



**ARMAX**

# SS88HP

**SAFARI ARMAX SNORKEL**

**Toyota Land Cruiser 200 Series with:**

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

**4.7L V8 DOHC VVT-i Petrol (2UZ-FE Engine)**



15/06/2015

ITEM	PART NO	DESCRIPTION	QTY
1	370-133-200	BODY - SNORKEL (SS88HP)	1
2	000-135-960	4" AIR RAM ASSEMBLY	1
3	370-032-200	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	000-377	WASHER - RUBBER - 8.5 x 42 x 3mm	6
9	000-349-300	WASHER - BODY - 8.4mm x 40mm - 304 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	000-1931/B	CLAMP - HOSE - No. 64 (BLACK)	1
15	370-016-200	GASKET - FOAM BODY (Self Adhesive)	1
16	370-017-200	TEMPLATE - GUARD PANEL	1
17	000-972-050	GROMMET - BLANKING 8.0mm	3



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Toyota Land Cruiser 200 Series with:  
4.5L V8 Intercooled Twin Turbo Diesel (1VD-FTV Engine)  
4.7L V8 DOHC VVT-i Petrol (2UZ-FE Engine)

### Installation Guide

#### Fitment to:

- Right Hand Side

#### Fitting Time:

- 180min

#### Special Tools:

- 114mm hole saw
- Step drill
- Body saw (reciprocating)
- Die grinder
- Touch-up paint
- Masking tape
- Loctite 243 (thread lock)
- Files

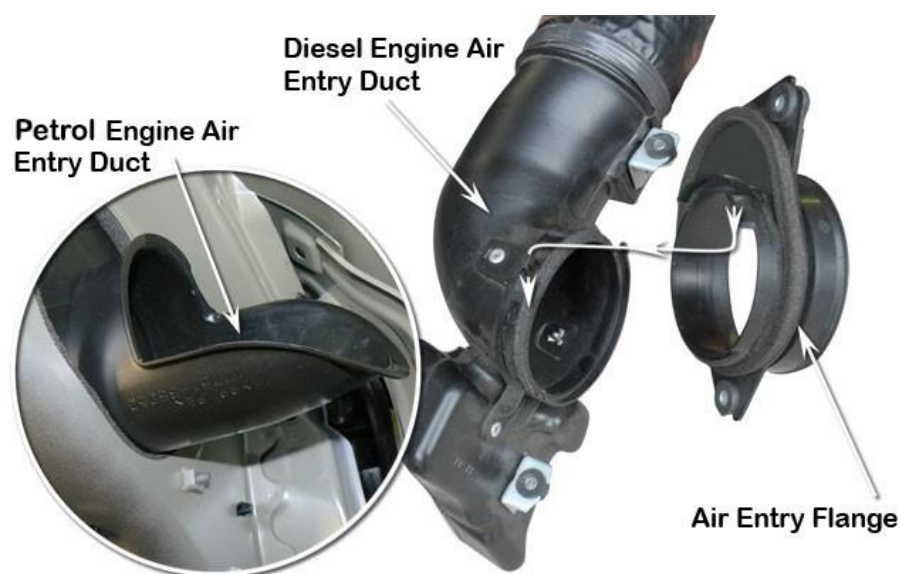
**Prior to commencing the installation, it is the installer's responsibility to verify that all components and particularly the template (Item 16) are correct.**

1

Remove the RHS mud flap, inner guard liner, guard mounted indicator (if fitted to vehicle) and the air cleaner assembly in accordance with the factory service manual.

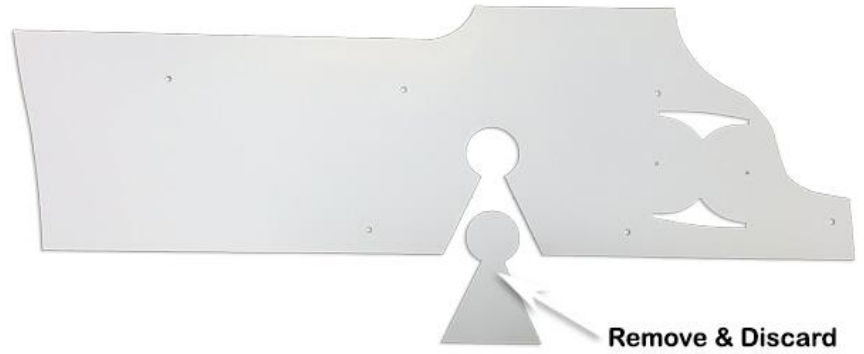
2

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



3

Remove and discard the perforated section of the guard panel template (item 16) as shown.



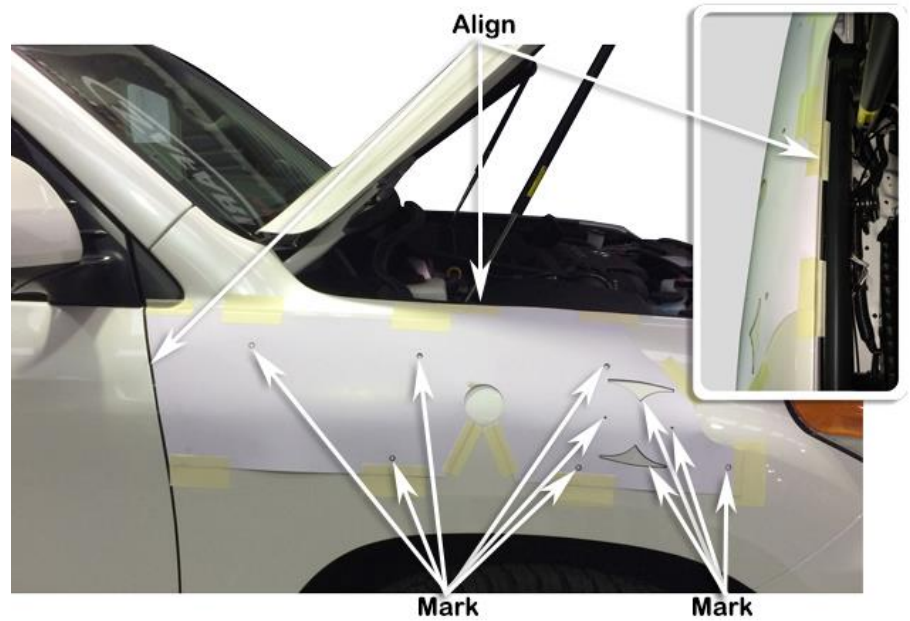
4

Align the guard panel template (Item 16) 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 upper and lower cut out sections with a felt tip pen.

Remove the template.



5

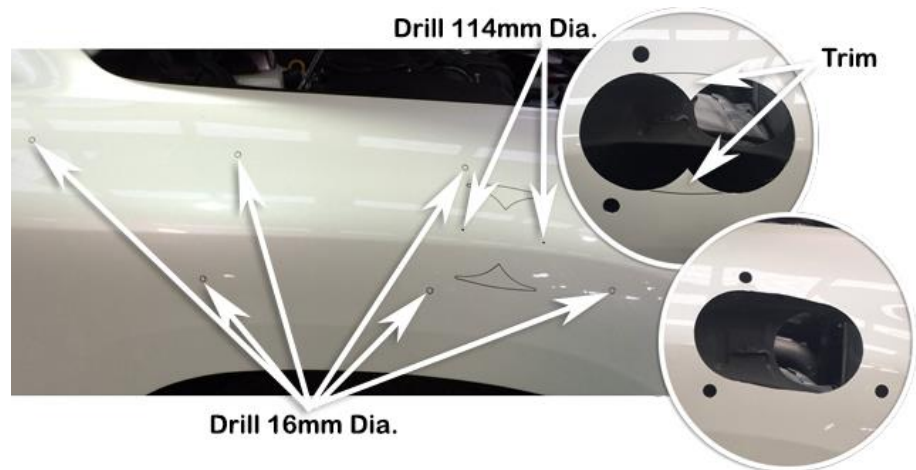
Drill a pilot hole for each of the marked positions.

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

Use a 114mm diameter hole saw to drill the snorkel body outlet snout hole positions.

Use a body saw to trim away the upper and lower sections of the guard panel between the two 114mm diameter holes as per the template cut outs.

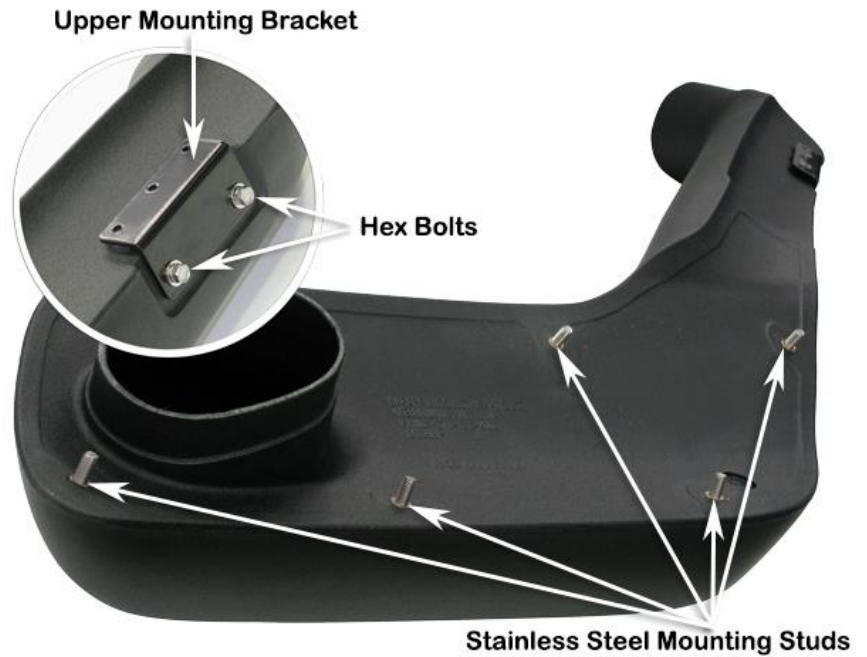
Deburr and paint holes.



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 15).

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).

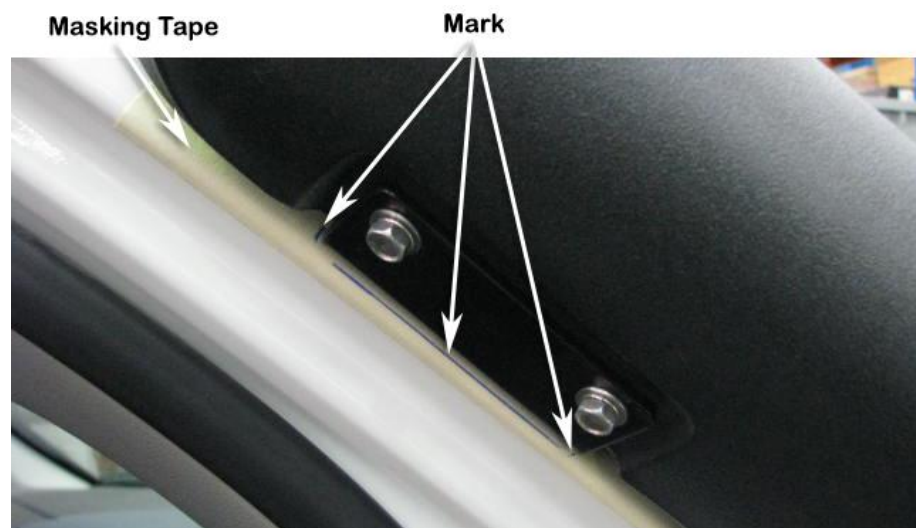


8

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

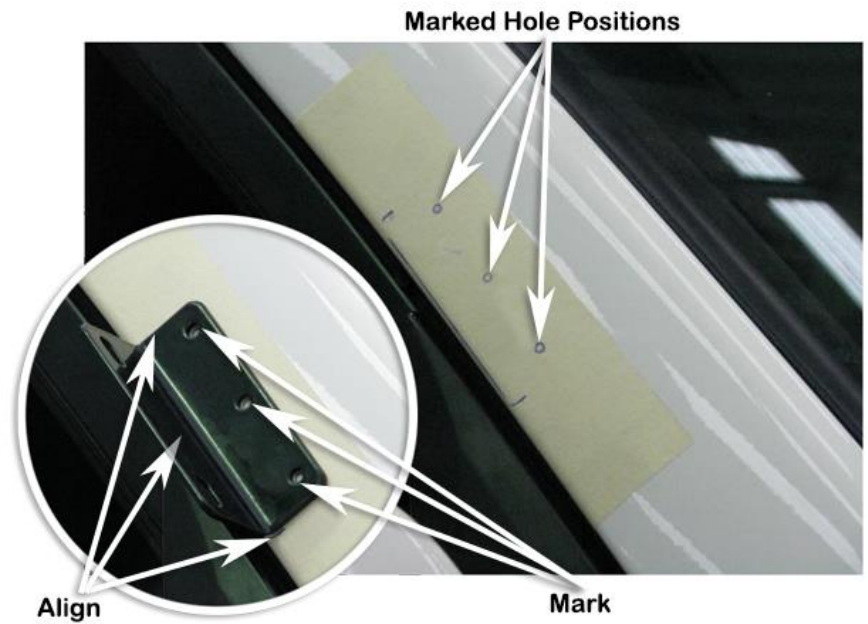
Carefully install the snorkel body (Item 1) to the guard panel.

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



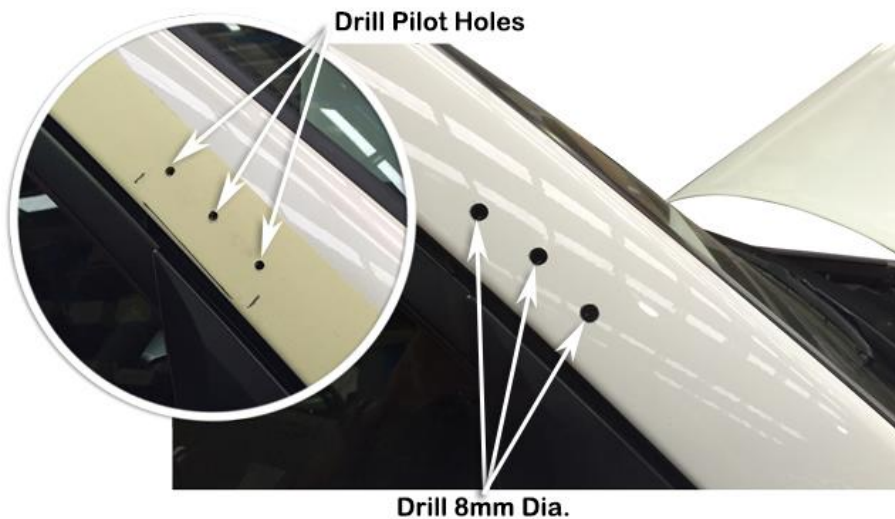
Remove the snorkel body (Item 1) from the vehicle, remove the upper mounting bracket (Item 3) from the snorkel body.

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.



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

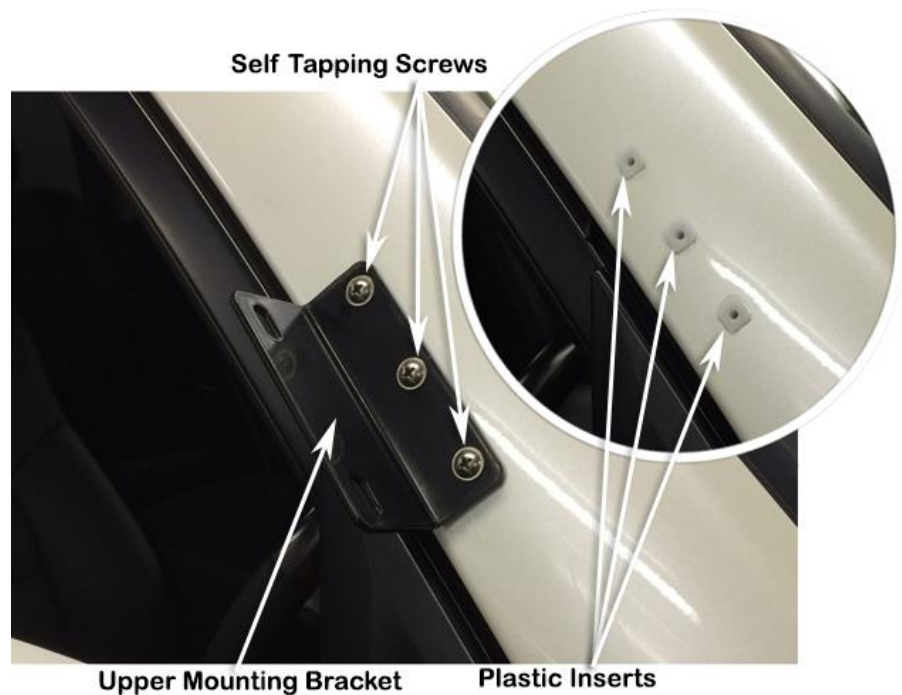
Deburr and paint holes.



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).

**NOTE:** If you are upgrading from a Safari SS87HF snorkel to a Safari SS88HP Armax snorkel you will need to install part no. 000-972-050 (item 17) in the unused holes in the 'A' pillar.



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

Depending on the year model of the vehicle either use a sharp knife to cut through the two spot welds retaining the pre-spinner into the air cleaner inlet or use a small flat blade screwdriver to un-clip the pre-spinner from the air cleaner inlet.

Remove the pre-spinner.



Remove the drain valve assembly from the air cleaner base.

The pre-spinner chamber must be completely removed from the air cleaner inlet, using the necessary tools carefully remove the chamber.

*(Hint; use a die grinder with a cut-off disc to remove approximately 15mm off the end of the internal tube and then a 83mm holesaw to remove the remaining section of the tube and chamber).*

Use a die grinder or a file to neatly remove the remaining material from the end of the chamber.

Re-install the drain valve assembly into the air cleaner base.



14

Using the body saw remove all of the vanes from the pre-spinner, use a file or die grinder to remove all of the remaining sections of vanes.

Apply sikaflex adhesive sealant to the air cleaner inlet and the pre-spinner (outer sleeve), re-install the outer sleeve into the air cleaner inlet, clean-up any excess sealant.



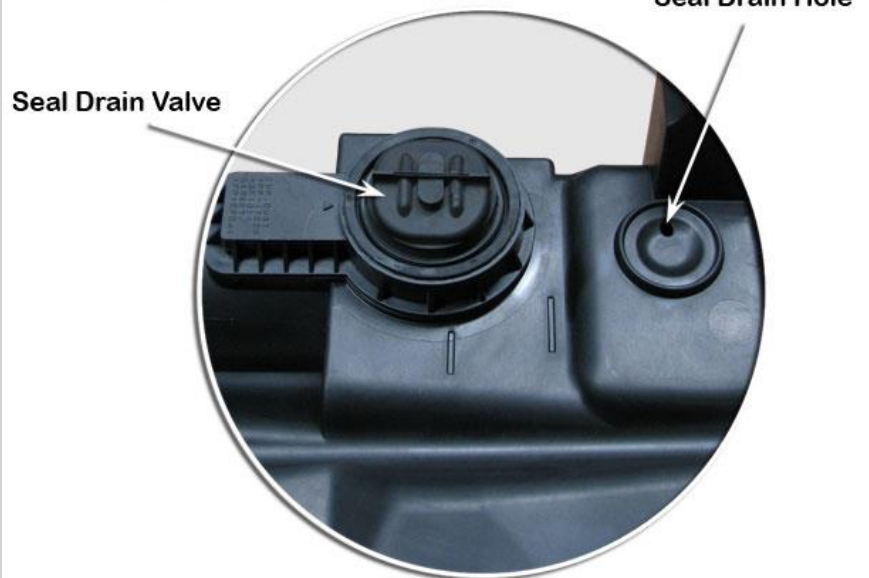
15

**Installer's Option:**

The air cleaner housing base/underside has two drain openings that may permit water to enter the air intake.

Safari advises that both drain openings should be sealed to ensure a watertight installation.

**Installer's Option**

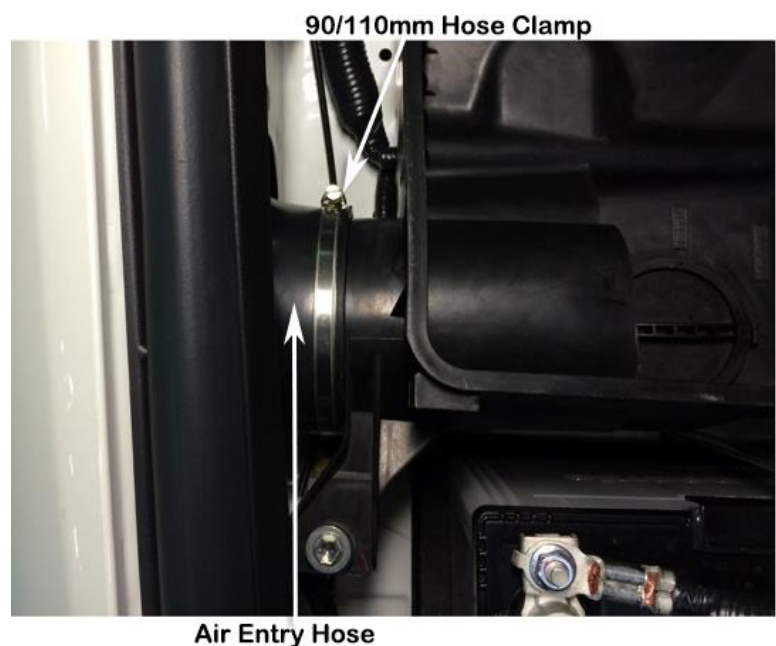


16

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

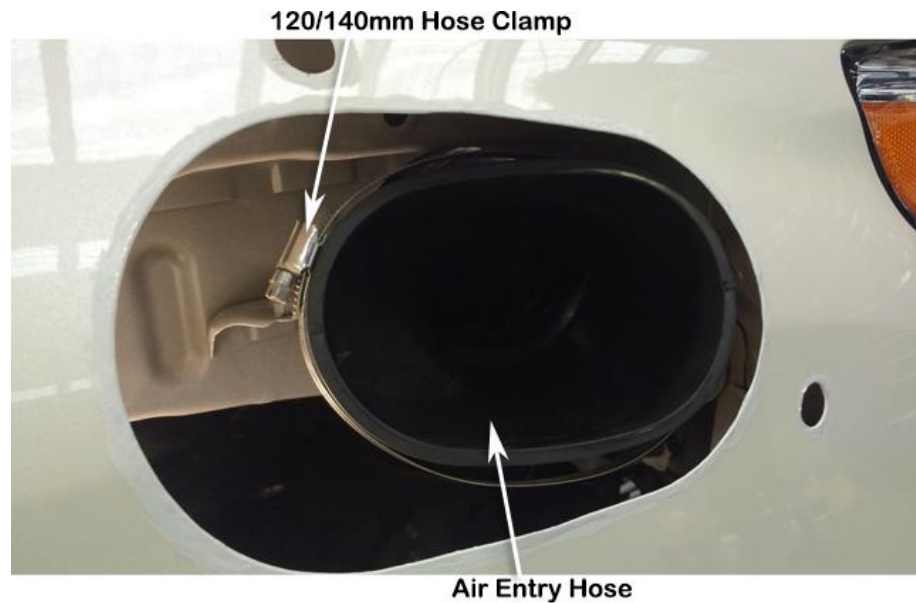
Loosely install a 90/110mm hose clamp (item 12) over the air cleaner inlet.

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, rotate and align the hose with the main hole in the guard panel.



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.



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).

Aligned 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).





19

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, positioned and orientated the 120/140mm hose clamp correctly onto the air entry hose and tighten.



20

Loosely install the black hose clamp (Item 14) 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 14).



21

Install the guard mounted indicator (if fitted to vehicle), 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.

22

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