



FITTING INSTRUCTIONS

PART NUMBER AND DESCRIPTION:

3646070- RAW REAR STEP TOW BAR (RSTB)

SUITED TO VEHICLE/S:

Mitsubishi Triton MR (2019 ON) – Will not suit models equipped with the Mitsubishi Blind Spot Warning (BSW) system

WARNING

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 tow bar component, contact your nearest authorised ARB stockist.
- ◆ Do not use this product for any vehicle make or model, other than those specified by ARB.
- ◆ Do not remove labels from this tow 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.
- ◆ The eyelets on the rear bar have been designed and tested for connection of trailer safety chains. They are not to be used for recovery or direct towing.
- ◆ For recovery, fit a suitable and rated tow hitch to the central tow hitch receiver.
- ◆ Position high lift jack at lift locations beneath the outer corners of the RSTB. Do not lift directly from the tube.

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	SIDE CUTTERS
INSULATION TAPE	MASKING TAPE
DEUTSCH CRIMPING TOOL	WIRE STRIPPER
NEEDLE NOSE PLIERS	SOCKET SET
ALLEN KEY SET	TAPE MEASURE
FINE ROUND FILE	RUST PREVENTATIVE PAINT
TORQUE WRENCH 9-95Nm range	

HAVE AVAILABLE THESE SAFETY ITEMS WHEN FITTING PRODUCT:

Protective eyewear		Hearing protection	
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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
M12x1.25	95Nm	71lbft

RSTB PARTS LISTING

APPLICATION	PART NO.	QTY	DESCRIPTION
PREPARE REAR STEP TOW BAR (RSTB)	4654612	1	WELDED RAW RSTB ASSY SUIT TRITON
	6151715	16	NUT M6 CAGED 3.6-4.5MM 836-D
RSTB TO VEHICLE	3789943	1	TEMPLATE TRITON MR NUM PLATE
	6523291R	1	PANEL BEAVER RH SUIT TRITON MR
	6523291L	1	PANEL BEAVER LH SUIT TRITON MR
	3750339	1	BRKT NUMBER PLATE FRAME
	3750336R	1	BRKT NUMBER PLATE MOUNT RH
	3750336L	1	BRKT NUMBER PLATE MOUNT LH
	6602011	2	CANOE CLIP
	5670039R	1	SPRING LICENCE PLATE RH
	5670039L	1	SPRING LICENCE PLATE LH
	5848302	2	PACKER RB NYLON
	6151213	2	BOLT M6 x 1.0 x 20 Gd8.8 BZ
	4584295	16	WASHER FLAT M6 x 12 x 1.3 BLK ZN
	4581082	2	WASHER FLAT, M6 x 19 x 1.6 BZ
	6151459	6	SCREW BTN HD M6 x 16 BZ
	6151549	8	NUT NYLOC M6 x 1.0 GR8.8 BTZP480
	6151384	4	SCREW ST PHD 5.2x16 / PH PC8.8 BTZP480
	6821189	4	GROMMET RND FC 1500 080 090
	6151256	8	SCREW BTN HD M6 x 16 SS
	6151096	10	BOLT HXHD M12 x 1.25 x 40 CL8.8 ZP
	4581049	10	WASHER FLAT, 1/2 x 1 1/8 x 3 GOLD ZN
	3194793	2	PLATE ASSY CHASSIS
3759700	2	BRACKET ASSY CHASSIS	
PANELS TO RSTB	6151300	2	NUT CAGED M8 2.6-3.5
	3195067	1	PLATE DIFFUSER MOUNT
	6151256	10	SCREW BTN HD M6 x 16 SS
	4581304	10	WASHER FLAT M6 S/S
	6523293	1	DIFFUSER RAW RH SUITS TRITON
	6523294	1	DIFFUSER RAW LH SUITS TRITON
	3527050	1	SENSOR SURROUND KIT
	3195208	1	PLATE EXTRUSION RSTB
180302	10	CABLE TIE	
TOW TONGUE	4761170	1	TOW TONGUE 45 DEG
	55010	1	TOW BAR PULL PIN
	55020	1	SPRING CLIP

TRAILER WIRING

The following trailer wiring solutions can be purchased from ARB. Purchase the main wiring harness with ECU (Part no. 3600010) in conjunction with the appropriate socket and tail listed below. Alternatively, this product is compatible with the factory trailer wiring solution.

To install this loom, a crimping tool suitable for crimping contact type size 16 Deutsch pins is required. Suitable crimping tools can be purchased from auto electrical wholesalers as shown.



APPLICATION	PART NO.	QTY	DESCRIPTION
TRAILER WIRING	3600010	1	RSTB WIRING INCLUDING ECU
	3600020	1	RSTB SOCKET & TAIL 7 PIN FLAT
	3600030	1	RSTB SOCKET & TAIL 12 PIN FLAT
	3600040	1	RSTB SOCKET & TAIL 7 PIN ROUND LRG
	3600050	1	RSTB SOCKET & TAIL 7 PIN ROUND SML

OPTIONAL ACCESSORIES

The following ARB accessories can be fitted to this product:

APPLICATION	PART NO.	QTY	DESCRIPTION
OPTIONAL ACCESSORIES	171403	1	ARB AIR LINE FITTING
	10600030	1	ARB TRAILER CAMERA KIT
	58X22/A	1	RECOVERY HITCH AND SHACKLE
	6594050	1	50 AMP ANDERSON PLUG

			
AIR LINE FITTING	TRAILER CAMERA KIT	RECOVERY HITCH	ANDERSON PLUG

GENUINE ACCESSORIES REMOVAL



Removal of rear bumper bar:

1. Disconnect the parking sensor wiring loom on each side of the vehicle. There are 2 separate looms for the parking sensors.



2. Remove licence plate and disassemble the bumper bar from the chassis by removing 2 M12 nuts from each side as shown.



3. Remove bolt plate from inside of chassis rail from each side and discard as shown and remove bumper bar



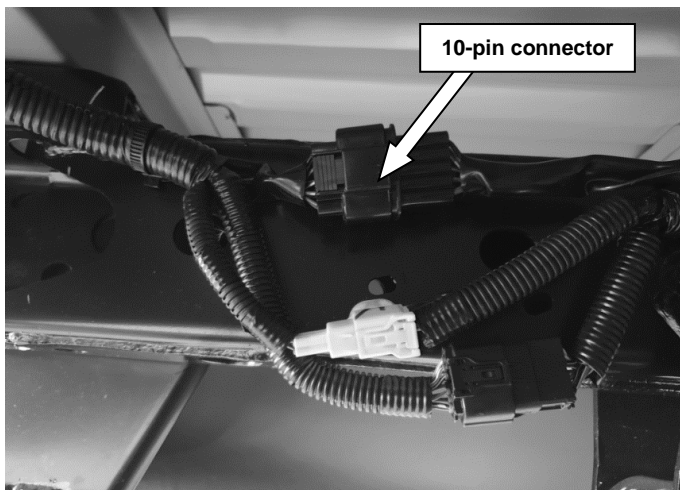
4. Remove the spare wheel from beneath the tub using the wheel nut wrench and jack handle pieces supplied with the vehicle. Insert as shown through the access slot above the number plate position and rotate counter-clockwise to release the wheel.

VEHICLE/RSTB WIRING

A trailer wiring solution that incorporates a smart ECU is available for this vehicle. To fit this solution, the rear vehicle wiring harness must be cut and high quality, waterproof Deutsch connectors installed to provide signal pickup points for the ECU.

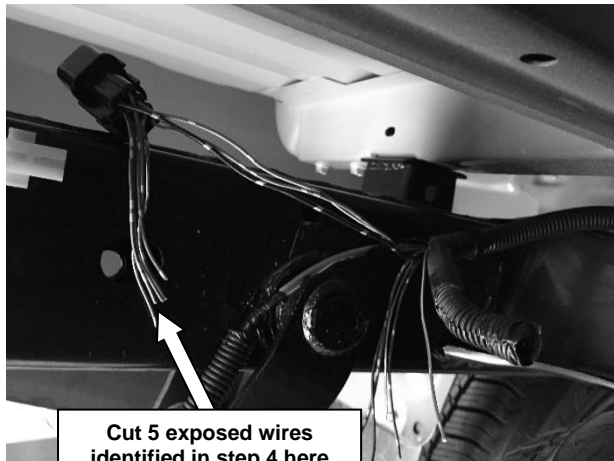
To install this loom, a suitable crimp tool is required. Refer to Page 4 for more details about the crimp tool.

Follow the steps below to install the trailer wiring solution:



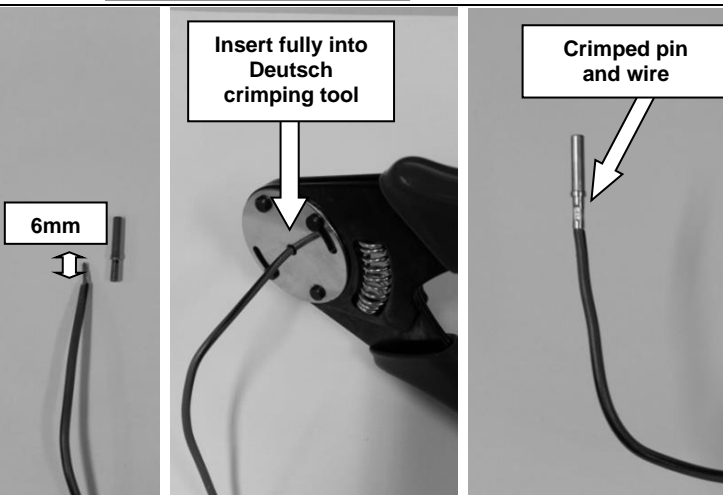
5. Locate the 10-pin connector on the left-hand chassis rail behind cross member as shown. Disconnect connector and remove tape if present and expose 200mm of the following coloured wires from the PVC/corrugated tubing:

Green/Yellow	(LH Indicator)
Red	(Reverse)
Green/Red	(RH Indicator)
Blue/Orange	(Brakes)
Green	(Clearance)



Warning: Wire colours may vary slightly and should be double checked with a multi-meter or test light. Failure to double check may result in damage to the vehicle.

6. Cut a 90mm section from the centre of the 5 exposed wires. This will leave ~55mm of wire before they re-enter the corrugated tubing and the 10-pin connector.



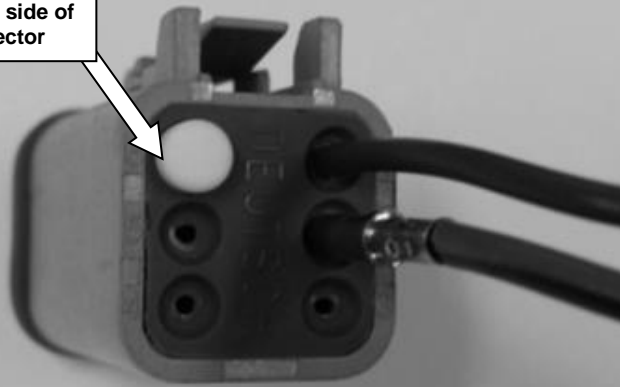
7. Remove 6mm of the plastic insulation coating from the end of each newly cut wire.

8. Insert each wire into the shorter end of a metal Deutsch pin.

9. Insert the longer end of the metal Deutsch pin into a crimping tool and crimp the wire and pin together as shown.

VEHICLE/RSTB WIRING

Plastic cover on the front side of connector



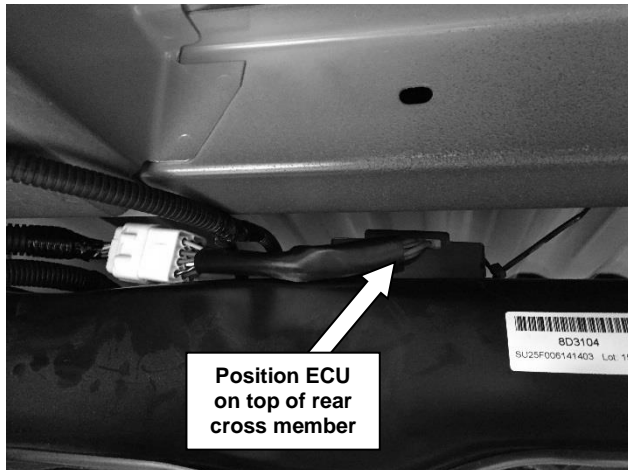
10. Insert one set of wires into a male 6-pin connector from the back in the following order:

Pin position	Wire colour
1	Green/Yellow
2	Red
3	Green/Red
4	Blue/Orange
5	Green

Note: Pin positions are shown on the back of the connector.

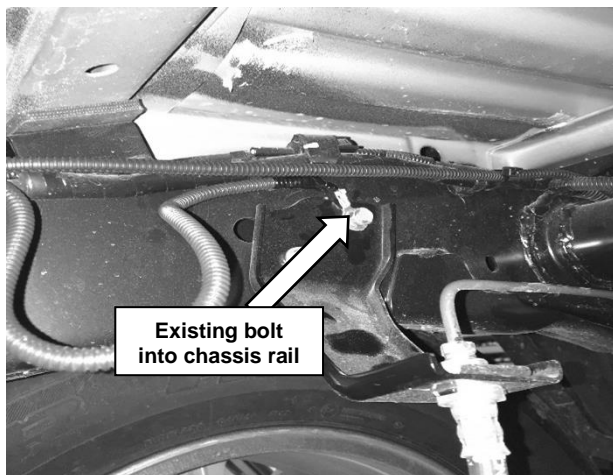


11. Insert the white blank pin into position 6 as shown in the previous step.
12. Insert the plastic cover to the front of the connector as shown.
13. Repeat steps 10-12 for the other connector.



Position ECU on top of rear cross member

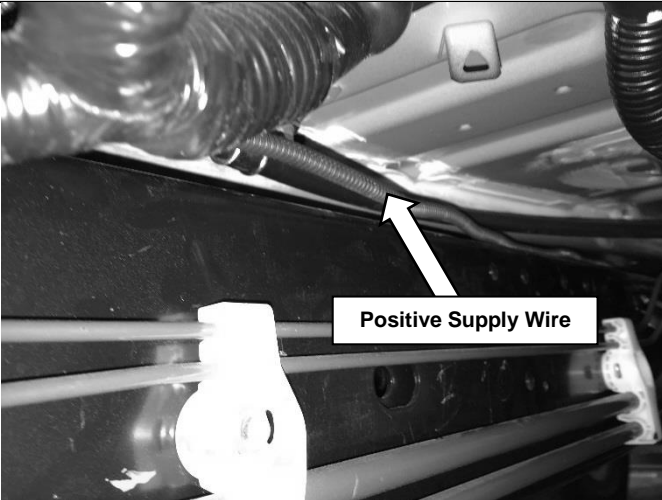
14. Position ECU on top of rear cross member as shown. Secure using the ECU mounting holes with 2 cable ties.
15. Connect the ECU unit to the RSTB wiring harness using the large 12 pin connector.



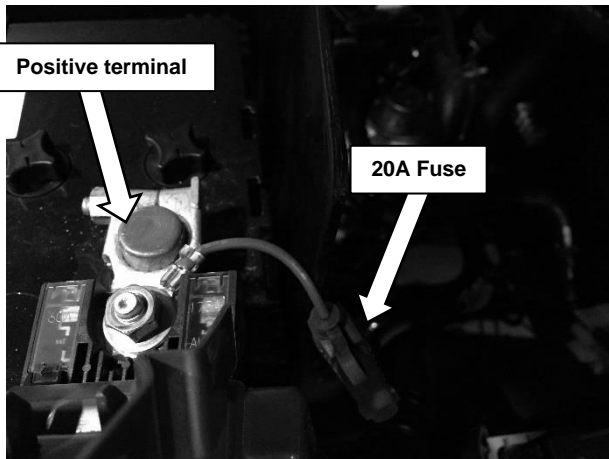
Existing bolt into chassis rail

16. Connect the ground wire of the RSTB harness to the bolt on the LH chassis rail located in front of the rear cross member near the brake line mount.

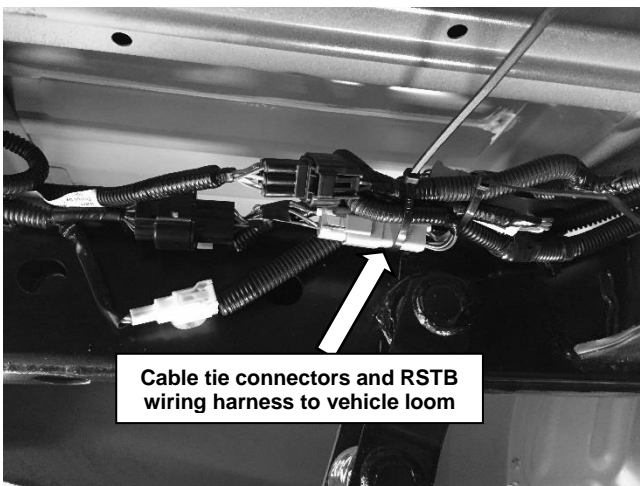
VEHICLE/RSTB WIRING



17. Route the positive supply wire to the front of the vehicle following the existing vehicle harness along the left chassis rail.



18. Continue routing the positive supply wire through the engine bay to the battery.
19. Connect the positive supply wire to the positive terminal of the battery using the existing bolt as shown.

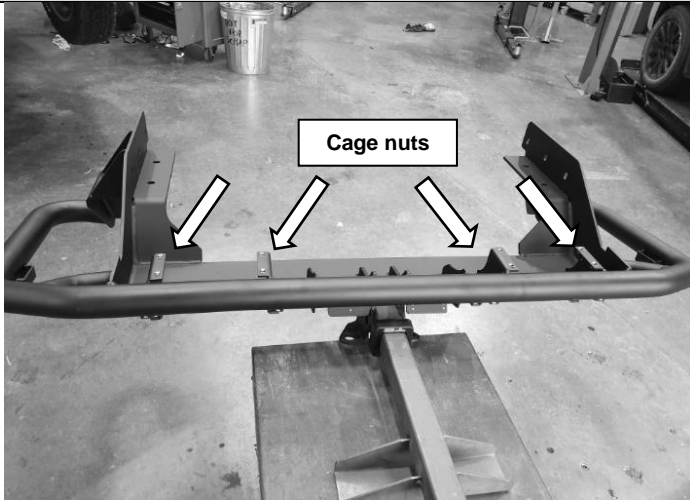


20. Connect the RSTB wiring harness to the 2 male 6-pin connectors.
Note: The RSTB wiring harness is not polarity sensitive in this region so the male 6-pin connectors can be connected to either female connector.
21. Ensure vehicle tail lights function correctly.
22. Fasten the connectors to the vehicle loom using the cable ties provided.

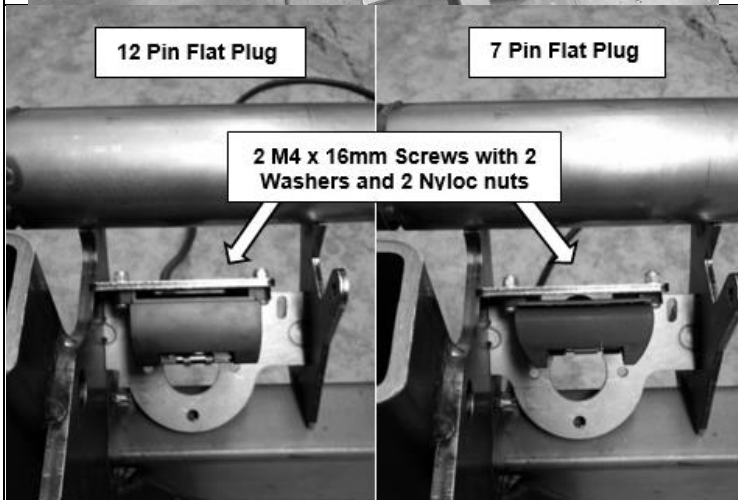
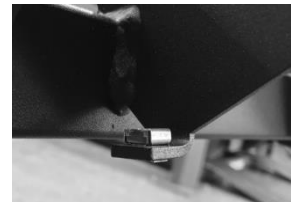
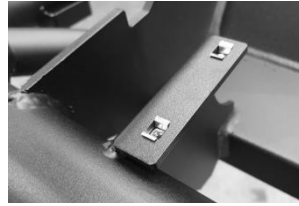


23. Re-wrap the un-cut wires with the existing split corrugated tubing and new tape.
24. Tidy and fasten all wiring using the cable ties provided.
Warning: Make sure all wires are securely fastened away from any hot, sharp or moving surfaces. Do not fasten wiring harness to fuel or brake lines.
25. Ensure vehicle tail lights function correctly.

PREPARE REAR STEP TOW BAR (RSTB)

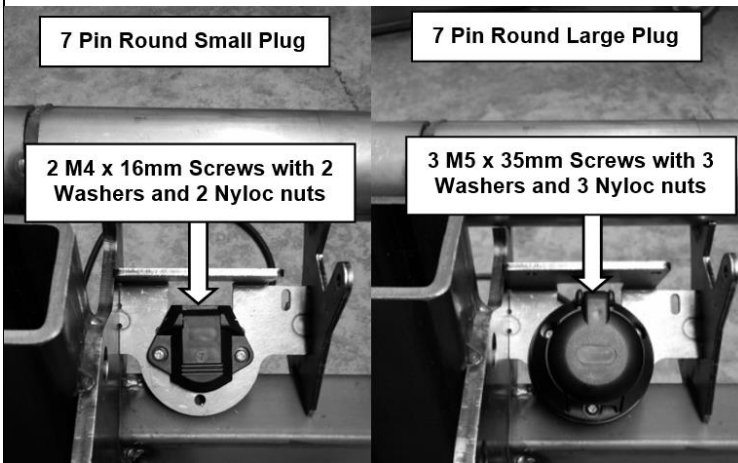


26. Place the RSTB on a flat surface that will not damage its coating or on a lifting device as shown.
27. Fit 16 long-leg M6 caged nuts to the RSTB.



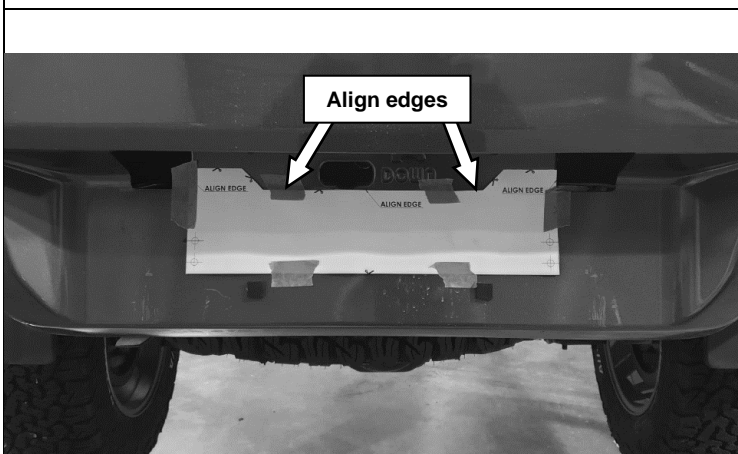
For fitment of flat trailer plugs:

28. Using the appropriate mounting holes as shown and fasteners supplied with the trailer plug, attach the trailer plug to the trailer plug bracket on the RSTB.



For fitment of round trailer plugs:

29. Using the appropriate mounting holes as shown and fasteners supplied with the trailer plug, attach the trailer plug to the trailer plug bracket on the RSTB.



30. Place the number plate drilling template on the rear panel of the tub as shown. When aligned use masking tape to hold in place.
31. Centre punch the 4 holes, remove template and drill to $\text{Ø}6.5\text{mm}$ and de-bur each hole to remove all sharp edges.

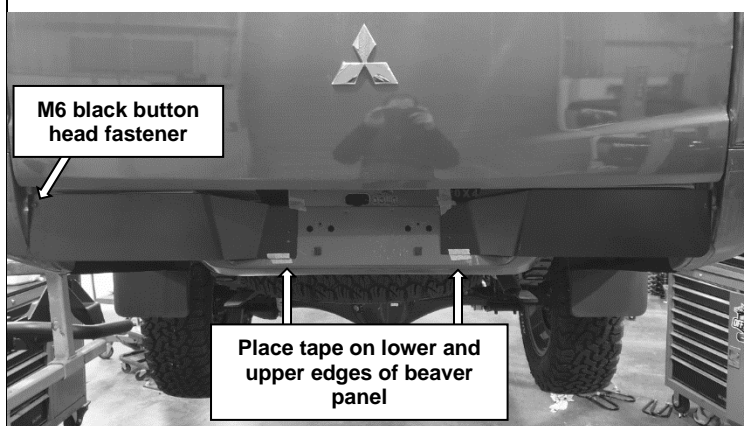
PREPARE REAR STEP TOW BAR (RSTB)




32. Temporarily fasten beaver panel to rear of tub and align upper edge of beaver panel so it is parallel with tailgate lower edge.
33. When the alignment is achieved drill $\text{\O}6.5\text{mm}$ hole through tub face. Remove temporary fasteners holding beaver panel in place. De-bur the hole to remove all sharp edges.
34. Treat all raw edges with a rust preventative paint.



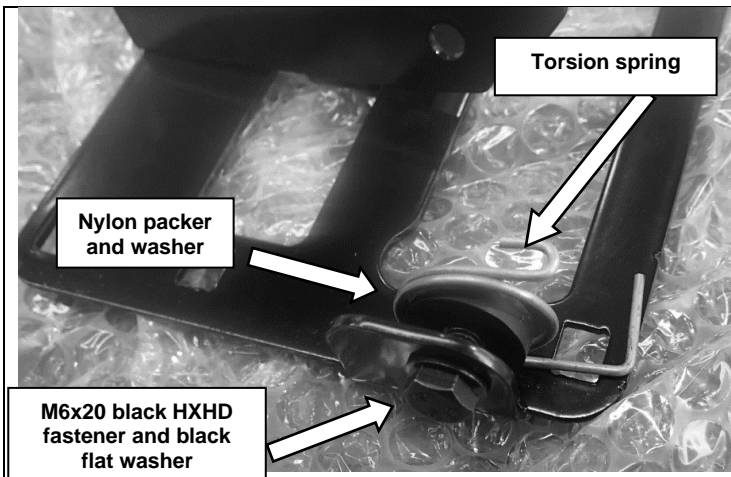
Warning: Drilling operations can result in flying metal debris; safety glasses should be worn.



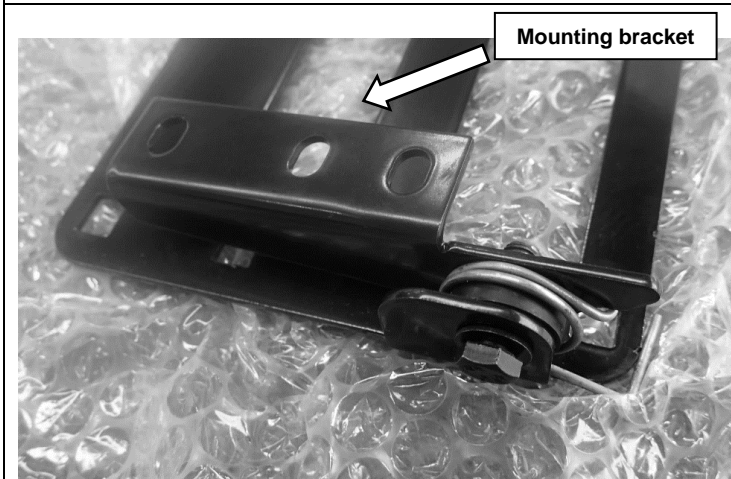
36. Attach beaver panel to rear of tub as shown using single M6x1.0x16 black button head fastener with black flat washer, M6 nyloc and flat black washer on tub inside face
 M6 X 1.0 - 9 Nm.
37. Place tape in centre section to temporarily hold beaver panel in place. This will assist in mounting the number plate assembly



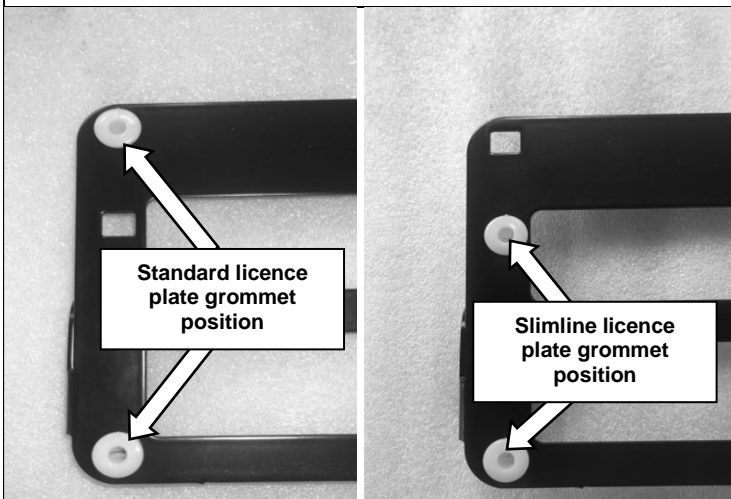
38. Insert canoe clip into both LH and RH number plate mount brackets as shown.



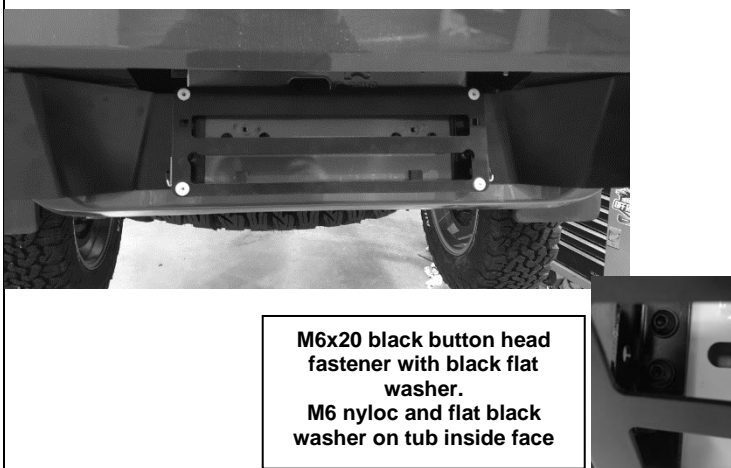
39. Assemble LH license plate bracket as shown taking note of mounting bracket orientation. Repeat step for opposite side of license plate bracket.
40. Tighten the screws enough so the brackets can be rotated by hand but not freely by themselves.



41. Complete assembly should look like picture shown.



42. Insert 4 plastic grommets into number plate frame to suit licence plate size



43. Fix the license plate assembly to the beaver panel using 4 M6x1.0x16 button head screws, 8 M6 flat washers (black), and 4 M6 nyloc nuts as shown.
44. Tighten all screws to the specified torque.

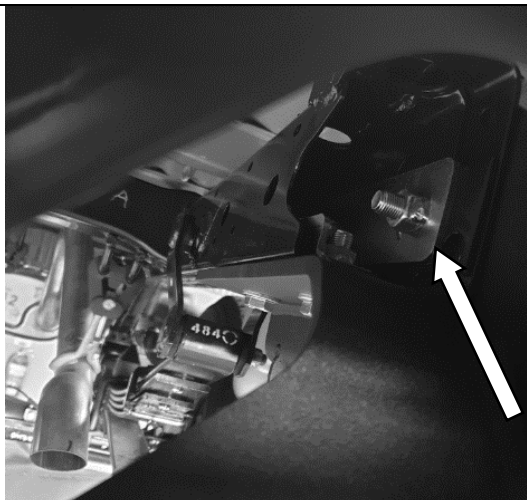
 **M6 X 1.0 - 9 Nm.**

RSTB TO VEHICLE



45. With the assistance of other people or a lifting device, lift the RSTB up beneath the chassis rails aligning the holes in the side of the chassis with those in the vertical surfaces of the RSTB.

Note: Take care to ensure the trailer plug wiring is not damaged during this step.



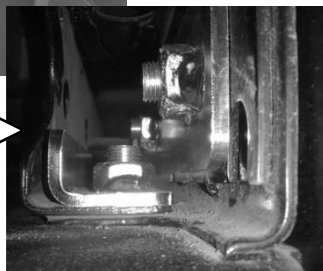
46. Fix the vertical plates of the RSTB to the chassis plate from fitting kit in each chassis rail using 3x M12x1.25x40 (fine pitch) hex head bolts, 3x M12 flat washers and 3x M12 flat washers per chassis rail. Leave finger tight at this stage as shown.



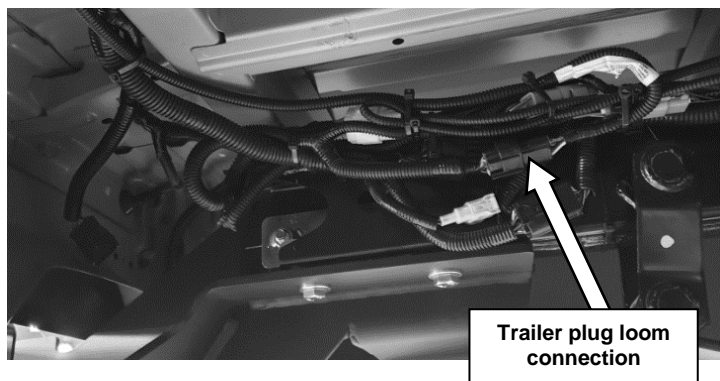
47. Insert folded chassis plate from fitting kit as shown inside chassis and fasten the remaining horizontal mount points using 2x M12x1.25x40 (fine pitch) hex head bolts, 2x M12 flat washers and 2x M12 flat washers

48. Check RSTB spacing to vehicle and tighten all fasteners to the specified torque.

Chassis rail inside



M12 X 1.25 - 95 Nm.

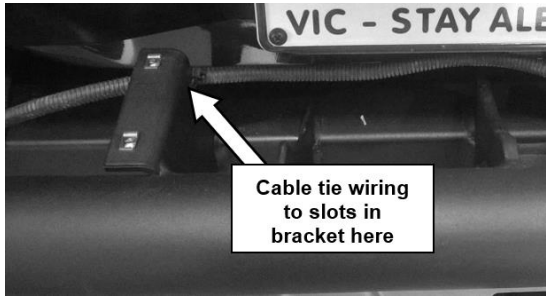


49. Route the trailer plug loom through the RSTB and attach to the appropriate connector on the RSTB wiring harness or vehicle loom as shown.

50. Ensure all trailer tail lights function normally.

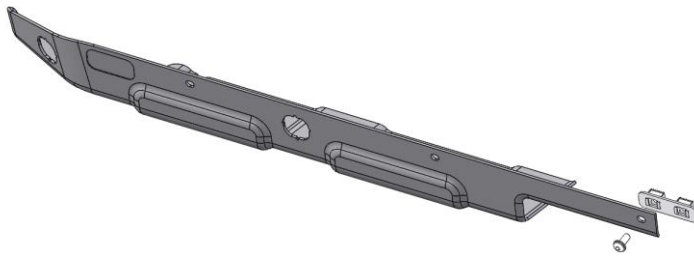
Note: Test that the trailer park, brake and reverse lights function normally. Also test the left and right indicators along with the hazard setting.

RSTB TO VEHICLE



51. Tidy and fasten all wiring using cable ties and the slots in the RSTB brackets, as well as existing fastening locations.

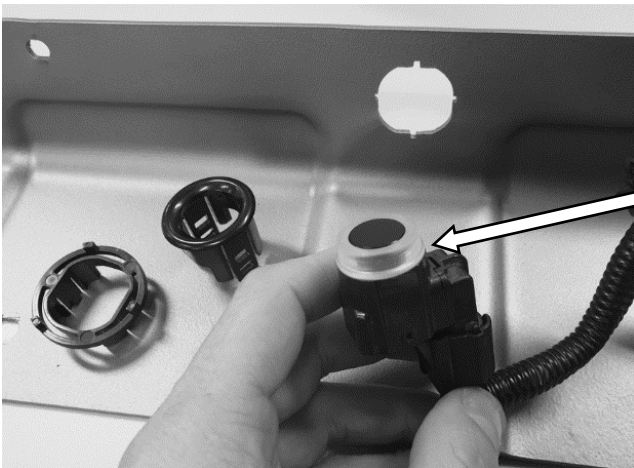
Warning: Make sure all wires are securely fastened away from any hot, sharp or moving surfaces. Do not fasten wiring harness to fuel or brake lines.



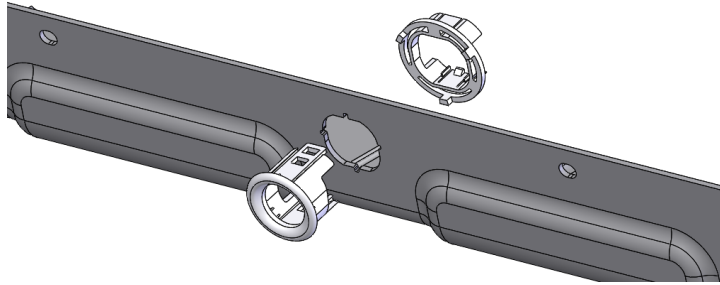
52. Fit the diffuser mount plate with M6 cage nuts, M6 x 16 M6 stainless steel button head screws and M6 flat washers to either the LH or RH diffuser as shown.



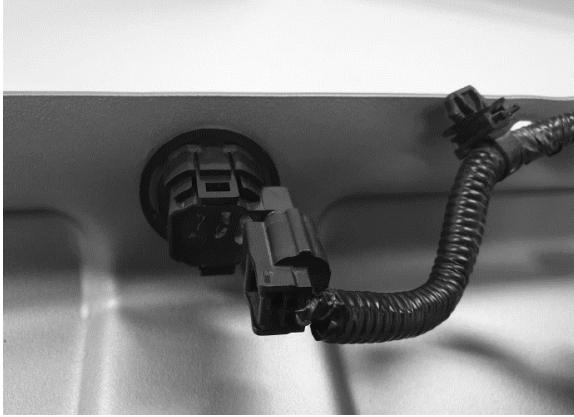
53. With the OE bumper upside down remove the plastic cover to expose the sensors and wiring loom on both sides.
54. Remove parking sensors and wiring harnesses marking the exact locations the sensors came from.



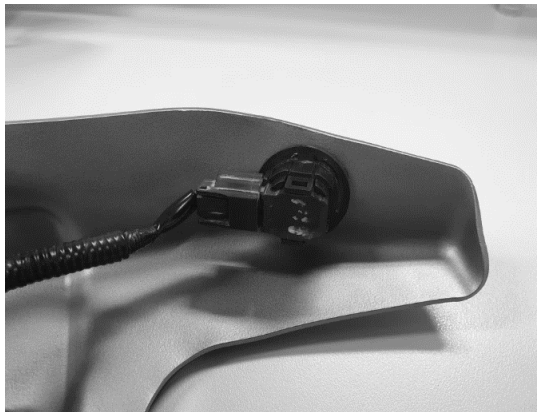
55. Remove the OE silicone sleeves on each sensor and replace with the thicker ones supplied with the fitting kit.



56. Push the sensor housing into the diffuser panel and then press the housing retainer on the rear until it firmly clips into place.
Repeat this step for all 4 sensor housings



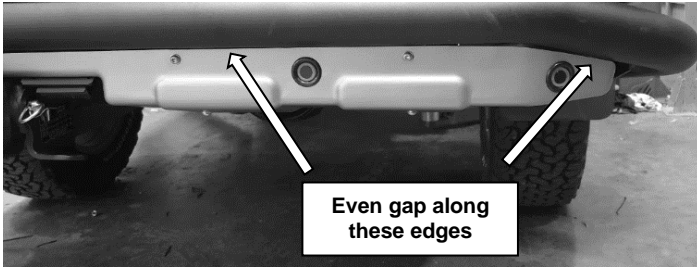
57. Clip the inner sensor into the housing as shown




58. Clip the outer sensor into the housing as shown

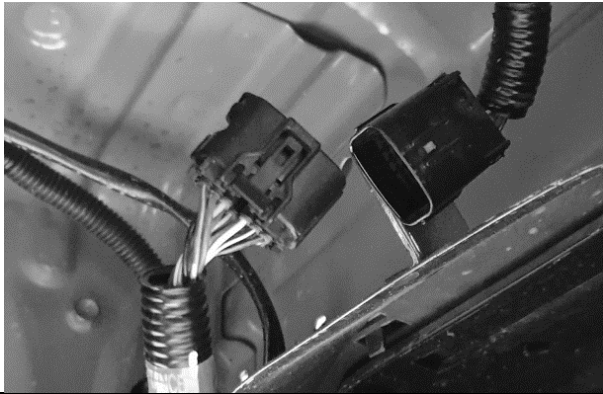


59. Sensor orientation on the LH diffuser panel must be exactly as shown. RH panel sensor orientation will be the opposite.

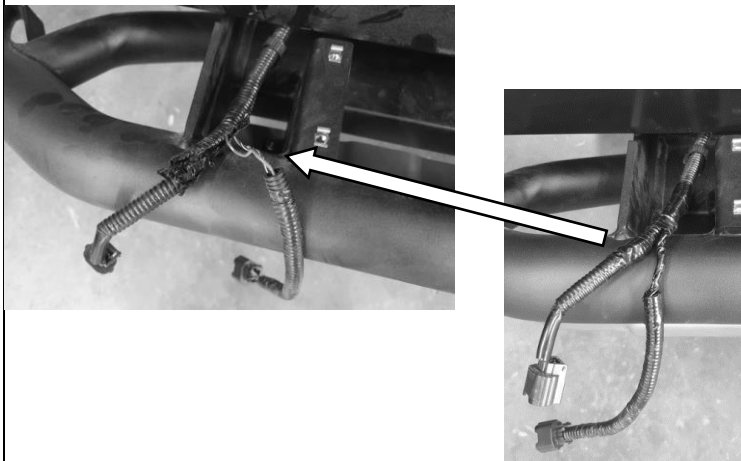


60. Position each diffuser panel so there is an even gap between the panel and the RSTB tube. Tighten fasteners to the specified torque.

 M6 X 1 -9 Nm.



61. Feed the sensor wiring loom on each side up through the RSTB framework and plug it back in.




62. If the sensor loom is tight open up the conduit at the intersection of the two sensor wires exposing 50mm of sensor wires as shown. This can be done by removing a section of existing tape or carefully cutting the tape along the conduit join. Tape up exposed wires.

PANELS TO RSTB/VEHICLE



63. Attach the step plate extrusion to the RSTB using 8 M6x1.0x16 button head screws. Tighten fasteners to the specified torque.

 M6 X 1 -9 Nm.

NOTE: Do not install washers under the 8 M6 button head screws that are fixing the step plate extrusion to the RSTB

64. Reattach the spare wheel beneath the vehicle.

FITTED PRODUCT

