# **INSTALLATION GUIDE**



# Toyota Landcruiser 100/105: 04/98-09/07

SN59-3369



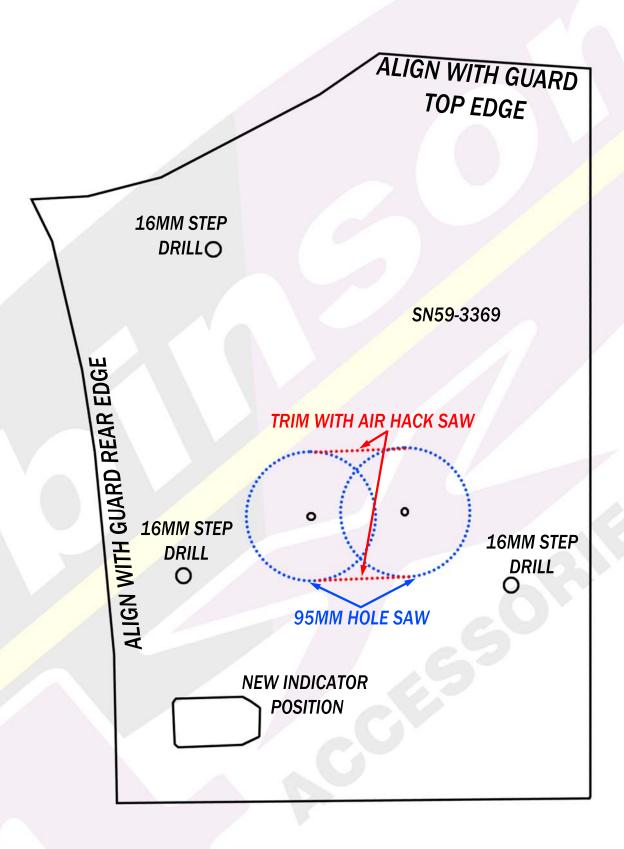
This Snorkel will take approximately 2 hours to install and is installed to the Right Hand Side of the vehicle.

#### **Tools required are:**

- 95mm hole saw
- Step Drill, drill bits and drill
- Masking Tape
- Sensor safe Sealant (Sikaflex 227 Recommended)
- Touch up Paint and small brush or cotton bud

- Allen keys & Spanners
- Pop rivet gun
- Small Square file
- Screw Drivers
- Centre Punch and Hammer
- Pneumatic hacksaw or equivalent

# TEMPLATE OUTLAY





- 1. Remove the RH mudflap and plastic inner wheel arch guard.
- 2. Remove the air-box intake duct located inside the wheel arch.





- 3. Remove the RH indicator
- 4. Apply masking tape to the RH quarter panel, it is a good idea to cover the whole panel so you do not scratch it when working around it.
- 5. Check the template against the snorkel body. Align the template on the vehicle as seen in picture on page 2, tape it down and double check again making sure it is the correct way up to align the snorkel correctly.



- 6. Once you are happy with the alignment of the template centre punch the 5 holes and mark the new indicator locating hole
- 7. Drill the 5 holes with a small pilot drill.
- 8. Drill a few holes in the centre of the new indicator locating hole with the pilot drill, then remove template.
- 9. Using the step drill, drill the 3 stud holes out to 16mm to clear the studs.
- 10. Using a 95mm hole saw on low speed drill the 2 holes to clear the snorkel body outlet.
- 11. Mark a line parallel across the top and bottom of each of the 95mm holes.



12. Using the Pneumatic hacksaw cut between the 2 holes top and bottom horizontally to make an oval.



13. Using the step drill, drill a few larger holes in the centre of the new indicator position. This will allow you to start to cut the shape out with the pneumatic hacksaw.





14. Using the pneumatic hacksaw carefully cut out the new indicator position.
Alternatively a series of small holes can be drilled around the edge of the shape and joined with a file.



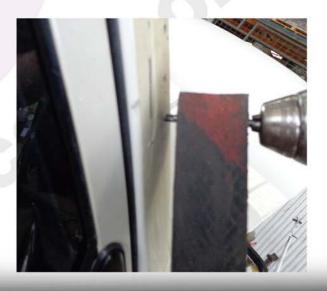
- 15. Use a file to neaten the edges and ensure the indicator fits correctly.
- 16. Remove the burrs from all holes with file or deburrer.
- 17. Fit the upper snorkel body mount to the snorkel with the bolts supplied. Do not over tighten
- 18. Fit the 3 studs to the snorkel body with thread lock and tighten with Allen key, DO NOT over-tighten.
- 19. Put some masking tape on the A-Pillar approximately where the upper bracket will mount.
- 20. Test fit the snorkel body carefully and mark the top mounting bracket position.



21. Remove the snorkel and remove the mounting bracket from the snorkel body. Hold the mounting bracket back into the position marked in the previous steps and mark the hole positions.



22. Centre punch then pilot drill the holes, and then drill to 7.5mm It is a good idea when doing this to drill through a block of wood or equivalent spacer so that only about 5mm of the drill tip sticks out so you do not drill through the interior or air bags.





23. Remove the burs from these holes, remove masking tape, paint all bare metal surfaces including the holes drilled in the quarter panel, and remove all metal fillings from the A-Pillar and quarter panel.



24. Using the screws fit the top mounting bracket. DO NOT OVER TIGHTEN SCREWS.



25. Using the pneumatic hacksaw cut a slot in the entry end of the inner guard duct. It should be about 30mm long, this will allow the rubber joiner to be fitted. The outer ring may also need to be removed to allow fitment as the rubber hose is a tight fit on this.



- 26. Fit the snorkel body to the vehicle. On each stud put a large flat washer supplied and a nyloc nut and do up finger tight.
- 27. Fit the upper snorkel mounting bracket bolts.
- 28. Tighten the nyloc nuts on the studs, and tighten the upper mounting bracket bolts. Do not over-tighten.
- 29. Fit the rubber joiner to the inner guard duct, the duct may need to be bevelled slighty as it can be quite tight and may also require a small amount of lubricant.



30. Remove the original foam seal from the air-box elbow inside the wheel arch.





- 31. Place the 2 stainless hose clamps around the rubber joiner previously fitted.
- 32. Place a thick bead of sensor safe sealant around the other end of the air duct where it meets the air box elbow to provide a seal where the foam was just removed.
- 33. Re-fit the air duct aligning the front end with the air-box elbow and the rubber joiner on the rear end with the snorkel body outlet and tighten hose clamps. Re-install the original retaining bolt.



- 34. To ensure a full waterproof system check the rest of the connections on the original air duct system and apply sealant where required.
- 35. Refit the indicator to its new position and plug in the wiring clip.
- 36. Refit the inner wheel arch guard, mudflap and any other items removed during installation.
- 37. Fit you Dobinson's 4x4 Ram head to the top of the snorkel with the black hose clamp supplied

