

## INSTALLATION GUIDE

## **ISNORKEL021**

FORD RANGER
3.0L Turbo Diesel Intercooled



- Ironman 4x4 Snorkel fits to the left hand side of the Ford Ranger.
- It will take about 3 hours to install.
- Below is a list of some required tools for installing your Ironman 4x4 Snorkel:
- Hole Saw (95mm)
- Step Drill
- Air Hacksaw
- Pop-Rivet Gun

NOTE: Only use "sensor safe" sealant during installation

1. Before installation check snorkel application is compatible with your vehicle.

2. Remove left hand front mudguard liner, air cleaner assembly and Ranger badge.



3. Apply masking tape to left hand front mudguard.



4 Tape template to mudguard making sure it is lined up with top of mudguard (bonnet opening) and rear of mudguard (door opening).

5. Using a felt tipped pen, mark all holes through template onto mudguard. Remove template.



6. Drill mounting holes to 16mm and using a 95mm hole saw, cut the remaining hole for air entry hose.





7. De-burr and rust-proof all holes (this applies to all holes drilled after this step).

8. Open left hand front door and carefully remove front section of door rubber and plastic trim from windscreen pillar.





- 9. Using thred lock, screw all mounting studs into snorkel body and attach pillar mounting bracket loosely to snorkel using M6 Bolts provied.
- 10. Apply masking tape to left hand front windscreen pillar. Hold snorkel body in position on front mudguard and mark location of mounting holes through pillar bracket onto pillar (edge of mounting bracket should be in line with the crease on pillar).



11. Remove snorkel body and remove pillar bracket from snorkel.



12. Drill holes for pillar bracket to 5mm and attach pillar bracket with pop rivets provided.



13. Apply masking tape to plastic trim removed in Step 8. Hold trim in position on pillar, mark location of pillar bracket onto plastic trim and remove trim from pillar.



14. Rule two straight lines across trim using marks in previous step as a guide.

Rule a line 5mm from step in trim between lines marked previously.





15. Remove section of trim by drilling a series of 3.5mm holes and cuttign between holes to create a slot.





16. Refit plastic trim to pillar allowing bracket to pass through slot craeted in previous step (enlarge slot to clear bracket if required). Refit door rubber.



17. Remove intake duct from air cleaner housing.



18. Position air cleaner adaptor over air cleaner intake and drill two mounting holes to 5mm.



19. Seal adaptor to air cleaner intake using silicone sealant and secure in place using pop rivets provided.



20. Refit air cleaner assembly to vehicle.



21. From under mudguard, fit rubber joiner to air cleaner adaptor and secure in place with hose clamp.



22. Attach snorkel body to mudguard using M8 Nylcok nuts and Bowdy washers, making sure snorkel outlet engages with rubber joiner and secure with hose clamp.

Re-attach to pillar mounting bracket using M6 Bolts.



- 23. Refit mudguard liner.
- 24. Check all hose connections for potential leaks and seal as required.

25. Fit Ironman 4x4 Air Ram and secure with hose clamp provided.



