	BOLT HXHD FL M10x1.5x30 PC8.8 ZNB480	4
4584400	WASHER FLAT M10x30x4 HV300 ZNB480	8
6152156	NUT HEX NYLOC M10x1.5 ZP	4
4584329	WASHER FLAT M6x12.2x1.2 BTZP480	10
SW715694	TRIM PIN 6.5-6.8 SCRIVET PLA 2.5-7	2
PLASTICS		
3540290	SENSOR SURROUND KIT (4)	1
6821426	HARNESS BULLBAR FORD ENG	1
6821427	HARNESS BULLBAR FORD BCM	1
3163294	COVER STRAP KIT SUMMIT	1
3163295	OUTER GRILLE KIT SUMMIT	1
3163316	RADAR COVER LARGE SUMMIT	1
3500991	ARB LAMP CLUSTER KIT SUMMIT	1
6781451	TAPE PROTECTION	2
CAMERA RELOCATION		
37500319	BRKT CAM RELOCATE COMMERCIAL	1
37500321	CAM BRACKET RELOCATE COMM	1
6151496	BOLT HXHD M6x10 ZINC SILVER	2
6151459	SCREW BHD M6x16 BTZP480	2
4584329	WASHER FLAT M6x12.2x1.2 BTZP480	2
6151173	NUT FLANGE M6 ZNB480 SERRATED	2
6151526	NUT CAGED M6 1.8-2.7 BZP480	2
LIGHT BRACKET		
37500238R	FOG CLUSTER MNTING BRKT RHS	1
37500238L	FOG CLUSTER MNTING BRKT LHS	1
6152094	SCREW PHD M6x1.0x30 PC8.8 TX ZNB 480	2
6151300	NUT CAGED M6 2.6-3.5 956-C	2
6152008	BOLT HXHD FL M6x1.0x25 PC8.8 ZNB480	4
6151173	NUT FLANGE M6 ZNB480 SERRATED	4
GRILLE BRACKET		
37500213R	GRILLE RETAINER BRACKET RHS	1
37500213L	GRILLE RETAINER BRACKET LHS	1
3197134	PLATE GRILLE ADAPTER	1
6151173	NUT FLANGE M6 ZNB480 SERRATED	4
6151533	SCREW HWHD 4.8x1.59x9.5 PH PC8.8 ZTB480T	2
LICENCE PLATE		
37500320	BRKT RG PLTE COMM HINGE	1
37500898	BRKT FLIP UP NUMBER PLTE	1
4581304	WASHER FLAT M6 SS	4
4584327	WASHER F M6X16X1.2	6
6151213	BOLT HXHD M6X1.0X20	2
6151223	NUT M6X1 NYLOC ZNB480	2
6151975	SCREW BTN HD M6X12 SS	4
5848302	PACKER RB NYLON	2
6151443	SCREW BHD M6x20 BZP	2
4584329	WASHER FLAT M6x12.2x1.2 BTZP480	2
WINCH COVER PANEL		
6523685	PANEL WINCH CVR SUITS FORD	1
6151213	BOLT HXHD M6x1.0x20 PC8.8 ZNB480	4
4584329	WASHER FLAT M6x12.2x1.2 BTZP480	4
6151223	NUT HEX NYLOC M6x1.0 ZNB480	4
RADAR MOUNTING		
3753232	RADAR MOUNTING BRACKET SUITS RANGER	1
6151655	NUT FLANGE M8x1.25 PC8 TZP480 ENS 14/002	2
6151730	BOLT HXHD FL M8x1.25x20 FT PC8.8 BZP480 ENS14-001	2
6151213	BOLT M6 x 1.0 x 20 Gd8.8 BZ	1
4584329	WASHER FLAT M6x12.2x1.2 BTZP480	1
6151223	NUT NYLOC M6 x 1.0 BZ	1
ELECTRICAL BRACKET		
3197309	BUSBAR WINCH POSITIVE	1
3195561	BUSBAR WINCH EARTH	1
6151730	BOLT HXHD FL M8x1.25x20 FT PC8.8 BZP480	3
6151655	NUT FLANGE M8x1.25 PC8 TZP480	4
6152061	SCREW PHD M6X10	1
37500380	RELAY FUSE MNT BRKT STRUT	1
4584329	WASHER FLAT M6x12.2x1.2 BTZP480	1
6151402	BOLT HXHD M6x1.0x16 PC8.8 BZP	1
6151475	NUT U M6x1.0 TZP480	1

FITTING PROCEDURE



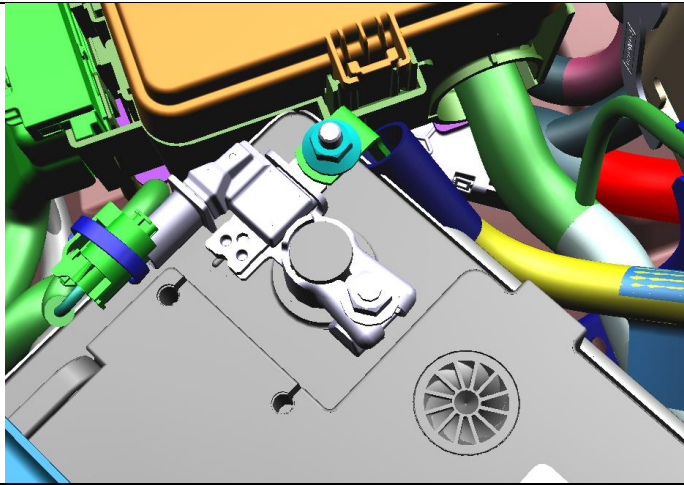
1. Remove number plate from the bumper if fitted.

2. Open the bonnet and remove the scrivenets shown. Unclip the shroud and set aside.



3. Remove the top two bolts which secure the grille and set aside.





4. Disconnect the negative battery terminal.

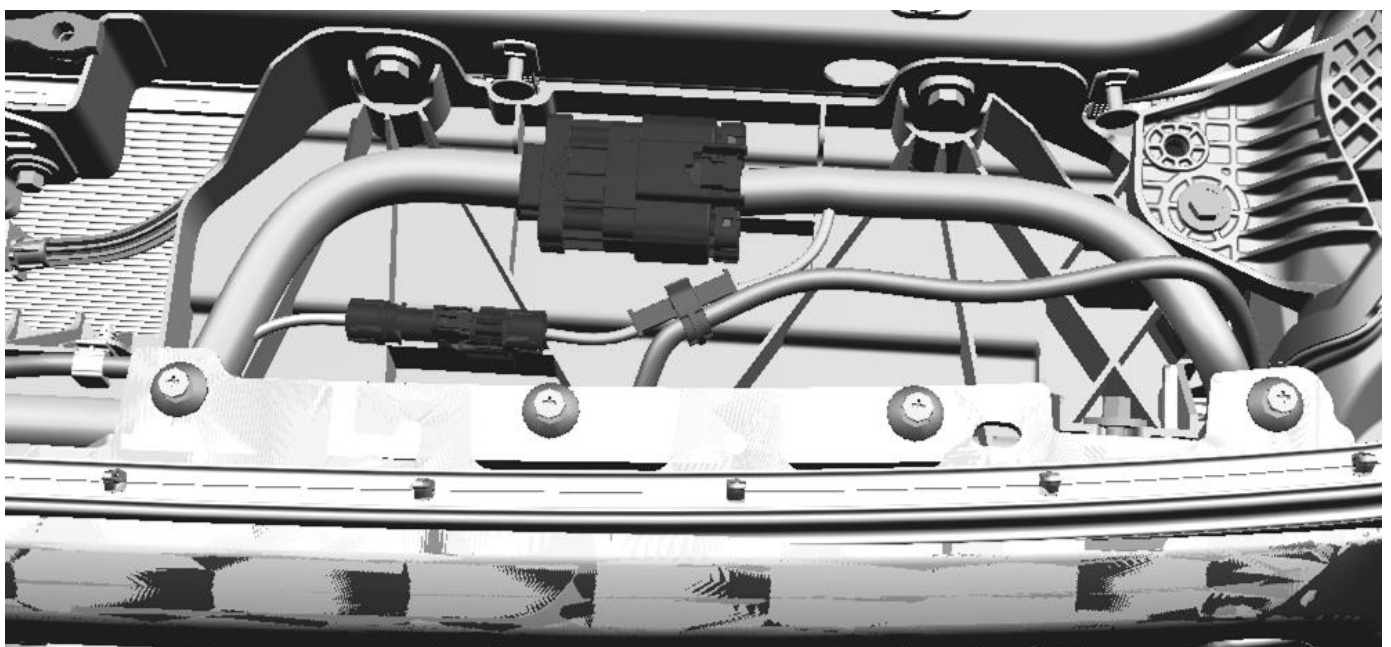


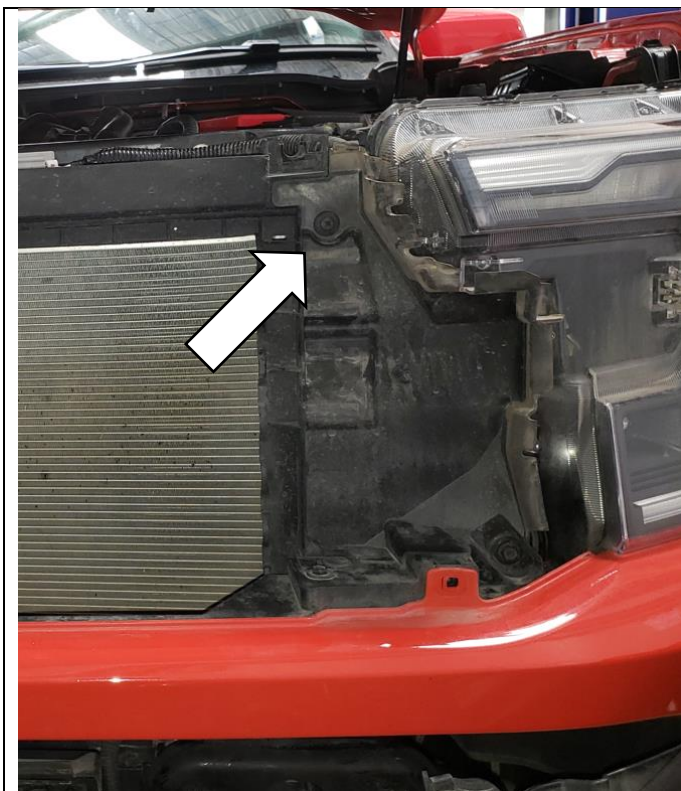
WARNING: Vehicle ignition must remain OFF until all sensors are relocated and reconnected in their final position.



5. Above the grille, complete the following:
 - a) Disconnect the 20 way connector on front sensor harness by pressing the release and pulling.
 - b) Disconnect coax camera cable.
 - c) Disconnect camera washer line.

CAUTION: Water may leak from the camera washer line. Seal with electrical tape



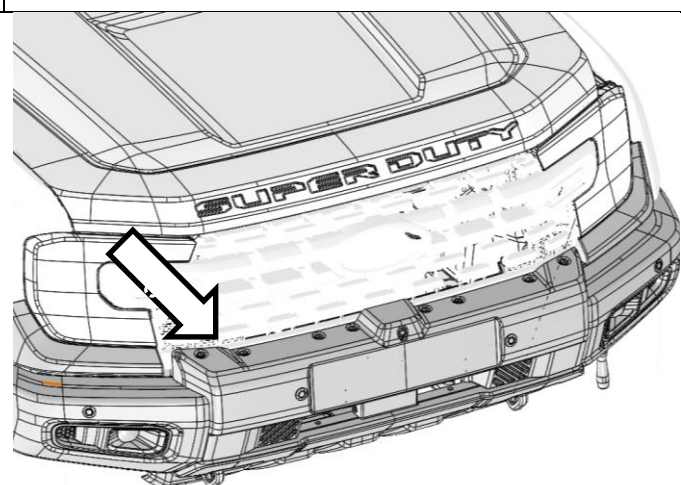


6. Remove the upper scrivet shown.

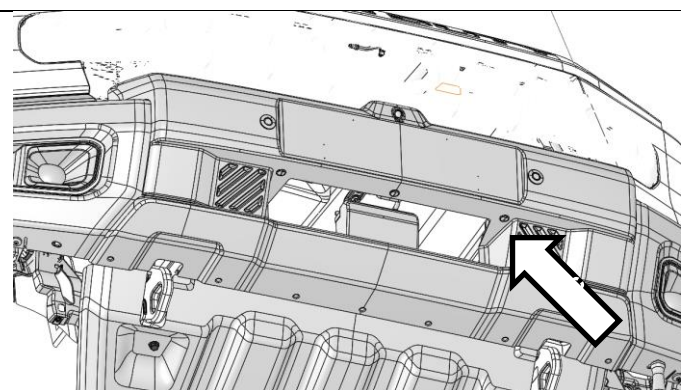
Feed the harness 20-pin connector between the shroud and the headlight cluster downwards under the lower bumper until it is free of the vehicle.

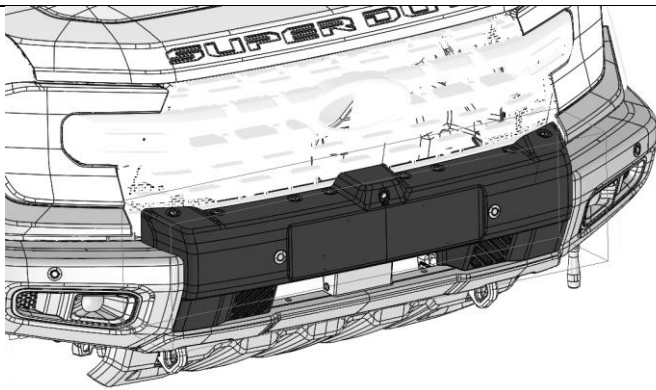


7. Remove the scrivets at the top of the OEM bumper.



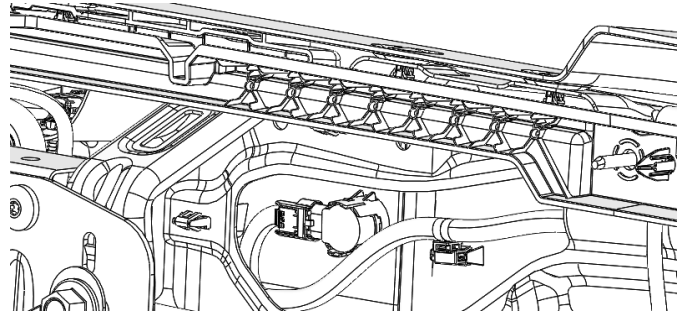
8. Remove the fasteners underneath the top section of the bumper.





9. Remove the centre section cover of the OEM bull bar.

The inner parking sensor and harness may need to be unclipped as the cover is removed to allow the cover to be pulled away.



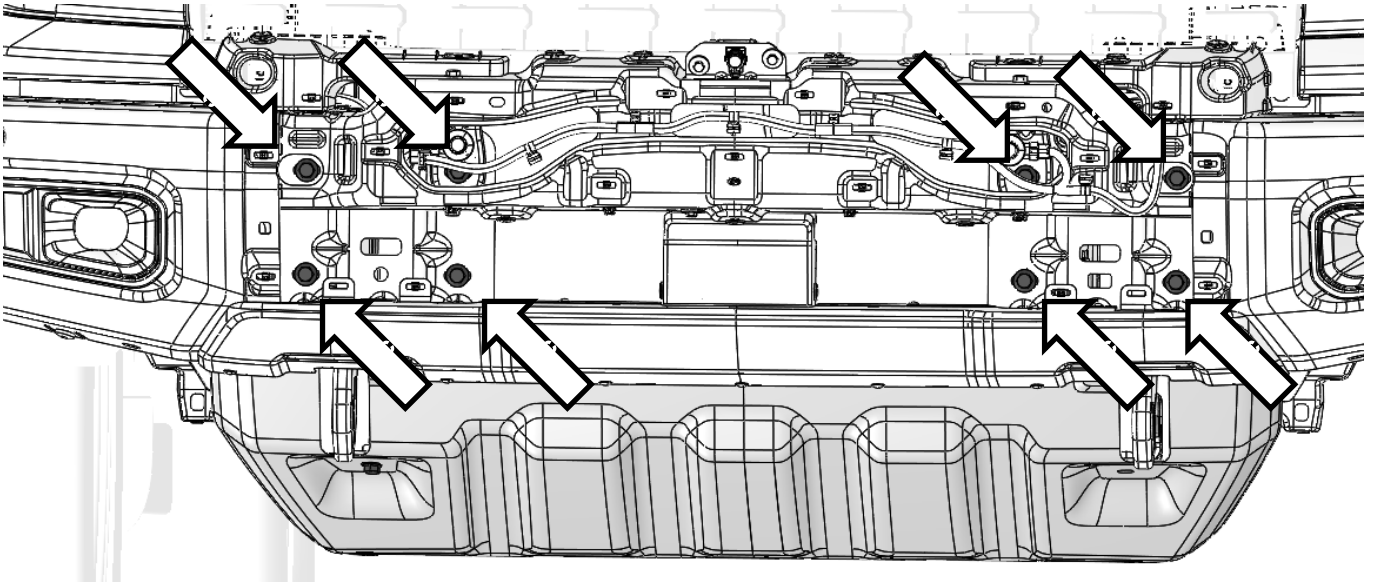
10. Remove three screws fixing the grille. Keep these screws for reuse later.



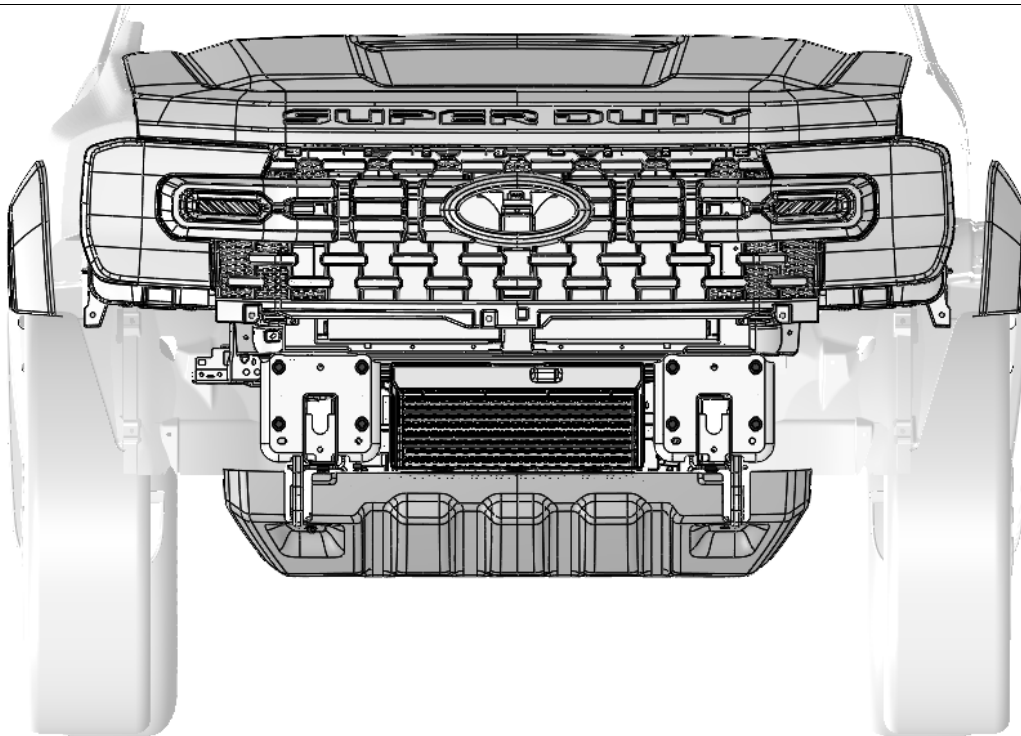
11. Gently unclip and remove grille starting from the light fixtures and top of grille.

Place the grille face down on a soft surface to avoid damage.

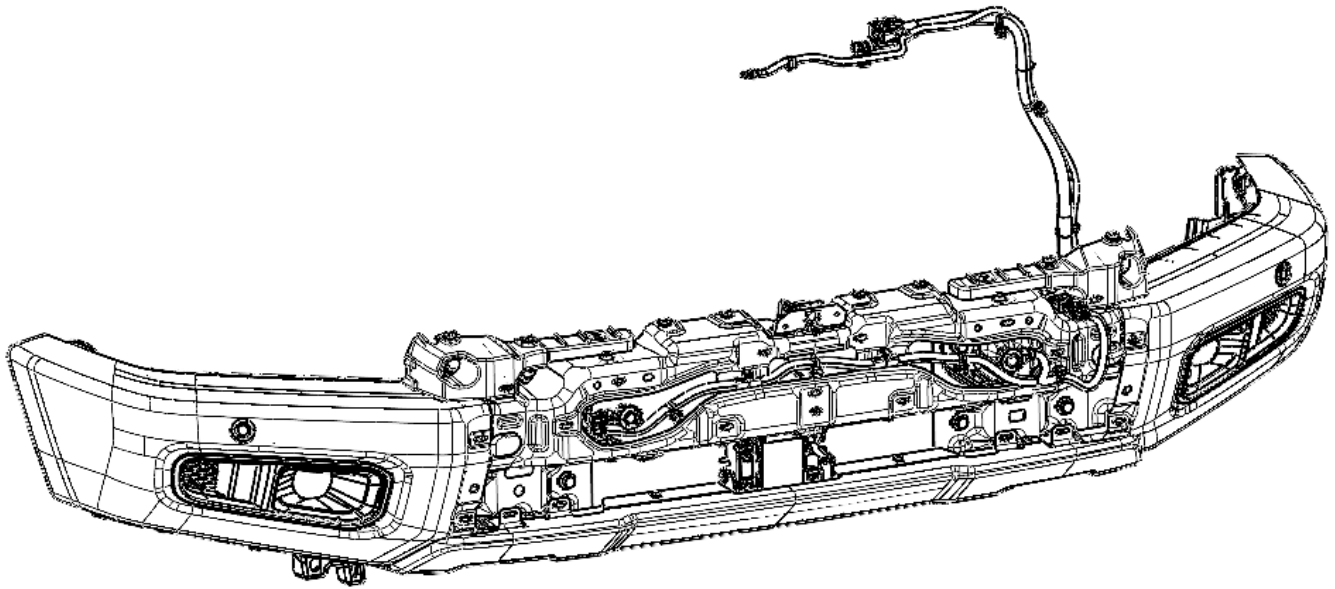
12. Remove the eight fasteners fixing the OEM bumper to the front of the chassis rail plates.



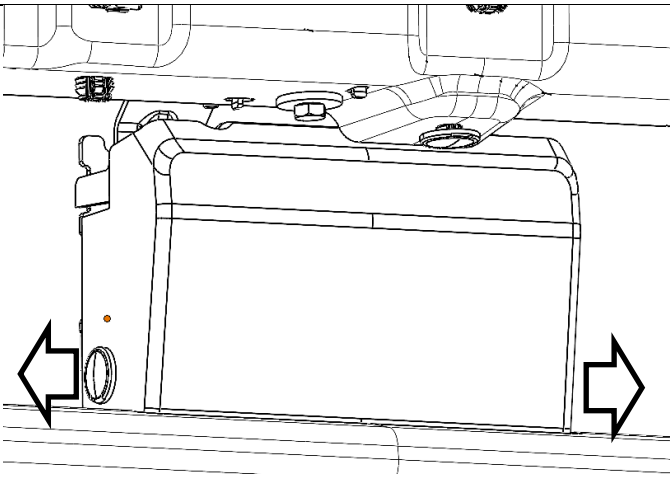
13. Remove OEM bumper from vehicle. Use a lifting table to assist if required. Ensure the 20-pin connector, bumper harness, camera cable and washer line that were separated from the vehicle previously come free of the vehicle at the same time.



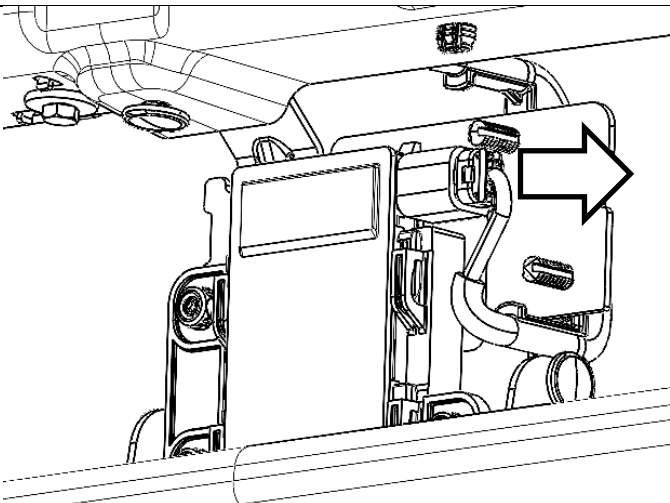
14. Place the OEM bumper / bull bar on a trolley or table to allow access to the electrical components for disassembly.

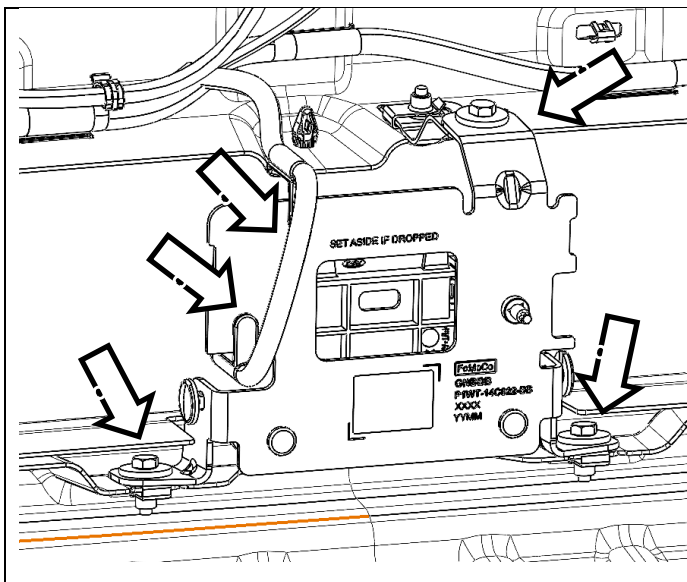


15. Remove the plastic radar housing from the OEM bumper / bull bar.



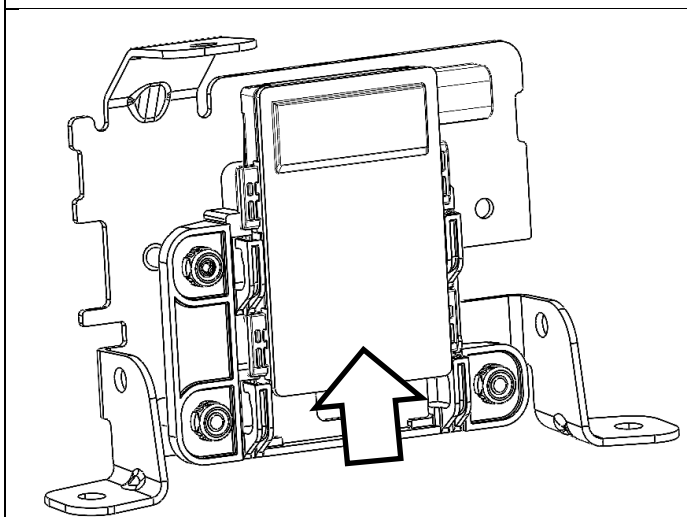
16. Disconnect the radar plug from the radar module.



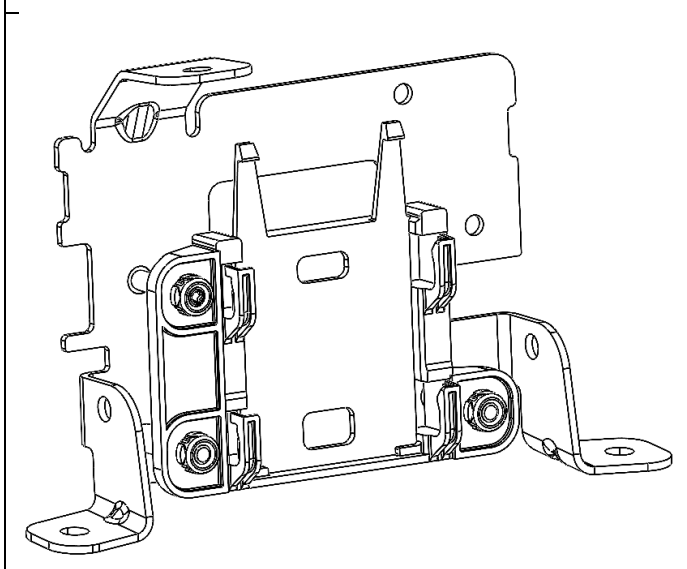
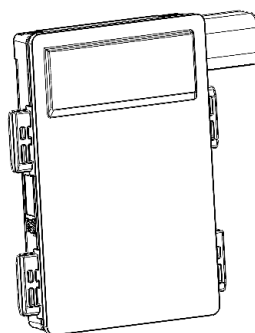


17. Unclip the radar harness from the radar bracket at the two points shown.

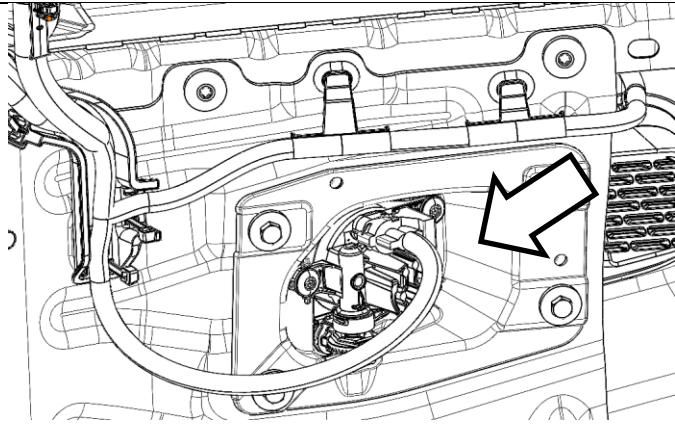
Separate the radar module/bracket assembly from the OEM bumper / bull bar by removing the three fasteners shown.



18. With the radar module/bracket assembly removed from the OEM bumper, carefully release the module and set aside safely.



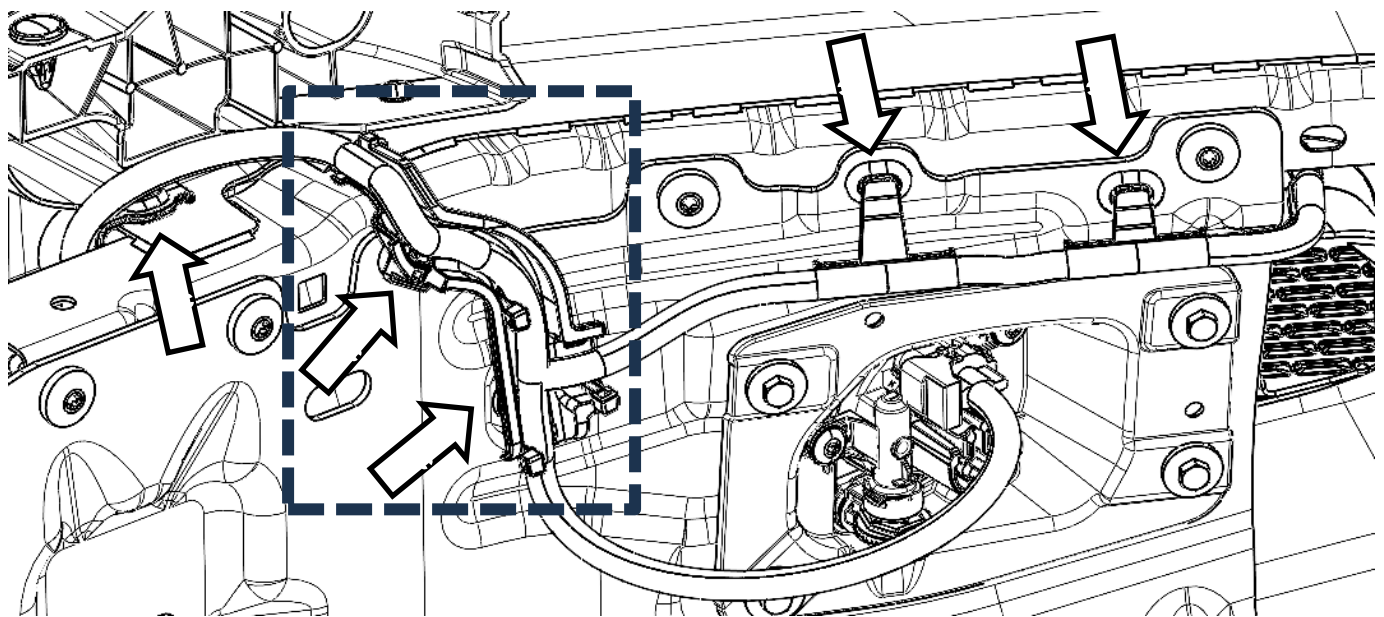
19. Set aside the radar bracket and plastic tray for assembly into bull bar at a later stage.



20. Unplug the RHS and LHS fog light connectors from the OEM fog lights, these plugs will not be used for bull bar fitment.
21. Cut off connectors from harness and insulate wires with heat shrink.

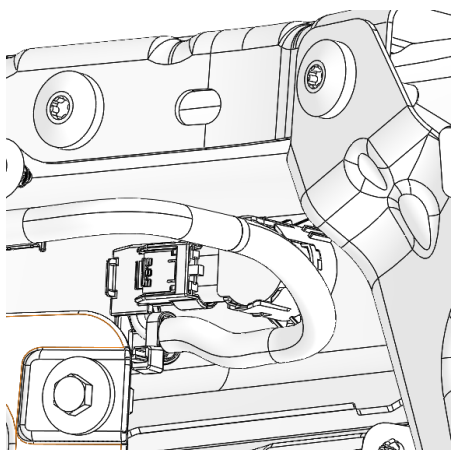
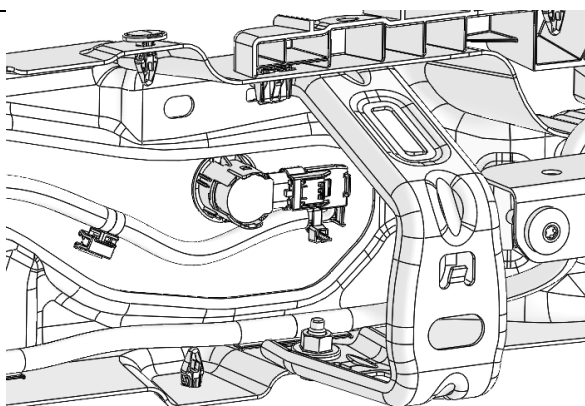
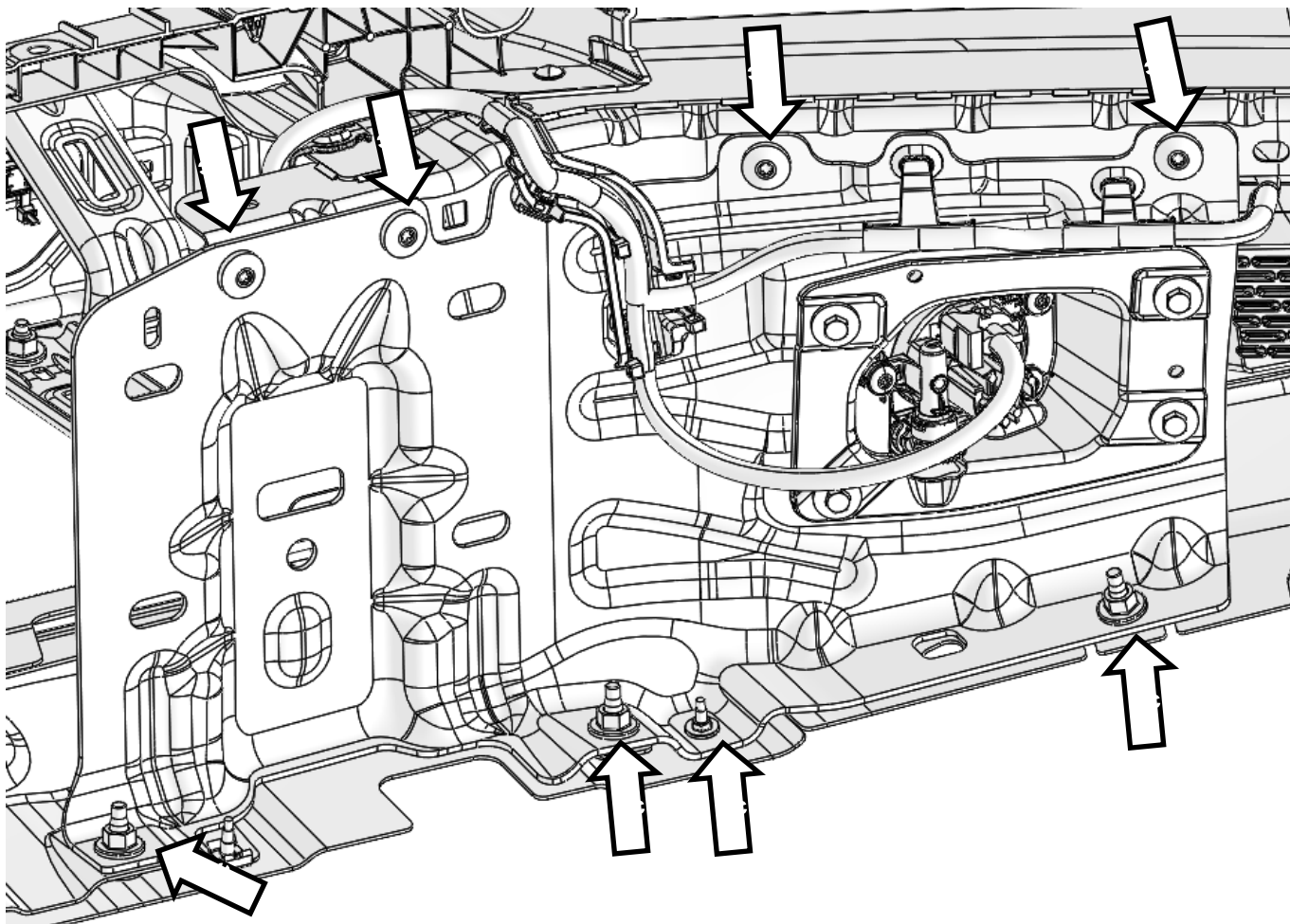
22. Remove the electrical harness from the OEM bumper bull bar at the points shown. Unclip the plastic tray highlighted below and leave the harness attached to the tray.

RHS shown, repeat LHS.



23. Remove the panel shown to gain access to the outer parking sensor.

RHS shown, repeat LHS.



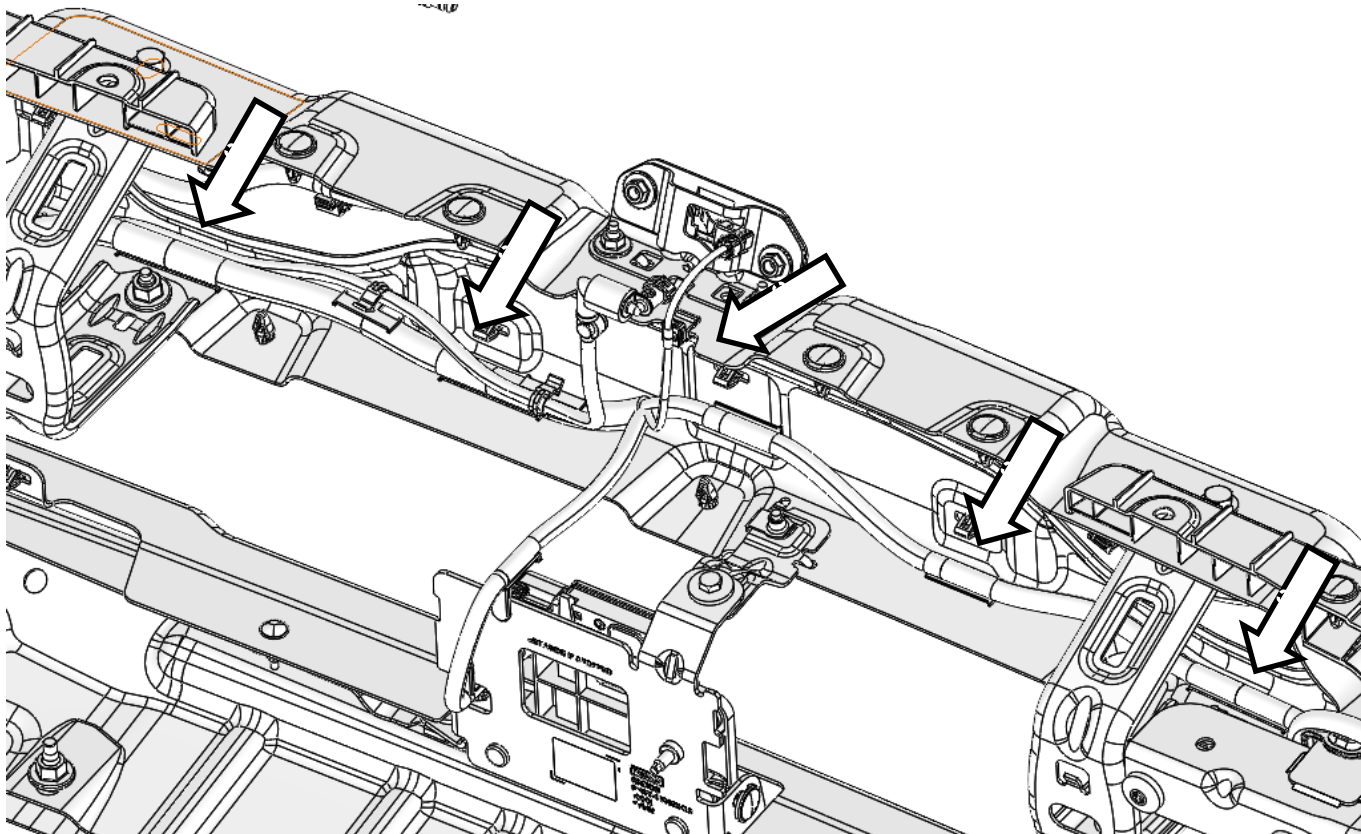
24. Remove front parking sensors from bumper/bull bar.

Use masking a tape and permanent marker to label the sensor position for correct re-assembly into the bull bar.

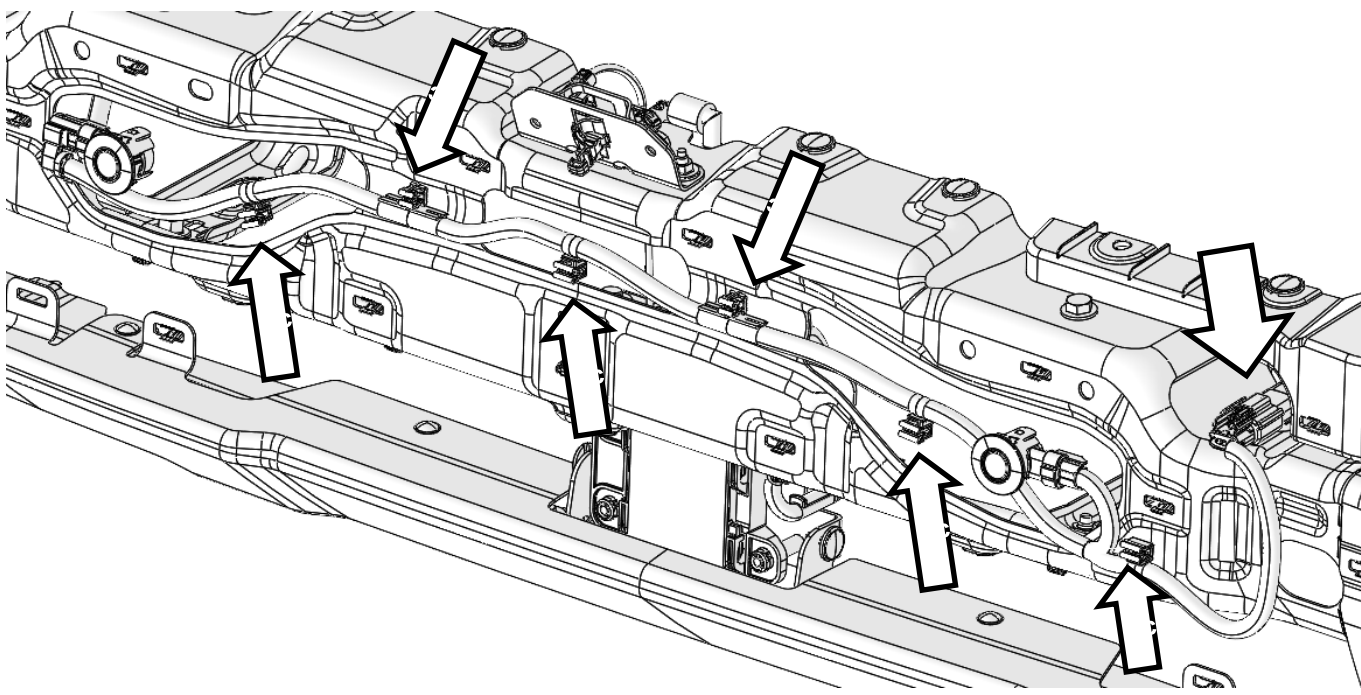
RHS shown, repeat LHS.

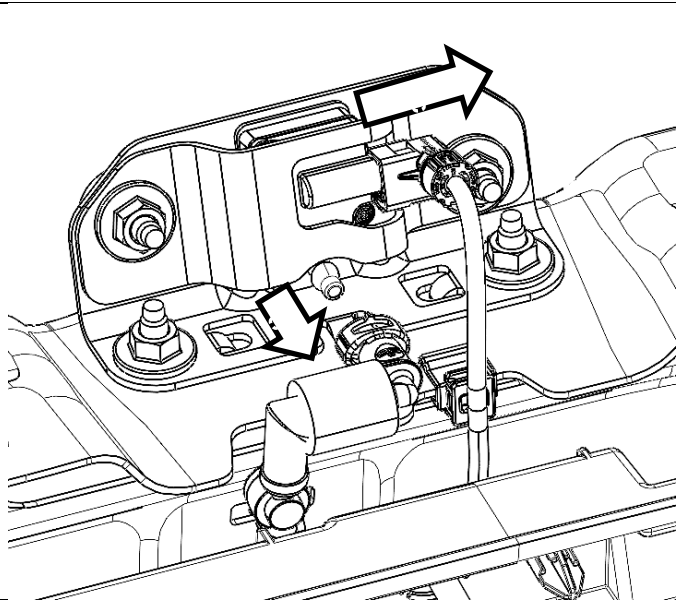
LO	Left Outer	RO	Right Outer
LI	Left Inner	RI	Right Inner

25. Continue removing the harness from the rear of the bumper at the points shown.



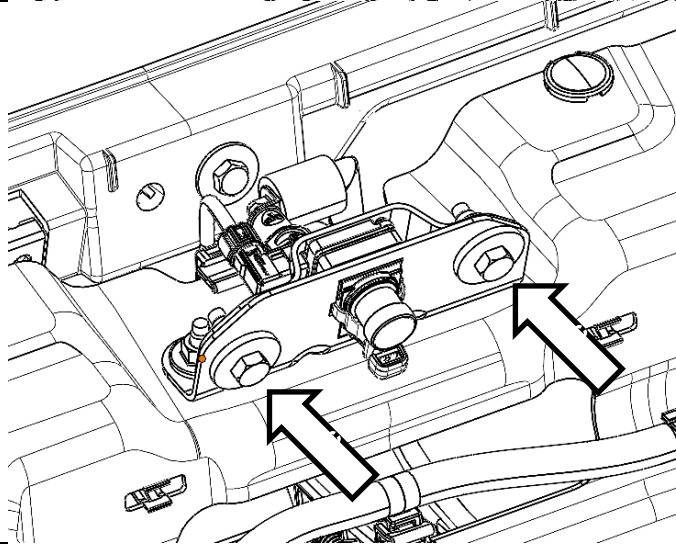
26. Disconnect the harness connector at the position shown at the front of the bumper /bull bar. Continue removing the harness from the bumper at the positions shown.



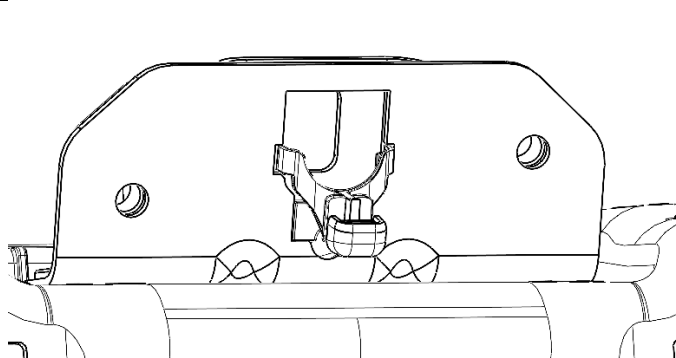


27. Disconnect the camera cable and washer line from the rear of the camera.

Have a cloth ready to avoid water spillage from the washer line, and seal the line with electrical tape to prevent spillage during fitment.

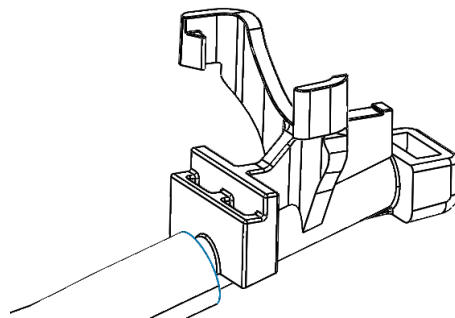


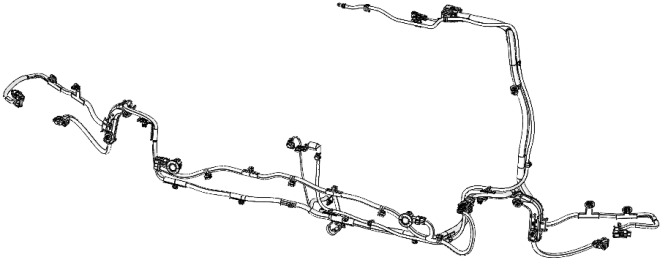
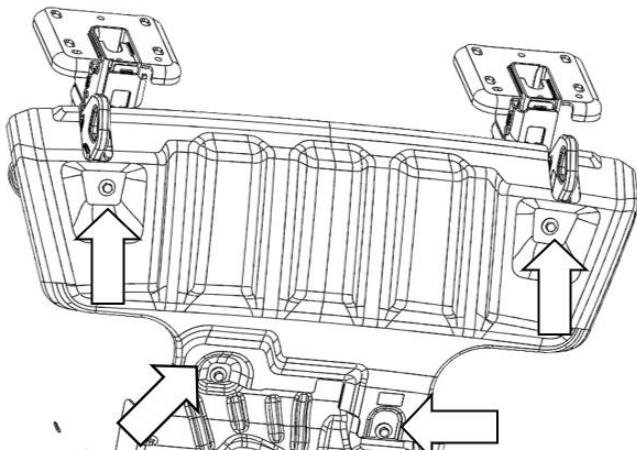
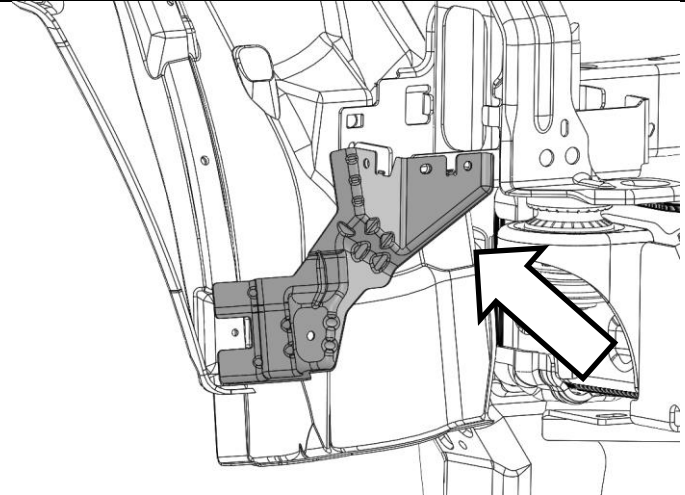
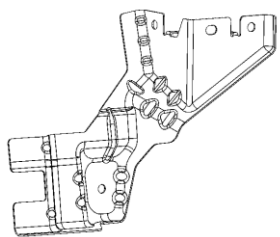
28. Remove the camera from OEM bumper / bull bar. Set aside safely.

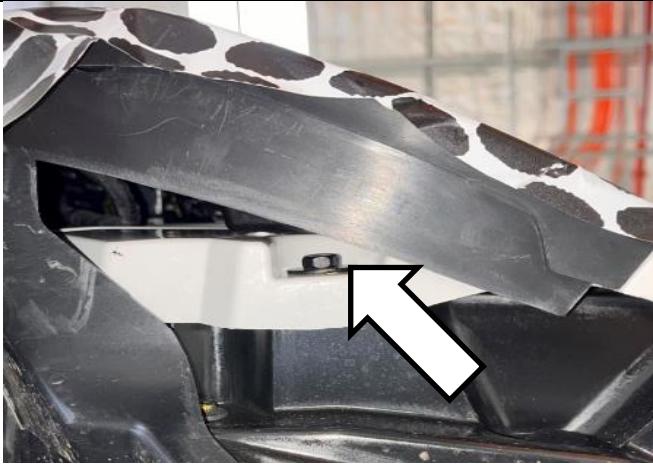


29. Unclip the washer nozzle from the OEM bumper / bull bar. Set aside safely.

Keep the washer line and connectors to be refit at later stage.



	30. Completely separate and remove harness from bumper / bull bar. Unclip and disconnect any other clips and/or fastening points that have not already been disconnected. Set aside safely for installation into bull bar at later stage.
	31. Remove the OEM stone shield by loosening the two rear bolts and removing the two front bolts. Set bolts aside for re-fitment at later stage. Set the stone shield aside safely.
	32. Remove wheel arch liner support brackets from both sides and discard. On the RHS the horn will also be removed – set aside for refitment at next step. Retain the fasteners removed for the LHS fender support bracket for winch fitment.  DISCARD
	33. Using a silver OEM fastener removed previously, re-fasten the horns directly onto the vehicle body in the orientation shown.  M6 - 9 Nm.



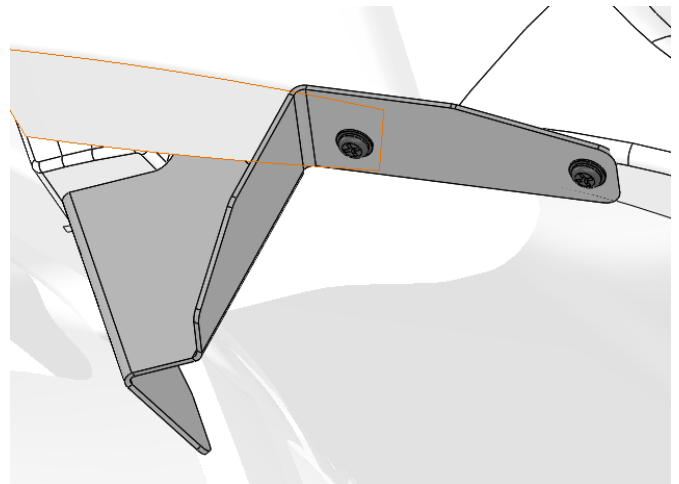
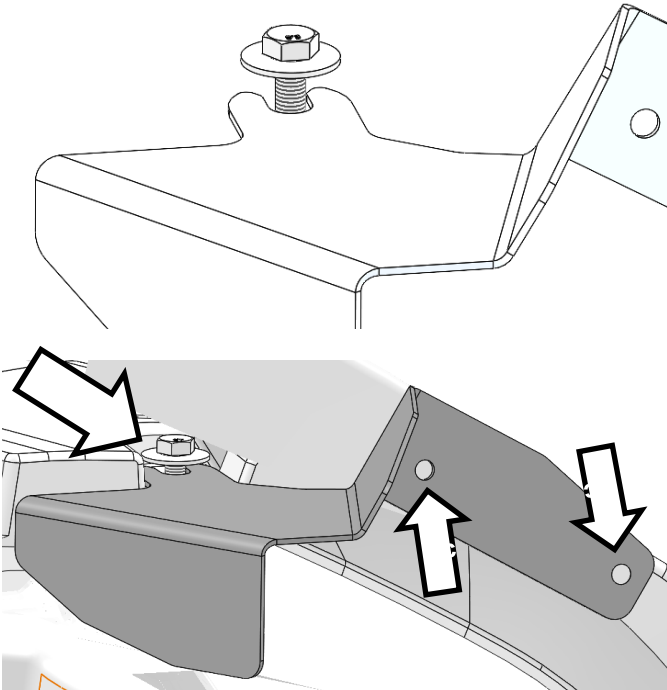
34. Identify the fastener shown behind the flare. Loosen the fastener but do not remove.

Slide the close out panel 6523667R shown so that the opened slot sits behind the loosened fastener. Tighten fastener.

With the panel in position, mark and drill a pilot hole at the 2 points shown into the bumper.

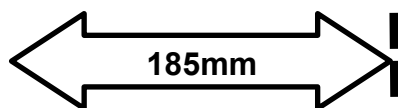
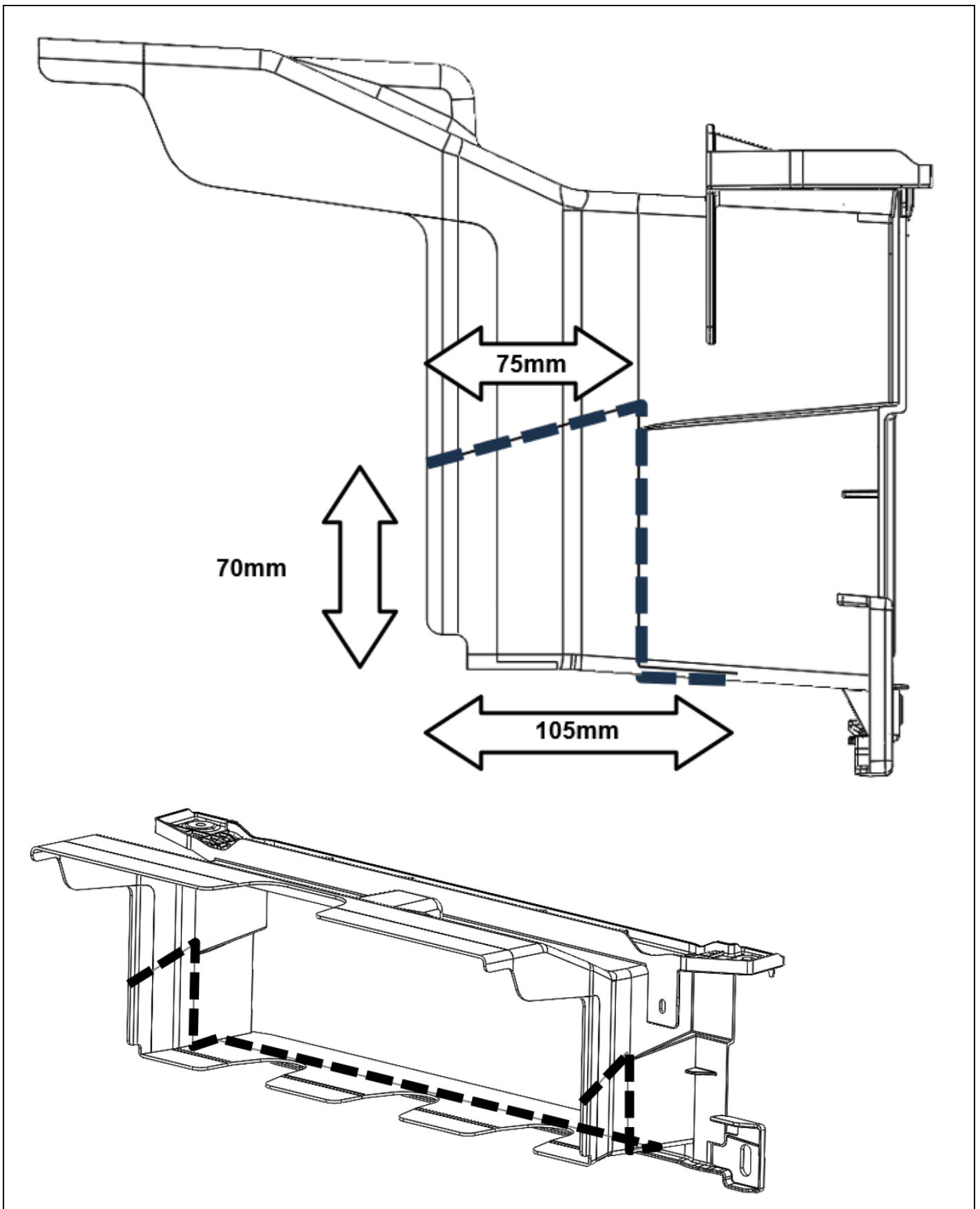
Secure the panel using two self-tapping screws.

RHS shown, repeat LHS.



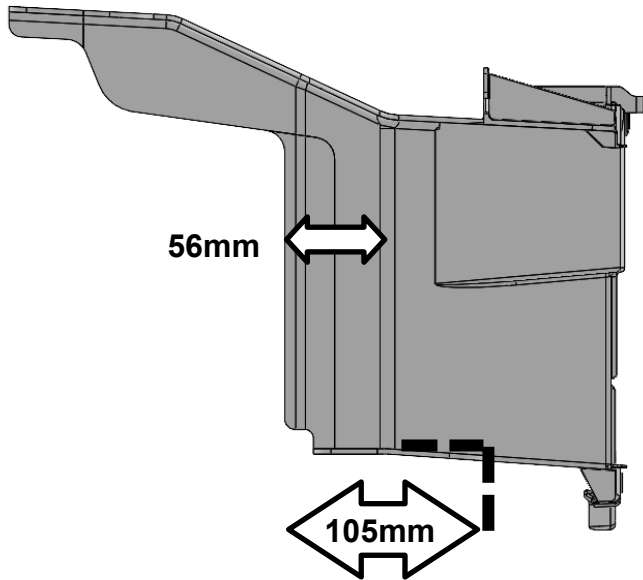
35. **IF NOT FITTING WINCH:** Mark the profile shown on the CAC shroud and cut using an oscillating multi tool, removing the lower section.





36. IF FITTING WINCH:

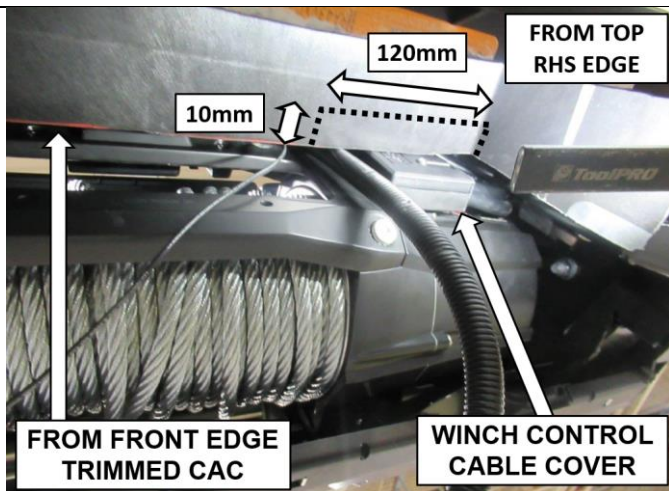
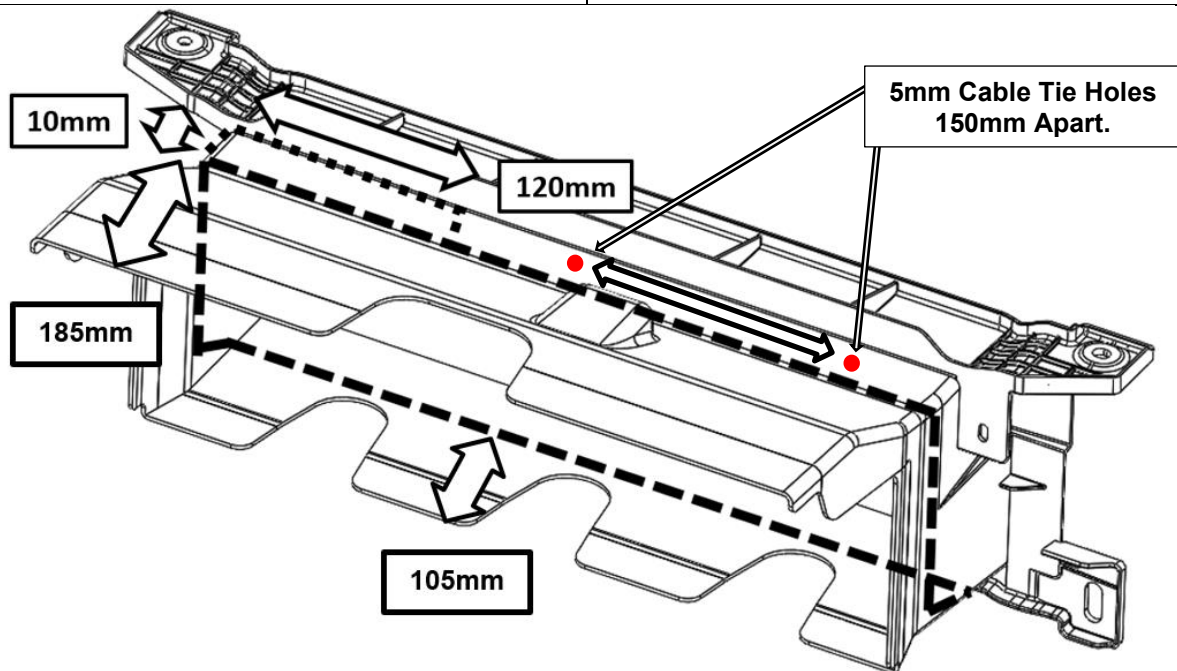
Use masking tape to mark a cut line through the front of the CAC shroud and mark and drill 5mm cable tie holes 20mm front the front edge as shown. These holes will be used to secure the winch negative cable later.



Cut through the front of the shroud using an oscillating multi-tool.

NOTE: IF FITTING ZEON

Additional trimming required on the top surface of CAC deflector in the area shown for cable cover clearance.

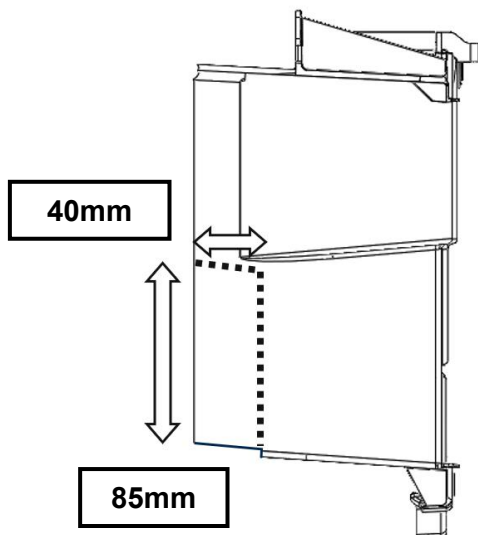


37. IF FITTING WARN ZEON

Use masking tape to mark a cut line through the front of the CAC shroud as shown.

Cut through the front of the shroud using an oscillating multi-tool.





38. IF FITTING WINCH:

Additional trimming required on both sides of CAC where shown. Mark cut lines with masking tape and marker. Trim with oscillating multi-tool.



There are two harnesses supplied with this product;

Engine Bay Harness 6821426 (IMAGE 1) & Cabin Harness 6821427 (IMAGE 2). Please study the layout of these harnesses and the connectors as these will be referenced throughout the harness install procedure.

IMAGE 1

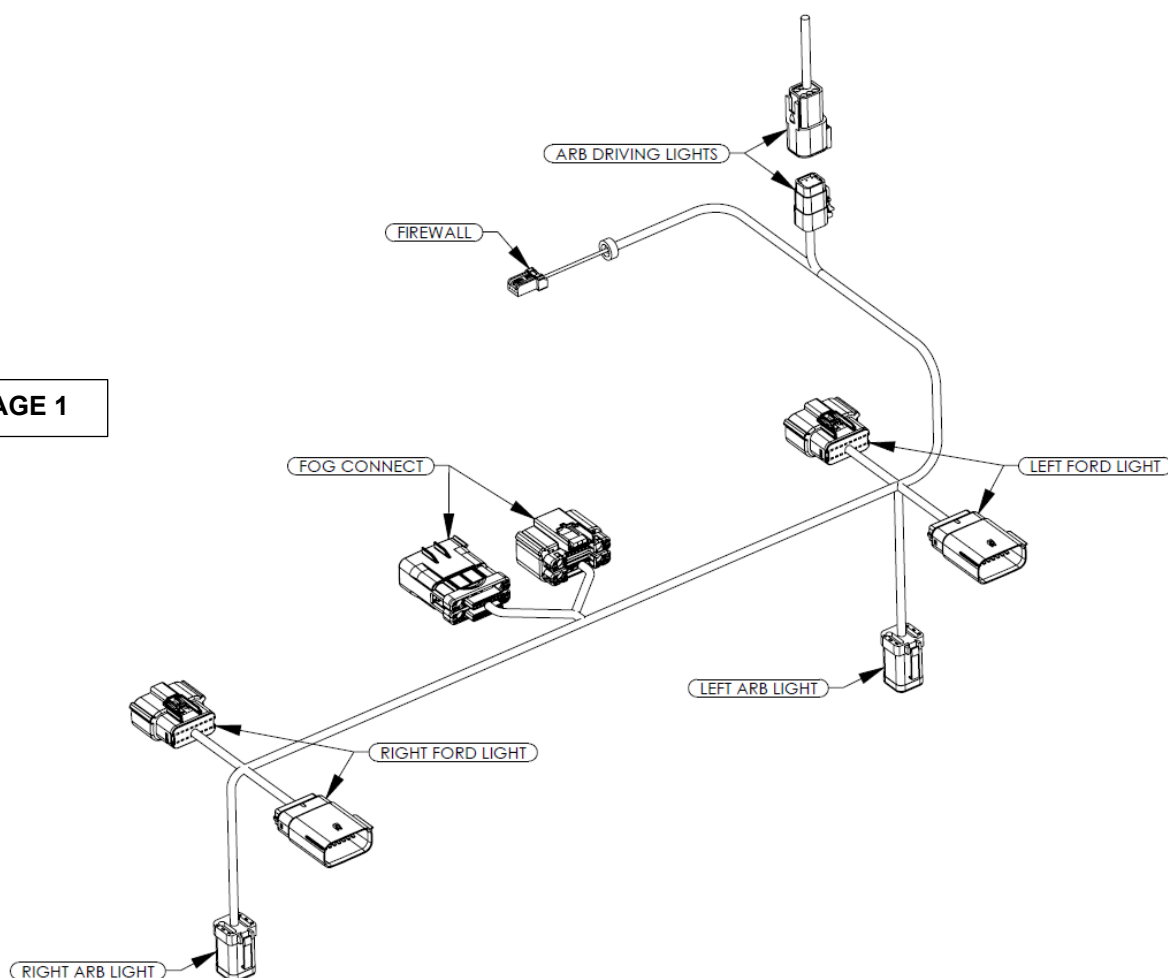
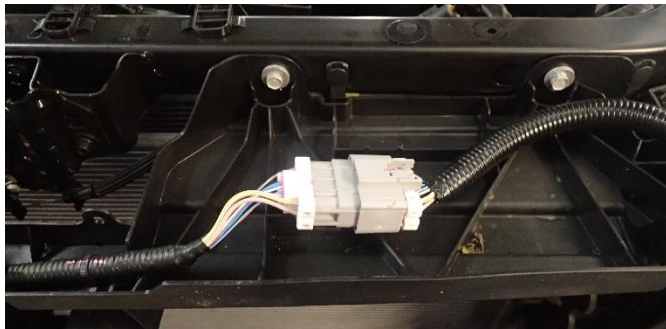
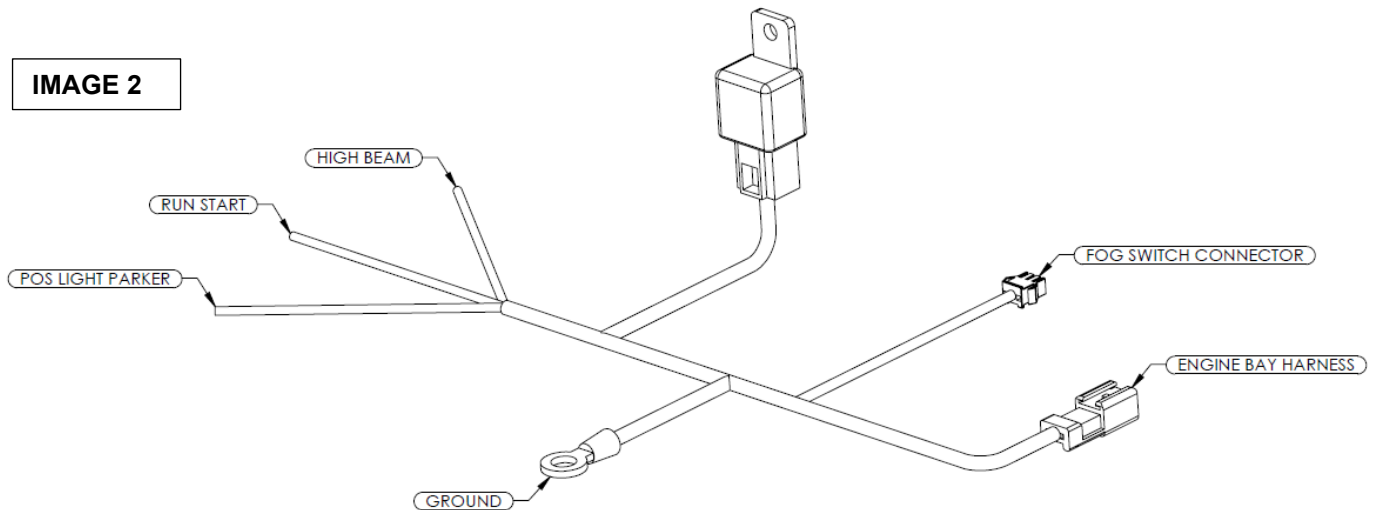


IMAGE 2



39. On the Engine Bay Harness, locate the connectors labelled “FOG CONNECTOR”.

Connect the male “FOG CONNECTOR” into the mating vehicle 20-way connector.

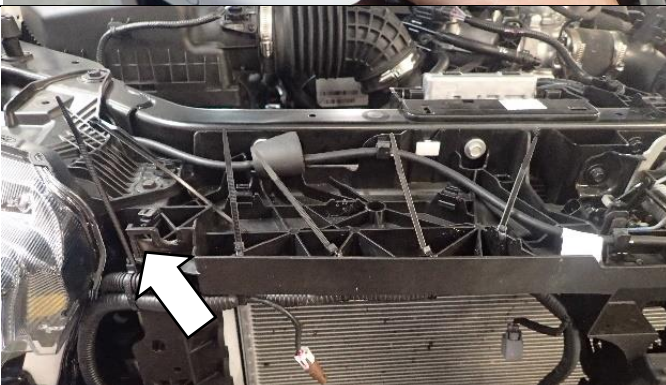
Leave the female “FOG CONNECTOR” disconnected until bull bar is fitted to vehicle.



40. The provided harness is routed above the radiator cover panel.



41. Locate the connectors labelled “RIGHT FORD LIGHT” and “RIGHT ARB LIGHT” ON THE Engine Bay Harness.



42. Route connectors and harness through the gap behind the right hand headlight and pull out above the headlight.



43. Disconnect the right hand vehicle headlight connector.

Pull out vehicle headlight connector to above the headlight



44. Connect the female connector labelled "RIGHT FORD LIGHT" with the vehicle headlight harness connector.



45. Connect the male connector labelled "RIGHT FORD LIGHT" into the vehicle headlight connector.

Route connector "RIGHT ARB LIGHT" down below vehicle headlight.

Secure loose cables behind headlight with cable ties. Ensure cables are not contacting any sharp or metal edges.



46. Pull connectors labelled "LEFT FORD LIGHT" to above the left hand headlight.

	47. Under the left hand front wheel arch, find the access window. Using a screw driver, remove the three retaining scrivenets. Remove the access window panel to gain access to the left hand vehicle headlight connector.
	48. Reaching from above the headlight, press the vehicle connector release. While pressing, insert hand into access window and pull connector out from headlight. Pull connector with vehicle harness to above the headlight.
	49. Connect the female connector labelled "LEFT FORD LIGHT" with the vehicle headlight harness connector.
	50. Connect the male connector labelled "LEFT FORD LIGHT" into the vehicle headlight connector. Again, use the wheel arch access window to assist. Route connector "LEFT ARB LIGHT" down below vehicle headlight. Secure loose cables behind headlight with cable ties. Ensure cables are not contacting any sharp or metal edges.



51. Replace wheel arch window panel.

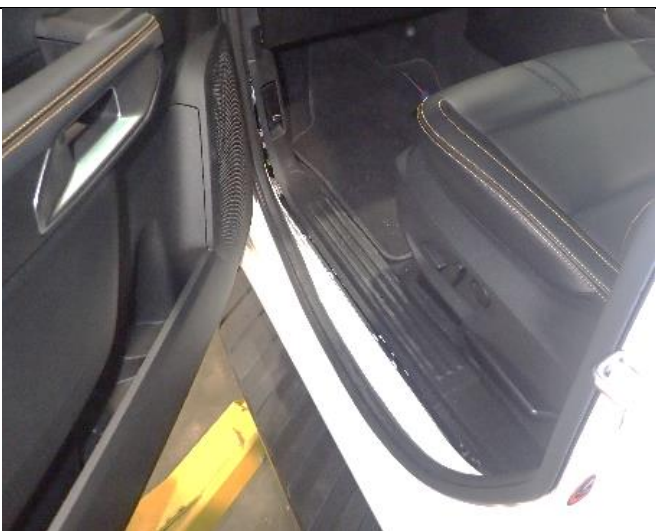


52. Route remaining harness above headlight into the quarter panel cavity. Follow the left hand bonnet release cable and secure with cable ties.



53. Inside the left hand side foot well, find and remove the christmas tree plug as shown.

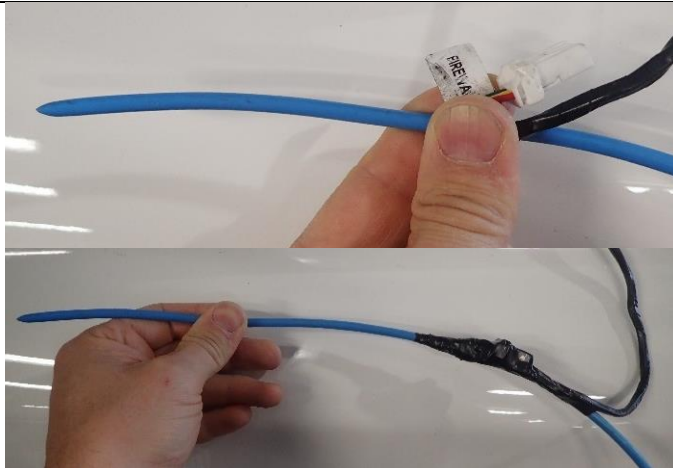
A flat head screw driver may assist to lever the plug out.



54. Lift the rubber seal surrounding the left hand side sill panel.



55. Remove door sill panel as shown. This can be removed by lifting the sill panel and then rotating up.



56. On the Engine Bay Harness, find connector labelled "FIREWALL".

Find a short length of plastic pipe or similar.

On the end of the pipe, cut a sharp point.

Join the "FIREWALL" connector to the pipe with electrical tape. Ensure the tape removes all sharp edges to ensure the taped connector can pass through the firewall grommet with ease.



57. On the engine bay side of the firewall, locate the firewall grommet behind the left hand side fuse box.



58. With a sharp blade, cut and remove the nipple from the firewall grommet.

Spray the pipe and taped connector with lubricant.

Feed pipe through firewall grommet nipple.



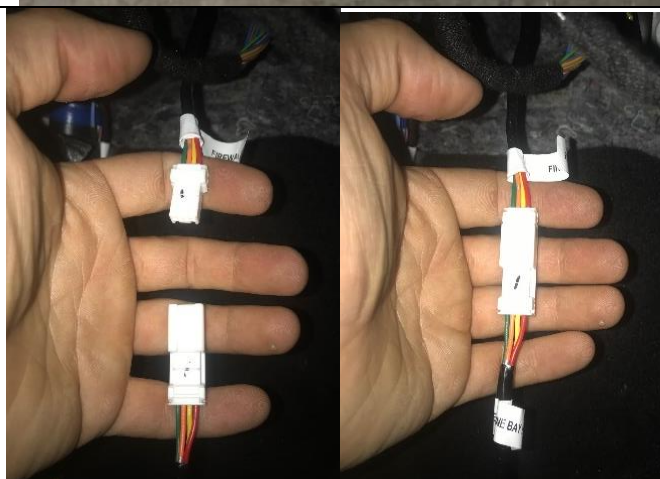
59. From inside the vehicle, pull the pipe and “FIREWALL” connector through the firewall grommet.

Remove tape and pipe leaving the “FIREWALL” connector inside the vehicle.

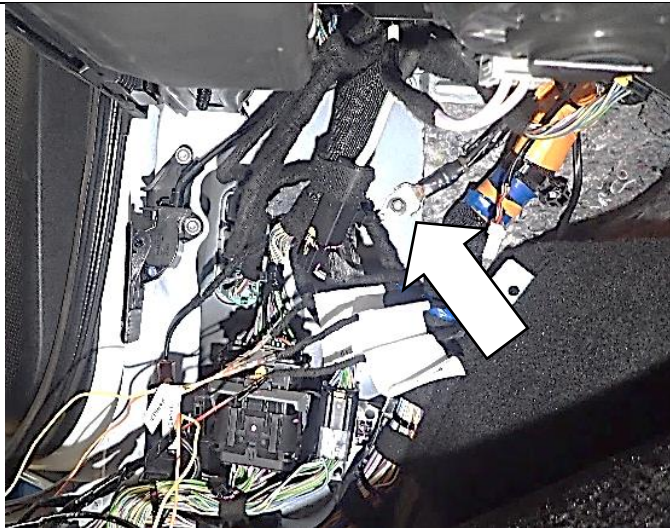
Secure the harness in the engine bay with cable ties.



60. On the Cabin Harness identify the connector labelled “ENGINE BAY HARNESS”.

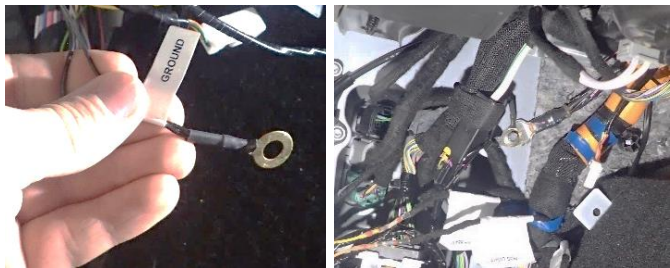


61. On the cabin harness, join connector labelled “ENGINE BAY HARNESS” with Engine Bay Harness connector labelled “FIREWALL”.



62. In the left hand side footwell, find existing ground point.

Remove ground bolt with 8mm socket.

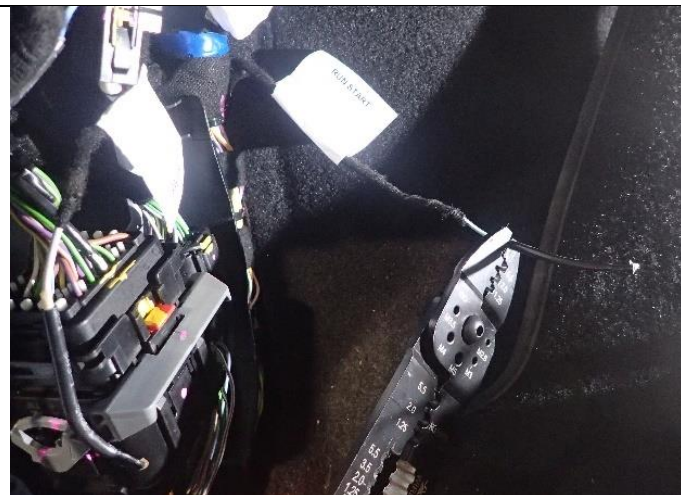


63. Identify ring terminal labelled "GROUND" on the cabin harness.

Install ring terminal onto existing ground point and fasten with original bolt.



FOOTWELL GROUND - 12 Nm.



64. Inside the left hand side footwell, on the vehicle harness, find the wire labelled "RUN START".

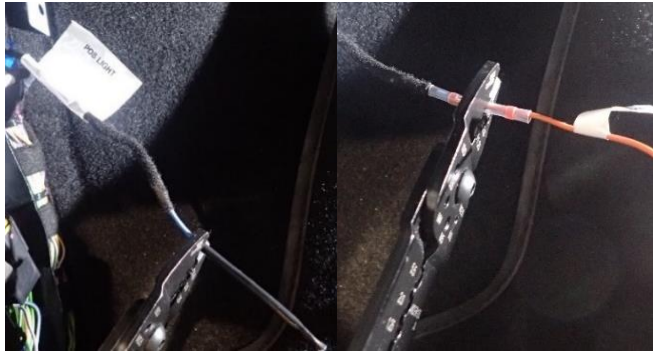
Cut and strip this wire in preparation for joining with the ARB harness.

On some vehicle variants, the wire does not include a label. In this case locate the green with white stripe wire. Confirm this wire is 12VDC with ignition ON, and 0VDC with ignition OFF.



65. Using a crimp joiner supplied in the ARB harness kit join the vehicle wire labelled "RUN START" with the Cabin Harness wire labelled "RUN START".

Using a heat gun, apply heat to secure and seal the join.



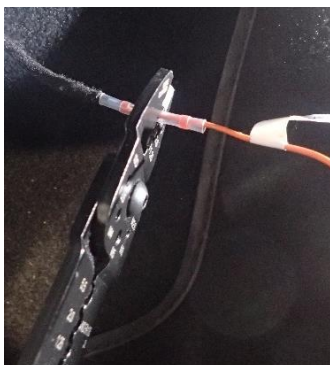
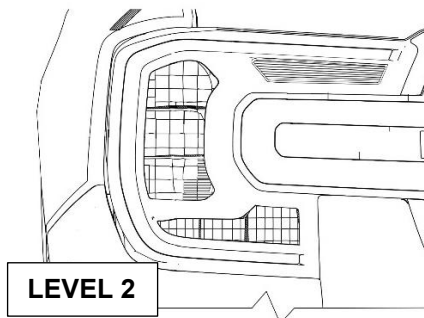
66. Inside the left hand side footwell, on the vehicle harness, find the wire labelled "POS LIGHT".

Cut and strip this wire in preparation for joining with the ARB harness.

67. Using a crimp joiner supplied in the ARB harness kit join the vehicle wire labelled "POS LIGHT" with the Cabin Harness wire labelled "POS LIGHT PARKER LEVEL 1, 2 AND 3".

Using a heat gun, apply heat to secure and seal the join.

The MY25 Ford Super Duty is equipped with LEVEL 2 headlights.



LEVEL 2 HEADLIGHT (DRIVING LIGHTS)

68. Inside the left hand side footwell, on the vehicle harness, find the wire labelled "HIGH BEAM".

Cut and strip this wire in preparation for joining with the ARB harness.

69. Using a crimp joiner supplied in the ARB harness kit join the vehicle wire labelled "HIGH BEAM" with the Cabin Harness wire labelled "HIGH BEAM".

Using a heat gun, apply heat to secure and seal the join.



70. In the left hand side footwell, bundle all cables and relay to existing vehicle harness.

Secure with cable ties.

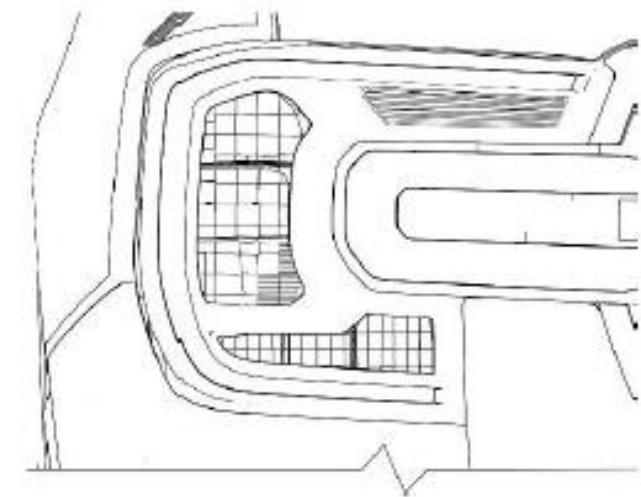


71. Refit the passenger side footwell panel. Press at various locations to ensure all clips are engaged.

Refit the footwell christmas tree plug.

Reinstall the rubber seal. Press at various locations to ensure all is secure.

Refit glove box into vehicle.



The MY25 Ford Super Duty is equipped with LEVEL 2 headlights.

	INSTRUCTION FOR DRIVING LIGHTS INSTALLATION ONLY. <i>This harness includes a 6-way connector for driving light installation. The 6-way connector labelled ARB DRIVING LIGHTS has two fitment options:</i> Fitment with ARB SOLIS driving lights. This requires harness SJBHARNFRD (sold separately). Continue to next step. Fitment with all other driving lights (sold separately).
	72. The SJBHARNFRD harness is supplied with three patch looms as shown. Each patch loom is labelled accordingly. Select the patch loom required for the vehicle headlight LEVEL as per below. I. "UPFITTER" For vehicle fitted with Upfitted switch panel. II. "LEVEL2, LEVEL3" For vehicles with LEVEL 2 or LEVEL 3 headlights.
	73. Remove the flylead connector labelled "DRIVING LIGHT CONNECTOR" from the Engine Bay Harness. Discard flylead connector. This should be located above the passenger side wheel arch, adjacent to the fuse box. Install the correct patch loom between the SJBHARNFRD harness connector and the Engine Bay Harness connector labelled "DRIVING LIGHT CONNECTOR".
	74. Complete the instructions provided with the SJBHARNFRD harness.



ALL OTHER DRIVING LIGHTS INSTALLATION

75. Locate the flylead connector labelled “DRIVING LIGHT CONNECTOR” from the Engine Bay Harness.

The “DRIVING LIGHT CONNECTOR” flylead has various wires with labels attached. Select the wire required for the vehicle headlight LEVEL and driving light harness requirements as per below.

- I. POS LIGHT PARKER. For driving lights which require a parker light signal +12VDC.
- II. HIGH BEAM LEVEL 2. High beam signal for vehicles with LEVEL 2 headlights.
- III. RUN START IGNITION. For driving lights which require an ignition signal +12VDC.

Strip the required wires on the “DRIVING LIGHT CONNECTOR” flylead and connect with the driving light harness (supplied separately). Use the supplied crimp joiners to ensure a secure join.



76. Strip the required wires on the “DRIVING LIGHT CONNECTOR” flylead and connect with the driving light harness (supplied separately). Use the supplied crimp joiners to ensure a secure join.

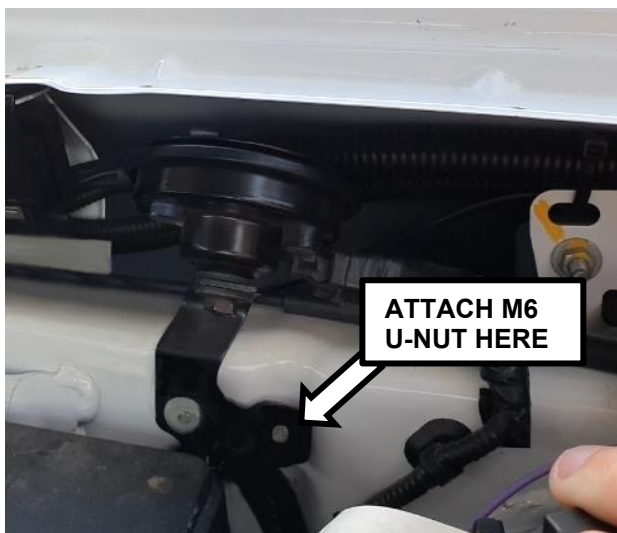


77. Reconnect the negative battery terminal to the battery.

78. Test and validate all light features as per below. (Temporarily connect ARB fog cluster.)

Check both vehicle headlights and ARB light clusters for correct operation.

- I. DRL. Note, the ARB DRL is triggered with vehicle ignition and may perform differently to the vehicle DRL.
- II. PARKER.
- III. LOW BEAM. Vehicle headlight only.
- IV. HIGH BEAM. Vehicle headlight and driving lights (if fitted) only.
- V. LEFT INDICATOR & RIGHT INDICATOR.

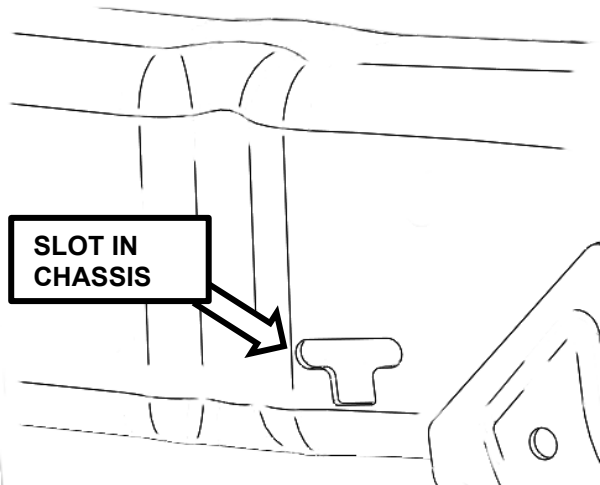


79. For future installation of accessories, supplied with this kit is a RELAY & FUSE MOUNTING BRACKET.

On the passenger quarter panel, locate the horn bracket, next to the fuse box, and identify the slot in the chassis.

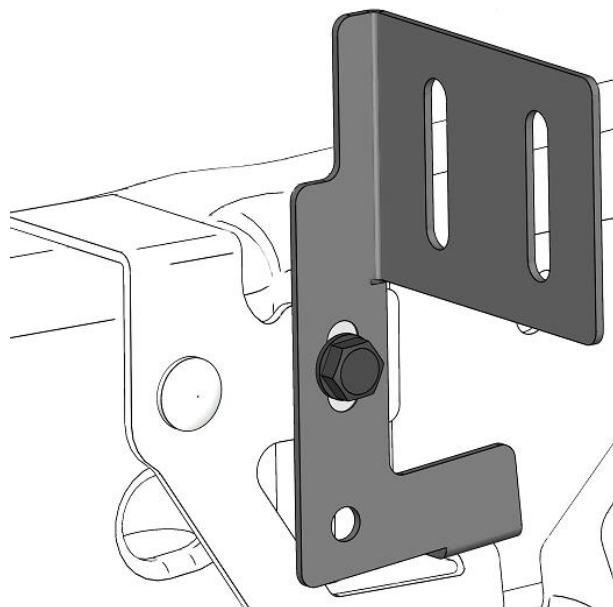
Attach a M6 U-nut to the horn bracket, with the thread on the chassis side of the bracket.

80. Attach the MOUNTING BRACKET, by sliding the tab into the slot on the chassis, ontop of the existing bracket and fasten the MOUNTING BRACKET to the horn bracket with the supplied M6 x 16 hex head bolt and M6 x 12.2 x 1.2 washer.

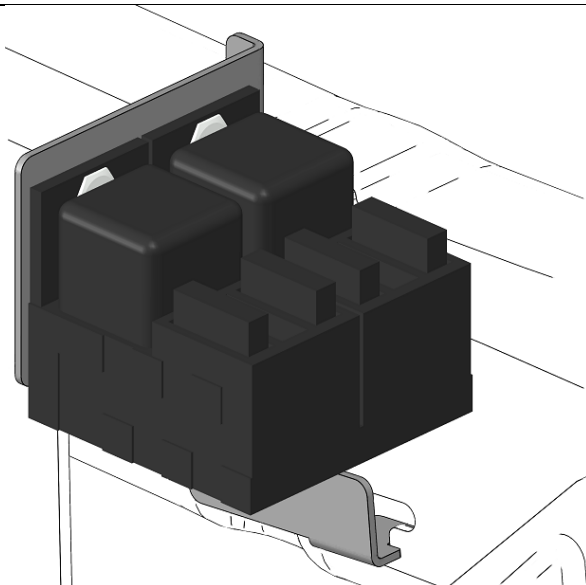


Torque to specification.

 M6 – 9 Nm.



81. Refer to fitting instructions supplied with driving lights harness, and attach the relay and fuse holders with the supplied hardware.



82. For winch and dual battery installation, supplied with this kit is a BUSBAR POSITIVE.

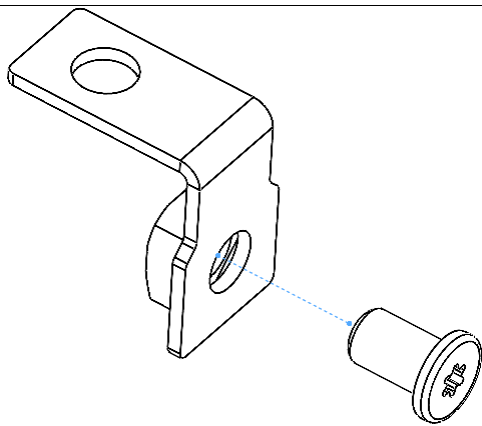
On the battery positive terminal, remove the third terminal nut. If no terminal nuts are fitted, source M6 flange nut to suit terminal stud.

Install the BUSBAR POSITIVE onto the vacant terminal stud.

Refit flange nut securing the BUSBAR POSITIVE.

Note, this kit includes an M6x10 Pan Head Torx drive screw for ring terminal installation.





The negative should be installed directly on top of the negative shunt. Source an M8 bolt and flange nut to secure the negative cable to the shunt.

For all other accessories, install on the ARB BUSBAR EARTH.



+VE BATTERY STUD – 9 Nm.

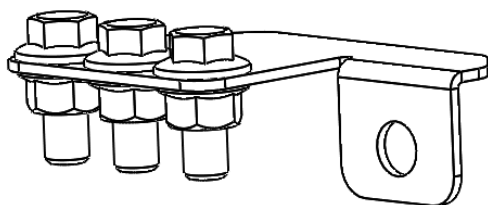


M6 - 9 Nm.



M8 - 22 Nm.

CAUTION: Failure to correctly torque bolts may result in a thermal incident.



83. For future installation of accessories, supplied with this kit is a BUSBAR EARTH and M8 hardware.

On the body earth point, remove the bolt securing the earth cable to the body.

Remove the ring terminal from the earth point and install the BUSBAR EARTH beneath the earth ring terminal.

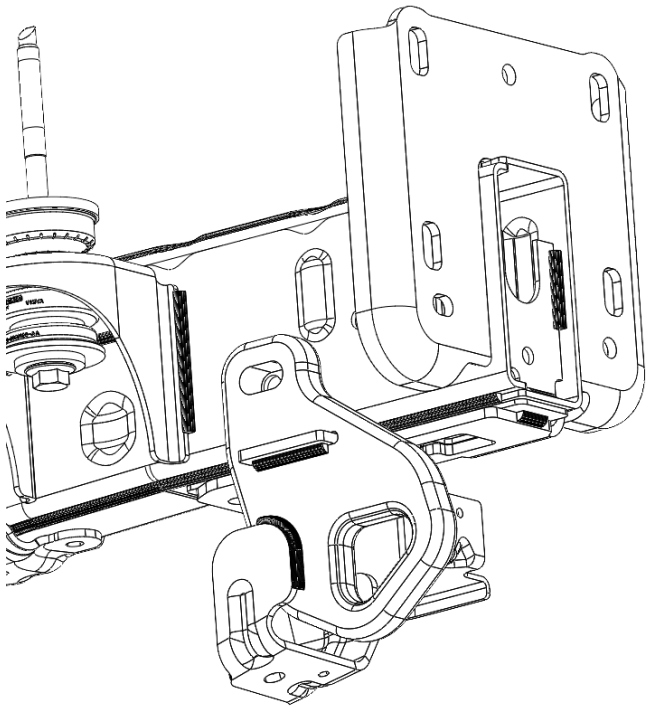
Refit the ring terminal and secure with original bolt.



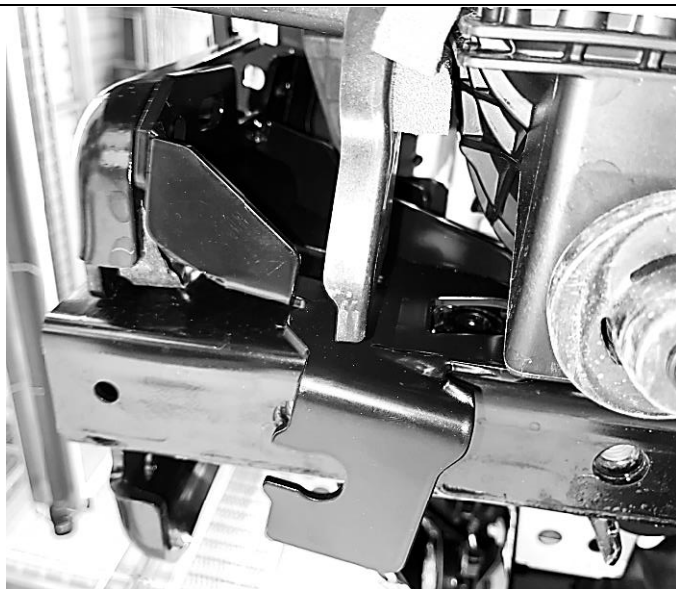
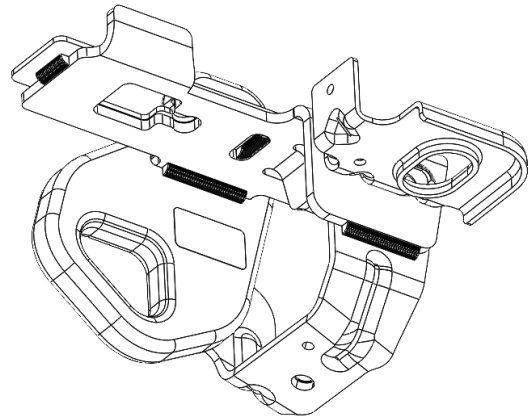
BATTERY/BODY GROUND - 20 Nm.



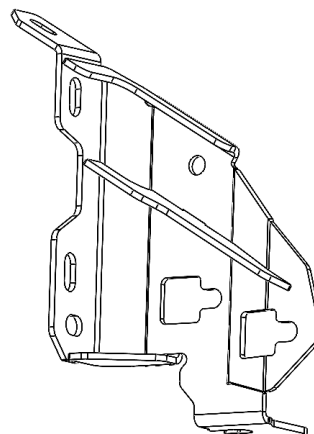
M8 - 22 Nm.



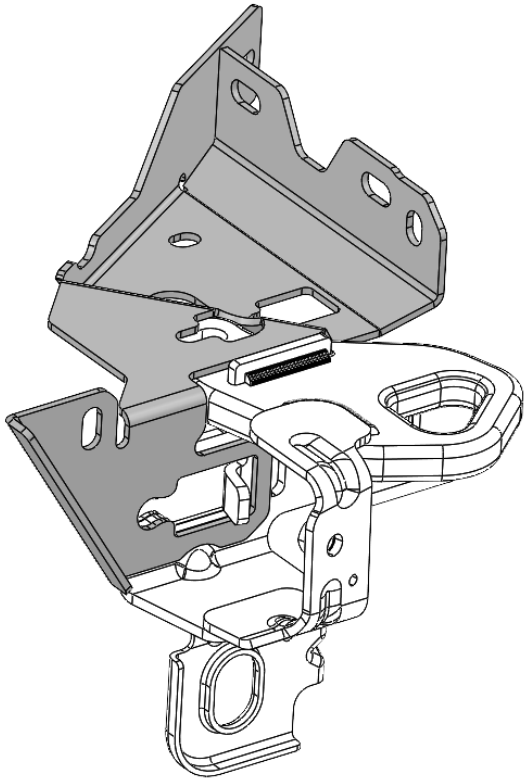
84. Using a transmission jack, strap or similar, support the intercooler.
- Remove the two M14 OEM bolts, one through bolt and one flange nut from each OEM tow point on RHS and LHS.
- Discard the through bolt and flange nut.



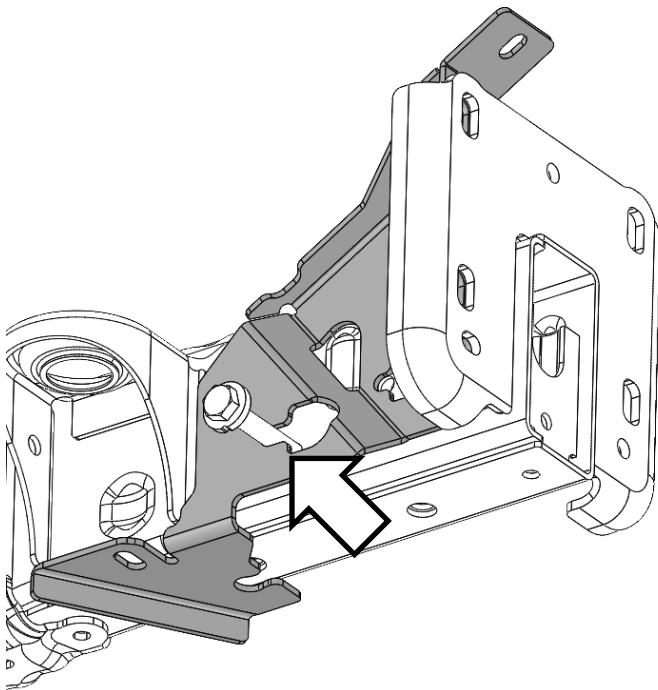
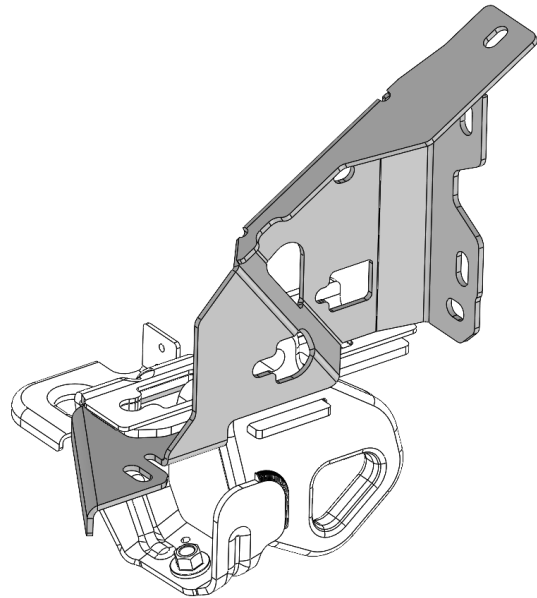
85. Place the inboard chassis mount bracket 4655567R/L behind the front chassis plate.
- Manoeuvre upwards from below the chassis rail between the rail and the intercooler shroud. Bracket may need to be shimmed into position.
- Once past the intercooler plastics secure with tape or cable tie so it does not fall down.



RHS SHOWN

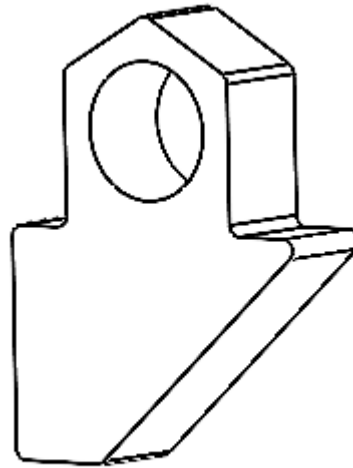


86. With the RHS tow point loose, assemble the tow point and outboard chassis bracket (37500184R) together as shown.



87. Place the RHS outboard mounting bracket and tow point shown on the OUTSIDE of the RHS chassis rail.
- Fit an M12x1.25x130mm bolt with an M12x30x5 washer and fit through the outer chassis bracket and tow point slot into the chassis.

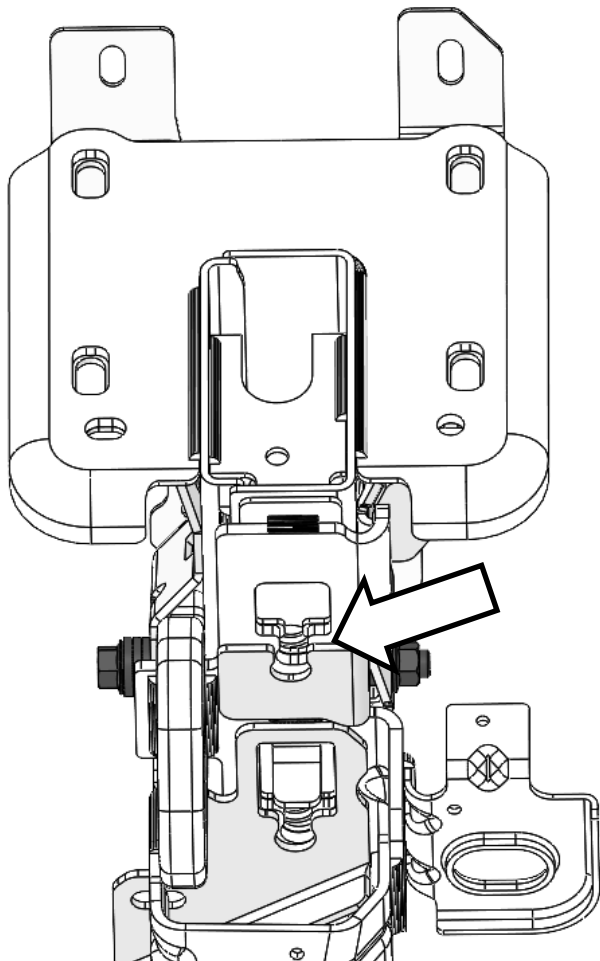
88. Locate a chassis inboard spacer 3197030 into position inside the small bracket fixed to the chassis as shown.



Continue pushing the M12 bolt fitted previously through this spacer, then position the inboard chassis bracket and push bolt all the way through to locate it as well.

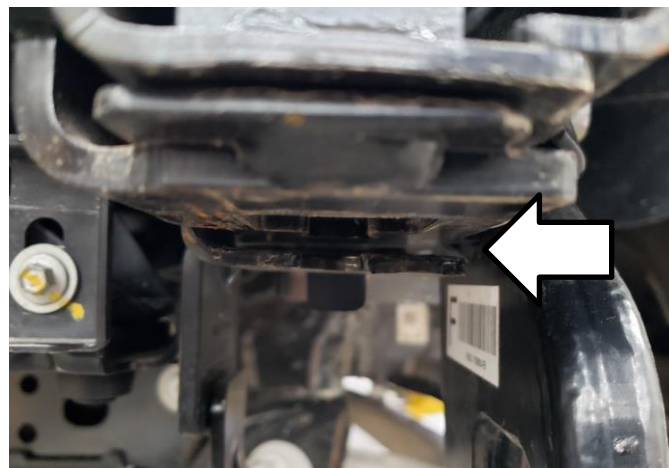
89. Secure both brackets to the chassis with an M12x26x4 washer and M12 nyloc as shown.

DO NOT TIGHTEN YET.

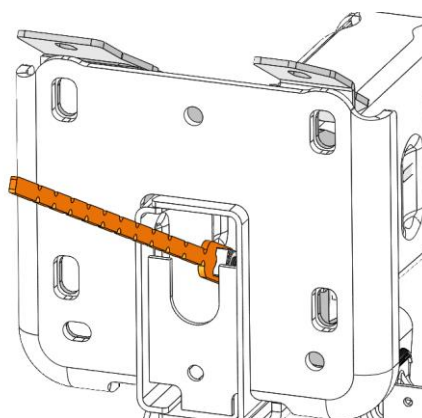
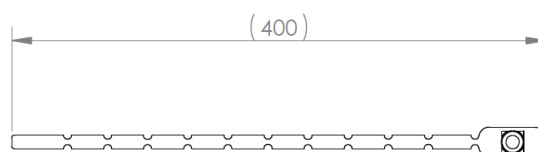


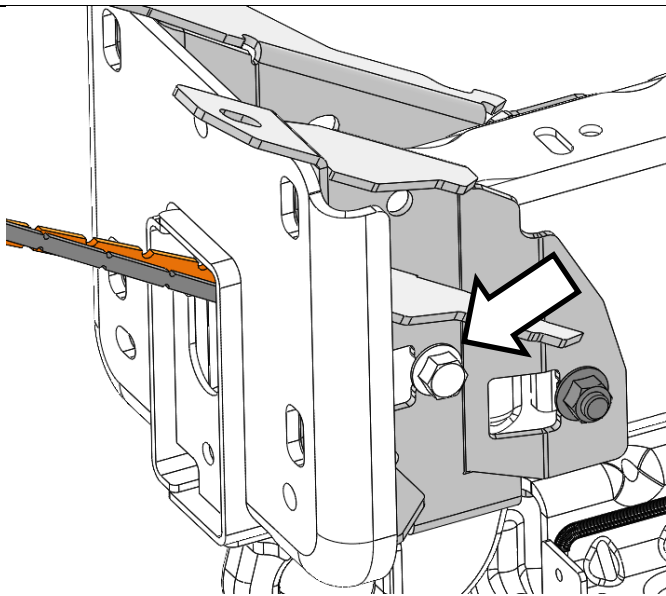
90. The outer bracket should be seated against the tow point.

There is an intentional gap between the inboard bracket and the tow point.



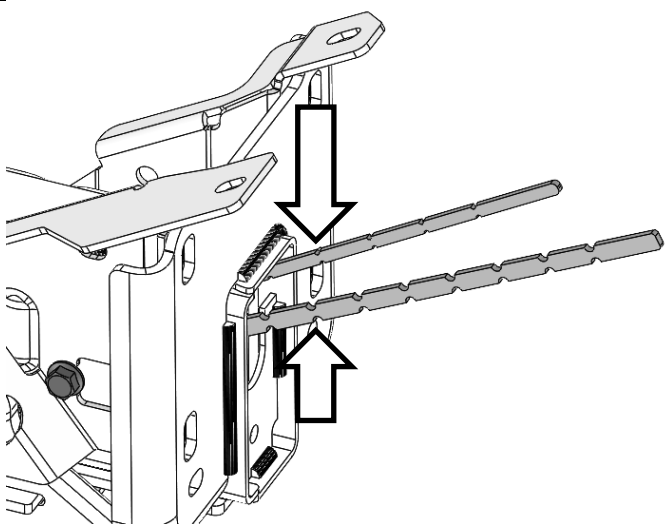
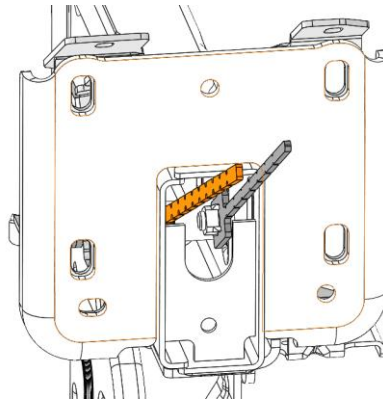
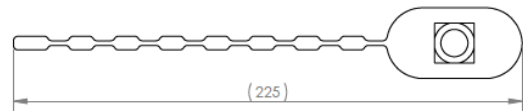
91. Use an M10 nut stick and M10x30 flange bolt fasten through the second outboard slot/hole on the outside of the mounts and chassis.





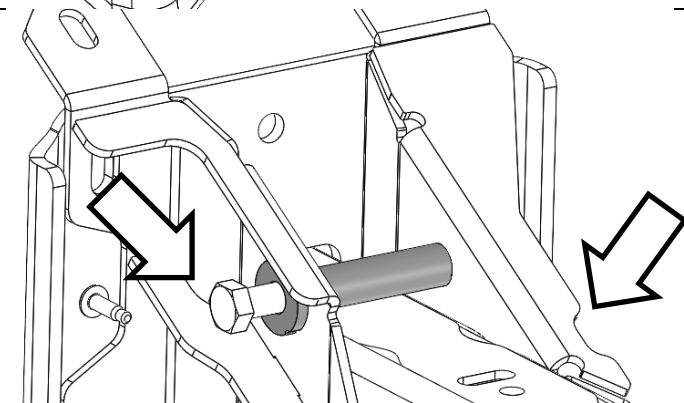
DO NOT TIGHTEN YET.

92. Use an M12 nut stick and M12x30 flange bolt fasten through the second slot/hole on the inside of the mounts and chassis.



93. Break the nut stick stems at the first breakpoints OUTSIDE the chassis rail.

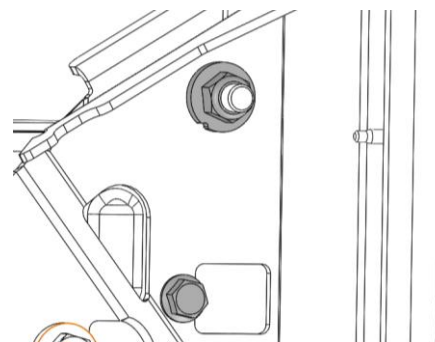
Breaking at this position will allow the bolts to be tightened without the nut plates spinning loose in the chassis rail.

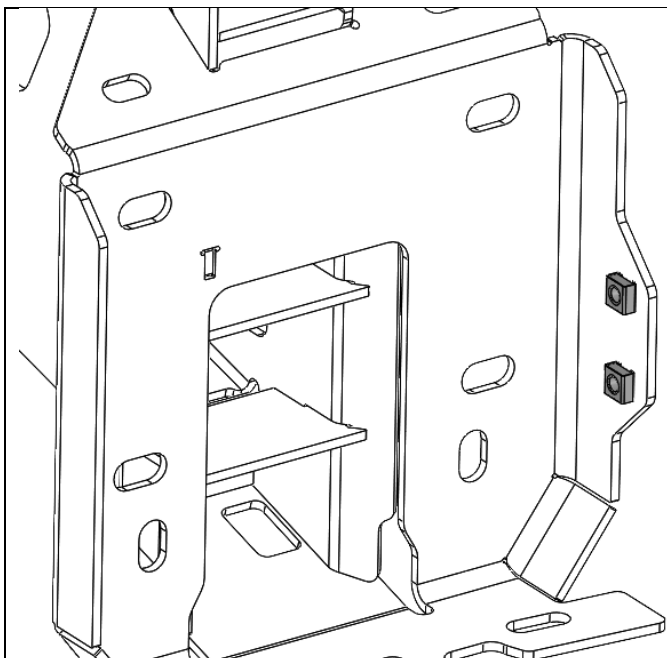


DO NOT TIGHTEN YET.

94. Place an M12x1.75x110 bolt with one M12x30x5 washer through the upper slots on the chassis brackets, fitting an M12 crush tube between the brackets.

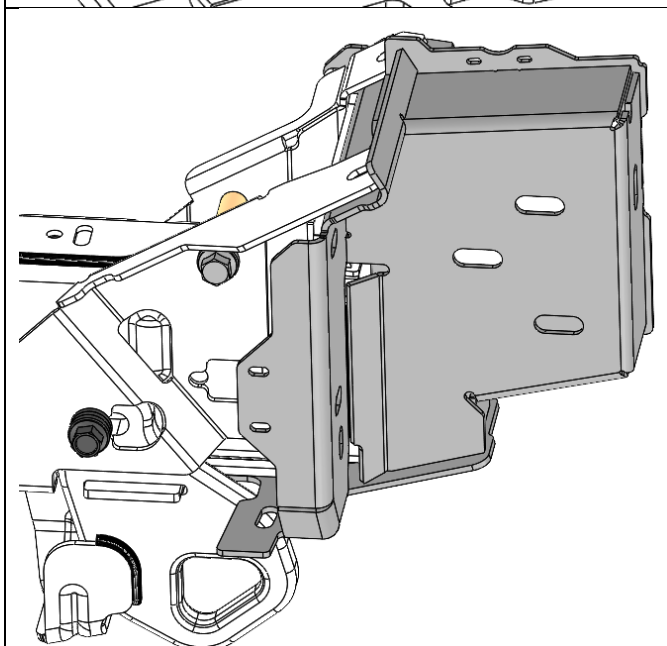
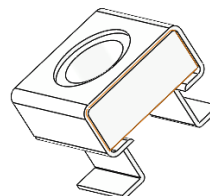
Fasten the outboard chassis bracket using another M12x30x5 washer and M12 Nyloc nut.





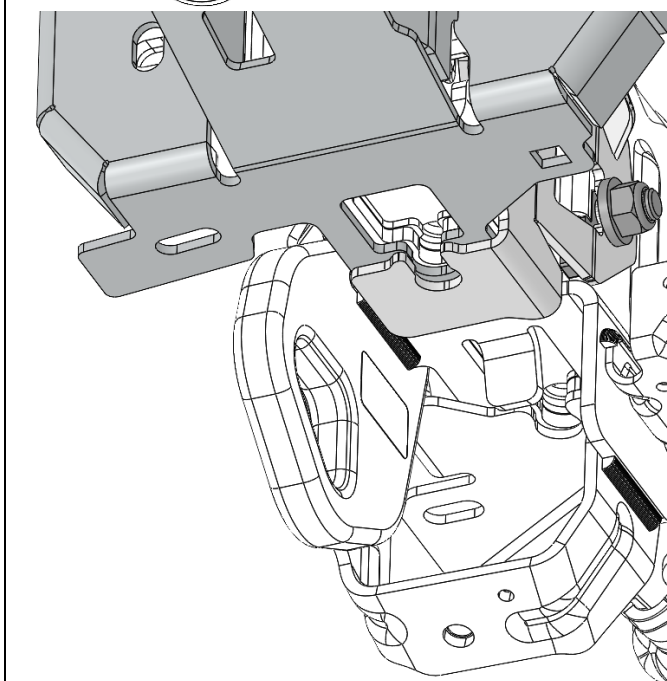
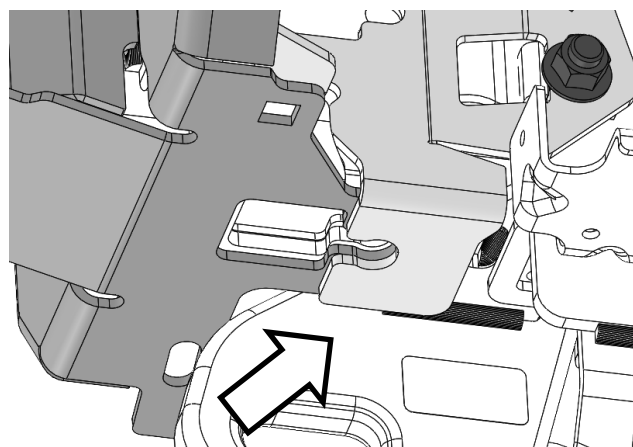
95. Fit two silver M6 - 4mm cage nuts to the front chassis mount 4655566R.

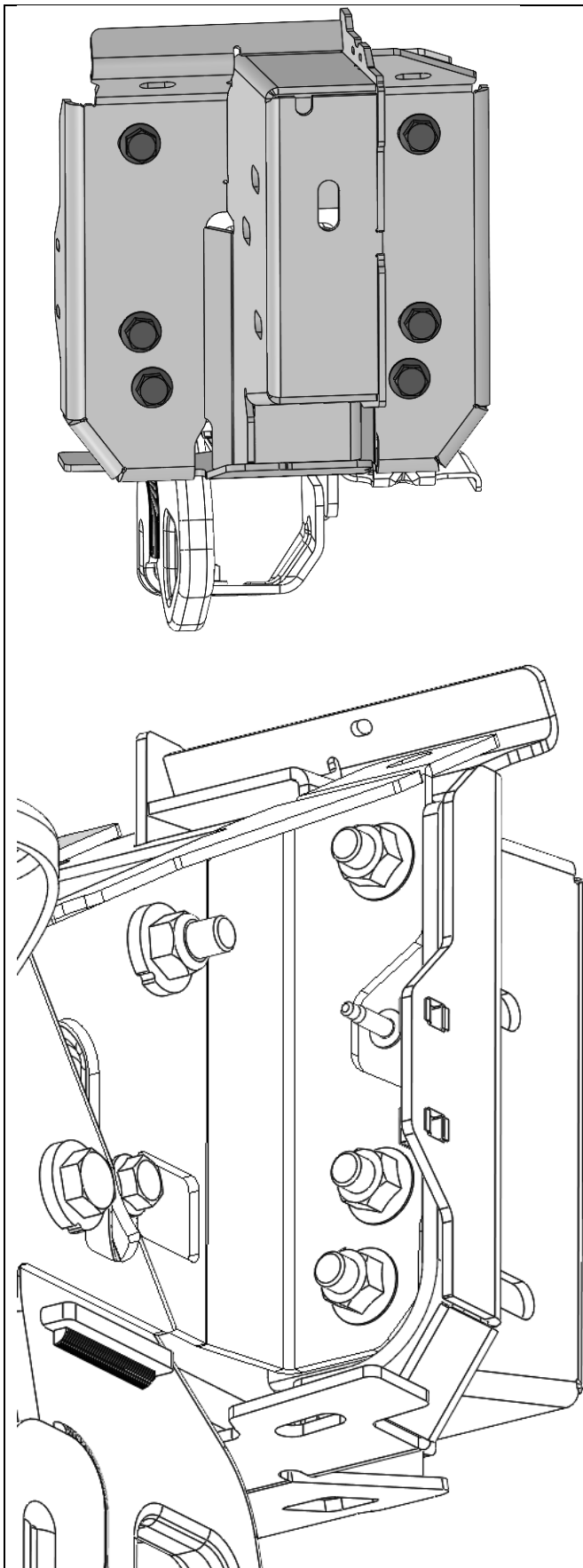
RHS shown, repeat LHS.



96. Fit the RHS chassis mount assembly over the front chassis plate.

CAUTION: The rear tab of the bracket fits *BETWEEN* the Tow Point and inner bracket.

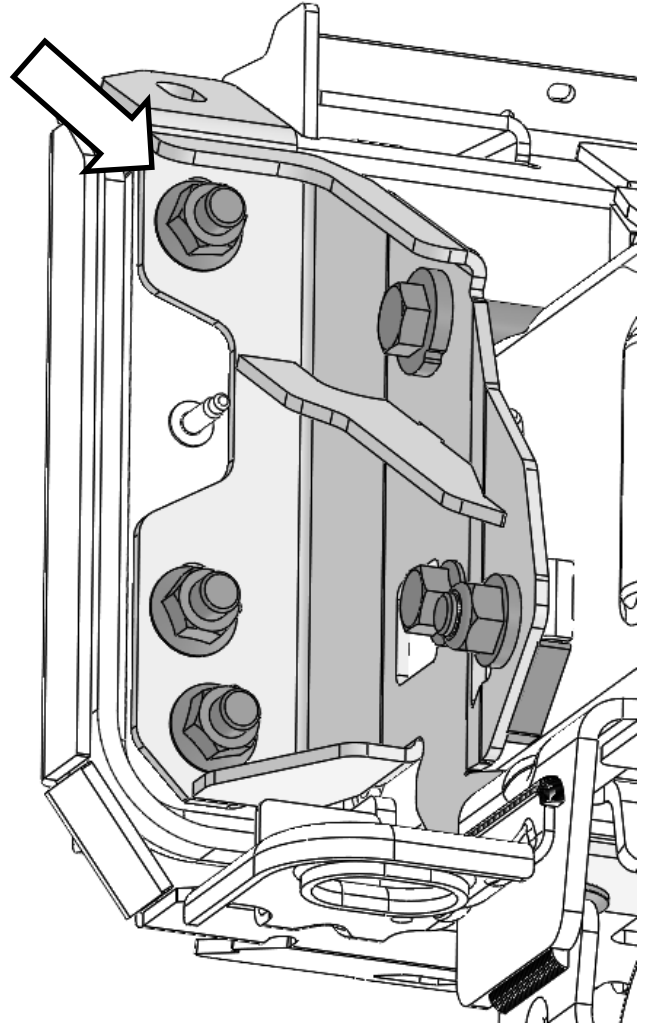


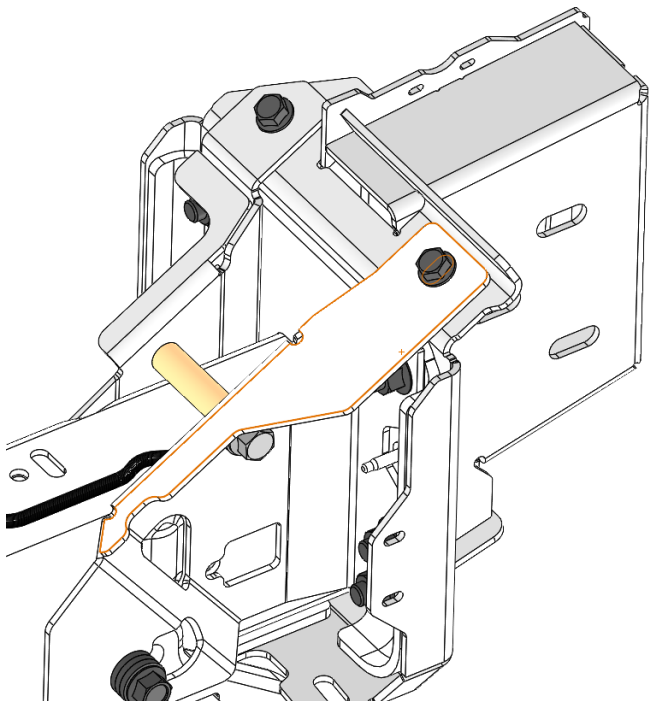


97. Loosely assemble six M12x35 flange bolts and flange nuts through the front chassis mount, the chassis plate, and the rear chassis brackets.

DO NOT TIGHTEN YET.

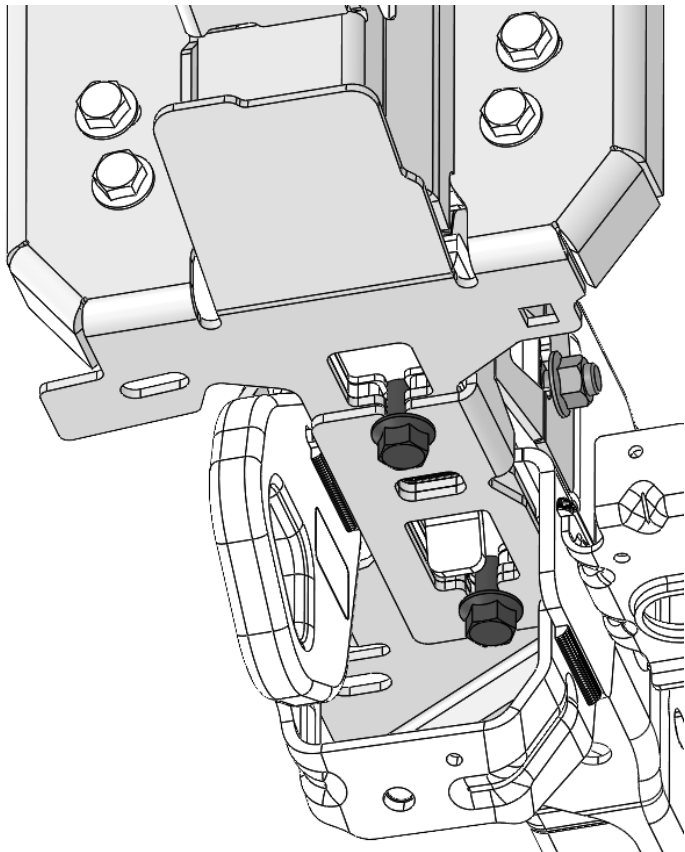
NOTE: If required use a ring spanner to reach up and fit the upper INSIDE nut on the inboard sides of the chassis rails.





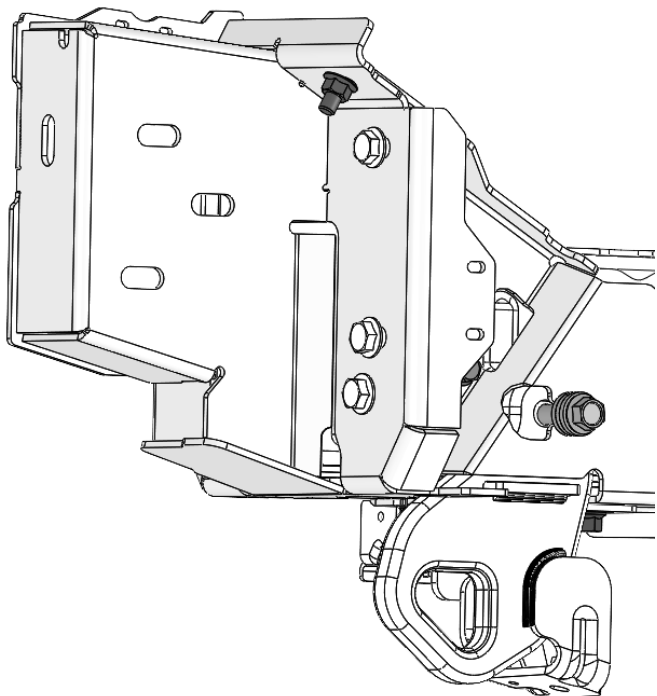
98. Loosely assemble two M10x30 flange bolts and flange nuts through the slots on the rear brackets and the mount assembly on both sides of the chassis rail.

DO NOT TIGHTEN YET.

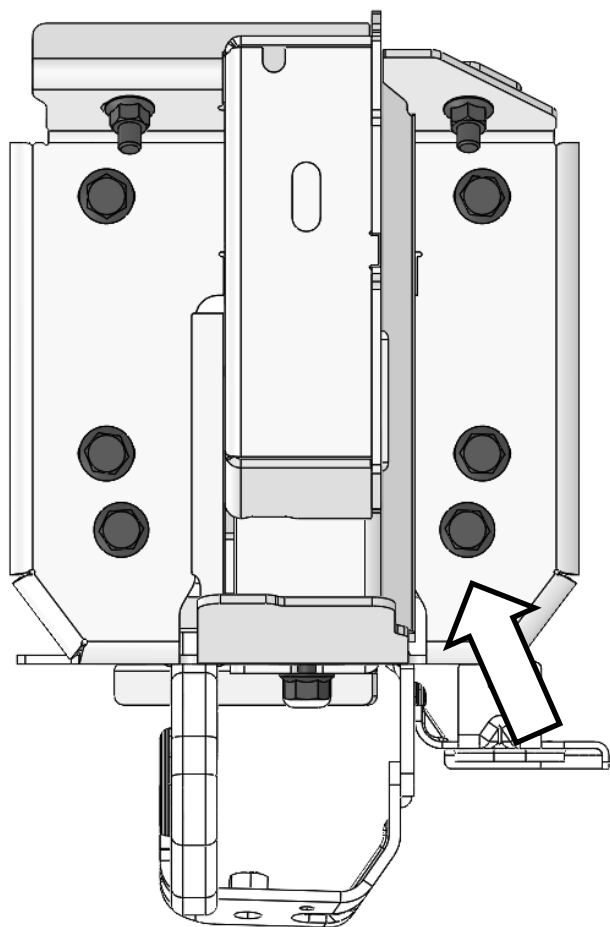


99. Fit two M14x50mm flange bolts. Ensure that the rubber intercooler isolator seats into aperture in the OE tow point.

DO NOT TIGHTEN YET.



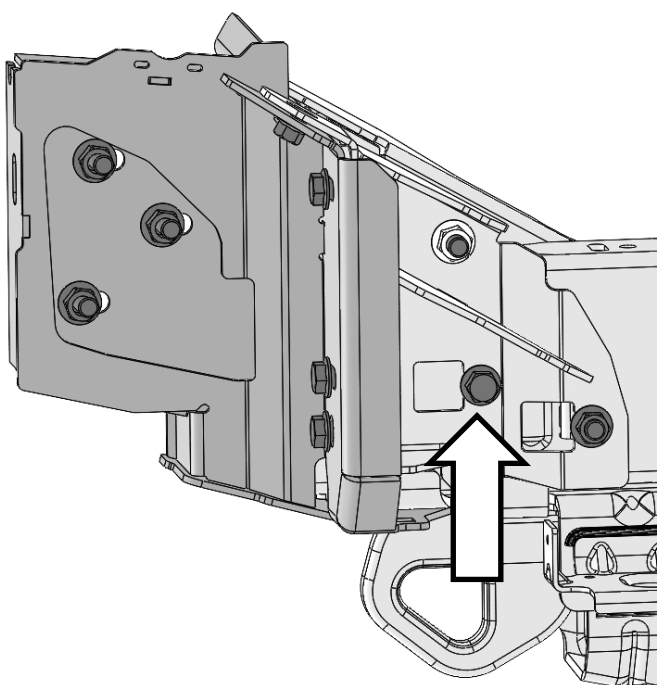
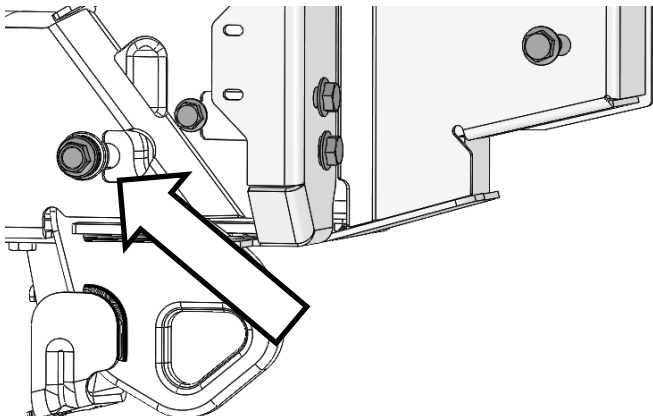
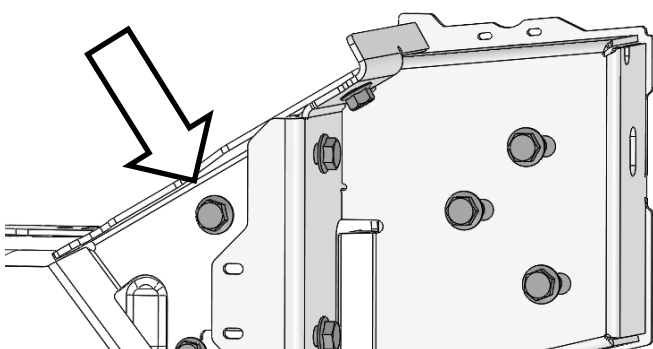
100. **REPEAT STEPS 85 – 99 FOR LHS.**

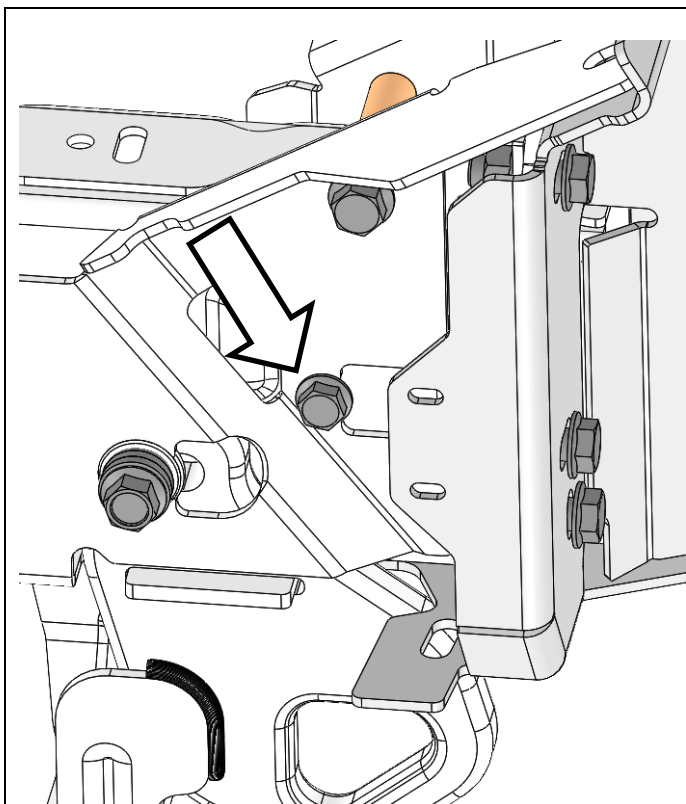


101. Tension M12 Flange bolts on the front of the mount to torque specified.



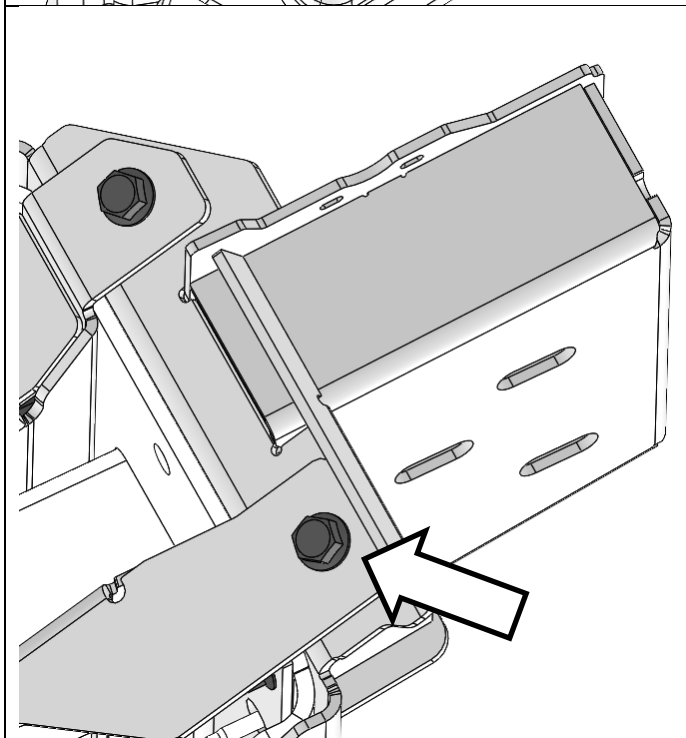
M12 - 77Nm.

	102. Tension the M12 bolt with nut stick fitted to the inside of the chassis rail RHS.  M12 PC8.8 - 77 Nm.
	103. Tension M12x130 bolt running through the chassis.  M12 PC10.9 - 92 Nm.
	104. Tension M12x100 bolt running through the crush tube.  M12 PC10.9 - 92 Nm.



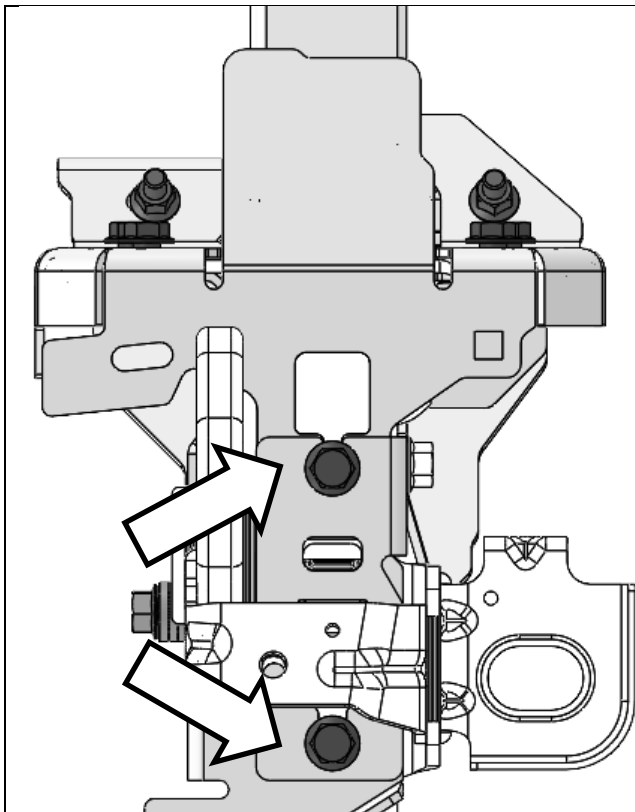
105. Tension the M10 bolt with nut stick on the outside of the chassis rail RHS.

 M10 - 44 Nm.



106. Tension the upper M10x30 flange bolts.

 M10 - 44 Nm.

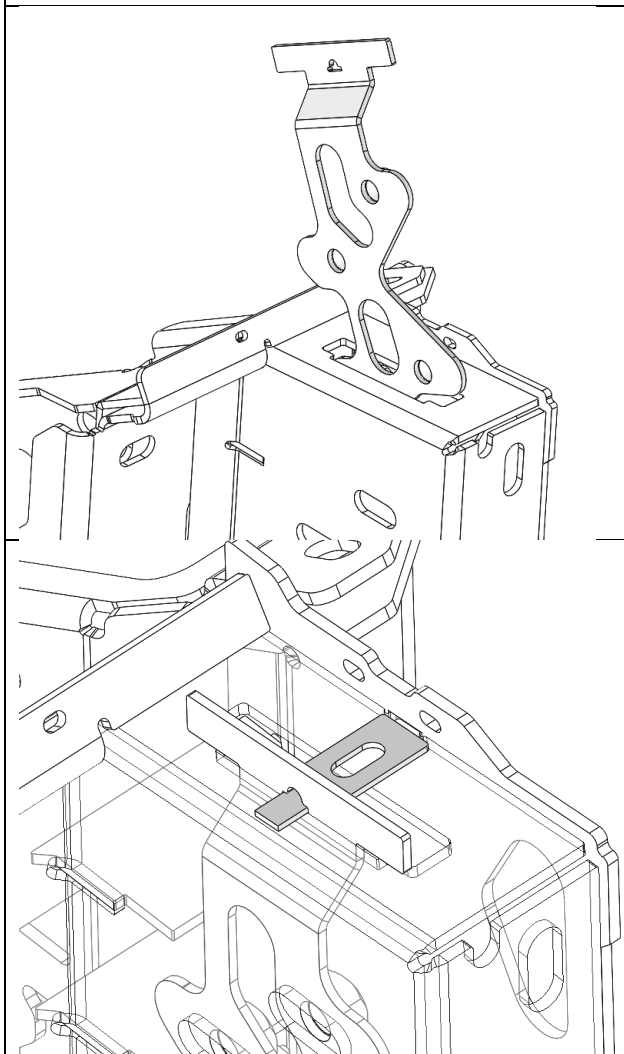


107. Tension M14x50 flange bolts.



M14 PC10.9 - 125 Nm.

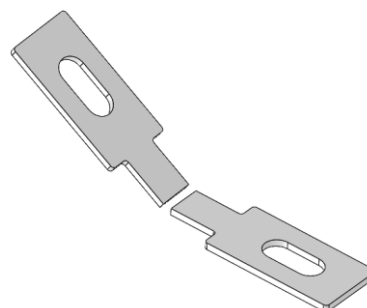
REPEAT TORQUE STEPS 101 - 107 FOR LHS

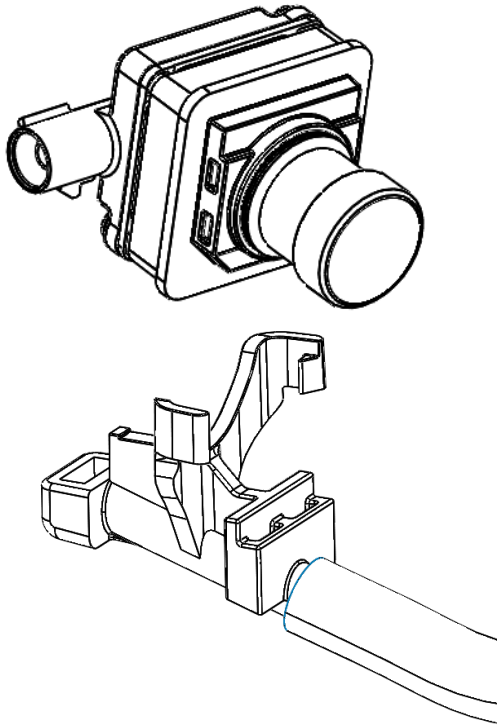


108. To prep the mounts for bull bar mounting, insert the mounting nut plates into each impact absorber.

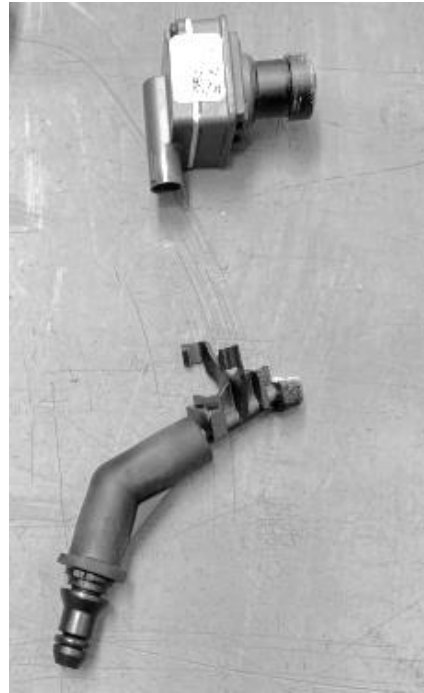
RHS shown, LHS opposite.

109. Break the locator key plate into two tabs and insert into each nut plate keyway on each mount to prevent the nut plate falling into the impact absorber.





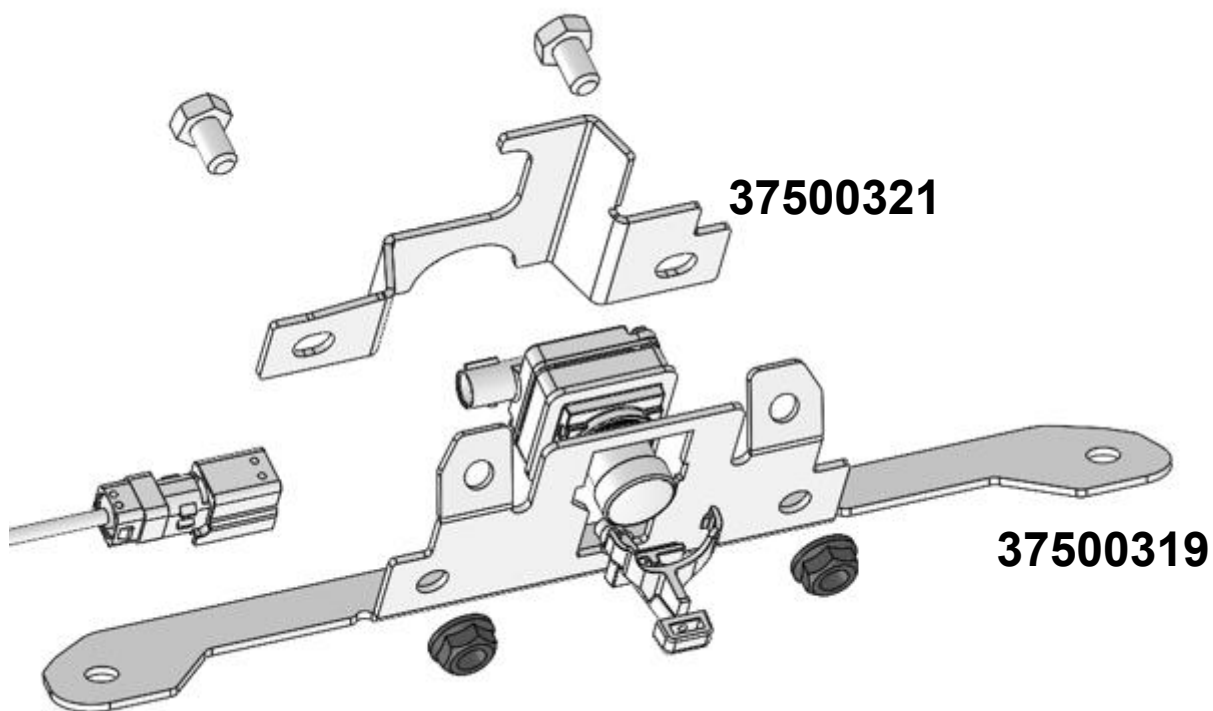
110. Prepare the camera and washer nozzle removed previously for assembly into the bull bar.



111. Assemble the camera module and washer nozzle into ARB brackets 37500321 and 37500319.

Clamp the camera and nozzle together by fastening the brackets with two M6x10 bolts and flange nuts.

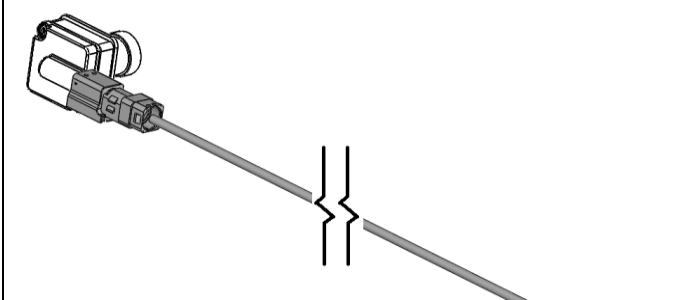
 M6 - 9 Nm.





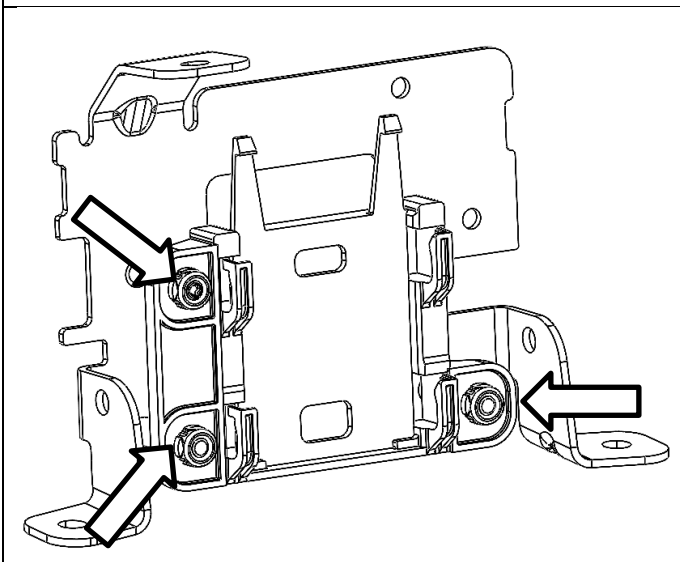
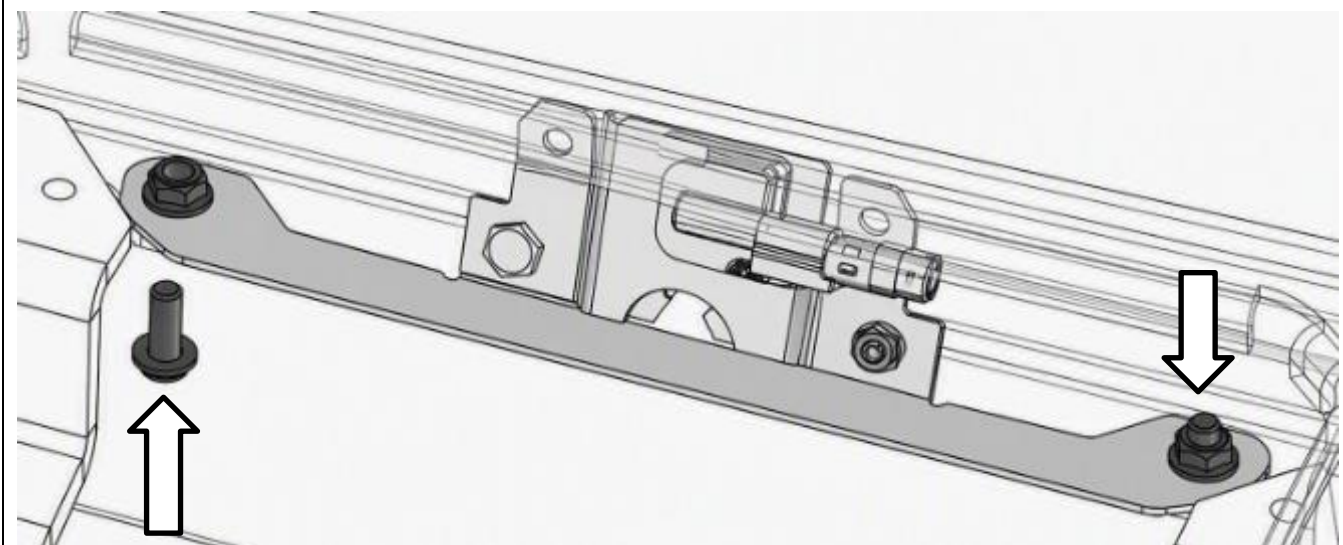
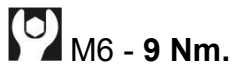
112. From the washer line previously removed, fit the 90° tube to the camera washer nozzle fixed in the brackets.

Refit the connector shown on the camera assembly to the OEM vehicle washer line attached to the harness.

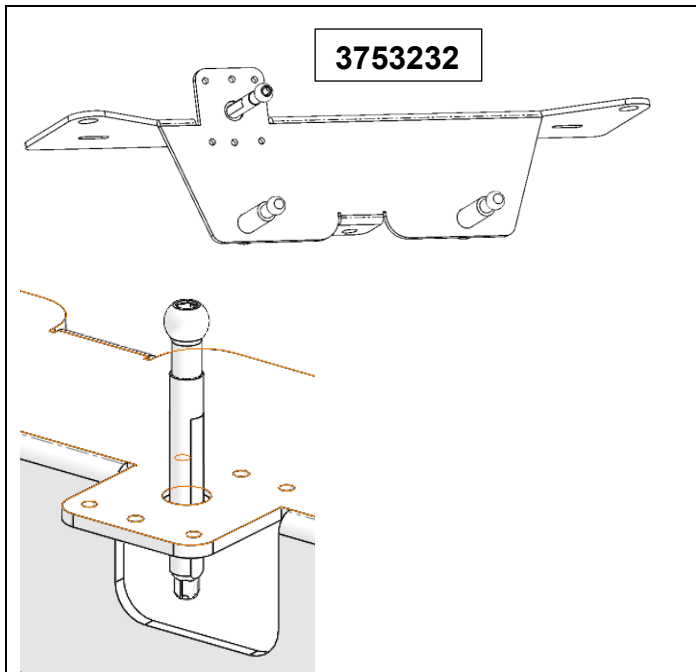


113. Connect camera cable on vehicle harness to camera.

114. Fit camera bracket assembly to bar using two M6x20 bolts, M6x12 flat washer and M6 flange nuts.

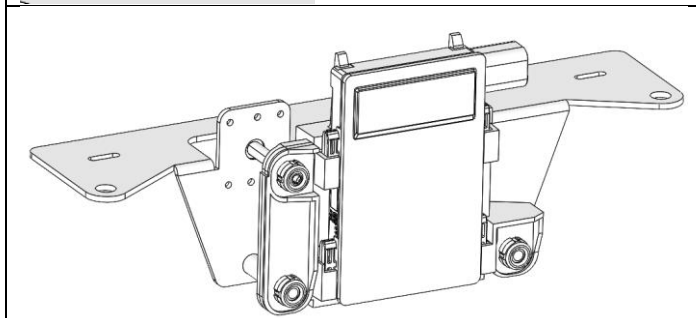


115. Gently unclip the plastic radar tray from the ball point mounts and set aside for fitment into the bull bar.



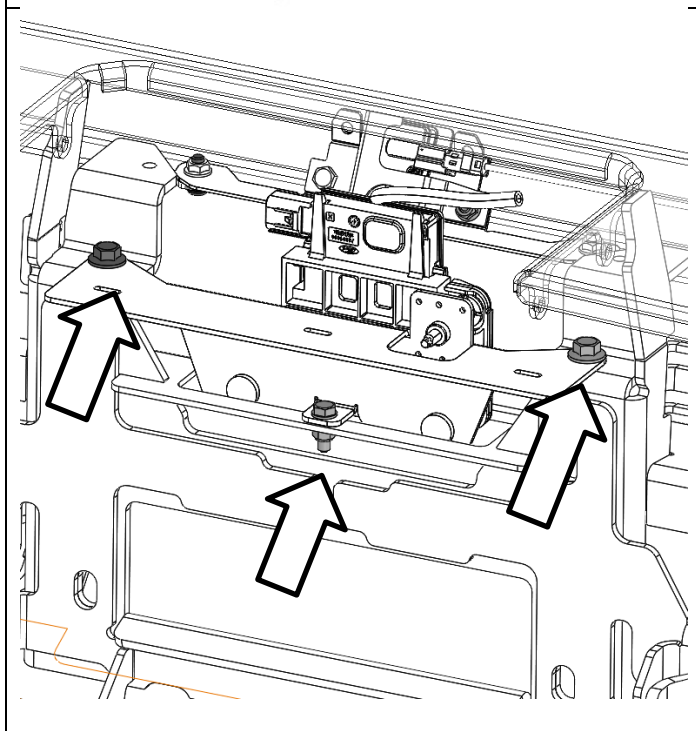
116. Remove the adjustment Torx screw from the Ford radar bracket and assemble onto ARB bracket 3753232 as shown.

Reuse original hardware for reassembly
1x Torx drive stud (T20)



117. Reassemble radar module tray onto ARB bracket 3753232 by clipping onto ball point mounts.

Carefully fit the radar module into the tray once secured.



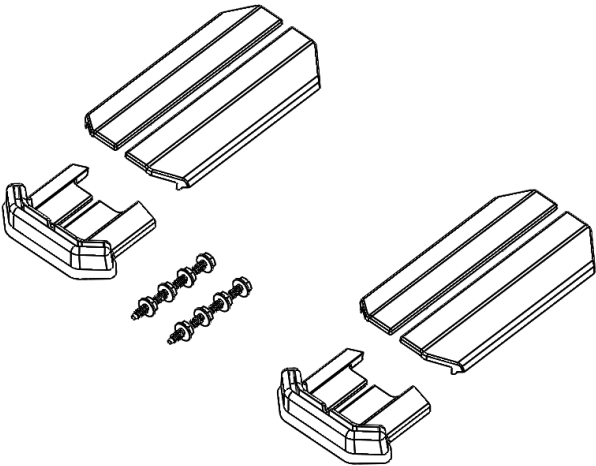
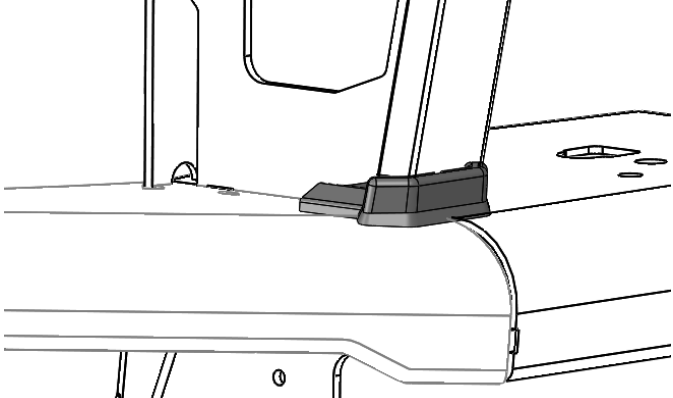
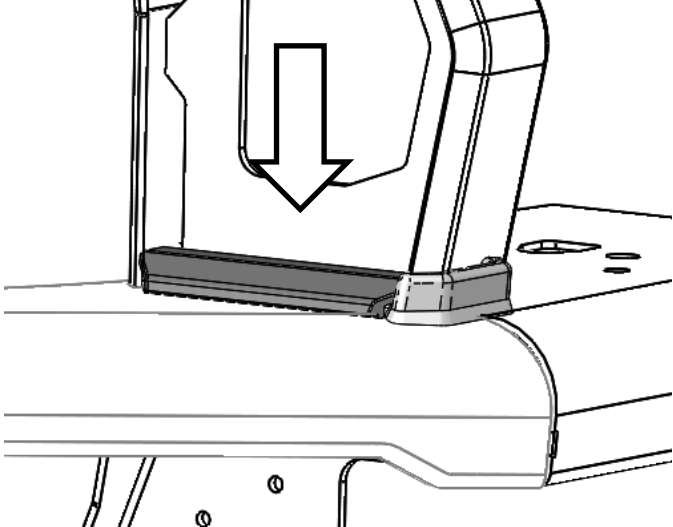
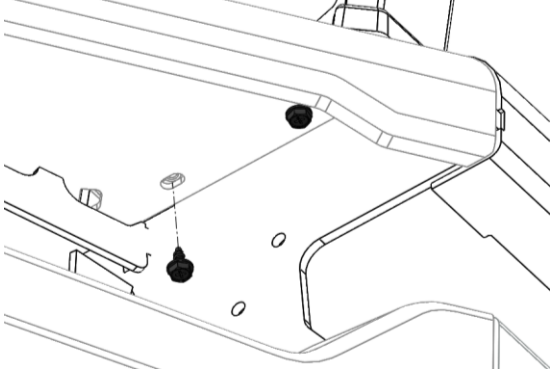
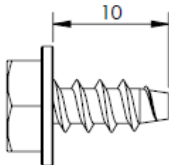
118. Using a pair of M8x20 black flange head bolts and M8 flange nuts, assemble radar and bracket onto bull bar winch cradle.

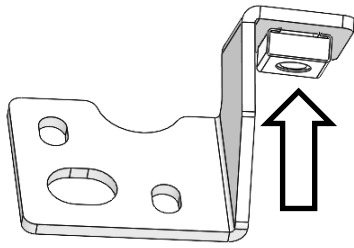
Fasten the lower return to the lower pan of the bull bar using an M6x20 hex bolt, washer and flange nut.

Torque to specification:

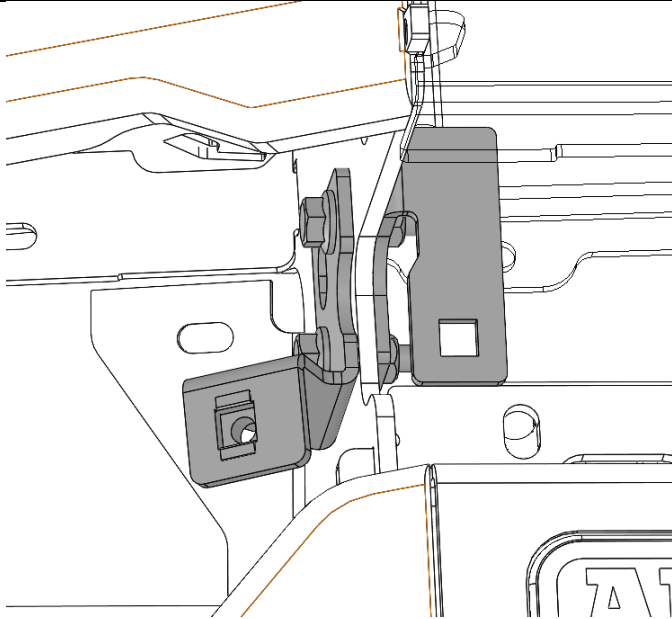
 M8 - 22 Nm.

 M6 - 9 Nm.

	119. Identify the cover strap plastics kit, 3163294.
	120. Fit the rubber intersection mouldings to the base of each upright cover strap. NOTE: <i>Ensure that the skirt of the rubber moulding is not folded back on itself and is sitting flat against the bull bar.</i>
	121. Place the plastic cover down onto the rubber moulding, repeat on both sides of the cover straps.
	122. From underneath, fit two screws into each plastic cover. Tighten until the covers are secure and have firmly clamped the rubber moulding. 

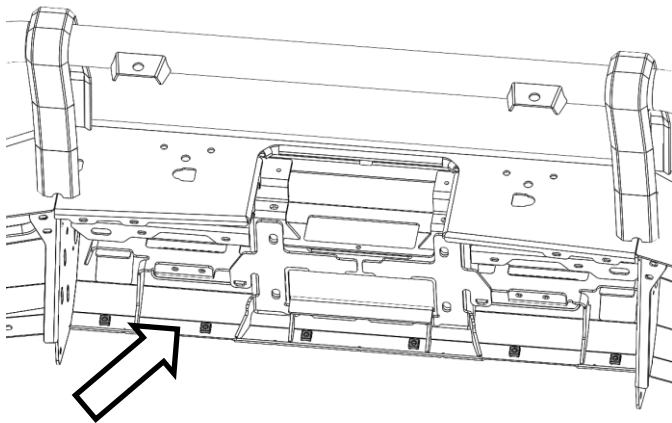
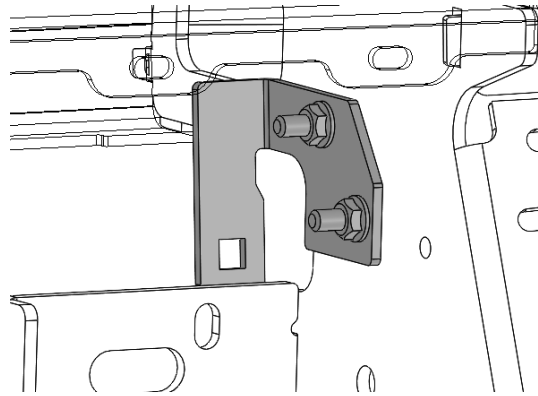


123. Assemble a silver M6 cage nut into both fog cluster mounting brackets.

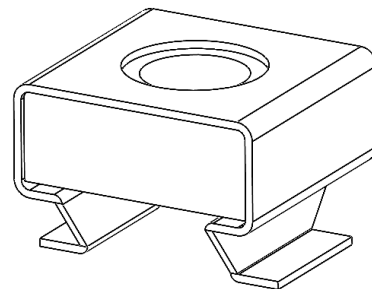


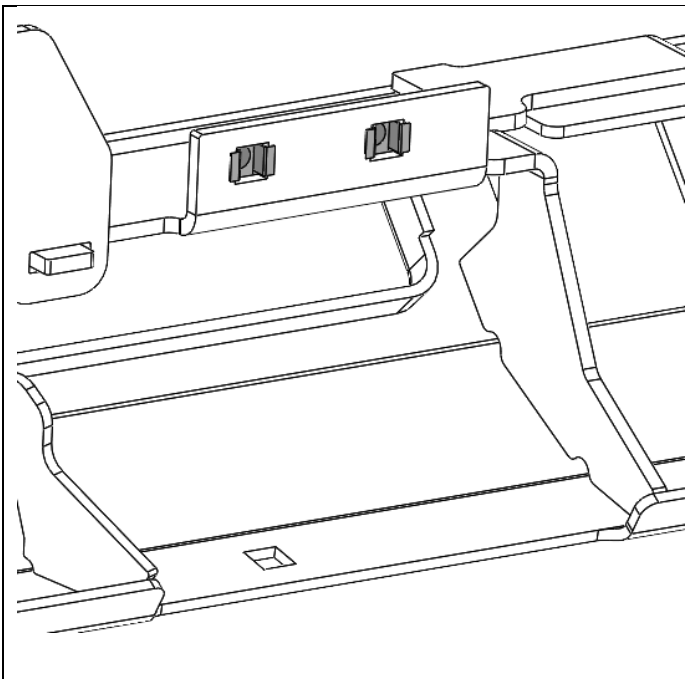
124. Assemble both fog cluster mounting brackets 37500238R/L and grille retaining brackets 37500213R/L onto the outside of the uprights with M6 flange bolts and flange nuts.

 M6 - 9 Nm.

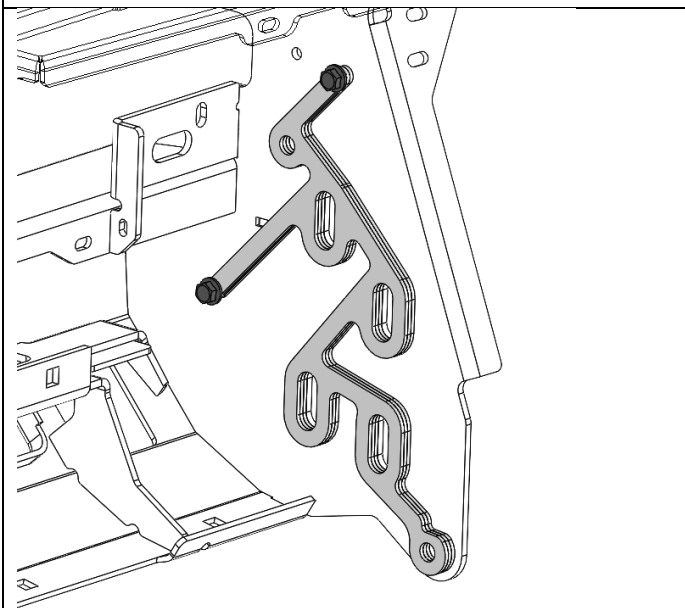
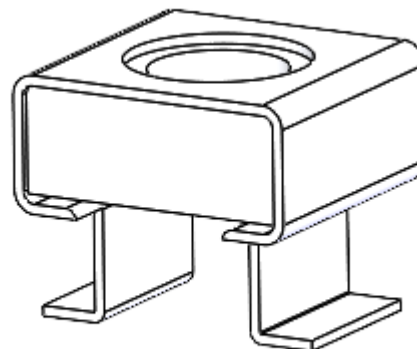


125. Assemble six silver M6 cage nuts into lower return of bull bar pan.





126. Fit two silver M6 - 4mm cage nuts to each side of the bull bar as shown.

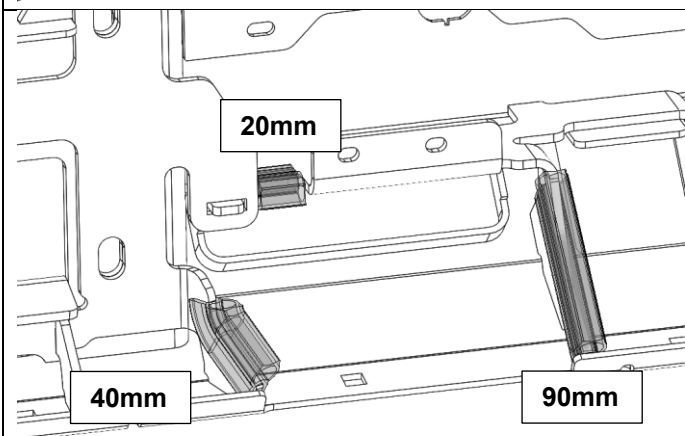


127. Use a tape measure to check the distance across the two internal mounting faces of the bull bar.

Similarly measure the distance between the mounting faces on the chassis mounts.

Select an appropriate number of 2.5mm shims (3195931) to take up the difference in the two dimensions taken and pre-assemble onto bull bar uprights using M6x25 flange bolts and flange nuts.

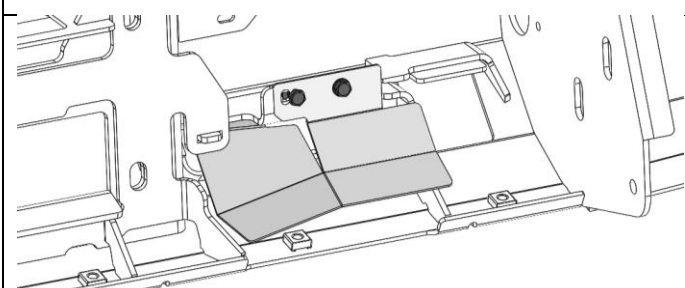
NOTE: At least one shim is required on each upright.



128. Cut a 150mm length of pinch weld and separate into a 90, 20 and 40mm length each.

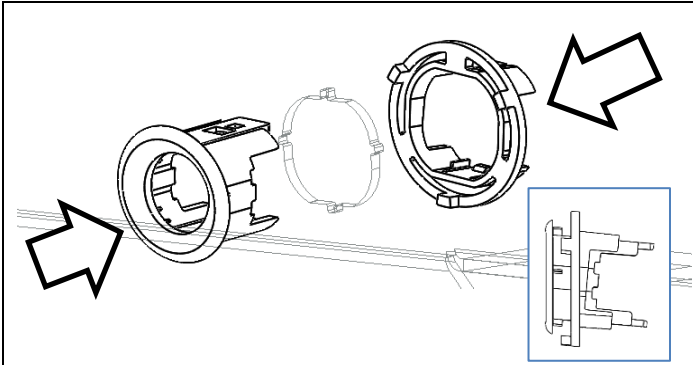
Fit the lengths where shown.

Repeat on the LHS with another 150mm length.



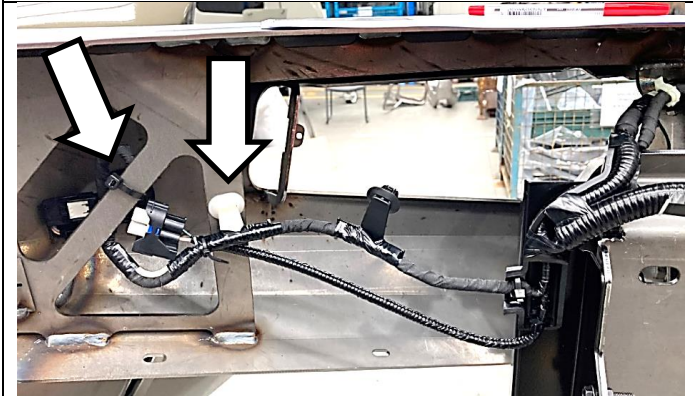
129. Fit the RHS and LHS pan duct panels using two M6x20 screws & washers.

 M6 - 9 Nm.

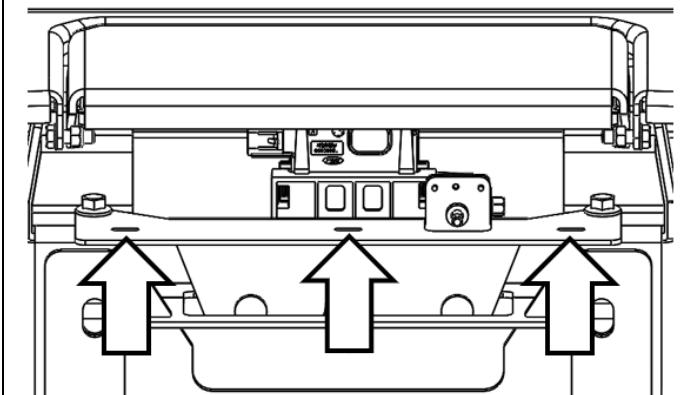


130. Fit the four front sensor housings to the bull bar. Placing the housing through the bar from the front of the vehicle.

From the rear of the bar, clip the rear sensor housings onto the front housings. Check that both clips are engaged properly. If clips don't engage apply pressure on the outer ring of the rear housing.



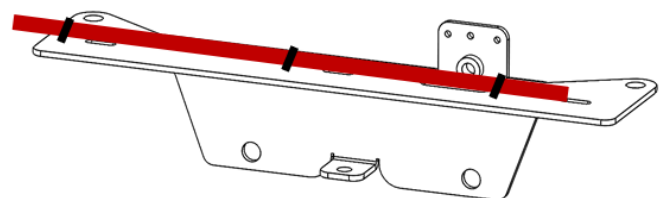
131. Secure harness to the outer wing brace using the plastic clip and cable ties.

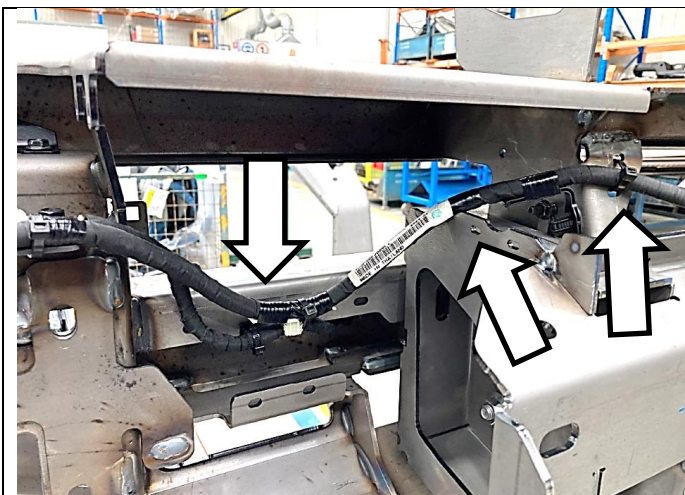


132. Secure harness with cable ties supplied and original edge clips attached to harness. Slots in radar bracket are for cable ties.

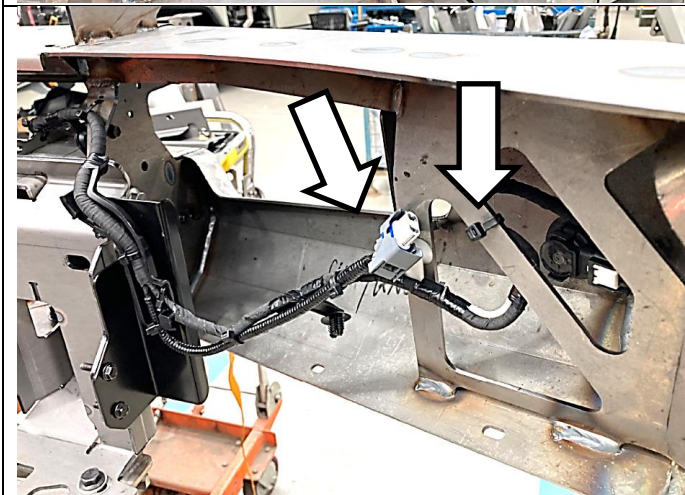
If fitted, winch positive should also be routed across top face of radar bracket

NOTE: EXCESS CAMERA CABLE SHOULD BE SECURED TO THE RADAR BRACKET AT THIS STE.

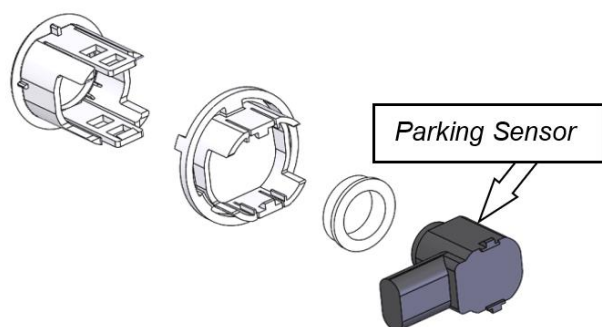




133. Secure the harness along the RHS of the bull bar using cable ties in the positions shown.



134. Connect and clip harness into outer RHS sensor and secure the harness to the outer wing brace using the slot in the bracket and cable ties.



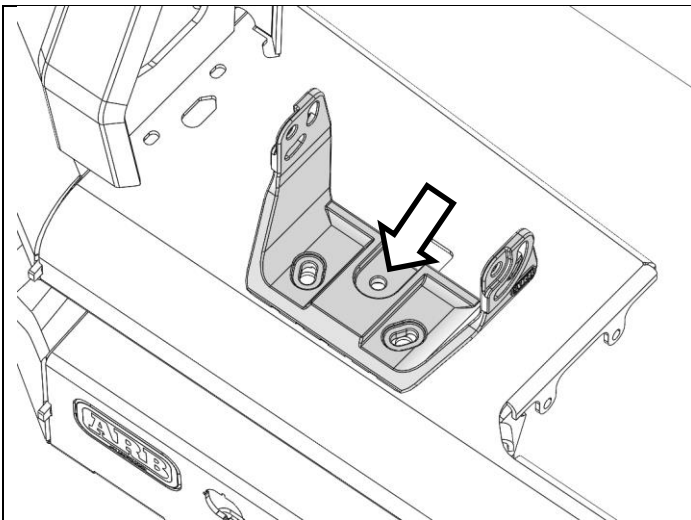
135. Assemble parking sensors into housings installed previously.

Check that both clips are engaged properly and silicone decoupling ring is seated properly.

Tail of sensor should point towards the uprights of the bull bar.

RHS inboard and outboard shown, mirror for LHS.

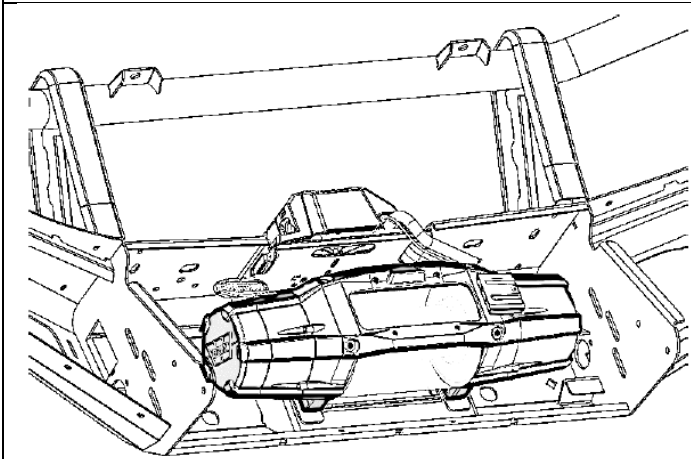
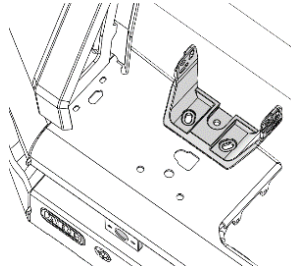




136. NOTE: IF FITTING DRIVING LIGHTS

Align the driving light mounts to the hole pattern on the top pan of the bull bar as shown. (ARB SOLIS lights shown here)

Refer to the instructions supplied with the driving lights for next steps.



137. NOTE: IF FITTING WINCH:

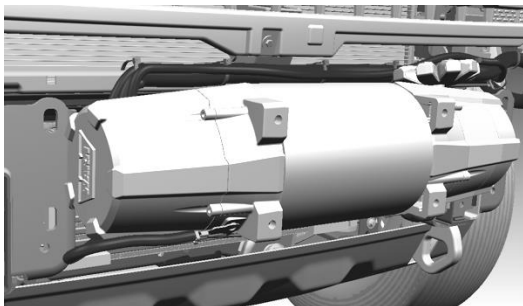
Install winch into the bull bar at this step before fitting bull bar to vehicle.

Refer to the fitting instructions supplied with the winch for installation.

Refer to instructions supplied with either 3540480 or 3540490 winch fitting kit.

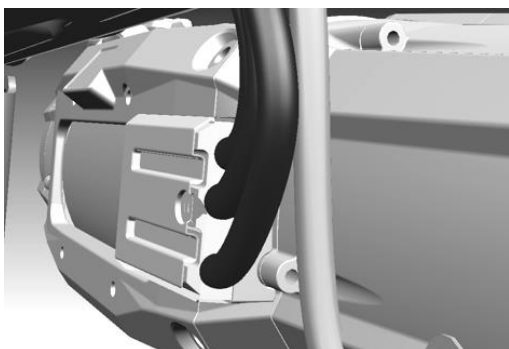
CAUTION: For correct winch fitment check notes below before proceeding.

NEGATIVE TERMINAL CONNECTION



a.

POSITIVE TERMINAL CONNECTION



b.

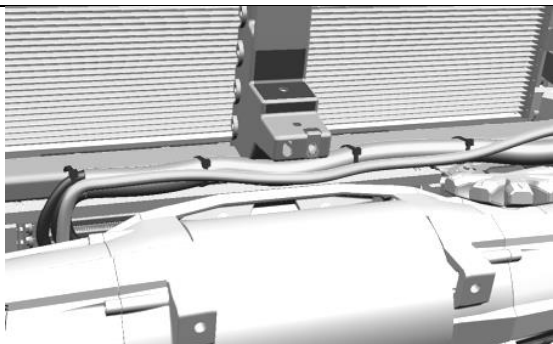
CABLE ROUTING

138. NOTE: IF FITTING WINCH

Refer to these instructions for wiring installation.

- a. Cable tie positive cable to the vehicle radiator bracket as highlighted. Use large strap cable tie to avoid damage.
- b. Three positive cables to be fitted with the corrugated tube provided under P/N 3540500.

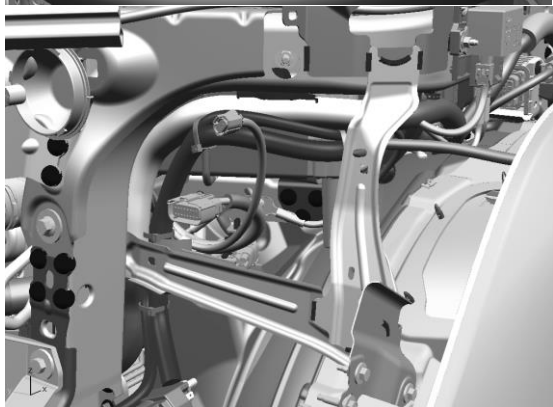
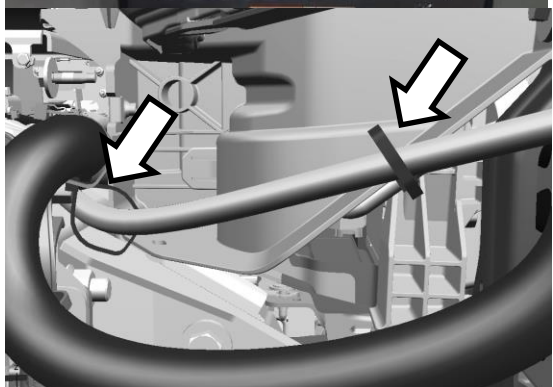
c.



d.



e.

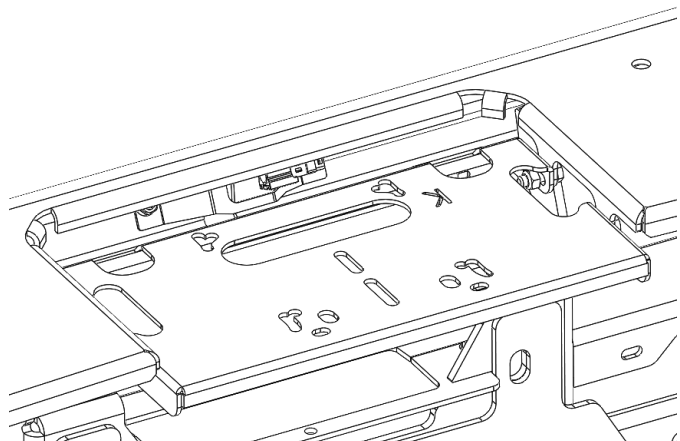


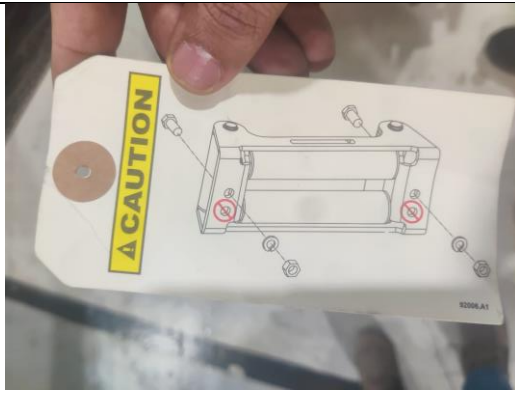
- c. Start of positive cable 150mm should not be sleeved to bend it as shown. Corrugated tube fitted where secured by cable ties.
- d. Negative cable alone to be cable tied along the CAC shroud using the 5mm holes drilled in Step 36. Ensure negative cable is secured properly and has adequate clearance to winch spool.
- e. Negative cable to be taken behind grille and headlamp, along with the vehicle harness, around battery to the negative terminal. Cable tie every 100mm minimum.

139. **NOTE: IF NOT FITTING WARN CONTROL SOCKET RELOCATION KIT**

Follow the instructions supplied with the winch install kit.

For winch control socket relocation follow fitting instructions supplied with the socket relocation kit.





140. **NOTE: IF FITTING WINCH WITH STEEL CABLE AND ROLLER FAIRLEAD (RFL), RFL MAY COME WITH WARNING LABEL.**

DISREGARD WARNING LABEL:
APPLIES TO FOOT-DOWN WINCH FITMENT - NOT APPLICABLE TO THIS BULL BAR.



141. Using a mechanical lifting aid, position the bull bar close enough to the vehicle to be able to re-route the 20-pin harness connector, harness, camera cable and washer line the same way they were removed.



142. Route vehicle front harness from left to right along the fixing points in bull bar mounts.

LHS shown, RHS opposite.

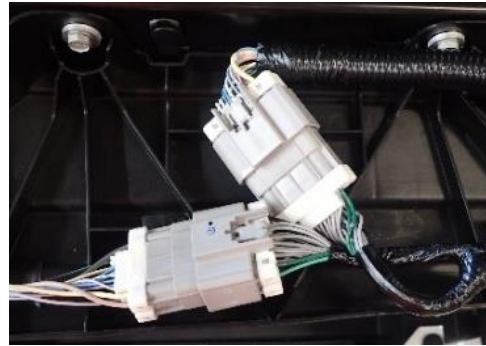
20-pin connector should remain on outside of LH upright.



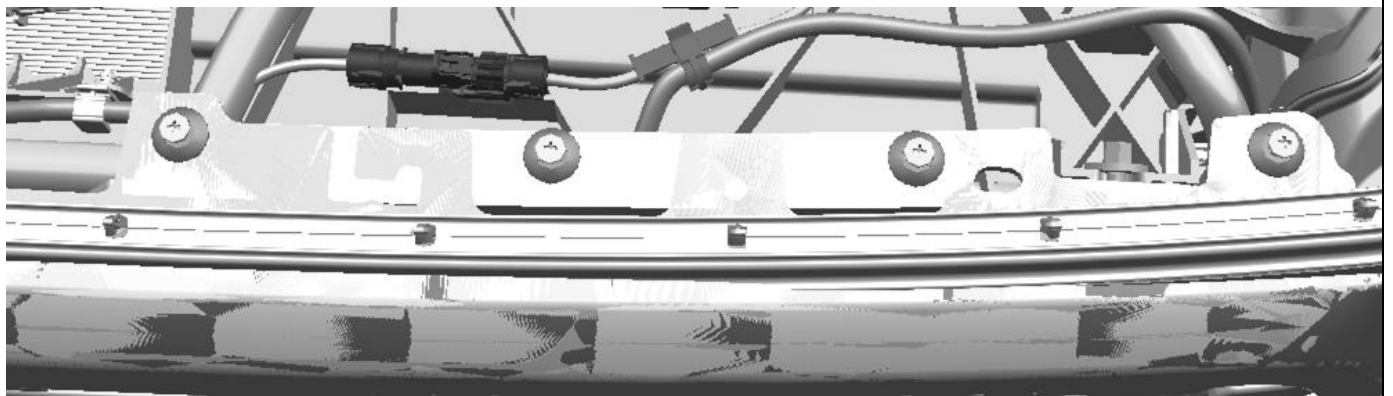
143. Re-route the vehicle harness into the vehicle from the bull bar under the LHS headlight cluster. Re-route through the way it was removed previously.

The 20-pin connector will connect into the engine bay harness installed previously.

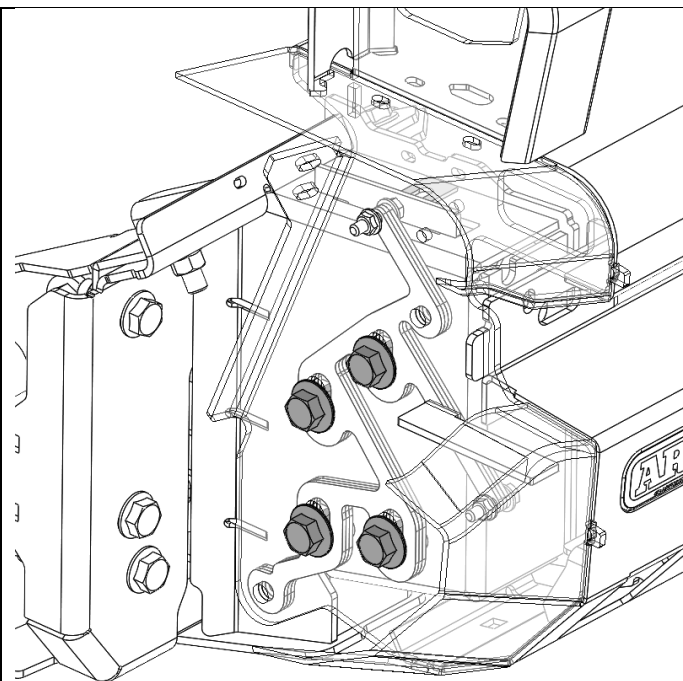
Re-fasten scrivet as shown once re-routed.



144. Reconnect the camera cable and washer lines where disconnected previously.



145. Using the OE screws, offer the grille back up to the vehicle and fasten.

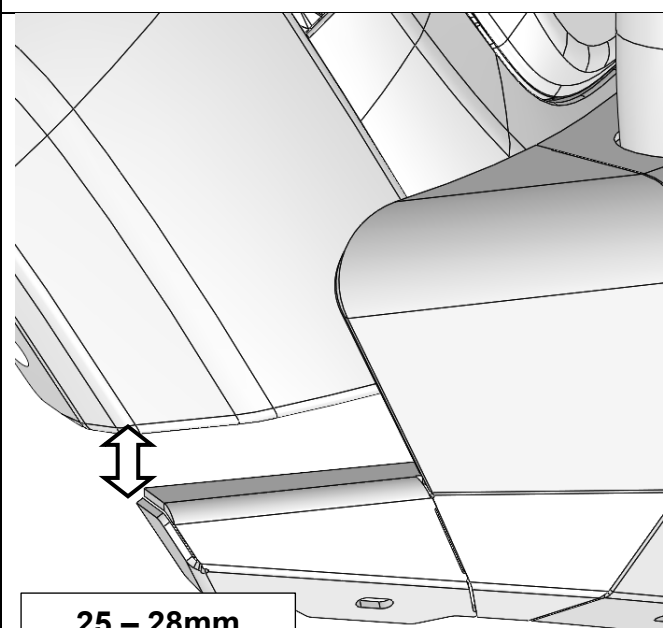


146. Loosely assemble bull bar onto impact absorbers using black M12x1.75x40 flange bolts. The flange bolts will fasten into the nut plates inserted in STEP 108.

If bull bar is not central to quarter panels, remove and adjust shims from one side to the other to adjust bull bar across the vehicle.

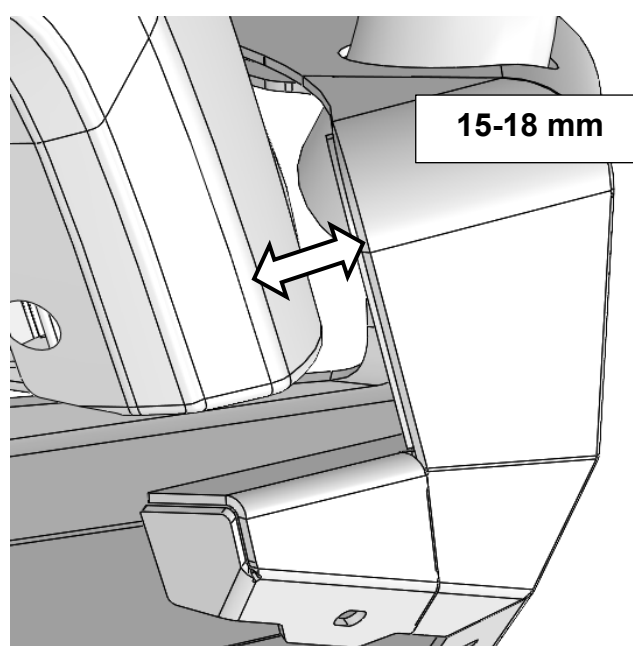
Wing section removed in image for clarity.

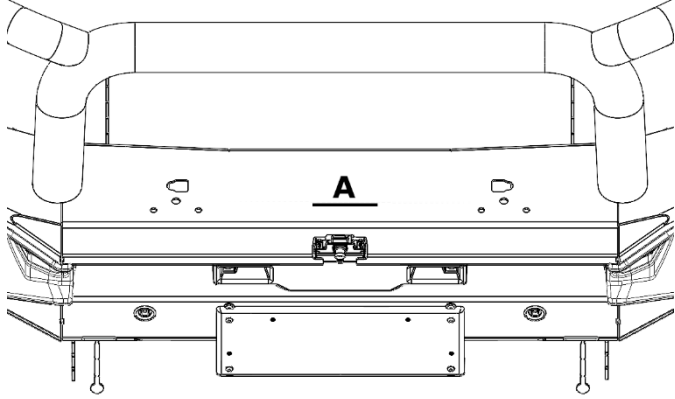
DO NOT TIGHTEN YET.



147. Once shim position has been confirmed, adjust bull bar on mounting slots to achieve a parallel 25-28mm VERTICAL gap between the wings and flare.

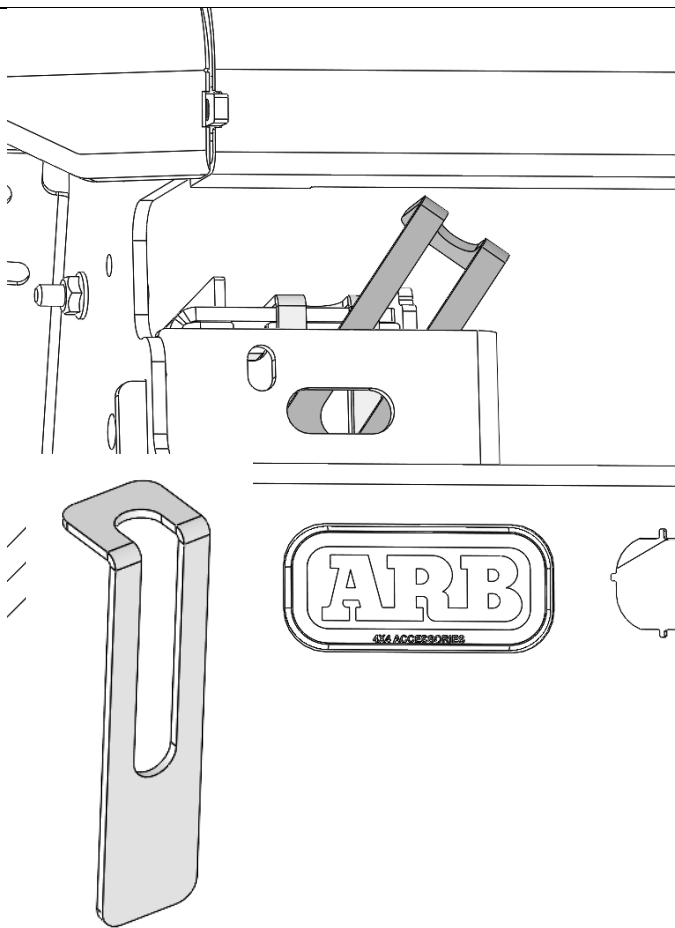
Tighten M12 mounting bolts to FIRM.



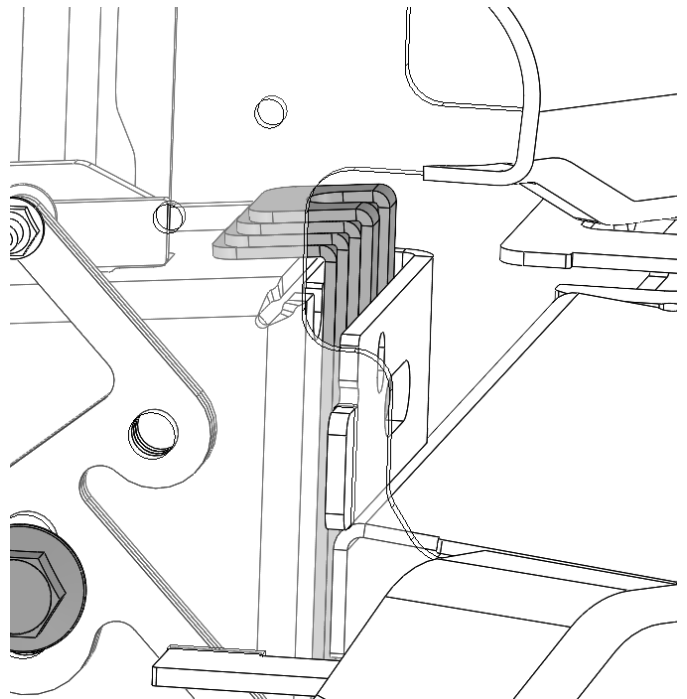


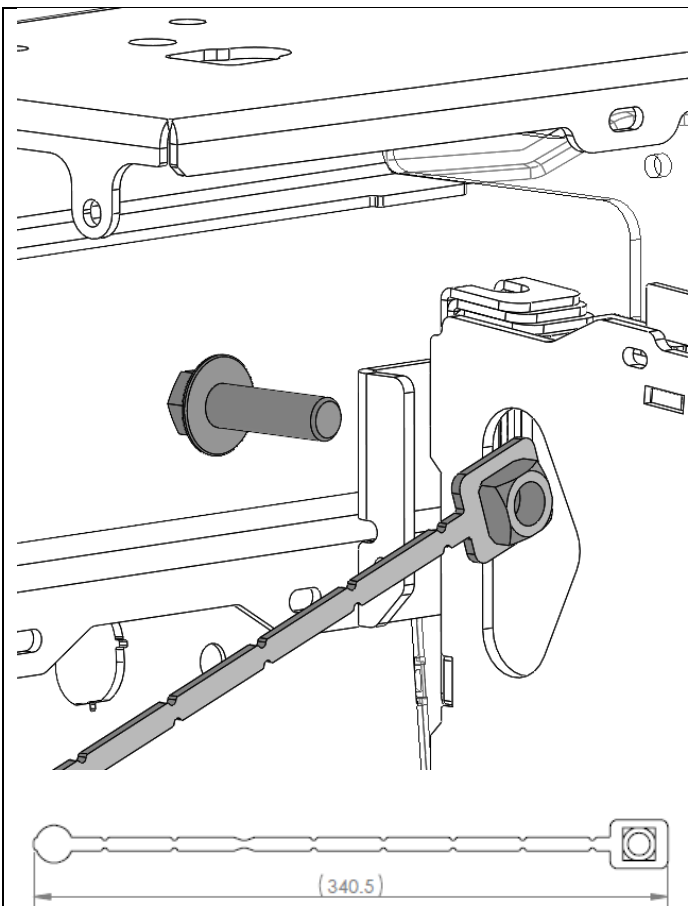
IMPORTANT: Top face of pan should be parallel to ground. If not, adjust accordingly.

148. Place an inclinometer/digital protractor on the bull bar top pan in position A as shown. The top face must be parallel to level ground with a tolerance of $\pm 1^\circ$.



149. With the bull bar firmly in the desired position, place front absorber shims (5848548) in position BETWEEN the front of the impact absorber and the rear of the bull bar as shown. Fit as required to pack the gap between the absorber and bar.

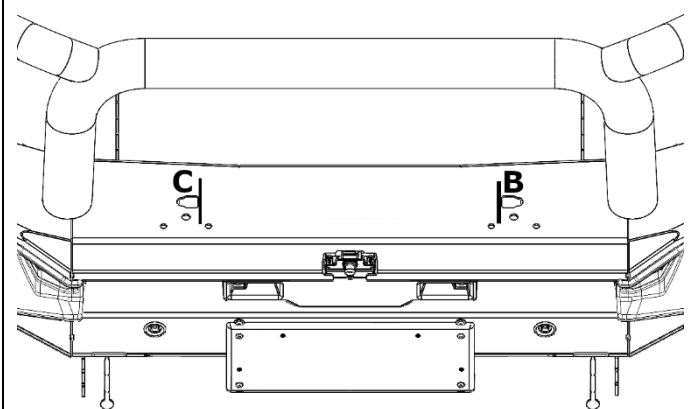
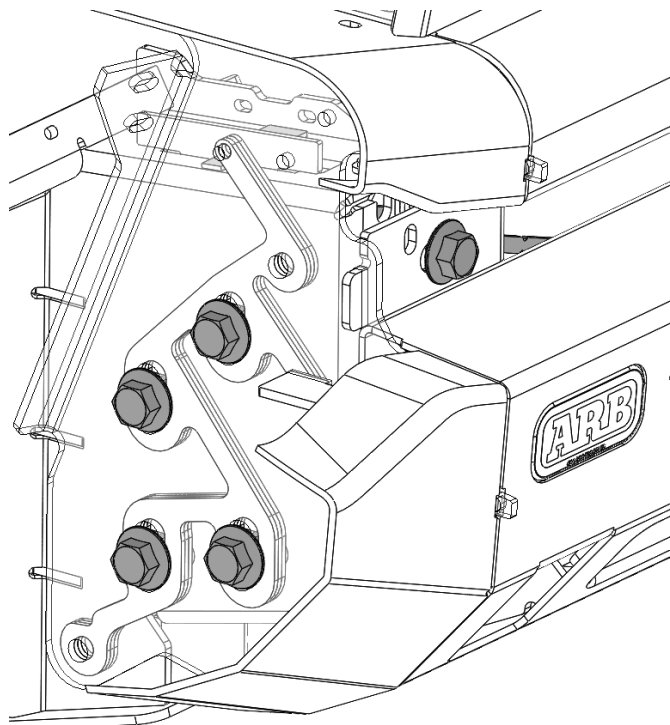




150. Secure the bull bar to the impact absorber **THROUGH** the placed packers using an M12x40 bolt and M12 nut stick as shown.

RHS shown, repeat LHS.

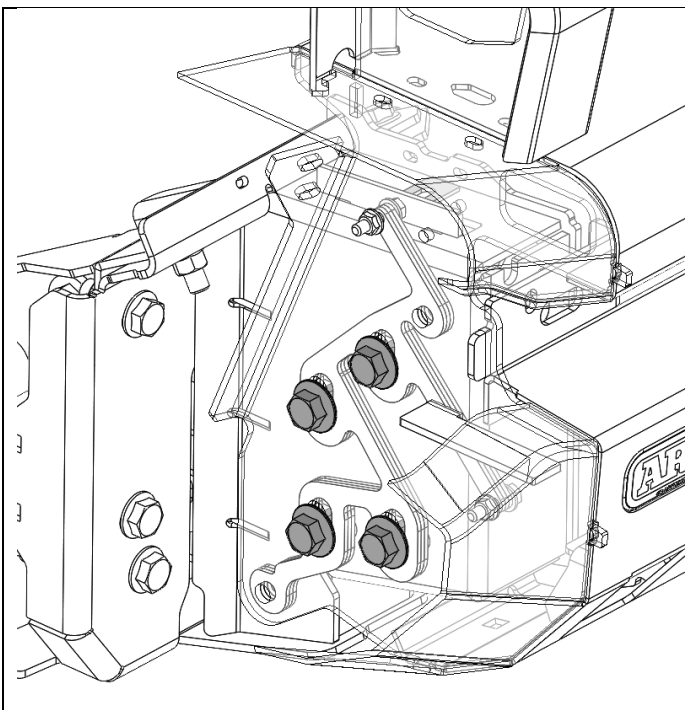
Tighten the front bolt to firm to close up any gap between absorber, bar and packers.



IMPORTANT: Top face of pan should be parallel to ground. If not, adjust accordingly.

151. Place an inclinometer/digital protractor on the bull bar top pan both positions B & C as shown. The top face must be parallel to level ground with a tolerance of $\pm 1^\circ$.

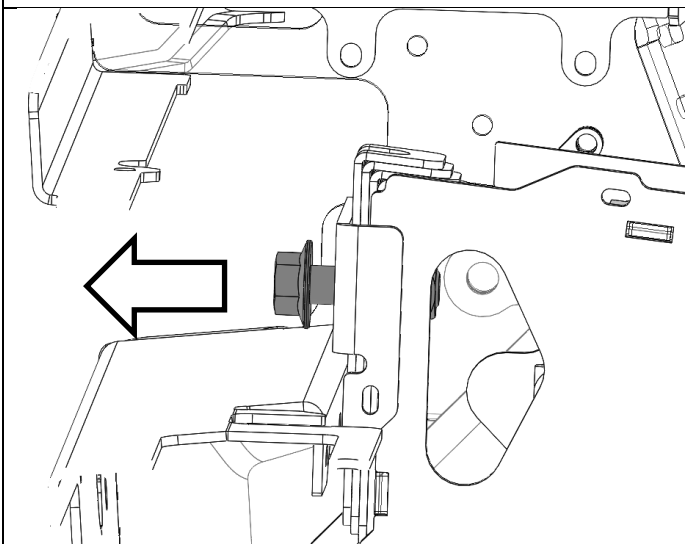




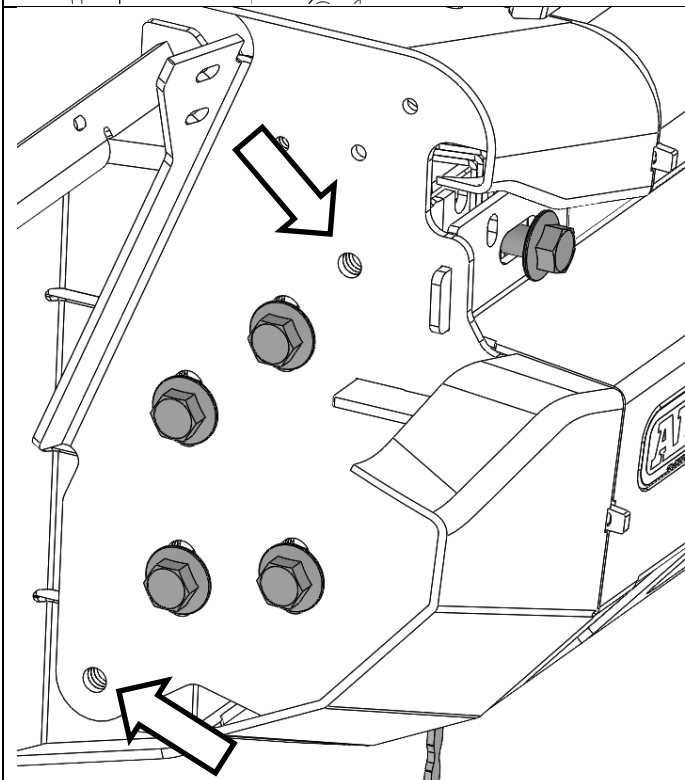
152. Torque the four M12 mounting bolts to spec.



M12 PC8.8 - 77 Nm.



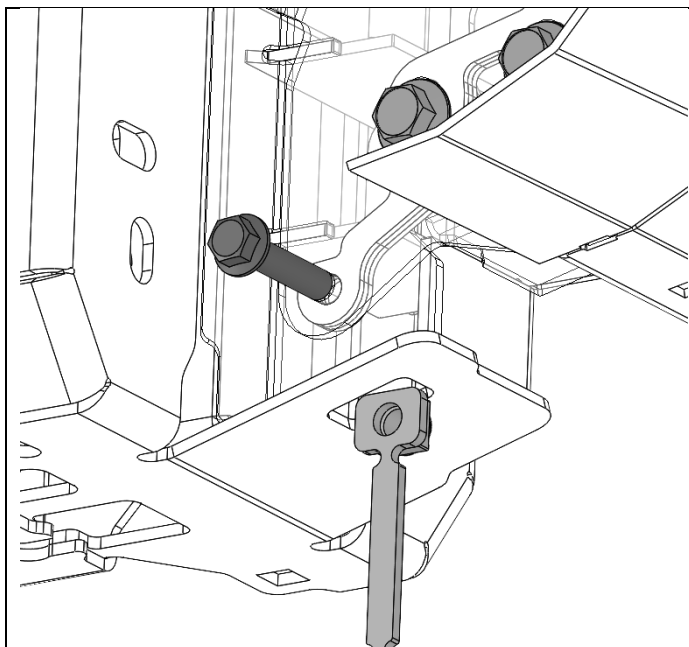
153. Loosen and pull the M12 front packer bolt forwards. This provides access to fit pinning bolts.



154. Drill four Ø10mm holes (2 per side) through the mount assembly using existing holes in bull bar as guide. This may require a right-angled drill.



Add anti-corrosion touch up paint to areas drilled.

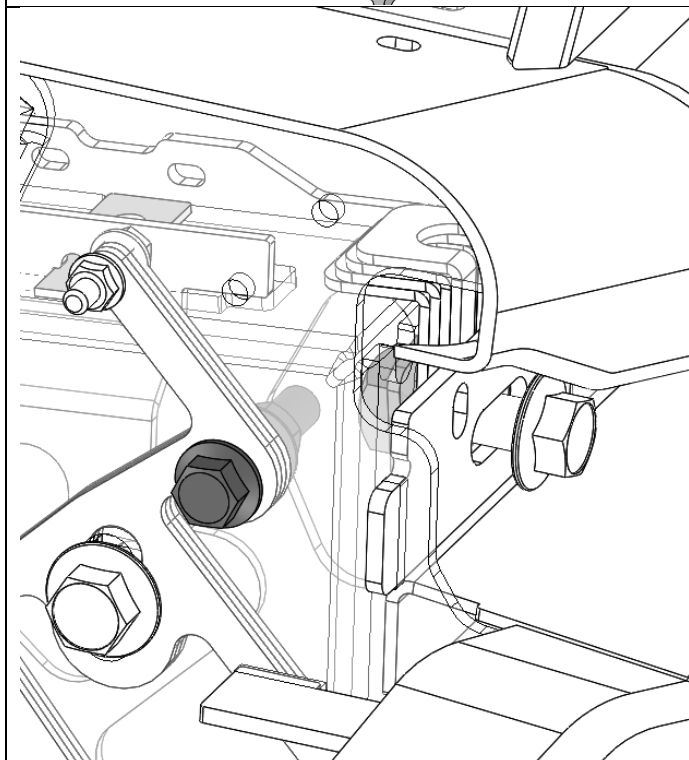
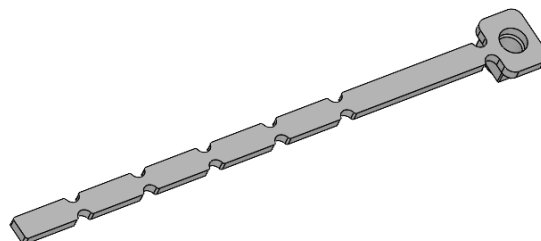


155. Fit the lower M10x45 pinning bolt with an M10 nut stick as shown (4655627).

Torque to specification.



M10 - 44 Nm.

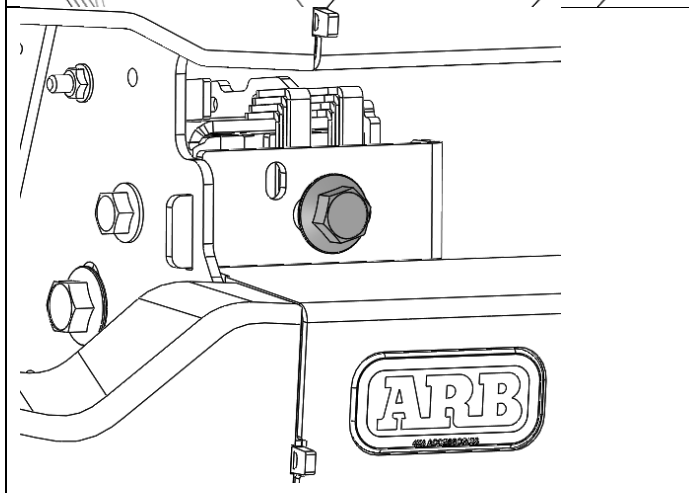
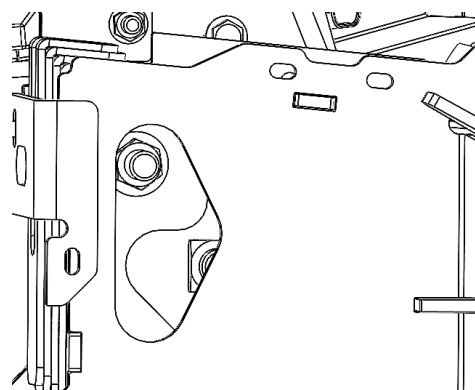


156. Fit the upper M10x45 pinning bolt and serrated flange nut. Access inside the absorber to fit the nut can be gained from the aperture shown.

Torque to specification.



M10 - 44 Nm.



157. Fully torque the two front absorber packer M12 bolt previously fitted on each side of the bull bar.

RHS shown, repeat LHS.

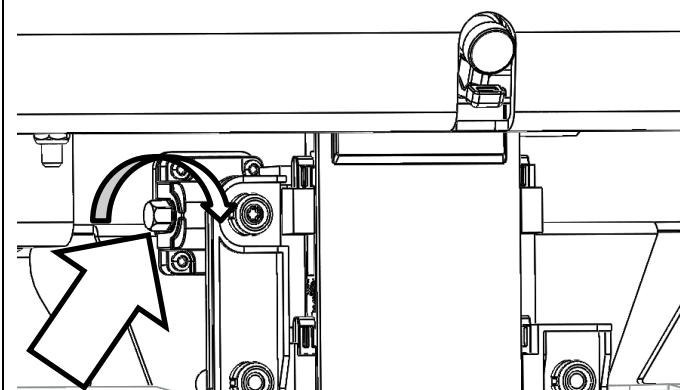


M12 PC8.8 - 77 Nm.

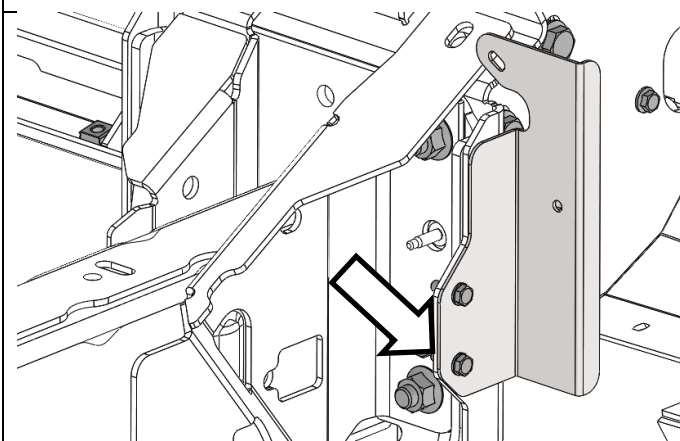


IMPORTANT: Front face of radar should be perpendicular to ground. If not, adjust accordingly.

158. Place a level on the front face of the sensor. The front face should be 90° degrees to level ground with a tolerance of $\pm 1^\circ$. If it is not within this tolerance, proceed to the next step. If it is within tolerance, no further action is required skip to STEP 160.

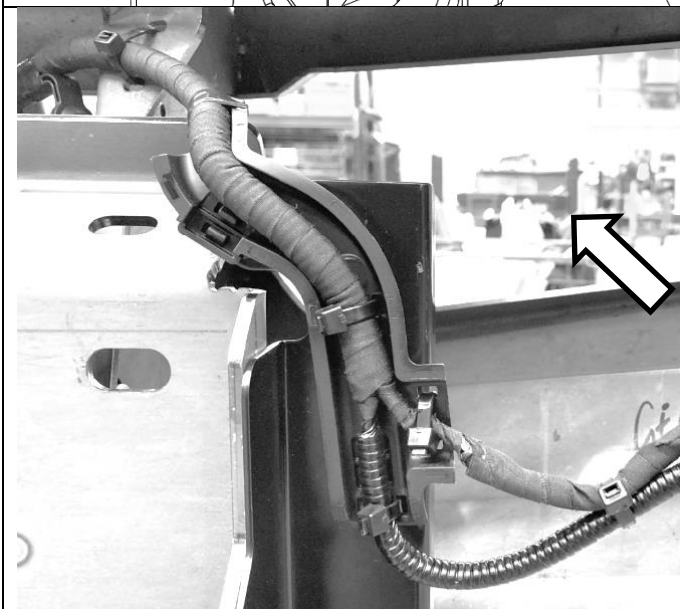


159. Using an 8mm socket, wind the adjustment screw to achieve correct angle.

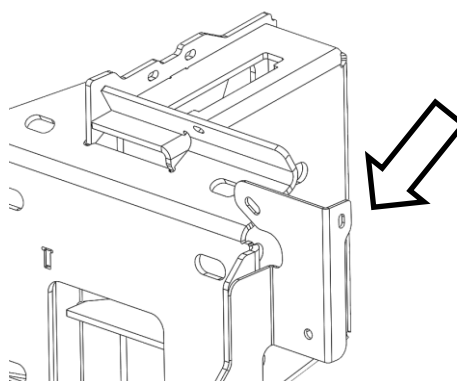


160. Fit the harness retention brackets to the RHS and LHS chassis mounts as shown using M6 hex screws, washers and cage nuts.

 M6 - 9 Nm.



161. Secure the harness plastic holder to the brackets fitted above and secure with cable ties to the chassis mount block as shown.

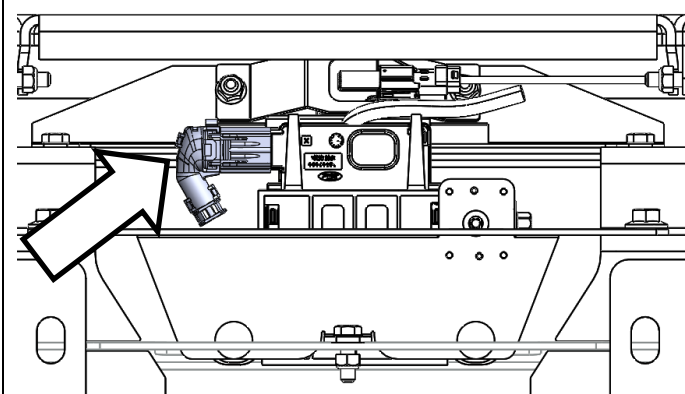




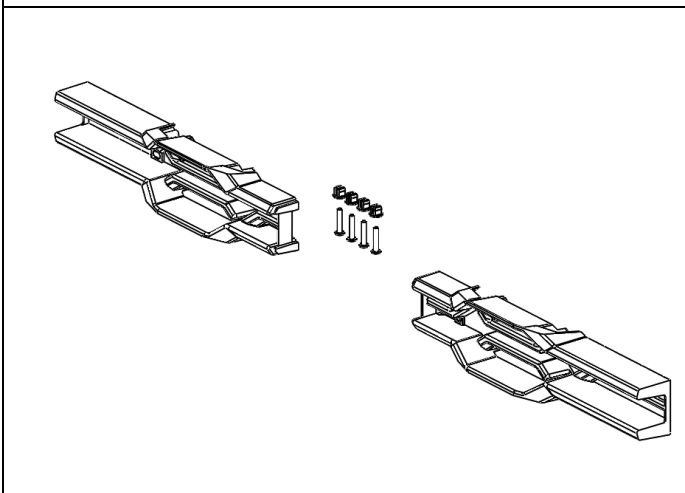
162. IF FITTING WINCH:

Cable tie positive and negative harness with ARB bracket.

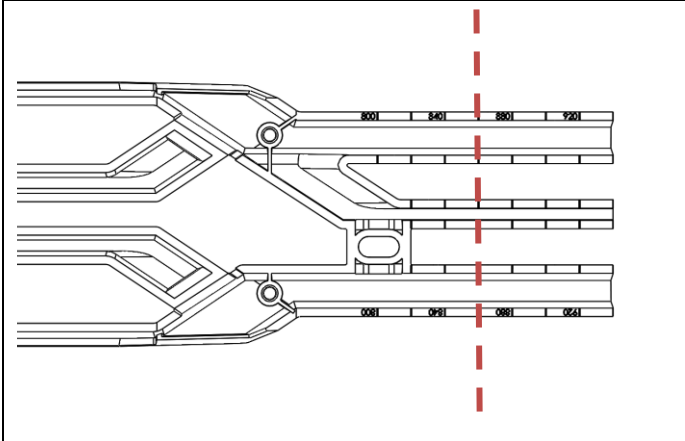
Cable tie the positive harness with the bull bar harness.



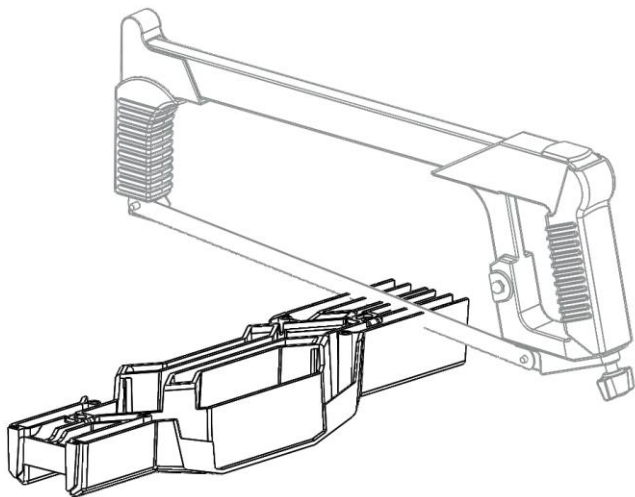
163. Connect radar to vehicle harness.



164. Identify the outer grille section kit, 3163295.

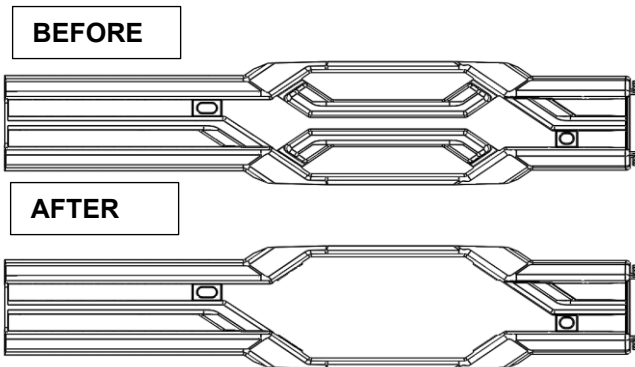


165. Mark both grille panels to be cut at the 860mm markings on the back face.



166. Use a hacksaw or similar cutting tool to carefully cut the grille panel at the positions marked in the step above.

Discard the off cuts and de-burr the cut edges using a file or sandpaper.

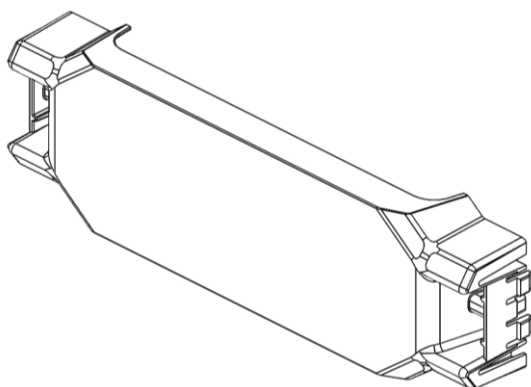


167. IF FITTING A WINCH AND CLUTCH ACCESS REQUIRED:

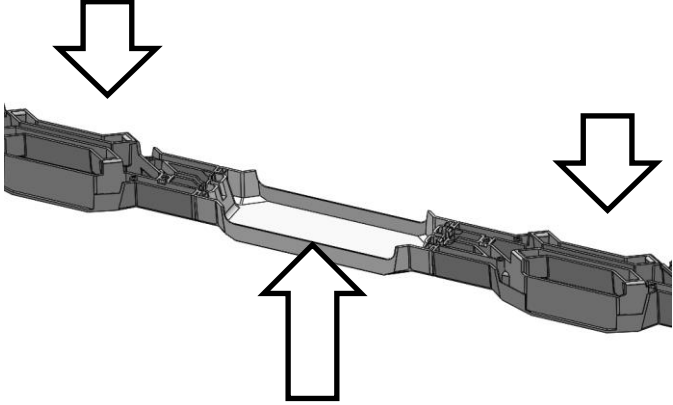
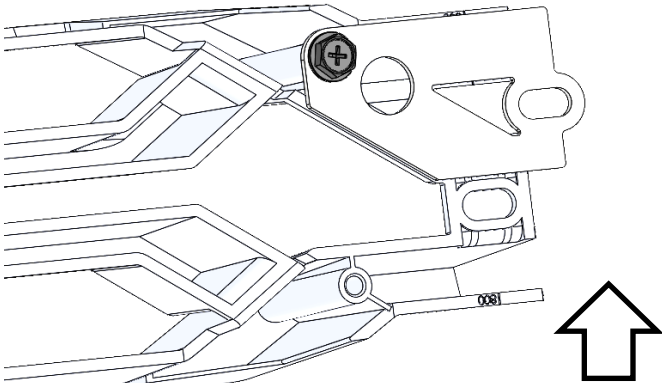
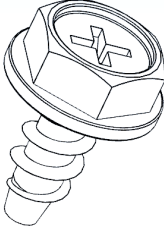
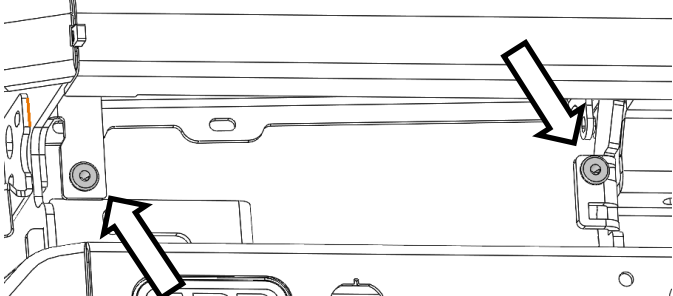
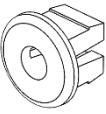
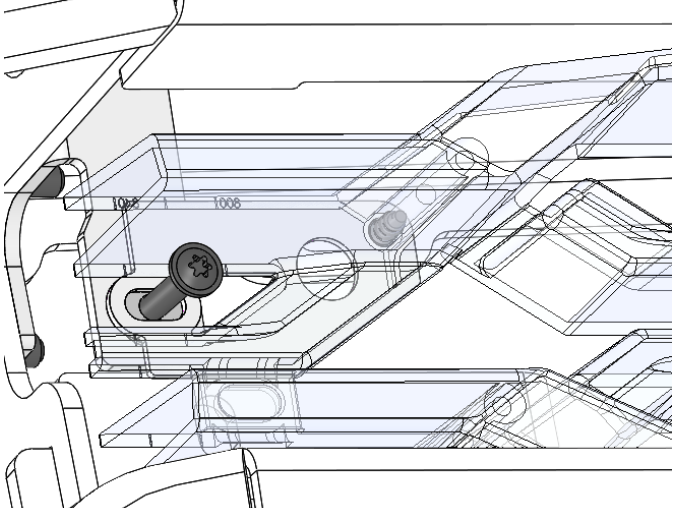
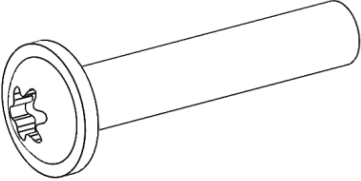
Identify the side of the grill where clutch access is required.

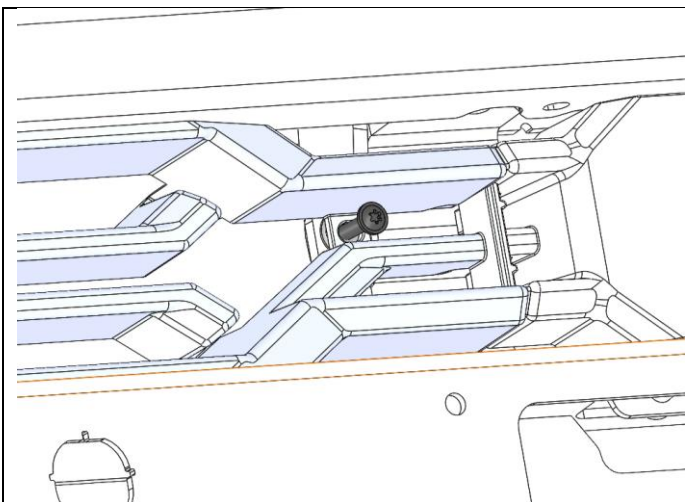
Remove the grille section shown for access to clutch lever. Remove

Cut from rear with an oscillating multi-tool. Deburr the edges post-cut.

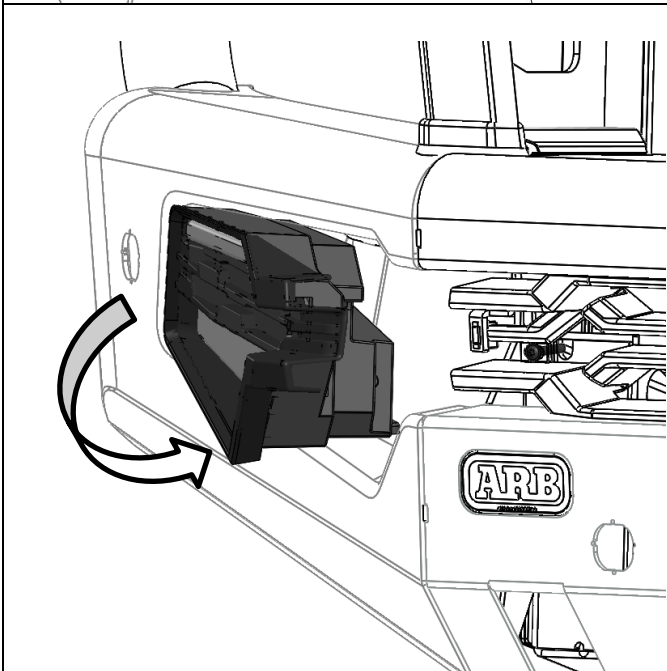
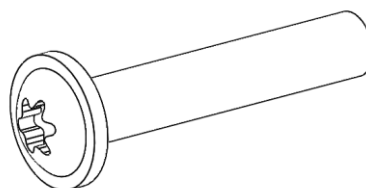


168. Identify the inner grille section kit, 3163316.

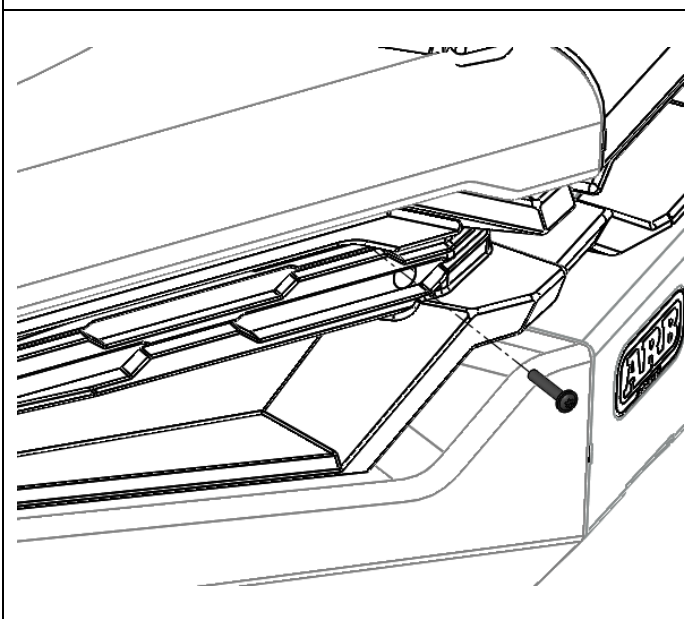
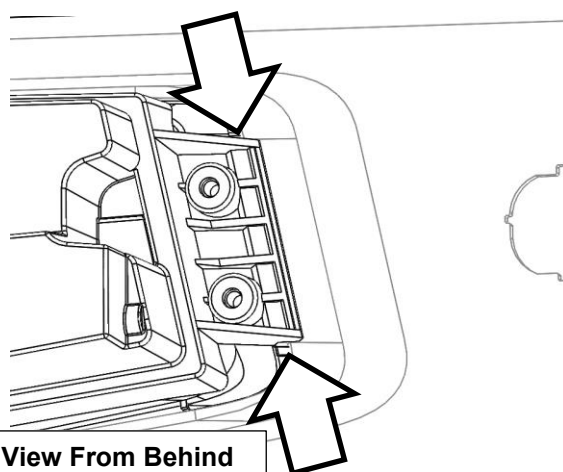
	169. Assemble centre section into both outer sections, make sure clips are fully engaged.
 TOP OF BULL BAR	170. Fit the grille adaptor plate 3197134 to the upper holes on each side of the grille as shown using the Phillips head screw. RHS shown, repeat LHS. 
	171. Press four round plastic grommets from the fitting kits into the upper square cut-outs seen from the front of the bull bar. RHS shown, repeat LHS. 
	172. Secure the grille at the outer points through the slot in the adapter plate fitted in <u>STEP 170</u>. Use the Torx head screw supplied in grille kit. 



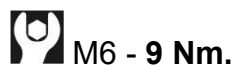
173. Attach grille assembly to bull bar at the inner grommets using two Torx head screws supplied in grille kit. RHS shown repeat LHS.

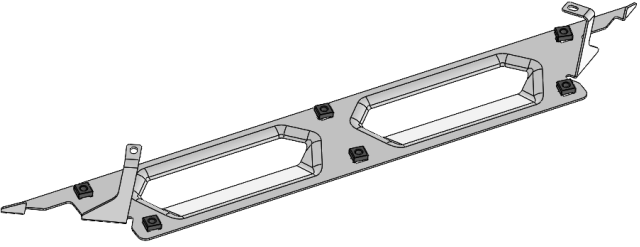
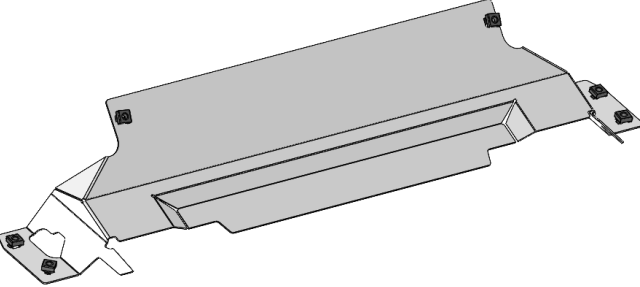
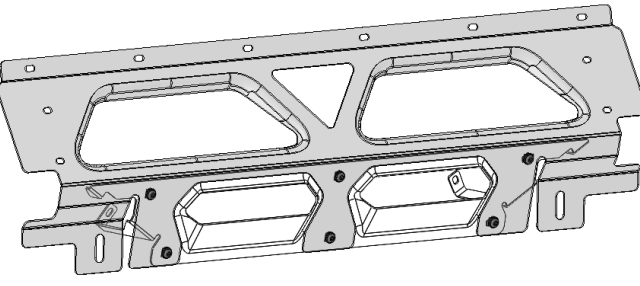
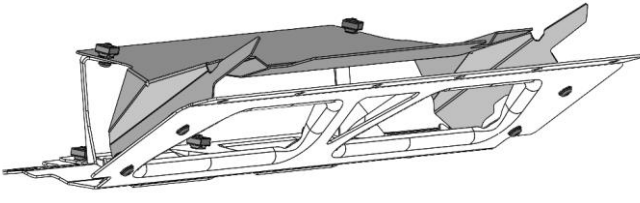


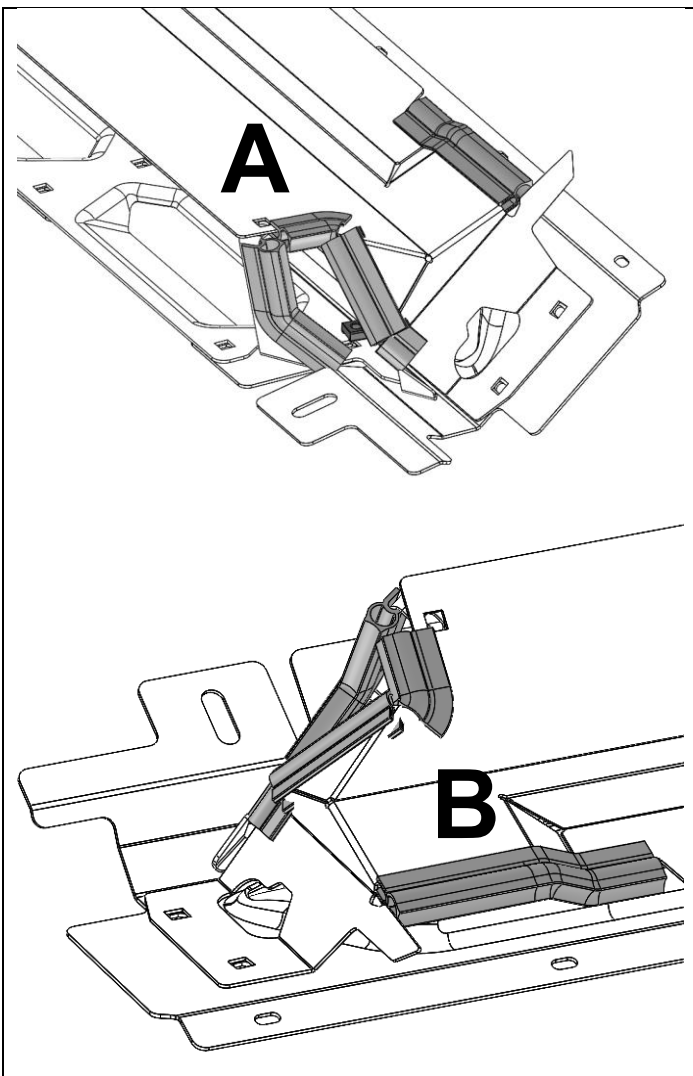
174. Index the outside groove of the lamp cluster over the edge of the aperture in the bull bar wing. Then rotate the lamp cluster into place.



175. Secure lamp cluster with M6 Torx head screw.



	176. Fit six cage nuts to the duct panel as shown.
	177. Fit six cage nuts to the ducting shroud as shown.
	178. Fasten the duct panel to the centre panel using six M6x16 button head screws and washers into the cage nuts fitted previously.  M6 - 9 Nm.
	179. Fasten the shroud panel to the centre panel and cut panel using M6x16 button head screws into the cage nuts fitted previously.  M6 - 9 Nm.

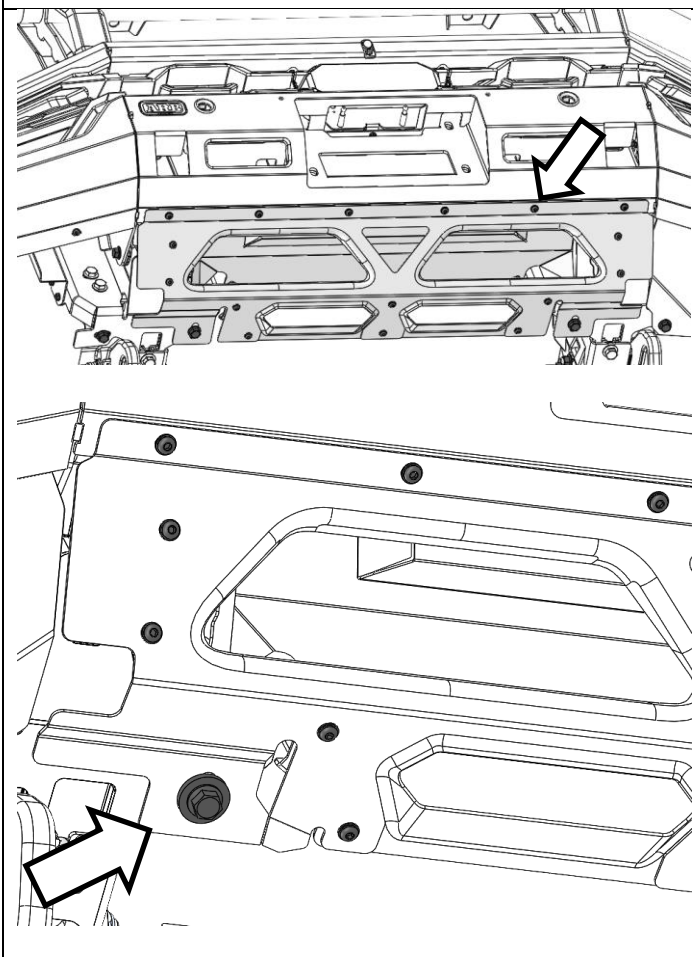


180. Fit a 300mm length of bulbed pinch weld to location A. Trim pinch weld if required to manipulate onto the edges of the ducting.

Trim the excess.

181. Fit a 150mm length of bulbed pinch weld in location B.

Repeat on the LHS.



182. Fasten the duct panel assembly to the bull bar lower pan using six M6x20 button head screws.

Secure to the impact absorber mount at the location shown using one M10x30 bolt, two M10x4x30 flat washers and an M10 Nyloc nut.

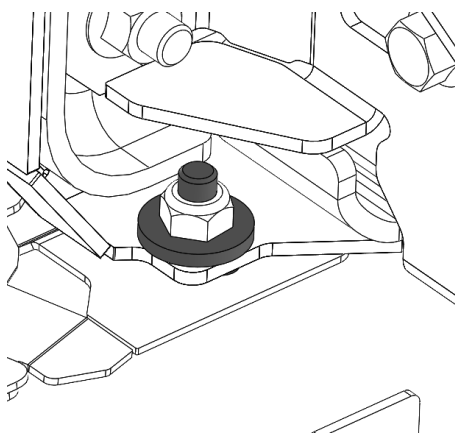
RHS shown, repeat LHS.

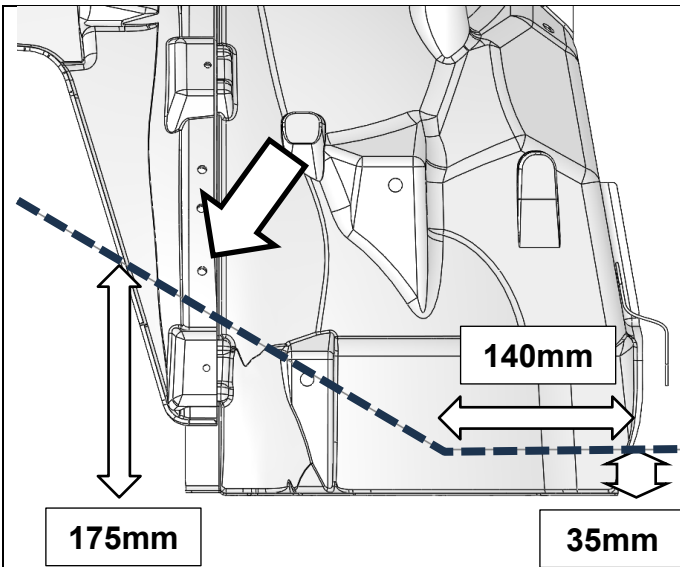


M6 - 9 Nm.



M10 - 44 Nm.

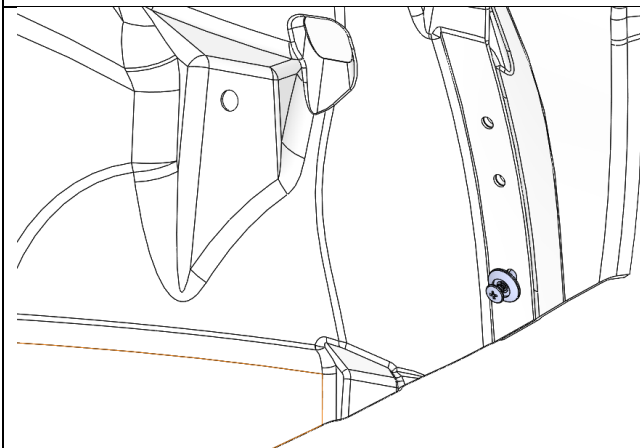




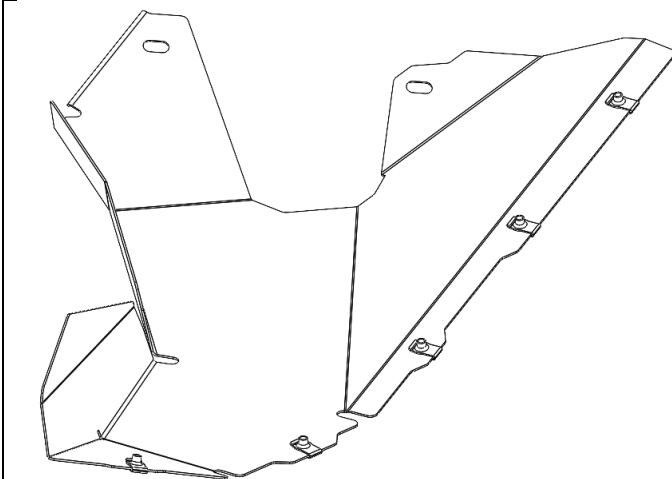
183. Mark and cut the wheel arch liners as shown using an oscillating multi-tool.

Ensure the horizontal trim line runs **UNDER** the fastener shown.

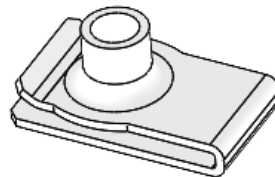
RHS shown, mirror on LHS.

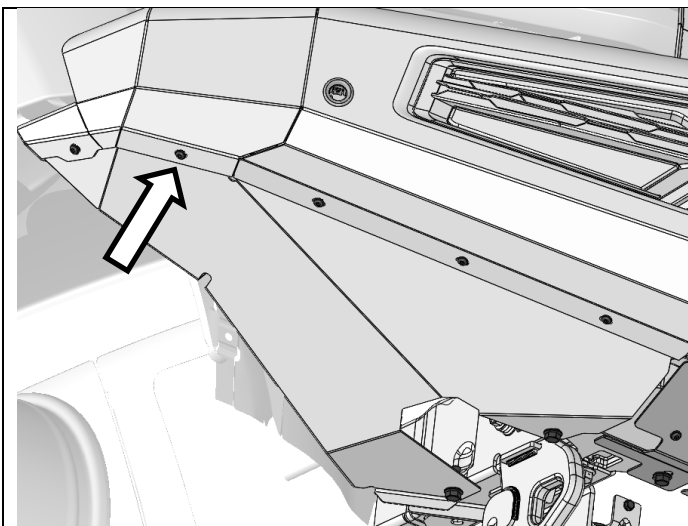


184. Retain the two trimmed panels of the wheel arch liner using the scriveners provided on each side of the vehicle.



185. Fit each wing underpanel with five U nuts as shown. Ensure threads are to the internal side of the panel.

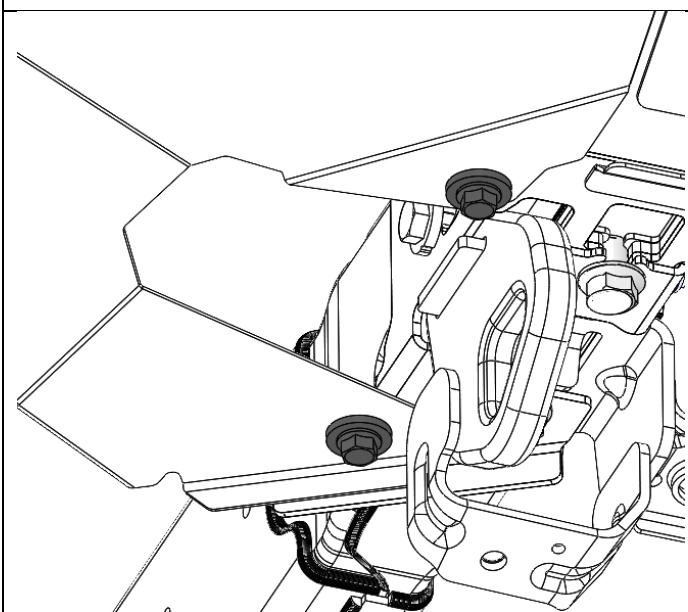




186. Fit the wing under panels into wings with five M6 button head screws and M6 washers.

RHS shown, repeat LHS.

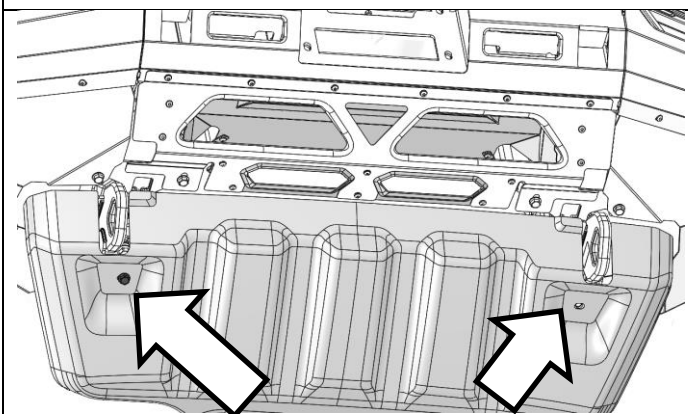
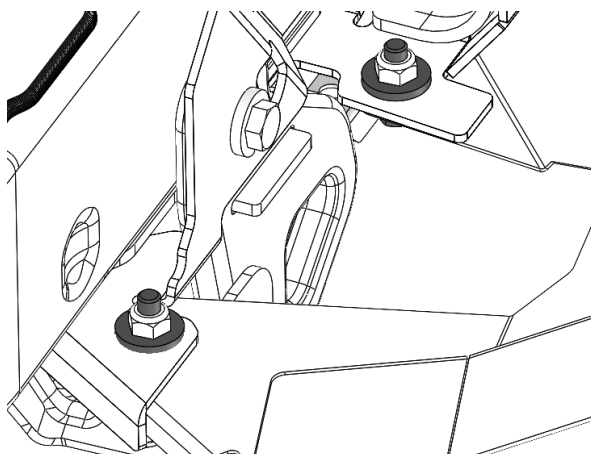
 M6 - 9 Nm.



187. Secure wing panel to the chassis mounts in the two positions shown using two M10 flange bolts, four M10x4x30mm flat washers and two M10 Nyloc nuts each side.

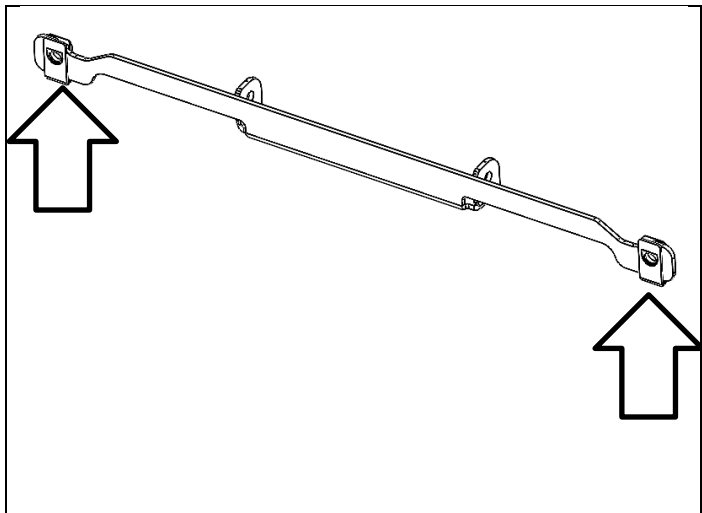
RHS shown, repeat LHS.

 M10 - 44 Nm.

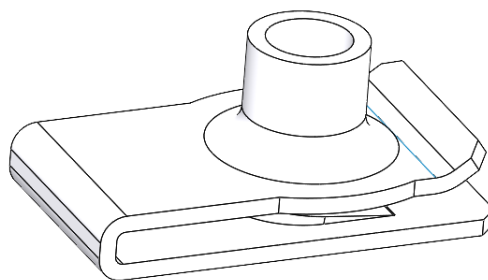


188. Re-fit the OEM stone shield over the ARB centre panel and wing underpanels with the OEM bolts previously removed.

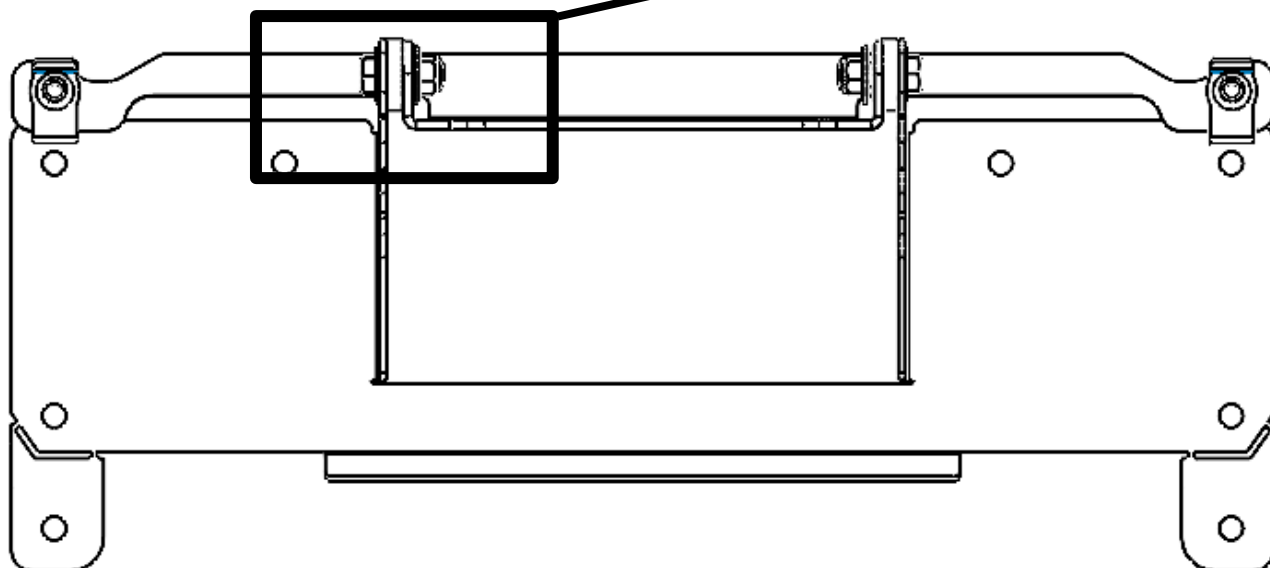
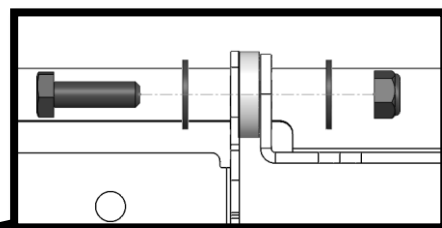
 M10 - 44 Nm.



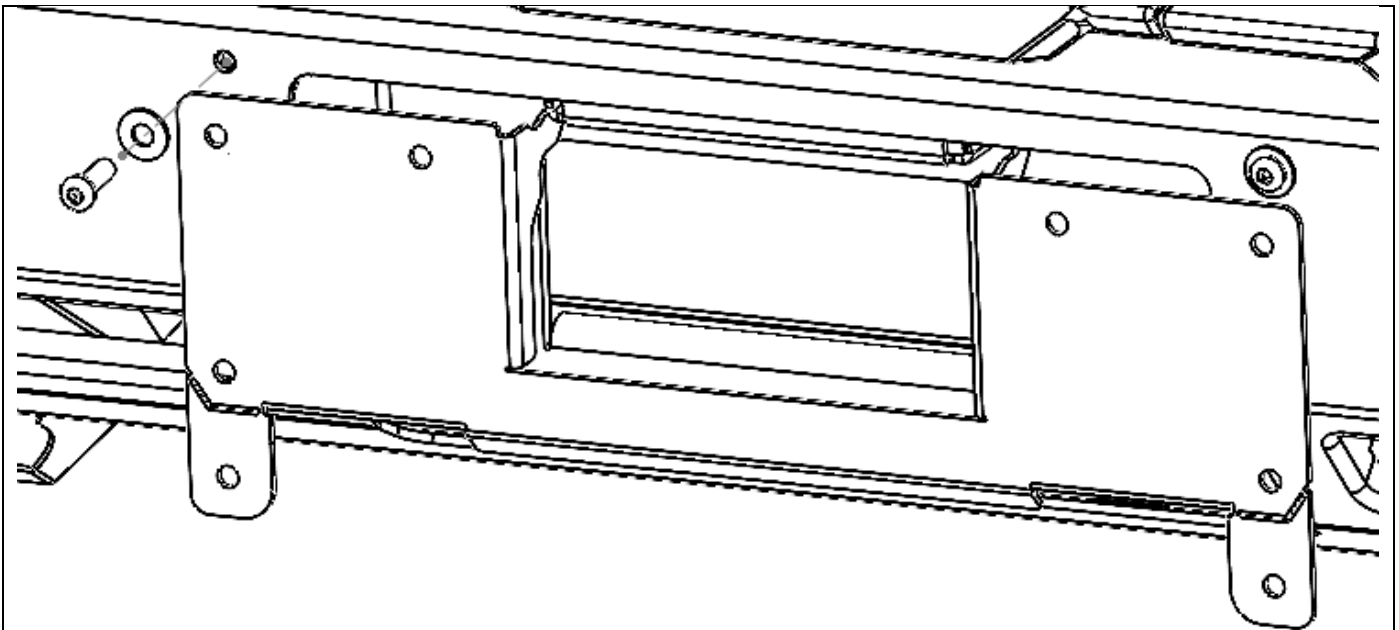
189. Assemble two M6 U-nuts onto the fixed number plate bracket in the orientation shown – nuts on the same side as the returns.



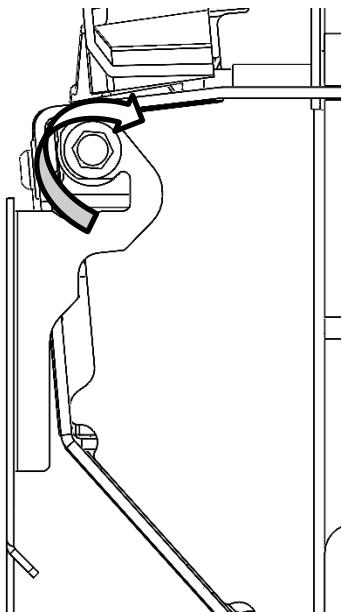
190. Assemble the two number plate brackets together using two M6x20 hex bolts, nylon packers, steel washers and nyloc nuts provided. Do not fully tighten at this point.



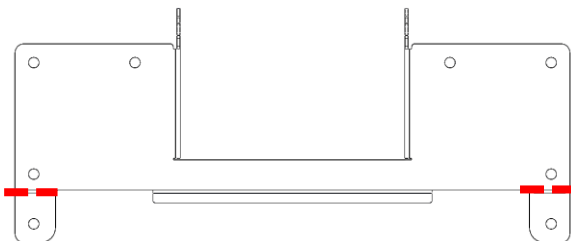
191. Position folding bracket in behind the front face of the bull bar and fasten with two M6x20 black button head bolts and washers. Torque to specification.



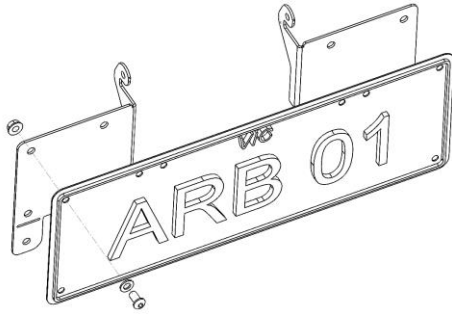
M6 - 9 Nm.



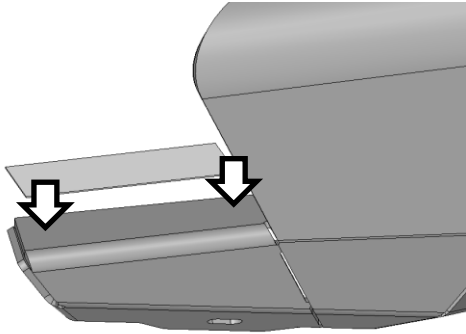
192. Gradually tighten the hex bolt and nyloc nuts installed in step 190 until adequate friction is achieved to allow smooth rotation.



193. If fitting a slim line / "Euro" style number plate, trim both sides at the dashed lines shown in the image. Remove all burrs and sharp edges using a file, then apply black touch up paint to the cut areas.



194. Attach the number plate to the pivot bracket using, four M6X10 button head screws, M6 washers and M6 flange nuts.



195. Identify protection tape and apply to area shown on bull bar wing.

ONCE SUMMIT BAR IS FITTED:

- Ensure all bolts are tensioned correctly.
- All wiring is clear of sharp edges or moving surfaces and secured properly.
- Piping is secured well away from sharp or moving components.
- Check operation of winch, if fitted and ensure it is used in conjunction with the user manual.
- Check all wiring and connections to turn signal lamps, parking sensors, camera, washers etc. are functioning correctly.
- **IMPORTANT: CALIBRATION CARD 37801181 MUST be completed, explained and provided to the driver during vehicle handover.**

