



**4X4 ENGINEERING**

# SS87HF

## SAFARI V-SPEC SNORKEL

To Suit: Toyota LandCruiser 200 Series (Pre-Facelift)

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

4.6L & 4.7L V8 DOHC VVT-i Petrol (1UR-FE & 2UZ-FE Engines)

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



19/06/2017

ITEM	PART NO	DESCRIPTION	QTY
1	370-133-000	BODY - SNORKEL (SS87HF)	1
2	000-135-800	3 1/2" AIR RAM ASSEMBLY	1
3	370-032-000	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	370-435-000	GASKET - UPPER MOUNTING BRACKET	1
8	000-110	STUD - 8mm x 1.25 x 25mm - S/S	5
9	000-311-300	WASHER - BODY - 8mm x 30mm - S/S	5
10	000-376	WASHER - RUBBER - 8mm x 33mm x 3mm	5
11	000-205-300	NUT - NYLOC - 8mm x 1.25mm - S/S	5
12	370-967-000	BRACKET - GUARD SUPPORT	1
13	370-025-000	SLEEVE - LOWER INSERT (Rubber)	1
14	370-024-000	HOSE - AIR ENTRY	1
15	000-910	CLAMP - HOSE - 90/110mm - S/S	2
16	370-044-000B	DUCT - AIR CLEANER BASE INLET - S/S (Diesel Fitment Only)	1
17	000-093-100	BOLT - B/H CAP SCREW - 4.0mm x 0.7 x 10mm - S/S (Diesel Fitment Only)	2
18	000-300-350	WASHER - BODY - 4.0mm x 12mm - S/S (Diesel Fitment Only)	2
19	000-223-300	NUT - NYLOC - 4.0mm x 0.7mm - S/S (Diesel Fitment Only)	2
20	370-025-600	SLEEVE - AIR INLET SUPPORT - 94.5mm x 35mm - Zinc Plated (Diesel Fitment Only)	1
21	000-914/B	CLAMP - HOSE - No. 56 (BLACK)	1
22	370-016-000	GASKET - FOAM BODY (Self Adhesive)	1
23	370-017-000	TEMPLATE - GUARD PANEL	1



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### Installation Guide

#### Fitment to:

- Right Hand Side

#### Fitting Time:

- 150min

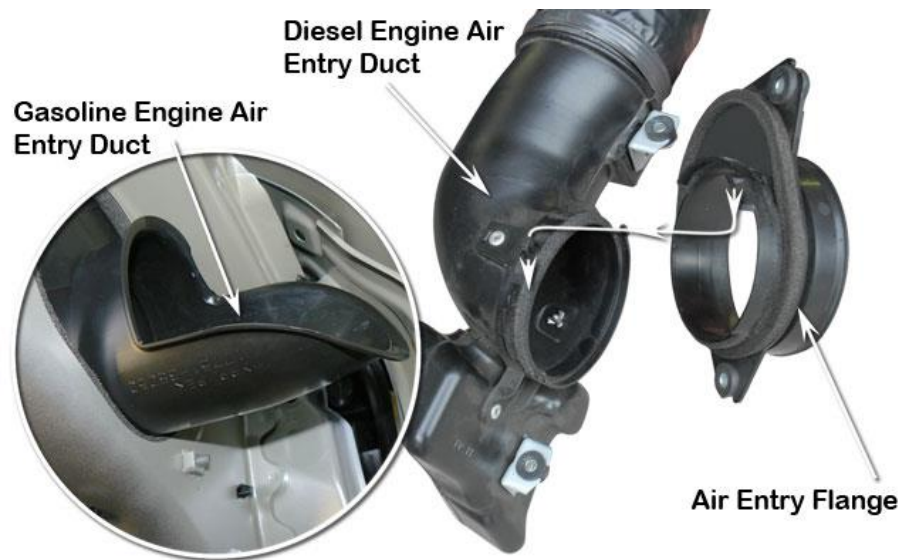
#### Special Tools:

- 114mm Hole saw
- Step drill
- Air body saw
- Touch-up paint
- Masking tape
- Loctite 243 (thread lock)
- Sikaflex 227 Adhesive Sealant

**Prior to commencing the installation, it is the installer's responsibility to verify that all components and particularly the template (Item 23) are correct.**

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

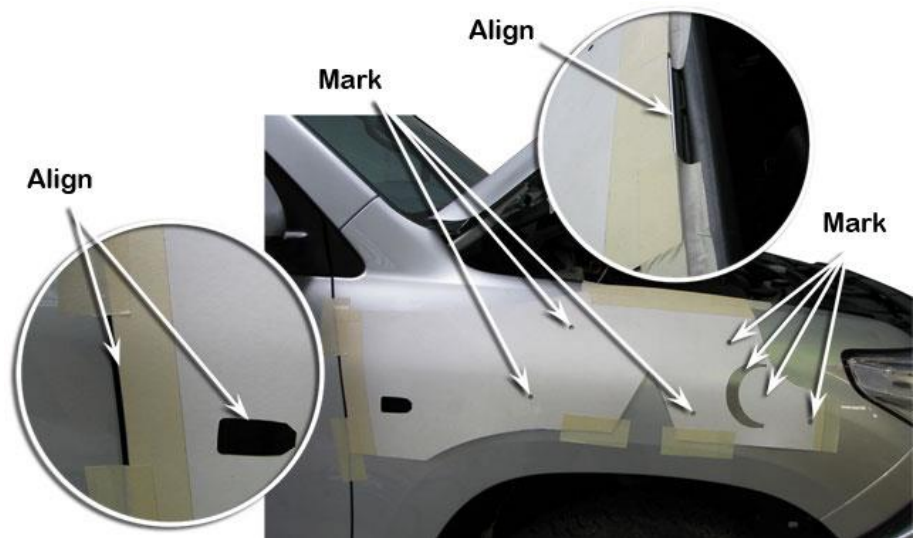
- 2 Remove and discard the air entry duct and air entry flange.



3

Align the guard panel template (Item 23) to the upper and rear edges of the right hand guard panel. Check alignment with the guard mounted indicator hole (if fitted to vehicle). Tape the template to the guard with masking tape.

Mark the snorkel outlet hole position and profile and the 5 snorkel mounting hole positions with a felt tip pen.



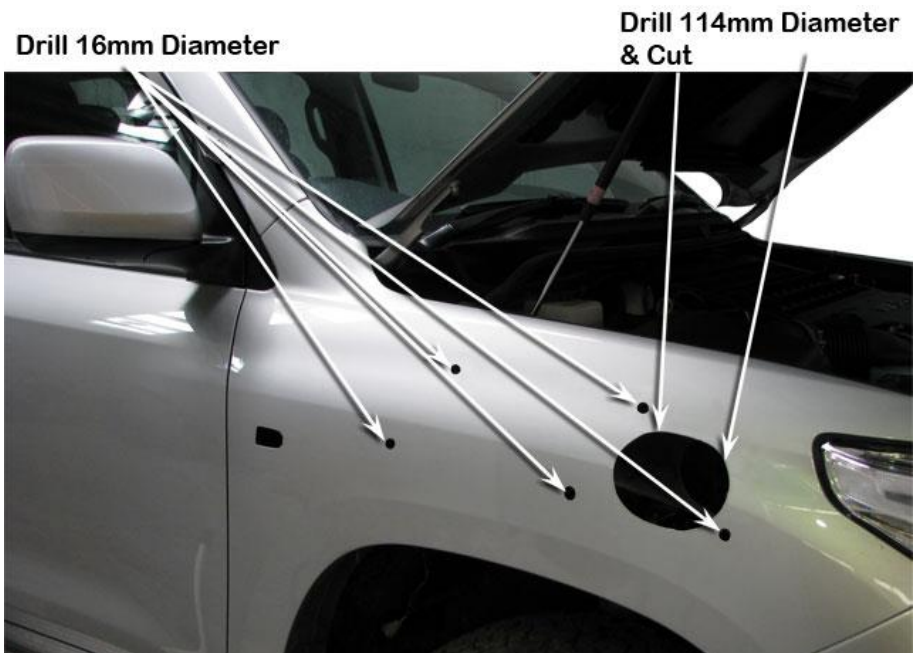
4

Drill a pilot hole for each of the marked positions.

Use the step-drill to drill the 5 mounting holes to 16mm diameter.

Drill the snorkel outlet hole with the 114mm hole saw.

Use the air body saw to enlarge the snorkel outlet hole to the marked profile. Deburr and paint holes.



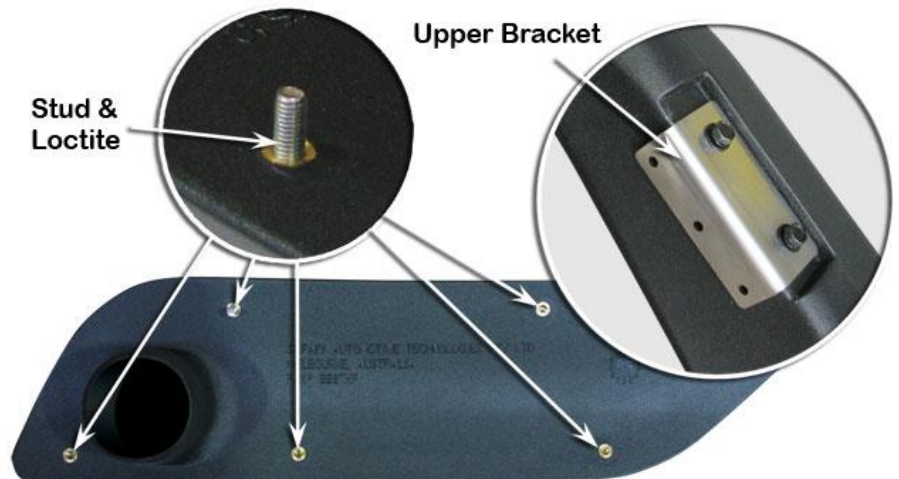
## NEW ZEALAND INSTALLATIONS ONLY :

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)

5

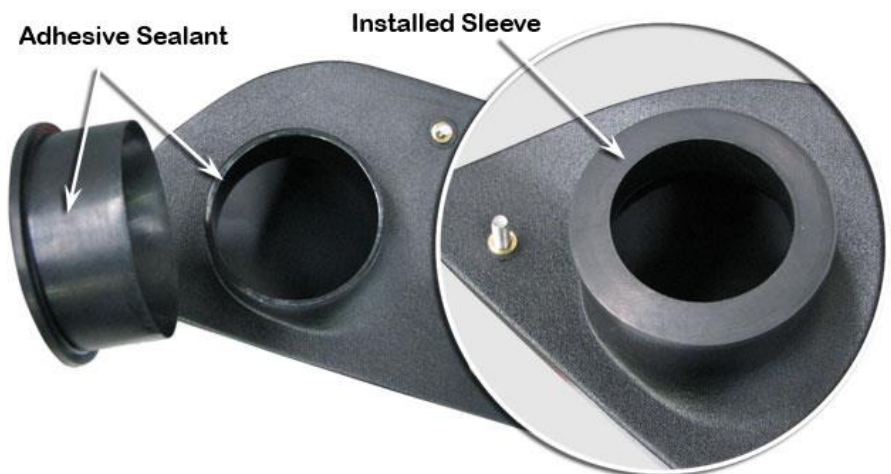
Install the upper mounting bracket (Item 3) to the snorkel body (Item 1) with hex bolts (Item 4). Apply Loctite 243 to each of the snorkel mounting studs (Item 8) and install finger tight into the snorkel body mounting inserts.



6

Apply a generous coating of adhesive sealant to the inside surface of the snorkel outlet snout and the outer surface of the rubber sleeve (Item 13).

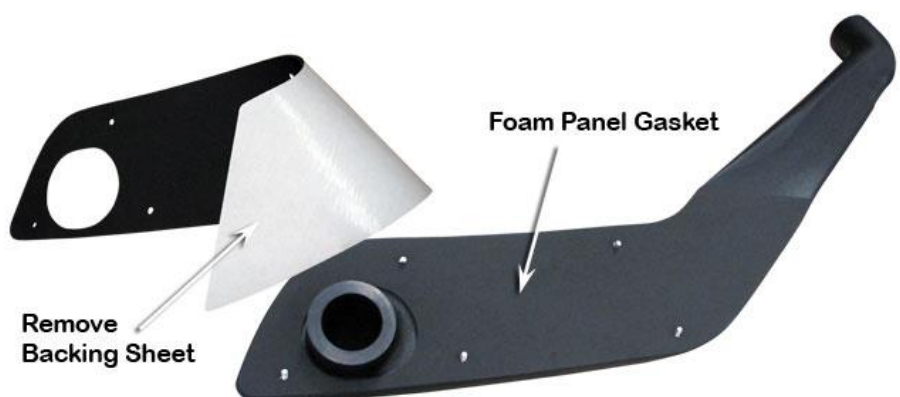
Install the rubber sleeve (Item 13) into the snorkel body outlet snout.



7

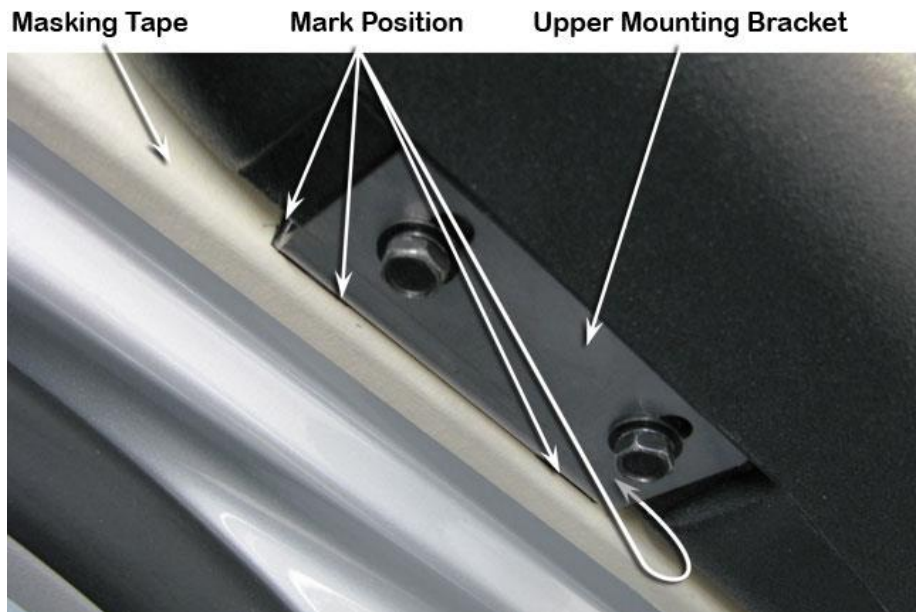
Remove the self-adhesive backing sheet from the foam body gasket (Item 22).

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

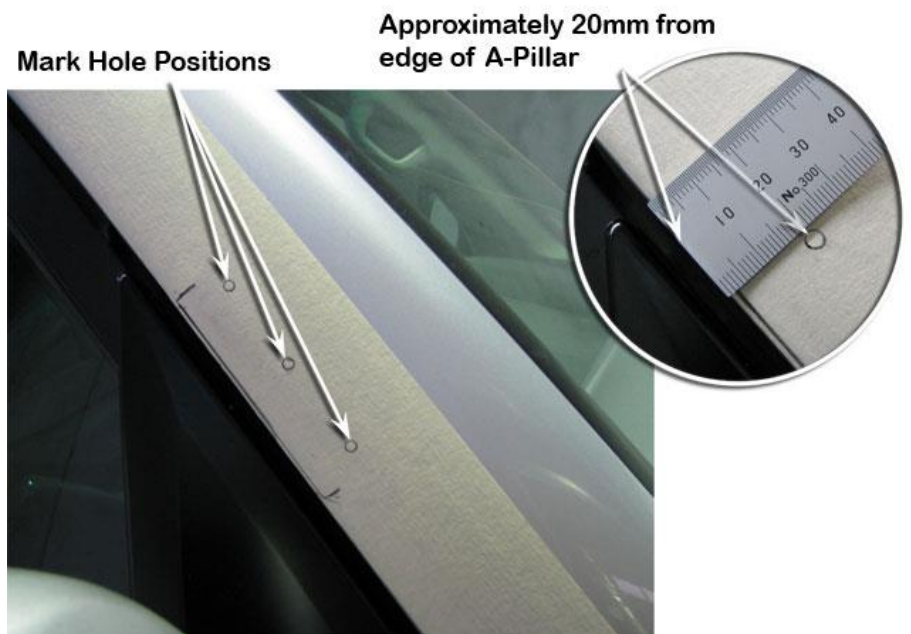
Place a strip of masking tape along the A-Pillar and install the snorkel body (Item 1) to the guard panel. When the snorkel body is correctly positioned, mark the outline of the upper mounting bracket (Item 3) onto the masking tape as shown.



9

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

Position the upper mounting bracket onto the previously marked bracket outline on the A-Pillar and mark the 3 mounting hole positions with a felt tip pen.

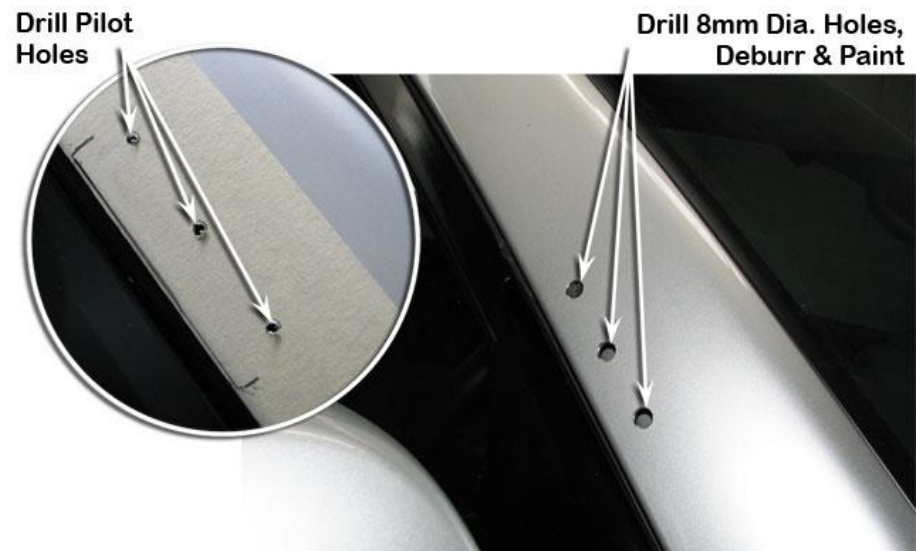


10

Drill a pilot hole for each of the 3 marked hole positions on the A-Pillar.

Drill each hole to 8mm diameter.

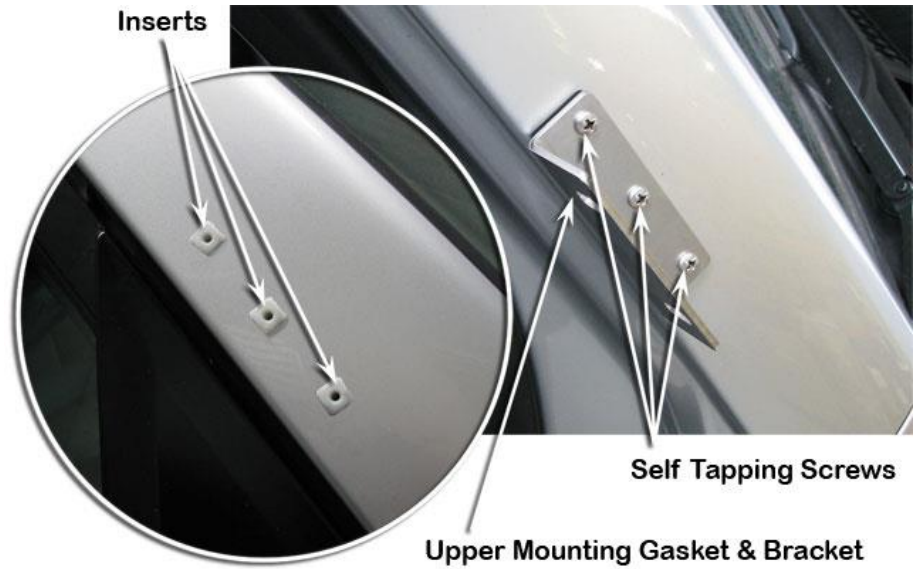
Deburr and paint holes.



11

Install the 3 plastic inserts (Item 6) into the upper mounting bracket holes in the A-Pillar.

Install the upper mounting bracket gasket (Item 7), the upper mounting bracket (Item 3) and secure with 3 self tapping screws (Item 5).



12

**DIESEL FITMENT ONLY:**

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

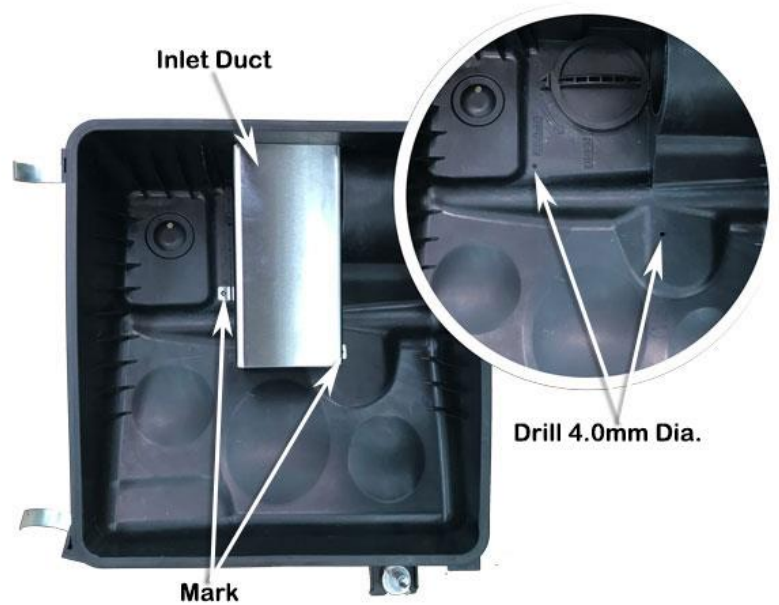
Using a small flat blade screwdriver remove and discard the pre-spinner from the air cleaner inlet.



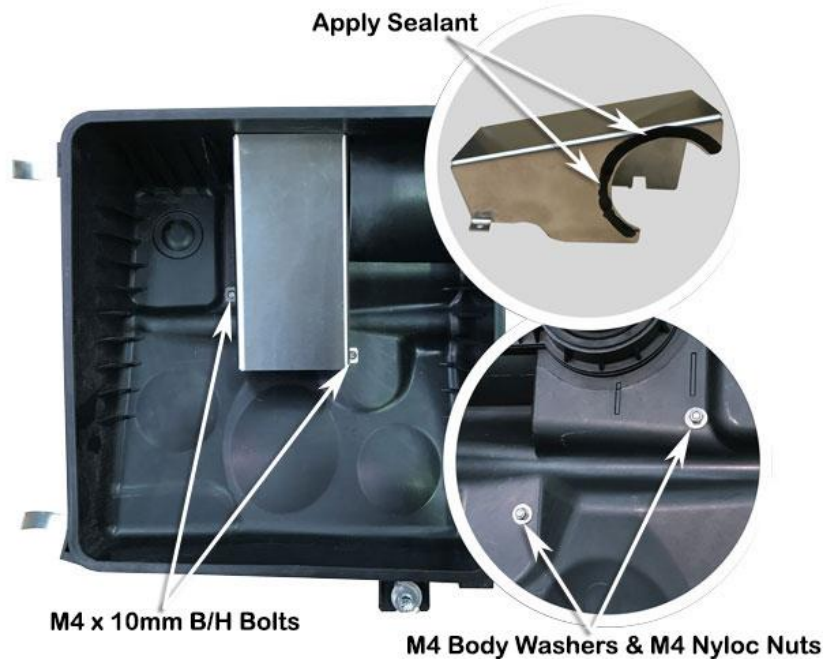
**DIESEL FITMENT ONLY:**

Install the air cleaner base inlet duct (item 16) 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 17), M4 body washer (item 18) and M4 nyloc nut (item 19).

**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 20) flush with the end of the air cleaner inlet snout.



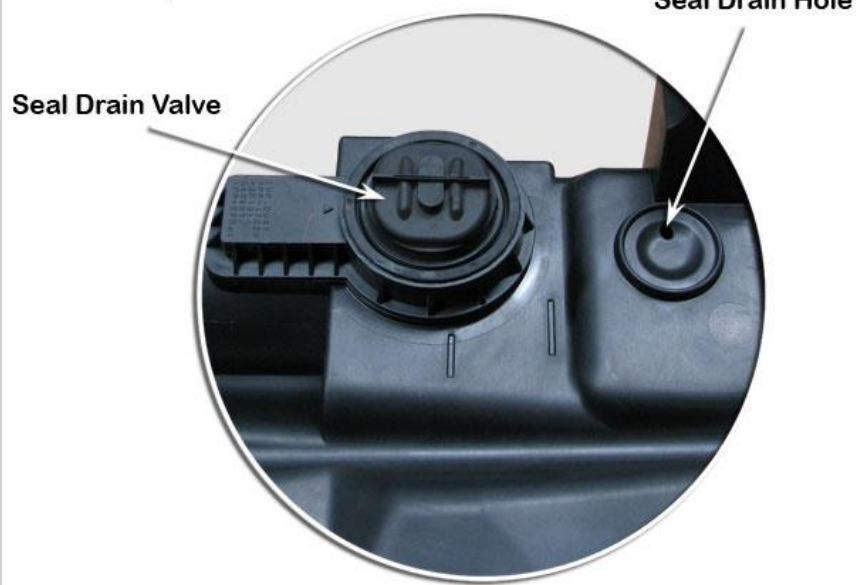
16

**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



17

Remove the sealing foam strip from the air entry snout (Petrol Fitment Only).

Measure in 18mm from the end of the air entry snout on the air cleaner base and mark around the entire circumference as shown.

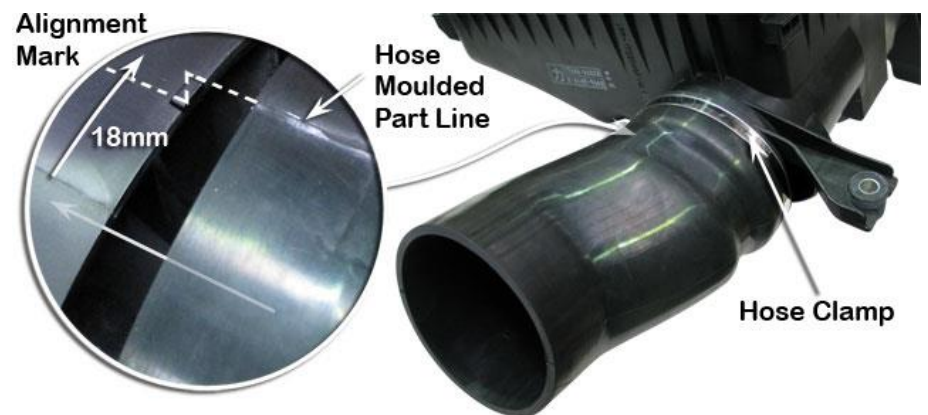
Measure up 18mm - 19mm from the air cleaner inlet snout moulding part-line and mark as shown.



18

Install the air entry hose (Item 14) onto the air cleaner inlet snout and align the moulded part line of the air entry hose to the marked position on the air cleaner inlet snout as shown.

Ensure that the air entry hose is installed square onto the air cleaner inlet snout and lined up to the marked circumference. When aligned correctly,

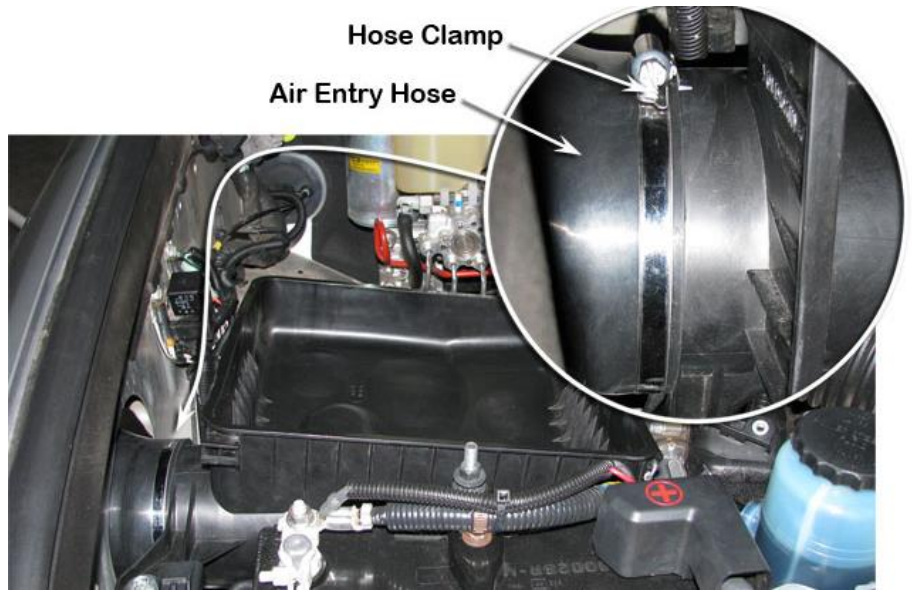




secure with a 90/110mm stainless steel hose clamp (Item 15).

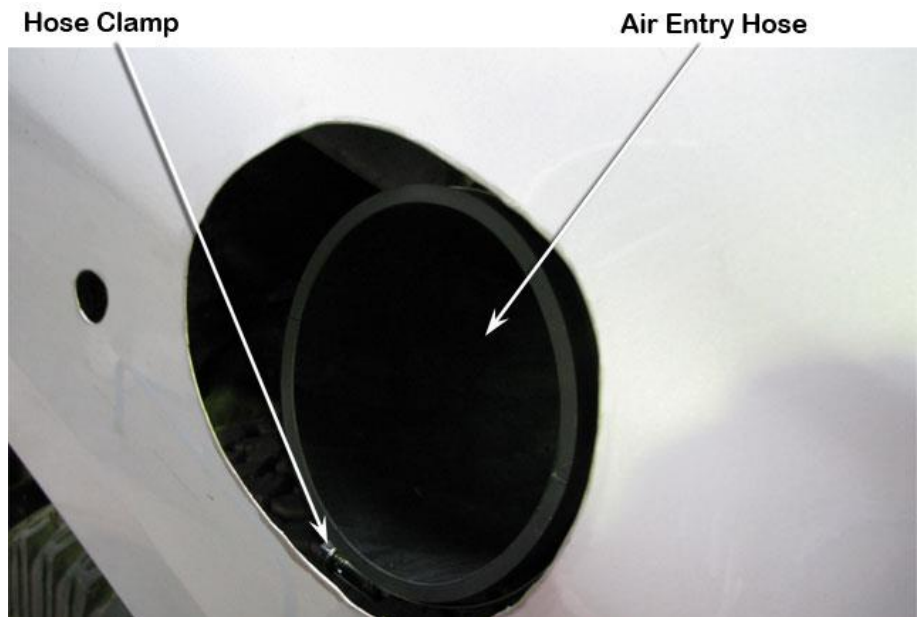
19

Install the air cleaner base assembly back into the vehicle. Fasten with the original mounting hardware. Install the air cleaner element and air cleaner lid. Reconnect the air mass sensor plug.



20

Loosely install a 90/110mm stainless steel hose clamp (Item 15) onto the snorkel snout end of the air entry hose (Item 14) and ensure that the clamping bolt of the hose clamp is orientated for accessibility.



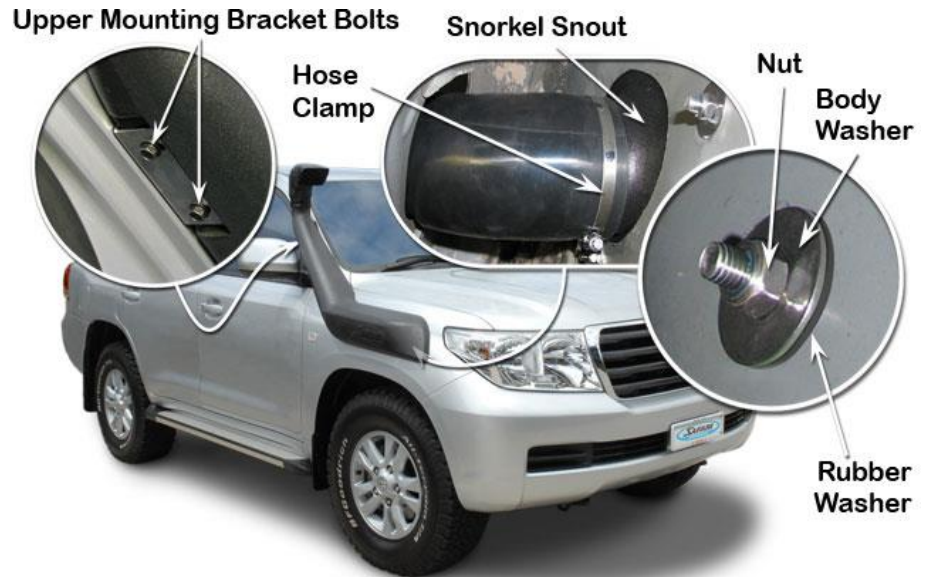
Install the snorkel body (Item 1) to the guard panel. When aligned correctly to the guard panel and the upper mounting bracket, install the rubber washers (Item 10) and body washers (Item 9). Secure the snorkel body to the guard panel with nyloc nuts (Item 11) in accordance with the following:

**DIESEL ENGINE** on all but the lower rear mounting stud.

**PETROL ENGINE** on all mounting studs.

Secure the snorkel body (Item 1) to the upper mounting bracket (item 3) with 2 hex bolts (Item 4).

Secure the air entry hose to the snorkel body outlet snout with the 90/110mm hose clamp (Item 15).

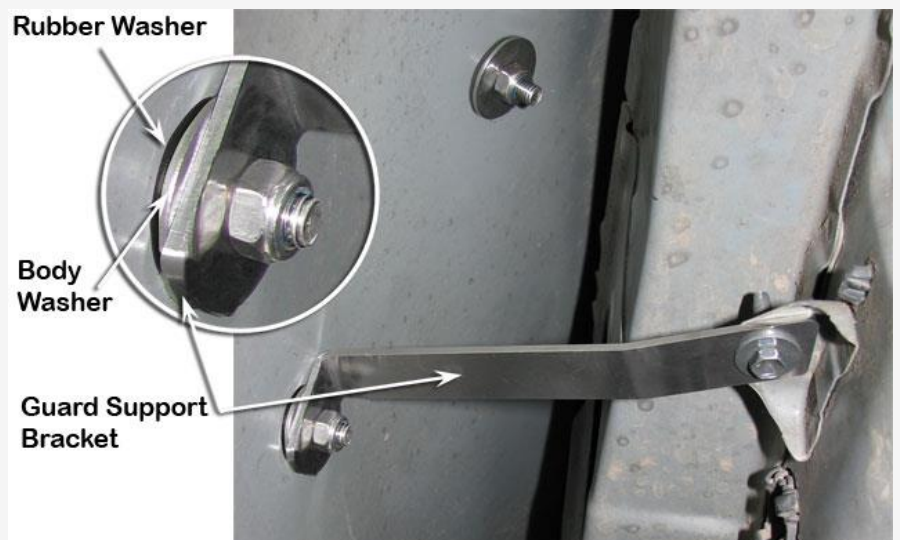


### DIESEL ENGINE

Install a rubber washer (Item 10), then a body washer (Item 9) to the lower rear mounting stud and then install the guard support bracket (Item 12) and retain loosely with a nyloc nut as shown (Item 11).

Apply Loctite to the threads of a standard M6 air entry duct retaining bolt (removed previously). Align the guard support bracket to the standard rear air entry duct mounting bracket (as shown) and retain loosely with the M6 bolt.

Tighten the nyloc nut (Item



11) at the guard panel end of the guard support bracket and then the M6 bolt at the engine bay end of the guard support bracket (Item 12).

23

Loosely install the black hose clamp (Item 21) to the base of the air ram (Item 2) and install the air ram to the snorkel body (Item 1). Align the air ram and tighten the hose clamp (Item 21).



24

Install the guard mounted indicator, inner guard liner, mud flap (and any other items that may have been removed) in accordance with the factory service manual.

25

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