



ELITE 3-LOOP WINCH BAR

FITTING INSTRUCTIONS



TOYOTA HILUX REVO 2020 ON

PK105FG1TH20E_RMB_UPMB , PK105FG1TH20E_RMB_UPO
PK105FG1TH20E_RMB_UPUMBLO , PK105FG1TH20E_RO_UPMB
PK105FG1TH20E_RO_UPO , PK105FG1TH20E_RO_UPUMBLO

Fitting Time : approx. 3 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 preventive 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.

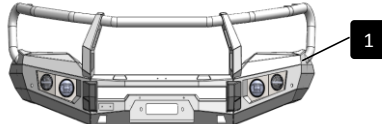
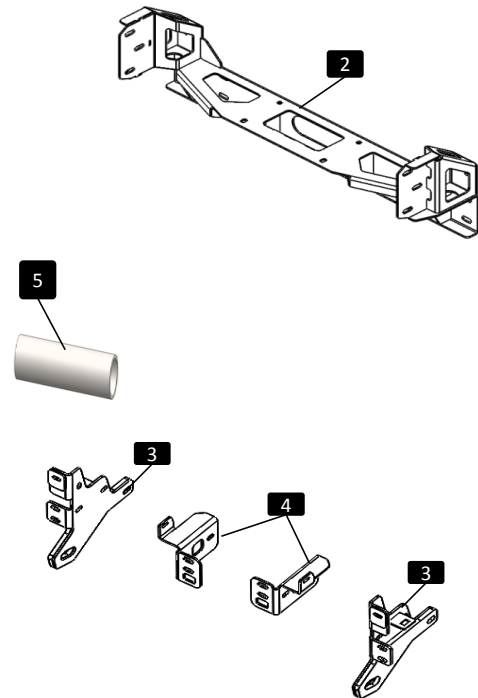
TOOLS REQUIRED

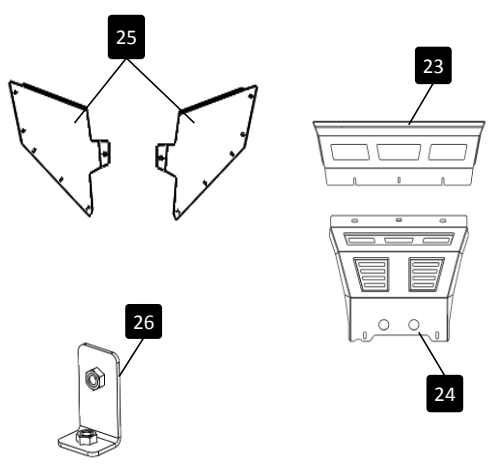
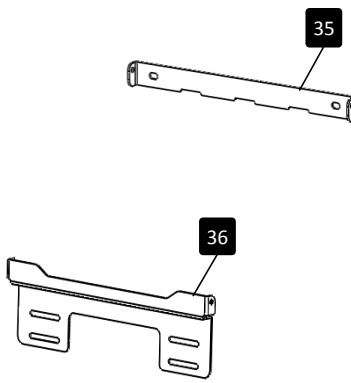
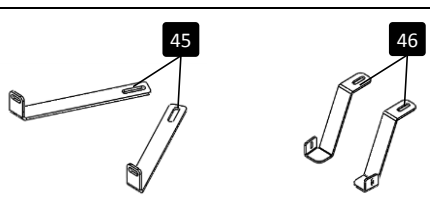
- | | | |
|--------------------------------|-----------------------------|---------------------------------------|
| 1. Metric Socket and Spanners | 2. 2" Masking tape | 3. Marking pen |
| 4. Drill and metric drill bits | 5. Test lamp or multi-meter | 6. Phillip and flat head screw driver |
| 7. Torque wrench | | |

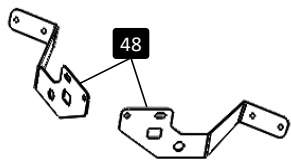
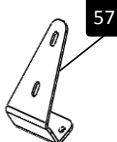
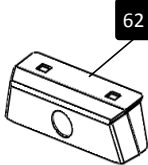
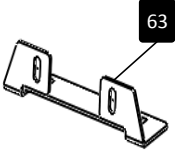


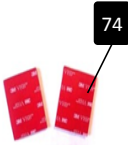

PARTS LIST



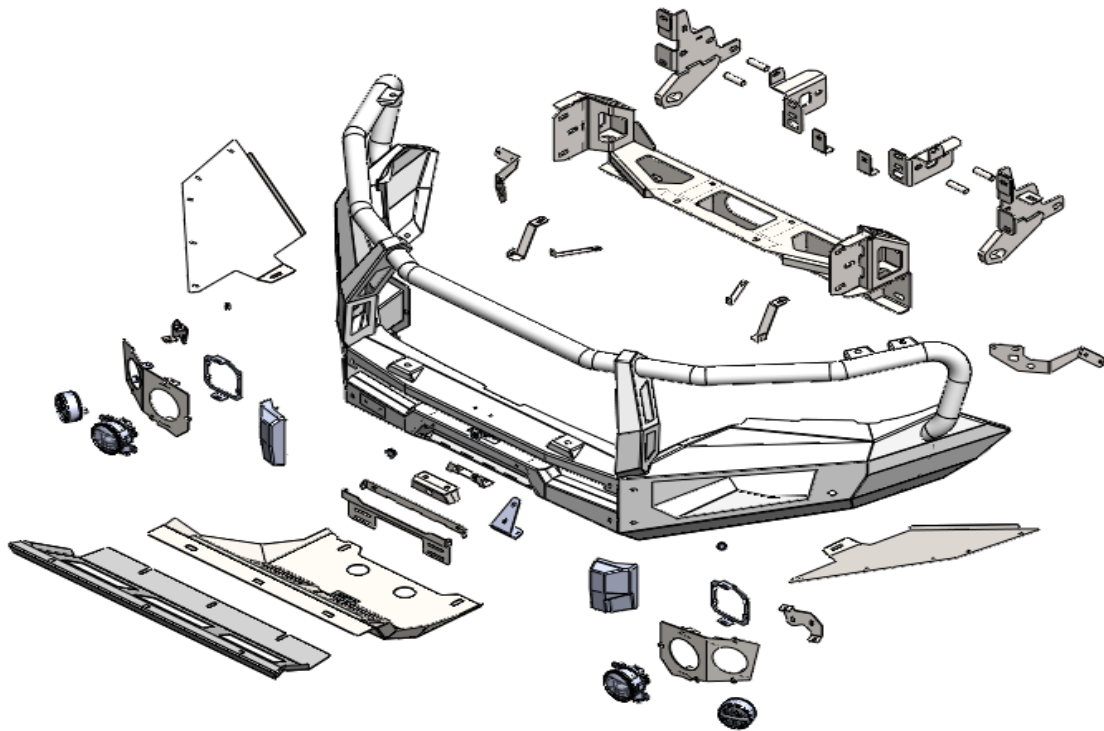
Important : Check contents of fitting kit before commencing fitment and report any discrepancies.

Steel Bull Bar			
Item	Component Name	Q'ty	Remarks
1	Winch Bull Bar	1	
Chassis Mounting Bracket			
Item	Component Name	Q'ty	Remarks
2	Chassis Mount Bracket	1	
3	Outer mounting support bracket (RH&LH)	2	
4	Inner mounting support bracket (RH&LH)	2	
5	Crush tube OD16x55 mm	4	
6	Hex Bolt M10x35x1.25	4	
7	Hex Bolt M10x35x1.5	4	
8	Hex Bolt M10x90x1.5	4	
9	Flat Washer M10 OD20	8	
10	Flat Washer M10 OD27	16	
11	Spring Washer M10	12	
12	Hex Nut M10x1.5	8	
13	Flange Nut M10x1.25	4	
14	Hex Bolt M10x35x1.25 (EDP)	8	
15	Spring Washer M10 (EDP)	8	
16	Flat Washer M10 OD27 (EDP)	12	
17	Flange Nut M10x1.25 (EDP)	4	
18	Hex Bolt M12x35x1.25	2	
19	Hex Bolt M12x35x1.5	6	
20	Spring Washer M12	8	
21	Flat Washer M12 OD33	14	
22	Hex Nut M12x1.5	6	

Protection Plate			
Item	Component Name	Q'ty	Remarks
23	Center Protection Plate 01	1	
24	Center Protection Plate 02	1	
25	Protection Plate LH/RH	2	
26	Protection Plate bracket	2	
27	Hex Bolt M6x20x1.0	10	
28	Spring Washer M6	10	
29	Flat Washer M6 OD20	10	
30	Cage Nut M6x1.0x3T	10	
31	Hex Bolt M8x20x1.25 (EDP)	10	
32	Spring Washer M8 (EDP)	10	
33	Flat Washer M8 OD22 (EDP)	10	
34	Cage Nut M8x1.25x3.2T	6	
License Plate Bracket			
Item	Component Name	Q'ty	Remarks
35	License Plate Bracket (Inner)	1	
36	License Plate Bracket (outer)	1	
37	Hex Bolt M6x20x1.0	4	
38	Spring Washer M6	4	
39	Flat Washer M6 OD20	8	
40	Flange Nut M6x1.0	4	
41	Button Head Bolt M6x20x1.0 (SUS)	2	
42	Nyloc Nut M6x1.0	2	
43	Nylon Washer M6	4	
44	Flat Washer M6 OD14 (SUS)	4	
Front Grill Bracket			
Item	Component Name	Q'ty	Remarks
45	Front Grill Bracket TF15/TH20 (LH / RH)	2	
46	Front Grill Bracket TH20 (LH / RH)	2	
47	Pillip Truss Head Tapping 3/16"x20 sus	2	

Inner Guard Bracket			
Item	Component Name	Q'ty	Remarks
48	Inner Guard Bracket (RH&LH)	2	
49	Hex Bolt M6x20x1.0	4	
50	Spring Washer M6	4	
51	Flat Washer M6 OD20	8	
52	Flange Nut M6x1.0	4	
53	Hex Bolt M8x20x1.25	4	
54	Spring Washer M8	4	
55	Flat Washer M8 OD22	8	
56	Flange Nut M8x1.25	4	
Winch Control Plate			
Item	Component Name	Q'ty	Remarks
57	Winch Control Plate	1	
58	Hex Bolt M6x20x1.0	2	
59	Spring Washer M6	2	
60	Flat Washer M6 OD20	4	
61	Flange Nut M6x1.0	2	
camera bracket			
Item	Component Name	Q'ty	Remarks
62	camera bracket A	1	  
63	camera bracket B	1	
64	Sensor Plug 20.6 mm.	1	
65	Button Head Bolt M5x12x0.8	2	
66	Spring Washer M5	2	
67	Flat Washer M5 OD12	2	
68	Hex Nut M5x0.8	2	
69	Hex Bolt M6x20x1.0	4	
70	Spring Washer M6	4	
71	Flat Washer M6 OD20	4	
72	Cage Nut M6x1.0x2T	4	
Accessories			
Item	Component Name	Q'ty	Remarks
73	Sensor Plug 17.3 mm.	2	  
74	Double sided adhesive 3M	4	
75	Cutting template	1	

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 and the bonnet that retain the grille at the top.

***Keep for re-fitment of grille.**



- 3 Remove the OEM Plastic radiator cover the front of car.



- 4 Disconnect cable Adaptive cruise located behind grille.



FITTING PROCEDURE



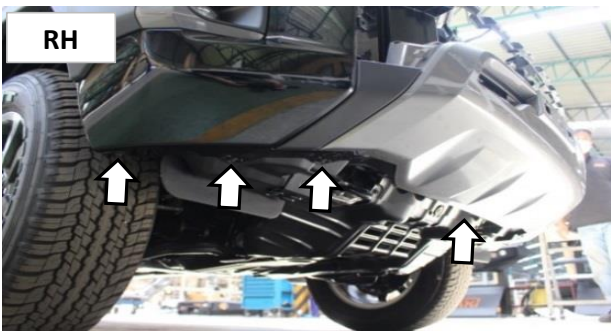
- 5** Unclip and remove the grille from vehicle and place on a soft surface.

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

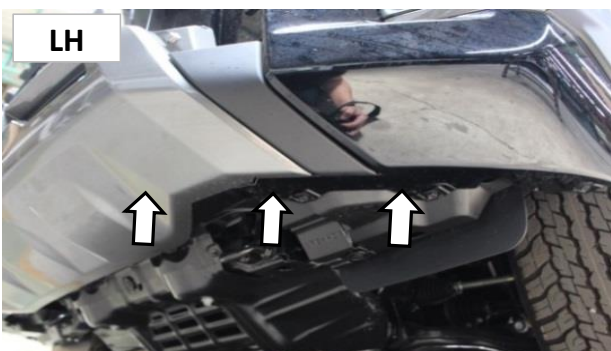


- 6** Remove and discard the screws retaining the bumper bar in the wheel arch.

***Repeat for the opposite side.**



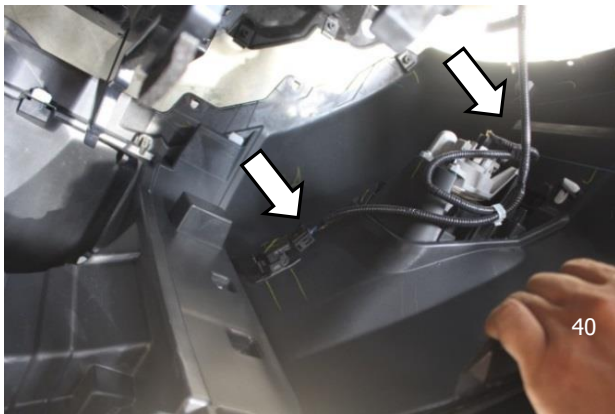
- 7** Remove and discard the plastic clips and bolts from the lower section of the bumper bar as shown.



FITTING PROCEDURE



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



- 9** Disconnect cable parking sensor and Fog light .

***Repeat for the opposite side.**

Front Grill Version 1.



- 10** Remove the camera from the grille.

*****Do it carefully.**



Front Grill Version 2.



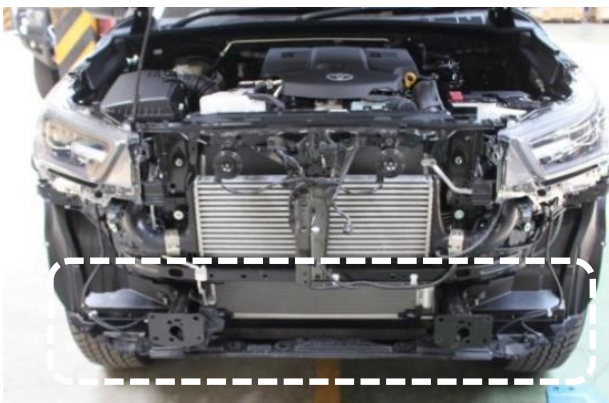
FITTING PROCEDURE



- 11** Remove and discard the outer bumper clips from the front guards both sides.



- 12** Lift the chassis mounting bracket onto the chassis of vehicle.

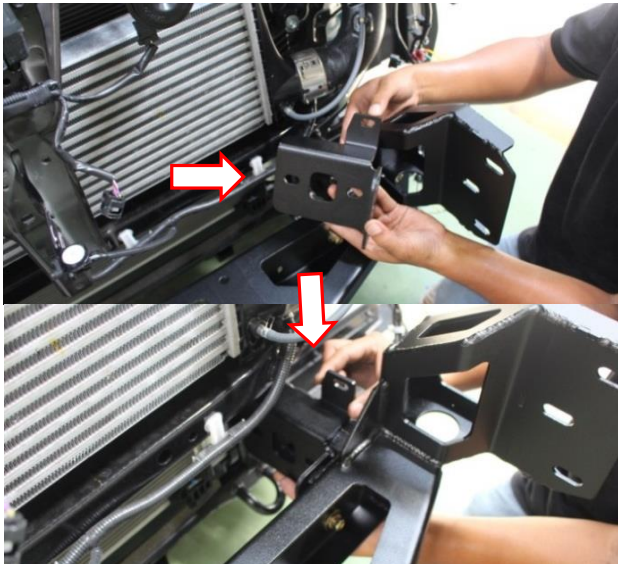


- 13** Lift the chassis mounting bracket onto the chassis of vehicle.

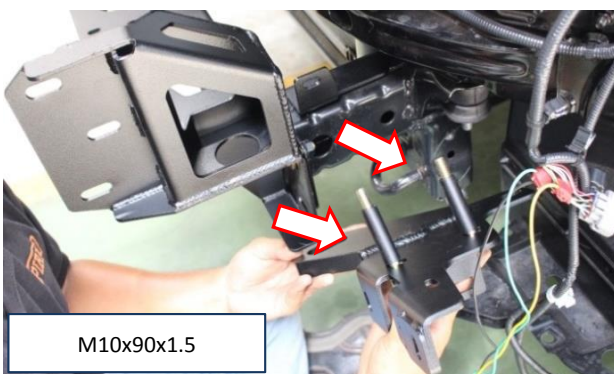
FITTING PROCEDURE



- 14 Secure with four M10 bolts (M10x35x1.25), spring and flat washers as shown.

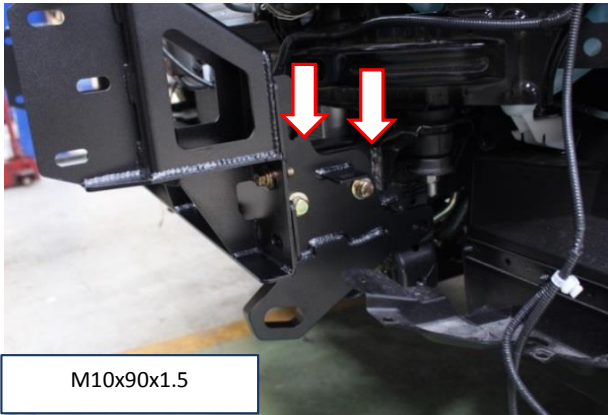


- 15 Place the inner mounting support bracket at the rear of mounting bracket



- 16 Place two M10 bolts (M10x90x1.5) into the outer mounting support bracket with two crush tubes .

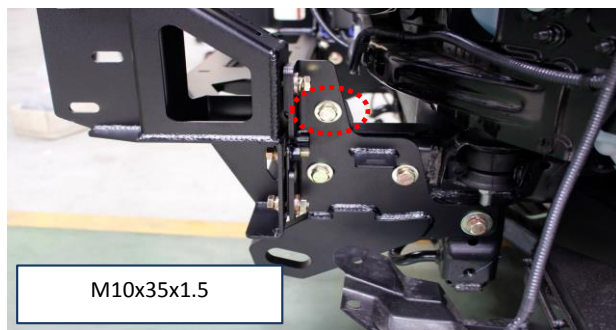
FITTING PROCEDURE



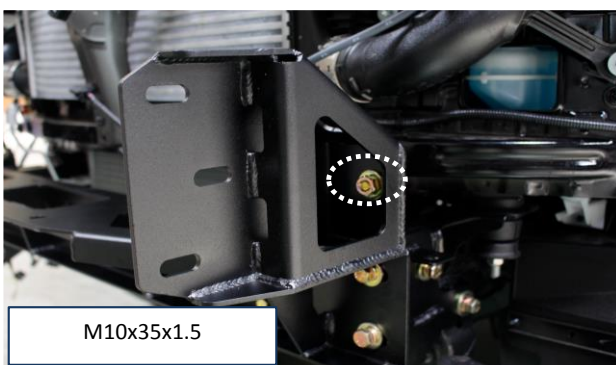
- 17 Fit into the mounting bracket through inner mounting support bracket and secure with spring, flat washers and hex nuts.



- 18 Secure with M12 bolts (M12x35x1.25), spring and flat washer as shown.



- 19 Secure with M10 bolts (M10x35x1.5), spring and flat washer as shown.



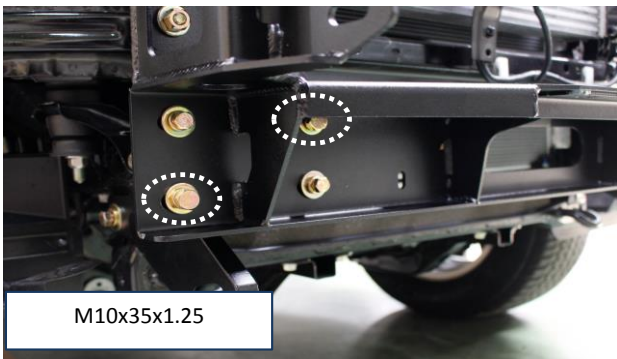
- 20 Secure with M10 bolts (M10x35x1.5), spring and flat washer as indicator.

FITTING PROCEDURE



M10x35x1.5

- 21** Secure with M10 bolts (M10x35x1.5), spring and flat washer as shown.

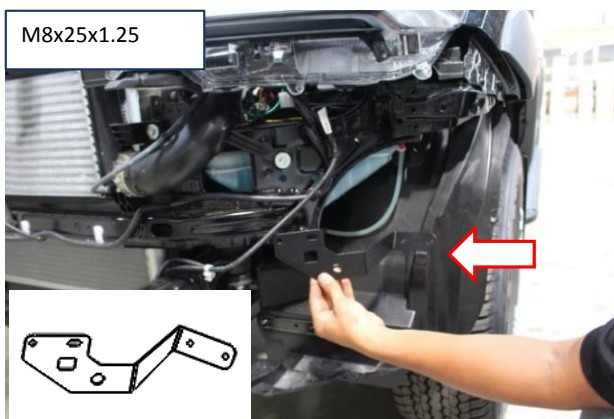


M10x35x1.25

- 22** Secure with M10 bolts (M10x35x1.5), spring and flat washer as shown.



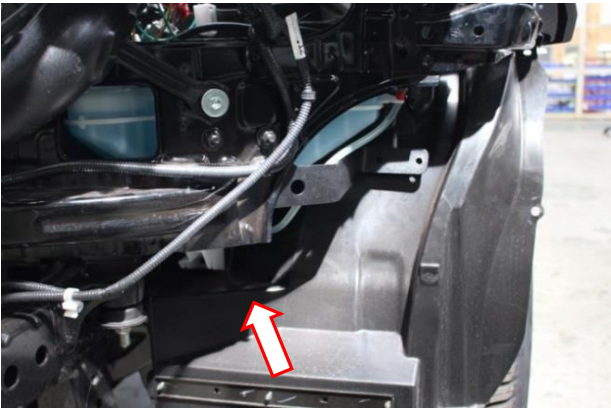
- 23** Location of winch on the chassis mount bracket.



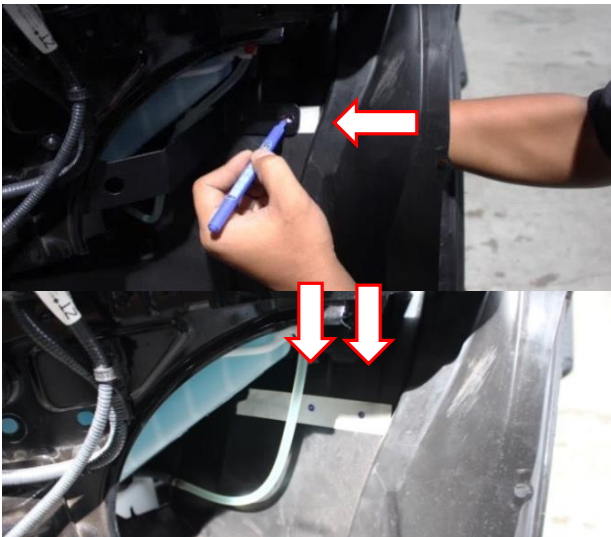
M8x25x1.25

- 24** Fit the inner guard retaining bracket to the vehicle using two M8 bolts (M8x25x1.25), spring and flat washers and flange nut

FITTING PROCEDURE



- 25** Already fit the inner guard retaining bracket to the vehicle .



- 26** Using the bracket as a guide drill two holes using a 6.5 mm. drill bit.

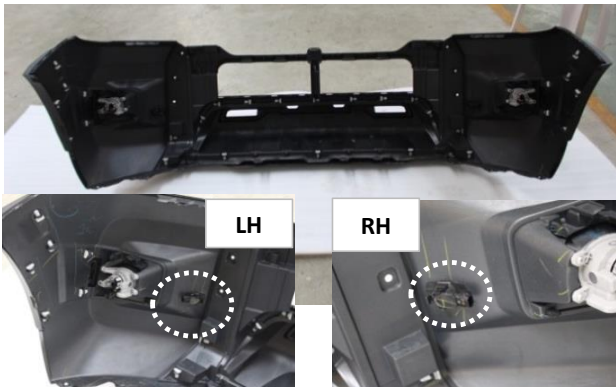
- 27** Mark the location for drill 6.5 mm.



- 28** Drill holes in guard (D 6.5mm) on the guide position both sides

*** Repeat for the opposite side**

FITTING PROCEDURE



29 The position of parking sensor (where fitted) at the bumper bar.



29 Mark the position of the parking sensor (where fitted) at the front of bumper bar and remove parking sensors both sides.



30 Mark the position and remove parking sensor brackets both sides.



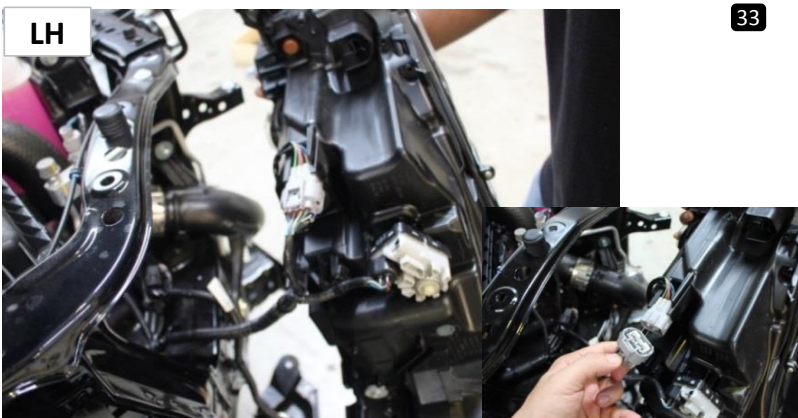
31 Parking sensors and parking sensor brackets.

FITTING PROCEDURE



32 Remove carefully the headlight set.

***Keep for refitment of bumper.**



33 Disconnect wiring headlight set.

***** Repeat for the opposite side*****



34 Using a LED test lamp or multi meter locate the "indicators & Parking Lights" wires. Wires are located behind the headlamp inside the engine bay.

*****Repeat for the opposite side**

PIAK LED Harness codes

- Indicator Yellow
- Park brown
- Earth White

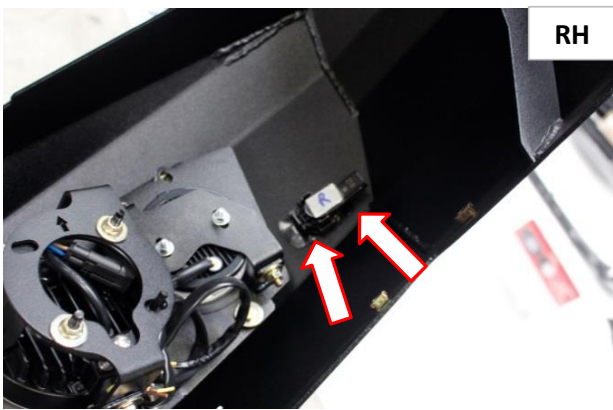


35 Re-install the sensor brackets.

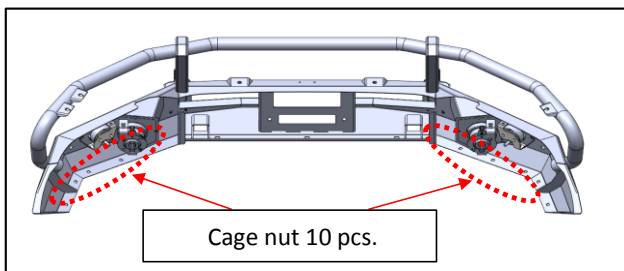
FITTING PROCEDURE



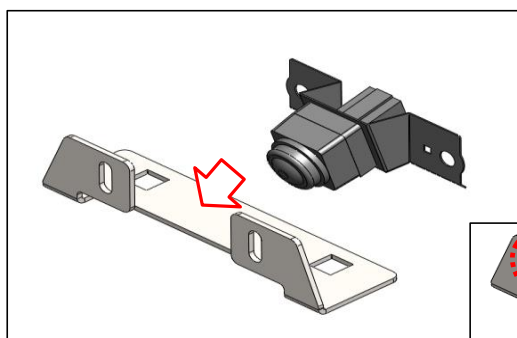
- 36** Take double-sided adhesive on a parking sensor brackets.



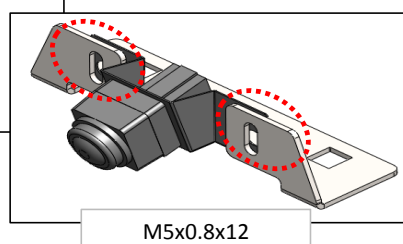
- 37** Re-install the parking sensor to fitment bumper bar.



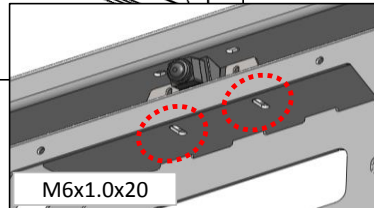
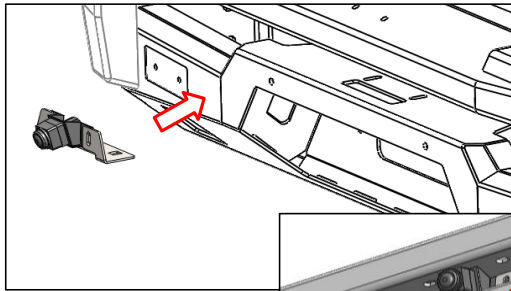
- 38** Insert ten M6x1.0x3T cage nuts onto the bumper bar as shown.



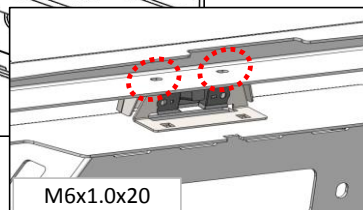
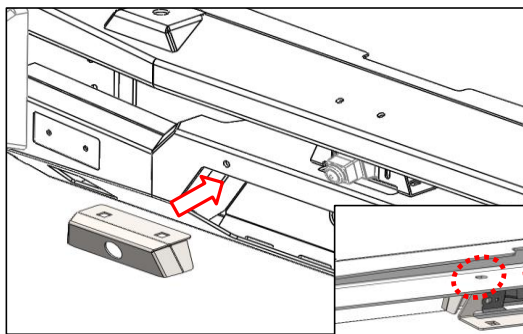
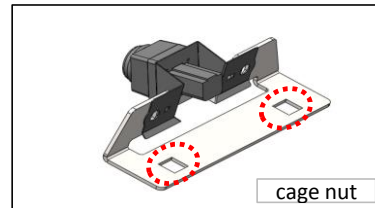
- 39** Fit the front camera to the camera bracket B use two Button Head Bolt M5x0.8x12 ,Spring Washer ,Flat washers and hex nut as shown.



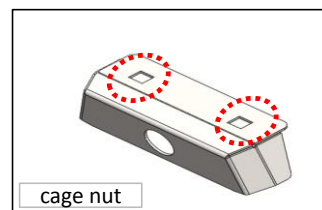
FITTING PROCEDURE



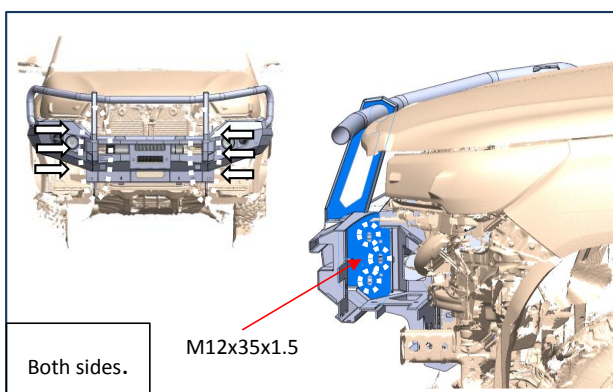
- 40** Insert two M6x1.0x2T cage nut onto the camera bracket B Fit camera bracket B on the bar. Use two Hex bolts M6x1.0x20, spring washer and Flat washer as shown.



- 41** Insert two M6x1.0x2T cage nut onto the camera bracket A Fit camera bracket A on the bar. Use two the Hex bolts M6x1.0x20, spring washer and Flat washer as shown.



- 42** Lift the bumper bar onto the chassis of the vehicle.



- 43** Secure bumper bar onto the chassis mounting bracket by using three M12 bolts (M12x1.5x35), spring washers, flat washers and hex nuts.

***Repeat for the opposite side.**
***Do not tighten.**

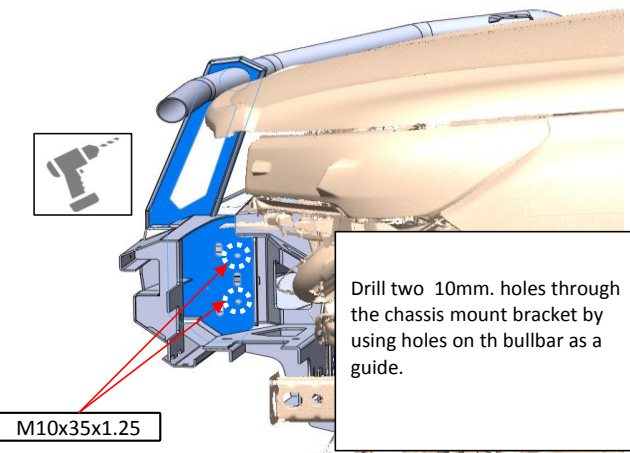
FITTING PROCEDURE



44

Align the bar so there is a 20mm 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 chassis mount and adjust accordingly. Tighten all bolts to the correct torque.

***Repeat for the opposite side.**



45

Drill two 10 mm holes through the chassis mount bracket by using holes on the bullbar as a guide and painted with rustproof paint.

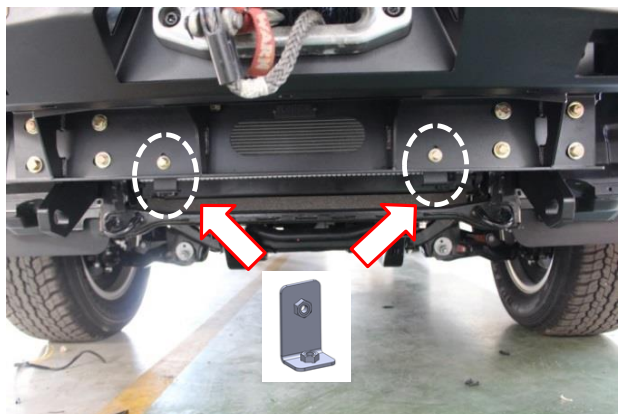
Secure with two M10 bolts (M10x35x1.25) spring washers, flange washers and flange nuts.

***Repeat for the opposite side.**



46

Connect cable parking sensor, front camera, Fog light and PIAK combination lamp.

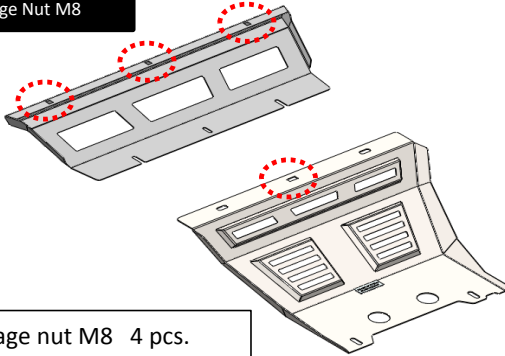


47

Secure with two protection plate bracket and two M8 bolts (M8x20x1.25), spring washers, flange washers and flange nuts.

FITTING PROCEDURE

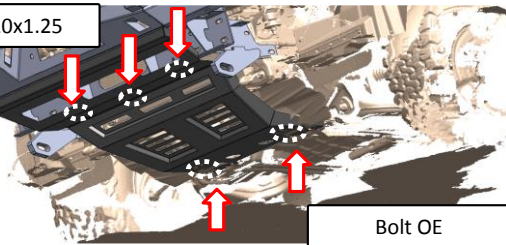
Cage Nut M8



Cage nut M8 4 pcs.

- 48** Insert four cage nut M8(M8x1.25x3.2T) on the protection plate center as shown.

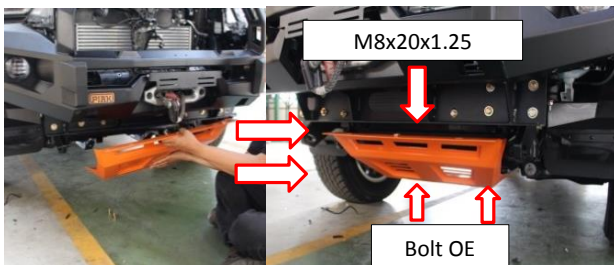
M8x20x1.25



Bolt OE

- 49** Lift the center protection plate 02 onto bumper bar and secure M8 bolt (M8x1.25x20), Spring washer and flat washer as shown.

Secure two Bolt OE (Original bolts) as shown.



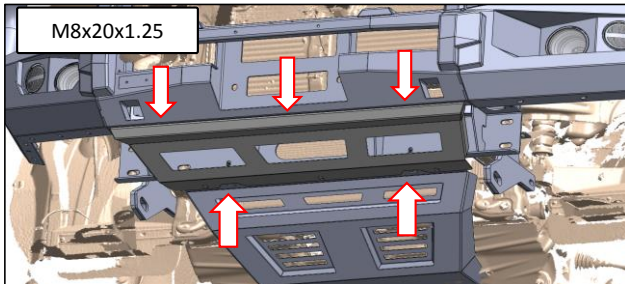
M8x20x1.25

Bolt OE

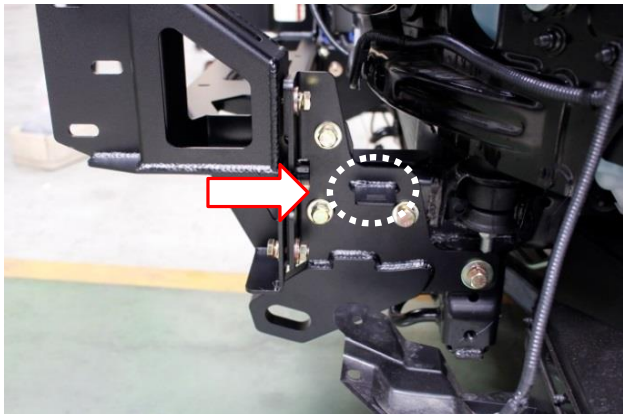
- 50** Lift the the center protection plate 01 onto the chassis of the vehicle as shown.



FITTING PROCEDURE

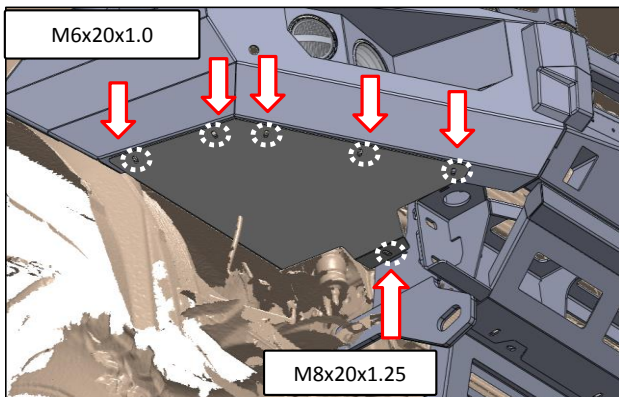


- 51** Secure five M8 bolts (M8x1.25x20), Spring washers and flat washers as shown.



- 52** Insert cage nut M8x1.25x3.2T onto the protection plate LH/RH as shown.

***Repeat for the opposite side.**



- 53** Secure five M6 bolts (M6x1.0 x20), Spring washers and flat washers as shown.

Secure M8 bolts (M8x1.25 x20), Spring washers and flat washers as shown.

***Repeat for the opposite side.**

***Do not tighten.**



- 54** Mark the location on the fenders as shown.

***Repeat for the opposite side.**

FITTING PROCEDURE



- 55** Remove protection plate LH/RH first and then use a air saw to cut off the fenders as shown.

***Repeat for the opposite side.**



- 56** Re-install protection plate LH/RH.

***Repeat for the opposite side.**

Front Grill Version1



- 57** Front Grill Version1.



- 58** Use a cutting template for cut the front grille LH side.

FITTING PROCEDURE



- 59** Use a cutting template for cut the front grille RH side.



- 60** Location to cut the Front grille.



- 61** Use air saw to cut the Front grille.



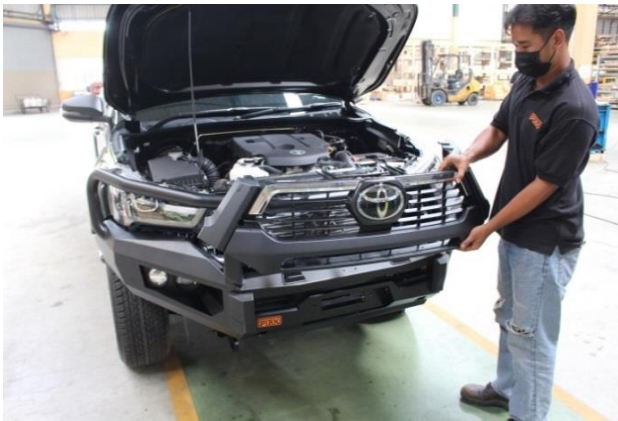
- 62** Front grille that already cut and use top piece for re-fitting onto to car.

FITTING PROCEDURE



RH

- 63** Install the Front Grille Bracket on to the Front grille - use the Phillip Truss Head Tapping 3/16"x20 for mounting both sides.



- 64** Re-install the front grill to the vehicle by using original bolts.



Front Grill Version2

- 65** Front Grill Version2.



- 66** Do the same as steps 58

FITTING PROCEDURE



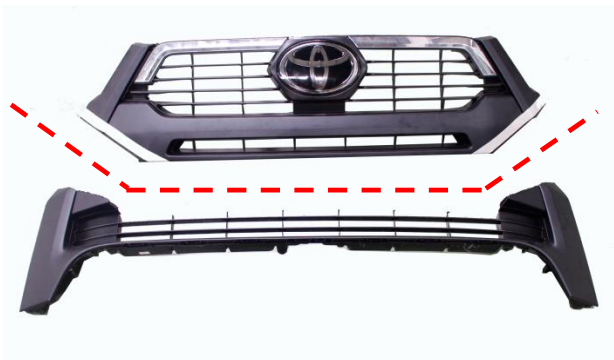
67 Do the same as steps 59.



68 Do the same as steps 60.



69 Do the same as steps 61.



70 Do the same as steps 62.

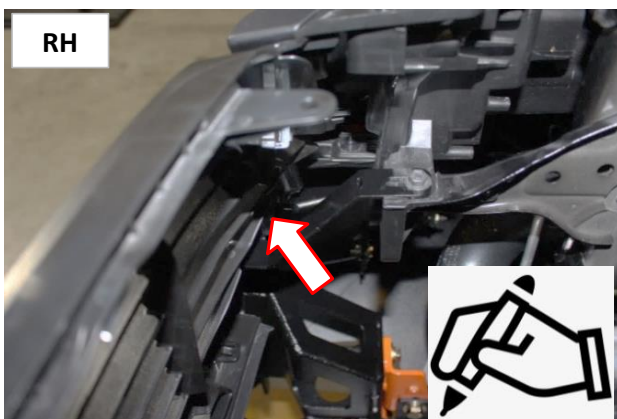
FITTING PROCEDURE



71 location of Front grille bracket (RH&LH) .

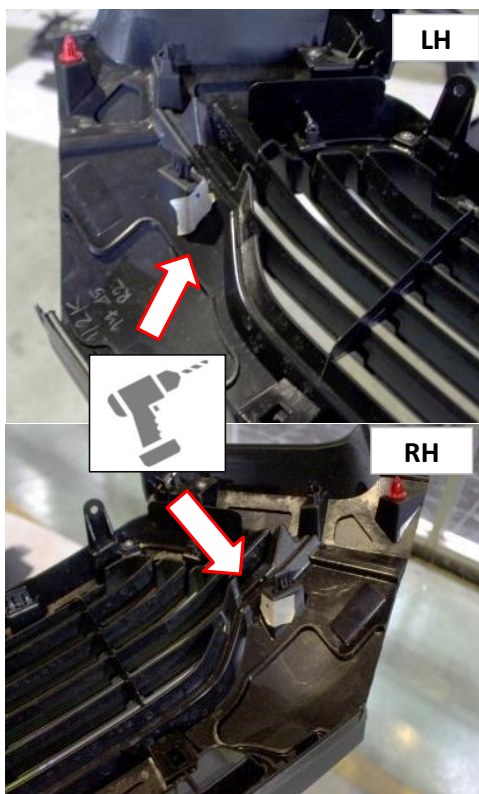
Secure front grill bracket onto the vehicle by using original bolt.

Repeat for the opposite side.



72 Lift the Front grille to the car and mark position for drill holes to secure the grille to the bracket.

Repeat for the opposite side.



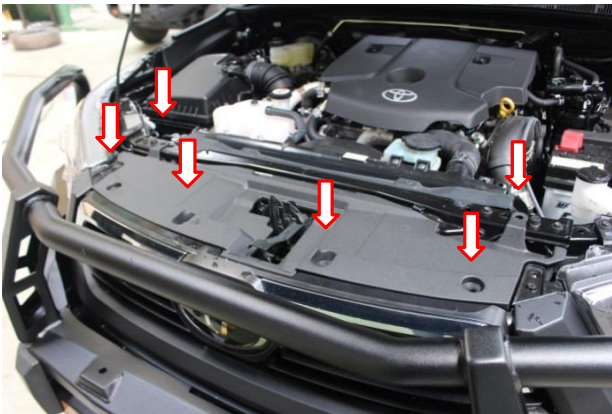
73 Drill Front grill (D 3 mm.) on the guide position both sides

Repeat for the opposite side.

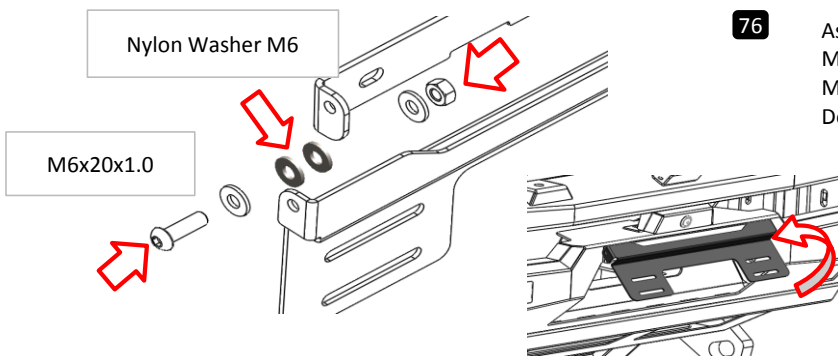
FITTING PROCEDURE



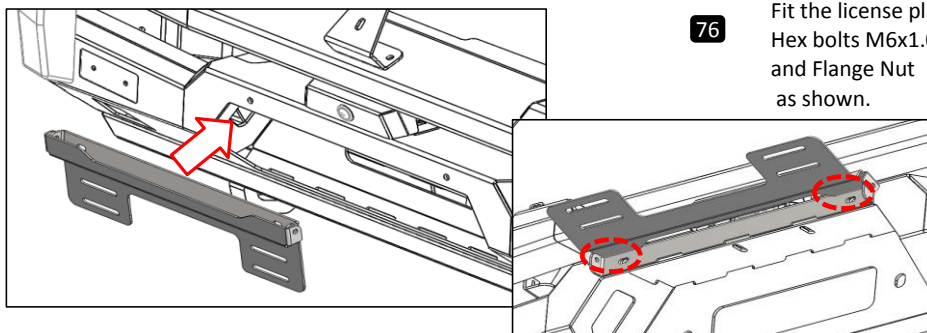
- 74** Re-install the front grill to the vehicle by using original bolts. using sensor plug 20.6 mm. close the sensor hole OE.



- 75** Re-install the clips to the OEM Plastic radiator cover.



- 76** Assemble License plate bracket by using two M6 button head, flat washer, Nylon Washer M6 and nyloc nut as shown. Do not fully tighten.



- 76** Fit the license plate bracket on the bar Use two Hex bolts M6x1.0x20 , spring washer ,Flat washer and Flange Nut as shown.

FITTING PROCEDURE

