



SS89HP

SAFARI ARMAX SNORKEL
 Toyota Land Cruiser 200 Series (MY16 Face Lift)
 1VD-FTV 4.5Litre-V8 Intercooled Twin Turbo Diesel
 (Does not suit GX model)



01/12/2016

Parts List

ITEM	PART NO.	DESCRIPTION	QTY
1	370-133-600	BODY - SNORKEL (SS89HP)	1
2	000-135-950	4" AIR RAM ASSEMBLY	1
3	370-032-600	BRACKET - UPPER MOUNTING	1
4	000-002-100	BOLT - HEX - 6mm x 1.0 x 14mm (SEMS)	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 - 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 - SIZE 64 (BLACK)	1
15	370-016-600	GASKET - FOAM BODY (SELF ADHESIVE)	1
16	370-017-600	TEMPLATE - GUARD PANEL	1



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Installation Guide

Fitment to:

- Right Hand Side

Fitting Time:

- 180min

Special Tools:

- Body saw (reciprocating)
- Step drill
- Die Grinder
- Files
- Loctite 243 (thread lock)
- Touch-up paint
- Prep-wash
- Masking tape

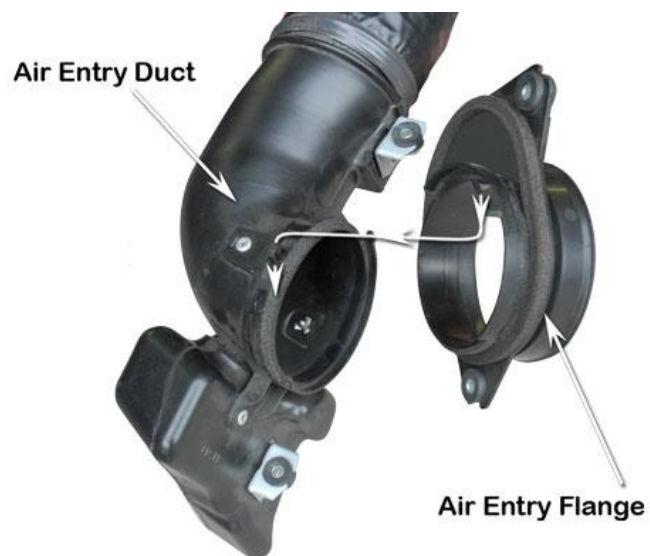
Prior to commencing the installation, it is the installer's responsibility to verify that all components and particularly the template (Item 16) are correct.

1

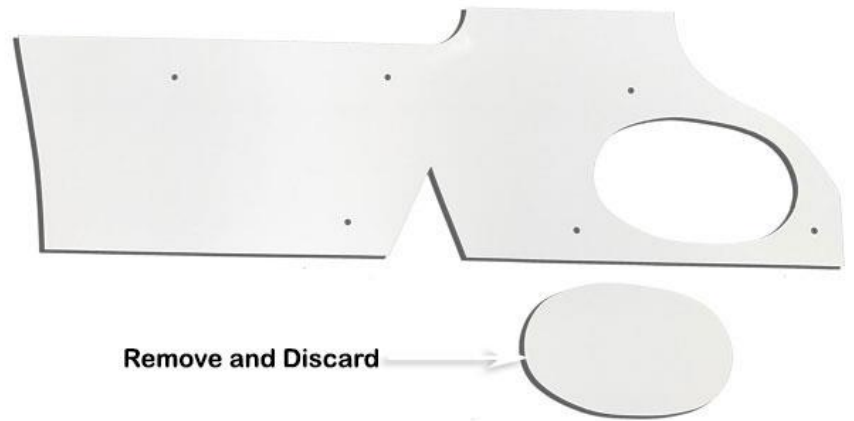
Remove the RHS mud flap, inner guard liner and the air cleaner assembly in accordance with the factory service manual.

2

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



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

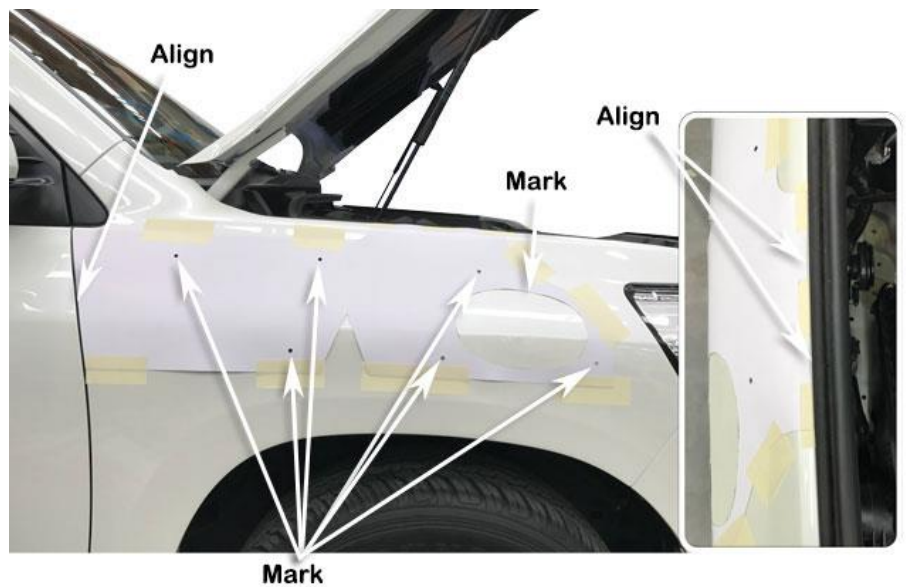


Align the guard panel template (Item 16) to the upper and rear edges of the right hand guard panel as shown.

Tape the template to the guard with masking tape.

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

Remove the template.



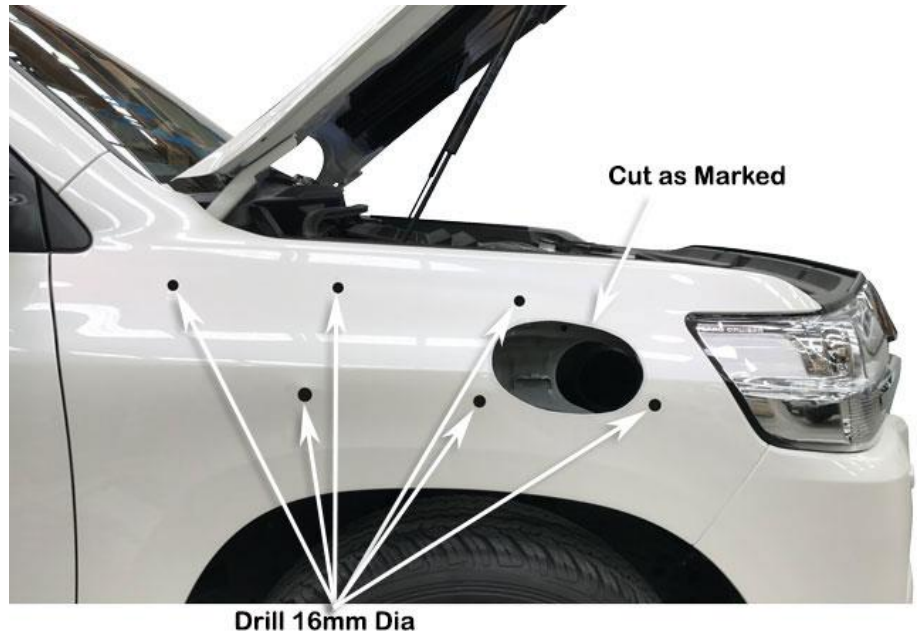
5

Drill a pilot hole for each of the marked positions.

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

Drill 2 or 3, 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 guard panel as marked from the template cut-out in step 4.

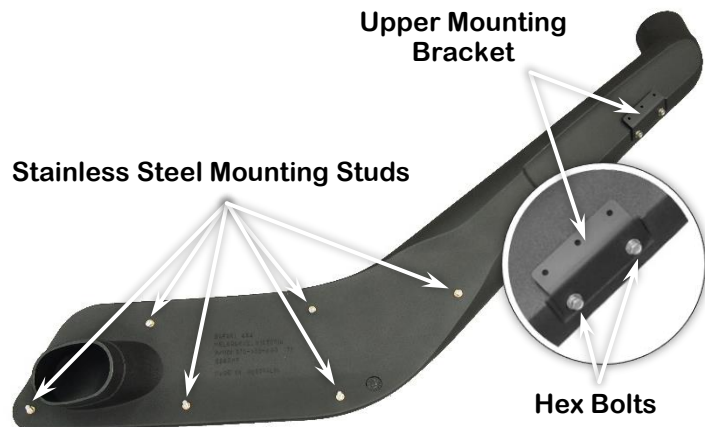
Deburr and paint holes.



6

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

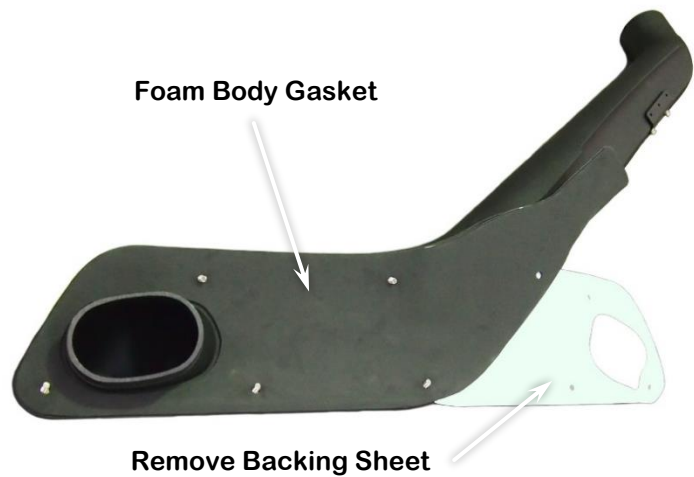
Apply Loctite 243 to each of the stainless steel mounting studs (Item 7) and install finger tight into the snorkel body (item 1) mounting inserts as shown.



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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).



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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.



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

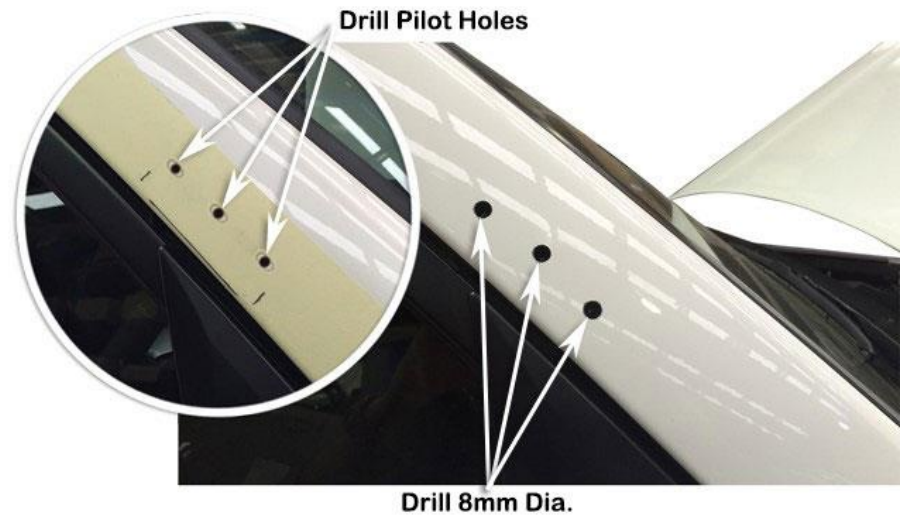
Position the upper mounting bracket onto the A-Pillar and align the bracket with the marked bracket outline. Mark the three mounting hole positions with a felt tip pen.



Drill a pilot hole for each of the three marked hole positions in the centre of each marked slot.

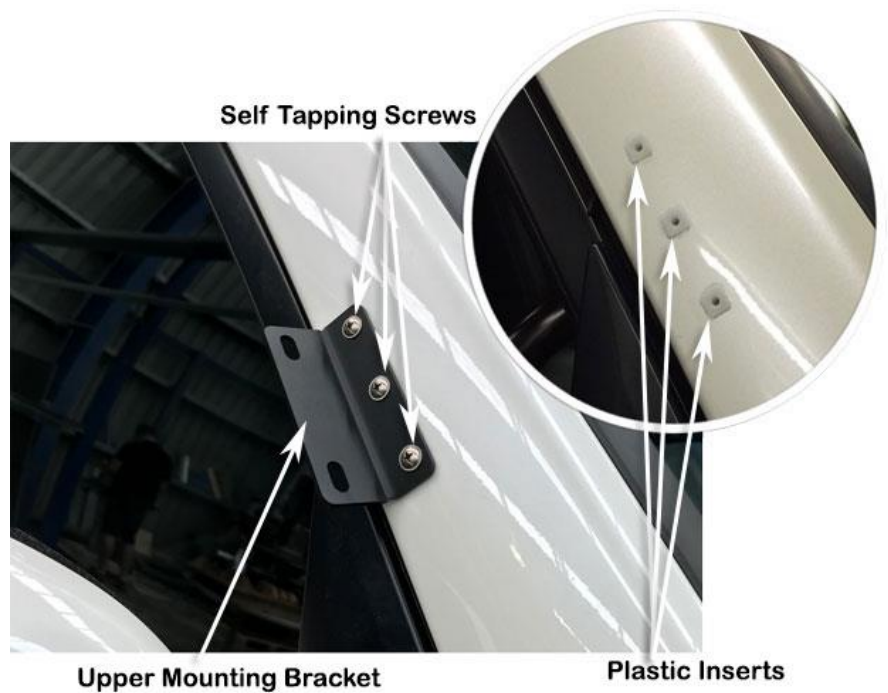
Drill each pilot hole to 8mm diameter with a step drill or 8mm drill bit.

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).



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

Using a small flat blade screwdriver un-clip the pre-spinner from the air cleaner inlet.

Remove the pre-spinner.



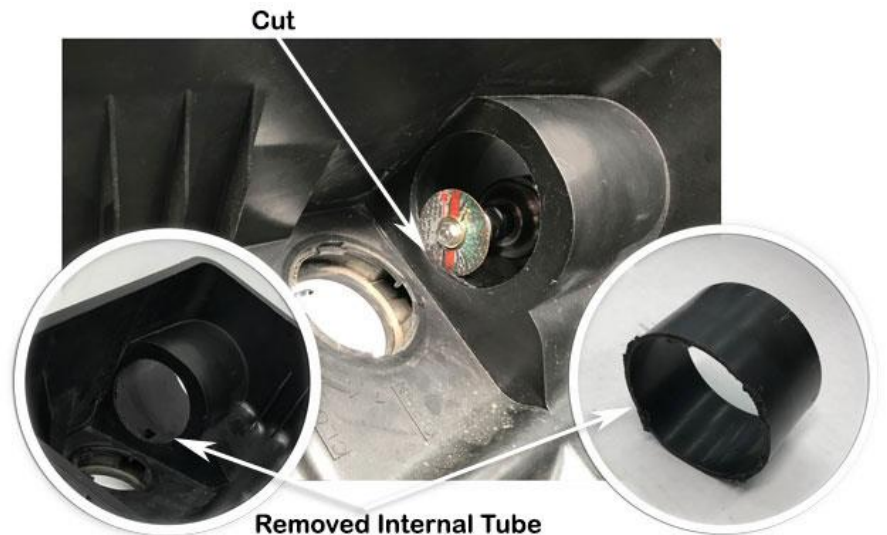
Remove the drain valve assembly from the air cleaner base.

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

Step 1; Using a die grinder with a cut-off disc remove as much of the internal tube as possible (46mm approximately), care must be taken when using the cut-off disc not to cut through the outer and inner walls of the air cleaner base.

Step 2; Using a die grinder with a suitable burr, carefully remove the end section of the internal tube.

Step 3; Use a file to neatly remove the remaining material from the end of the chamber.



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.

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



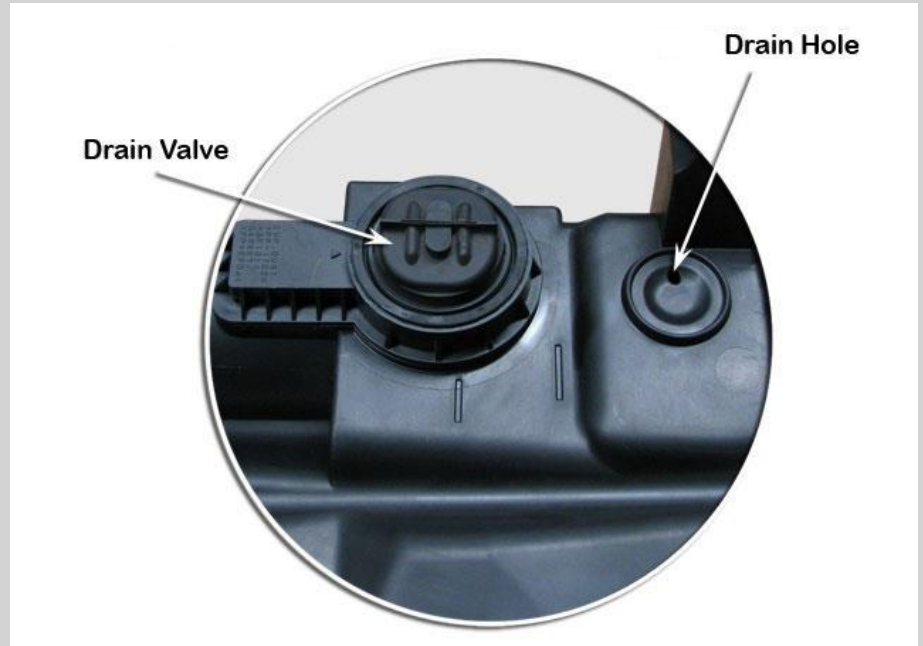
Using a scribe or paint pen, scribe or mark a line 18mm in from the end of the air cleaner inlet snout around the entire circumference as shown.



INSTALLER OPTION:

The air cleaner base contains a drain valve and a drain 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.



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 a small amount of 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.

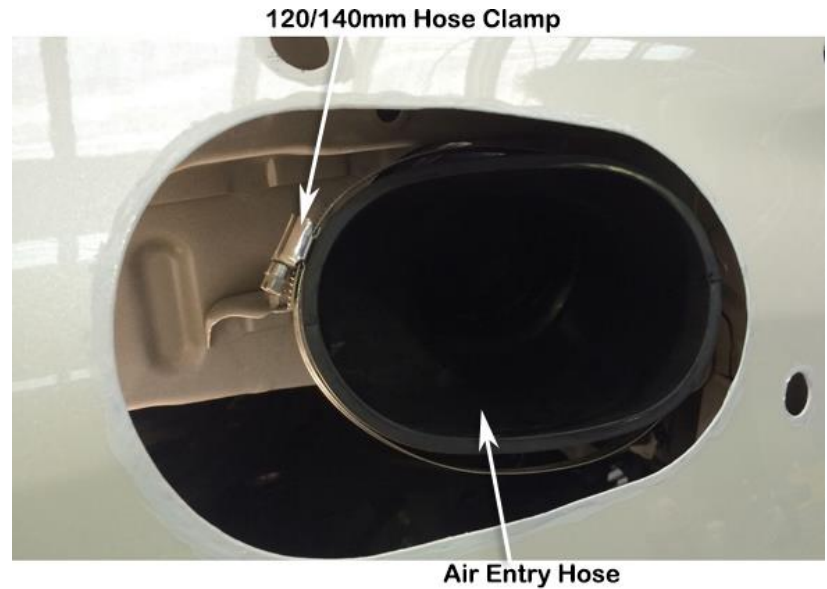


Carefully shape the 120/140mm hose clamp (item 13) to the oval shape of the air entry hose (item 11).

Note: hose clamp orientation.

Loosely install the 120/140mm hose clamp (Item 13) onto the air entry hose (Item 11) orientated the hose clamp onto the air entry hose as shown.

Apply a small amount of lubricant to the inside of the air entry hose.



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).



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Align the air entry hose (item 11) for best fitment, ensure the hose is correctly installed onto the air cleaner inlet snout, aligning the end of the air entry hose to the marked line around the air cleaner inlet snout (confirm the hose is correctly installed onto the air cleaner inlet snout using an inspection mirror), correctly position the 90/110mm hose clamp onto the air entry hose and tighten.

Correctly position and orientate the 120/140mm hose clamp onto the air entry hose and tighten (there should be a 6.0 – 8.0mm gap between the air entry hose to the snorkel body outlet shoulder).



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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).



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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.