



**4X4 ENGINEERING**

# SS982HF

SAFARI V-SPEC SNORKEL  
Ford PX-I & PX-II Ranger (All Models)  
2.2L & 3.2L TDCi Diesel (P4AT & P5AT Engines)



08/04/2014

## Parts List

ITEM	PART NO.	DESCRIPTION	QTY
1	680-133-300	BODY - SNORKEL (SS982HF)	1
2	000-135-800	3 1/2" AIR RAM ASSEMBLY	1
3	680-032-300	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	680-024-300	HOSE - AIR ENTRY	1
11	000-908	CLAMP - HOSE - 70/90mm	1
12	000-910	CLAMP - HOSE - 90/110mm	1
13	000-914/B	CLAMP - HOSE - SIZE 56 (BLACK)	1
14	680-017-300	TEMPLATE - GUARD PANEL (PX-I)	1
15	680-017-400	TEMPLATE - GUARD PANEL (PX-II)	1

## Installation Guide

**Fitment to:**

- Right Hand Side

**Fitting Time:**

- 150min

**Special Tools:**

- 108mm Hole Saw
- 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 14/15) are correct.**

**1**

Remove the following in accordance with the factory service manual:

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

**2**

Remove and discard

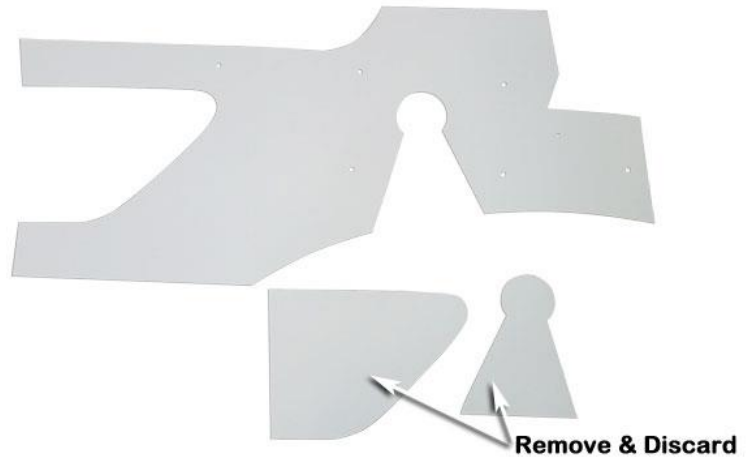
- Air intake duct



3a

**PX-I Guard Panel Template:**

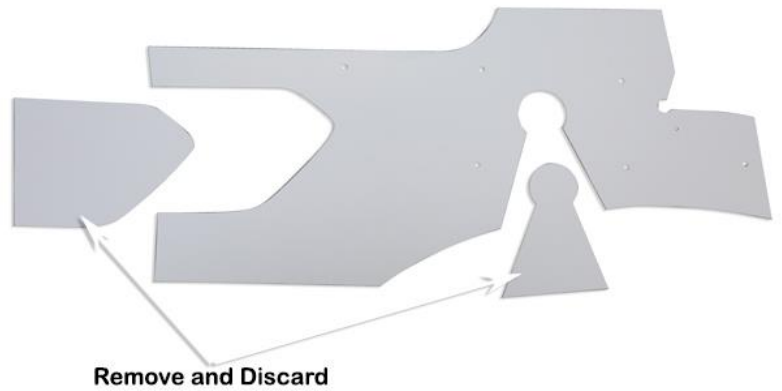
Remove and discard the two perforated sections of the guard panel template (item 14) as shown.



3b

**PX-II Guard Panel Template:**

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



4a

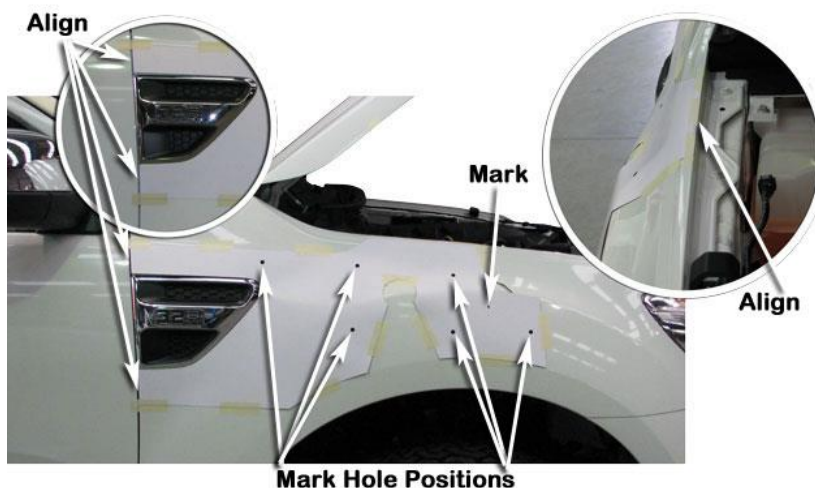
**PX-I Guard Panel Template fitment:**

Align the guard panel template (Item 14) 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 with a felt tip pen.

Remove the template.



4b

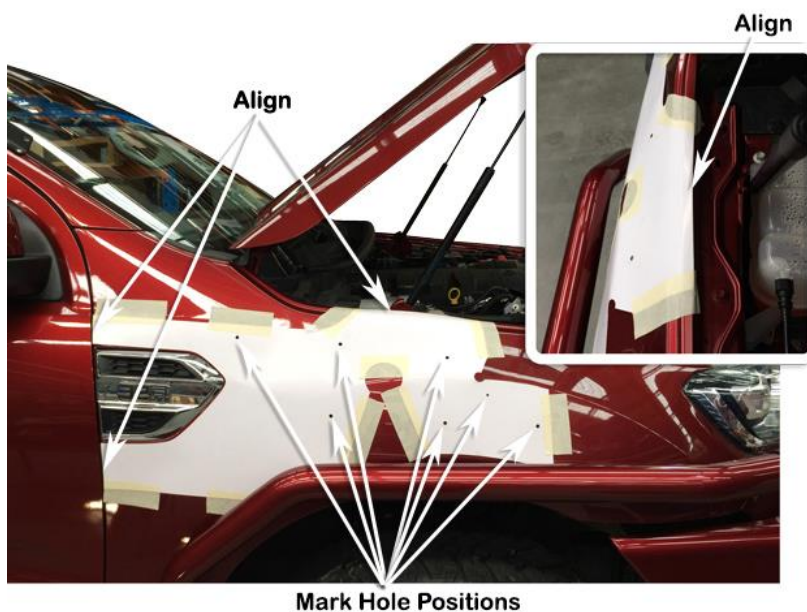
**PX-II Guard Panel Template fitment:**

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 with a felt tip pen.

Remove the template.





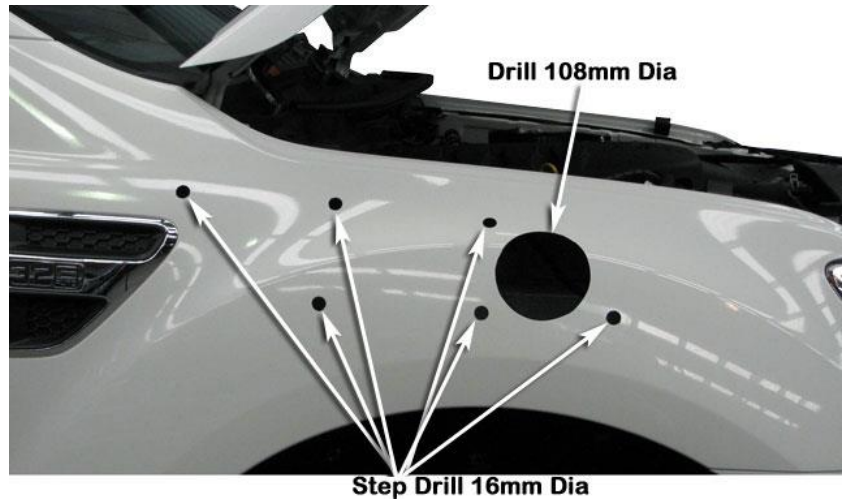
5

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

Use a 108mm diameter hole saw to drill the snorkel body outlet hole position.

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

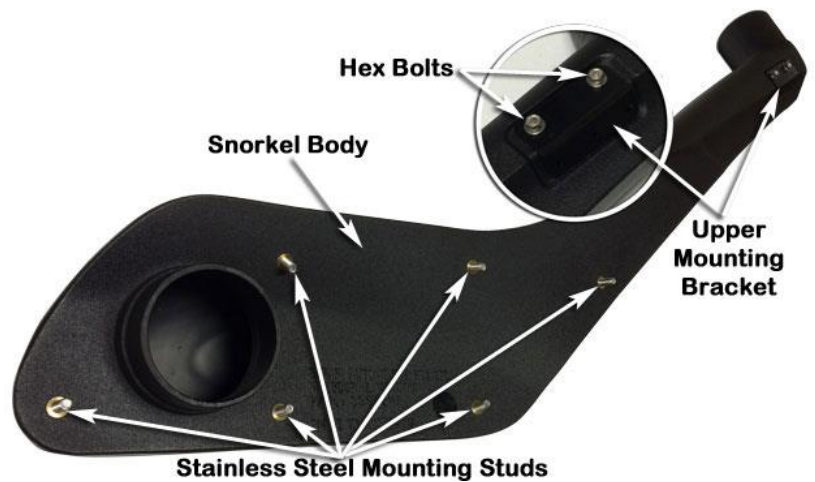
Deburr and paint all holes.



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 the studs finger tight into the snorkel body (Item 1) mounting inserts as shown.



7

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.



8

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.

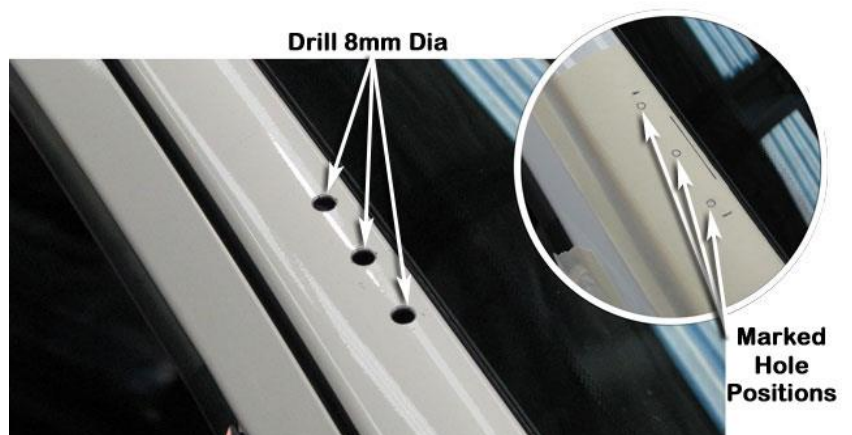


9

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.

**Warning:** The A-pillar cavity is filled with a pink coloured resin, it may be necessary to use a small screwdriver and hammer to clear the holes for the plastic inserts (extreme care must be taken when doing this to ensure the vehicles air bags are not discharged).

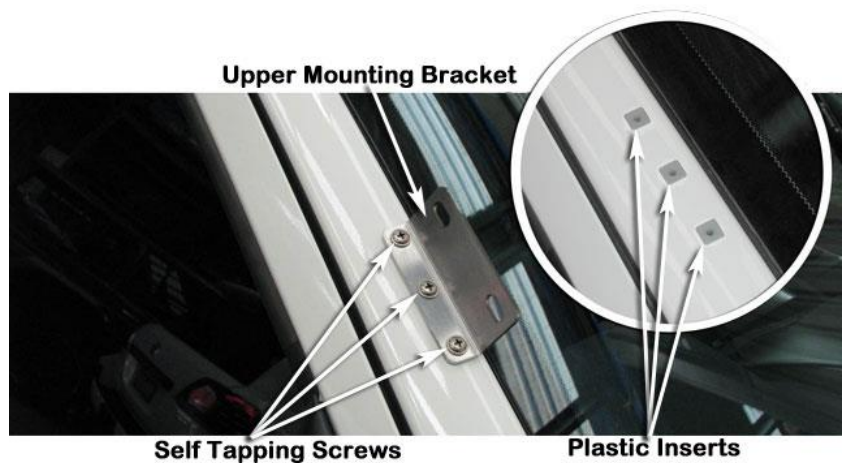
Deburr and paint holes to prevent rust.



10

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).

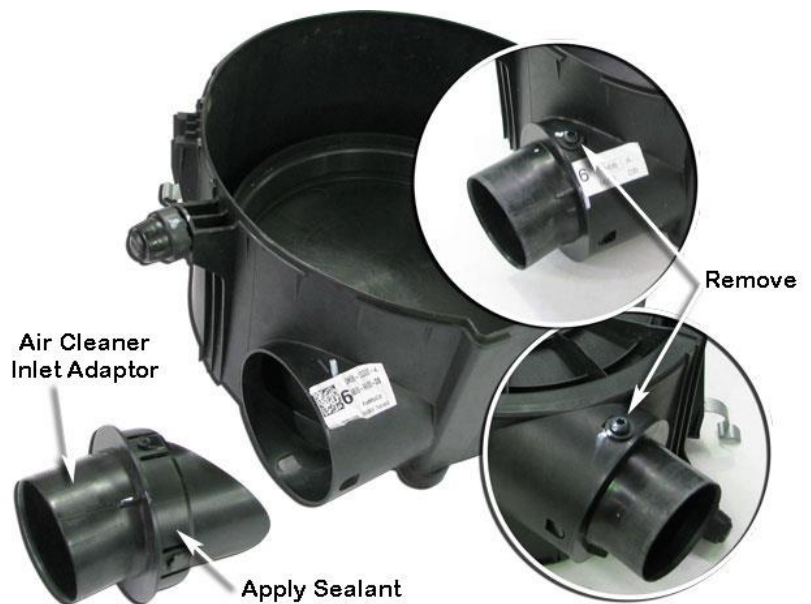


11

The air cleaner inlet adaptor must be removed and sealed.

Remove the two screws retaining the air cleaner inlet adaptor and remove the inlet adaptor, clean surfaces and apply adhesive sealant to the inlet adaptor, refit the inlet adaptor and fasten the two screws. If required apply extra sealant to ensure the connection is totally sealed.

Clean any excess sealant to ensure a neat finish.



12

**INSTALLER OPTION :**

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

It is up to the installer to decide whether the drain valve should be sealed.



13

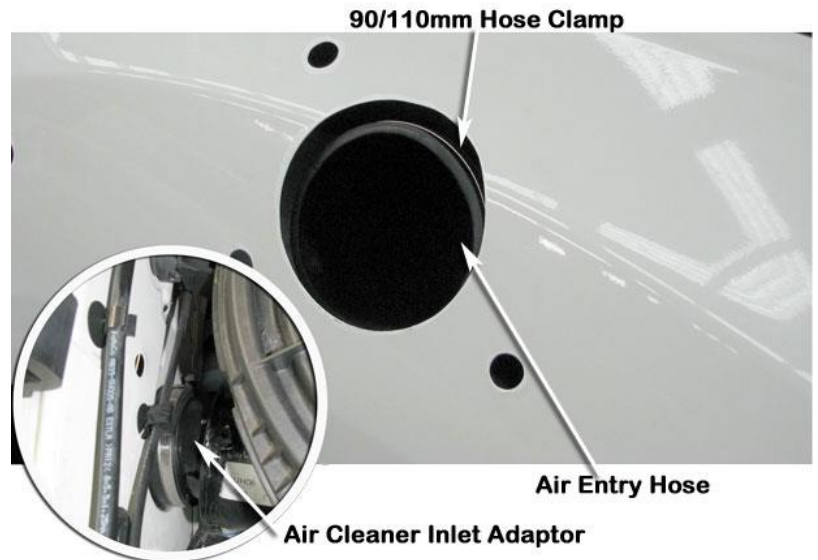
Loosely install a 70/90mm hose clamp (Item 11) over the air cleaner inlet adaptor, install the air cleaner base into the vehicle and fasten with standard mounting bolts.





Loosely install the 90/110mm hose clamp (Item 12) onto the air entry hose (item 10).

Install the air entry hose through the hole in the inner guard panel and onto the air cleaner inlet adaptor, rotate and align the air entry hose (item 10) with the main hole in the guard panel.



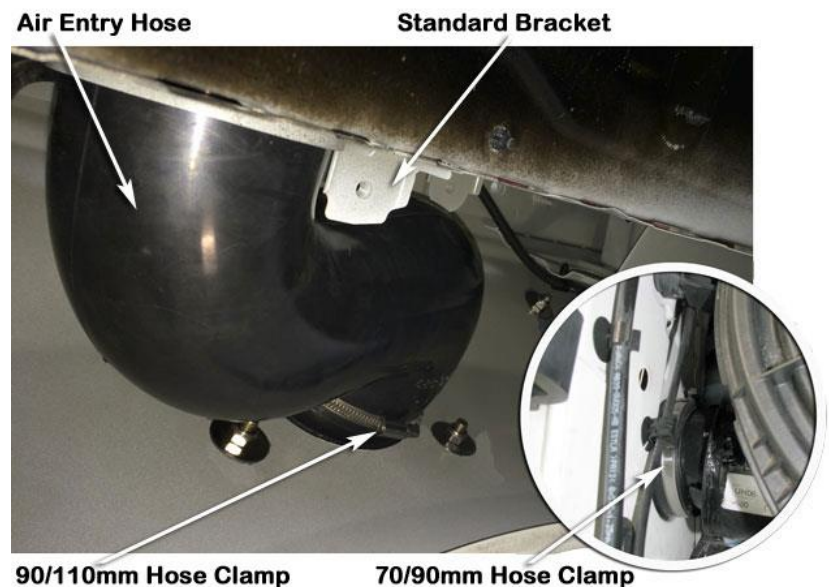
Carefully install the snorkel body (Item 1) to the guard panel, guiding the snorkel body outlet into the air entry hose (item 10), align the snorkel body to guard panel and upper mounting bracket.

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).



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, check that the air entry hose has adequate clearance to the standard bracket as shown*), correctly position the 70/90mm and 90/110mm hose clamps at either end of the air entry hose and tighten the hose clamps.



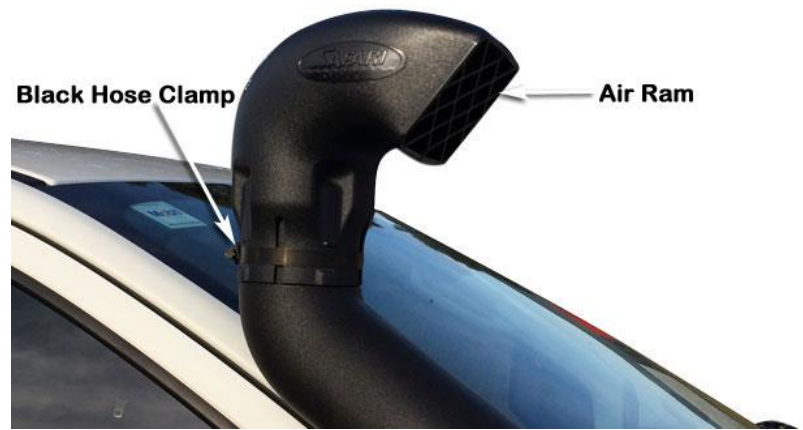


17

Install the black hose clamp (Item 13) 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 13).



18 Install the RHS guard insulator, 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.**