



# SS16HFE

Nissan GU Patrol Series 3  
4.8L 6 cyl Petrol (TB48E Engine)

01/03/2012



## Parts List

ITEM	PART NO	DESCRIPTION	QTY
1	485-133-500	BODY - SNORKEL (SS15HFB)	1
2	000-135-800	3 ½" AIR RAM ASSEMBLY	1
3	485-032-500	BRACKET - UPPER MOUNTING	1
4	000-002-100	BOLT - HEX - S/S - 6mm x 1.0 x 14mm (SEMS)	2
5	000-951	SCREW - S/T - S/S - 4.2mm x 13mm	3
6	000-960	INSERT - PLASTIC	3
7	000-110	STUD - S/S - 8mm x 1.25 x 25mm	5
8	000-311-300	WASHER - BODY - S/S - 8mm x 32mm	5
9	000-205-300	NUT - NYLOC - S/S - 8mm x 1.25mm	5
10	485-024-000	HOSE - SNORKEL OUTLET	1
11	485-025-000	JOINER - 90mm OD x 60mm Long	1
12	485-024-200	HOSE - AIR CLEANER ENTRY	1
13	485-025-200	JOINER - 90mm OD x 48mm Long	1
14	485-024-500	HOSE - AIR CLEANER INLET	1
15	000-951-500	SCREW - S/T - 4.8mm x 16mm (Silver)	1
16	000-909	CLAMP - HOSE 80/100mm	3
17	000-910	CLAMP - HOSE 90/110mm	2
18	000-1911	CLAMP - HOSE 100/120mm	1
19	000-914/B	CLAMP - HOSE - No. 56 (BLACK)	1
20	485-017-500	TEMPLATE – GUARD PANEL	1



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## Installation Guide

### Fitment to:

- Left Hand Side

### Fitting Time:

- 180min

### Special Tools:

- 95mm & 111mm Hole saws
- Step drill
- Touch-up paint
- Loctite 243 (Threadlocker)
- Scriber
- Masking tape
- Body Saw (Reciprocating) / Hacksaw
- 3.5mm Drill Bit

**Prior to commencing the installation, it is the installer's responsibility to verify that all components and particularly the template (Item 20) are correct.**

### 1 Remove the following in accordance with the factory service manual.

- LHS Guard Liner
- LHS mudflap
- LHS Indicator Assembly
- Charcoal Canister
- Coolant Reservoir Bottle
- Air Cleaner Assembly
- Radio Antenna (if fitted)

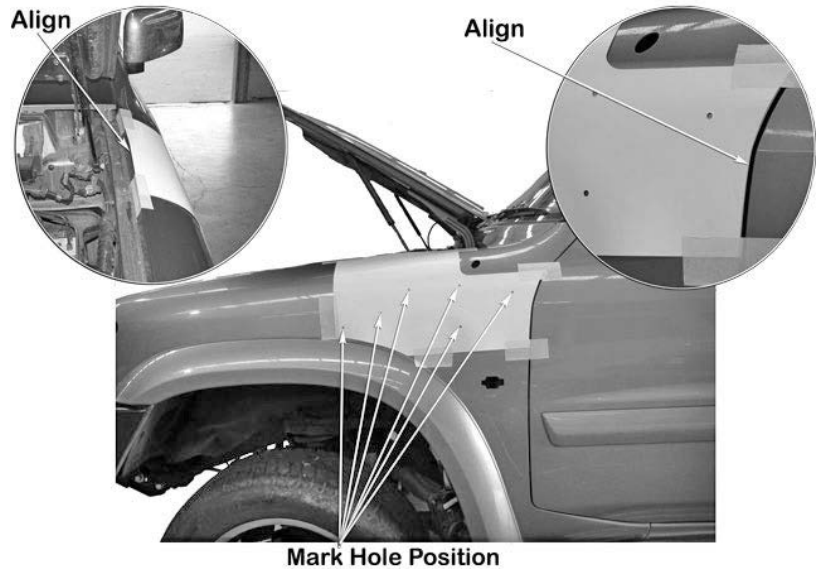
### 2

Remove and discard the standard air cleaner ducting.



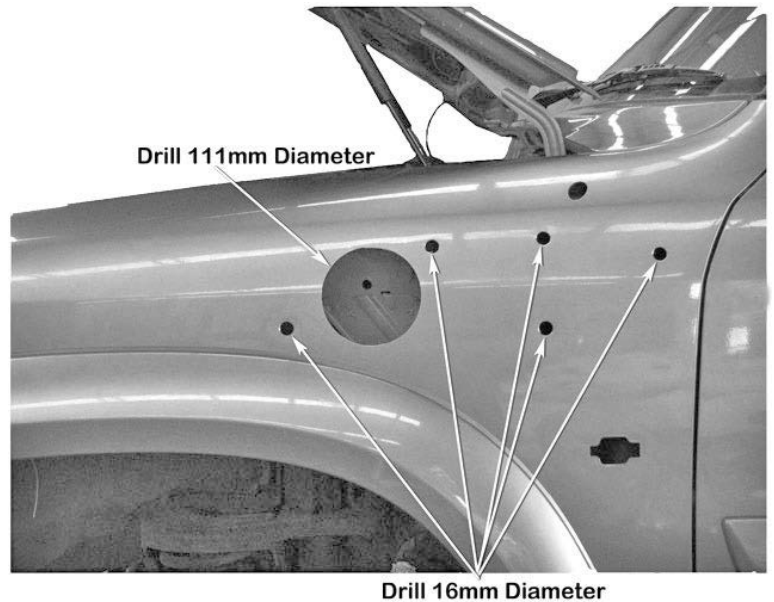
3

Align the guard panel template (item 20) with the upper and rear edges of the LHS guard panel. Tape the template to the guard panel with masking tape. Mark all hole positions with a felt tip pen and remove the template.



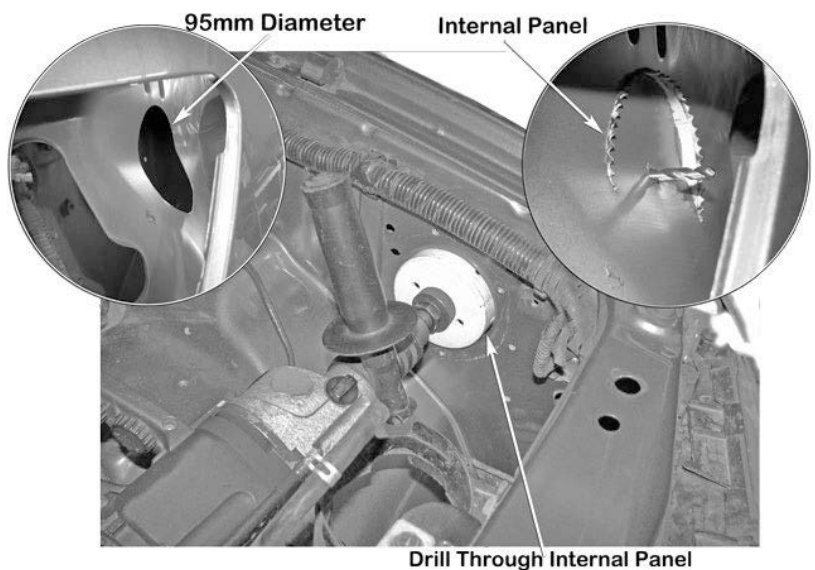
4

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 in the guard panel. Use a step drill to drill the five mounting holes to 16mm diameter. Deburr and paint holes to prevent rust.



5

Use the 95mm hole saw to drill the hole through the internal panel, using the standard air intake hole in the inner guard as a guide for the 95mm hole saw whilst drilling. *Hint: Insert a piece of timber through the indicator hole to prevent the guard panel being damaged from the holesaw.* Deburr and paint hole to prevent rust.



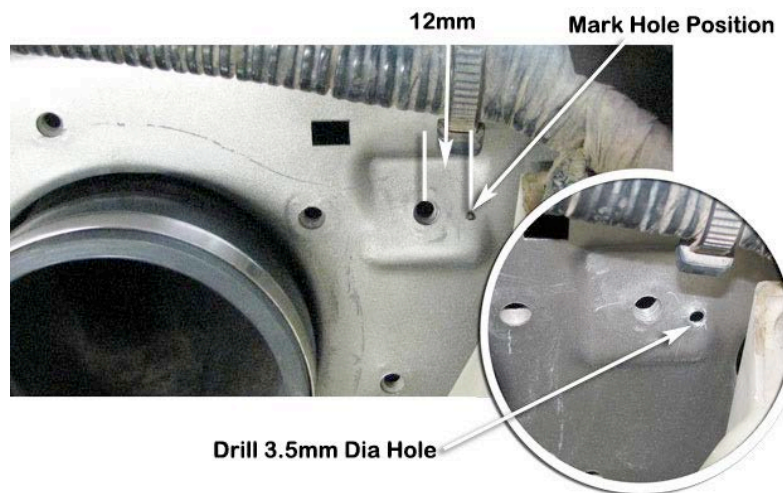
6

The top coolant overflow bottle mounting hole must be repositioned. Measure and mark the new mounting hole position approximately 12mm forward of the standard mounting hole as shown.

Drill a pilot hole at the marked position.

Using a 3.5mm drill bit, drill the mounting hole.

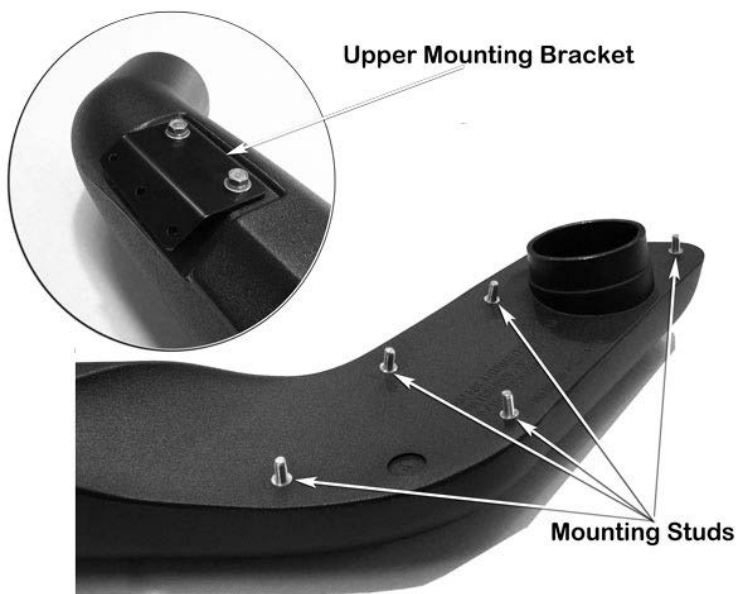
Deburr and paint hole.



7

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.





8

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, use the scribe to mark the position of the upper mounting bracket (item 3) onto the masking tape as shown.



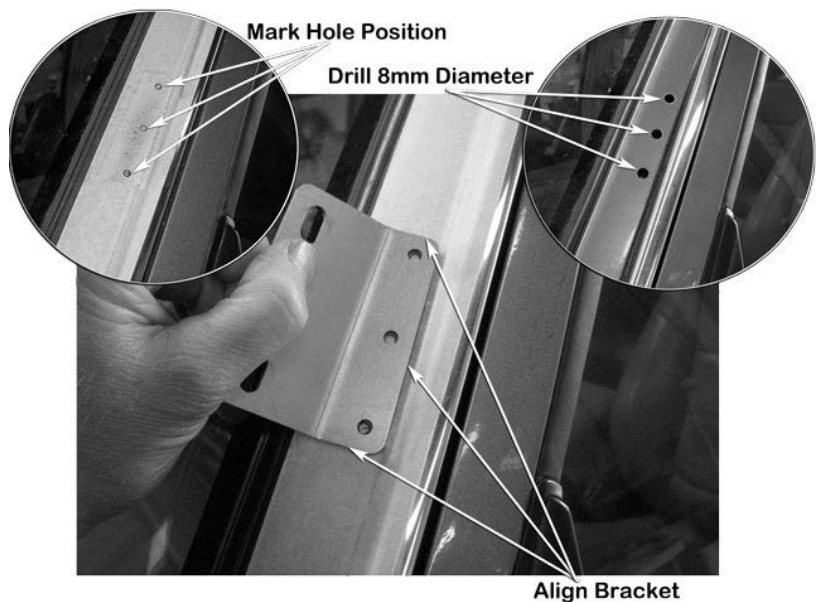
9

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 onto the A-pillar and align the bracket to the scribe markings on the masking tape. 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.

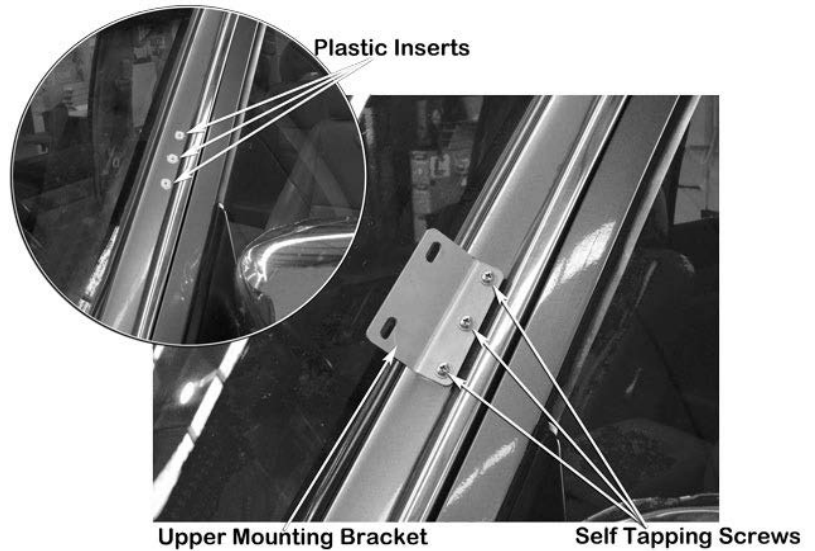
Deburr and paint holes to prevent rust.



10

Install the plastic inserts (item 6) into the upper mounting bracket holes in the A-pillar.

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



11

Install the air cleaner entry hose (item 12) through the 95mm diameter hole in the internal panel and the standard air intake hole.

*Hint: Squash the end of the hose inwards and tape to hold whilst installing the hose through the holes as shown.*



12

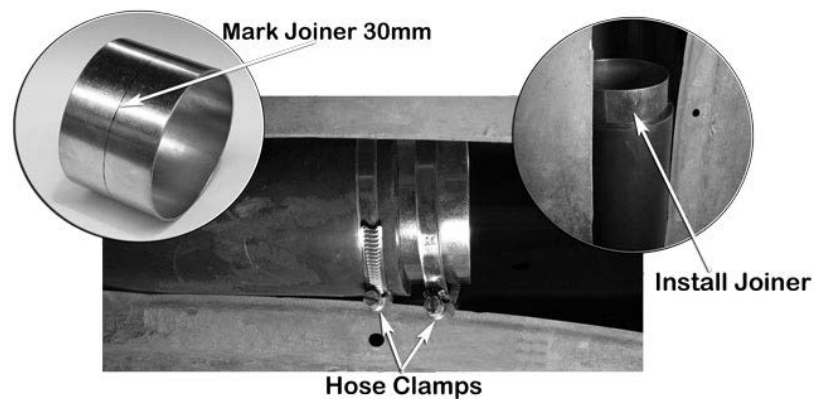
Measure and mark a line around the circumference of the 90mm diameter x 60mm long joiner (Item 11), 30mm in from the end.

Install the joiner into the air cleaner entry hose (Item 12) and align the 30mm mark to the end of the hose.

Secure the joiner in place with a 90/110mm hose clamp (Item 17).

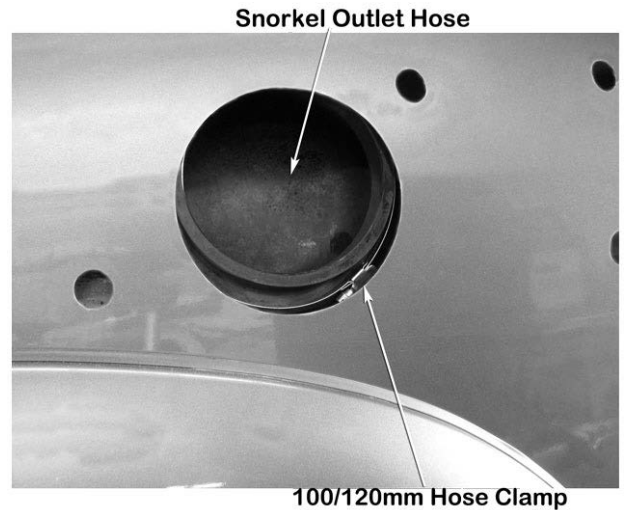
Install the second 90/110mm hose clamp (Item 17) loosely over the joiner and install the snorkel outlet hose (Item 10) over the joiner (Item 11).

Do not tighten the hose clamp at this stage.



13

Install the 100/120mm hose clamp (item 18) loosely over the snorkel outlet hose (item 10) and align the hose with the hole in the guard panel.

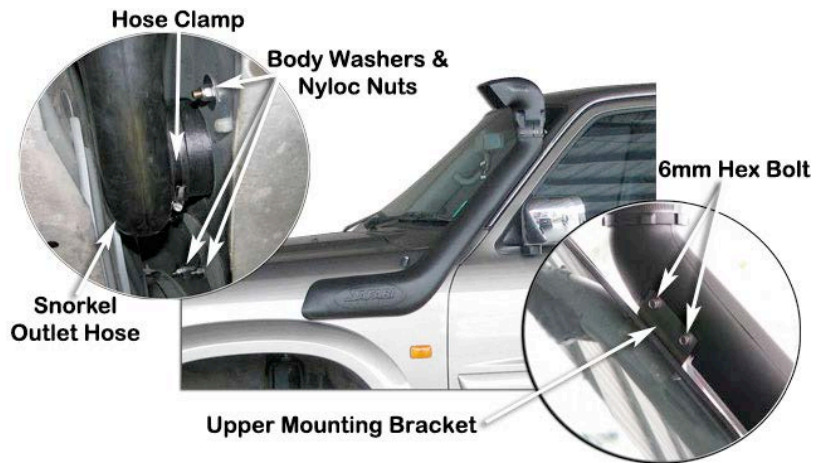


14

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 the 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).

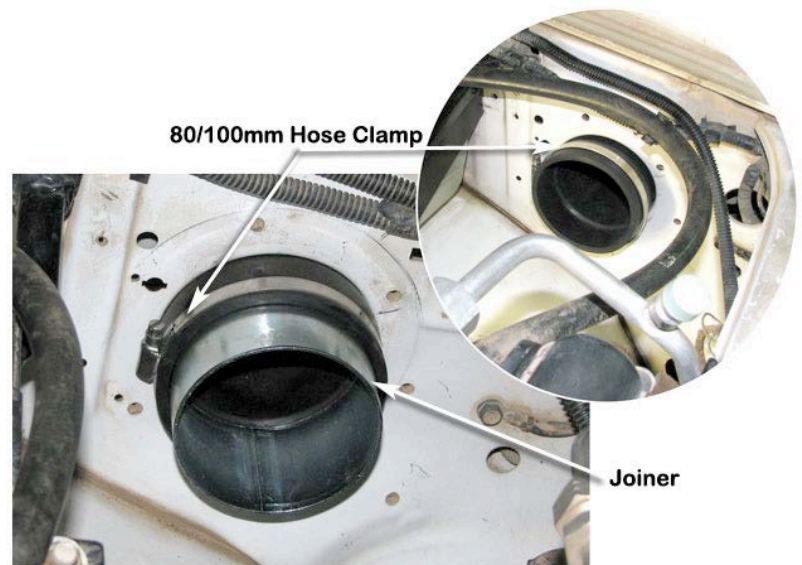
Fasten the snorkel body to the upper mounting bracket with hex bolts (item 4).



15

Install the 80/100mm hose clamp (item 16) loosely over the air cleaner entry hose (item 12).

Install the joiner (item 13) into the air cleaner entry hose (*with approximately 22mm of the joiner protruding out of the hose*), tighten the 80/100mm hose clamp.

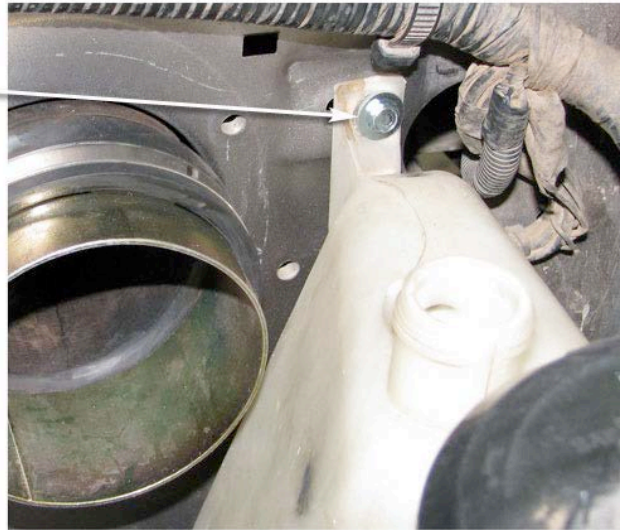




16

Install the radiator overflow bottle and fasten using self tapping screw (item 15) in the relocated mounting hole position and standard bolt in the lower mounting position, re-install the charcoal canister into the canister mounting bracket and reconnect hoses.

Self Tapping  
Screw



17

### INSTALLER OPTION

The air cleaner housing contains a drain outlet. The drain outlet can permit water to enter the air intake.

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

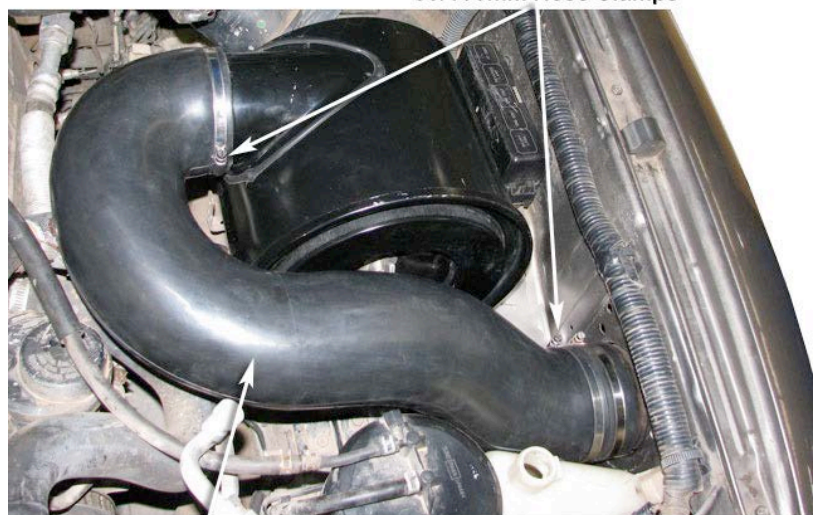


18

Install the air cleaner assembly and fasten with standard mounting hardware, loosely install a 80/100mm hose clamp (item 16) at either end of the air cleaner inlet hose (item 14).

Install the air cleaner inlet hose onto the joiner (item 13) and air cleaner inlet.

80/100mm Hose Clamps



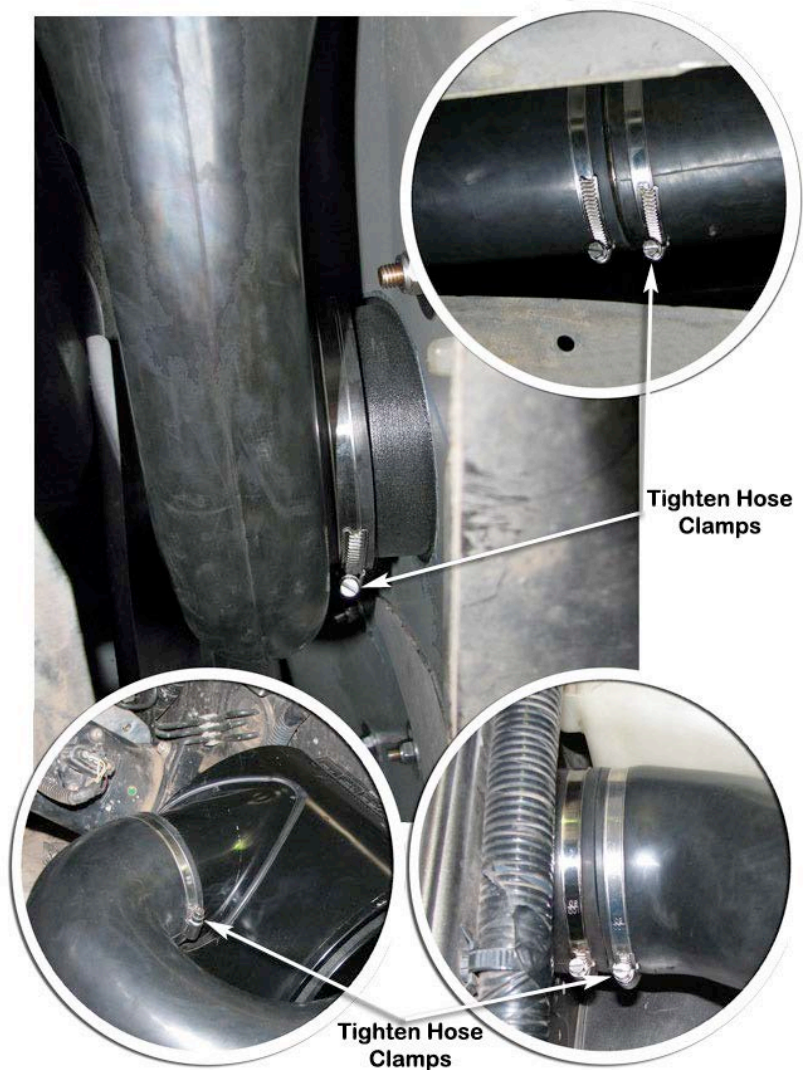
Air Cleaner Inlet Hose



19

Align the three hoses (items 10, 12 & 14) for best fitment, ensure that the snorkel outlet hose (item 10) is installed hard up against the shoulder of the snorkel body outlet snout and tighten the 100/120mm hose clamp (item 18).

Tighten the 90/110mm hose clamp at the joiner and the 80/100mm hose clamps at the air cleaner entry and air cleaner inlet hoses.



20

Install the black hose clamp (item 19) 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 19).



21 Re-install the indicator assembly, radio antenna, guard liner, mud flap and any other items that may have been removed during the snorkel installation process.

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