



ELITE 3-LOOP WINCH BAR

FITTING INSTRUCTIONS



MITSUBISHI PAJERO SPORT 2016 -2019

PK105FG1RPWTMPS16E

Fitting Time : approx. 3-4 hours



BULL BAR SAFETY NOTICE:

INSTALLATION SHOULD ONLY BE DONE BY APPROPRIATELY QUALIFIED OR EXPERIENCED PERSONS IN ACCORDANCE WITH THESE INSTRUCTIONS.

IT IS THE RESPONSIBILITY OF THE INSTALLER TO ENSURE THAT THE PRODUCT IS CORRECTLY FITTED.

WARNING:

Do not attach Vehicle Frontal Protection System (**VFPS**) to the vehicle using anchorages 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.

The VFPS has been produced to provide continued functionality of parking sensors and other "driver assist" features as closely as possible to Original Equipment. However, as all possible road conditions and combination of other accessories fitted to the vehicle which may affect functionality characteristics cannot be anticipated, ***the driver remains responsible at all times for properly controlling the vehicle, monitoring all "driver assist" features and intervening where required to ensure the vehicle is safely operated.***

IMPORTANT INFORMATION:

Before installing the VFPS:

Check that all components, as listed in the assembly table, are available.

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. Piak cannot be held responsible for such changes and appropriate enquiries should be made before installation.

Before installing, inspecting and/or maintaining the VFPS, the work space should be safe and clear of fuel, debris, electrical or other components.

During installation:

It is the responsibility of the installer to confirm correct operation/clearance of all components.

All holes drilled shall 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.

MAINTENANCE AND CARE:

To ensure continued safety and correct operation of the product, the VFPS must be routinely inspected and regularly serviced (including bolt torque checked for correct tension) by an appropriately qualified or experienced person.

The high tensile fasteners supplied with this product were used to achieve the specified rating. If replacement of the fasteners is required, fasteners of the same rating and quality must be used.

If this VFPS is fitted with a hinged number plate bracket, extra care must be taken when returning back to public roads following the use of the winch or conducting a deep water crossing.

The driver must ensure that the number plate bracket is returned back to the down position allowing full visibility of the number plate when returning to public roads.

EQUIPMENT:

These safety products should, at a minimum, be used when fitting or working on the product.



Protective Glasses



Hearing Protection

Installation in accordance with these instructions and adherence to warnings will ensure compliance with relevant regulatory and safety standards as at the revision date.

Failure to adhere to these instructions may affect the roadworthiness of the vehicle or cause personal injury, death or damage to property.

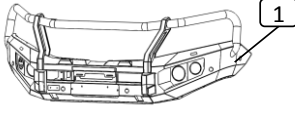
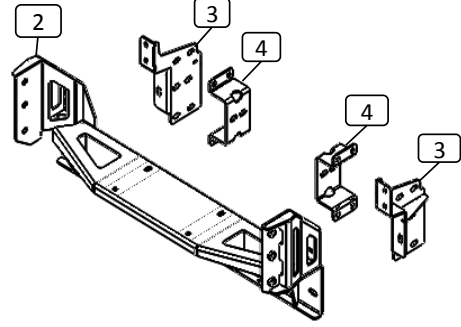
BY USING THIS PRODUCT YOU ACKNOWLEDGE AND AGREE THAT TO THE EXTENT PERMITTED BY LAW PIAK WILL NOT ACCEPT LEGAL OR OTHER LIABILITY FOR ANY LOSS, INJURY OR DAMAGE CAUSED BY INCORRECT OR INAPPROPRIATE INSTALLATION OR USE OF THE PRODUCT.

TOOLS REQUIRED

1. Metric socket and spanners
2. Phillips and flat head screw driver
3. Torque wrench
4. Marking pen
5. Cutter
6. 2" Masking tape
7. hole saw 20mm ,30 mm.
8. Test lamp or multi-meter
9. Drill and metric drill bits

PARTS LIST

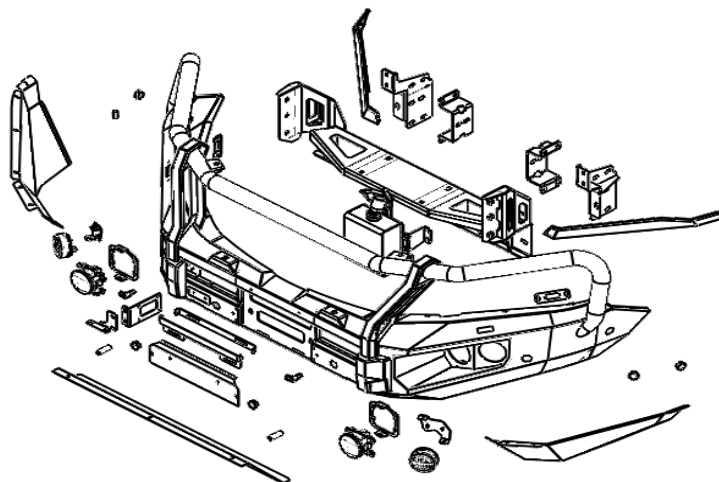
⚠ Important : Check contents of fitting kit before commencing fitment and report any discrepancies.

Steel Bull bar			Remarks
Item	Component Name	Q'ty	
1	Winch Bull bar	1	
Chassis Mounts to Vehicle			Remarks
Item	Component Name	Q'ty	
2	Chassis mount bracket	1	
3	Chassis support bracket (LH/RH)	2	
4	Chassis support bracketinside	2	
5	Crush Tube Ø16 x 48mm	2	
6	Hex Bolt M12x35x1.5	6	
7	Hex Bolt M10x35x1.25	14	
8	Hex Bolt M10x30x1.25	4	
9	Hex Bolt M10x90x1.5	4	
10	Hex Bolt M8x30x1.25	4	
11	Flange Nut M10x1.25	14	
12	Hex Nut M10x1.5	4	
13	Flange Nut M8x1.25	4	
14	Spring Washer M12	6	
15	Spring Washer M10	22	
16	Spring Washer M8	4	
17	Flat Washer M12	6	
18	Flat Washer M10	30	
19	Flat Washer M8	8	

Protection Plates to Bar			
Item	Component Name	Q'ty	Remarks
20	Center Protection Plate	1	
21	Wing protection plate (LH/RH)	2	
22	Hex Bolt M6x20x1.0	19	
23	Spring Washer M6	19	
24	Flat Washer M6	19	
25	Cage Nut M6x1.0x2T	4	
26	Cage Nut M6x1.0x3T	15	
Windshield Washer Reservoir			
Item	Component Name	Q'ty	Remarks
27	PIAK Aluminium_Windshield Washer Bottle OD 21 mm. 2.3L.	1	
28	Windshield Washer Bracket A_MPS16	1	
29	Windshield Washer Plate B	1	
30	Motor pump windshield washer reservoir bracket	1	
31	Motor pump Headlight Washer reservoir bracket	1	
32	Rubber water level sensor	1	
33	Additional Windshield Water Tank Hose (ID 34,24 X L110 mm.)	1	
34	Wiring harness (L=850 mm.)	3	
35	rubber tube Black (L= 350 mm.)	1	
36	rubber tube clear (L= 350 mm.)	1	
37	Plastic joints	2	
38	Pinch Weld Edge 3 mm. (L 400mm.)	1	
39	Cable Tie (L=150 mm.)	8	
40	Hex Bolt M6x20x1.0	6	
41	Flat Washer M6 OD14	8	
42	Flat Washer M6 OD20	4	
43	Spring Washer M6	6	
44	Flange Nut M6x1.0	6	
45	Button Head Bolt M6x20x1.0 EDP	1	
46	Spring Washer M6 EDP	1	
47	Flat Washer M6 OD14 EDP	2	
48	Flange Nut M6x1.0 EDP	1	
49	Button Head Bolt M5x15x0.8	4	
50	Spring Washer M5	4	
51	Flat Washer M5	8	
52	Flange Nut M5x0.8	4	

License Plate Bracket				
Item	Component Name	Q'ty	Remarks	
53	License Plate Bracket (Inner)	1		
54	License Plate Bracket (Outer)	1		
55	Hex Bolt M6x20x1.0	4		
56	Spring Washer M6	4		
57	Flat Washer M6	8		
58	Button Head Bolt M6x20x1.0	2		
59	Nyloc Nut M6x1.0	2		
60	Nylon Washer M6	4		
61	Flat Washer M6	4		
62	Flange Nut M6x1.0	2		
plate infilled (LH,RH)				
Item	Component Name	Q'ty		Remarks
63	Plate infilled (LH/RH)	2		
64	Hex Bolt M6x20x1.0	6		
65	Spring Washer M6	6		
66	Flat Washer M6	12		
67	Flange Nut M6x1.0	6		
Winch Control Plate				
Item	Component Name	Q'ty	Remarks	
68	Winch Control Plate 01	1		
69	Winch Control Plate 02	1		
70	Hex Bolt M6x20x1.0	2		
71	Spring Washer M6	4		
72	Flat Washer M6	4		
73	Flange Nut M6x1.0 M6	2		
74	Button Head Bolt M6x20x1.0	2		
75	Cage Nut M6x1.0x3T	2		
Accessories				
Item	Component Name	Q'ty	Remarks	
76	Front Grill Bracket (LH/RH)	2		
77	Pinch Weld (L 350 mm.)	2		
78	Sensor blanking plugs D25.5x14.5 mm	6		

Components Overview



TORQUE SETTING OF FASTENER

Mounting bolts must be tightened to torque's specified following ;

Bolt Diameter (mm.)	Class 8.8		Class 10.9	
	Torque (Nm.)	Torque (ft-lb.)	Torque (Nm.)	Torque (ft-lb.)
M6	10.5	7.7	15	11.1
M8	25.5	18.8	36.5	26.9
M10	50.5	37.2	72.2	53.3
M12	88	64.9	126	92.9
M14	140	103	200	148

FITTING PROCEDURE



- 1 Locate the vehicle in a suitable position. Rest the bullbar on a surface that will not scratch the bar.



- 2 Remove the clips that retain the grille at the top. Keep for re-fitment of grille.



- 3 Unclip and remove the grille from vehicle and place on a soft surface.

Notice- Refer to vehicle repair manual for correct removal procedure.



- 4 Unclip the wiring looms coming from behind the bumper bar.

FITTING PROCEDURE



- 5 Remove the fog light surrounds from the bumper.



- 6 Remove hex nut M6 (one either side) retaining the lower bumper.

Repeat in step 5-6 for the opposite side.



- 7 Remove and retain the three M6 bolts retaining the top of the bumper.



- 8 Remove and discard the screws retaining the bumper bar in the wheel arch.

Repeat the opposite side.

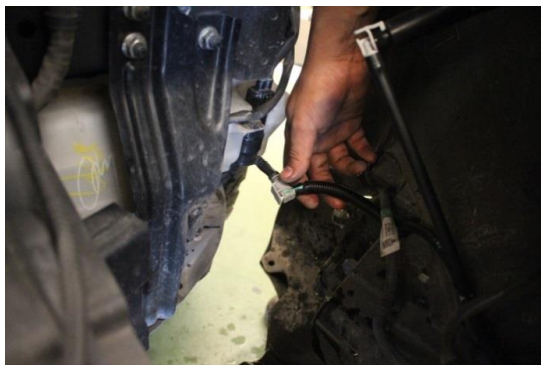
FITTING PROCEDURE



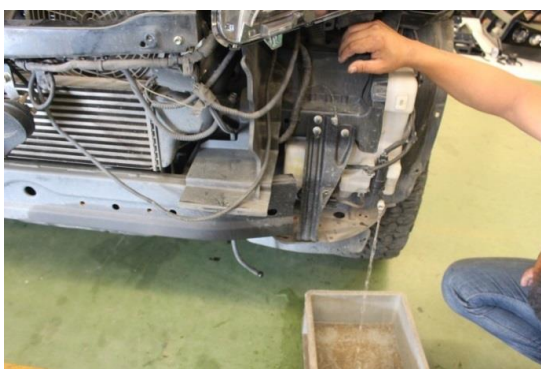
- 9** Unlocked carefully pulled bumper removal.
Repeat for the opposite side.



- 10** Carefully remove the bumper from the vehicle.
If unsure about bumper removal refer to the workshop manual



- 11** Unlock water pipe Headlight Washer Water .



- 12** Drain the fluid from the washer bottle.
If fitting to a GLX or GLS model vehicle remove the washer bottle.

FITTING PROCEDURE



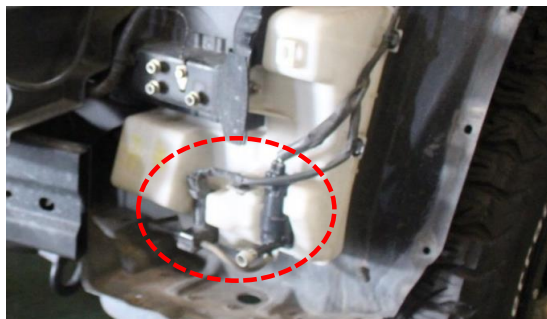
- 13** Remove and discard the bumper support brackets from either side of the vehicle.



- 14** Remove and discard the outer bumper clips from the front guards.



- 15** Remove and retain screw securing the windshield washer reservoir to vehicle at top.



- 16** Carefully unclip windshield washer reservoir from the hose.

FITTING PROCEDURE



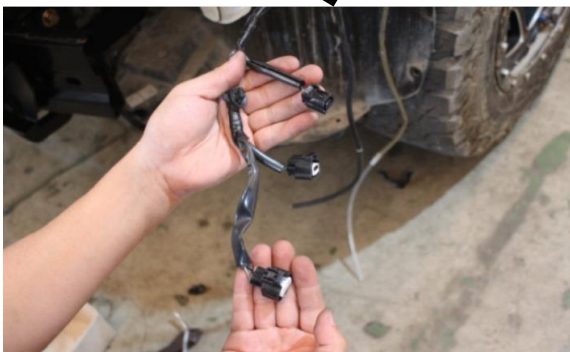
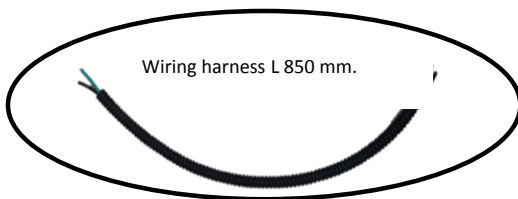
17 Remove and retain two screws securing the windshield washer reservoir to vehicle at beside .



18 Carefully remove the tank retain water for windshield washer.



19 As shown is plug sensor and motor pump.

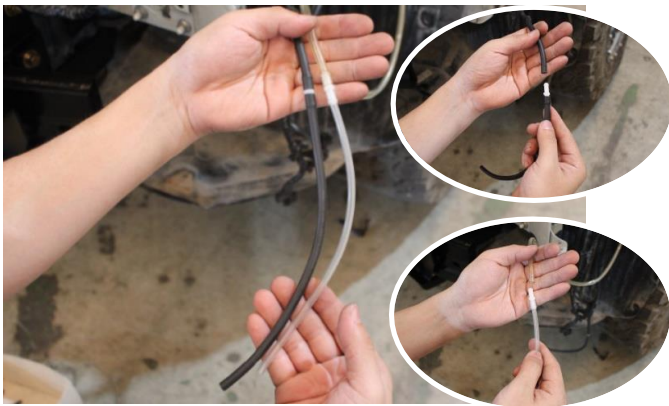


20 Using wiring harness L850 mm. Connect the motor cable original and Water Sensor taken.

FITTING PROCEDURE



21 Wear the connector with a hose.



22 Wear the connector with a hose. Connect one end of the cable to the motor at the other end and the original cable.

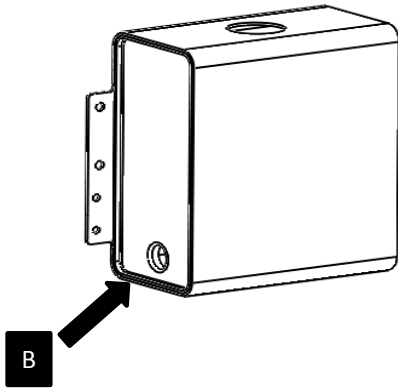


23 Remove the parts of original windshield washer reservoir as shown.

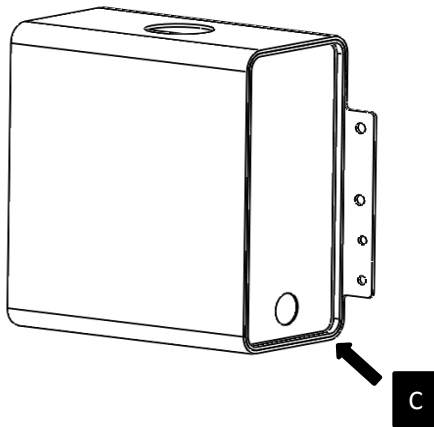
- ***(A.) Lid Windshield Washer Bottle.
- ***(B.) Motor pump Windshield Washer reservoir .
- ***(C.) Motor pump Headlight Washer reservoir.
- ***(D.) Water Sensor taken.



FITTING PROCEDURE



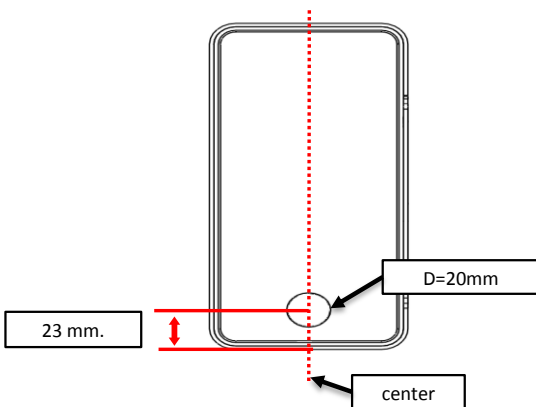
24 location at (B.) Motor pump Windshield Washer reservoir .



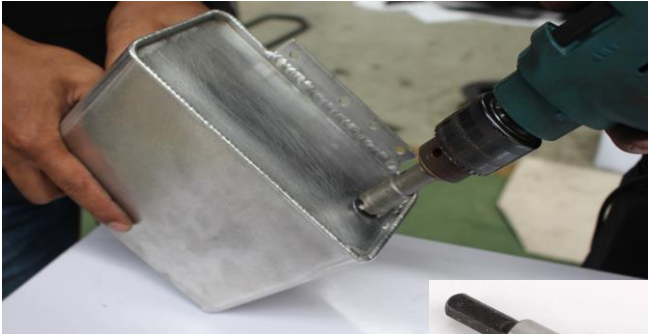
25 Measure the center position of the bottom 23 mm. as shown.

Do it carefully

If the car has a Headlight Washer reservoir (C).
drill (D=20 mm) hole for installation Motor pump Headlight Washer reservoir .

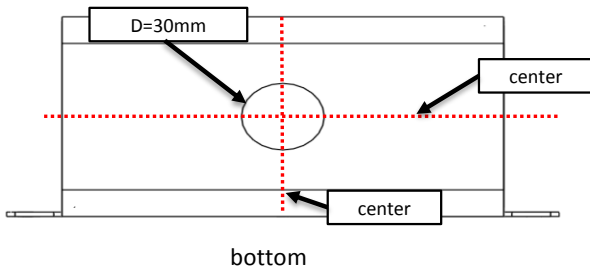


FITTING PROCEDURE



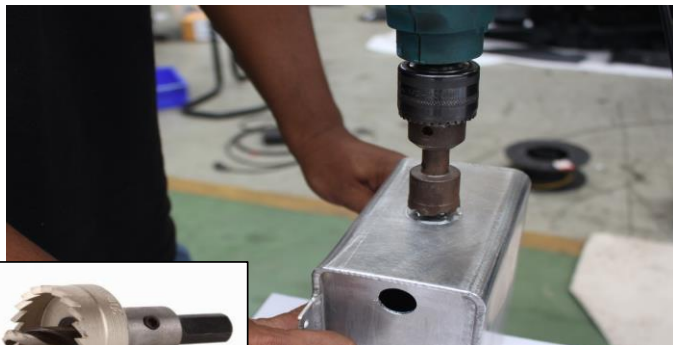
26 Drill hole use hole saw 20 mm. as shown. chamfering the drilled edge.

Do it carefully.



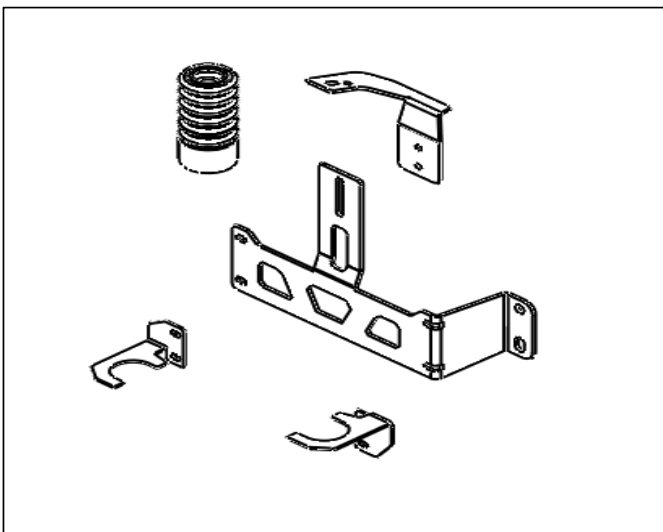
27 Measure the center position of the bottom.

If the car has a Water Sensor taken. drill (D=30 mm.) hole for installation Water Sensor taken (D).



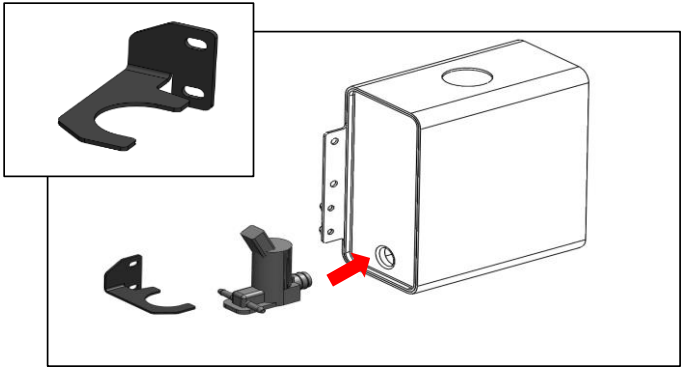
28 Drill hole use hole saw 30 mm. as shown. chamfering the drilled edge.

Do it carefully.



29 Set windshield washer bracket and Additional Windshield Water Tank Hose (ID 34 X L110 mm.).

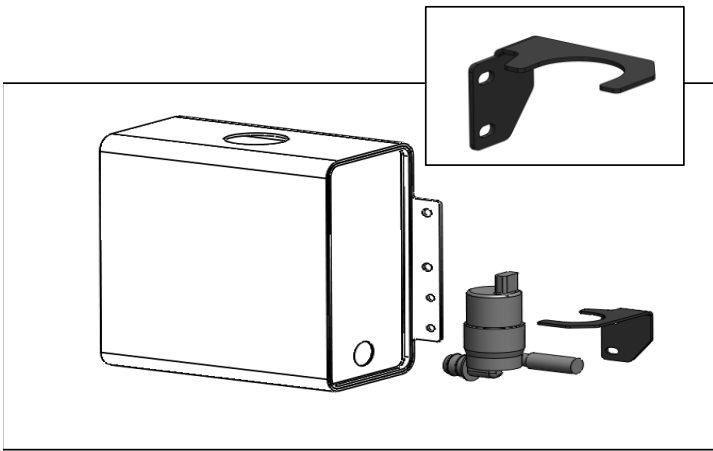
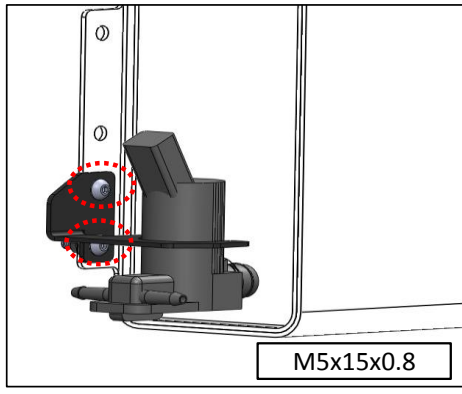
FITTING PROCEDURE



30 Re-install Motor pump Windshield Washer reservoir on the Windshield Washer Bottle. as shown.

Do it carefully.

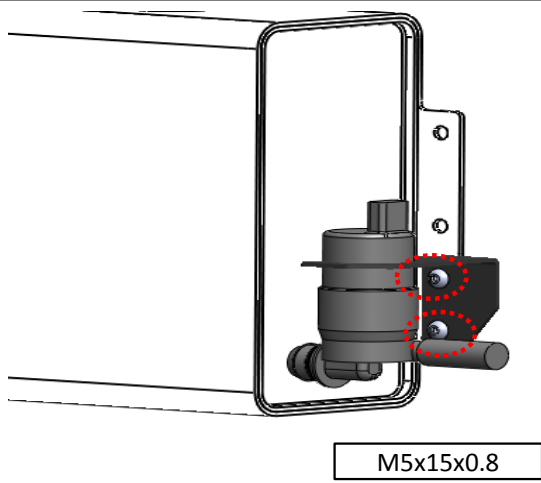
Fix Motor pump windshield washer reservoir bracket on to the Motor pump and PIAK Aluminium_Windshield Washer Bottle.
Use two bolts M5x0.8x15 ,Spring Washer ,Flat washers ,and Flange nut.



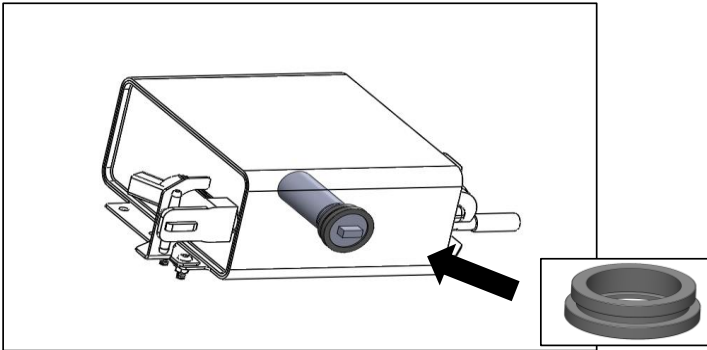
31 Re-install Motor pump Headlight Washer reservoir on the Windshield Washer Bottle. as shown.

Do it carefully.

Fix Motor pump Headlight Washer reservoir bracket on to the Motor pump Headlight and PIAK Aluminium_Windshield Washer Bottle.
Use two bolts M5x0.8x15 ,Spring Washer ,Flat washers ,and Flange nut.



FITTING PROCEDURE



32 Re-install Water Sensor taken ,use the Rubber water sensor as shown.

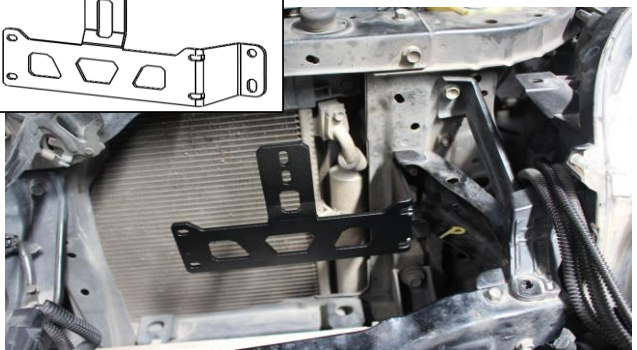
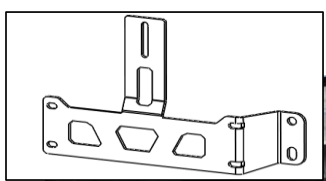
Do it carefully.

After installed please make sure no water leak from the bottle.



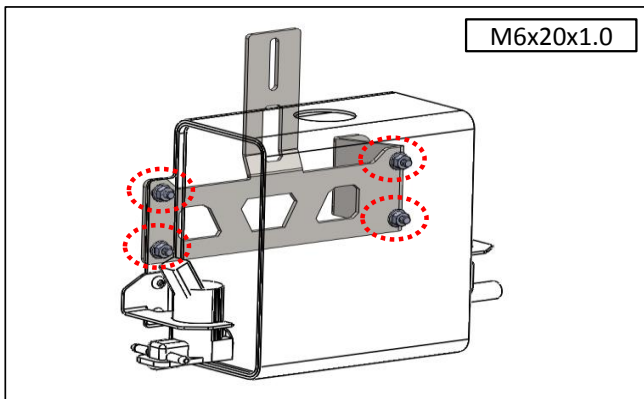
33 Fix Windshield Washer Bracket A on the body car. Using tow original bolts as shown

use two original flange nut M8x1.25 .as shown.

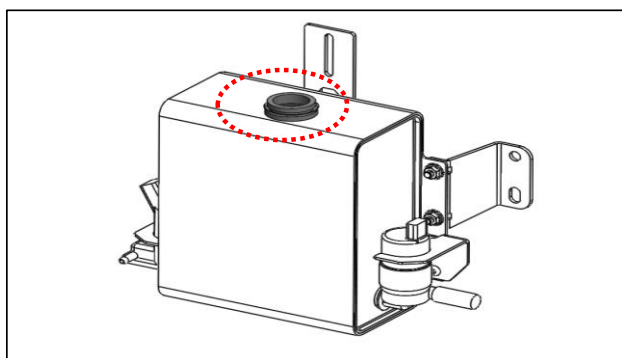


34 Fix PIK Aluminium_Windshield Washer Bottle on to the Windshield Washer Bracket A.Use four bolts M6x1.0x20 ,Spring Washer ,Flat washers ,and Flange nut.as shown.

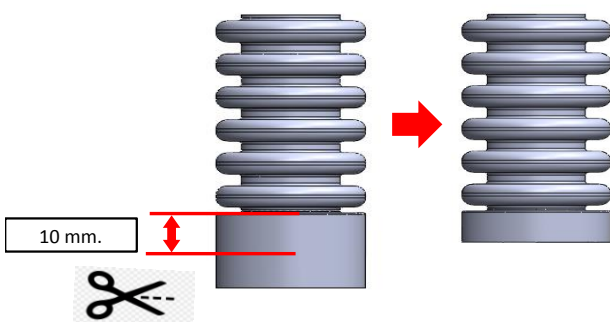
FITTING PROCEDURE



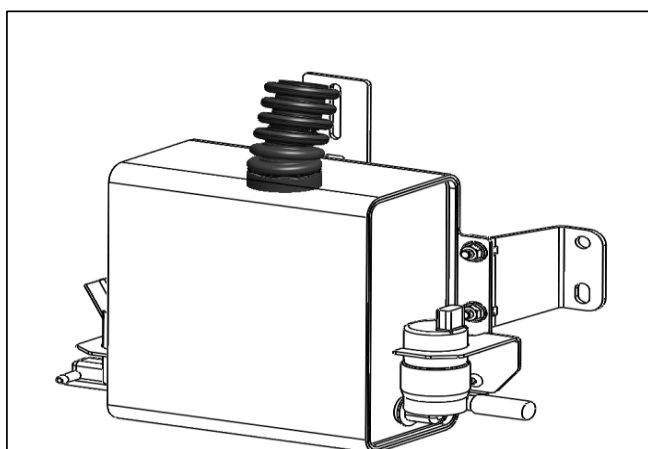
M6x20x1.0



35 Assemble rubber water stop on the Windshield bottle as shown.



36 Cut Additional Windshield Water Tank Hose as the picture.

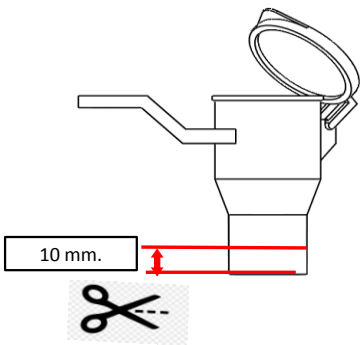


37 Assemble Additional Windshield Water Tank Hose as the picture.

FITTING PROCEDURE



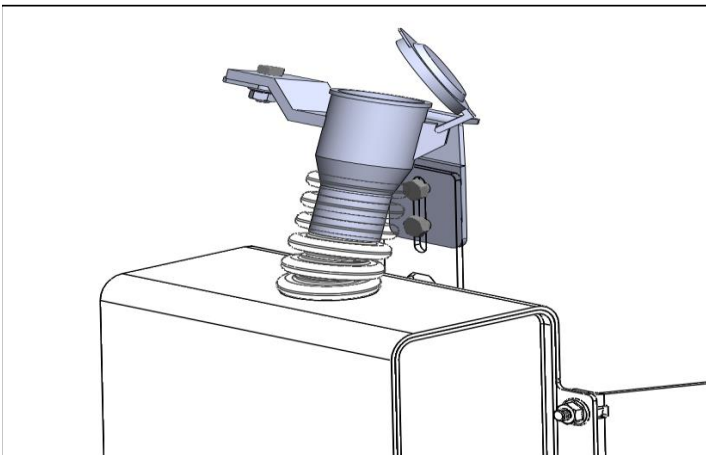
38 lid Windshield Washer Bottle and Windshield Washer Plate B.



39 Cut lid Windshield Washer Bottle 10 mm. as the picture.



40 Fix lid Windshield Washer Bottle and on to the Windshield Washer Plate B. Use hex bolt M6x1.0x20 ,Flat washer and Flange nut.



41 Fix set lid Windshield Washer Bottle and on to the Windshield Washer Bracket A. Use two hex bolts M6x1.0x20 ,Flat washers and Flange nuts.

FITTING PROCEDURE



42 Re-fitment the upper bumper and sketch the circles to match the lid Windshield Washer Bottle for drilling.



43 Cut into holes. For opening the lid to put water.



44 The drilled hole to use for open-close the lid Windshield Washer Bottle.

Use the Pinch Weld Edge 3 mm. to place at the edge of the cut.



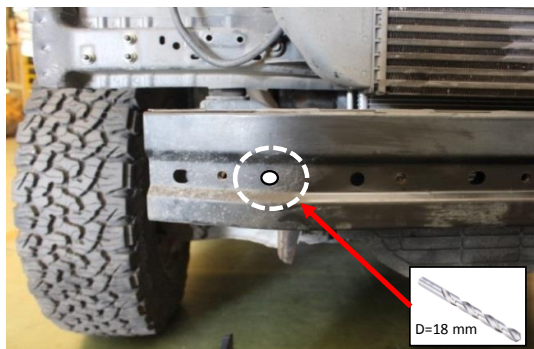
45 Lift the chassis mounting bracket onto the chassis of vehicle.

Using four M10 x 1.25 x 35mm hex bolts, M10 spring and flat washers loosely fit the chassis mount bracket.

FITTING PROCEDURE



- 46** Mark the locations of the front holes.
Remove the brackets.



- 47** Drill a pilot hole through both sections of the intrusion beam . Using a step drill or similar, enlarge the holes to 18mm.



- 48** Insert two Crush Tube $\varnothing 16 \times 48\text{mm}$ into the front intrusion beams.



- 49** Lift the chassis mounting bracket onto the chassis of vehicle. Using four M10 x 1.25 x 35mm hex bolts, M10 spring and flat washers.

FITTING PROCEDURE



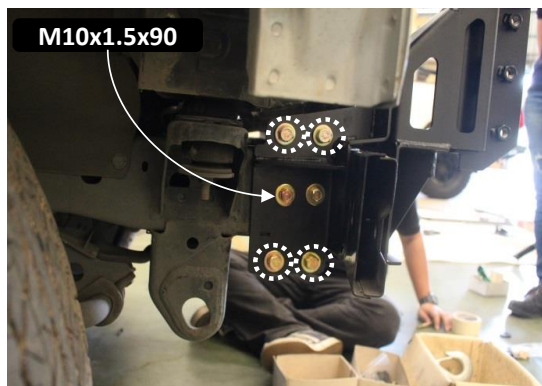
- 50** Place the inner support bracket over the inside of the chassis rails.



- 51** Connect chassis support bracket onto the chassis mount and insert wire bolt through the hole of bracket.
- Secure with one M10 bolt (M10x35x1.25), spring and flat washer as shown.

Do not tighten.

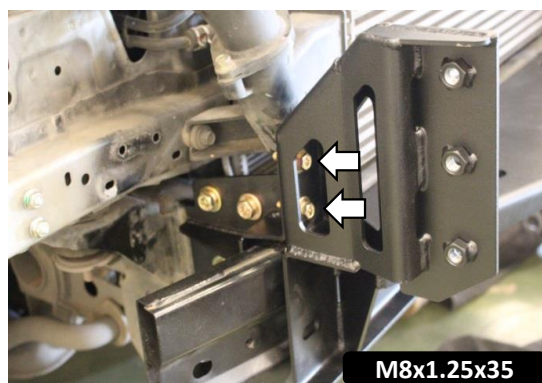
Notice : If you want to install a front Recovery Point (PK701-MPS16), install in this step.



- 52** Secure the chassis mount bracket to the chassis support assembly with M10 x 1.5 x 90mm hex bolts, M10 spring, flat washers and hex Nut.

Secure with four M10 bolts (M10x35x1.25), spring, flat washers and Flange nut as the circles.

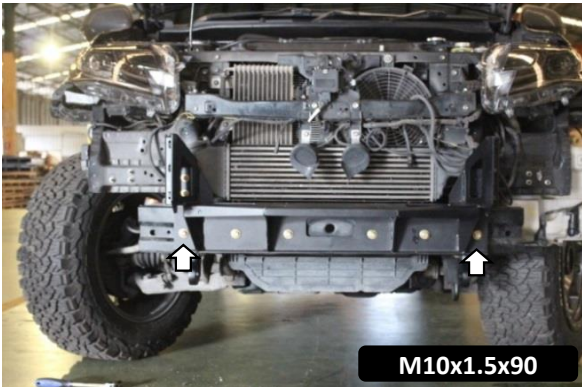
Do not tighten.



- 53** Secure the chassis mount bracket to the chassis support assembly with two M18 x 1.25 x 35mm hex bolts, M10 spring, flat washers and Flange Nut

Do not tighten.

FITTING PROCEDURE



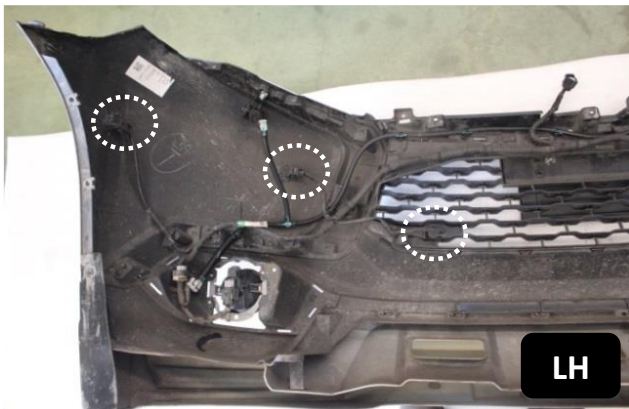
54 Secure the chassis mount bracket to the chassis support assembly with two M10 x 1.5 x 90mm hex bolts, M10 spring and flat washers

Do not tighten.



55 If fitted, remove the parking sensors and parking sensor surrounds from the bumper bar.

Note the location of each parking sensor. The parking sensors and surrounds will



56 Remove the fog light loom and parking sensor loom (where fitted) from the bumper bar.

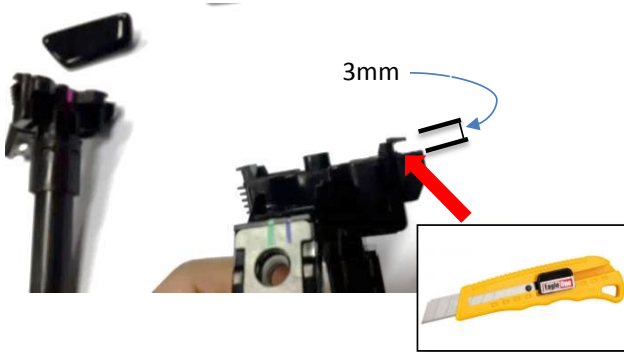


FITTING PROCEDURE

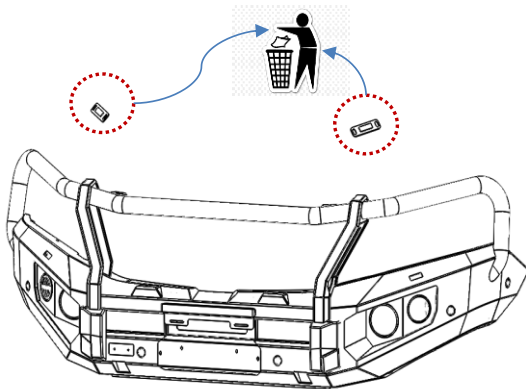


57 Remove Headlight Washer Water surrounds from the bumper bar.

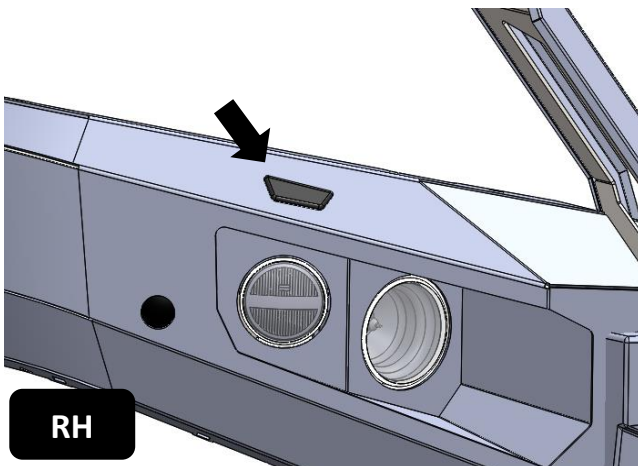
Note the location of each Headlight Washer Water .



58 Cut Plastic Headlight Washer Water surrounds 3mm gap as shown.



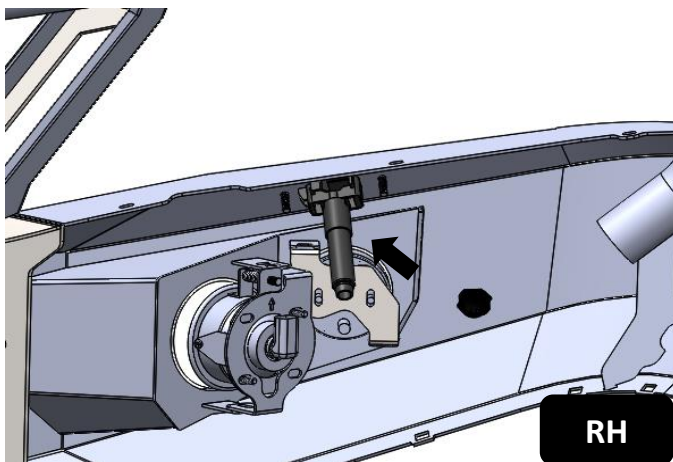
59 Remove Headlamp Washer plugs from the bumper bar.



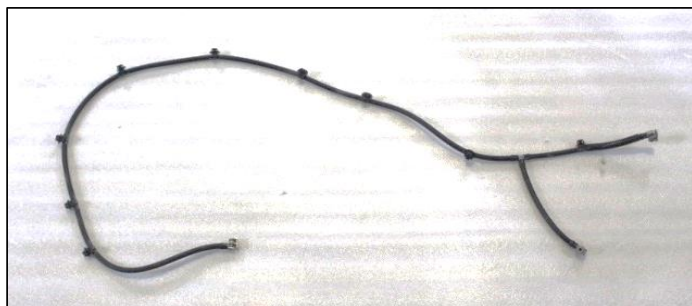
60 Re-install the Headlight Washer Water surrounds to the bull bar. as shown.

Repeat for the opposite side.

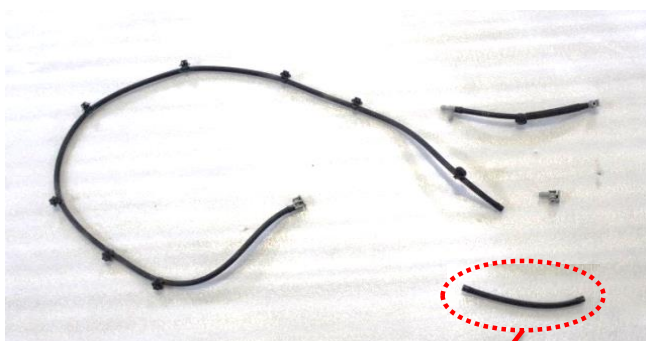
FITTING PROCEDURE



61 The water line is attached to the original bumper.

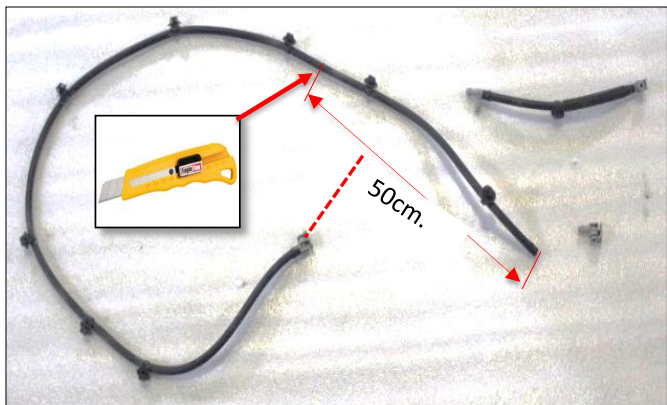


62 After removing the water line from the original bumper.



63 Remove the water line from each other and pull the joint from the hose in the middle.
Keep the joints and discard the middle water line.

FITTING PROCEDURE



64 Measure the end of the cable without joints. Enter 50 cm. and cut.



65 Connect the same cable that has been cut to another cable that connects to the three-way joint.

Connect the cable length 50 cm, connect to the three-way and the end of the joint.



66 Connect the same cable that has been cut to another cable that connects to the three-way joint.

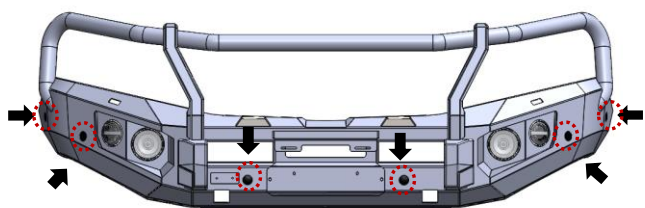
Connect the cable length 50 cm, connect to the three-way and the end of the joint.

Connect the left and right wires to the nozzles on each side, while the middle cable connects pump.

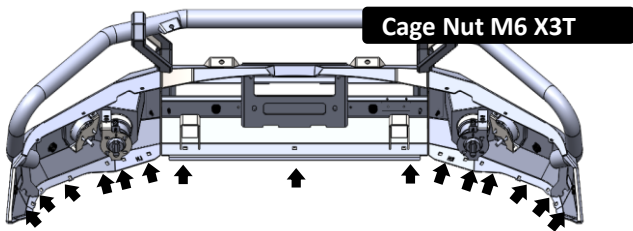


67 Re-install the parking sensor surrounds and parking sensors to the bull bar.

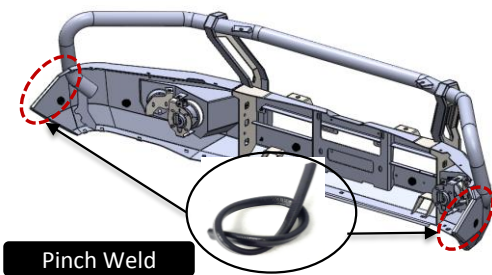
Have to extend the sensor cables in the bar.



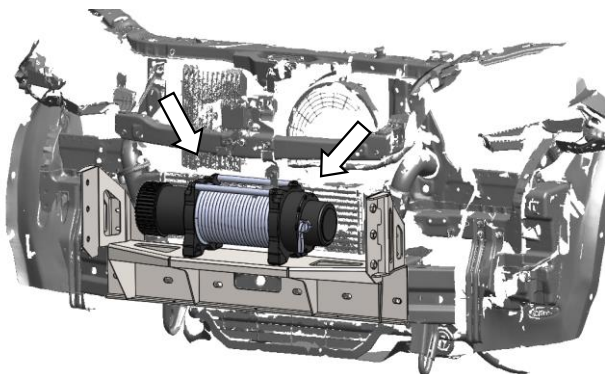
FITTING PROCEDURE



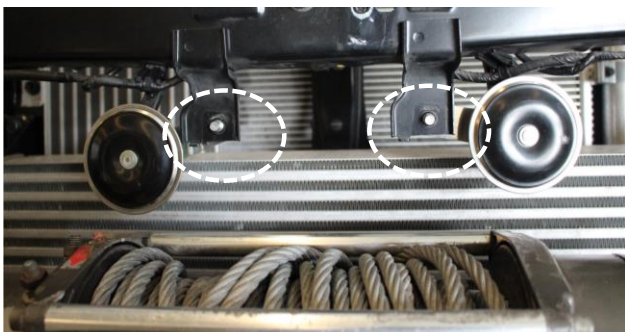
68 Insert fifteen M6x1.0x3T cage nuts onto the bullbar as indicators.



69 Insert Pinch Weld Put at the end RH&LH as shown.

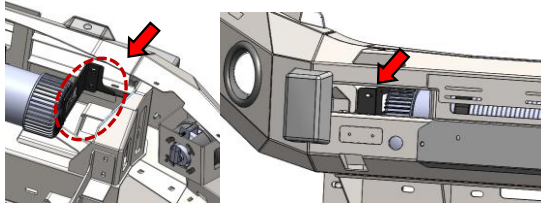


70 location of winch on the chassis mount bracket.

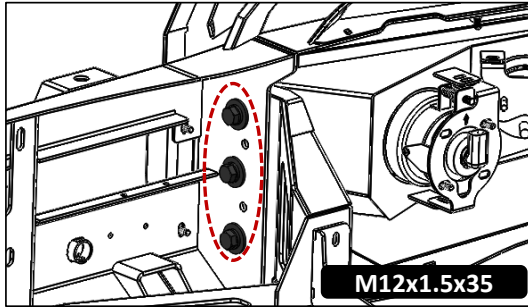


71 If a winch is being fitted remove the RH & LH horn of vehicle.

FITTING PROCEDURE



- 72** location of winch Control box on the bracket to bar.



- 73** Lift the bullbar onto the chassis of the vehicle.

Secure bull bar onto the chassis mounting bracket by using three M12 bolts (M12x35x1.5), spring washers and flat washers

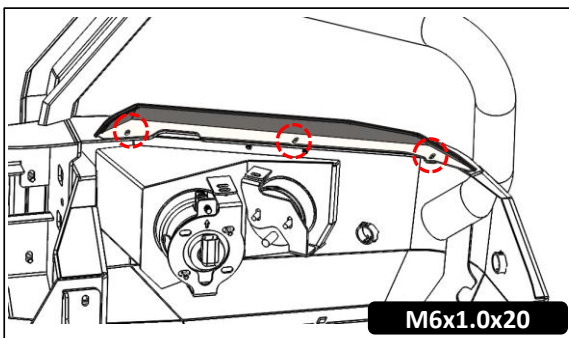
Repeat for the opposite side.



- 74** Align the bar so there is a minimum 20 mm. gap between the car and wing return of the bar and the end of the wing is in line with the wheel arch.

If the bar does not sit centrally across the front of the vehicle, loosen the chassismount and adjust accordingly.

Tighten all bolts to the correct torque.

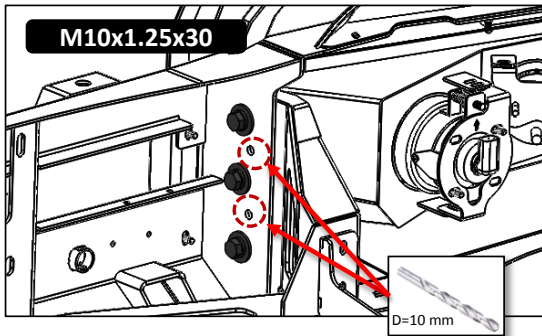


- 75** Fit the plate infilled onto the top bullbar. Using three M6 x 1.0 x 20mm hex bolts, M6 spring, flat washers and Flange Nut



- 76** A minimum 15 mm. gap between the plate infilled and Headlight . Tighten all bolts to the correct torque.

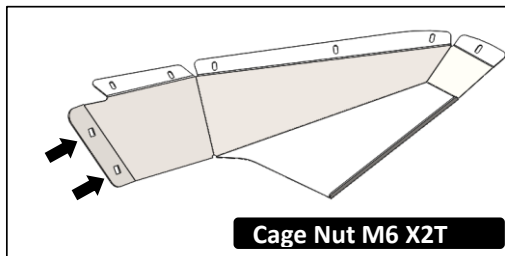
FITTING PROCEDURE



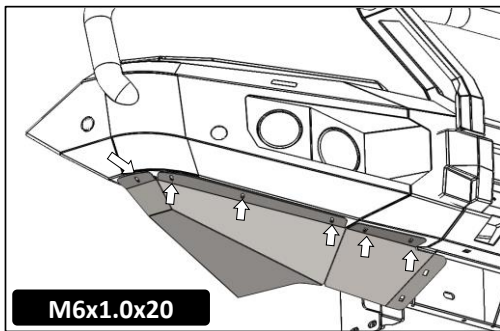
77 Drill two 10 mm holes through the chassis mount bracket by using holes on the bullbar as a guide.
Secure with two M10 bolts (M10x30x1.25) and flange nuts .
Repeat the opposite side.
Using a LED test lamp or multi meter locate the "Parking Lights" wires. Wires are located behind the headlamp inside the engine bay.

PIAK LED Harness codes

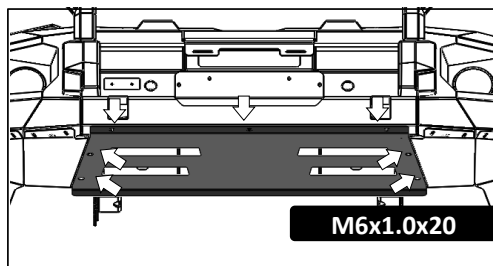
- Indicator Yellow
- Park brown
- Earth White



78 Insert tow M6x1.0x2T cage nuts onto the wing protection plate as indicators.



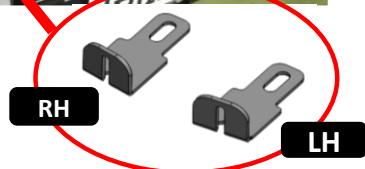
79 Fit the wing protection plate onto the bullbar.Using six M6 x 1.0 x 20mm hex bolts, M6 spring and flat washers.



80 Fit the center protection plate onto the bullbar.Using seven M6 x 1.0 x 20mm hex bolts, M6 spring and flat washers.



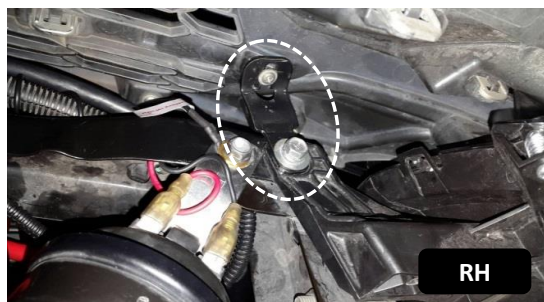
81 location of Front grille bracket (RH&LH) . Attach the Front grille bracket to the grille using the tek screws that are at the back of the grille.



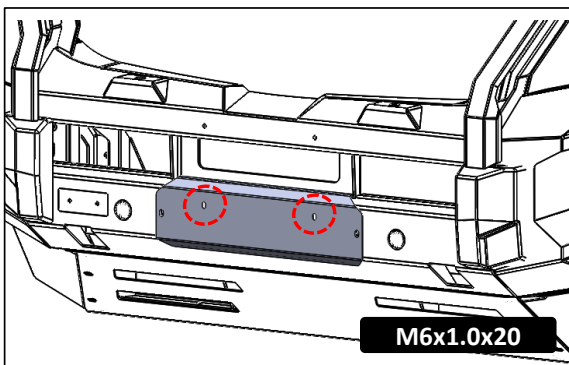
FITTING PROCEDURE



82 Re-install the front grill removed earlier to the vehicle by using original bolts.

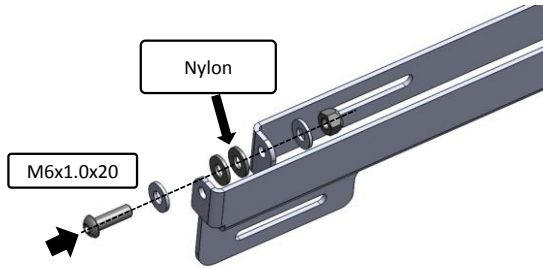


83 as shown install the front grill earlier to the vehicle by using original bolts complete.



84 Installing a license plate if the winch is not installed.

FITTING PROCEDURE



85 Assemble License plate bracket by using two M6 button head, flat washer, Nylon Washer M6 and nyloc nut as shown.

Do not fully tighten.

