



SS178HF

SAFARI V-SPEC SNORKEL
Suits: MAZDA BT-50 RG04 MY21 (All Models)
3.0L Turbo Diesel (4JJ3-TCX Engine)



20/09/2021

Parts List

ITEM	PART NO.	DESCRIPTION	QTY
1	686-133-000	BODY - SNORKEL (SS178HF)	1
2	000-135-800	3 1/2" AIR RAM ASSEMBLY	1
3	741-032-000	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	000-311-300	WASHER - BODY - 8mm x 30mm - S/S	6
9	000-205-300	NUT - NYLOC - 8mm x 1.25mm - S/S	6
10	741-024-000	HOSE - SNORKEL OUTLET	1
11	741-024-200	HOSE - AIR ENTRY (Flanged)	1
12	741-025-200	JOINER - STAINLESS STEEL - 76.2mm OD x 50mm	1
13	741-959-000	CAP - BLANK-OFF (Moulded)	1

14	000-958-150	POP RIVET - 4.0mm x 13mm	16
15	000-300-350	WASHER - BODY - 4mm x 11mm - S/S	2
16	741-217-000	TEMPLATE - AIR CLEANER (MAIN)	1
17	741-217-200	TEMPLATE - AIR CLEANER (FRONT)	1
18	741-025-000	PLATE - HOSE SUPPORT (MAIN)	1
19	741-025-025	PLATE - HOSE SUPPORT	4
20	741-025-050	PLATE - HOSE SUPPORT (LOWER)	1
21	000-908	CLAMP - HOSE - 70/90mm	3
22	000-1911	CLAMP - HOSE - 100/120mm	1
23	000-914/B	CLAMP - HOSE - SIZE 56 (BLACK)	1
24	686-017-000	TEMPLATE - GUARD PANEL (SS178HF)	1



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Suits: MAZDA BT-50 RG04 MY21 (All Models)
3.0L Turbo Diesel (4JJ3-TCX Engine)

Installation Guide

Fitment to:

- Right Hand Side

Fitting Time:

- 210min

Special Tools:

- Body Saw (Reciprocating)
- 79mm Holesaw
- Step Drill
- Files
- Drill Bits 4.5mm
- Loctite 243 (thread lock)
- Touch-up paint
- Sikaflex 227 Adhesive Sealant
- Masking Tape

Prior to commencing the installation, it is the installer's responsibility to verify that all components and particularly the template (Item 24) are correct.

1

Remove and discard the Air intake duct.



Remove & Discard

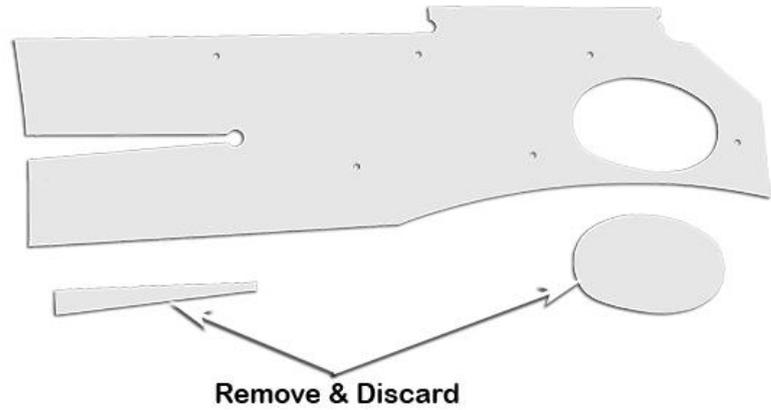
2

Remove the following in accordance with the factory service manual:

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

3

Remove and discard the two perforated sections of the guard panel template (item 24) as shown.



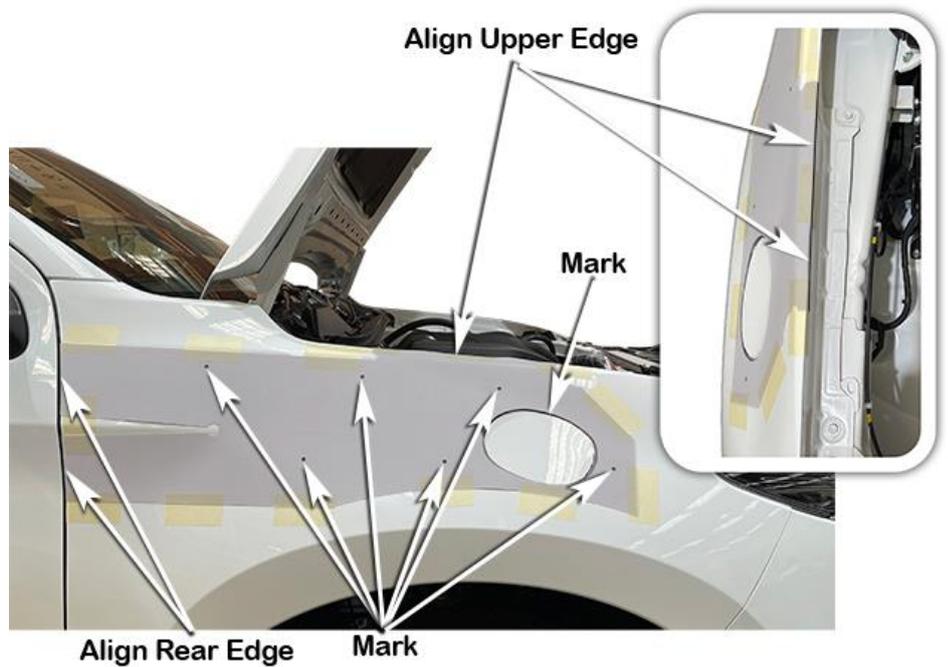
4

Align the guard panel template (Item 24) 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 main hole cut-out with a felt tip pen.

Remove the template.

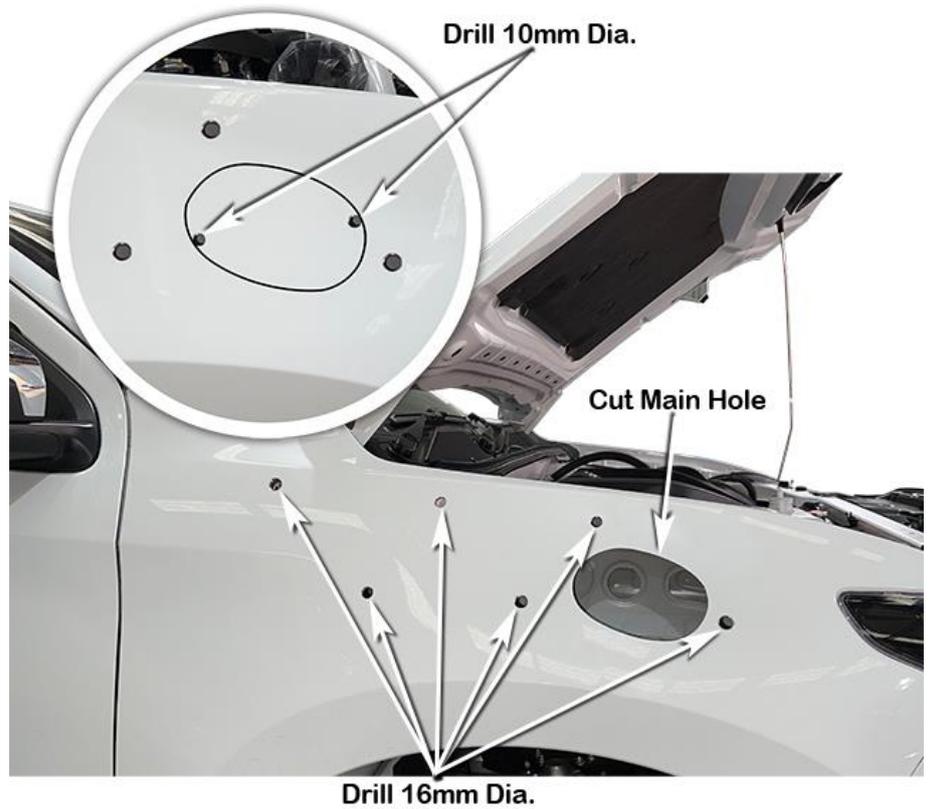


Drill a pilot hole for each of the marked hole positions.

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

Drill 1 or 2, 10mm diameter holes in the main hole 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 all holes.



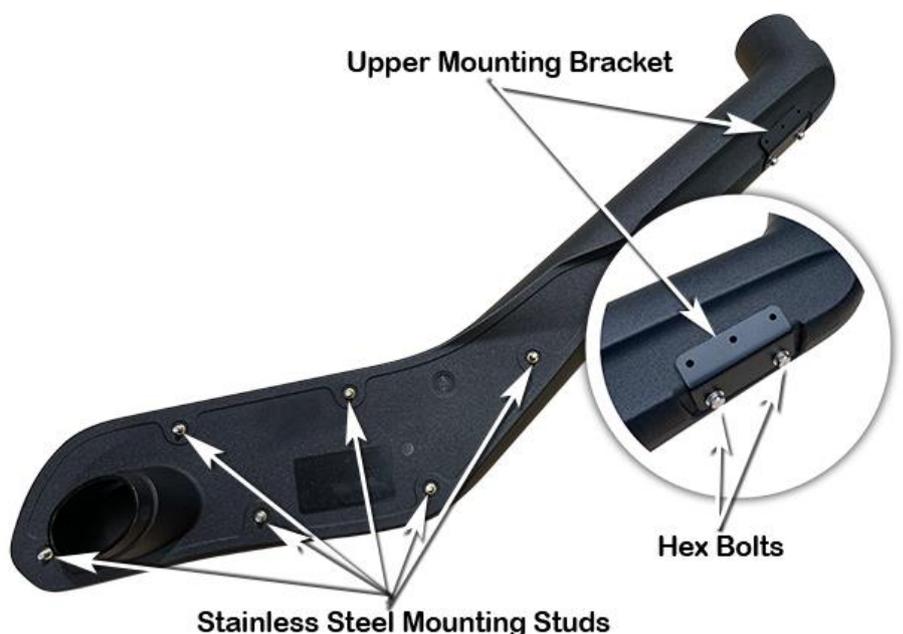
NEW ZEALAND INSTALLATIONS ONLY :

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

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

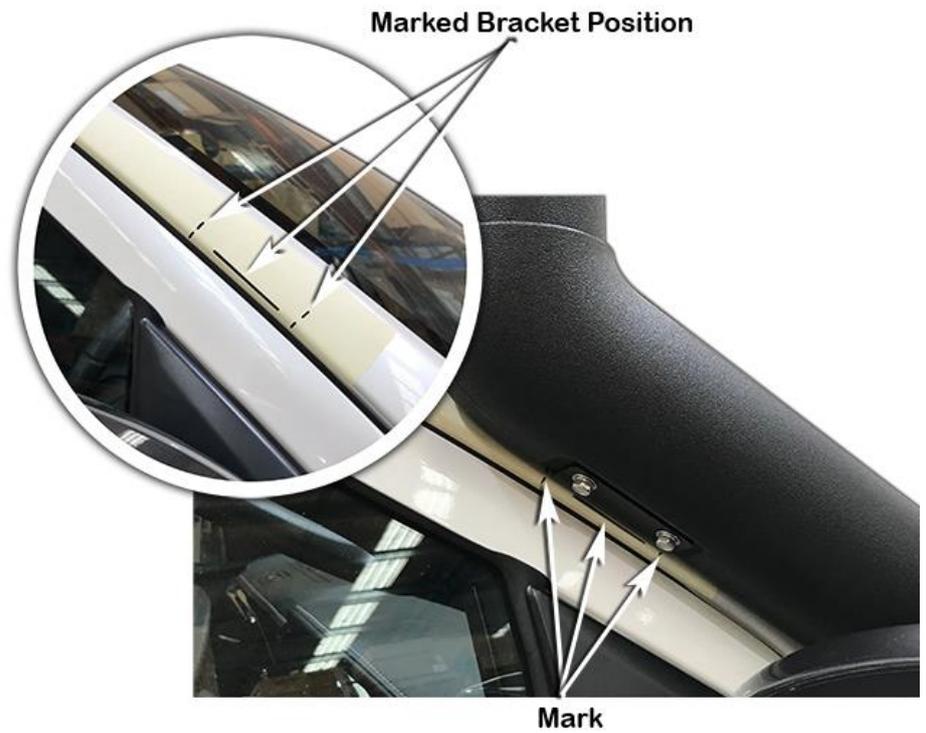
Apply Loctite 243 to each of the stainless steel mounting studs (Item 7) and install the studs finger tight into the snorkel body (Item 1) mounting inserts as shown.



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

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

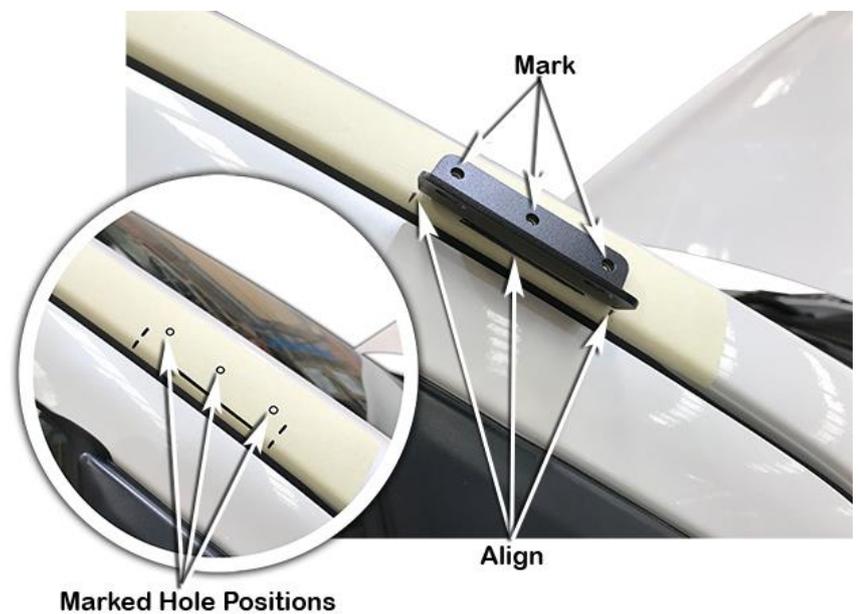
With the snorkel body correctly positioned, mark the outline of the upper mounting bracket (Item 3) onto the masking tape.



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

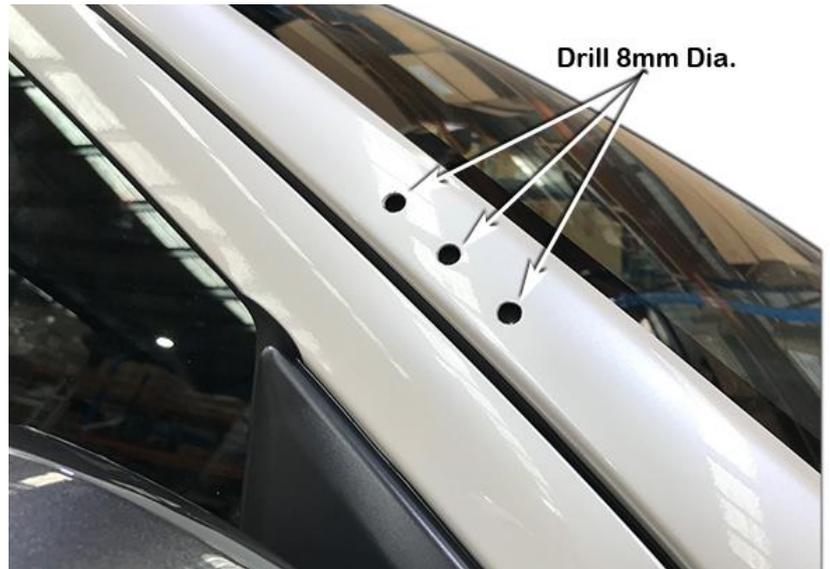
Position the upper mounting bracket (Item 3) onto the A-pillar and align the bracket with the marked bracket outline.

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 to prevent rust.

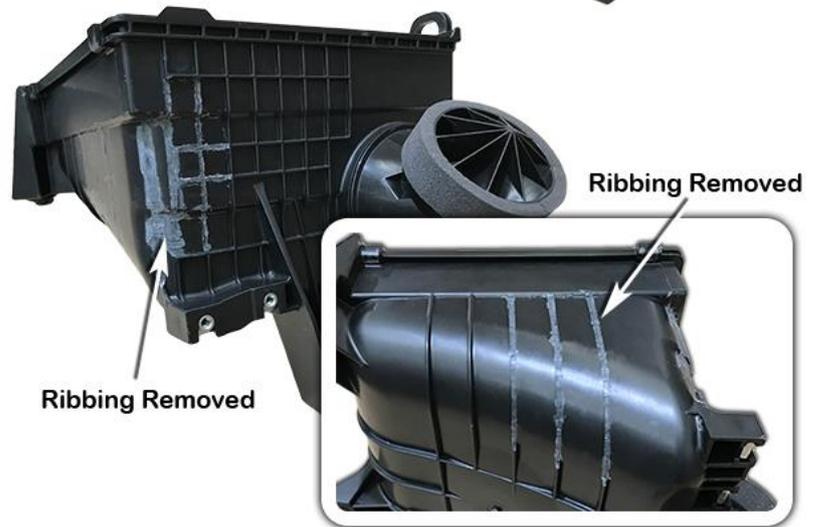
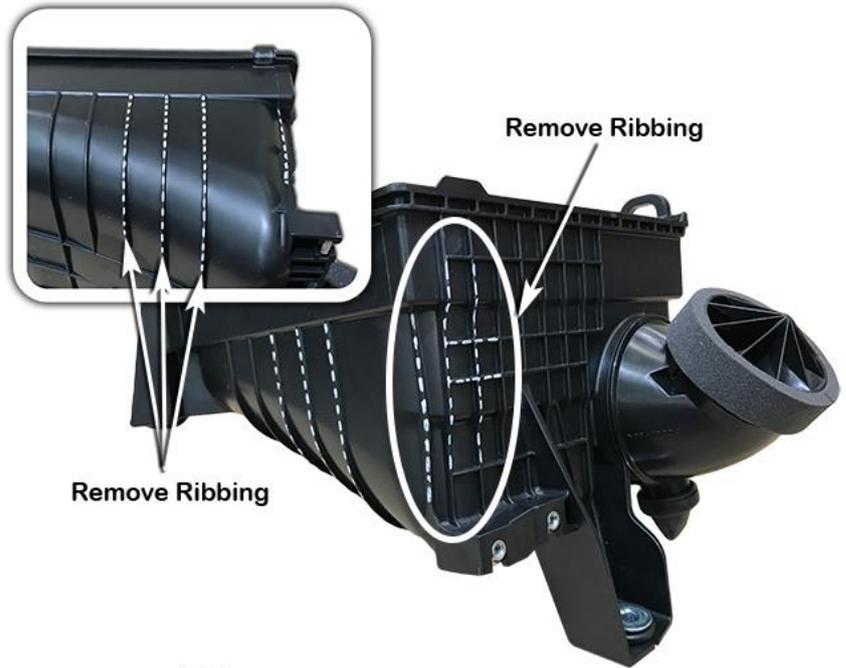


Install the plastic inserts (Item 6) into the 8mm diameter holes in the A-pillar.

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



Using a grinder or sharp knife, remove the highlighted ribs from the front and side of the air cleaner base.



Remove the two internal ribs as shown.

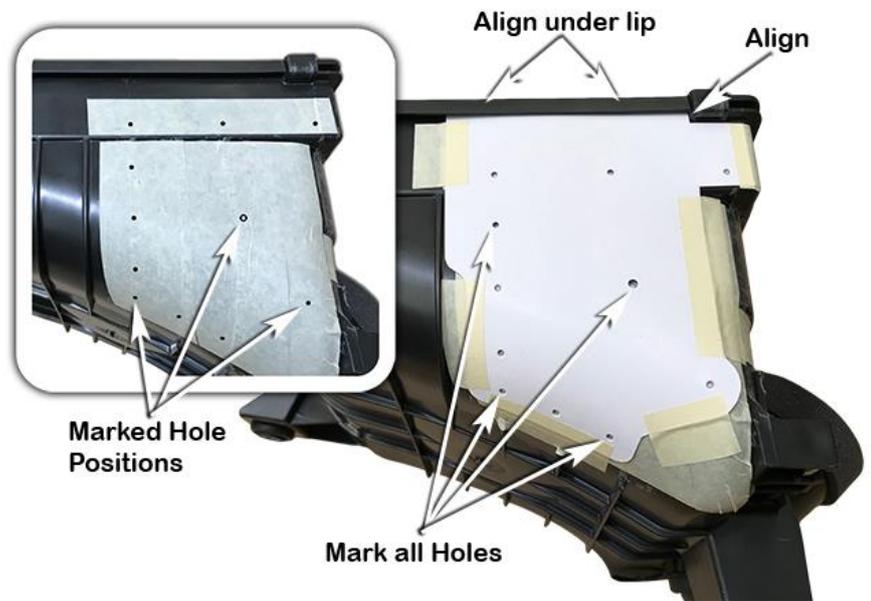


Neatly apply masking tape to the front and side of the air cleaner base.

Align and tape the main air cleaner template (item 16) under the top lip and to the side of the air cleaner clip tab of the air cleaner base as shown.

Mark all hole positions with a felt tip pen (fine point).

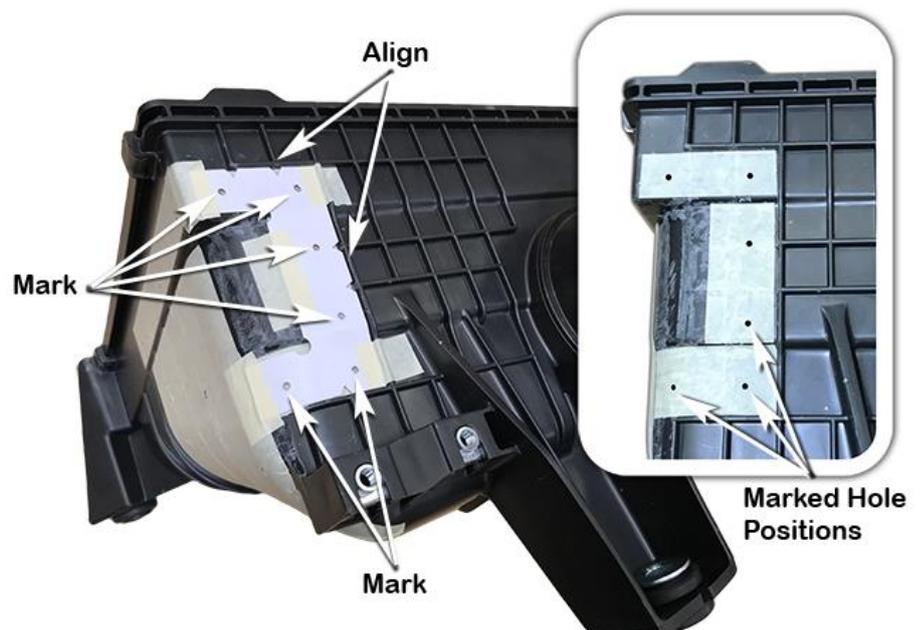
Remove the template.



Align and tape the front air cleaner template (item 17) to the upper and side ribs of the air cleaner base as shown.

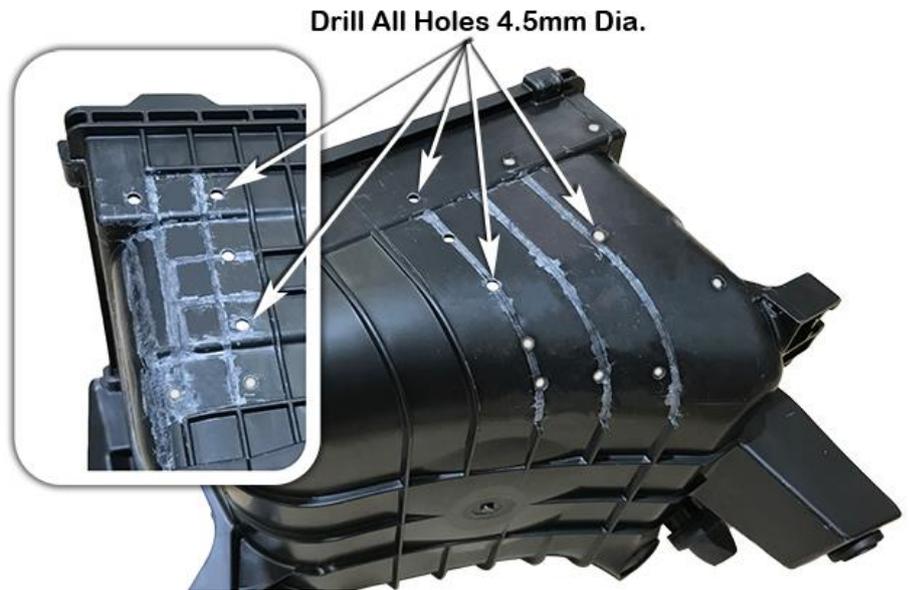
Mark all hole positions with a felt tip pen (fine point).

Remove the template.



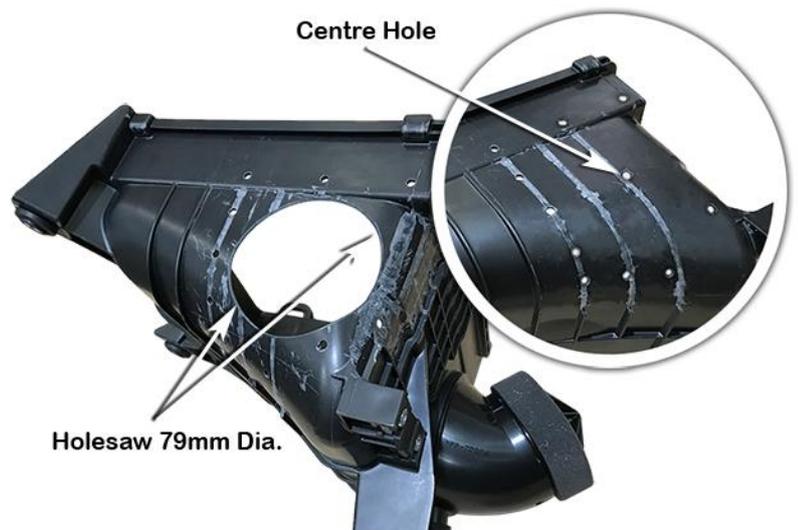
Drill a pilot hole for each of the seventeen marked hole positions, drill each hole position to 4.5mm diameter with a 4.5mm drill bit.

De-burr all seventeen holes.



Using a 79mm holesaw, drill the new air cleaner base inlet hole in the side of air cleaner base as shown.

Deburr the 79mm diameter hole.



Pre-bend two of the hose support plates (Item 19) to the required hose profile as shown.

Hint: Use a vice and a small hammer to bend the support plates.



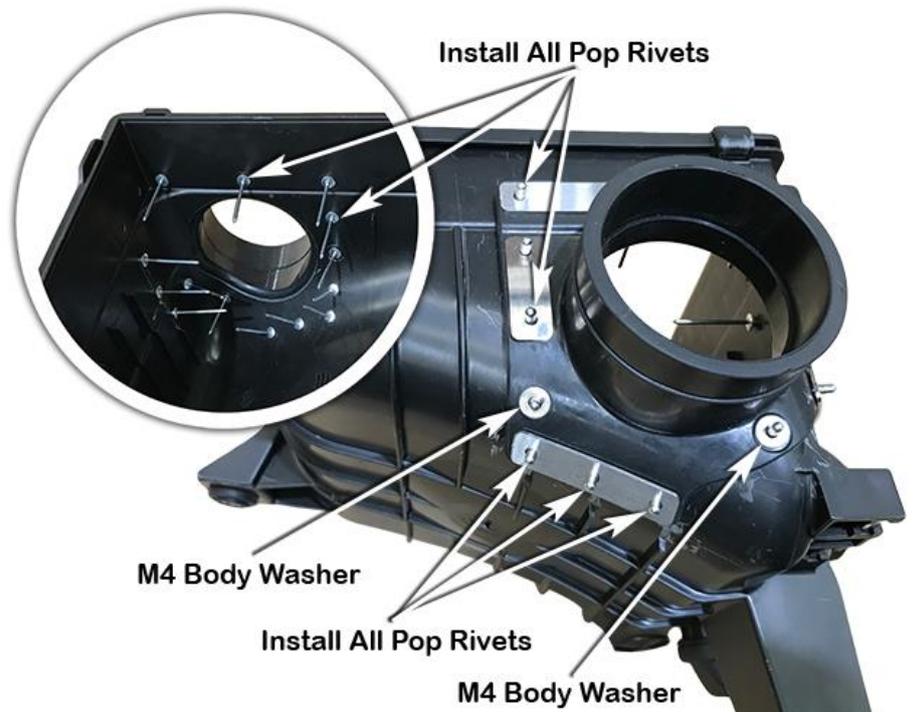
Apply Sikaflex adhesive sealant to the mating surfaces of the air cleaner base and air entry hose flange (item 11).

Install the air entry hose to air cleaner base.

Install pop rivets (item 14) and hose support plates (item's: 18,19 & 20) as shown.

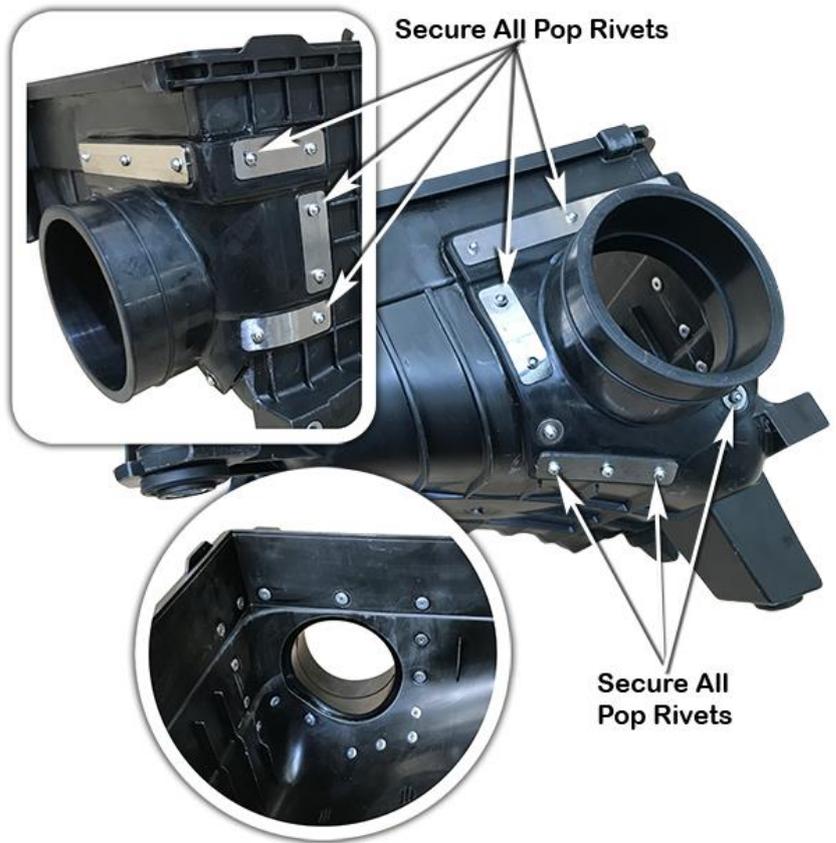
Install an M4 body washer (item: 15) onto the two lower corner pop rivets as shown.

N.B: All pop rivets must be installed from the inside of the air cleaner base.

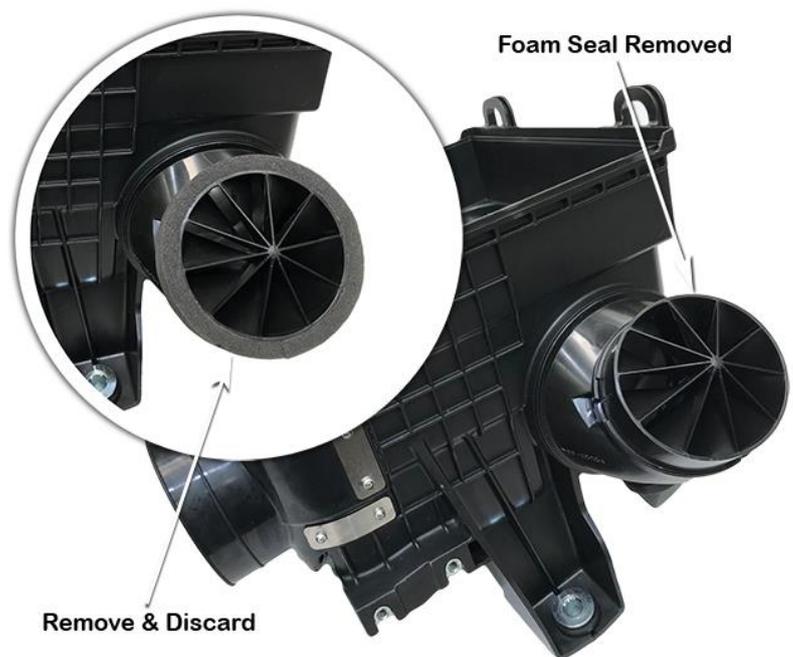


With the air entry hose, pop rivets and hose support plates correctly installed, secure all the pop rivets using a pop rivet gun.

Clean-up any excess sealant to ensure a neat finish.



Remove and discard the foam seal from the standard air cleaner base inlet.

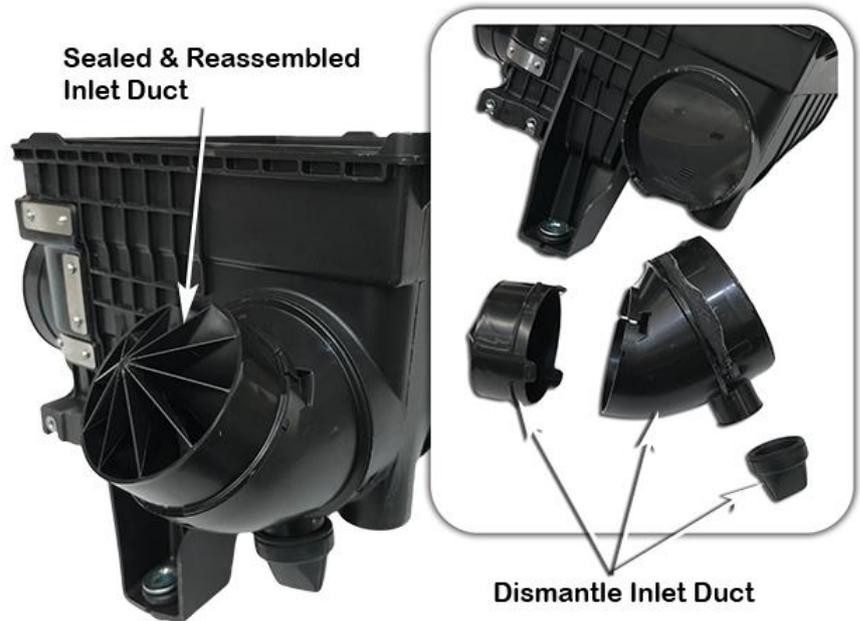


The standard air cleaner base inlet must be sealed by the installer.

Carefully dismantled the air cleaner inlet from the air cleaner base, remove and discard the foam seal.

Apply Sikaflex adhesive sealant to all the joints and then reassembled.

Clean-up any excess sealant to ensure a neat finish.



INSTALLER OPTION :

The air cleaner housing base contains two drain valves as shown. The drain valves can permit water to enter the air intake.

Safari advises that the drain valves should be sealed to ensure a watertight installation.

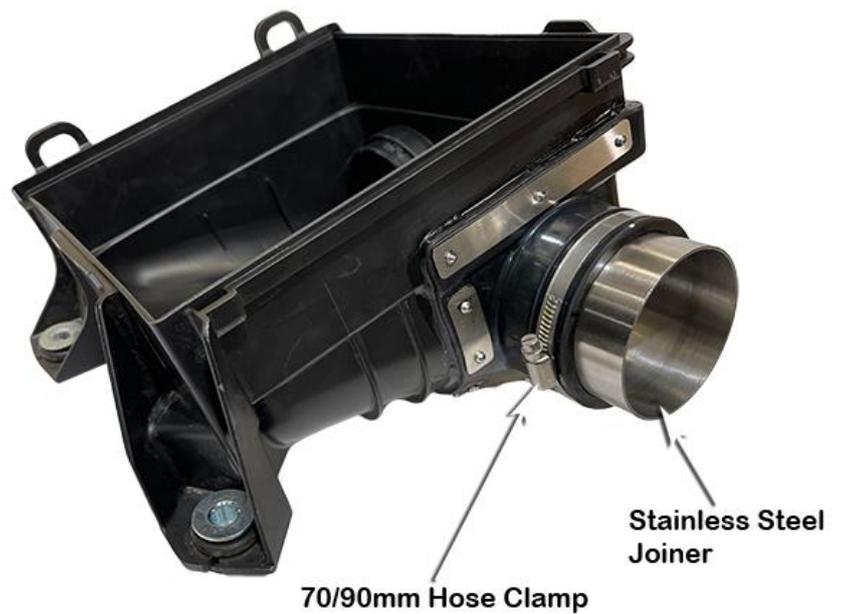


Install the moulded rubber blank-off cap (item 13) to the standard air cleaner base inlet.

Install a 70/90mm hose clamp (item 21) onto the blank-off cap and fasten the hose clamp.



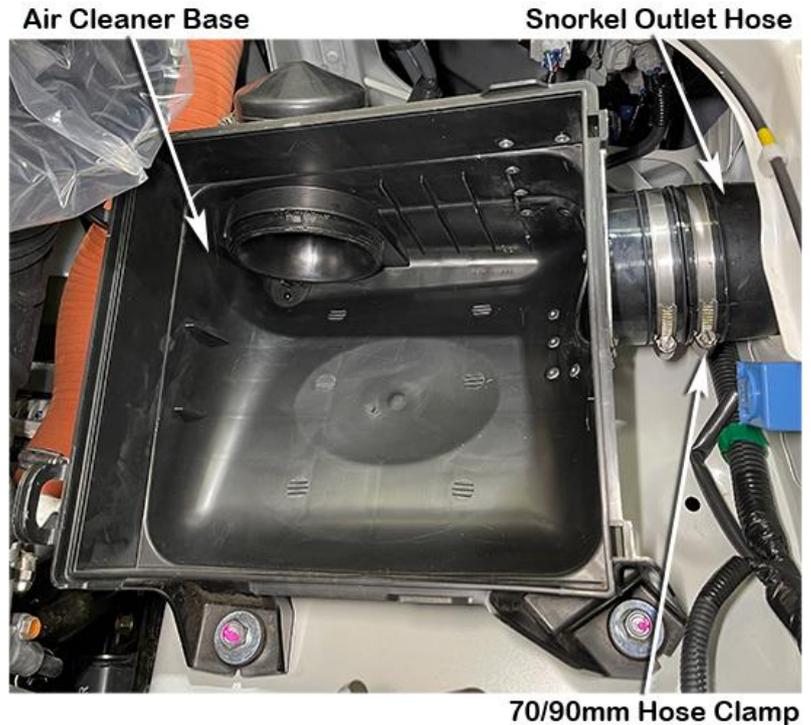
Install the stainless steel joiner (item 12) into the air entry hose (item 11), install a 70/90mm hose clamp (Item 21) onto the air entry hose and tighten.



Re-install the air cleaner base and fasten using the standard mounting bolts.

Install the snorkel outlet hose (Item 10) through the hole in the inner guard panel, loosely install a 70/90mm hose clamp (item 21) onto the hose and install the snorkel outlet hose onto the stainless steel joiner (item 12).

Slightly tighten the 70/90mm hose clamp, so the hose is still able to be rotated.



70/90mm Hose Clamp

Orientate the snorkel outlet hose to the main hole in the guard panel as shown.

Carefully shape the 100/120mm hose clamp (item 22) to the oval shape of the snorkel outlet hose (item 10).

Note: The orientation of the hose clamp.

Apply a small amount of lubricant to the inside of the snorkel outlet hose.



100/120mm Hose Clamp

Carefully install the snorkel body (Item 1) to the guard panel, guiding the snorkel body outlet snout into the snorkel outlet hose (item 10), 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).



Ensure the snorkel outlet hose is correctly installed onto the snorkel body outlet snout and tighten the 100/120mm hose clamp (item 22).

Ensure the snorkel outlet hose is correctly installed onto the stainless steel joiner and tighten the 70/90mm hose clamp (item 21).



Loosely install the black hose clamp (Item 23) over the base of the air ram assembly (Item 2).

Install the air ram assembly onto the snorkel body inlet.

Align the air ram assembly and tighten the black hose clamp (Item 23).



Install the RHS 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.

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