



4X4 ENGINEERING

SS123HF

TOYOTA HILUX (Oct 2015 onwards)
2.8L Turbo Diesel D-4D (1GD-FTV Engine)



01/12/2015

Parts List

ITEM	PART NO.	DESCRIPTION	QTY
1	322-133-000	BODY - SNORKEL (SS123HF)	1
2	000-135-800	3 ½" AIR RAM ASSEMBLY	1
3	322-032-000	BRACKET - UPPER MOUNTING	1
4	000-002-100	BOLT - HEX - 6mm x 1.0 x 14mm (SEMS)	2
5	000-951-300	SCREW - S/T - 4.2mm x 16mm - S/S	3
6	000-960	INSERT - PLASTIC	3
7	000-110	STUD - 8mm x 1.25 x 25mm - S/S	5
8	000-311-300	WASHER - BODY - 8mm x 30mm - S/S	5
9	000-205-300	NUT - NYLOC - 8mm x 1.25mm - S/S	5
10	322-024-000	HOSE - AIR ENTRY	1
11	000-910	CLAMP - HOSE - 90/110mm	2
12	000-914/B	CLAMP - HOSE - SIZE 56 (BLACK)	1
13	322-017-000	TEMPLATE - GUARD PANEL	1



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Installation Guide

Fitment to:

- Right Hand Side

Fitting Time:

- 120min

Special Tools:

- 111mm Hole Saw
- Body Saw (reciprocating)
- Step Drill
- Loctite 243 (thread lock)
- Masking Tape
- Touch-up paint

Prior to commencing the installation, it is the installer's responsibility to verify that all components and particularly the template (Item 13) are correct.

1 Remove the following in accordance with the factory service manual:

- Air Cleaner Assembly
- RHS Mud Flap
- RHS Guard Liner

2

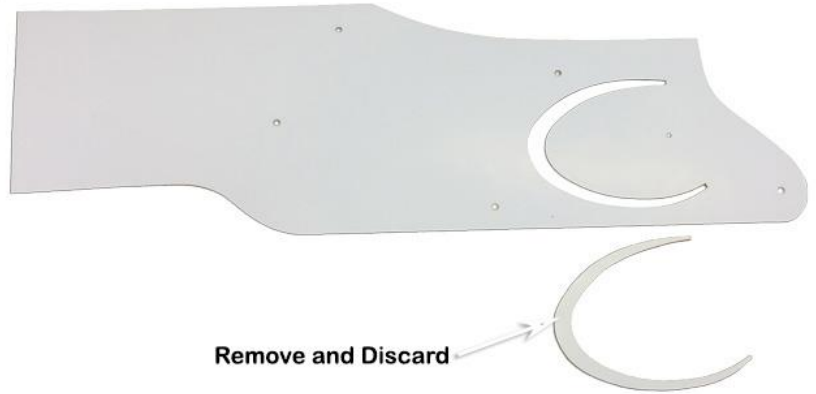
Remove and discard

- Air intake ducting
- Air Deflector



3

Remove and discard the perforated section from the guard panel template (item 13) as shown.



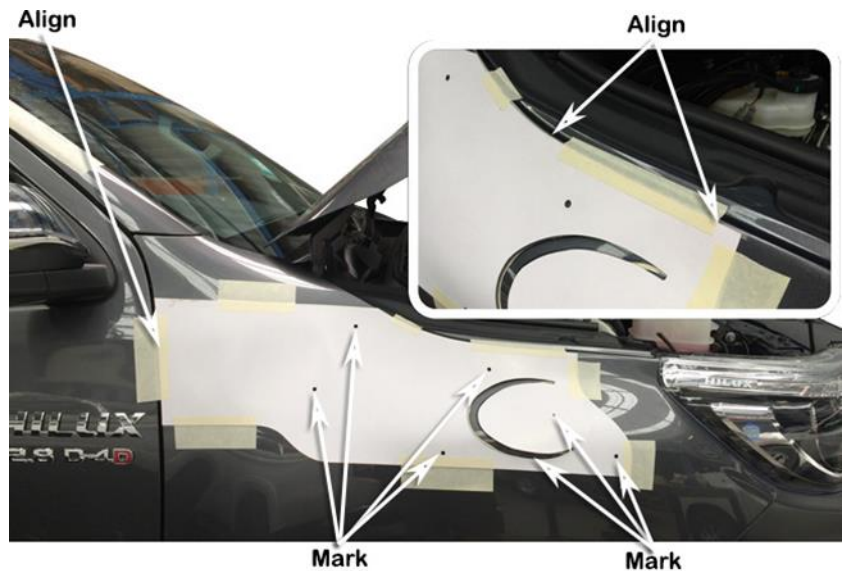
4

Align the guard panel template (Item 13) with the upper and rear edges of the RHS guard panel as shown.

Tape the template to the guard panel with masking tape.

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

Remove the template.



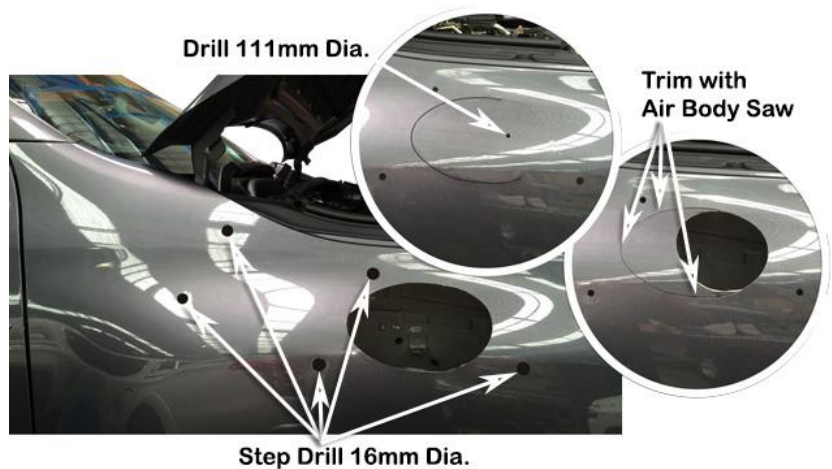
5

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

Use a 111mm diameter hole saw to drill the snorkel body outlet hole position, use the body saw to cut away the marked section of the guard panel.

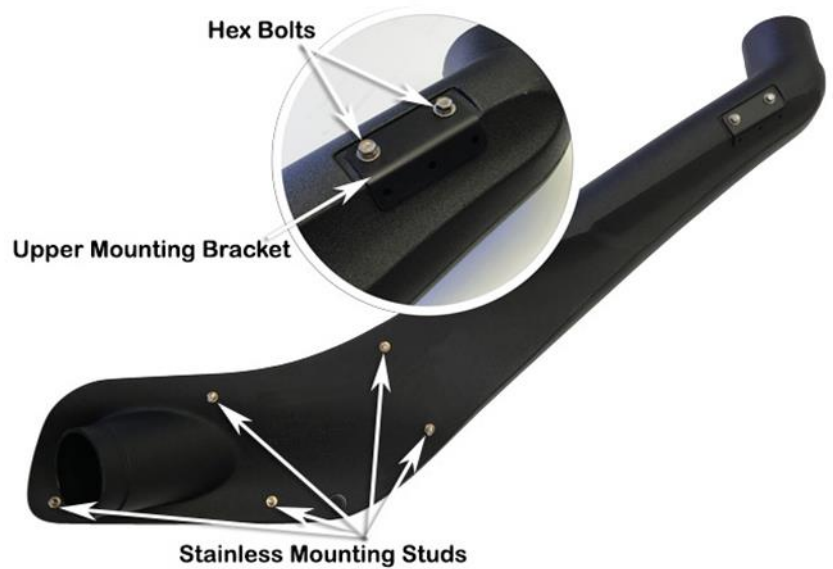
Use a step drill to drill the five mounting holes to 16mm diameter.

Deburr and paint all holes.



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

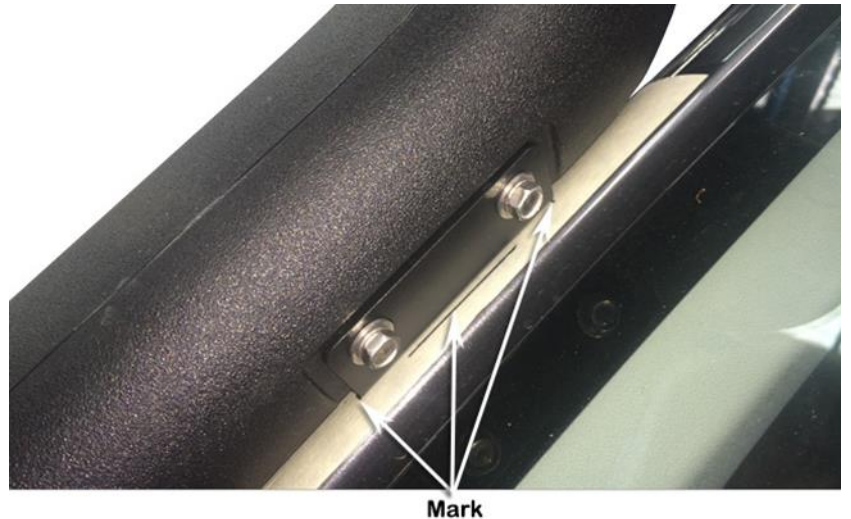
Apply Loctite 243 to each of the stainless steel mounting studs (Item 7) and install the studs finger tight into the snorkel body (Item 1) mounting inserts as shown.



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

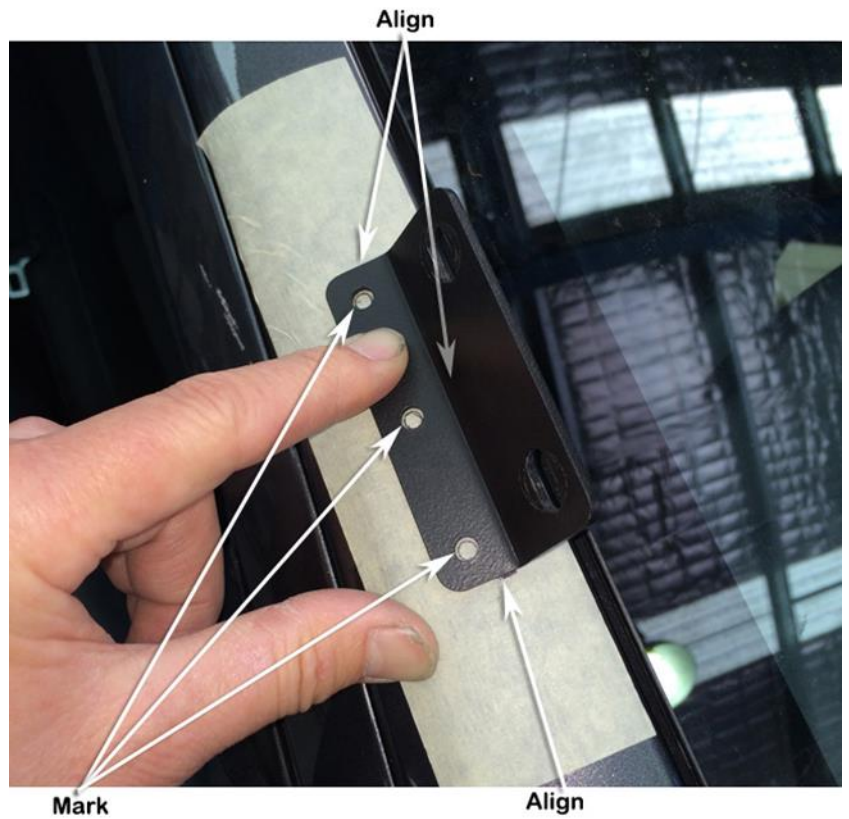
Carefully install the snorkel body (Item 1) to the guard panel.

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



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.



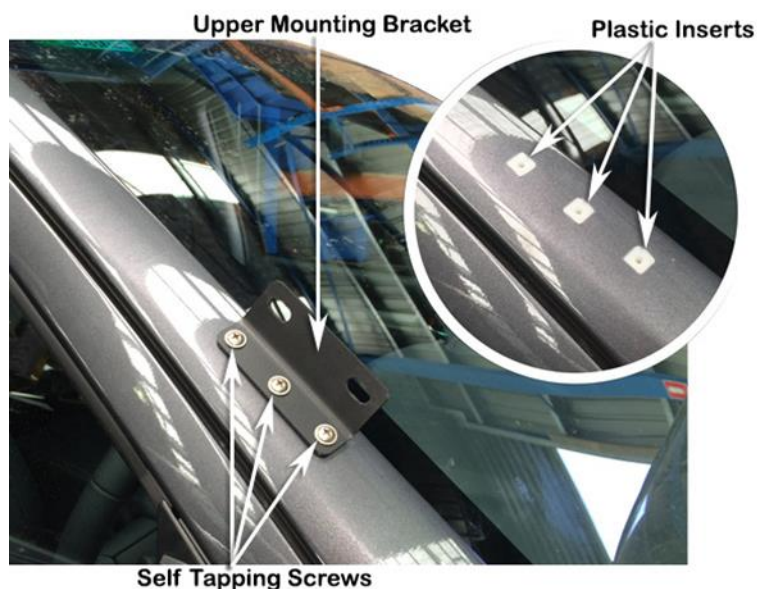
Drill a pilot hole at each of the three marked hole positions. Drill each hole position to 8mm diameter with a step drill or 8mm drill bit.

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).



Carefully install the snorkel body (Item 1) to the guard panel, align the snorkel body to guard panel and upper mounting bracket.

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

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



Scribe a line around the pre-spinner flange as shown.

Carefully remove the pre-spinner assembly, using the body saw cut along the scribed line removing the outer section of the pre-spinner flange.

Neaten the cut with a file or grinder.

Re-install the pre-spinner and file/grind off the two locating tabs so the tabs are flush with the air cleaner inlet.



13

INSTALLER OPTION :

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

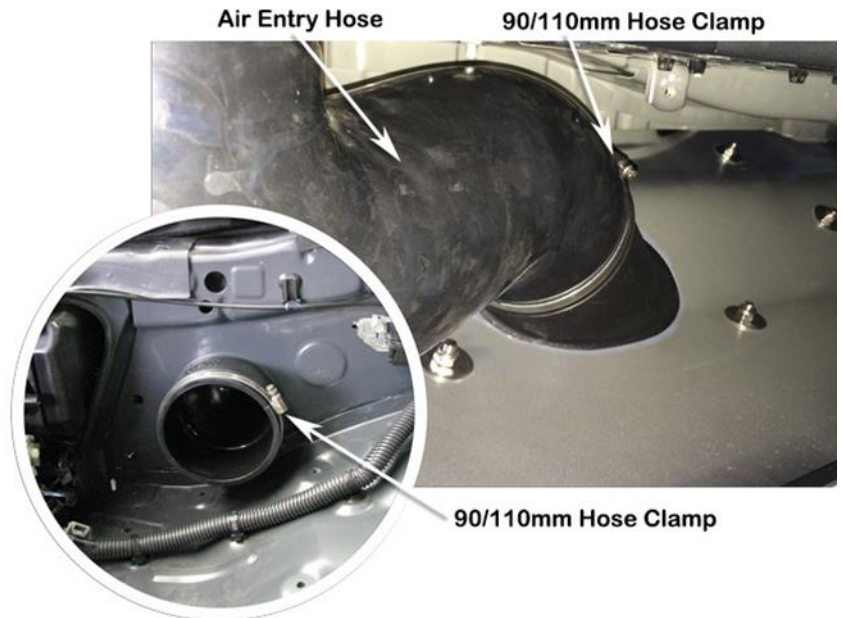
Safari advises that the drain valve and drain hole should be sealed to ensure a watertight installation.



14

Install the air entry hose (item 10) through the hole in the inner guard panel, loosely install a 90/110mm hose clamp (item 11) onto either end of the air entry hose.

Install the air entry hose onto the snorkel body outlet.



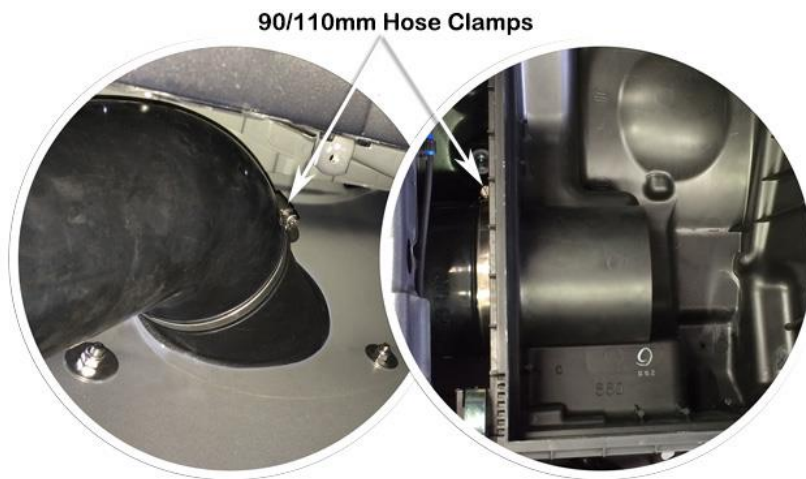
15

Re-install the air cleaner housing, guiding the air cleaner inlet into the air entry hose, fasten the air cleaner housing using standard mounting bolts.



16

Align the air entry hose for best fitment (*Ensure the air entry hose is installed hard up against the shoulder of the snorkel body outlet*), correctly position the 90/110mm hose clamps at either end of the air entry hose and tighten the hose clamps.



17

Install the black hose clamp (Item 12) loosely 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 12).



18

Install the guard liner, mud flap, air cleaner element, air cleaner lid, reconnect sensor wiring and any other items that may have been removed during the snorkel installation process.

19

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