



# SS178HFR

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



20/10/2021

## 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	741-024-300	HOSE - SNORKEL OUTLET	1
11	741-025-200	SLEEVE - STAINLESS STEEL - 76.2mm OD x 50mm	1
12	000-908	CLAMP - HOSE - 70/90mm	1
13	000-1911	CLAMP - HOSE - 100/120mm	1
14	000-914/B	CLAMP - HOSE - SIZE 56 (BLACK)	1
15	686-017-000	TEMPLATE - GUARD PANEL (SS178HF)	1



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 (Replaces Factory Mazda Snorkel)

### Installation Guide

#### Fitment to:

- Right Hand Side

#### Fitting Time:

- 210min

#### Special Tools:

- Body Saw (Reciprocating)
- Step Drill
- Files
- Masking Tape
- Loctite 243 (thread lock)
- Touch-up paint
- 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 15) are correct.**

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

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

**2**

Remove and discard the Factory Mazda snorkel components (shown) from the vehicle.

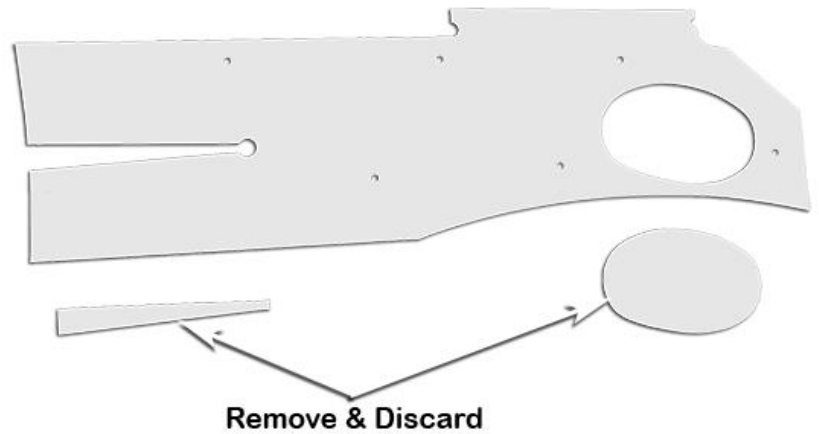
Retain the two screws from the upper mounting bracket as shown.

***Do Not*** removed the plastic inserts from the A-pillar panel.



3

Remove and discard the two perforated sections of the guard panel template (Item 15) as shown.



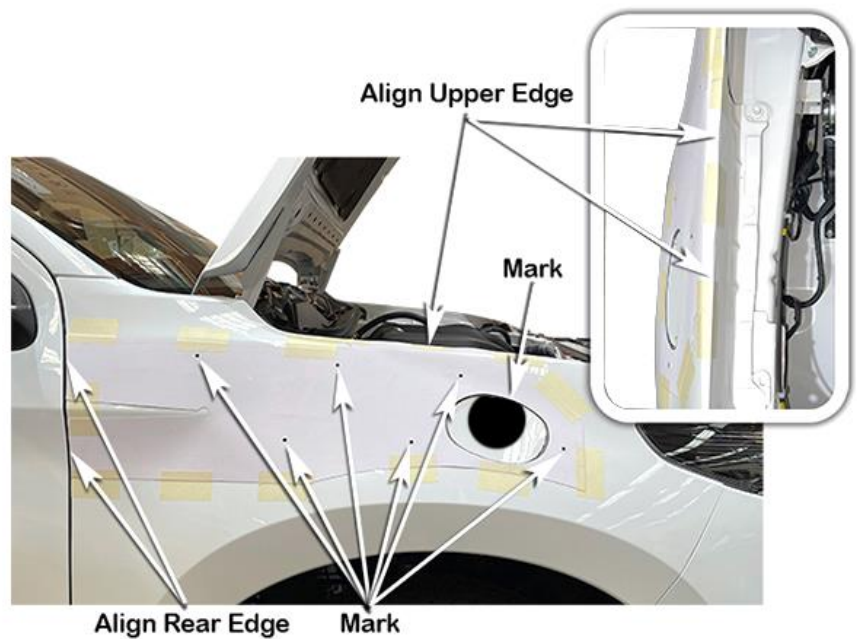
4

Align the guard panel template (Item 15) 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.

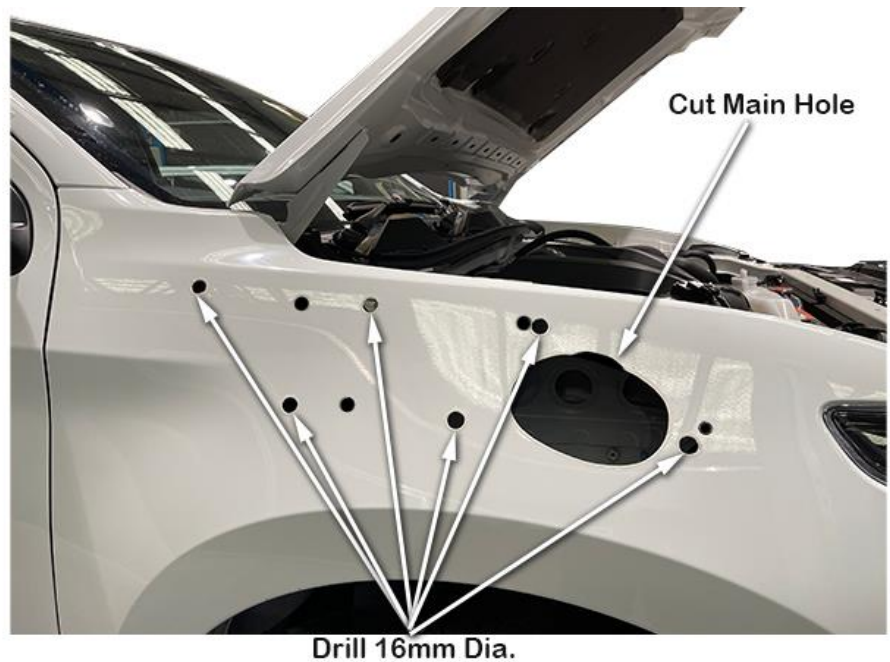


Drill a pilot hole for each of the marked hole positions.

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

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. It may also be necessary to re-paint the existing holes in the guard panel.



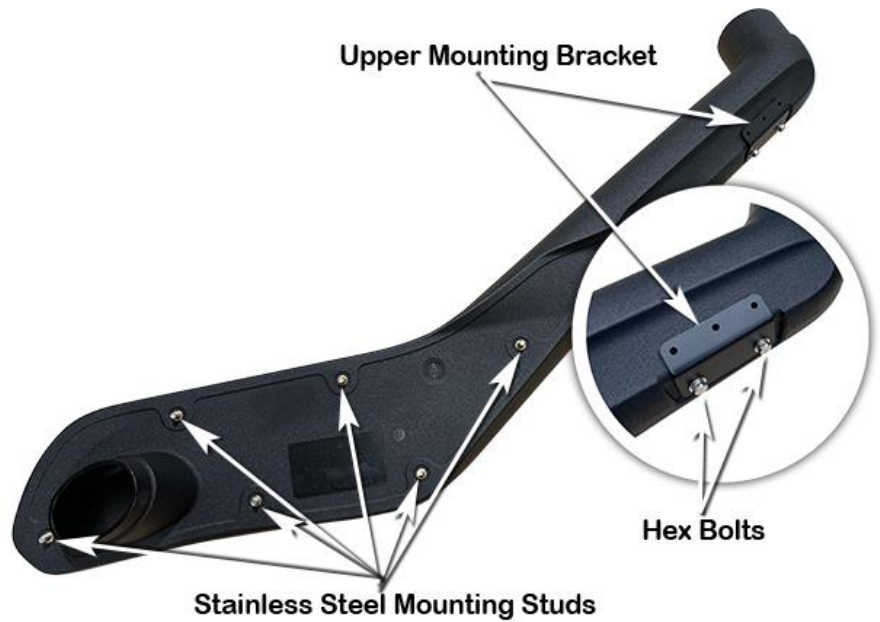
#### **NEW ZEALAND INSTALLATIONS ONLY :**

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)

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

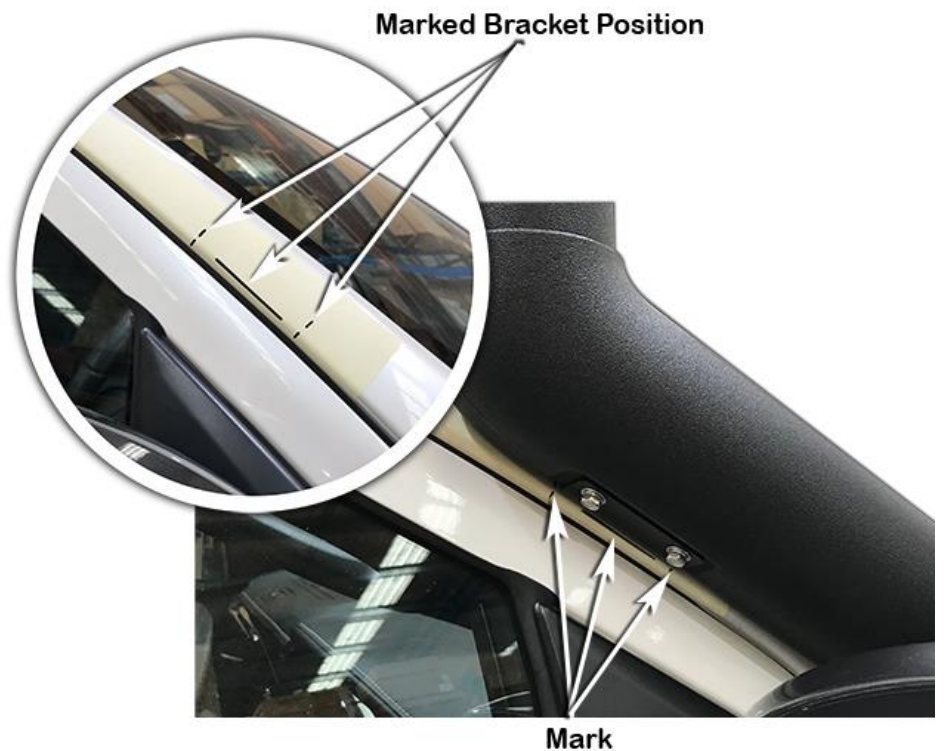
Apply Loctite 243 to each of the stainless steel mounting studs (Item 7) and install the studs finger tight into the snorkel body (Item 1) mounting inserts as shown.



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

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

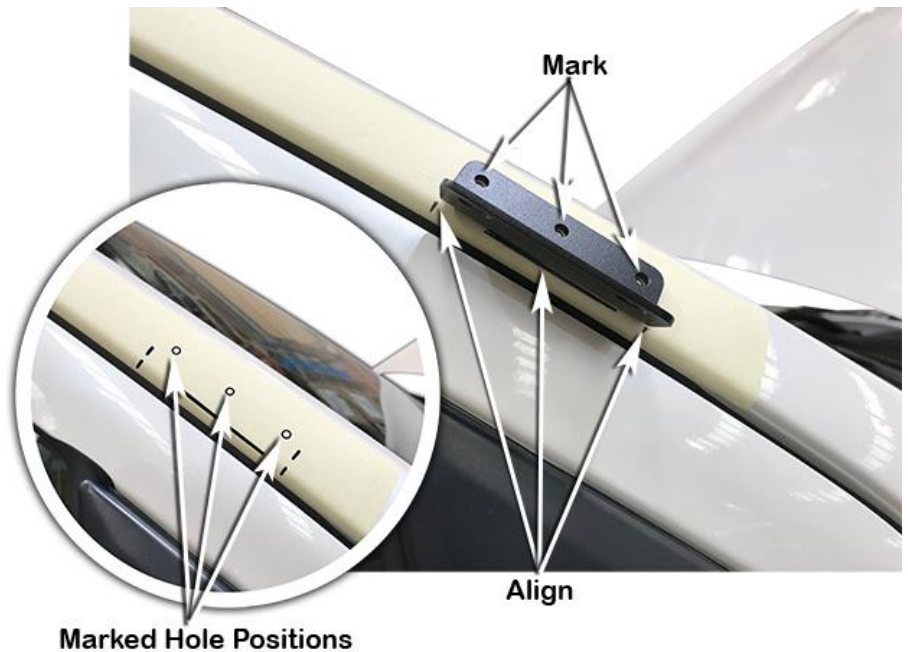
With the snorkel body correctly positioned, mark the outline of the upper mounting bracket (Item 3) onto the masking tape.



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.



Marked Hole Positions

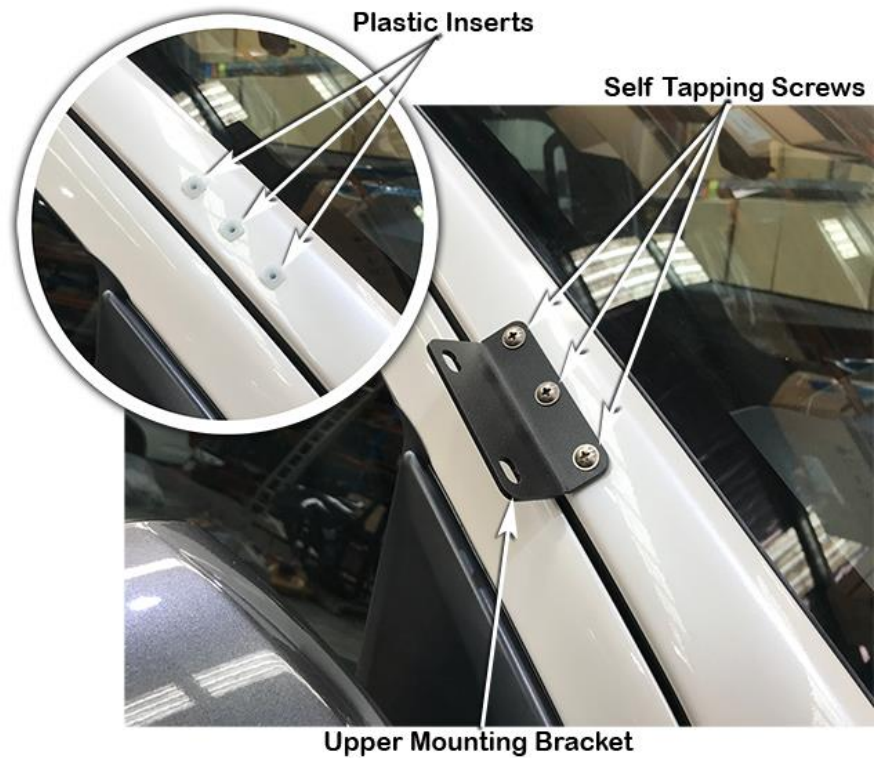
Drill a pilot hole at each of the three marked hole positions. Drill each hole position to 8mm diameter with a step drill or 8mm drill bit.

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).



Re-install the two self-tapping screws retained in step 2 into the two plastic inserts in the A-pillar to blank-off the holes.

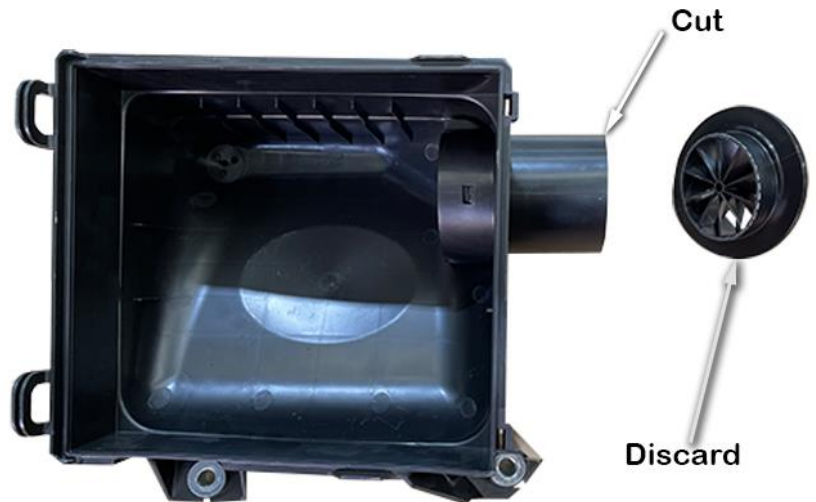


The inlet snout of the factory snorkel air cleaner base needs to be modified.

Measure and mark a cut line 40mm in from the end of the inlet snout as shown.



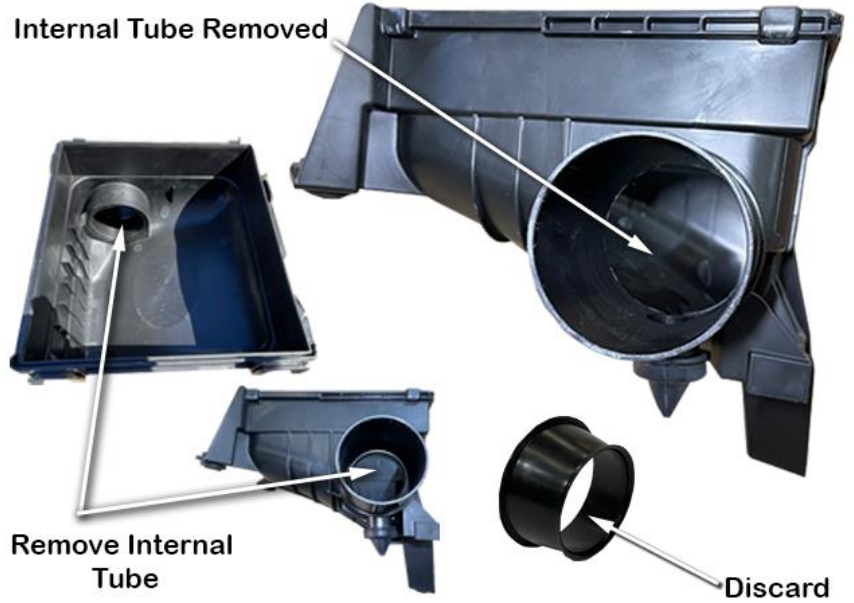
Using the body saw or a hack saw cut-off and discard the 40mm section from the air cleaner base inlet snout as marked in step 12.





The internal tube of the inlet snout must be removed, using a drift and a hammer gently tap the end of the tube to break the plastic welds retaining the internal tube.

Discard the internal tube.

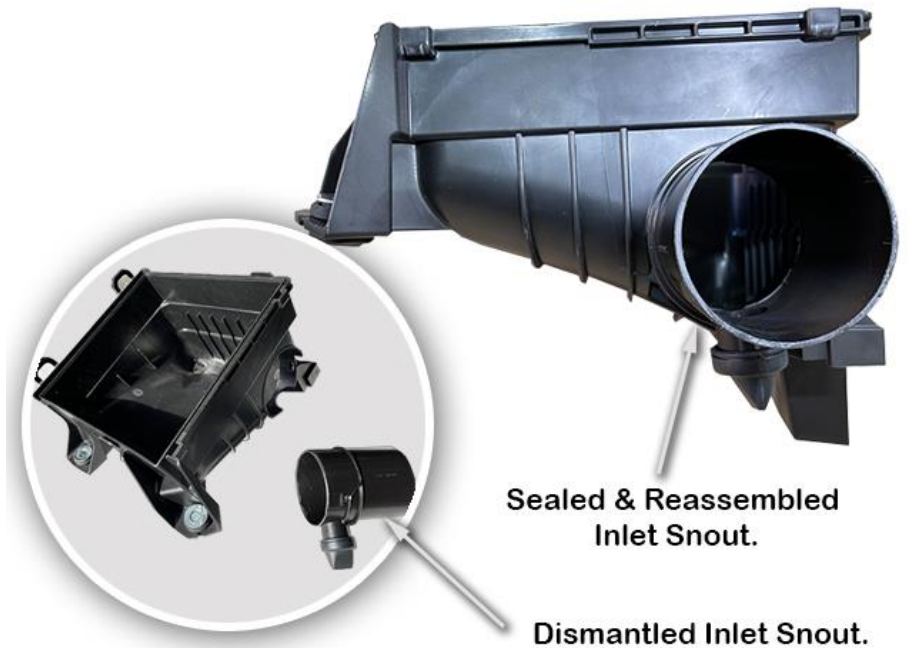


The air cleaner inlet snout must be sealed by the installer.

Carefully dismantled the air cleaner inlet snout from the air cleaner base.

Apply Sikaflex adhesive sealant to the joint 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.



Apply Sikaflex adhesive sealant to the inlet snout and stainless steel sleeve (Item 11).

Install the stainless steel sleeve (Item 11) into the air cleaner inlet snout, flush with the end of the inlet.

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

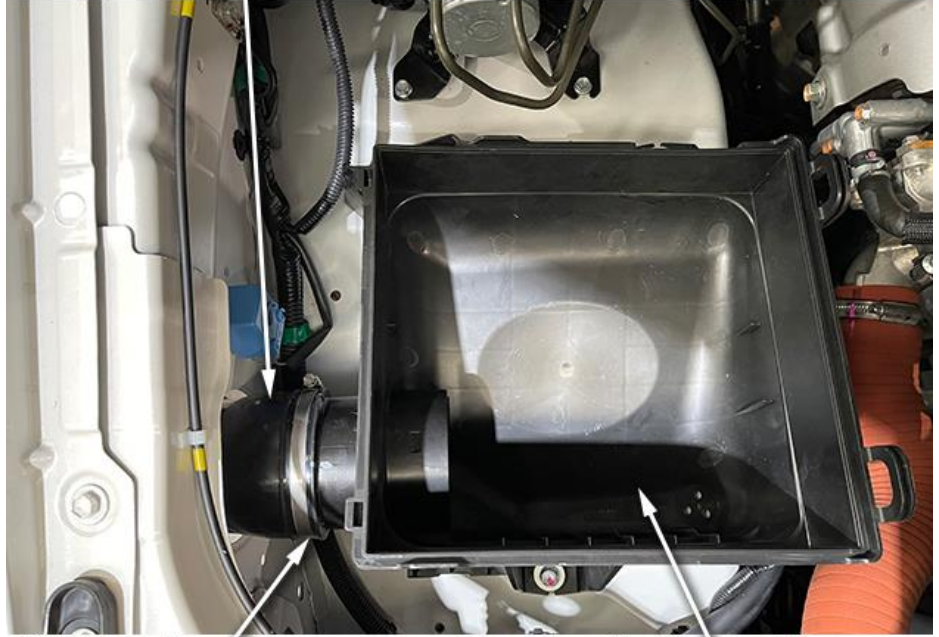


Re-install the air cleaner base and fasten using the standard mounting bolts.

Install the snorkel outlet hose (Item 10) through the hole in the inner guard panel, loosely install a 70/90mm hose clamp (Item 12) onto the hose and install the snorkel outlet hose onto the air cleaner inlet snout.

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

### Snorkel Outlet Hose



70/90mm Hose Clamp

Air Cleaner Base

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

Carefully shape the 100/120mm hose clamp (Item 13) 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.

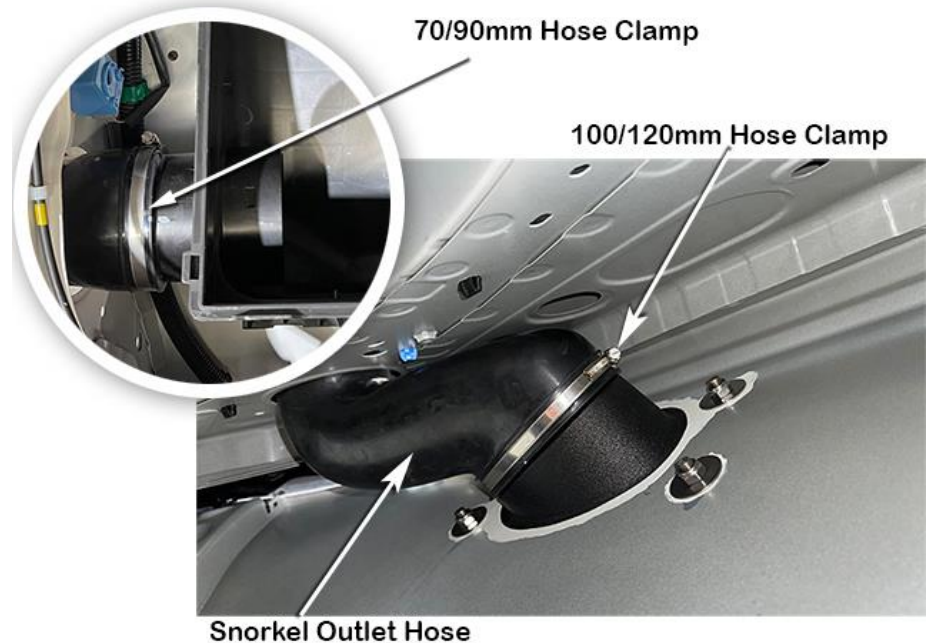
When correctly aligned, fasten the snorkel body to the guard panel with body washers (Item 8) and nyloc nuts (Item 9).

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 13).

Ensure the snorkel outlet hose is correctly installed onto the air cleaner inlet snout and tighten the 70/90mm hose clamp (Item 12).



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



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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.

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