

# OCAM

**4x4  
ACCESSORIES**

## INSTALLATION INSTRUCTIONS

PART NUMBER: BB2-LDV-T60-17

APPLICATION: LDV-T60 2017 to 08/2021

FITTING TIME: 4 hours



**OCAM 4x4 Accessories**  
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## WARNING

- Do not attach Vehicle Frontal Protection System (**VFPS**) to the vehicle using anchor-ages not intended for this purpose (e.g. engine mounting bolts).
- Do not use this product for any vehicle, make or model other than those specified by the VFPS manufacturer.
- Do not remove the plaque or label from the VFPS.
- Do not modify the structure of the VFPS in any way.

During installation of this product some of the driver aids may have been relocated. Some of these may need to be re-calibrated after fitment by the dealer. While this product has been produced to provide continued functionality of “driver aids” as closely as possible to Original Equipment, road conditions and the combination of other accessories fitted to the vehicle may affect functionality and cannot be anticipated. ***The driver remains responsible for the vehicle at all times.***

## IMPORTANT INFORMATION

- Always wear safety glasses and hearing protection.
- Make sure work area is kept clean at all times.
- Check that all components, as listed, are present.
- Thoroughly read all instructions.
- This product or its fasteners must not be modified in any way.
- These instructions are accurate as at the revision date and do not take into account any changes made by the vehicle manufacturer to vehicle design after the revision date, or other accessories that are or have been fitted to the vehicle.
- It is the responsibility of the installer to confirm correct operation/clearance of all components.
- All holes drilled must have all burrs and swarf removed then coated with a suitable rust preventative paint.
- Ensure that all hardware is fastened to torque list as detailed in these instructions.
- On completion of the job, these instructions are to be given to the customer.

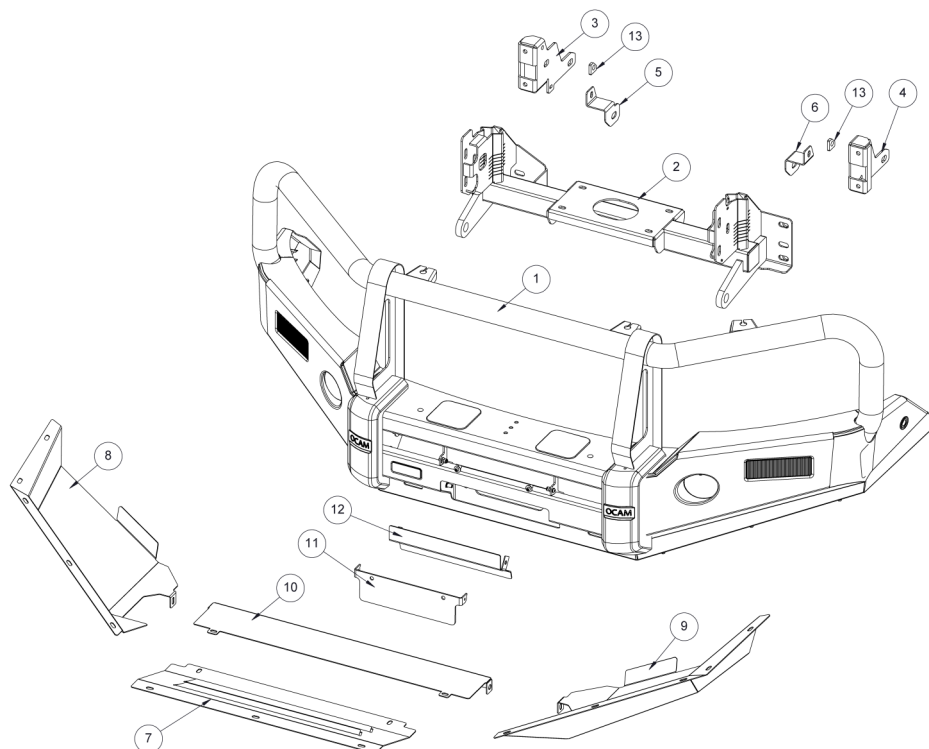
## PRODUCT CARE

- To maintain the appearance of the product, wash and dry regularly using a quality car wash.
- The product should be periodically checked for tightness.

| Torque Settings |           |              |
|-----------------|-----------|--------------|
| BOLT SIZE mm    | TORQUE Nm | TORQUE ft.lb |
| M5              | 7         | 5            |
| M6              | 11.8      | 8.7          |
| M8              | 28.8      | 21.3         |
| M10             | 57.5      | 42.3         |
| M12             | 99.8      | 73.7         |

## Tools Required

1. Metric socket and spanners
2. Phillips and flat head screwdrivers
3. Torx drivers
4. Torque wrench
5. Marking pen
6. 2" Masking tape
7. Air hacksaw or Multi-Tool
8. Soldering iron
9. Electrical tape



| Item | Part number | Description               |   | Qty |
|------|-------------|---------------------------|---|-----|
| 1    | 200476036   | Channel assembly          |    | 1   |
| 2    | 200476290   | Winch frame               |    | 1   |
| 3    | 200394487   | Chassis bracket outer RH  |    | 1   |
| 4    | 200394485   | Chassis bracket outer LH  |    | 1   |
| 5    | 200476350   | Chassis bracket inner RH  |    | 1   |
| 6    | 200476349   | Chassis bracket inner LH  |    | 1   |
| 7    | 200476064   | Centre bash plate front   |  | 1   |
| 8    | 200394519   | Centre bash plate rear    |  | 1   |
| 9    | 200347873   | Outer bash plate RH       |  | 1   |
| 10   | 200347872   | Outer bash plate LH       |  | 1   |
| 11   |             | Number plate bracket      |  | 1   |
| 12   |             | Winch cover plate         |  | 1   |
| 13   | 200394561   | Chassis spacer            |  | 2   |
| 14   |             | Camera relocation bracket |  |     |
| 15   | 200501405   | Pinch mould @ 500mm       |  | 2   |

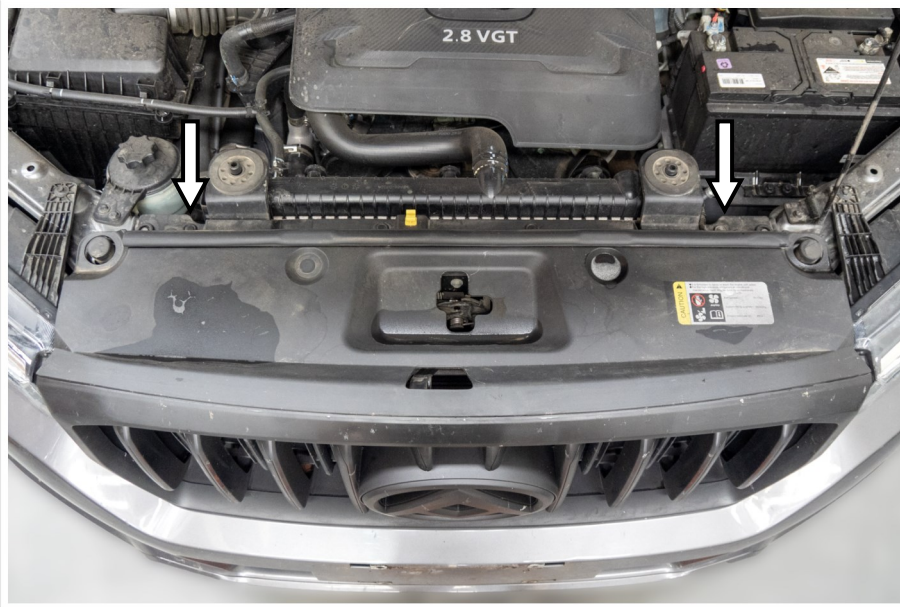


## Hardware

| Item | Part number | Description                | Qty |
|------|-------------|----------------------------|-----|
| 1    | 3003087     | Hex bolt M12 x 1.25 x 40mm | 6   |
| 2    | 3000172     | Spring washer M12          | 6   |
| 3    | 3004966     | Flat washer M12 x 32mm     | 12  |
| 4    | 3001554     | Hex nut M12 x 1.25         | 6   |
| 5    | 3003060     | Hex bolt M10 x 1.25 x 90mm | 2   |
| 6    | 3003020     | Hex bolt M10 x 1.25 x 30mm | 2   |
| 7    | 3002712     | Hex bolt M10 x 1.5 x 35mm  | 6   |
| 8    | 3000161     | Spring washer M10          | 8   |
| 9    | 3000246     | Flat washer M10 x 30mm     | 12  |
| 10   | 3001540     | Hex nut M10 x 1.25         | 2   |
| 11   | 3001590     | Flange nut M10 x 1.25      | 2   |
| 12   | 3002529     | Hex bolt M6 x 25mm         | 4   |
| 13   | 3006351     | Combo bolt kit M6          | 21  |
| 14   |             | Button head bolt M6 x 20mm | 4   |
| 15   | 3000136     | Spring washer M6           | 4   |
| 16   |             | Nylon washer M6 x 1.0mm    | 2   |
| 17   |             | Flat washer M6             | 8   |
| 18   |             | Nyloc nut M6               | 2   |
| 19   | 3001569     | Flange nut M6              | 4   |



1. Park the vehicle in a suitable location.
2. Where fitted, remove the number plate.



3. Remove the clips securing the top cover. Keep for reinstallation.
4. Unclip the top cover from the grille and remove.



5. Remove the two torx bolts securing the grille to the headlights. Keep for reinstallation.
6. If fitted, disconnect the front camera.





7. Carefully remove the grille from the vehicle.



8. Apply masking tape to the front of the bumper bar as shown.



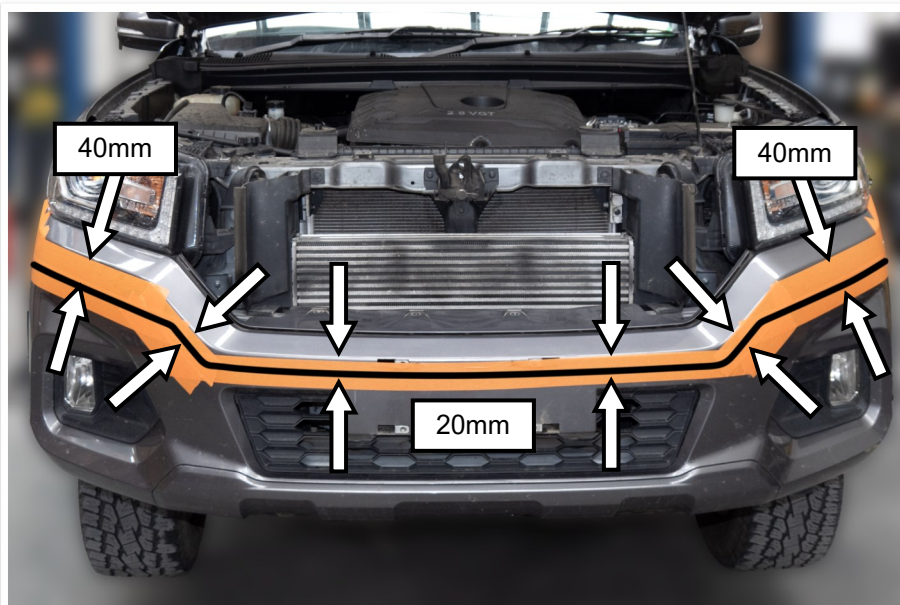
9. Apply masking tape to the sides of the bumper bar as shown.



10. There is a bumper cut template included at the end of these instructions. Cut out the templates and join the three parts as directed.
11. Fit the template to the vehicle using masking tape to hold in place.

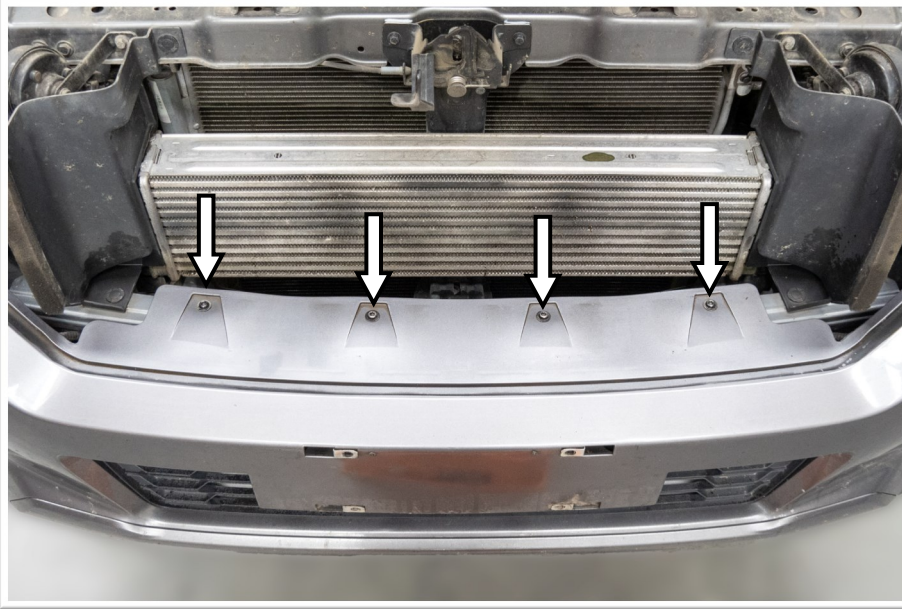


12. Draw a line along the bottom of the template with a marker.
13. Remove the template and repeat for the opposite side.

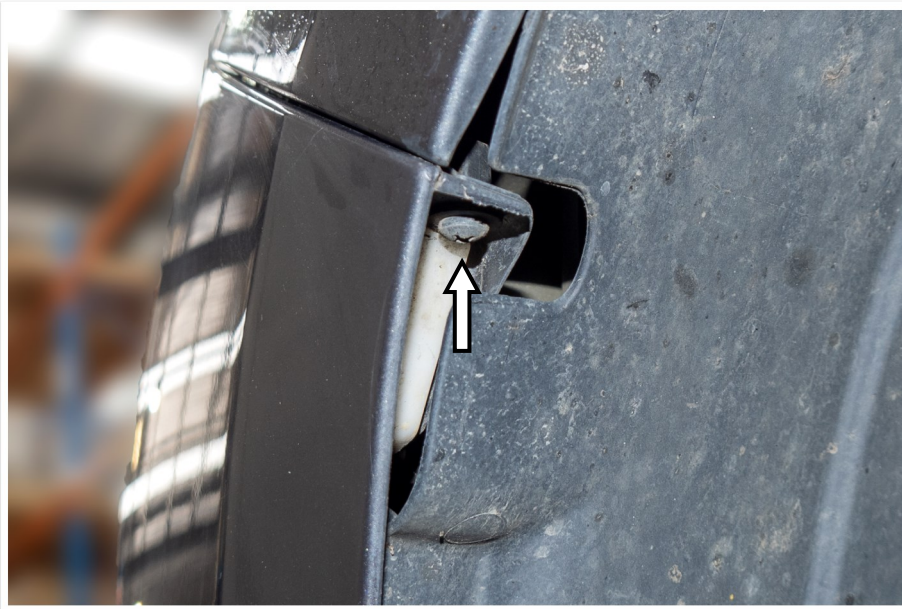


14. From the ends of the template use a marker to connect the both sides as shown below. 40mm from the crease under the headlights and 20mm under the crease around the grille opening.





15. Remove the four screws securing the top of the bumper bar. Keep for reinstallation.

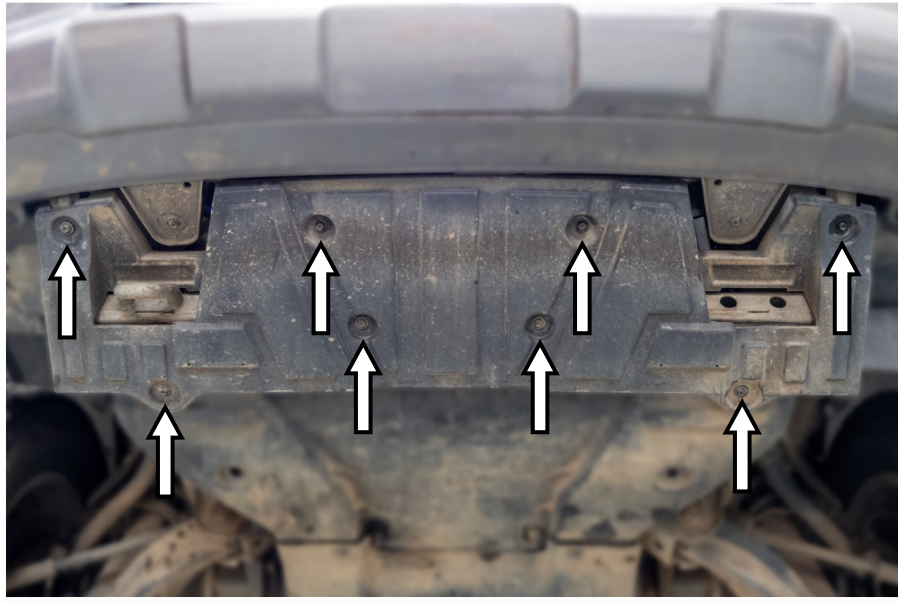


16. Remove the screw from either side of the bumper bar that secures the bumper to the guards. Keep for reinstallation.



17. Remove the four plastic clips and four screws from the bottom of the bumper bar. These can be discarded as they are no longer needed.

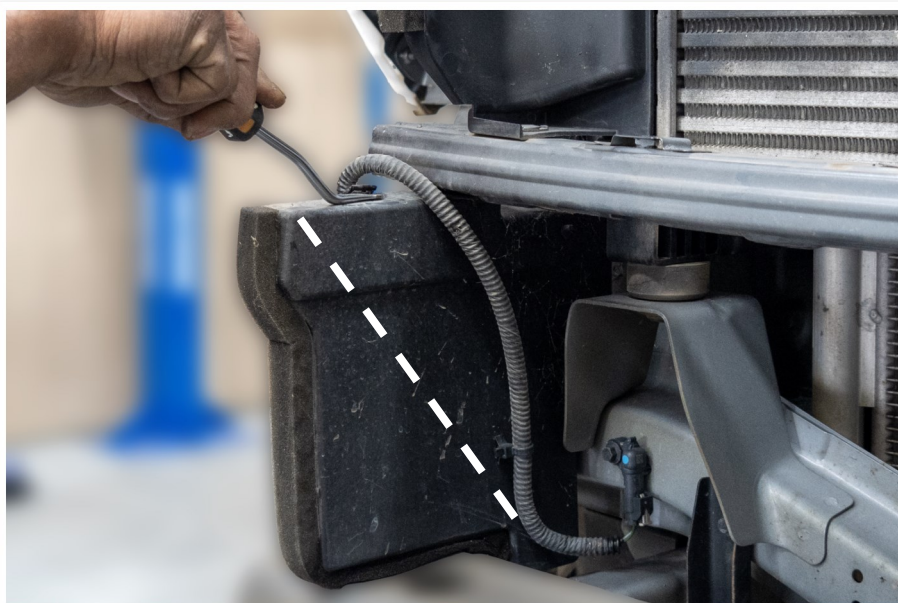




18. Remove the plastic splash tray.  
This can also be discarded.



19. Remove the bumper bar from the vehicle. Place on a stand or protected surface.

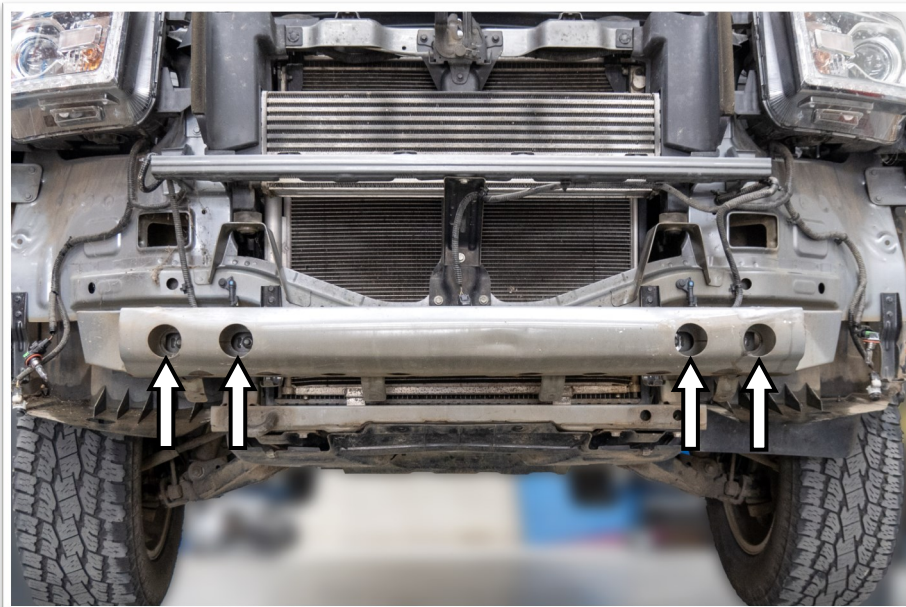


20. Detach the looms from the air guides above the front intrusion beam.

21. Remove the air guides.

22. Trim as shown.

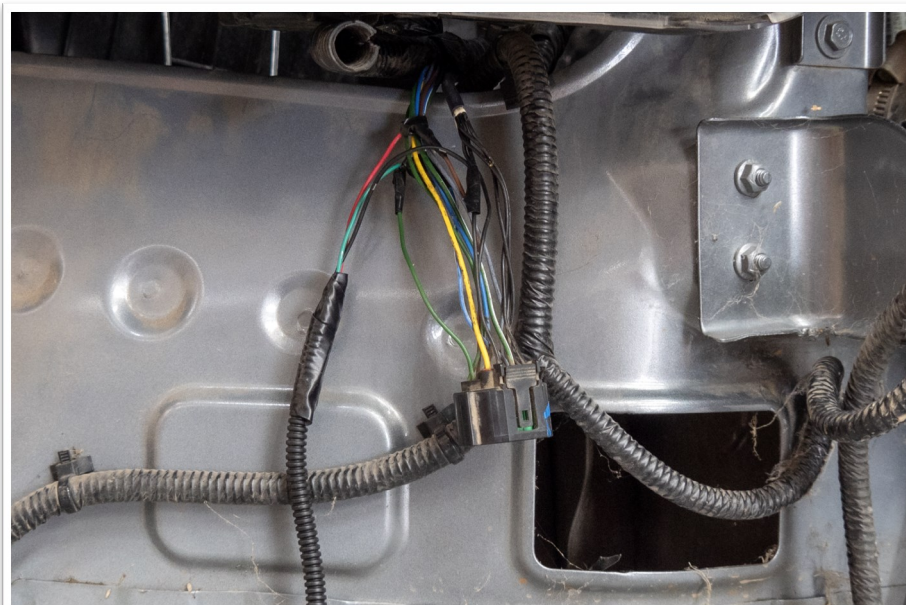




23. Remove the front intrusion beam. Keep the fasteners for installation of the winch mount.



24. Remove the four bumper support brackets.



25. Use a LED test light or Multi-meter to confirm the vehicles indicator, park and DRL positive wires from the headlight harness.

**Bull bar lamp wiring**

- ◆ White wire for DRL
- ◆ Green wire for indicator
- ◆ Red wire for park light
- ◆ Black wire for earth




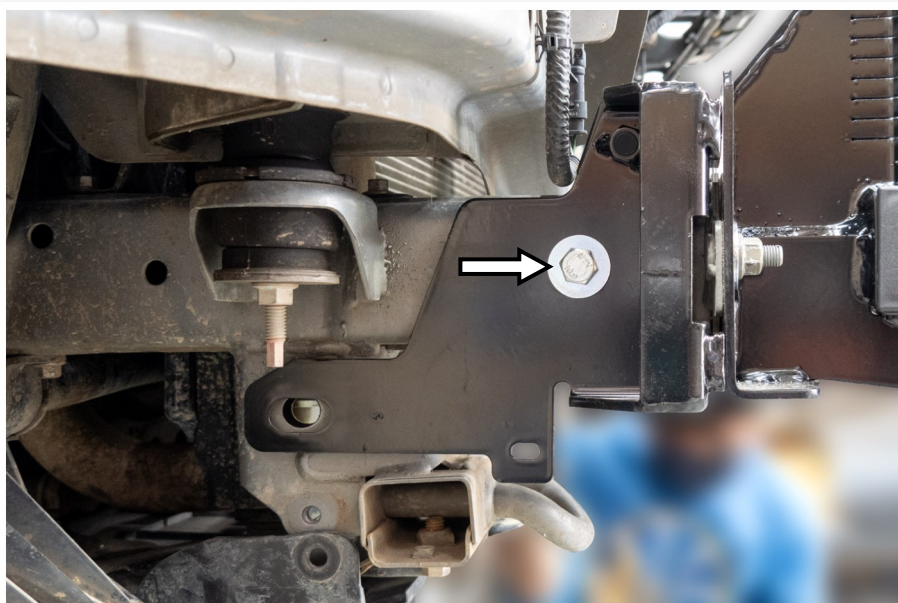


26. Using a soldering iron, splice the bull bar combination lamp looms to the vehicles headlight harness.
27. Insulate the wiring and protect with convoluted tubing.
28. Locate the new looms and secure to existing looms with cable ties leaving enough slack to connect to the bull bar.



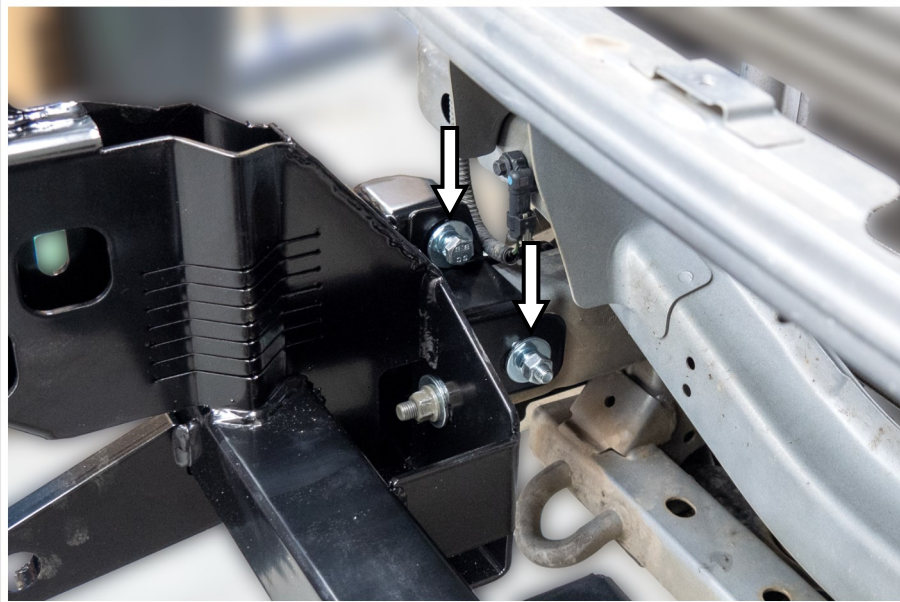
29. Lift the winch mount (item 2) onto the chassis. Secure using the fasteners removed with the intrusion beam.

 Leave finger tight only until all fasteners have been installed.



30. Fit the outer support brackets (items 3 & 4) to the chassis using M10 x 90mm hex bolts and flat washers.

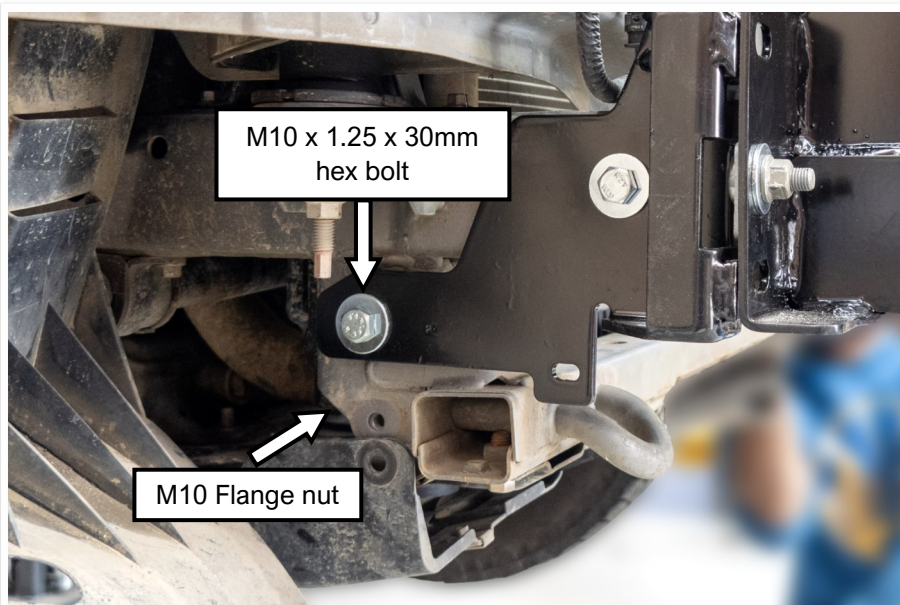




31. Fit the inner support brackets (items 5 & 6) over the previously installed M10 x 90mm hex bolts. Secure to the outer chassis brackets using M10 x 35mm hex bolts, M10 spring and flat washers.
32. Secure to the M10 x 90mm hex bolt with M10 spring and flat washers and M12 hex nut.



33. At the rear of the outer chassis brackets, insert the chassis spacer (item 13) between the bracket and chassis.

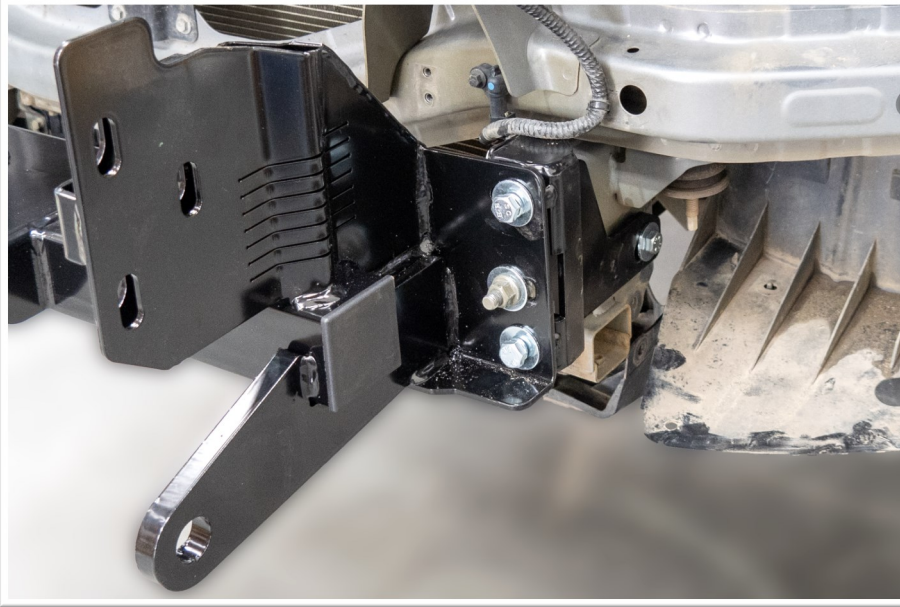


34. Secure the end of the outer chassis brackets using a M10 x 1.25 x 30mm hex bolts, M10 flat washers and M10 flange nuts.

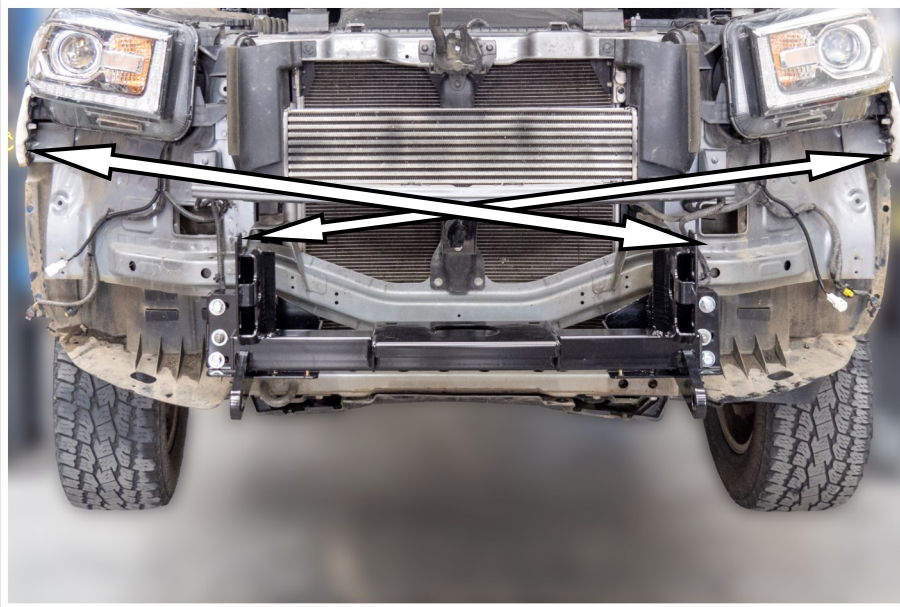


Insert the flange nut on the inside of the of the drop down bracket under the chassis rail.





35. Secure the outer chassis brackets to the winch frame using four M10 x 35mm hex bolts, M10 flat and spring washers.

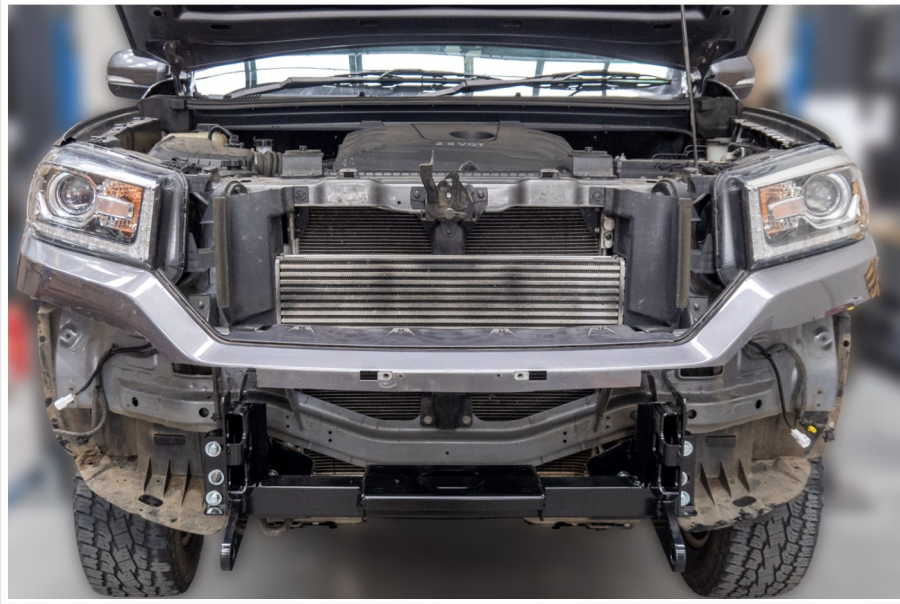


36. Centre the winch frame by measuring from the winch frame to a fixed location on the body of the vehicle.
37. Tighten all fasteners to the correct torque.
38. If fitting a winch, do so now following the instructions supplied with the winch.

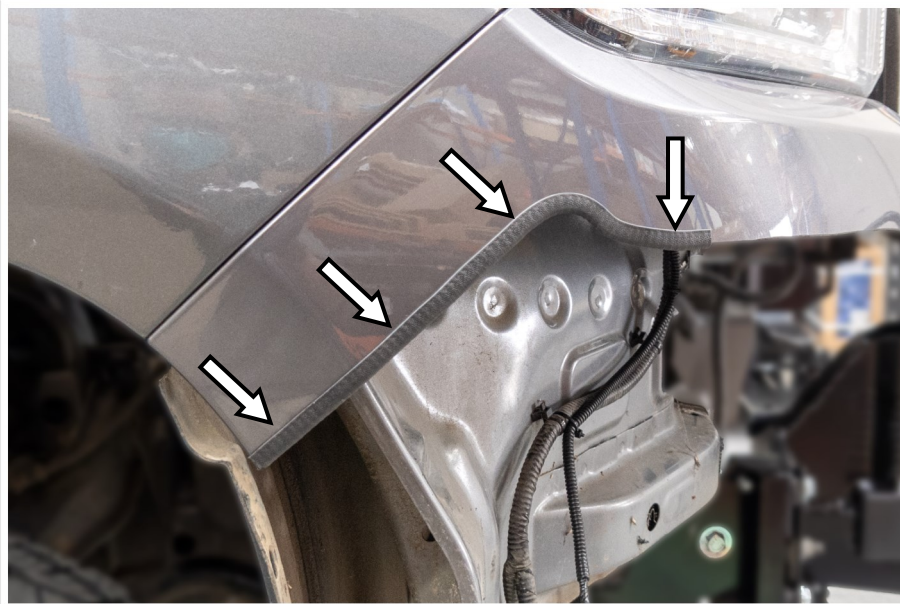


39. Trim the bumper bar as previously marked.
40. Deburr the cut edges and discard the lower section.

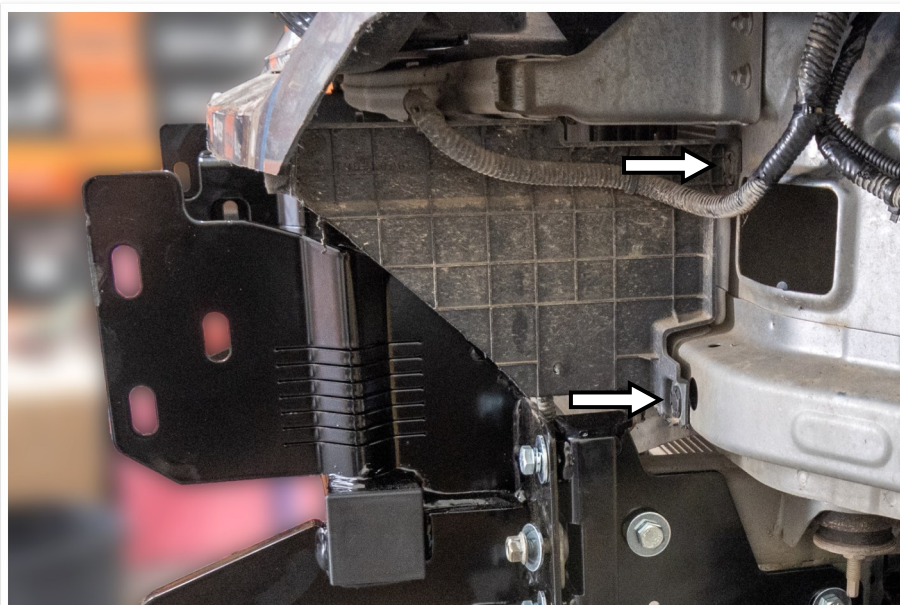




41. Reinstall the trimmed bumper bar, grille and top cover to the vehicle using the original fasteners.



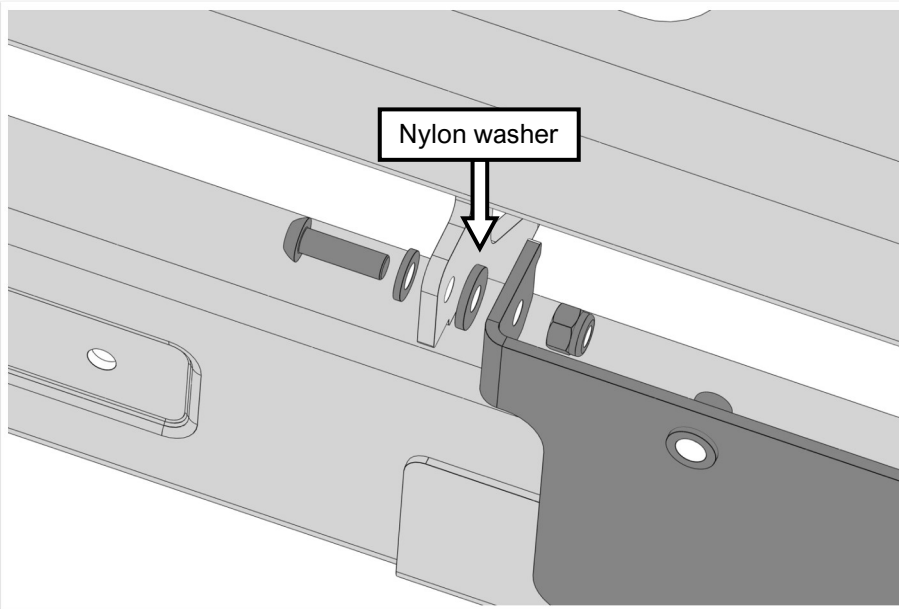
42. Fit the supplied pinch mould to the ends of the bumper bar.



43. Reinstall the trimmed air guides.



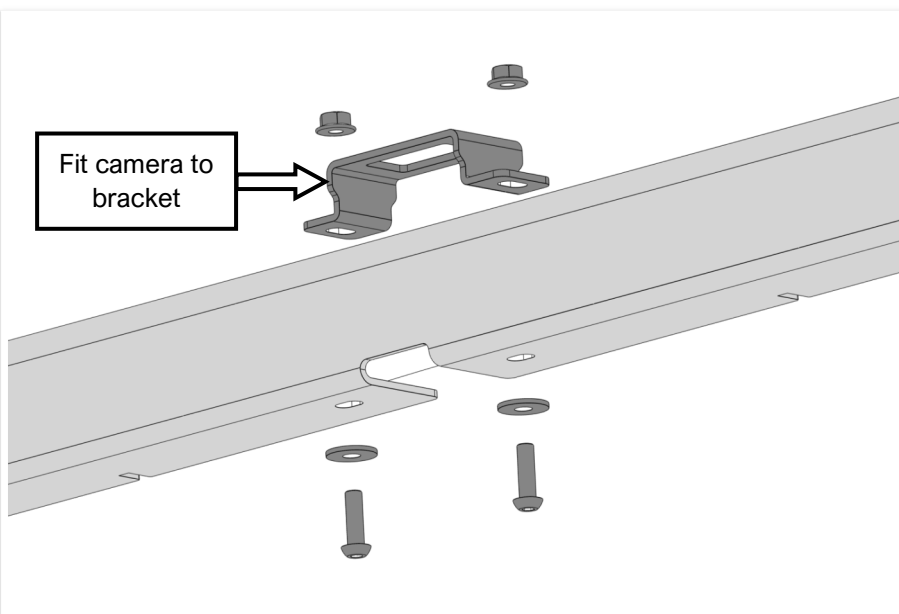
44. Where fitted, install the sensors removed from the bar into the sensor holders, secure with the supplied clamping top section.



45. Fit the hinged number plate bracket (item 11) to the bar using two M6 x 20mm button head screws, M6 flat washer, M6 nylon washer and M6 nyloc nut.



Do not overtighten, tighten so that the number plate bracket will be secure while driving but can still be moved when needed.

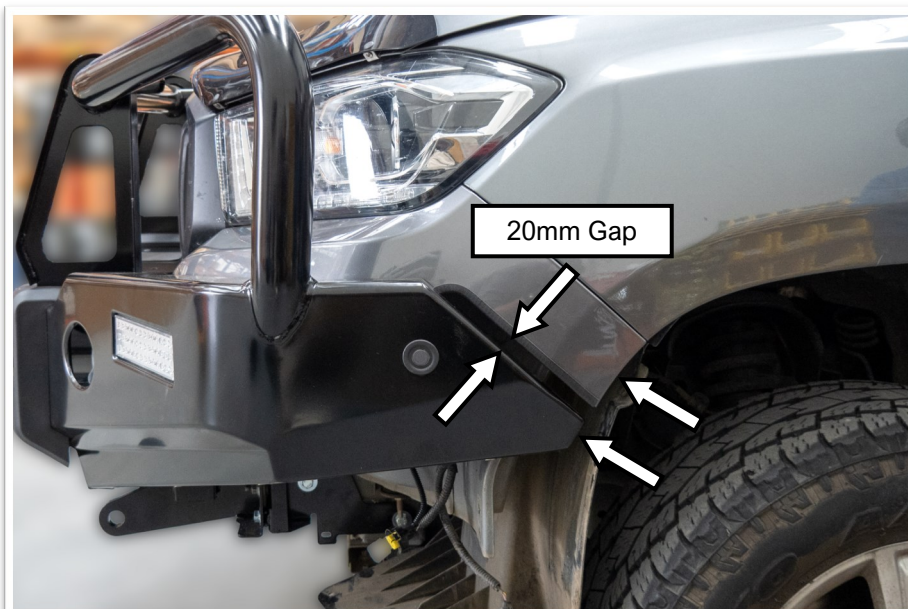


46. If a camera was removed from the bumper bar, install into the camera bracket (item 14).
47. Attach the camera bracket to the bar using two M6 x 20mm button head screws, M6 flat washers and M6 flange nuts.





48. Install the bull bar to the vehicle using six M12 x 40mm hex bolts, six M12 spring washers, 12 x M12 flat washers and Six M12 hex nuts.

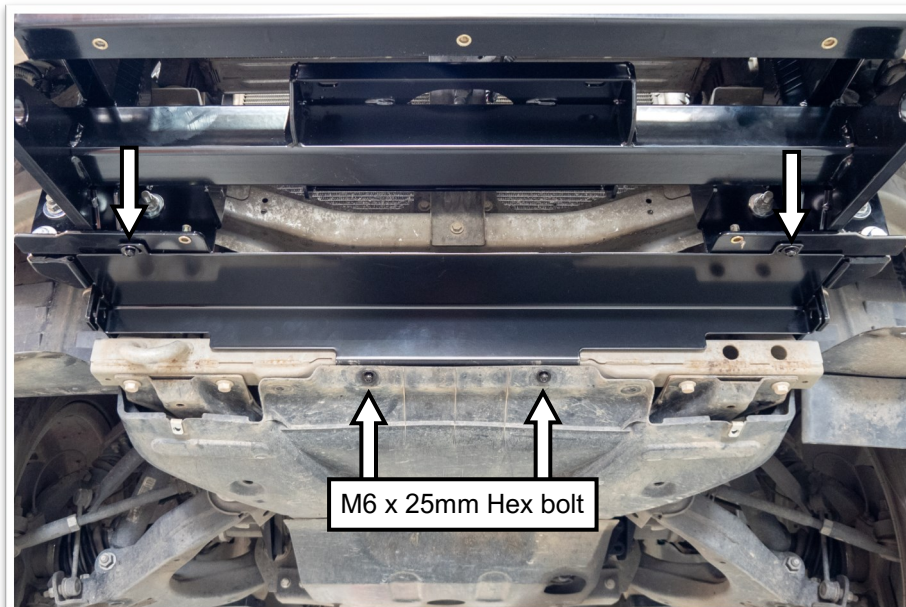


49. Align the bar so that the end of the wing has a 20mm gap to the cut bumper bar and the end of the bar is in line with the wheel arch.
50. Once aligned, tighten to the correct torque.



51. Connect side sensors, camera (where fitted), combination lamp and fog light looms.
52. Check that the combination lamps, fog lights, camera and sensors are working correctly.
53. Using cable ties, neatly secure the looms away from any hot, sharp or moving objects.





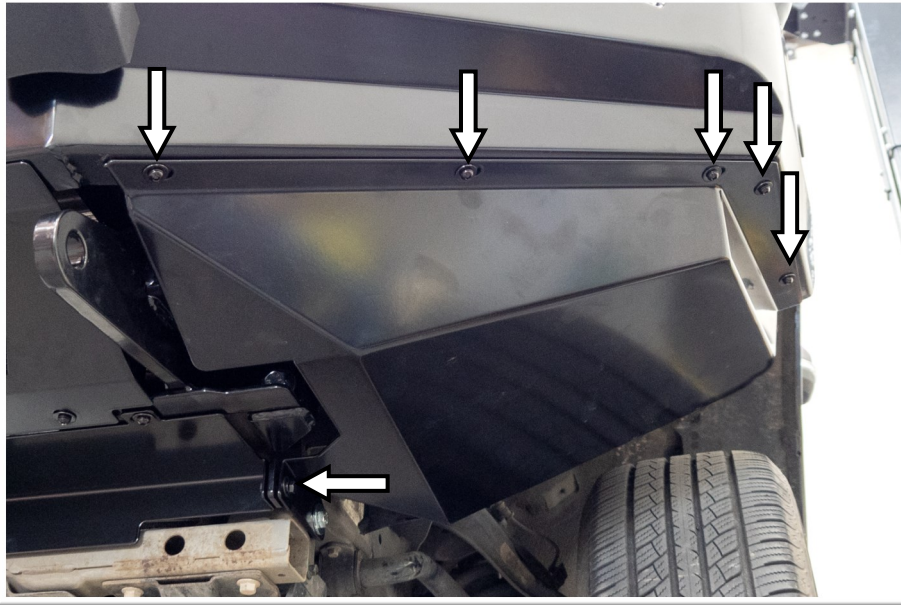
54. Install the rear centre stone tray (item 8) under the vehicles splash guard. At the rear, secure with two M6 x 25mm hex bolts, M6 spring and flat washers.
55. Secure the front using two M6 combo bolts.



56. Fit the front bash plate (item 7) to the bar using five M6 combo bolts.



57. Hold or temporarily secure the outer bash plates in place.
58. Mark a line on the wheel arc liners along the bottom edge of the bash plates.
59. Remove and trim the wheel arch liners using a sharp knife or multi tool.
60. The edge of the radiator support panel will also need to be trimmed, trim 20mm above the bash plate. Once trimmed paint the exposed edges



61. Secure the outer bash plate to the bar using five M6 combo bolts and to the chassis mount with a M6 x 25mm hex bolt, M6 flat washer and M6 flange nut.
62. Repeat for the opposite side.



63. Where removed, refit the number plate to the number plate bracket using two M6 combo bolts.

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100 mm

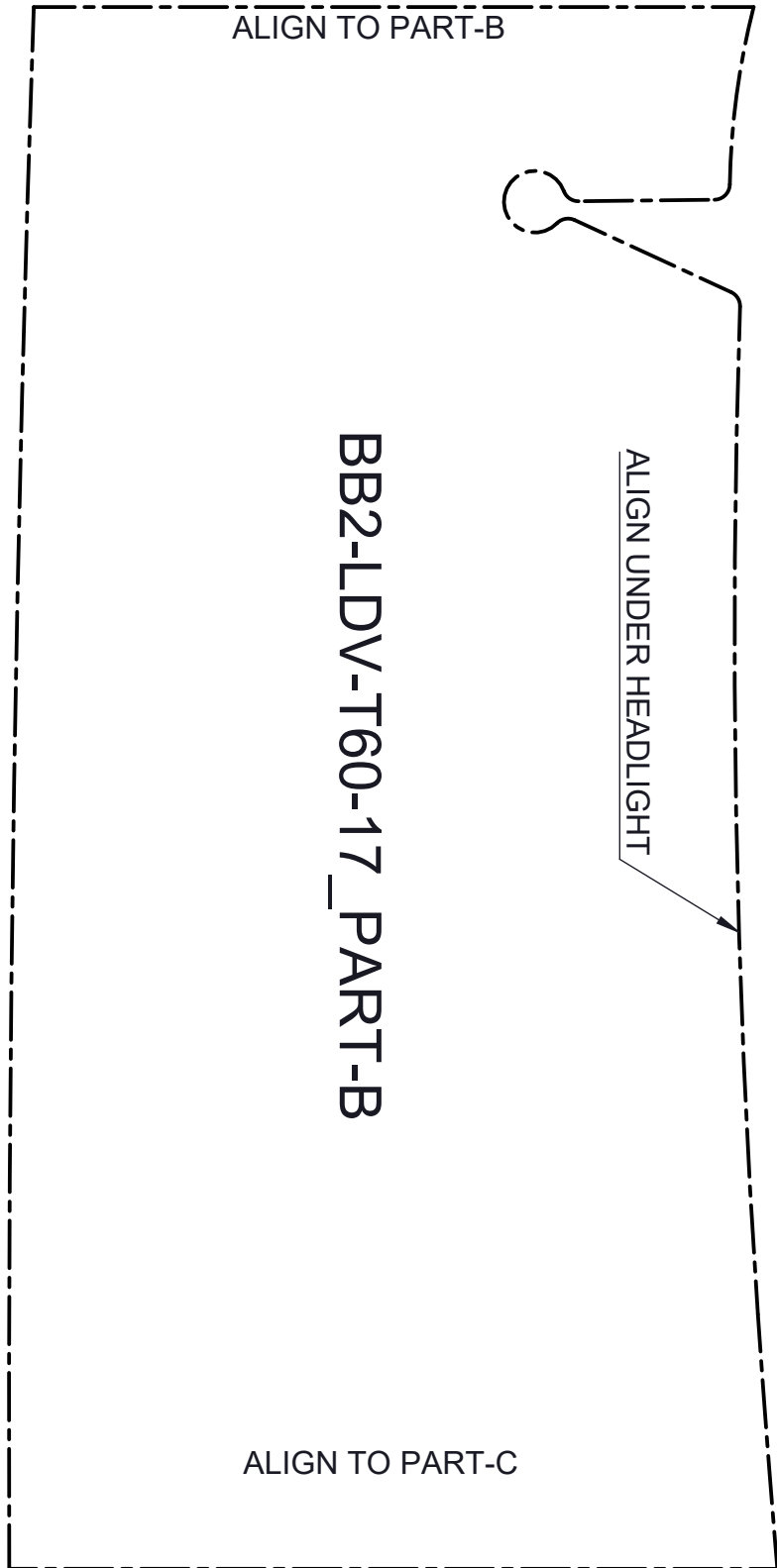
BB2-LDV-T60-17\_PART-A

ALIGN TO GUARD EDGE

ALIGN TO PART-B

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