



INSTALLATION GUIDE

ISNORKEL048

TO SUIT NISSAN NAVARA - WIDE AND NARROW BODY
YS23DDTT 2.3L Twin Turbo Diesel Engine
YS23DDT 2.3L Single Turbo Diesel Engine
YD25DDTI 2.5L Single Turbo Diesel Engine



- Ironman 4x4 Snorkel to suit Nissan NP300 Navara fits to the right hand side
- It will take about 4 hours to install
- Below is a list of some required tools for installing your Ironman 4x4 Snorkel:
 - Hole Saw (76mm and 89mm)
 - Air Hacksaw
 - Pop Rivet Gun
 - Step Drill
 - Spanner (13mm)

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NOTE: Only use "sensor safe" sealant during installation

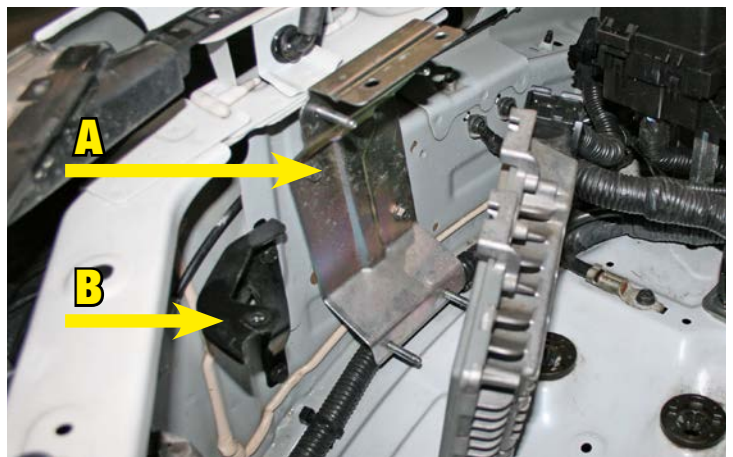
IMPORTANT: Snorkel installations should only be done by a qualified person and it's the responsibility of this person to ensure correct fitment, confirming the installation is water tight

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

2. Remove right hand front mudguard liner and factory air box.



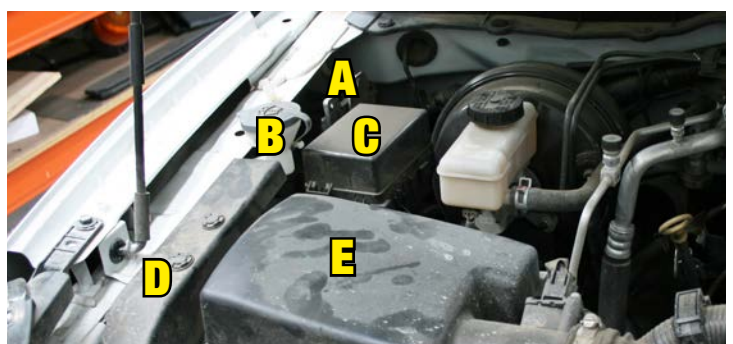
3. Remove front ECU and mounting bracket (A). Remove airbox retaining bracket (B).



4. Remove relay box and bracket, washer bottle fill neck, rear ECU and mounting bracket.



OVERVIEW: By this stage, all these items should have been removed
Rear ECU (A)
Washer Bottle Fill Neck (B)
Relay Box (C)
Front ECU (D)
Air Box (E)



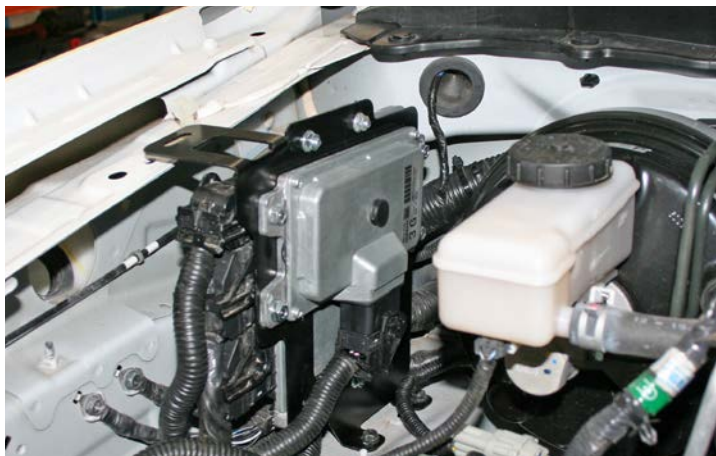
- 5.** STEP 1: Mount smaller ECU towards the top of the supplied bracket, opposite large tab. Use countersunk M6 bolts from the opposite side of the bracket, using nuts on the ECU side to secure.



STEP 2: Mount the large ECU on the opposite side, covering the heads the countersunk bolts from step 1. Secure using standard M6 nuts and bolts.

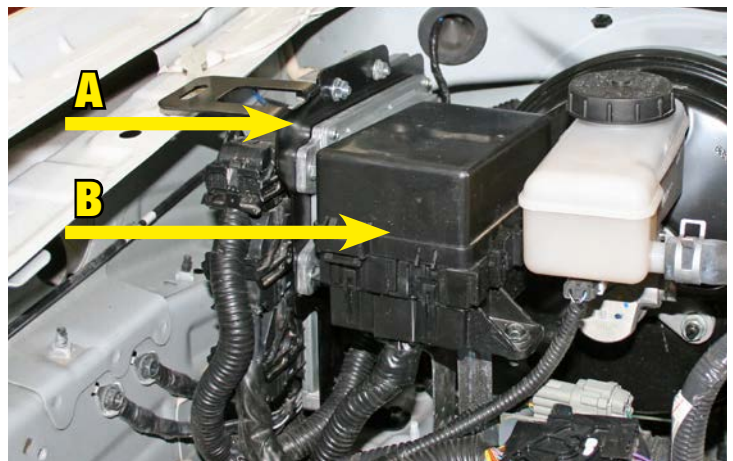
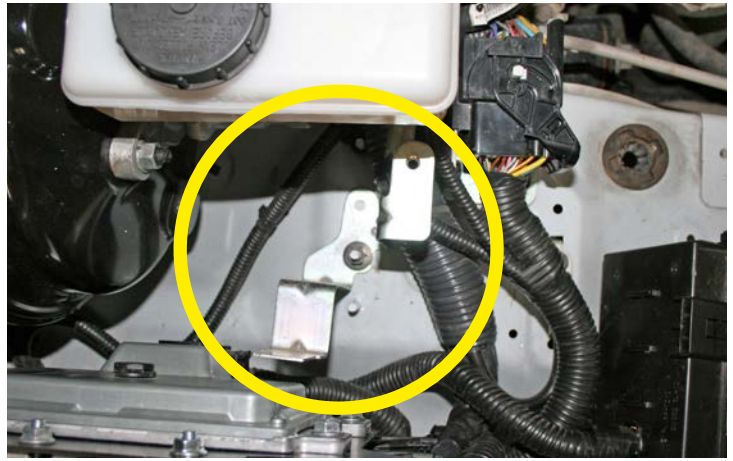


- 6.** Mount ECU's into back right hand corner of engine bay using 2 x M6 bolts removed from original computer bracket. Do not fit upper bolt on the inner guard, this will be completed later.



- 7.** Re-fit relay box mounting bracket by moving bracket across one hole. Re-fit relay box.

ECU (A)
Relay Box (B)



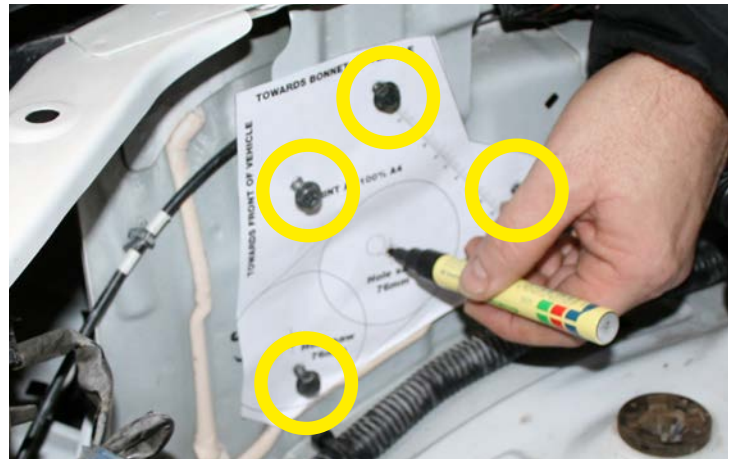
- 8.** Remove washer bottle from inner guard by removing 2 x M6 bolts then sliding forward.



- 9.** Using 4 bolts, bolt inner guard template into position and mark the 2 x 76mm hole centers

Drill both holes using a 76mm hole saw. Once drilled use an air hacksaw to join holes together.

De-burr and rust-proof all cut areas.



- 10.** Apply masking tape to right hand front mudguard and right hand windscreen pillar.

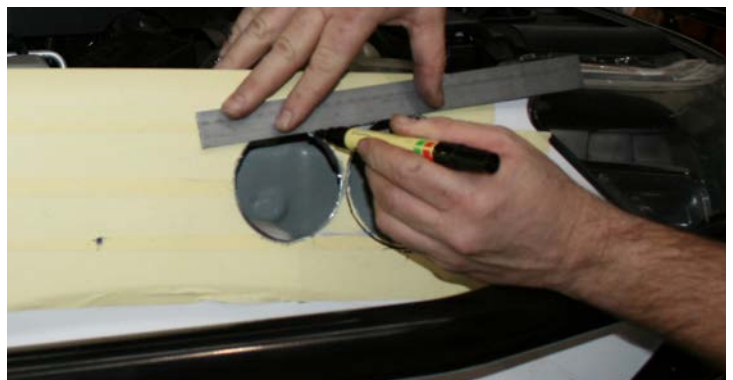


- 11.** Tape template to mudguard making sure it is lined up with top of mudguard (bonnet opening) and rear of mudguard (door opening).



- 12.** Use a felt tipped pen, mark all holes through template onto mudguard. Remove template.

- 13.** Using a hole saw drill 76mm hole and 89mm hole as indicated by the template. Once drilled use an air hacksaw to join holes together.



14. Drill remaining holes using a step drill to size indicated by the template.

NOTE: Circled hole shown to be max 12mm only



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

16. Using thread-lock screw all studs into snorkel body and attach pillar mounting bracket loosely to snorkel using M6 bolts provided.

17. Hold snorkel body in position on mudguard and mark position of pillar bracket on pillar.

Note: Ensure clearance around indicator.

18. Remove bracket from snorkel.

Hold bracket in position previously marked on pillar and mark mounting holes.

Drill mounting holes in pillar to 7.5mm. Apply silicone sealant. Insert mounting plugs and attach mounting bracket using three self tapping screws provided (when drilling mounting holes, only drill through outed skin and no further)



- 19.** Install snorkel body to vehicle using M8 Nylock nuts and body washers provided and attach to pillar bracket using M6 bolts provided.

Note: ensure clearance around indicator



- 20.** Apply sealant around the inside of the large end of the rubber duct. Install through inner guard hole and attach to snorkel body with hose clamp provided.



- 21.** Re-fit washer bottle. Check for clearance between snorkel mounting studs and washer bottle. Shorten studs if necessary.

- 22.** Place air box adaptor onto front right side of air box and mark the outside perimeter with a paint pen or similar.



- 23.** Using grinder or similar grind flat area where adaptor will sit as shown.



- 24.** Using supplied air box template mark hole for cutting



- 25.** Using air hacksaw cut the template shape to create a hole. Inner baffle will also require removal. Clean all edges.



- 26.** Apply sealant to airbox outer cut edge and back edge of air box adaptor.



- 27.** Fit air box adaptor to air box using supplied pop rivets. Add sealant to ensure fully sealed connection.

For example; check edges, rivets and internal edges.



- 28.** Remove factory intake duct and OE rubber seal. Add sealant to inside edge of supplied blanking cap and fit to air box over original intake hole.



- 29.** Trim lower section of air box mounting bracket away. Re-fit to vehicle.



- 30.** Add sealant to air box adaptor ready for fitment.



- 31.** Re-fit air box, attach to rubber joiner with hose clamp provided.

Check all hose connections and air box for potential leaks and seal as required.



- 32.** Install washer bottle filler neck.

Secure filler neck with top mount of computer relocation bracket using supplied M6 bolt and nut.



- 33.** Re-fit guard liner.

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

