



**4X4 ENGINEERING**

# SS89HF

## SAFARI V-SPEC SNORKEL

To Suit: Toyota LandCruiser 200 Series (MY16 Facelift)

4.5L V8 Twin Turbo Diesel (1VD-FTV Engine)

4.6L V8 DOHC VVT-i Petrol (1UR-FE Engine)

**N.B: Does Not Suit Models with Factory Raised Air Intake (Snorkel)**



19/06/2017

### Parts List

ITEM	PART NO.	DESCRIPTION	QTY
1	370-133-400	BODY - SNORKEL (SS89HF)	1
2	000-135-800	3 ½" AIR RAM ASSEMBLY	1
3	370-032-400	BRACKET - UPPER MOUNTING	1
4	000-002-100	BOLT - HEX - 6mm x 1.0 x 14mm (SEMS) - S/S	2
5	000-951	SCREW - S/T - 4.2mm x 13mm - S/S	3
6	000-960	INSERT - PLASTIC	3
7	000-110	STUD - 8mm x 1.25 x 25mm - S/S	6
8	000-376	WASHER - RUBBER - 8mm x 33mm x 3mm	6
9	000-311-300	WASHER - BODY - 8mm x 30mm - S/S	6
10	000-205-300	NUT - NYLOC - 8mm x 1.25mm - S/S	6
11	370-024-200	HOSE - AIR ENTRY	1
12	000-910	CLAMP - HOSE - 90/110mm - S/S	1
13	000-1913	CLAMP - HOSE - 120/140mm - S/S	1
14	370-044-000B	DUCT - AIR CLEANER BASE INLET - S/S (Diesel Fitment Only)	1
15	000-093-100	BOLT - B/H CAP SCREW - 4.0mm x 0.7 x 10mm - S/S (Diesel Fitment Only)	2
16	000-300-350	WASHER - BODY - 4.0mm x 12mm - S/S (Diesel Fitment Only)	2
17	000-223-300	NUT - NYLOC - 4.0mm x 0.7mm - S/S (Diesel Fitment Only)	2
18	370-025-600	SLEEVE - AIR INLET SUPPORT - 94.5mm x 35mm - Zinc Plated (Diesel Fitment Only)	1
19	000-914/B	CLAMP - HOSE - SIZE 56 (BLACK)	1
20	370-016-400	GASKET - FOAM BODY (SELF ADHESIVE)	1
21	370-017-400	TEMPLATE - GUARD PANEL	1

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**N.B: Does Not Suit Models with Factory Raised Air Intake (Snorkel)**

### Installation Guide

#### Fitment to:

- Right Hand Side

#### Fitting Time:

- 150min

#### Special Tools:

- 111mm hole saw
- Body saw (reciprocating)
- Step drill
- 4.0mm Drill Bit
- Sikaflex 227 adhesive sealant
- Masking tape
- Loctite 243 (thread lock)
- Touch-up paint
- Prep-wash

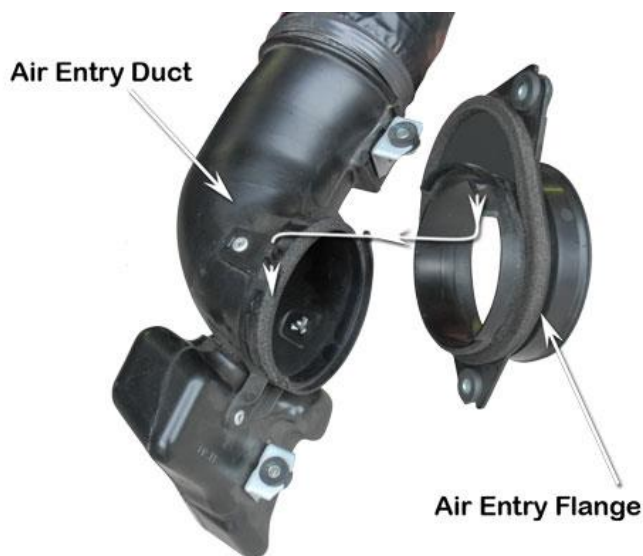
**Prior to commencing the installation, it is the installer's responsibility to verify that all components and particularly the template (Item 21) are correct.**

1

Remove the RHS mud flap, inner guard liner and the air cleaner assembly in accordance with the factory service manual.

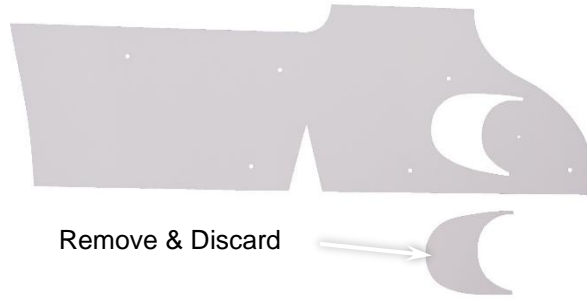
2

Remove and discard the air entry duct and air entry flange.



3

Remove and discard the perforated section of the guard panel template (item 21) as shown.



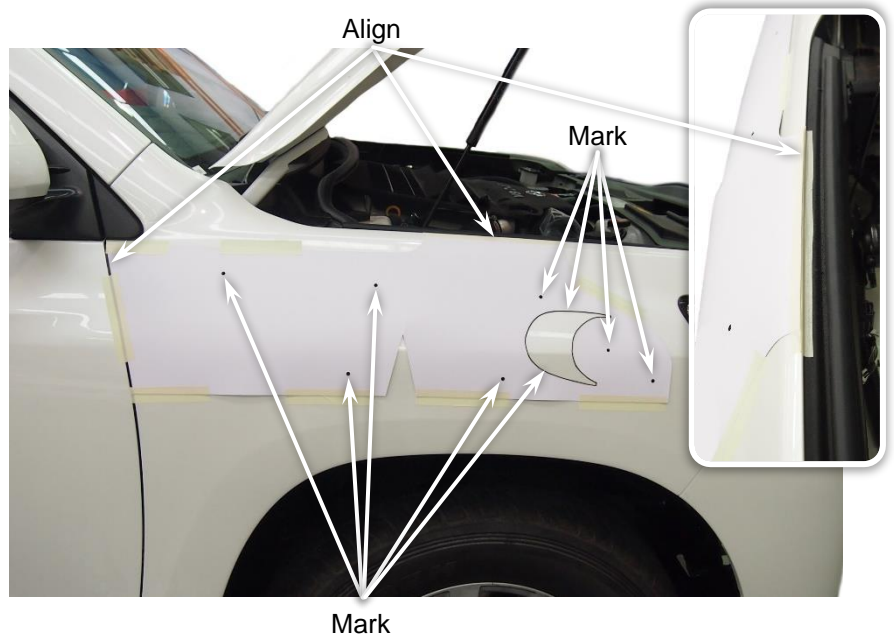
4

Align the guard panel template (Item 21) to the upper and rear edges of the right hand guard panel as shown.

Tape the template to the guard with masking tape.

Mark all hole positions and the cut out section with a felt tip pen.

Remove the template.



5

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

Use a step drill to drill the 6 mounting holes to 16mm diameter.

Use a 111mm diameter hole saw to drill the snorkel body outlet snout hole position.

Use a body saw to trim away the marked section of the guard panel as per the template cut out.

Deburr and paint holes.



**NEW ZEALAND INSTALLATIONS ONLY :**

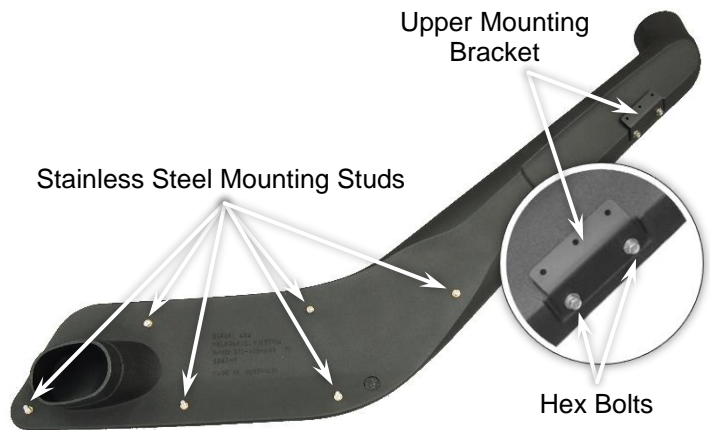
Safari have developed 2 methods of Snorkel A pillar attachment, for the conventional method please proceed with the current document alternatively please see the link below for further instructions.

[www.safari4x4.co.nz/apillarmounting](http://www.safari4x4.co.nz/apillarmounting)

6

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

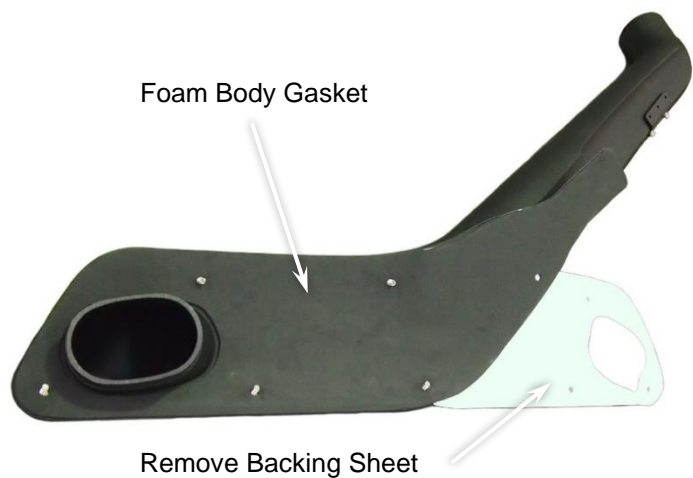
Apply Loctite 243 to each of the stainless steel mounting studs (Item 7) and install the studs finger tight into the snorkel body (item 1) mounting inserts as shown.



7

Remove the self-adhesive backing sheet from the foam body gasket (Item 20).

Align the foam body gasket (adhesive side down) to the back of the snorkel body and press down on the foam body gasket to adhere to the snorkel body (Item 1).





8

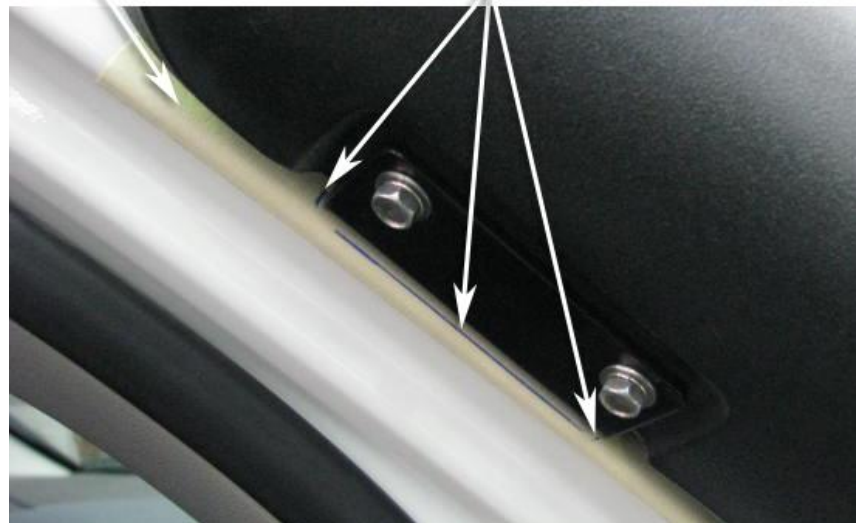
Place a strip of masking tape along the A-Pillar panel.

Carefully install the snorkel body (Item 1) to the guard panel.

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

Masking Tape

Mark

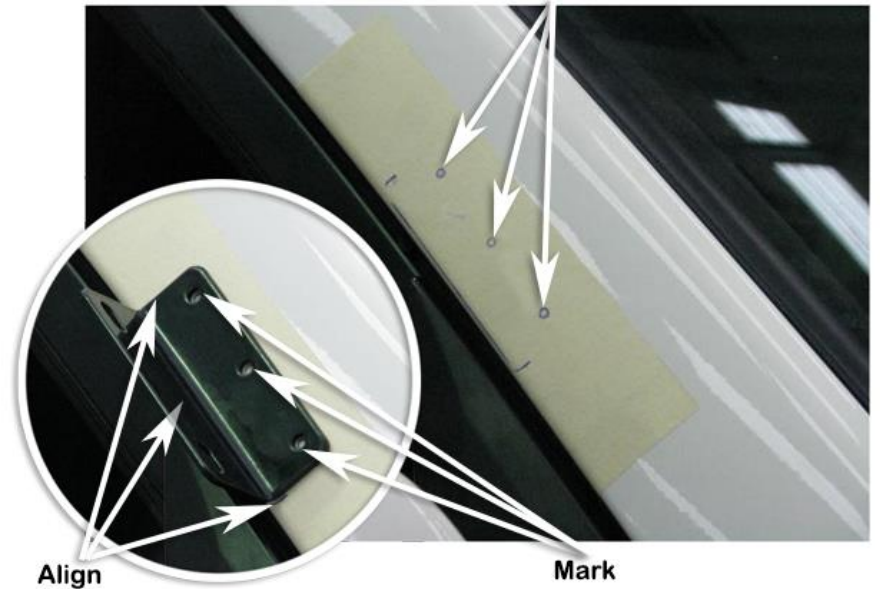


9

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

Position the upper mounting bracket onto the A-Pillar and align the bracket with the marked bracket outline. Mark the three mounting hole positions with a felt tip pen.

Marked Hole Positions



Align

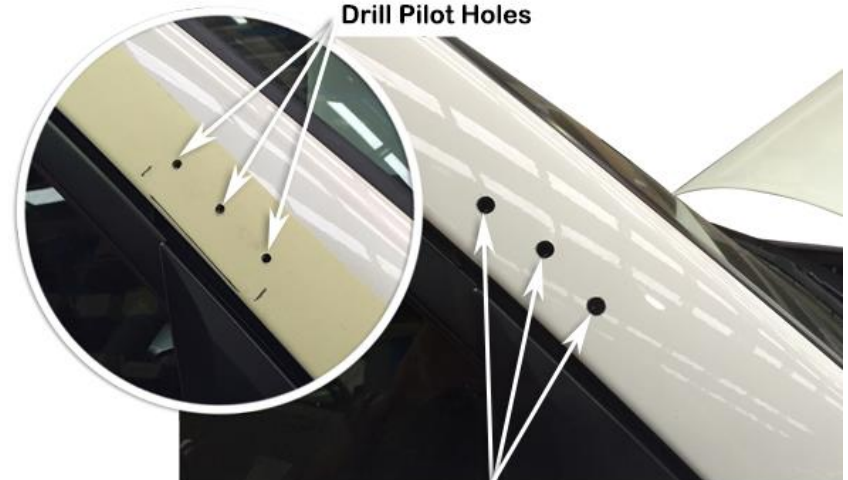
Mark

10

Drill a pilot hole for each of the three marked hole positions. Drill each pilot hole to 8mm diameter with a step drill or 8mm drill bit.

Deburr and paint holes.

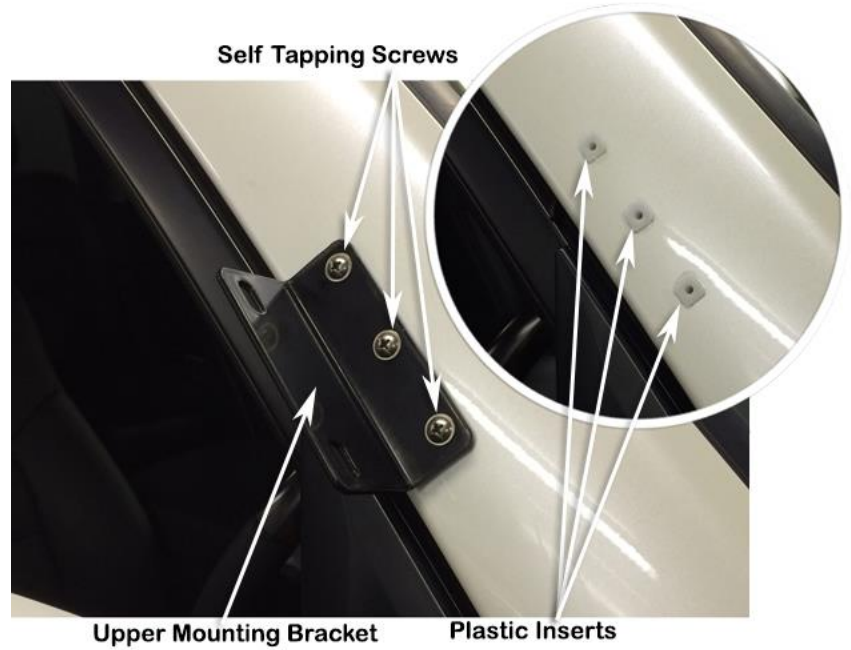
Drill Pilot Holes



Drill 8mm Dia.

Install the plastic inserts (Item 6) into the 8mm diameter holes in the A-pillar.

Secure the upper mounting bracket (Item 3) to the A-pillar with three self-tapping screws (Item 5).



Remove and discard the foam sealing tape from the air cleaner inlet snout.

**Diesel Fitment Only:**

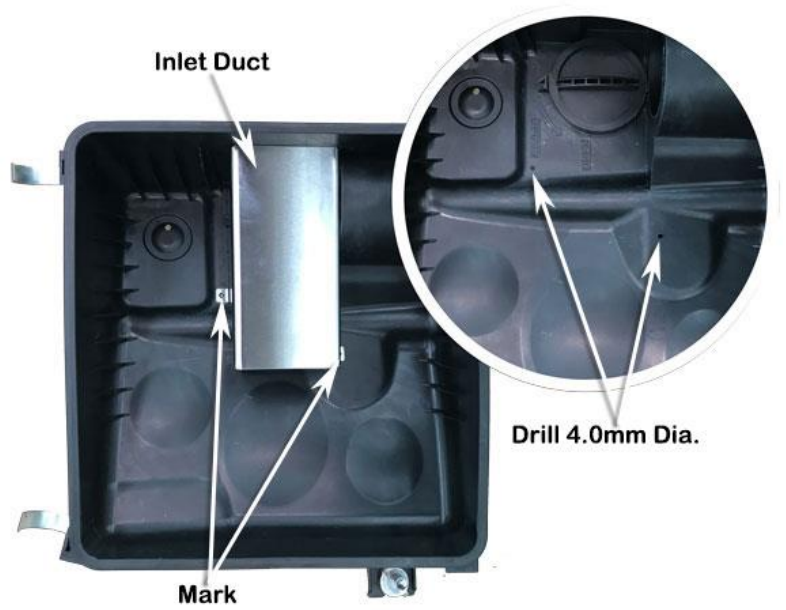
Using a small flat blade screwdriver remove and discard the pre-spinner from the air cleaner inlet.



**Diesel Fitment Only:**

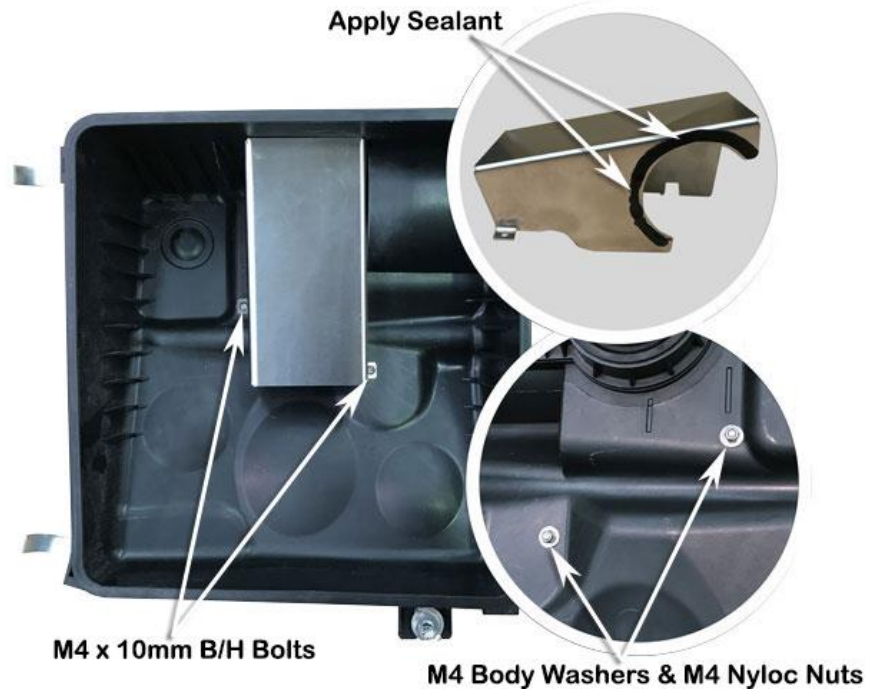
Install the air cleaner base inlet duct (item 14) and mark the two hole positions as shown.

Using a 4.0mm drill bit, drill the two marked hole positions.



**Diesel Fitment Only:**

Apply Sikaflex adhesive sealant to the flange of the air cleaner base inlet duct (as shown), install the duct and fasten into position with M4 x 10mm button head bolt (item 15), M4 body washer (item 16) and M4 nyloc nut (item 17).



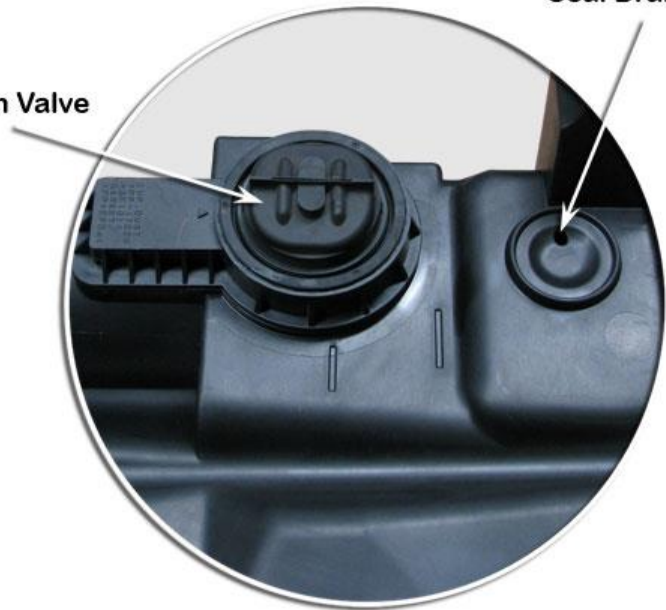
**Diesel Fitment Only:**

Apply Sikaflex adhesive sealant to the internal surface of the air cleaner inlet snout and install the air cleaner inlet support sleeve (item 18) flush with the end of the air cleaner inlet snout.

**INSTALLER OPTION**

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

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

**Installer's Option****Seal Drain Valve****Seal Drain Hole**



Install the air cleaner base into the vehicle. Fasten with the original mounting hardware.

Loosely install a 90/110mm hose clamp (item 12) over the air cleaner inlet.

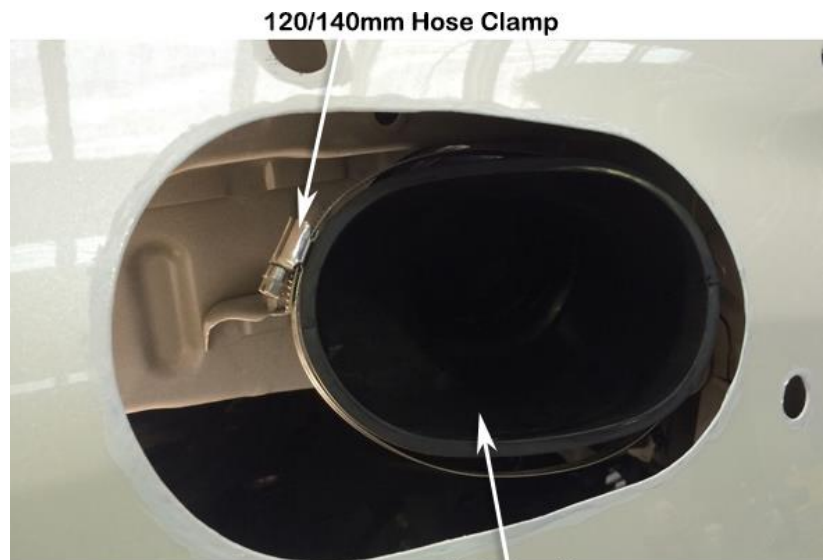
Apply lubricant to the round end of the air entry hose (item 11), install the hose through the hole in the inner guard panel and onto the air cleaner inlet snout, rotate and align the hose with the main hole in the guard panel.



Air Entry Hose

Carefully shape the 120/140mm hose clamp (item 13) to the oval shape of the air entry hose (item 11).

Loosely install the 120/140mm hose clamp (Item 13) onto the air entry hose (Item 11) and ensure that the hose clamp is orientated into the same position on the air entry hose as shown.



Air Entry Hose

Apply lubricant to the inlet of the air entry hose (item 11).

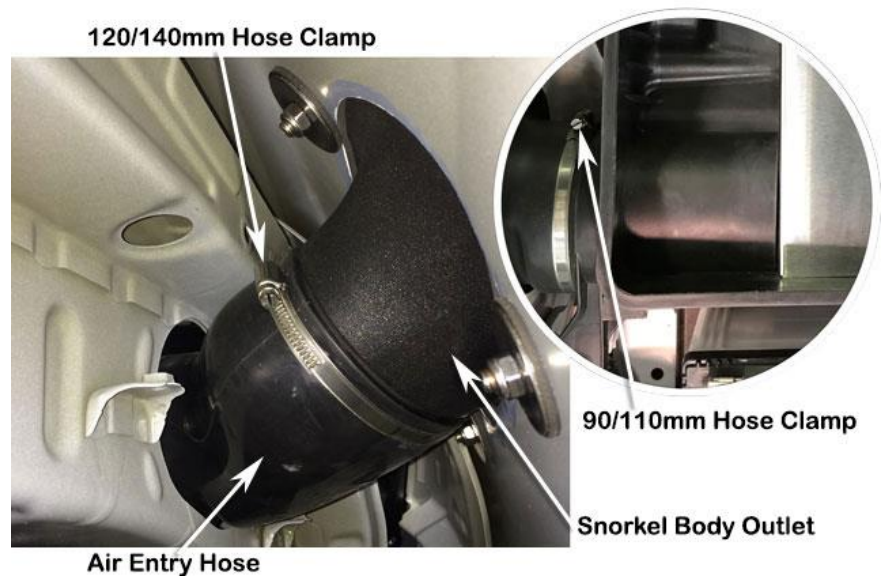
Carefully install the snorkel body (item 1) to the guard panel, guiding the snorkel body outlet snout into the air entry hose (item 11).

Align the snorkel body to the guard panel and upper mounting bracket, fasten the snorkel body to the guard panel with rubber washers (item 8), body washers (item 9) and nyloc nuts (item 10).

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



Align the air entry hose (item 11) for best fitment (Ensure the hose is correctly installed onto the air cleaner inlet), position the 90/110mm hose clamp correctly onto the air entry hose and tighten, position and orientate the 120/140mm hose clamp correctly onto the air entry hose and tighten.



21

Loosely install the black hose clamp (Item 19) to the base of the air ram assembly (Item 2).

Install the air ram assembly onto the snorkel body (Item 1).

Align the air ram assembly and tighten the black hose clamp (Item 19).



22

Install inner guard liner, mud flap, air filter element, air cleaner lid, reconnect sensor wiring and any other items that may have been removed in accordance with the factory service manual.

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