



TOYOTA LANDCRUISER 105 SERIES

1998-2002

PREDATOR & TORO FRONT BAR

IMPORTANT! – READ BEFORE INSTALLATION

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

GENERAL CARE AND MAINTENANCE

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

Plastic parts may be maintained with silicone spray.

Do not use acidic or alkaline based cleaning products.

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

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

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

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

BOLT TORQUE SETTINGS

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

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

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

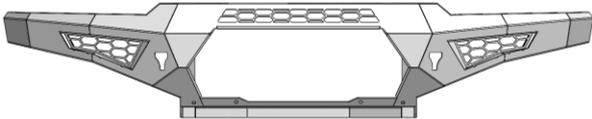
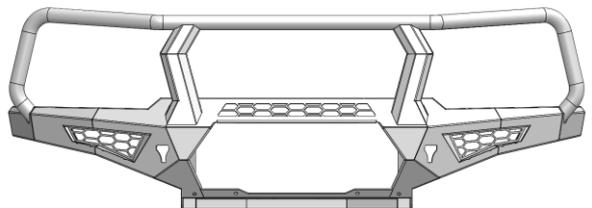
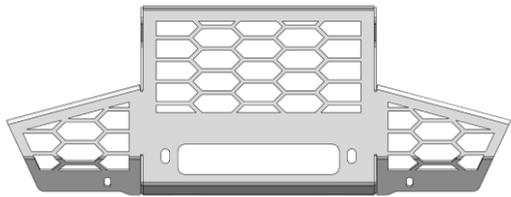
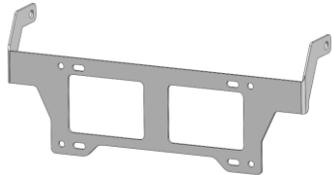
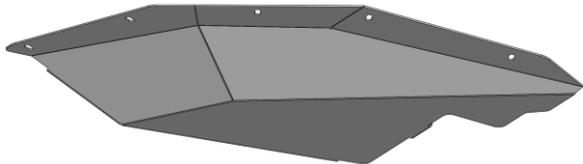
FRONT BAR MOUNTS AND TOW POINTS + REAR TOWBAR	
Size	Torque Nm
M10	57 Nm
M12	100 Nm
M14	164 Nm
M16	248 Nm

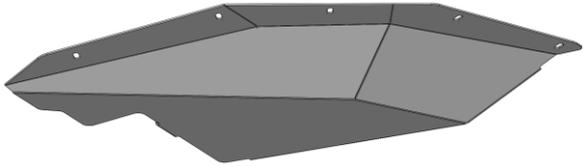
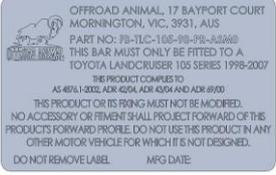
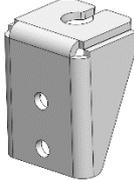
Always use a torque wrench to set correct torque settings. Ensure torque wrench is set to Nm unit of measurement. Otherwise perform conversion to lb-ft.

PARTS LISTING

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

Base Kit Parts – In the Box

Qty	Part Number	Description	Image
1	FB-TLC-100-98-PR-ASM1	LC100/105 Predator Bar Weldment	
OR			
1	FB-TLC-100-98-TOR-ASM1	LC100/105 Toro Bar Weldment	
1	FB-TLC-100-98-PR-ASM4	LC100/105 Mesh Fairlead Welded Assembly	
2	B-0822	WL Predator Number Plate Bracket	
2	B-1169	Wing Mesh Light Bracket	
1	B-1406	LC100/105 Pan Brace	
1	U-0093R	LC100/105 Side Underpanel RH	

1	U-0093L	LC100/105 Side Underpanel LH	
1	U-0103	LC100/105 Wheel Arch Guard RH	
1	U-0104	LC100/105 Wheel Arch Guard LH	
1	FB-TLC-105-98-PR-ADRCP	ADR Compliance Plate 105 Series	
1	OFA-LOGO	Offroad Animal Metal Logo	
1	FI Note	Fitting Instruction Note	N/A
2	PWS-SIDE-730	Pinch Weld PWS53S - Side Bulb Seal 730mm	N/A
TORO ONLY			
2	B-0649	Toro Antenna Bracket – 90 Degree Tall	

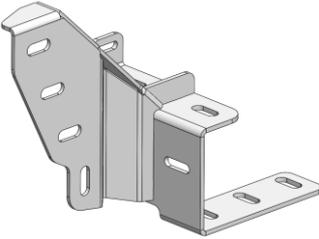
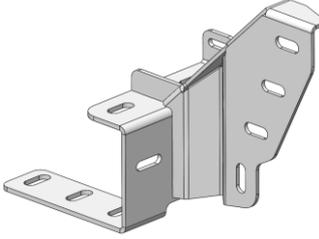
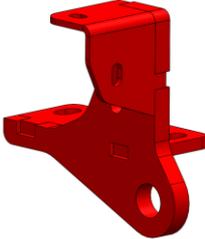
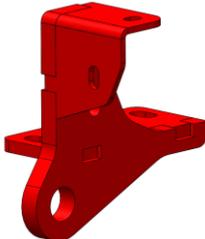
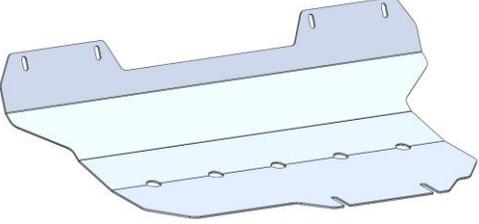
PREDATOR Base Kit Fasteners – Contained in Small Parts Kit Bag

Qty	Part Number	Description
32	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
32	M6 FLAT WASHER BLACK ZINC	M6 Flat Washer, 12x6.1x1, ISO4042 ZnNi BLACK PASSIVATED FINISH
12	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
16	M6CN3MM	CAGE NUT M6x2.6-3.5
4	M8 X 20 HEX	Bolt Hex, M8X20x1.25, GR8.8 ZP
2	M8 X 16 BHCS BZP	SCREW, BUTTON HEAD CAP, M8X16X1.25 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
2	M8 X 20 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M8X20X1.25, ISO4042 ZnNi BLACK PASSIVATED FINISH
2	M8 FLAT WASHER	M8 FLAT WASHER
4	M8 HD FLAT WASHER	M8 FLAT WASHER - High Tensile 19x8x1.9mm
4	M8 HD FLAT WASHER - BZP	M8 FLAT WASHER - High Tensile 19x8x2mm, ISO4042 ZnNi BLACK PASSIVATED FINISH
2	M8 NYW	Washer, M8, Nylon
2	M8 FLANGE NUT	Flange Nut, M8x1.25 G8.8 ZP
2	M8 NYLOC	NYLOC SELF LOCKING NUT, ST STL A2 ISO
8	M12X30	Bolt Hex, M12X30x1.75, GR8.8 ZP
10	M12 FW LHD	M12 FW Large Heavy Duty
6	M12 FLANGE NUT	Flange Nut, M12x1.75 G8.8 ZP
2	M12 Nyloc nut	M12 NYLOC NUT

TORO Base Kit Fasteners – Contained in Small Parts Kit Bag

Qty	Part Number	Description
32	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
32	M6 FLAT WASHER BLACK ZINC	M6 Flat Washer, 12x6.1x1, ISO4042 ZnNi BLACK PASSIVATED FINISH
12	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
16	M6CN3MM	CAGE NUT M6x2.6-3.5
4	M8 X 20 HEX	Bolt Hex, M8X20x1.25, GR8.8 ZP
2	M8 X 16 BHCS BZP	SCREW, BUTTON HEAD CAP, M8X16X1.25 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
6	M8 X 20 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M8X20X1.25, ISO4042 ZnNi BLACK PASSIVATED FINISH
2	M8 FLAT WASHER	M8 FLAT WASHER
4	M8 HD FLAT WASHER	M8 FLAT WASHER - High Tensile 19x8x1.9mm
8	M8 HD FLAT WASHER - BZP	M8 FLAT WASHER - High Tensile 19x8x2mm, ISO4042 ZnNi BLACK PASSIVATED FINISH
2	M8 NYW	Washer, M8, Nylon
2	M8 FLANGE NUT	Flange Nut, M8x1.25 G8.8 ZP
2	M8 NYLOC	NYLOC SELF LOCKING NUT, ST STL A2 ISO
8	M12X30	Bolt Hex, M12X30x1.75, GR8.8 ZP
10	M12 FW LHD	M12 FW Large Heavy Duty
6	M12 FLANGE NUT	Flange Nut, M12x1.75 G8.8 ZP
2	M12 Nyloc nut	M12 NYLOC NUT

105 Series Mount Kit Parts – In the Box

Qty	Part Number	Description	Image
1	FB-TLC-105-98-PR-ASM2R	LC105 Impact Assembly RH	
1	FB-TLC-105-98-PR-ASM2L	LC105 Impact Assembly LH	
1	FB-TLC-105-98-PR-ASM3R	LC105 Tow Point Welded Assembly RH	
1	FB-TLC-105-98-PR-ASM3L	LC105 Tow Point Welded Assembly LH	
1	B-1401R	LC105 Inner Chassis Brace RH	
1	B-1401L	LC105 Inner Chassis Brace LH	
2	P-0394	8MM Circular Spacer Suit M12 Bolt	
1	U-0092	LC105 Bash Plate - Suit RHD	

105 Series Mount Kit Fasteners – Contained in Small Parts Kit Bag

Qty	Part Number	Description
2	M8 X 30 HEX	Bolt Hex, M8X30X1.25, GR8.8 ZP
4	M8 X 30 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M8X30X1.25, ISO4042 ZnNi BLACK PASSIVATED FINISH
2	M8 HD FLAT WASHER	M8 FLAT WASHER - High Tensile 19x8x1.9mm
4	M8 FLAT WASHER- BLACK ZINC	M8 FLAT WASHER, 16.5x8.4x1.2, ISO4042 ZnNi BLACK PASSIVATED FINISH
8	M10 x 30	Bolt Hex, M10X30x[1.5], GR8.8 ZP
4	M10X50X1.25	Bolt Hex, M10X50X1.25, GR8.8 ZP
12	M10 FW LHD	WASHER, FLAT M10X28.5X2.5
4	M10 FLANGE NUT	Flange Nut, M10x1.5 G8.8 ZP
2	M12X30X1.25	Bolt Hex, M12X30x1.25, GR8.8 ZP
6	M12X40x1.25	Bolt Hex, M12X40x1.25, GR8.8 ZP
8	M12 FW LHD	M12 FW Large Heavy Duty

TOOLS REQUIRED

The following tools will be required to install the product.

Hand Tools	Power Tools	Workshop Equipment
Metric Socket Set 10-19mm	Electric/Air Impact Driver (Optional)	Panel stand or Soft Blanket
Socket Extension Bar	Angle grinder	Lifting Trolley
Metric Spanner Set 10-19mm		Measuring tape
Hex (Allen) Key Set 4-6mm		Lubricant (eg. WD-40)
Flat Blade Screwdriver Set		Rust Inhibiting Paint
Phillips Head Screwdriver Set		
Utility Knife		
Side Cutters		
M10x1.25 metric tap		
M12x1.25 metric tap		

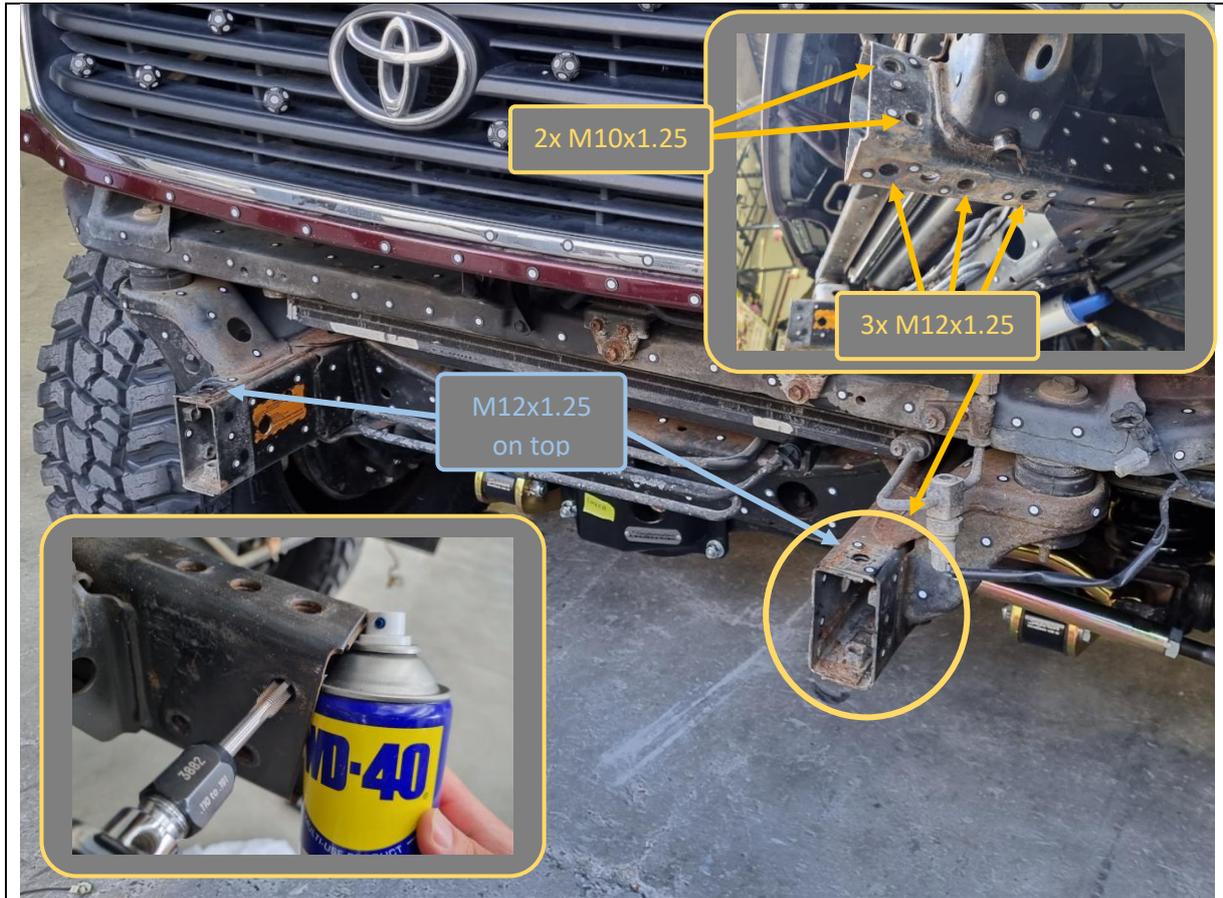
WORKSHOP SAFETY

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

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



<p>Note: This bar is designed to suit RHD vehicles only. Please contact Offroad Animal if fitting to a LHD vehicle and we can supply LHD specific parts.</p>	<p>TOOLS REQUIRED</p> <p>Lubricant or penetrating oil (eg. WD-40)</p>
<ol style="list-style-type: none"> 1. Remove the number plate and set aside. 2. Remove the stock bumper or aftermarket bullbar (including all mounting hardware) from the vehicle. Refer to YouTube guides or aftermarket instructions for removal process. <p>It is highly recommended to use penetrating oil when removing all bolts, since these vehicles are old.</p> <ol style="list-style-type: none"> 3. Remove tow hooks (factory or aftermarket). 	<p>FASTENERS</p>

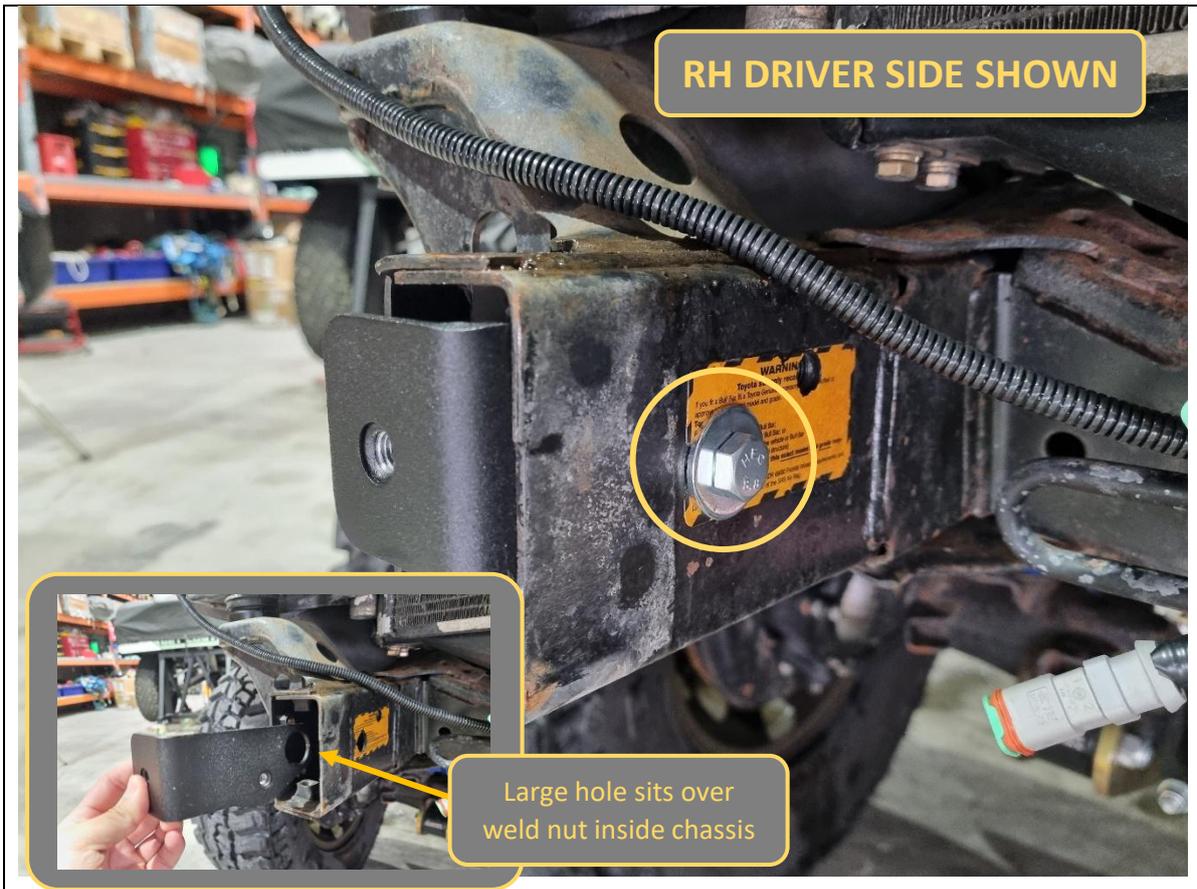


4. Prepare the chassis rail for fitment by cleaning out existing threads. With the use of cutting fluid, run M10x1.25 and M12x1.25 taps through the indicated holes on each chassis rail.

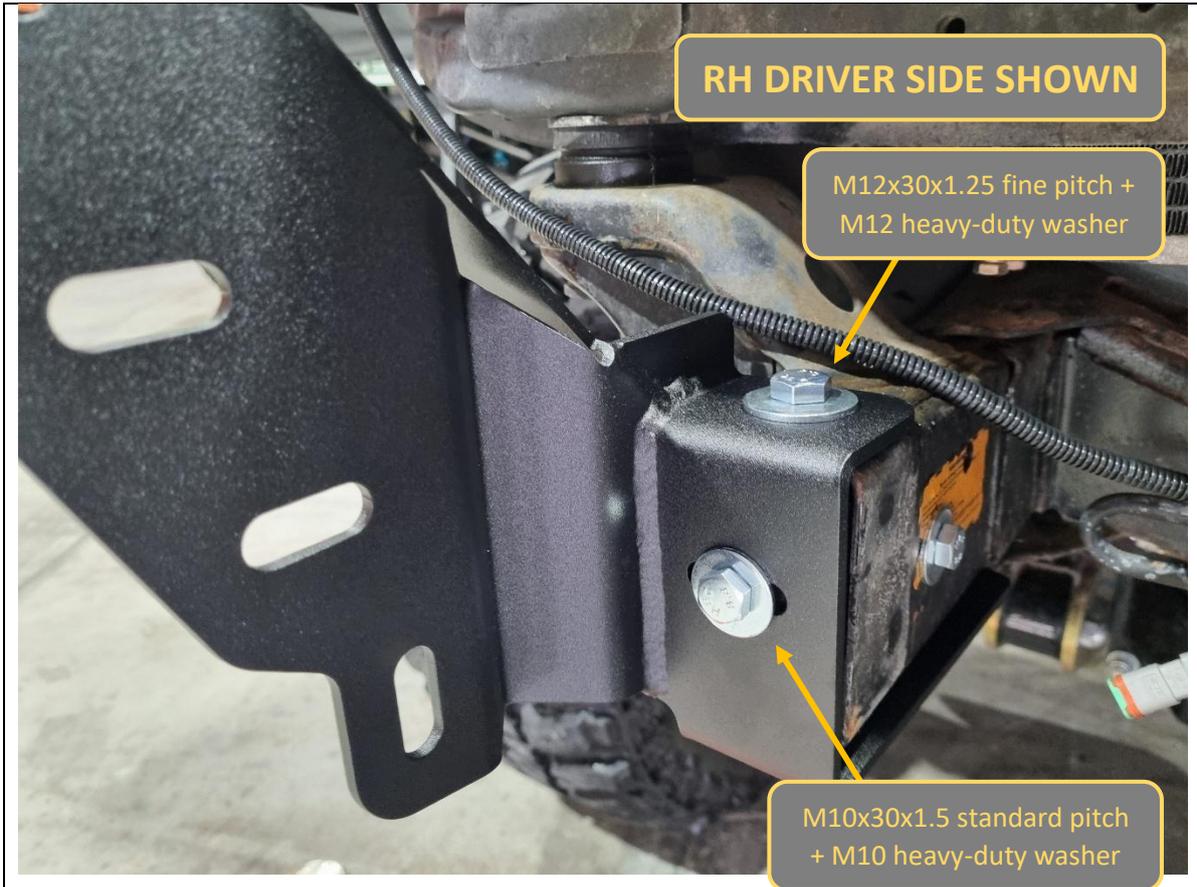
TOOLS REQUIRED

M10x1.25 metric tap
M12x1.25 metric tap
Lubricant or cutting fluid

FASTENERS



<ol style="list-style-type: none"> 5. Fit the B-1401 inner chassis brace through the front opening of the chassis rail. 6. Loosely secure with 1x M10x30 hex bolt and 1x M10 heavy-duty flat washer through the inside of the chassis. 7. Repeat for other side. 	<p style="text-align: center;">TOOLS REQUIRED</p>
	<p style="text-align: center;">FASTENERS</p> <p style="text-align: center;">2x M10x30 hex bolt 2x M10 heavy-duty washer</p>



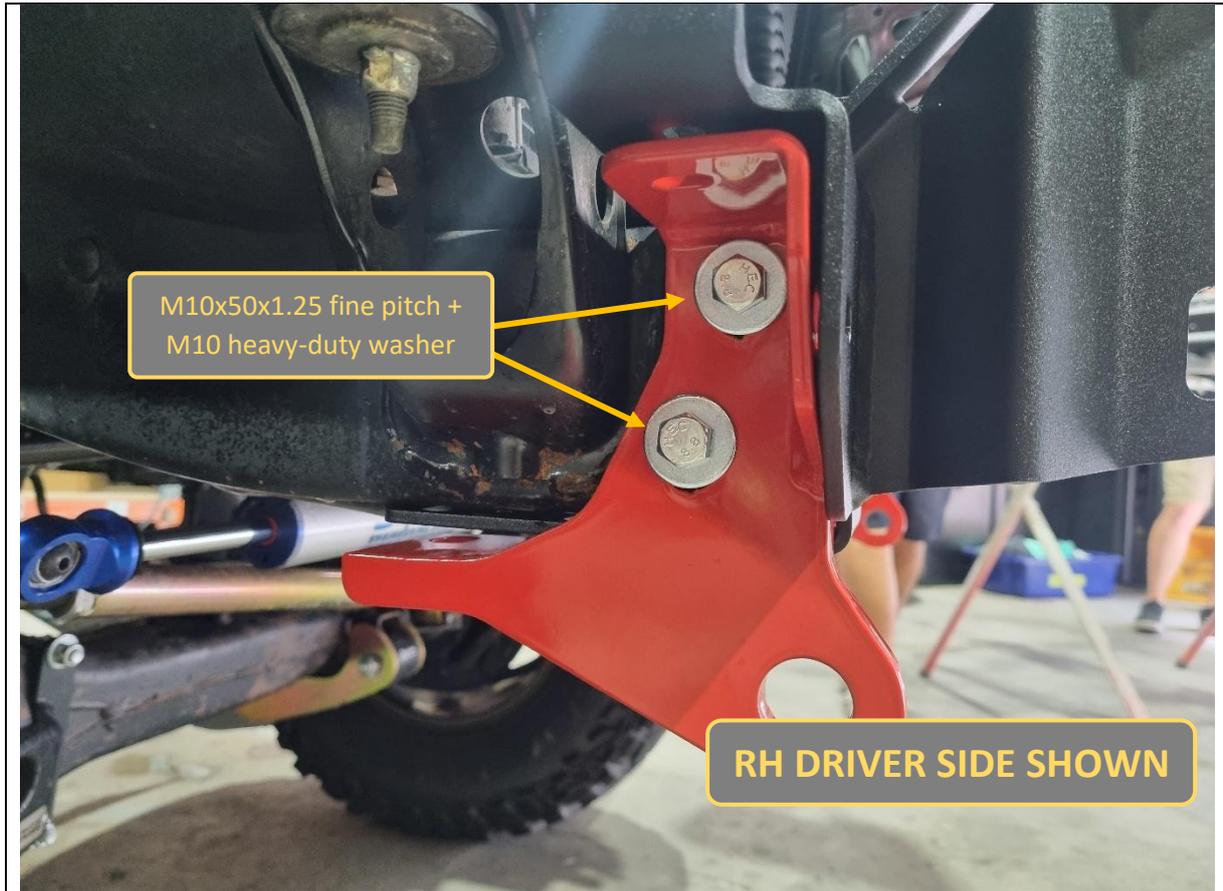
8. Fit the impact assembly onto the end of the chassis.
9. Loosely secure the top to the chassis rail with 1x M12x30x1.25 fine pitch hex bolt and heavy-duty washer.
10. Loosely secure the front to the inner chassis brace with 1x M10x30 hex bolt and heavy-duty washer.
11. Repeat for other side.

TOOLS REQUIRED

FASTENERS

2x M10x30 hex bolt
2x M10 heavy-duty washer

2x M12x30x1.25 hex bolt
2x M12 heavy-duty washer

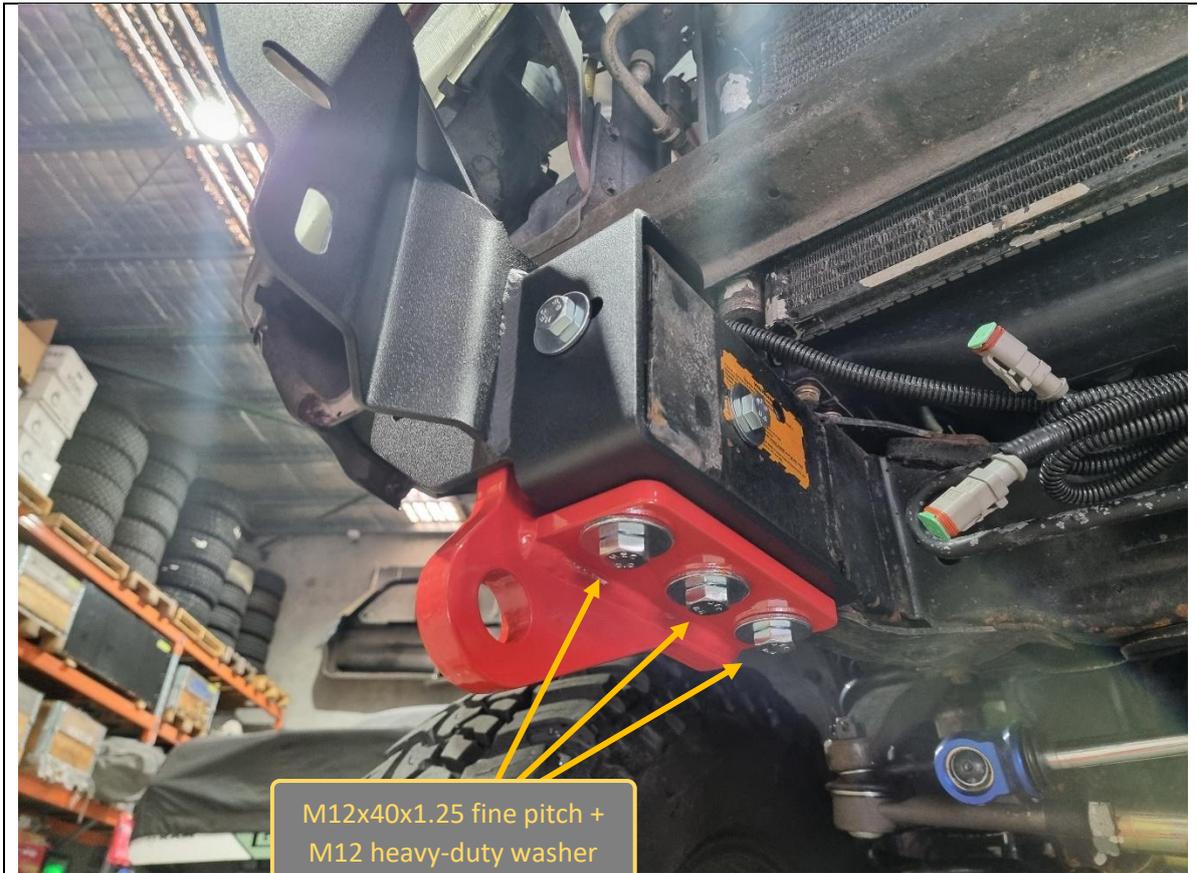


12. Fit the tow point to the outside of the chassis rail.
13. Loosely secure to the side of the chassis rail with 2x M10x50x1.25 fine pitch hex bolts and heavy-duty washers.
14. Repeat for other side.

TOOLS REQUIRED

FASTENERS

- 4x M10x50x1.25 hex bolt
- 4x M10 heavy-duty washer

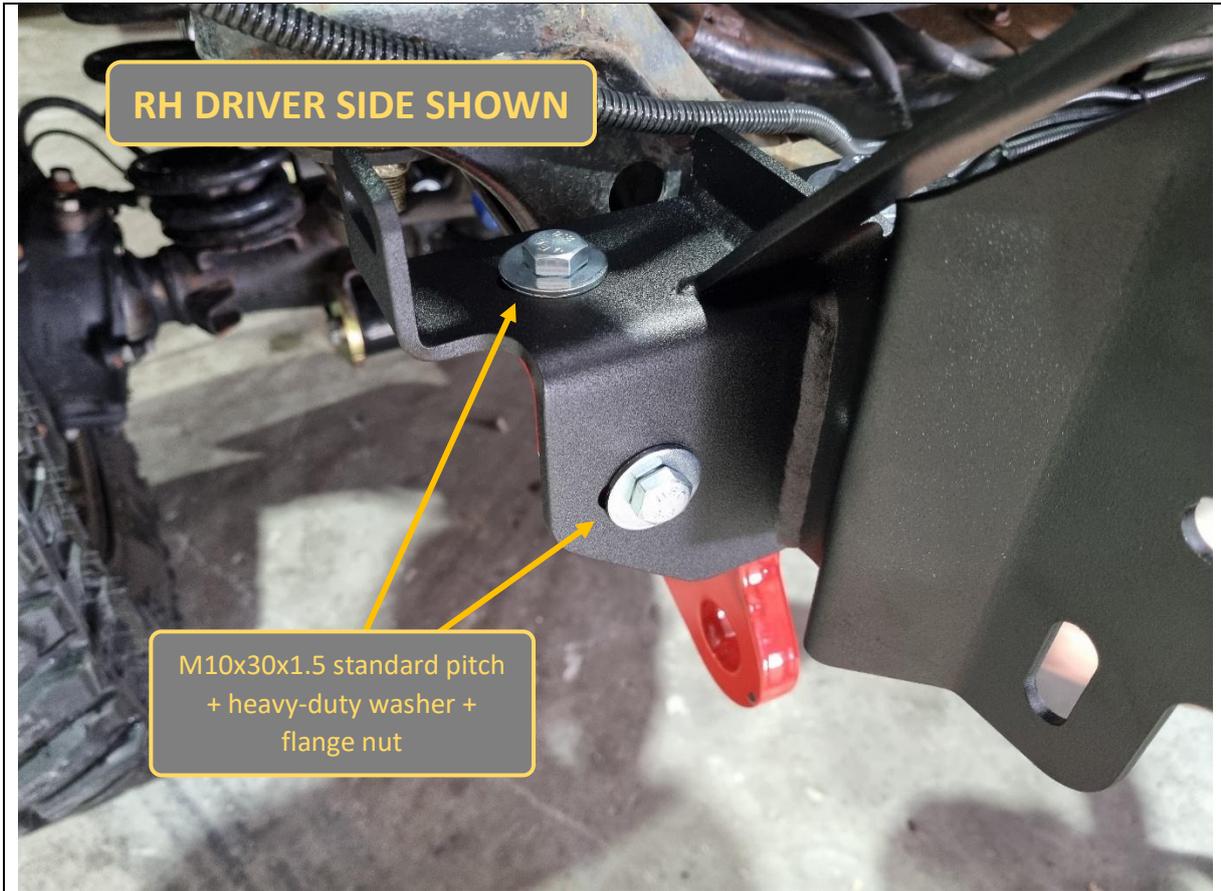


- 15. Loosely secure the tow point to the underside of the chassis rail with 3x M12x40x1.25 fine pitch hex bolts and heavy-duty washers.
- 16. Repeat for other side.

TOOLS REQUIRED

FASTENERS

6x M12x40x1.25 hex bolt
6x M12 heavy-duty washer



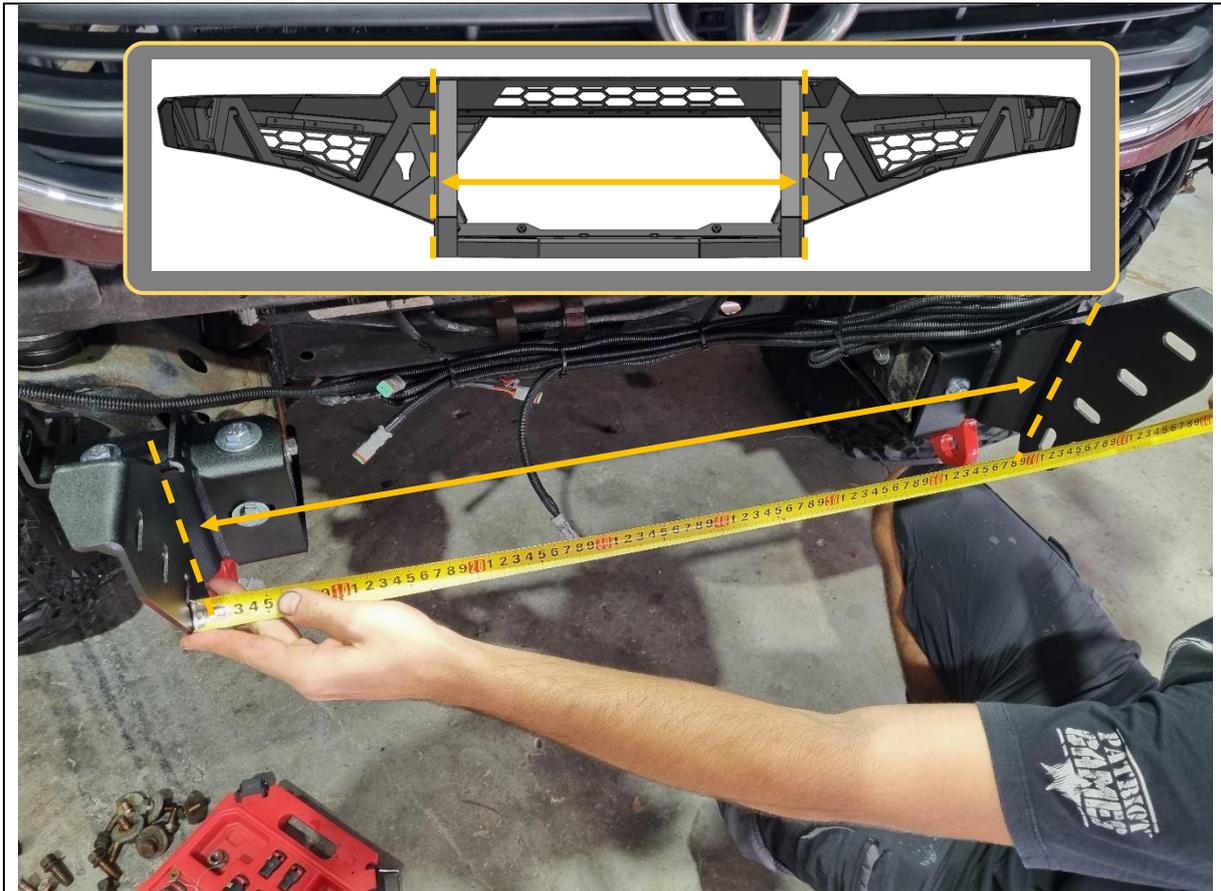
17. Loosely secure the impact assembly to the tow point using 2x M10x30 hex bolts, heavy-duty washers and flange nuts.

18. Repeat for other side.

TOOLS REQUIRED

FASTENERS

- 4x M10x30 hex bolt
- 4x M10 heavy-duty washer
- 4x M10 flange nut



19. Measure the distance between the outside faces of uprights on bar using tape measure. Write distance below for reference if required.

Bar Upright Width = _____mm

20. Adjust mounts by sliding left/right on the slots, such that distance between inner faces of mounts are approximately 2mm more than bar. Ensure the mount faces are vertically upright and symmetric left/right on the chassis.

21. Also measure from the mount to somewhere on the outer guard/headlight to make sure they mounts are central to the vehicle body.

22. Tighten all bolts securing impact assemblies, tow points and inner chassis braces.

23. Re-check the distance and re-adjust as required.

TOOLS REQUIRED

Tape measure

17mm socket/spanner
19mm socket/spanner

FASTENERS



24. If fitting an integrated light bar, do so now.

This bar is designed to fit the Offroad Animal 22-inch light bar. If fitting this light bar, assemble the light bar with legs facing outwards, and line it up with the slots in the centre gusset. Secure with M6 fasteners supplied with the light.

This bar can accommodate most other "20-22inch" size single row light bars. Stedi ST3K light bars require legs facing inwards.

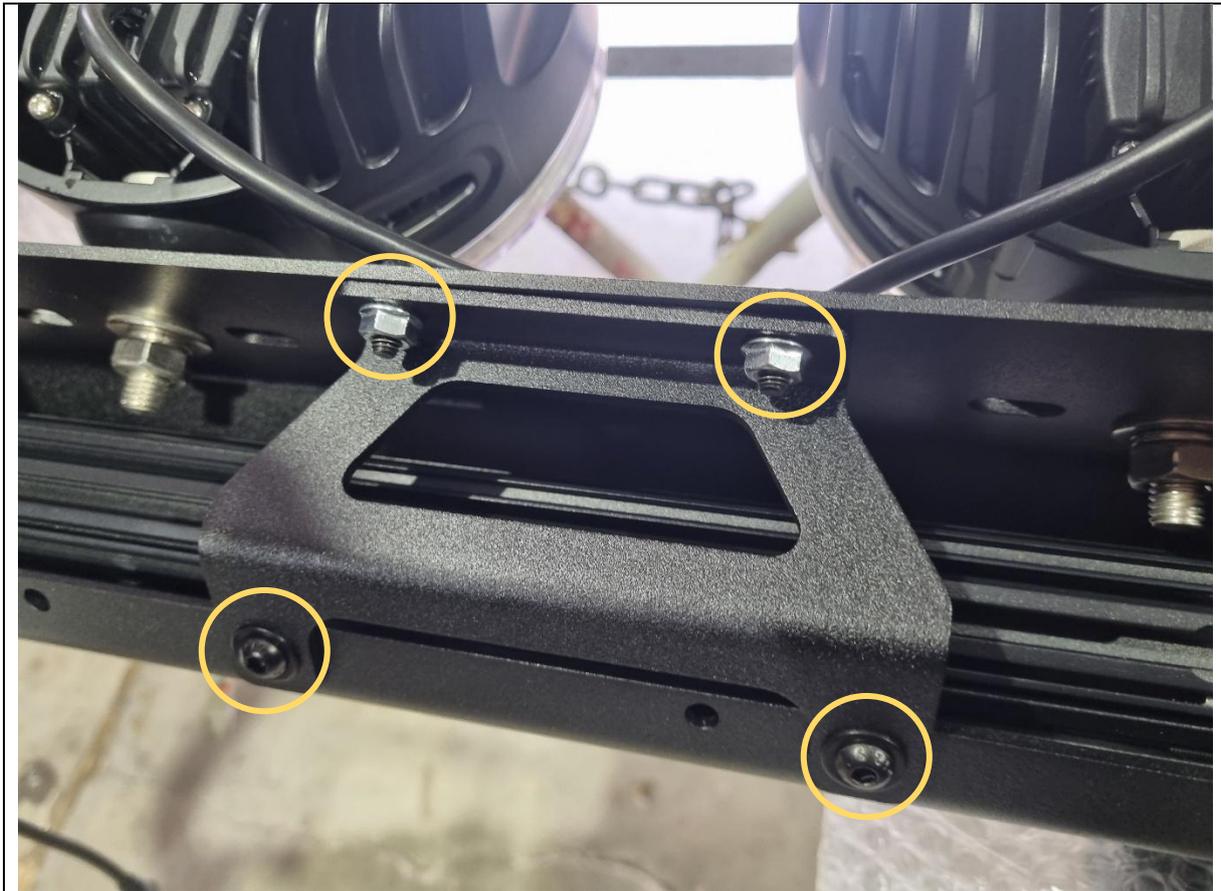
25. If fitting driving lights, stealth hoop, round hoop or rally hoop to this bar, this is also the most convenient time to do so. It is still possible later but is more difficult.

TOOLS REQUIRED

Supplied with accessories

FASTENERS

Supplied with accessories



- 26. Fit the 2x pan braces to the back of the top centre section of the bullbar.
- 27. Secure the bottom of each pan brace to the back of the bar with 2x M6x16 black button head bolts and black washers.
- 28. Secure the top of each pan brace to the top face of the bar with 2x M6x16 black button head bolts, black washers and flange nuts.

TOOLS REQUIRED

4mm hex/Allen key

FASTENERS

10x M6x16 black button head bolt
10x M6 black flat washer
4x M6 flange nut



RH DRIVER SIDE SHOWN

- 29. B-1169 mounting brackets are provided if wanting to fit a cube light or an 8" light bar into each bull bar wing.
- 30. Secure each mounting bracket to the inside the bull bar wings using 3x M6x16 black button head bolts, black washers and flange nuts.

TOOLS REQUIRED

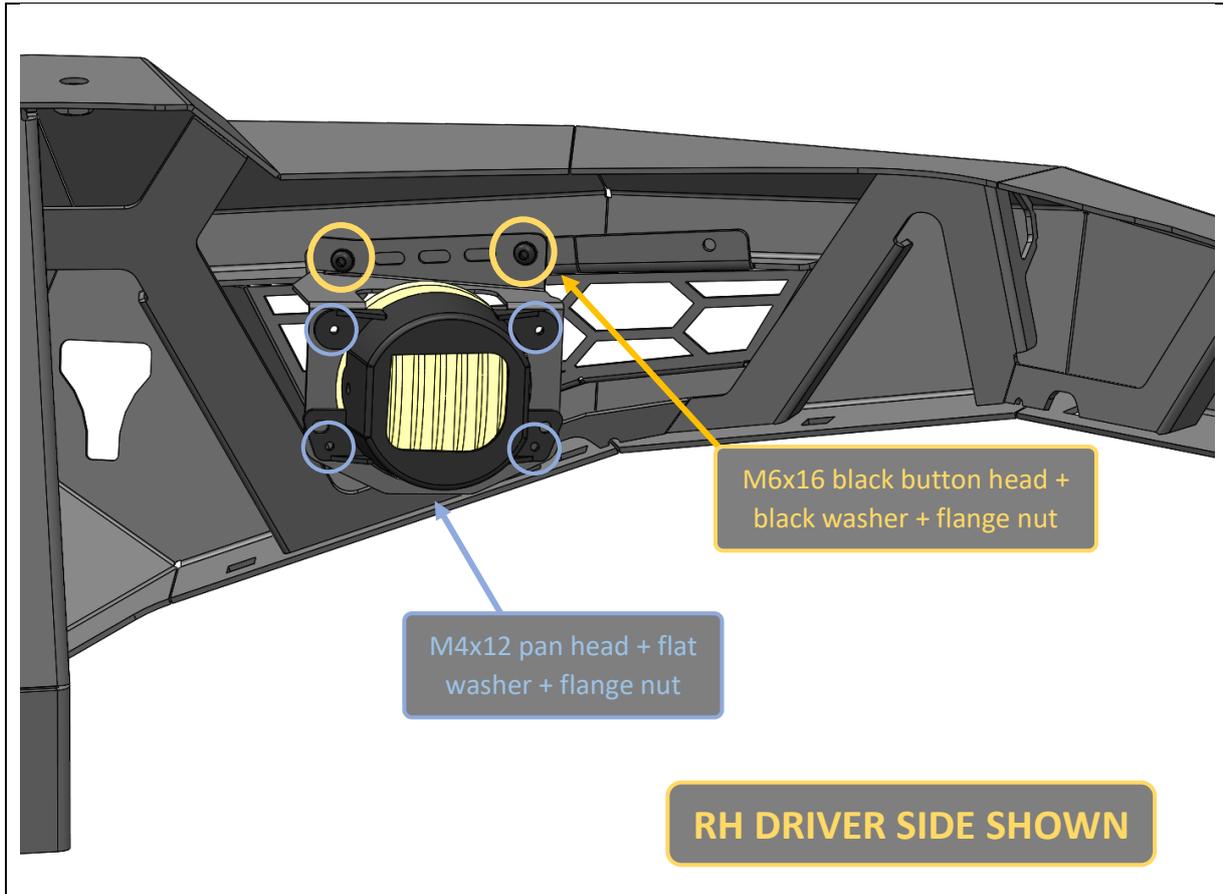
4mm hex/Allen key

Supplied with accessories

FASTENERS

6x M6x16 black button head
6x M6 black flat washer
6x M6 flange nut

Supplied with accessories



31. On request, Offroad Animal can also supply halo fog lights, mounting brackets and hardware for fitment inside each bull bar wing.
32. Bolt each fog light to its mounting bracket using 4x M4x12 pan head screws, flat washer and flange nuts.
33. Then fit the fog light and bracket to the inside of each bull bar wing and secure with 2x M6x16 black button head bolts, black washers and flange nuts.

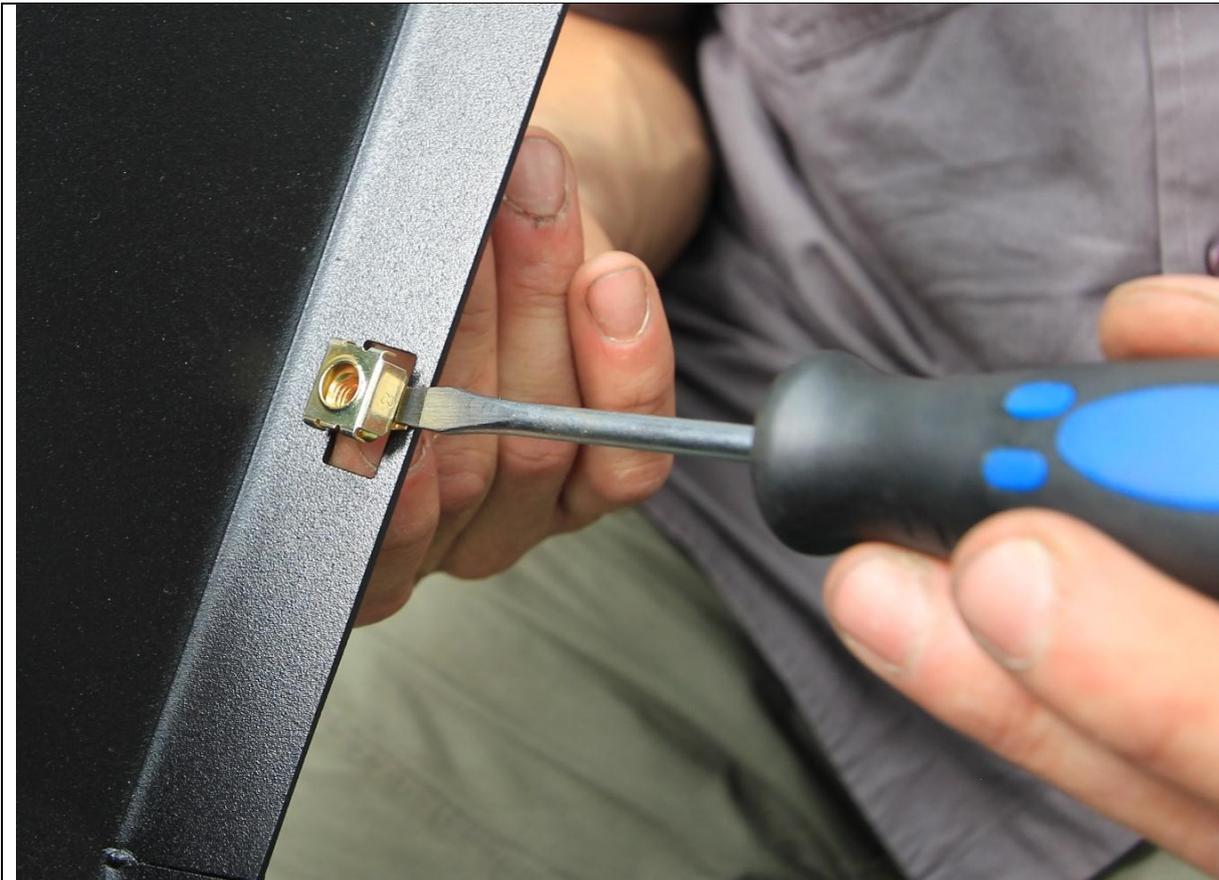
TOOLS REQUIRED

Phillips head screwdriver
4mm hex/Allen key

FASTENERS

8x M4x12 pan head screw
8x M4 flat washer
8x M4 flange nut

4x M6x16 black button head
4x M6 black flat washer
4x M6 flange nut



34. Fit 10x M6 cage nuts into the rectangular slots in bottom of wing (5x per side).

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

TOOLS REQUIRED

Flat blade screwdriver

FASTENERS

10x M6 cage nuts



35. Fit the provided 2x lengths of side bulb pinch weld rubber to the top edge of each bull bar wing.

TOOLS REQUIRED

FASTENERS

2x side bulb pinch weld rubber



<p>36. Toro only. If required, fit the supplied antenna mounting brackets to the back of the bar, and secure with 2x M8x20 black button head bolts and black washers, each.</p>	<p>TOOLS REQUIRED</p> <p>5mm hex/Allen key</p>
<p>37. Toro only. Else fit the 2x M8x20 black button head bolts and black washers to the back of each bullbar upright, to protect nut threads in bar for future use.</p>	<p>FASTENERS</p> <p>4x M8x20 black button head bolt 4x M8 black flat washer</p>



38. If fitting a winch with a central top mount control box (eg. Warn ZEON Winch), the bottom of the grill mount needs to be cut off with an angle grinder.

39. Paint the cut edge to prevent rust forming.

TOOLS REQUIRED

Angle grinder
Rust inhibiting paint

FASTENERS



<p>40. With assistance, either from another person or a lifting trolley, lift the bar onto the mounts on the vehicle.</p> <p>41. Secure the bar to the mounts with 8x M12x30 bolts, heavy-duty washers and Nyloc + flange nuts. Leave finger tight at this stage.</p> <p>Note: Use a washer on both bolt and nut side for the Nyloc nut. 1x Nyloc required per side of the bar. 1x washer on the bolt side is all that is required with flange nuts.</p>	<p>TOOLS REQUIRED</p> <p>Lifting trolley</p>
	<p>FASTENERS</p> <p>8x M12x30 hex bolt 10x M12 heavy duty washer 2x M12 Nyloc nut 6x M12 flange nut</p>



<p>42. With assistance, from another person, align the bar with the edges of the vehicle. Adjust such that the clearances are neat, and the bar is symmetric left/right on the vehicle.</p> <p>Acceptable range of clearances are outlined below.</p> <p>Front view: the bar should sit horizontally level with the body.</p> <p>Side view: the bar should have 15-20mm vertical clearance to the quarter panel and headlight. The end of the bar wing should be in line with the wheel arch liner.</p> <p>Top view: there should have 15-20mm clearance between the bar and grille.</p>	<p>TOOLS REQUIRED</p> <p>Lifting Trolley</p> <p>18/19mm socket/spanner</p>
<p>43. Once happy with alignment, tighten all 8x M12 bolts.</p>	<p>FASTENERS</p>



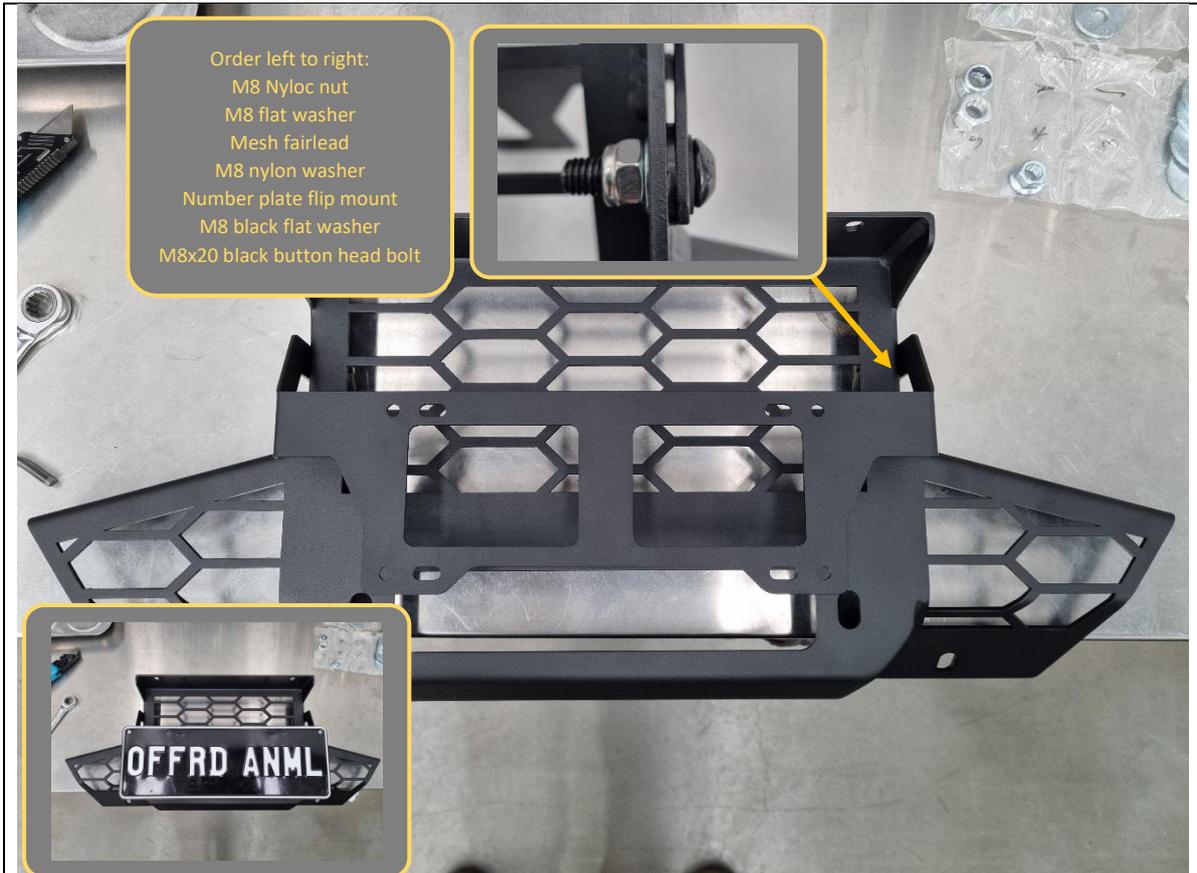
- 44. If fitting a winch, do so now by inserting the winch through the opening in the bar and bolting to the bottom winch cradle plate.
- 45. This bar is designed to fit most low mount winches, in foot down configuration. Warn ZEON 12 is the largest winch confirmed to fit.
- 46. Ensure clutch handle will be accessible through opening in front mesh panel. Refer to winch instructions regarding changing clutch handle location.

TOOLS REQUIRED

Refer to instructions supplied by winch

FASTENERS

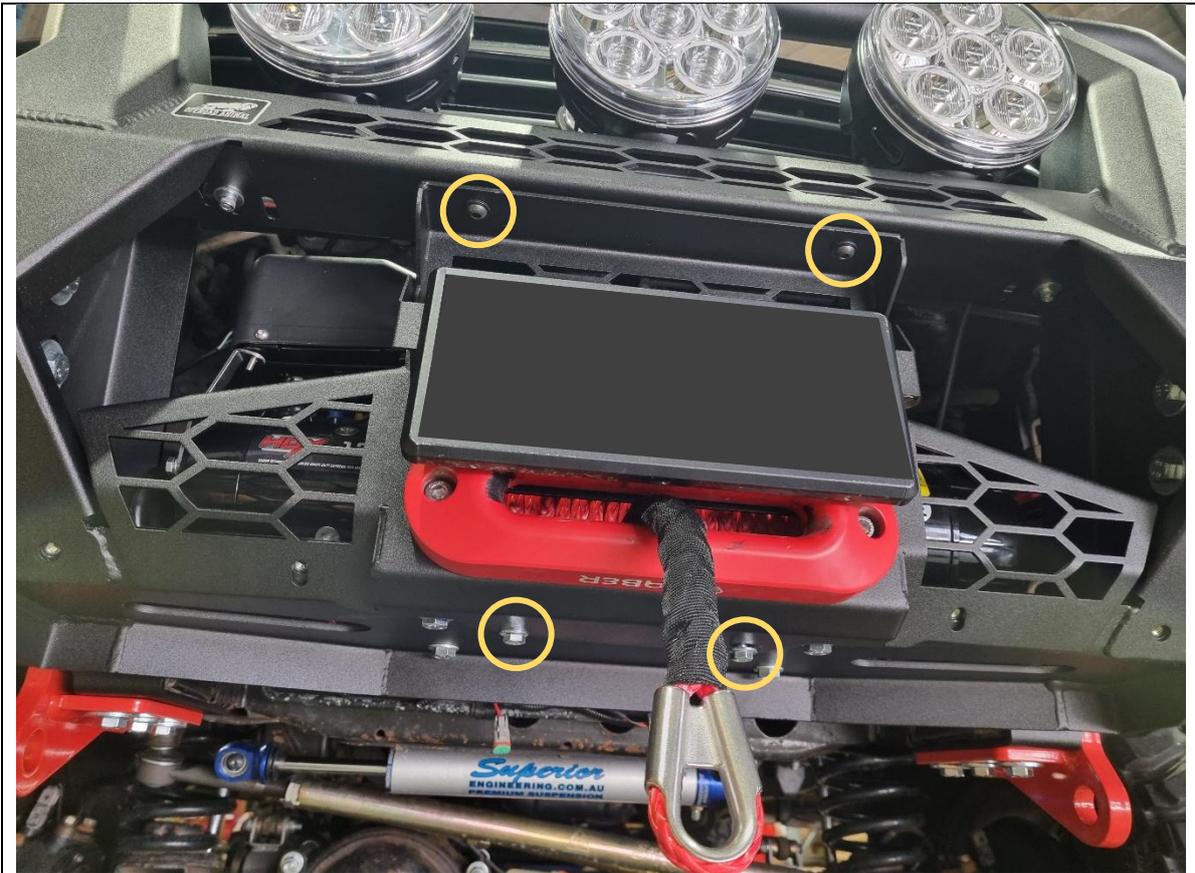
Supplied with winch



<p>47. Fit number plate flip mount to mesh panel as shown above. Tighten bolts so that flip mount and can be moved by hand with some friction resistance.</p> <p>48. Attach number plate to mount using 2x M6x16 black button head bolts, black washers and flange nuts.</p>	<p>TOOLS REQUIRED</p> <p>5mm hex/Allen key 13mm socket/spanner</p> <p>4mm hex/Allen key</p>
	<p>FASTENERS</p> <p>2x M8x20 black button head 2x M8 black flat washer 2x M8 nylon washer 2x M8 flat washer 2x M8 flange nut</p> <p>2x M6x16 black button head bolts 2x M6 black flat washer 2x M6 flange nut</p>



<p>49. If required, fit the winch fairlead to the mesh fairlead mount using M10 or 3/8" fasteners supplied with the winch. This bar is only compatible with hawse type fairleads.</p>	<p>TOOLS REQUIRED</p> <p>Refer to instructions supplied by winch</p>
	<p>FASTENERS</p> <p>Supplied with winch</p>



<p>50. Fit the mesh fairlead mount to the centre of the bar, using 2x M8x16 black button head bolts + black washers (top), 2x M8x20 hex head bolts + heavy duty washers (bottom).</p> <p>51. Tighten fasteners using 13mm socket/spanner and 5mm hex/Allen key.</p> <p>52. Feed winch cable through the hawse fairlead if applicable.</p>	<p>TOOLS REQUIRED</p> <p>13mm socket/spanner 5mm hex/Allen key</p>
	<p>FASTENERS</p> <p>2x M8x16 black button head 2x M8 black flat washer</p> <p>2x M8x20 hex head 2x M8 heavy duty washer</p>



- 53. Remove the front 2x factory skid plate bolts on the underside of the vehicle.
- 54. Very loosely fit 2x M8x30 hex bolts, heavy-duty washers and P-0394 spacer blocks through the skid plate bolt holes.

TOOLS REQUIRED

12mm socket/spanner

FASTENERS

2x M8x30 hex bolt
2x M8 heavy-duty washer
2x P-0394 spacer block



<p>55. Affix the supplied ADR compliance plate to the inner face of the centre bash plate (see top inset photo).</p> <p>56. Slide the rear of the centre bash plate onto the 2x M8x30 hex bolts, in between the washers and spacer blocks.</p>	<p>TOOLS REQUIRED</p> <p>5mm hex/Allen key 13mm socket/spanner</p>
<p>57. Fit the centre bash plate to the bar using 4x M8x30 black button bolts and black heavy-duty washers.</p> <p>58. Tighten all bolts.</p>	<p>FASTENERS</p> <p>4x M8x30 black button head 4x M8 black heavy-duty flat washer</p>



59. Fit the side underpanels to the underside of the bull bar wings and secure each one to the cage nuts in the bar with 5x M6x16 black button head bolts and black washers.

60. Also secure each side underpanel to the impact assembly using 1x M8x20 hex bolt, heavy-duty washer and flange nut. Reach in from behind to access with tools.

TOOLS REQUIRED

4mm hex/Allen key
13mm socket/spanner

FASTENERS

10x M6x16 black button head bolt
10x M6 black flat washer

2x M8x20 hex bolt
2x M8-heavy duty washer
2x M8 flange nut



RH DRIVER SIDE SHOWN

- 61. **Optional.** There are U-0103 and U-0104 wheel arch guard panels supplied to cover the gap inside the wheel well.
- 62. If choosing to install them, fit 3x M6 cage nuts to the rectangular slots on the rear lip of the side underpanel
- 63. Then secure the wheel arch guard to the side underpanel with 3x M6x16 black button head bolts and black washers.

TOOLS REQUIRED

Flat blade screwdriver
4mm hex/Allen key

FASTENERS

6x M6x16 black button head
6x M6 black washer
6x M6 cage nut



64. Review fitment and double check all bolts are tightened correctly.

TOOLS REQUIRED

FASTENERS



Congratulations! You're done!
Head for the tracks in your revamped and refreshed 105 Cruiser!