

# SS983HF

SAFARI V-SPEC SNORKEL  
 FORD RANGER 4<sup>th</sup> GEN 2019 onwards (All Models)  
 2.3L EcoBoost I-4 GDI Gasoline Engine



20/01/2020

## Parts List

ITEM	PART NO.	DESCRIPTION	QTY
1	683-133-000	BODY - SNORKEL (SS983HF)	1
2	000-135-960	4" AIR RAM ASSEMBLY	1
3	683-032-000	BRACKET - UPPER MOUNTING	1
4	000-002-100	BOLT - HEX - 6mm x 1.0 x 14mm (SEMS)	2
5	000-958-625	POP RIVET - 4.8mm x 10mm (Black Anodised)	3
6	683-435-000	GASKET - UPPER MOUNTING BRACKET (Nylon)	1
7	000-110	STUD - 8mm x 1.25 x 25mm - S/S	6
8	000-311-300	WASHER - BODY - 8mm x 30mm - S/S	6
9	000-205-300	NUT - NYLOC - 8mm x 1.25mm - S/S	6
10	680-024-700	HOSE - AIR ENTRY	1
11	680-025-700	PLATE - HOSE SUPPORT - (Main) - S/S	1
12	680-025-725	PLATE - HOSE SUPPORT - (Front) - S/S	1
13	000-093-400	BOLT - B/H 4.0mm x 0.7 x 16mm - S/S	4
14	000-094-300	BOLT - B/H 4.0mm x 0.7 x 20mm - S/S	2
15	000-095-300	BOLT - B/H 4.0mm x 0.7 x 25mm - S/S	5

16	000-300-350	WASHER - BODY - 4.0mm x 12mm S/S	11
17	000-223-300	NUT - NYLOC - 4.0mm x 0.7mm - S/S	11
18	000-1911	CLAMP - HOSE - 100/120mm - S/S	1
19	680-959-000	PLUG - AIR INLET BLANK-OFF	1
20	000-951	SCREW - S/T – 4.2mm x 13mm - S/S	2
21	680-967-600	PLATE - INNER FENDER SUPPORT - S/S	1
22	000-1020-300	BOLT - B/H CAP SCREW 5.0mm x 0.8 x 12mm - S/S	10
23	000-320-350	WASHER - BODY 5.0mm x 15mm - S/S	10
24	000-221-300	NUT - NYLOC 5.0mm x 0.8mm - S/S	10
25	000-038-300	BOLT - B/H CAP SCREW 6.0mm x 1.0 x 12mm - S/S	1
26	000-353	WASHER - BODY 6.0mm x 18mm - S/S	1
27	000-204	NUT - NYLOC 6.0mm x 1.0mm - S/S	1
28	000-1931/B	CLAMP - HOSE - SIZE 64 (BLACK)	1
29	680-217-700	TEMPLATE - AIR CLEANER HOUSING (Upper Side)	1
30	680-217-725	TEMPLATE - AIR CLEANER HOUSING (Lower Side)	1
31	680-217-750	TEMPLATE - AIR CLEANER HOUSING (Upper Front)	1
32	680-217-775	TEMPLATE - AIR CLEANER HOUSING (Front Lower)	1
33	683-017-000	TEMPLATE - FENDER	1

## Installation Guide

### Fitment to:

- Right Hand Side

### Fitting Time:

- 210min

### Special Tools:

- Body Saw (Reciprocating)
- Step Drill
- 90 degree Drill
- Metric Drill Bits
- Files
- Allen Key Set
- Masking Tape
- Loctite 243 (thread lock)
- Touch-up paint
- Sikaflex 227 Adhesive Sealant

**Prior to commencing the installation, it is the installer's responsibility to verify that all components and particularly the fender template (Item 33) are correct.**

1

Remove and discard the Air intake duct.

Refit the two bolts removed after discarding the air intake duct.



2

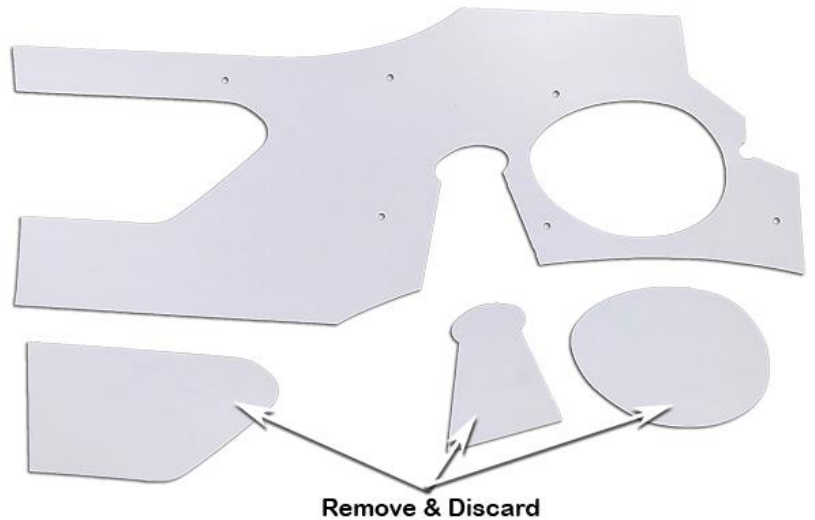
Remove the following in accordance with the factory service manual:

- Air Cleaner Assembly

*Hint: Cover the air intake hose with a plastic bag to prevent any foreign matter from entering the air intake and causing potential engine damage.*

3

Remove and discard the three perforated sections from the fender template (item 33) as shown.



4

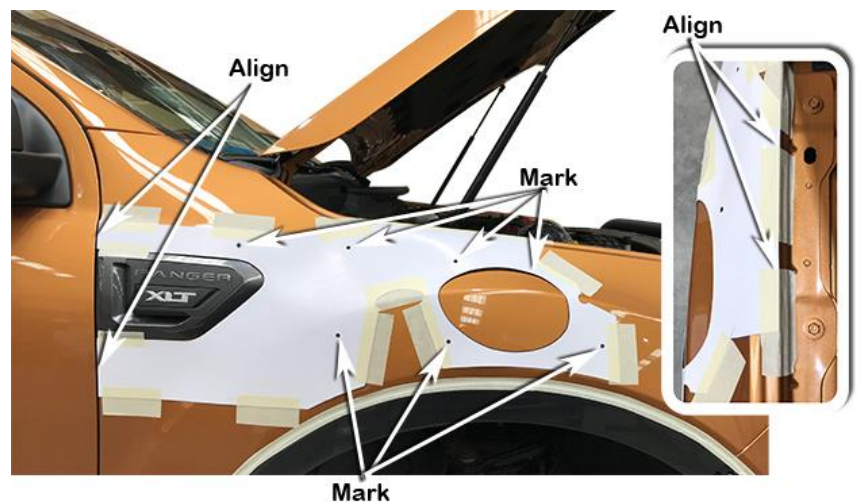
Align the fender template (Item 33) with the upper and rear edges of the right hand fender as shown.

Tape the template to the fender with masking tape.

Mark all hole positions and the cut-out section with a felt tip pen (Sharpie).

Remove the fender template.

*Hint: Apply masking tape over the join between the right hand front Fender and right hand front Wheel Arch Moulding.*



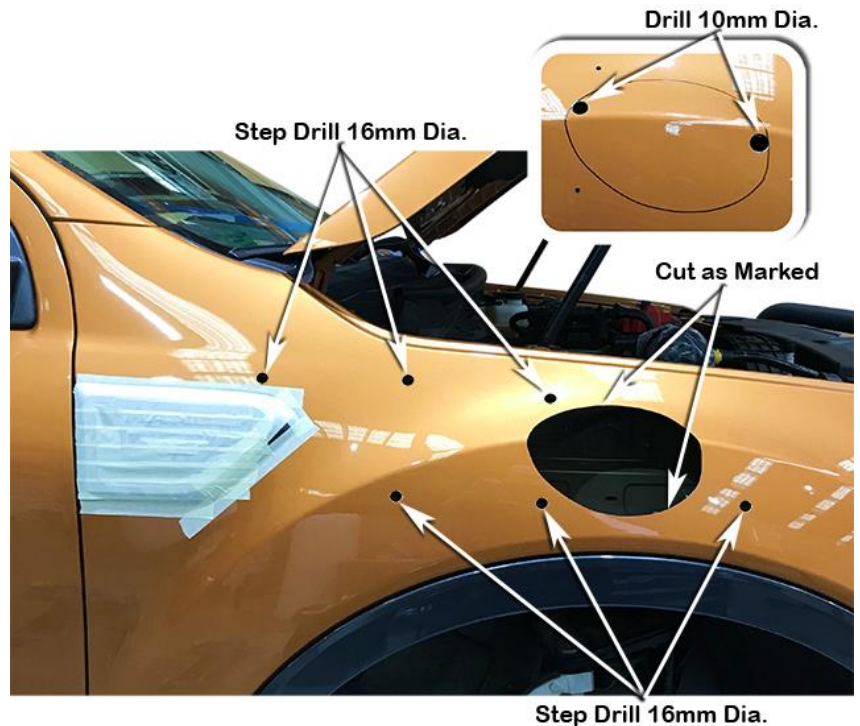
Drill a pilot hole for each of the marked hole positions.

Use a step drill to drill the six mounting holes to 16mm diameter.

Drill 1 or 2, 10mm diameter holes in the cut-out section for a start/stop point for the body saw, using the body saw cut the main hole in the fender as marked from the template cut-out in step 4, cutting on the outside of the marked cut line.

Thoroughly deburr all holes and cut section of fender.

*Hint: Apply masking tape over the Ranger grille to prevent any metal swarf being trapped between the grille and fender.*



Remove the following in accordance with the factory service manual:

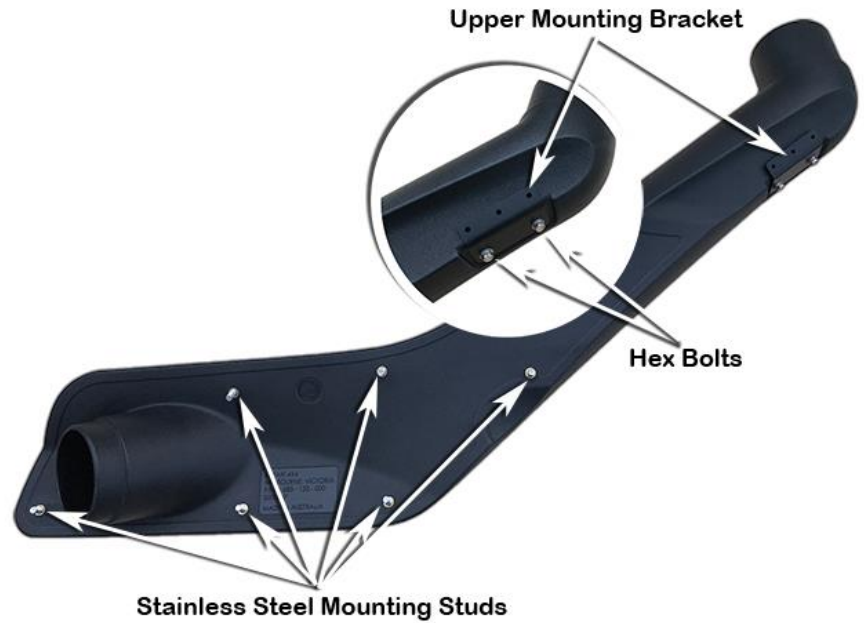
- Right Hand Reflector Assembly
- Right Hand Front Wheel Arch Moulding
- Right Hand Front Splash Guard

*Caution: Care must be taken when removing the Front Wheel Arch Moulding, reach through the main hole in the fender and unclip as many of the plastic clips retaining the wheel arch moulding to the fender, carefully unclip any of the remaining plastic clips.*



Install the upper mounting bracket (Item 3) to the snorkel body (Item 1) with hex bolts (Item 4).

Apply Loctite 243 to each of the stainless steel mounting studs (Item 7) and install the studs finger tight into the snorkel body (Item 1) mounting inserts as shown.

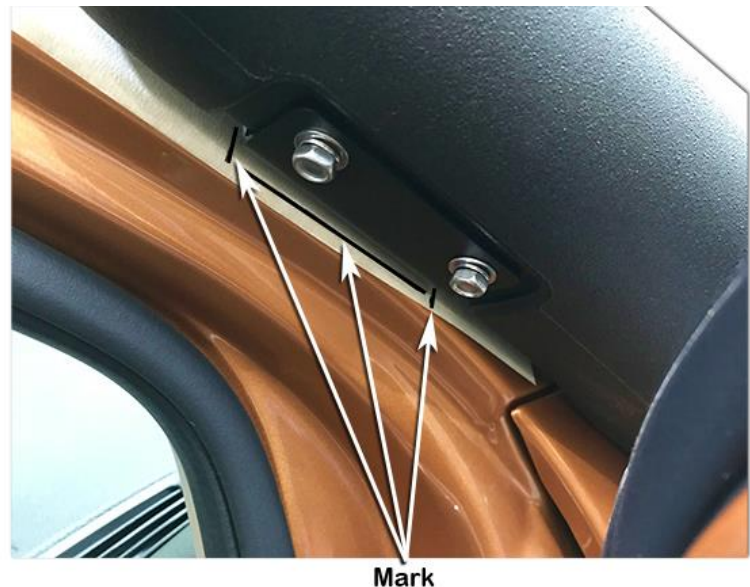


Place a strip of masking tape along the A-pillar panel.

Carefully install the snorkel body (Item 1) to the fender.

With the snorkel body correctly positioned, mark the outline of the upper mounting bracket (Item 3) onto the masking tape.

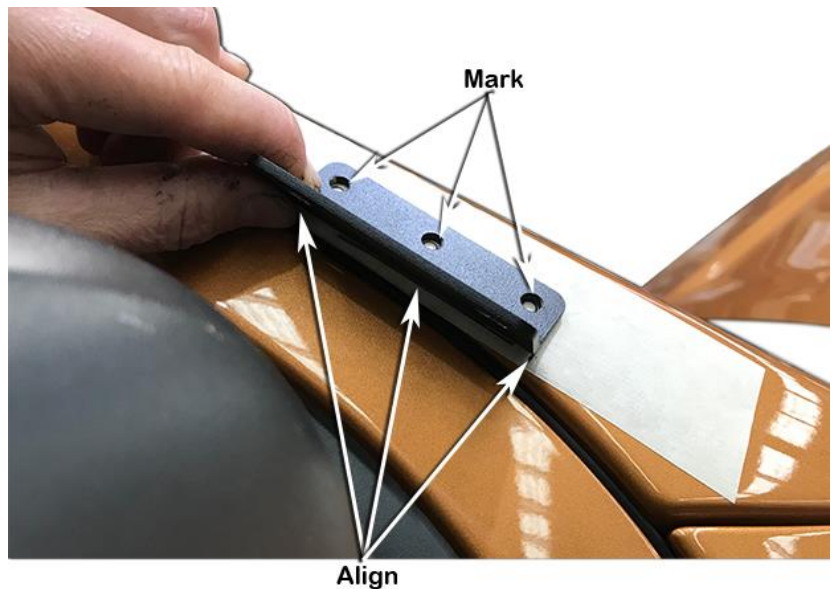
*Note: With the snorkel body correctly positioned, open and close the right hand front door, checking for adequate clearance between the door frame and upper mounting bracket.*



9

Remove the snorkel body (Item 1) from the vehicle and remove the upper mounting bracket (Item 3) from the snorkel body.

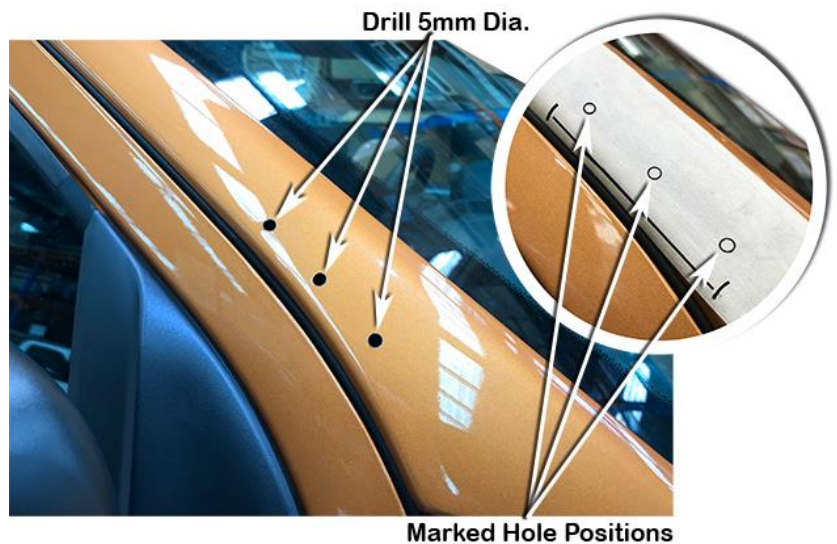
Position the upper mounting bracket (Item 3) onto the A-pillar and align the bracket with the marked bracket outline. Mark the three mounting hole positions with a felt tip pen.



10

Drill a pilot hole at each of the three marked hole positions. Drill each hole position to 5.0mm diameter with a 5.0mm drill bit.

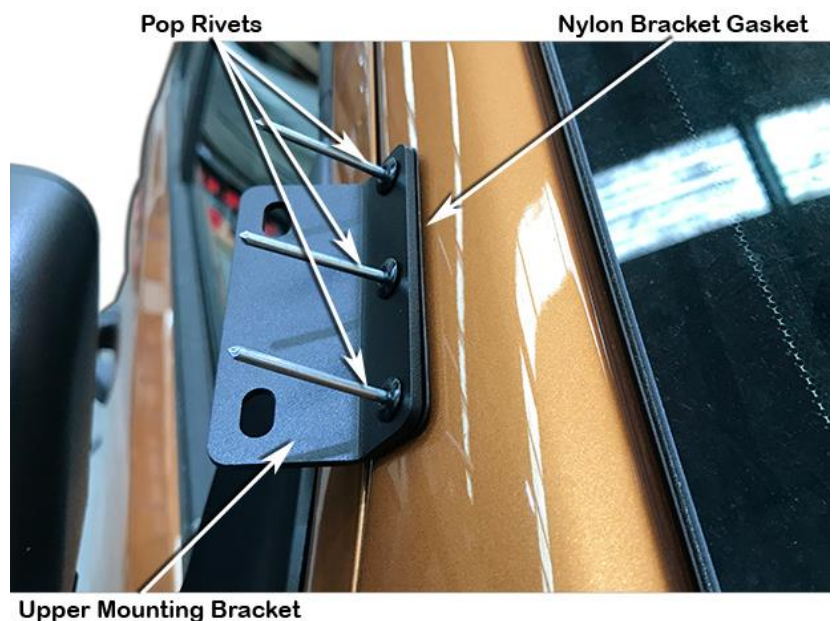
Deburr and paint holes to prevent rust.



11

Install the nylon bracket gasket (item 6) to the upper mounting bracket (item 3) and install the upper mounting bracket and nylon bracket gasket onto the A-pillar.

Install the three pop rivets (item 5) through the bracket and gasket and into the three 5.0mm diameter holes in the A-pillar panel.





Using a pop rivet gun, secure the three pop rivets attaching the upper mounting bracket and nylon bracket gasket to the A-pillar panel.



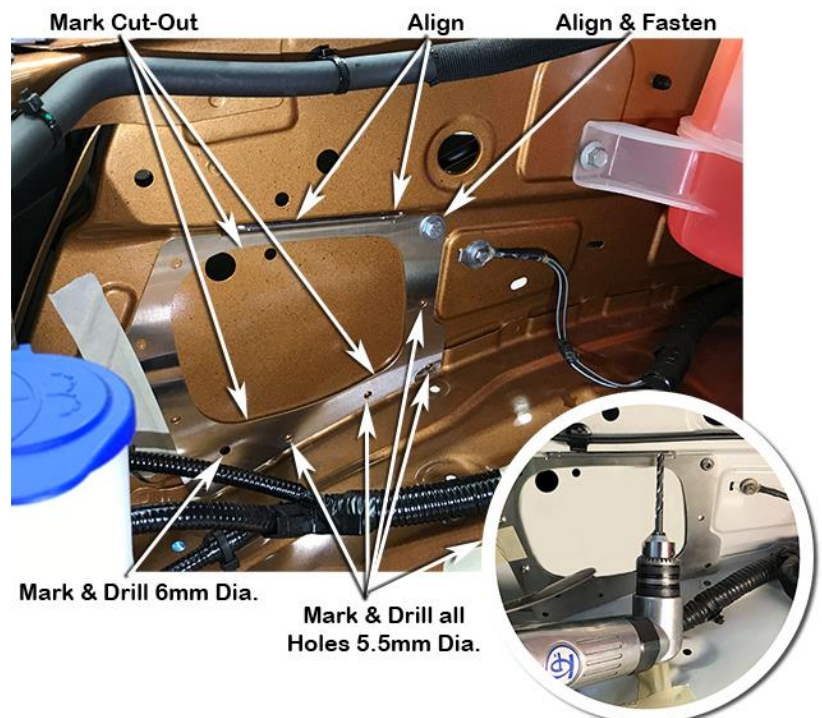
Unclip the wiring loom shown from its mounting positions.

Install the inner fender support plate (item 21) to the inner fender panel, align and fasten to the 6.0mm hole in the inner fender panel with a M6 x 12mm button head bolt (item 25), M6 body washer (item 26) and M6 nyloc nut (item 27), align the support plate to the fold in the inner fender panel, mark or drill all ten mounting hole positions with a 5.5mm drill bit, mark or drill the washer hose relocation hole with a 6.0mm drill bit.

Mark the inner fender panel cut-out with a felt tip pen.

Remove the inner fender support plate (item 21).

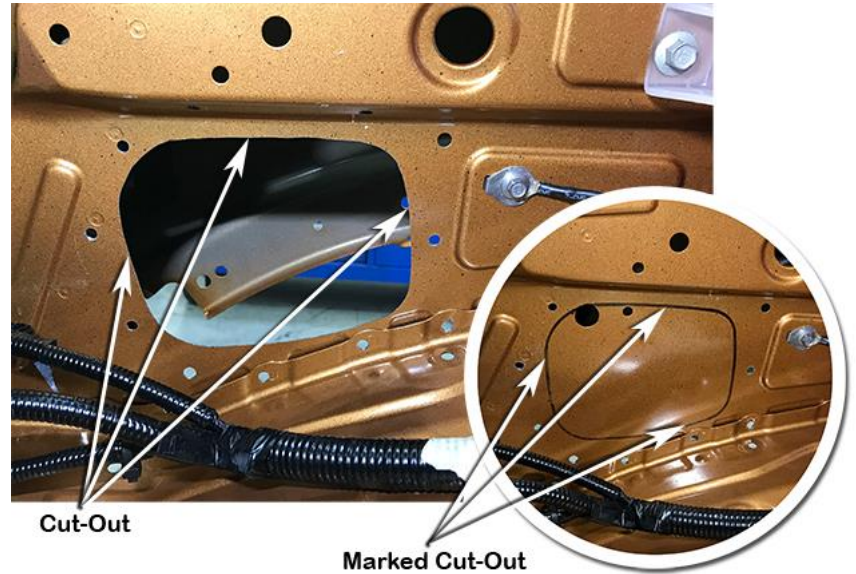
*Note: A drill with a 90 degree chuck is required for drilling the two upper holes in the folded section of the inner fender panel.*





Using the body saw, cut the marked cut-out in the inner fender panel, cutting on the outside of the marked line.

Deburr and paint all holes and cut section of panel to prevent rust.

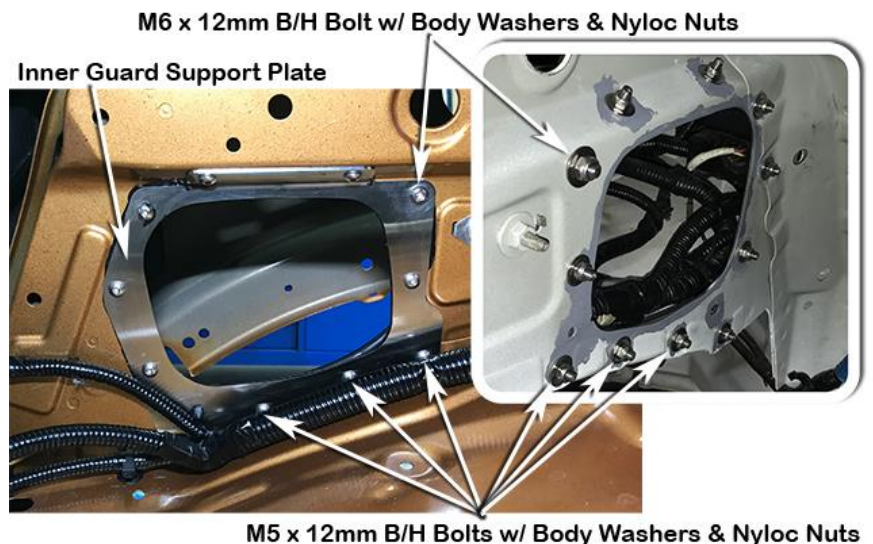


Apply Sikaflex adhesive sealant to the inner fender support plate (item 21) and install the support plate to the inner guard panel, install all ten M5 x 12mm button head bolts (item 22), M5 body washers (item 23) and M5 nyloc nuts (item 24), install the M6 x 12mm button head bolt (item 25), M6 body washer (item 26) and M6 nyloc nut (item 27).

With all fasteners installed, secure the inner fender support plate to the inner fender.

Clean-up any excess adhesive sealant to ensure a neat finish.

Re-clip the wiring loom into the standard mounting holes.

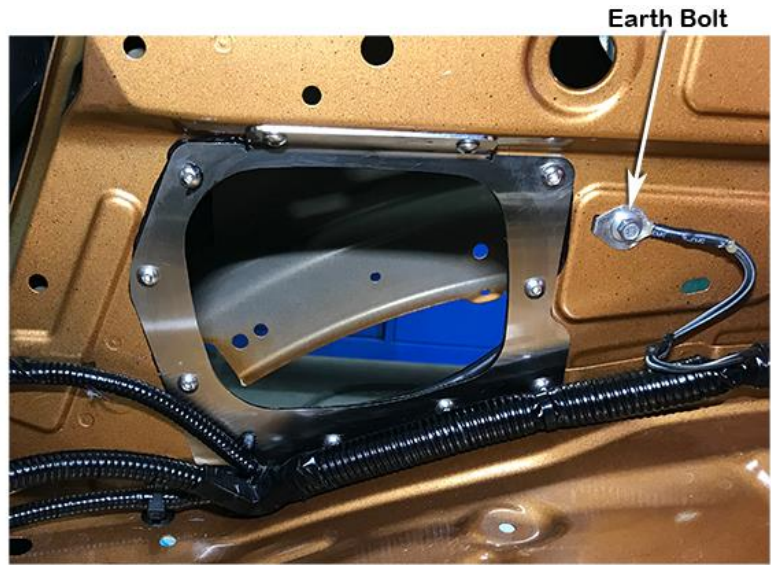


16

The earth bolt shown must be removed and shorten, using a hacksaw cut approximately 6.0mm off the end of the bolt.

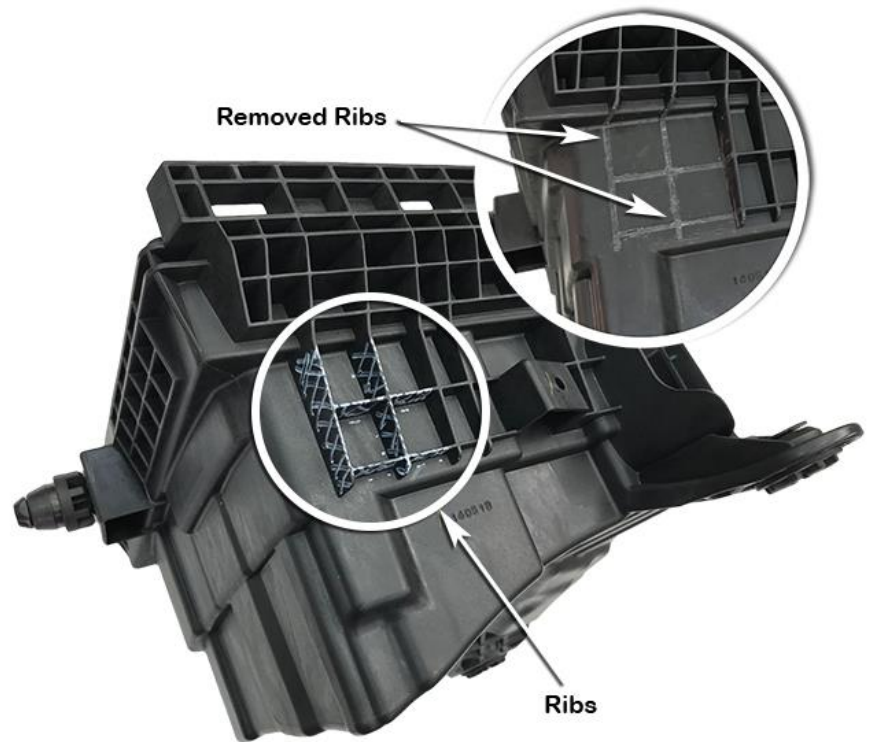
Deburr the cut end of the bolt and re-install the bolt.

Paint the cut end of the bolt to prevent rust.



17

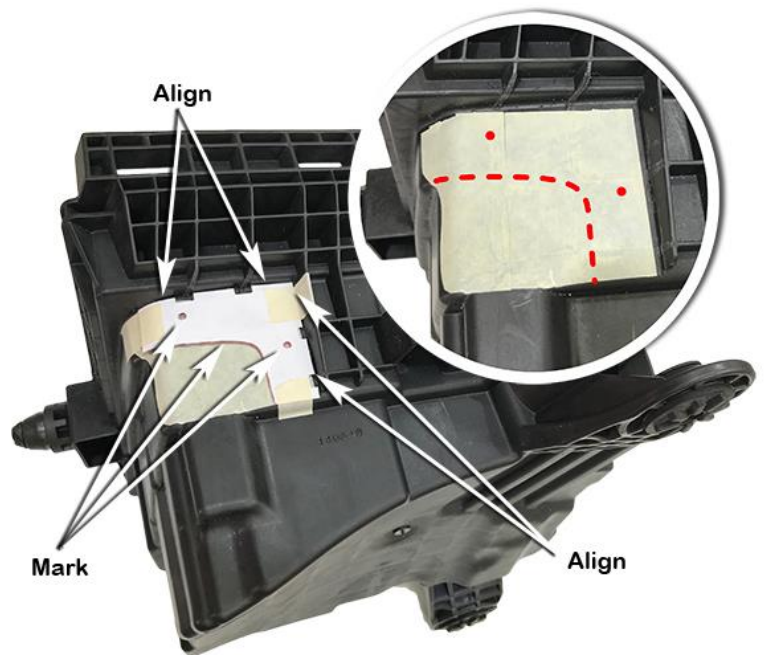
The ribs shown on the front corner of the air cleaner base must be neatly removed, using a body saw, side cutters, sharp knife or grinder remove the ribs.



Neatly apply masking tape to the upper front surface of the air cleaner base, align the front upper template (item 31) to the air cleaner base as shown.

Mark the 2 hole positions and the cutting line.

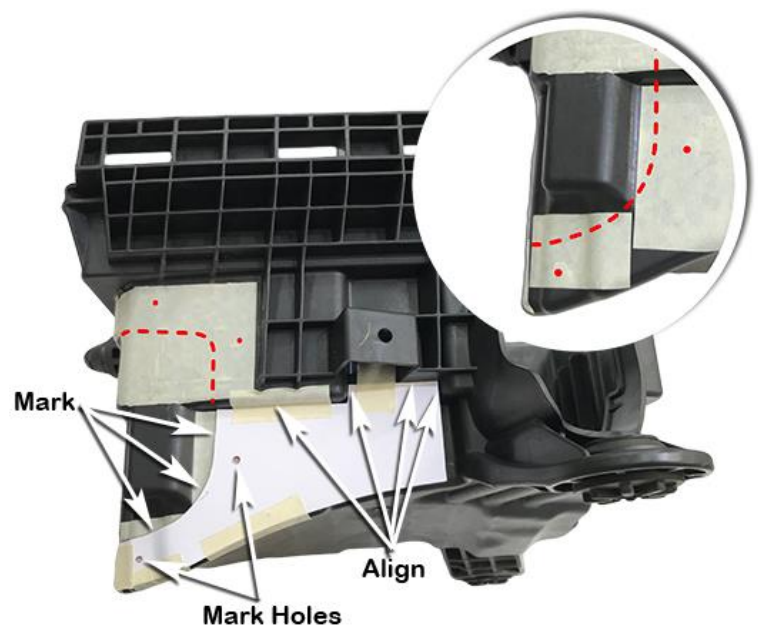
Remove the template.



Neatly apply masking tape to the lower front surface of the air cleaner base, align the front lower template (item 32) to the air cleaner base as shown.

Mark the 2 hole positions and the cutting line.

Remove the template.

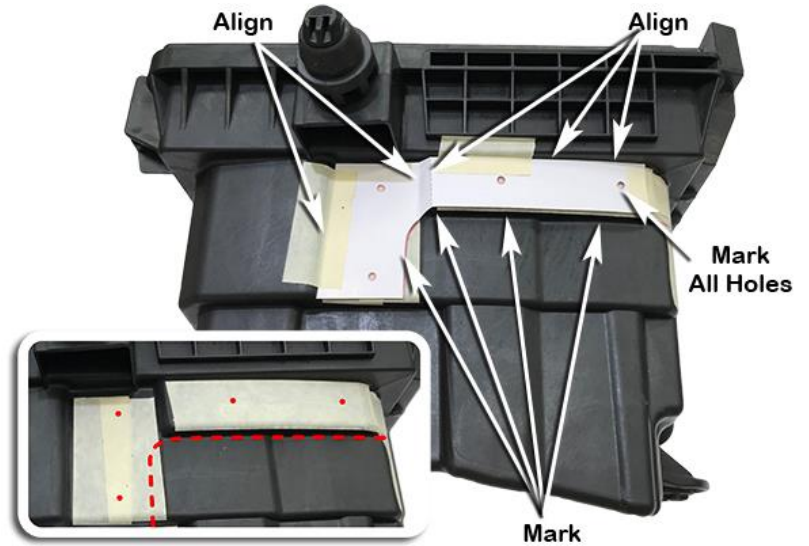




Neatly apply masking tape to the upper side surface of the air cleaner base, align the upper side template (item 29) to the air cleaner base as shown.

Mark the 2 hole positions and the cutting line.

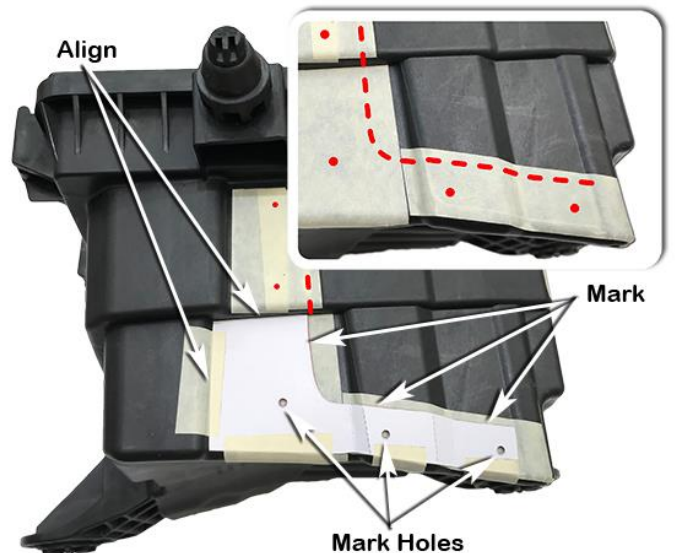
Remove the template.



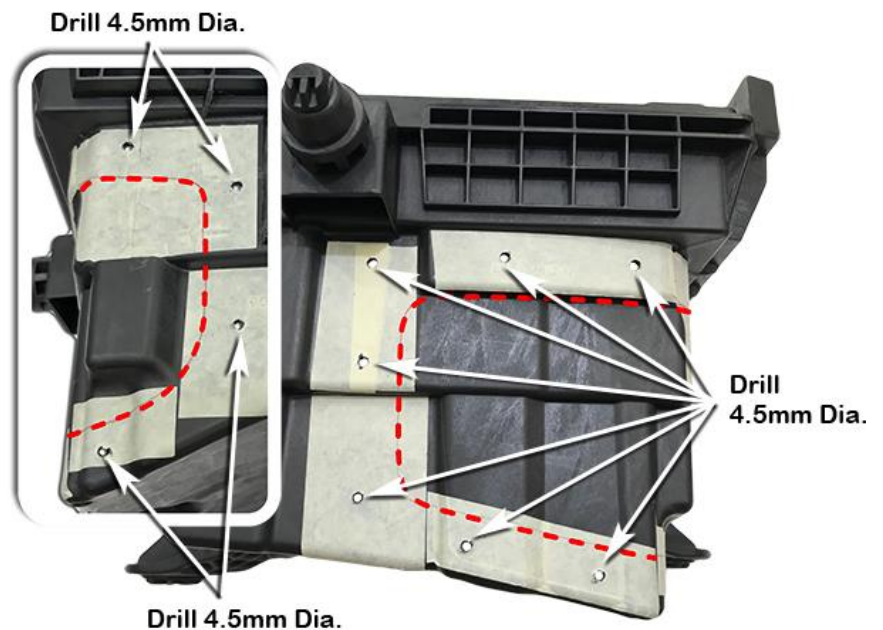
Neatly apply masking tape to the lower side surface of the air cleaner base, align the lower side template (item 30) to the air cleaner base as shown.

Mark the 2 hole positions and the cutting line.

Remove the template.



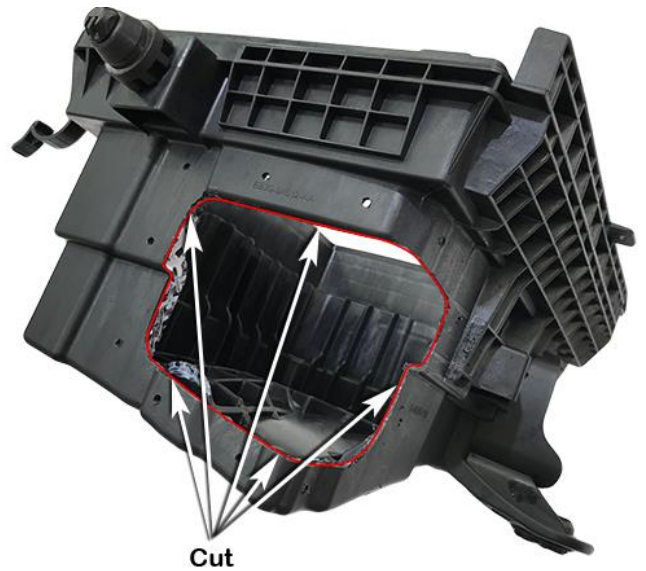
Drill a pilot hole at each of the marked hole positions, using a 4.5mm diameter drill bit, drill the eleven holes to 4.5mm as shown.



23

Using the body saw cut the new air inlet hole as marked from the templates in steps 18, 19, 20, & 21.

Use a file or die grinder to clean-up the cut section.

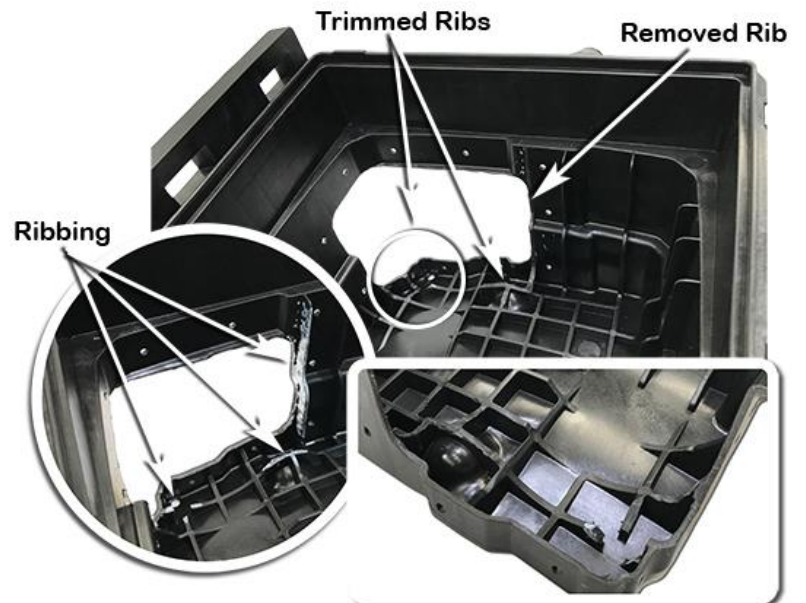


24

Using the body saw neatly remove the internal rib shown.

Using a die grinder, grind away the corner ribbing and the raised ribbing in the centre of the air cleaner base as shown.

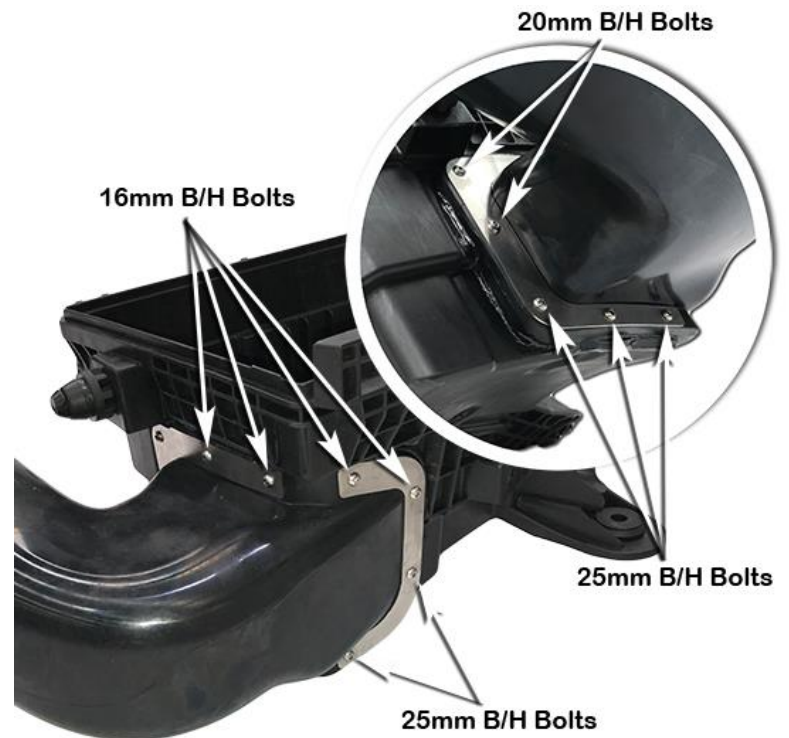
Clean-up and deburr all cuts.



Apply Sikaflex adhesive sealant to the mating surfaces of the air cleaner base and air entry hose flange.

Install the air entry hose (item 10) onto the air cleaner base, install the main and front hose support plates (item's 11 & 12) to the hose, start installing the M4 button head bolts (item's 13, 14 & 15) through the support plates, air entry hose and air cleaner base.

*Note: There are three different length bolts supplied in the kit, ensure the correct length bolts are install into the correct positions as shown.*



Install a M4 body washer (item 16) and a M4 nyloc nut (item 17) to each of the bolts, tighten all the nuts, securing the air entry hose to the air cleaner base.

Clean-up any excess sealant to ensure a neat finish.





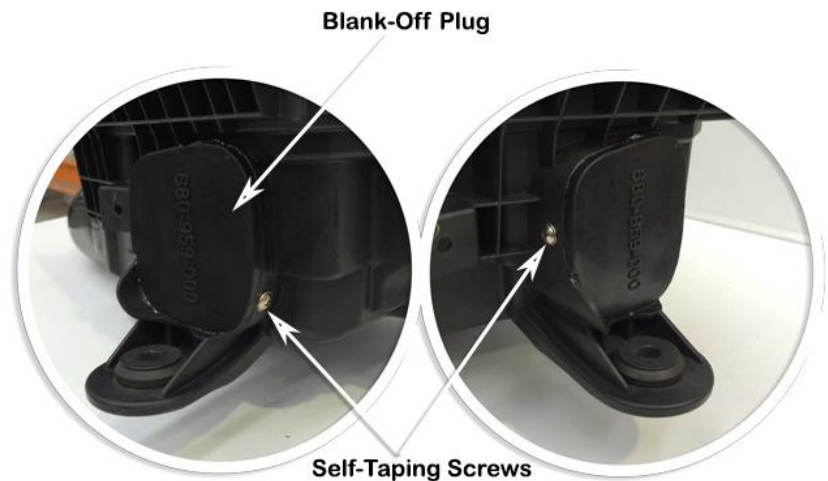
Measure and mark two hole positions 5.0mm in from the end of the air cleaner inlet snout as shown.

Drilled the two marked hole positions with a 4.0mm drill bit.



Apply Sikaflex adhesive sealant to the air cleaner inlet and blank-off plug (item 19), install the blank-off plug into the air cleaner inlet hole and secure with two self-taping screws (item 20).

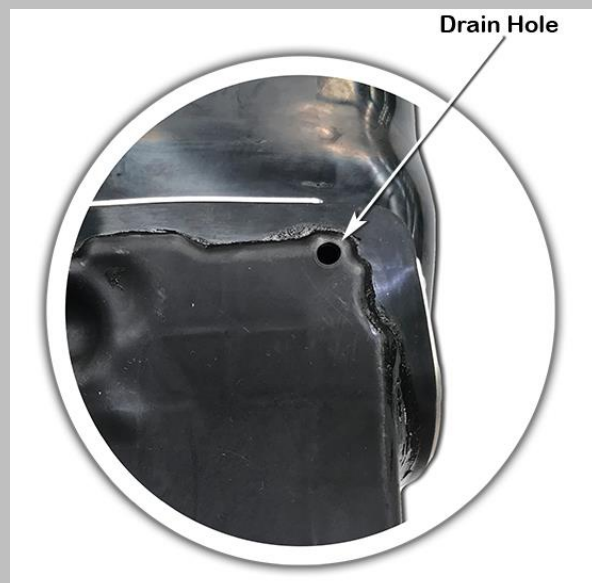
Clean-up any excess sealant to ensure a neat finish.



### **INSTALLER OPTION :**

The air cleaner base contains a drain hole as shown. The drain hole can permit water to enter the air intake.

Safari advises that the drain hole should be sealed to ensure a watertight installation.



30

The end of the air entry hose (item 10) must be squashed inwards and taped to hold as shown.

***N.B: it is critical the hose is taped the way shown in the photo, for installation purposes.***

*Note: With the hose taped, spray lubricant over the outside of the hose.*

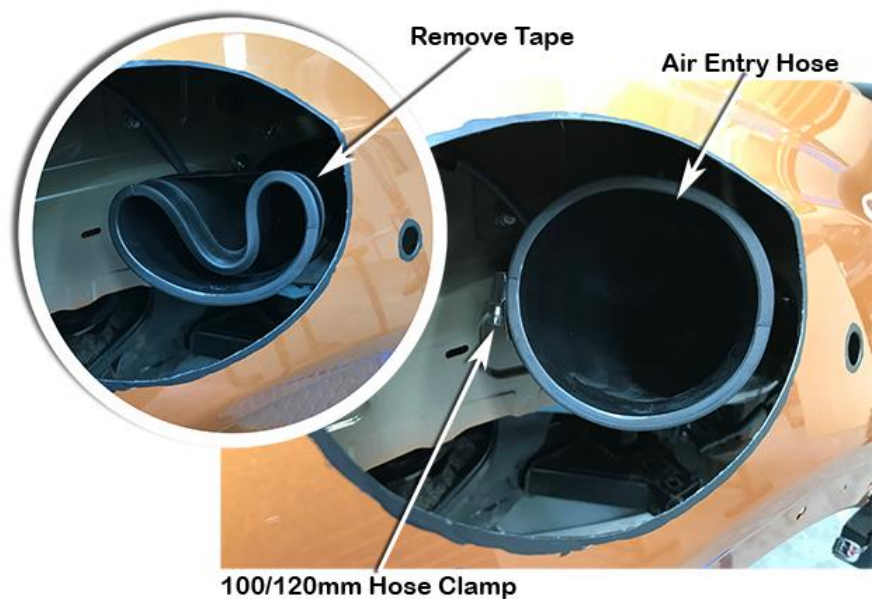


31

Install the air cleaner base into position, guiding the air entry hose through the hole in the inner fender, with the air cleaner base correctly positioned, installed the two standard mounting bolts and fasten.

Remove the tape.

Loosely install the 100/120mm hose clamp (Item 18) onto the air entry hose (item 10).



32

Carefully install the snorkel body (Item 1) to the fender, guiding the snorkel body outlet into the air entry hose (item 10), align the snorkel body to fender and upper mounting bracket.

When correctly aligned, fasten the snorkel body to the fender with body washers (Item 8) and nyloc nuts (Item 9).

Fasten the snorkel body to the upper mounting bracket with hex bolts (Item 4).



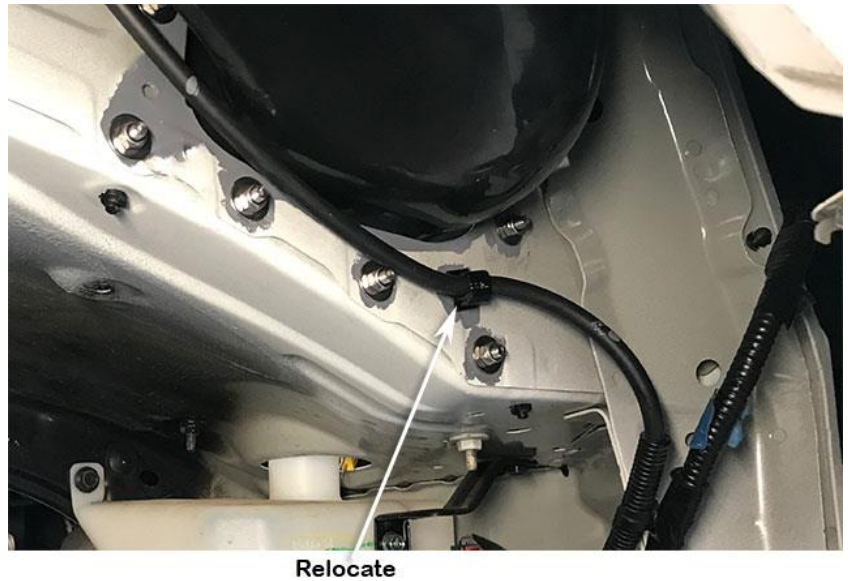
33

Ensure the air entry hose is correctly installed onto the snorkel body outlet and tighten the 100/120mm hose clamp (item 18).



34

Relocate the windshield washer hose mounting clip into the 6.0mm hole drilled in the inner fender.



35

Loosely install the black hose clamp (Item 28) over the base of the air ram assembly (Item 2).

Install the air ram assembly onto the snorkel body.

Align the air ram assembly and tighten the black hose clamp (Item 28).



36

Re-install the right hand front splash guard, right hand front wheel arch moulding, right hand front reflector assembly, air cleaner element, air cleaner lid, reconnect sensor wiring and any other items that may have been removed during the snorkel installation process.

37

**N.B: It is the installer's responsibility to ensure that all connections are watertight.**