



# FITTING INSTRUCTIONS

Part Number: **3414670**  
Product Description: **COMMERCIAL BULL BAR**  
Suited to vehicle/s: **06/2020 ON TOYOTA HILUX (WIDE BODY)**  
Optional  
Fitting Kits: **3500520 - ARB AUX Light Loom (Non-Factory fog light vehicles)**  
**3500890 – LED Fog Light Kit (LH&RH Lights)**  
**3540050 - Winch Install Kit**  
**W90394 – Warn Control Socket Relocation Kit**  
**3500770 - Smittybilt X20 Winch Install Kit**  
**3500610/20 - Warn Zeon Wire/Synthetic Rope Winch Install Kit**

## **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

## **ARB 4x4 ACCESSORIES**

### **Corporate Head Office**

42-44 Garden St  
Kilsyth, Victoria  
AUSTRALIA, 3137

Tel: +61 (3) 9761 6622  
Fax: +61 (3) 9761 6807

Australian enquiries  
North & South American enquiries  
Other international enquiries

sales@arb.com.au  
sales@arbusa.com  
exports@arb.com.au

**www.arb.com.au**

# 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 DRILL WITH COMPLETE METRIC DRILL SET
MULTITOOL OR JIGSAW WITH BLADE SUITABLE FOR PLASTIC	50mm LOW TACK MASKING TAPE
FILE	UTILITY KNIFE
TAPE MEASURE	TOUCH UP PAINT ANTI CORROSION
STEEL RULER	TORQUE WRENCH
MATTE BLACK SPRAY PAINT	-

### HAVE AVAILABLE THESE SAFETY ITEMS WHEN FITTING PRODUCT:

Protective eyewear



Hearing protection



**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	Torque Nm	Torque lbft
M6	9Nm	7lbft
M8	22Nm	16lbft
M10	44Nm	32lbft
M12	77Nm	57lbft

PARTS LISTING			
APPLICATION.	PART NO.	QTY	DESCRIPTION
FIT MOUNTS TO CHASSIS	3759738R	1	BRKT MNT STEEL HILUX 15ON RHS
	3759738L	1	BRKT MNT STEEL HILUX 15ON LHS
	3759667R	1	BRKT CHASSIS OUT HILUX 15ON RH
	3759667L	1	BRKT CHASSIS OUT HILUX 15ON LH
	3759666R	1	BRKT CHASSIS IN HILUX 15ON RHS
	3759666L	1	BRKT CHASSIS IN HILUX 15ON LHS
	6151094	2	BOLT M12 x 1.25 x 30 Gd8.8 ZP
	6151428	4	NUT FLANGE M12 X 1.75 ZP
	4581007	14	WASHER FLAT ½ x 1 1/2 x 4MM SILVER TZP
	6151357	8	BOLT SEMS M10 X 30 ZP Gd8.8
	6151321	8	NUT FLANGE M10 x 1.5 ZP
	4581040	8	WASHER FLAT M10 X 25 X 3 ZP
	3194818	4	PLATE NUT ASSY HILUX BAR 15ON
	6151360	12	BOLT M12 x 1.75 x 35 Gd 8.8 ZP
FIT BAR TO MOUNTS	6151360	6	BOLT M12 x 1.75 x 35 Gd 8.8 ZP
	6151357	4	BOLT SEMS M10 X 30 ZP Gd 8.8
	4581007	6	WASHER FLAT ½ x 1 1/2 x 4MM SILVER TZP
	6151428	6	NUT FLANGE M12 X 1.75 ZP
	6151321	4	NUT FLANGE M10 x 1.5 ZP
FIT STONE GUARD	6523089	1	PANEL STONE GUARD HILUX 15ON
	6151234	8	BOLT M8 x 1.25 x 25 Gd 8.8 BP
	4581307	8	WASHER FLAT, M8 x 20 x 2 BLK ZN
	6523077R	1	PANEL WING RH COMBAR HILUX15ON
	6523077L	1	PANEL WING LH COMBAR HILUX15ON
	6151213	10	BOLT M6 x 1.0 x 20 Gd8.8 BZ
	4581082	10	WASHER FLAT, M6 x 19 x 1.6 BZ
	6151548	4	NUT FLANGE M8 x 1.25 GR8.8 BTZP480
	6151315	10	NUT CAGED M6 0.7-1.6
	6151301	4	NUT CAGED M8 3.3-4.7
	3759772	2	WING PANEL BRACKET
FIT LIGHTS	3163015	1	OS LIGHT INDICATOR SURROUND KIT
	6821287	1	LAMP LED INDICATOR CLEARANCE
FIT LICENSE PLATE	6821189	2	GROMMET RND FC 1500 080 090
	6151384	2	SCREW ST PHDCOL PH 5.2 X 16 TBZP480
PARKING SENSOR FITMENT	3163091	2	PLUG BLANKING BLK 17.4mm
	3195099	2	SENSOR CLAMPING PLATE
	6151223	4	NUT HEX NYLOC M6X1.0   ZNB 480
MISCELLANEOUS	6191037	2	PINCH WELD 1000mm NARROW LONG
	180302	6	CABLE TIE 4.8 x 180mm BLACK
	37800069	2	CUTTING TEMPLATE SUITS HILUX

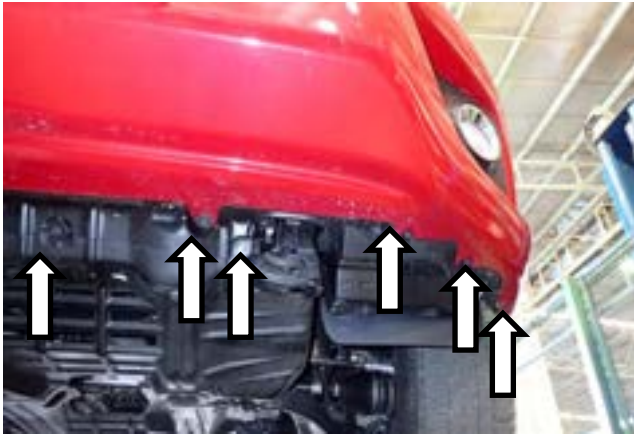
## FITTING PROCEDURE



***Note: Read the instructions thoroughly before starting***

1. Remove all fasteners and scrivenets retaining bumper along inside edge of wheel arches – (Right hand side shown).

Set aside for later on.



2. Remove all fasteners and scrivenets retaining bumper along lower lip – (Left Hand side shown).

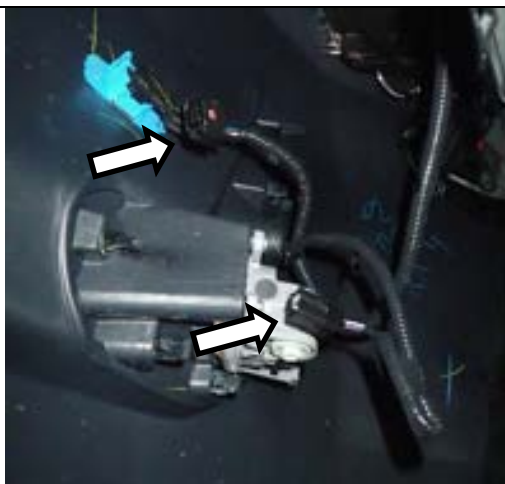
Set aside scrivenets and fasteners used to attach bumper to OEM stone deflector for re-use later on.



3. Remove dressing piece from underside and discard.



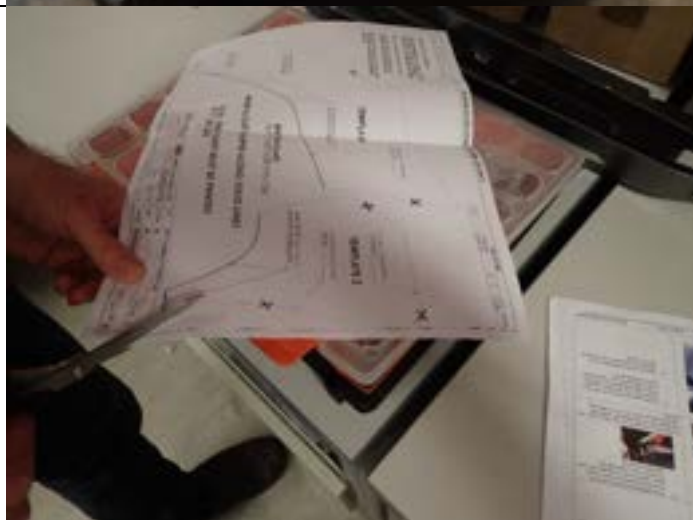
4. Ensure inner guards are unclipped from front bumper.



5. Disconnect fog light wiring and if equipped front parking sensors – (Right Hand side shown).



6. Apply masking tape to each side of bumper as shown adjacent.



7. Carefully cut out 2 piece bumper cut template supplied.

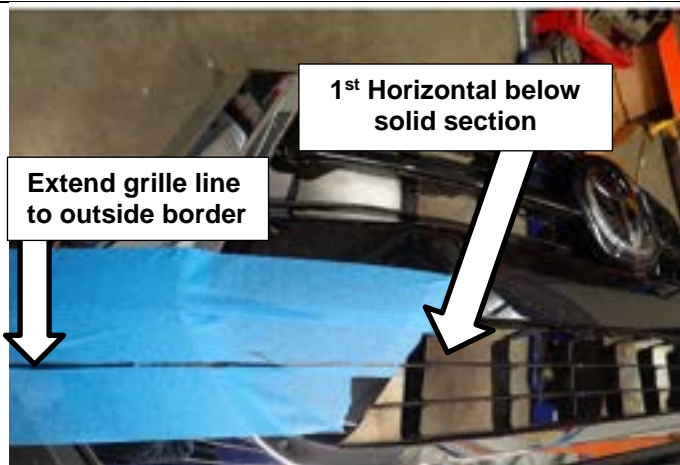
**Note: Both Template 1 and 2 will be used for both sides (LH & RH) – be careful not to damage.**



(LHS shown without tape for clarity)

8. Position both templates onto RHS of bumper aligning with edges of bumper specified on template.
9. Using a permanent marker, outline edges of bumper cut template onto masking tape where the bumper cut will be performed.

Remove template and repeat for LHS. Take care not to rip template upon removal.



10. Identify the first horizontal line of the grille below the solid section. Extend this line to the outside edge of the border of the grille.

Immediately below will be the cutting line for the Grille.




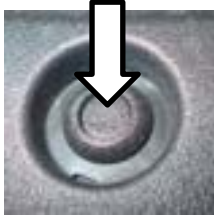

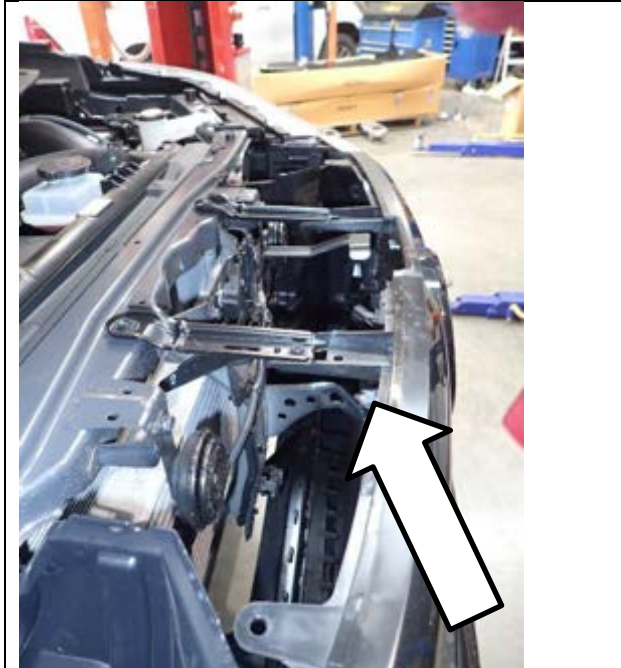
11. Using a marker, accurately mark a straight-line level to Template 1 that joins the templates marked in step 9. Repeat for opposite side.

**Notes:**

-use the **edge** of a 1m rule to ensure a straight horizontal line.

12. Cutting line should appear as shown:



	<p>13. Open the bonnet and remove all scrivenets (8) retaining plastic cover. Set aside scrivenets removed for re-use later on.</p> <p><b>HINT:</b> Depress centre to remove.</p> 
	<p>14. Remove plastic cover from above grille and set aside, this will be reused.</p>
	<p>15. Remove upper grille retaining screws (4). Set aside for re-fitment later on.</p> <p>Remove centre grille retaining screw (see arrow) Set aside for re-fitment later on.</p>



16. Gently unclip and pull back the top outside corners of the grille to reveal final two screws retaining grille. Using an extension and socket, remove and set aside for re-fitment later on.



17. If vehicle is equipped with Toyota Safety sense, unplug radar (located behind Toyota badge).



18. Remove registration plate and set aside, then carefully remove bumper from vehicle by pulling on each side of the bumper near the wheel arches and working your way towards the centre.

Set grille and bumper aside on a soft non-marking surface for cutting.



19. If vehicle is equipped with parking sensors, using a paint pen or white marker, label each parking sensor (Left or Right) prior to removing from bumper.

Once marked, un clip parking sensors (2) from bumper and store for refitment.



20. Using a blunt flat blade screw driver or similar, gently pry/remove the sensor housing from the bumper.

Unclip the black retainer from the blue housing.  
Discard the blue housing, store the black retainer for refitment.



**DISCARD LOWER  
SECTION SHOWN**

21. Using an oscillating multi-tool or saw suitable for cutting plastic, carefully cut along the marked line and discard the bottom section of the bumper bar.



22. Remove masking tape. Use a file to de-burr the cut edge of the remaining bumper bar section.

23. Re-install trimmed bumper, grille and plastic cover using OE fasteners removed in previous steps.

Ensure both scrivenets are fitted inside wheel arches on each side.

24. Apply pinch weld trim to the cut edge of the bumper bar.





25. Remove plastic lower impact absorber from vehicle and discard.

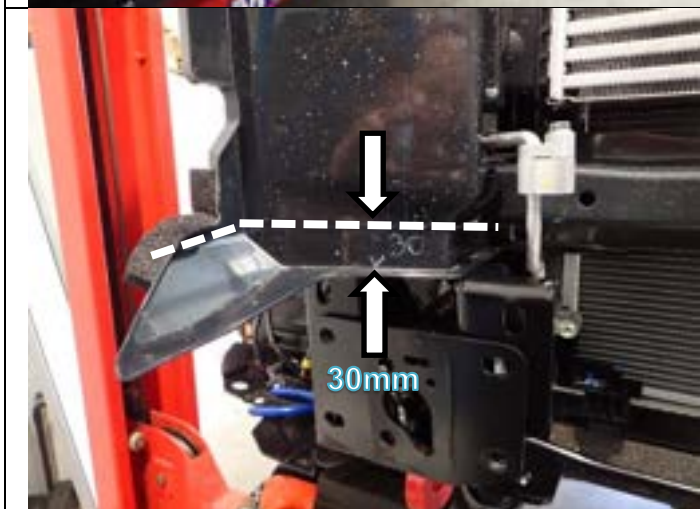
Note: Lower impact absorber is retained by plastic clips. Levering absorber free with a large screw driver may aid removal.



26. Remove 2 x M10 bolts on both sides (4 total) fixing crash beam to chassis and remove crash beam.

Discard crash beam.

Note: Retain 4 x M10 bolts for re-use.



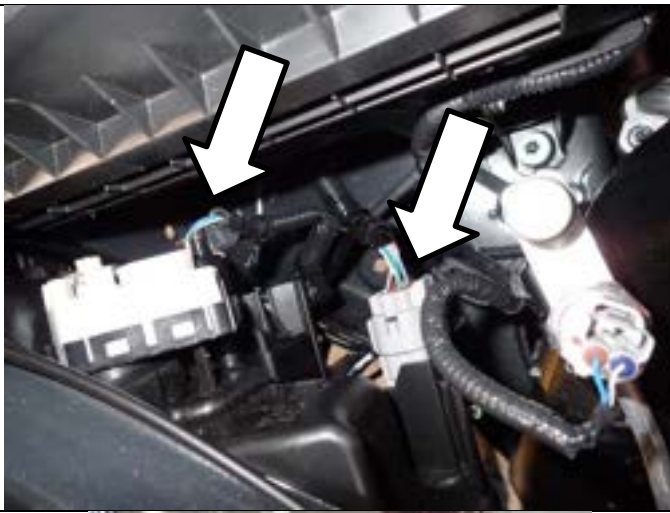
(RHS SHOWN)

27. Locate air deflector panels and mark up 30mm from bottom edge as detailed in the image – (Right Hand side shown).  
28. Use scissors or shears to carefully cut lower portion away and discard.

Note: Take care not to damage any other components on the vehicle whilst cutting.

29. Carefully remove any burrs or sharp edges with a file and/or sandpaper.





30. From the inside of the engine bay, unclip both the black and grey connectors from each headlight.

To achieve better access for indicator and clearance light wiring, feed loom out of engine bay under head lights as shown below.



31. Following fitting instructions 3789197 supplied in kit 6821287; attach the LED combination lamp looms (also supplied in same kit). Vehicle coloured wires can be found in the positions indicated.

**Notes:**

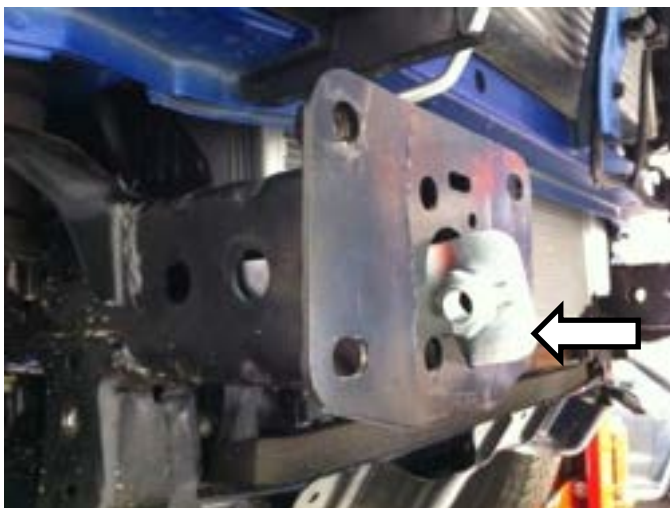
**-Use a test light or multimeter to pick the appropriate wire to attach the loom to.**

**-Use solder to join wires.**

**-Cover each join with either insulation tape or heat shrink tube.**

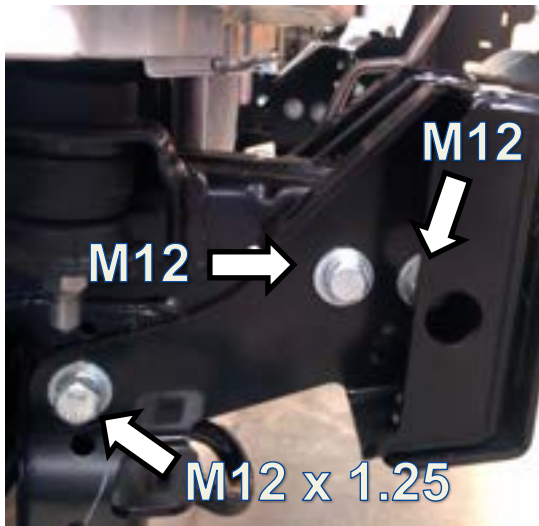
32. **- Use cable ties to secure all wiring.**

Function	LED Wire	Vehicle Wire
Ground	Black	White & Black (PIN 5)
Indicator	Green	RHS: Large Ø Red (PIN 6) LHS: Yellow (PIN 6)
Clearance	Red	RHS: Grey (PIN 3) LHS: Dark Green (PIN 3)



33. Insert 2 x M12x1.75 nut plates into RHS chassis rail as shown.

Note: 1 x nut plate is used to fasten the outer chassis support to the outside of the face of the chassis and 1 x nut plate is to fasten the inner chassis support to the inner face of the chassis. Install nut plates accordingly.



34. Loosely fasten RHS outer chassis support bracket to outside face chassis using 2x M12x1.75x35mm bolts and flat washers installed through the front holes into the previously installed nut plate.

35. Loosely fasten the RHS outer chassis support bracket at the rear hole using M12 x 1.25 x 30 bolts and flat washer installed into OE captive nut in the chassis bracing.



36. Loosely fasten RHS inner chassis support bracket to inside chassis face using 2x M12x1.75x35mm bolts and flat washers installed through the holes into the previously installed nut plate.

37. Repeat process to install chassis support brackets on LHS.

Washers



Washers

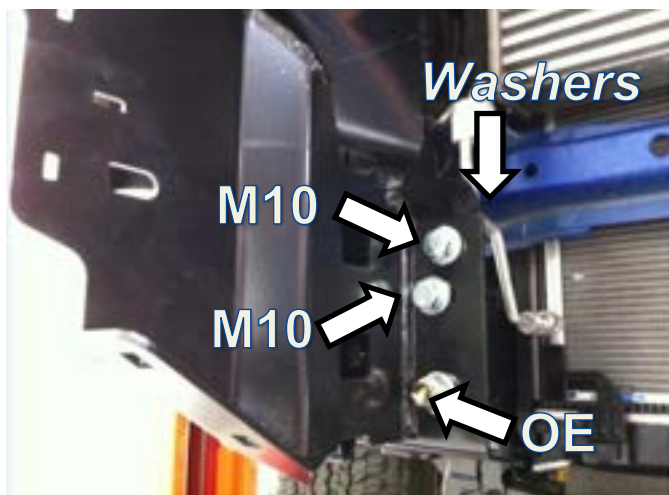
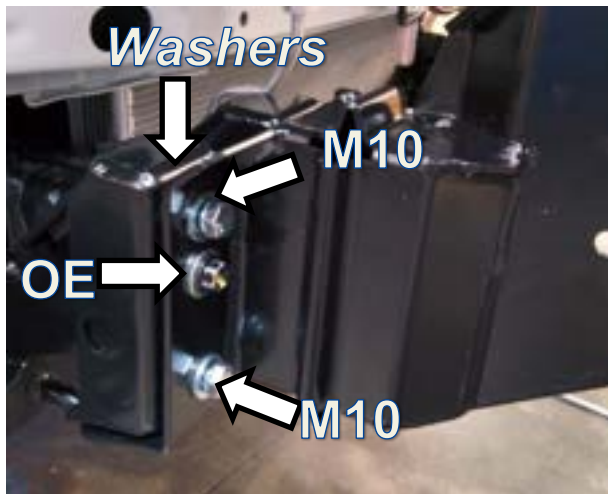


38. **IMPORTANT:** On upper mounting holes between the support brackets and the mount install 1 x M10 x 25 x 3mm flat washer per hole.(4 locations RH outer & inner, LH outer and inner))

(RH Outside support shown below).

Washer



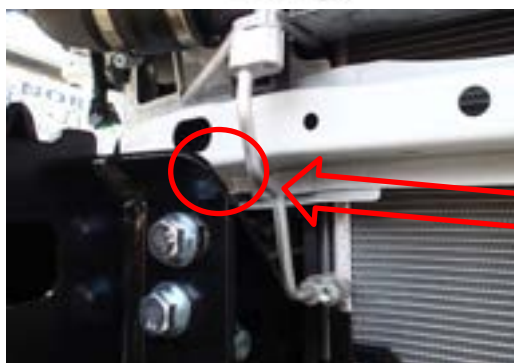
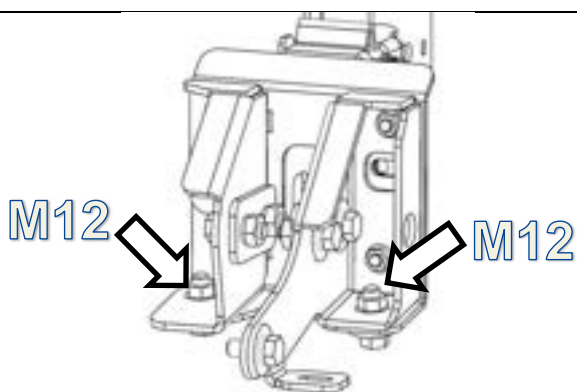
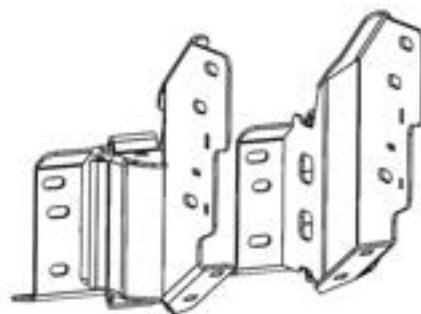


39. Loosely install RHS Bullbar Mount onto chassis flange.  
-Install 2xM10x25x3 washers onto 2 x OE M10 bolts (retained at step 26) and re-install into the chassis flange captive nuts (positions as indicated).

40. Ensure 2 x M10x25x3 washers are installed between chassis support bracket and mount plate (as per step 38).

41. Loosely install 4 x M10 x 30 SEMS bolts and 4 x M10 flange nuts through mount, flange and chassis support brackets.

**NOTE: MOUNTS ARE HANDED. RIPPLES ARE ON THE OUTSIDE OF MOUNTS**



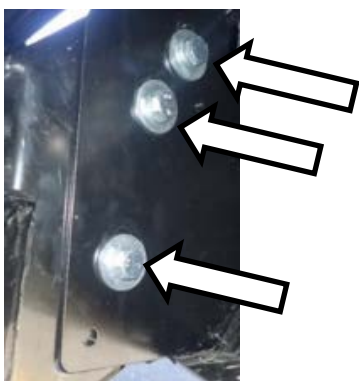
42. Loosely install 2 x M12 x 35 bolts and flat washers through lower mount and chassis support brackets into M12 flange nuts.

**Note:** Starting with the M10 bolts installed from the front of the mount, tighten all fasteners enough to eliminate any play in mount or support brackets but to still allow for adjustment of bullbar.

43. Repeat process to install Bullbar mount on LHS.

**NOTE: Check clearance between mount and AC line is approximately 15mm**  
If necessary the AC tube can be carefully bent away from the bracket by pushing the top section towards the car.  
While bending the tube. Make sure you support the lower fittings to avoid damage.

	<p>44. Press dome plugs into sensor holes in bar. (these will be used to accurately locate the sensor retaining brackets)</p> <p>For vehicles not equipped with parking sensors skip to step 47.</p>
	<p>45. Assemble the sensor retaining plate onto the plastic retainer (set aside in step 20) so that the tail of the plate is on the opposite side to the raised section.</p>
	<p>46. Assemble retainer and plate onto the inside of wing aligning mounting holes with studs. (tail outboard)</p> <p>The dome plug installed at step 44 should hold the retainer concentric to the sensor hole in the wing.</p>
	<p>47. Fasten assembly to bullbar by torquing M6 Nyloc nuts to specification. Remove dome plugs and press RHS sensor into black retainer.  <b>CHECK SENSOR IS CONCENTRIC IN HOLE, IF NOT ADJUST.</b></p> <p>Repeat for LHS.</p> <p> M6 – 9Nm</p>
	<p>Ensure all other aftermarket accessories such as driving lights/winch/UHF aerial have been fitted to the bull bar.</p> <p><b>NOTE: If fitting a winch, Roller Fairlead must be drilled to 25mm offset if not already done</b></p> <p>48. With the assistance of another person, place the bar on the mount brackets.</p> <p><b>Warning:</b> Due to the weight of the bar and winch if fitted, it is advised that you use some form of mechanical assistance when lifting the bar onto the vehicle such as an elevating trolley.</p>



49. Loosely fasten bar to mounts using 6 x M12 x 1.75x35mm bolts, 6 x M12 flat washers and 6 X M12 flange nuts.



50. Adjust position of bar left/right until it's sitting central to body, then tighten all fasteners joining mount assembly to chassis brackets (4x M10 and 2x M10 OE bolts each side).



M10 – 44Nm



51. Tighten all inner and outer M12 chassis support bracket fasteners.



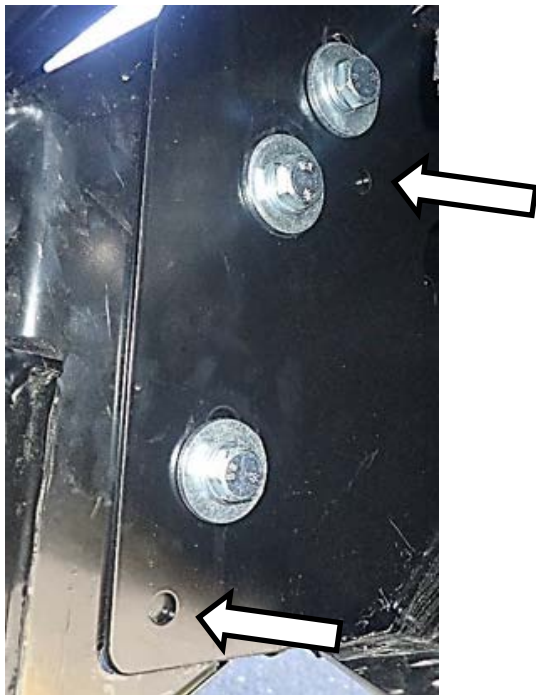
M12 – 77Nm



52. Position the bar so that its level with the bumper cut profile as shown and there is an even gap of 15 - 19mm between the Wing Edge and Bumper Cut Trim.
53. Once bar is visually in correct position, tighten 6x M12 Fasteners joining Bull Bar to Mount Assembly.



M12 – 77Nm

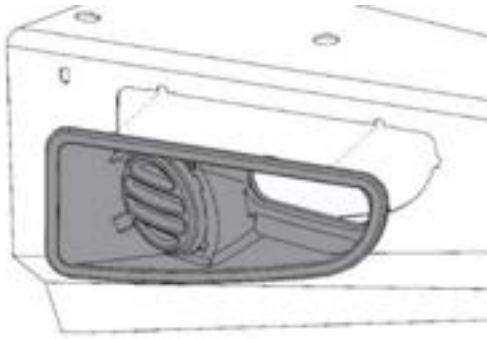


54. Drill 4 x Ø10mm holes (2 per side) through mount assembly using existing holes in bull bar as guide.
55. Add anti-corrosion touch up paint to area drilled.
56. Fasten 4x M10 SEMS bolts and flange nuts to pinning holes.



M10 – 44Nm

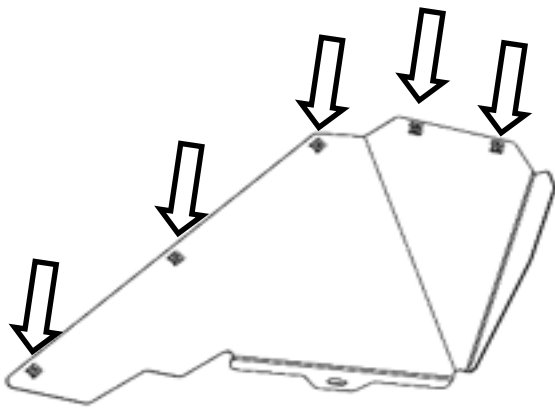




57. Assemble and Install Combination Light Surrounds (p/n 3163015) as per instruction no. 3786421 supplied with Surround Kit.

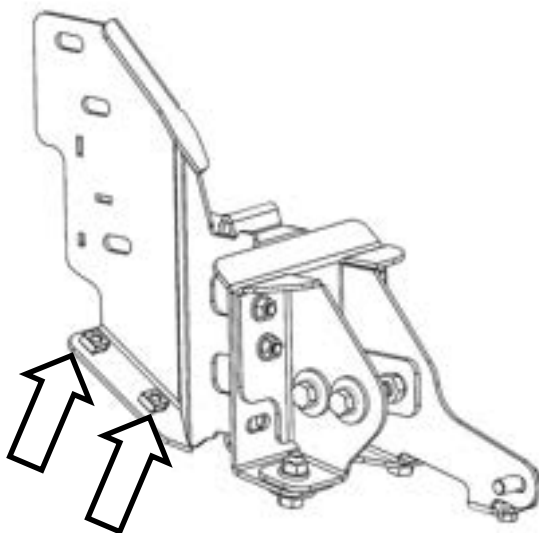
**Note:**

- Optional Fog Lamps can be installed at this point.
- The instructions for the Fog Lamp Surround reference an earlier Combination Lamp Kit. Please use 6821287 LED Combination Lamp Kit.



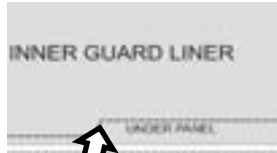
58. Fit 5 x M6 cage nuts to each wing under panel.

*Note:* Cage nut heads to be located on top side.



59. Fit 4x M8 cage nuts to RH and LH bull bar mounts as indicated. (RH Mount Shown)

*Note:* Cage nut heads to be located on top side of bull bar lip and mount assembly.



5-10mm from bottom  
of under panel

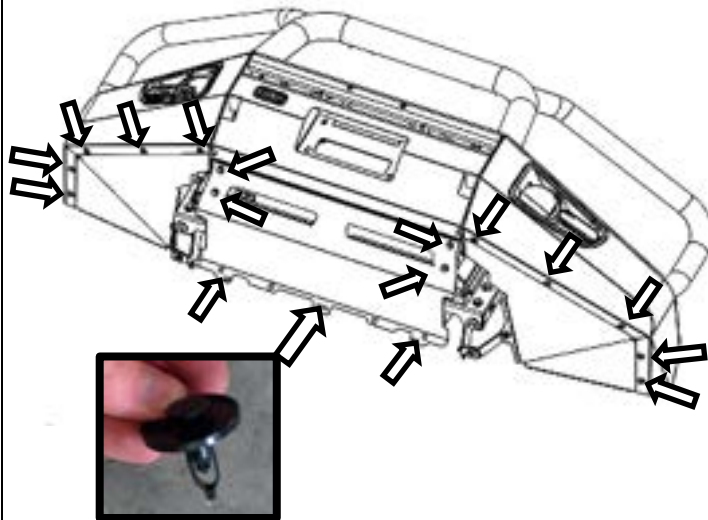
60. Position Wing Under Panels and then mark lines onto the OEM Inner Guards (LH & RH) using Wing Under Panels as guide. Ensure enough inner guard remains so that it may be neatly tucked/secured behind Wing under panel lip.

*Note: Cutting 5-10mm from the bottom of the under panel will allow the guard to be properly secured.*

61. Carefully cut along marked lines using multi tool or jig-saw.



**Caution: Use care not to damage the windscreen washer bottle or hoses when trimming LH inner guard.**



62. Fasten stone tray with 4 x M8x1.25x25mm bolts, 4 x M8 flat washers and 2 x OEM M6 fasteners.

Fasten wing under panels to bull bar using 10 x M6 bolts & 10 x M6 flat washers.

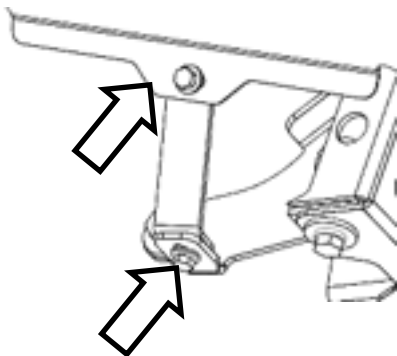
Fasten centre hole of stone guard using OEM clip shown.



M6 – 9Nm



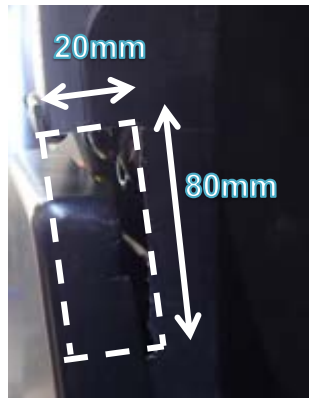
M8 – 22Nm



63. Fasten wing panel brackets to RHS and LHS wing panel and chassis BRKT using 4 x M8x1.25x25mm bolts, M8 flange nuts & 4 x M8 flat washers.



M8 – 22Nm



64. In line with the bottom edge of the lower bumper trim and the top edge of the bull bar wing tip use a pair of shears to cut a section approximately 20mm x 80mm from the inner guard outer edge to allow it to be pushed into the end of the wing. (RH Shown).

65. Push inner guard panel inside the end of the wing and behind the rear lip of the wing under panels.



66. Remove the scrivet screw from the scrivet clip removed earlier and set aside.



67. Install scrivet clip onto inner guard and bumper outer end as shown.

**Note:** Removing upper scrivet (as pictured) may assist during this process.

68. Using the hole in the clip as a guide drill through the inner guard and bumper as shown using a 3mm drill bit.



69. Remove clip and set aside.

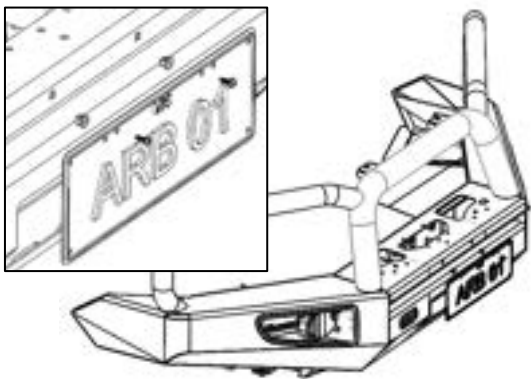


70. Using a 7mm drill bit, drill the previously drilled 3mm holes in the inner guard and bumper out to 7mm.

**Note:** Pull the bumper end away from the inner guard (as pictured) and drill 1 x hole at a time rather than drilling straight through both holes.



71. Re-Install clip and scrivet as shown.



72. Fit the plastic plugs into the square holes in the bull bar. Fit the registration plate to the bull bar using the black self-tapping screws.

73. Discard all remaining fasteners.

## FITTED PRODUCT – TOYOTA HILUX COMMERCIAL BULL BAR

### ONCE BAR IS FITTED:

- Ensure all bolts are tensioned correctly.
- All wiring is clear of sharp edges or moving surfaces and is secured properly.
- Piping is secured well clear of sharp or moving components.
- Check operation of winch if fitted.
- Check all wiring and connections are functioning correctly.

### IF VEHICLE IS FITTED WITH 'TOYOTA SAFETY SENSE', TO PREVENT MALFUNCTION OF RADAR:

- DO NOT fit winch control boxes to top pan of bull bar
- DO NOT fit driving lights larger than ARB AR21 Intensity lights.

