INSTALLATION INSTRUCTIONS FOR A REPLACEMENT TANK

THE LONG RANGER

THE BIG TANK FOR A BIG COUNTRY

MADE IN AUSTRALIA

NISSAN GU PATROL

Suits all petrol models

TR45P – 145 litre replacement tank

GENERAL NOTES

a) Please take a few minutes to read through this installation guide before proceeding.

b) Fitting time is approximately 3.5 hours. No major vehicle modifications are required. This LONG RANGER tank locates under the vehicle in place of the original tank.

c) Although the LONG RANGER tank maximises ground clearance, it should be noted that the new tank will sit slightly lower than the original tank's stone guard.

d) The original filler, fuel level sender unit, and pick-up unit are used in this installation. Extreme care and cleanliness is recommended when handling fuel level sender and submerged fuel pump units. Inspect any components that are to be reused from the original tank installation for serviceability and replace any item found to be defective.

e) Check if the vehicle owner wants to retain the original tank and any associated parts.

f) A vehicle hoist is not essential but will speed the job up significantly.

g) Check that tools, clothing and footwear are clean before working on the interior of the vehicle.

h) LONG RANGER tanks are coated with a high-performance primer. For added protection, a topcoat may be added. If the vehicle has been rustproofed, it is suggested that the tank (and any changes made to the vehicle during fitting) be touched up after installation.

i) The LONG RANGER is designed to fit with most towbars and in most cases they are best fitted after or during the tank installation. Most towbars will need to be removed to access the rear tank mounting bolts.

j) Access to the rear cargo area is required but not essential.

k) On models with rear air it is important that the pipe above the tank are checked for clearance.

l) Observe safety precautions during the installation of the LONG RANGER fuel tank.

INSTALLATION KIT – TR45

QTY DESCRIPTION This LONG RANGER installation kit checked by _____

- ❑ 1 LONG RANGER TANK **(TR45)**
- ❑ 6 Flat washers 10.0 x 30.0 x 2.5mm
- ❑ 1 Canister mounting bracket #TR45PCM
- ❑ 1 Carbon canister TLR #CC01
- ❑ 3 Tag bolt M8 x 20 #SF02 (for carbon canister mount)
- ❑ 3 Self-locking nuts M8
- ❑ 3 Flat washers M8
- ❑ 4 Bolt M6 x 20
- ❑ 4 Self-locking nuts M6
- ❑ 8 Flat washers M6
- ❑ 2 Brass fittings 1/4 BSP x 6mm straight
- ❑ 3 Hose clamps MH4 (fuel pickup)
- ❑ 10 Cable tie 150mm
- ❑ 5 Cable ties 300mm
- ❑ 1 Fuel hose 6.5mm ID x 450mm long for breather extension.
- ❑ 1 Fuel hose 6mm x 4500mm (Long Ranger canister to OEM canister)
- ❑ 1 Fuel hose 6mm x 600mm (Long Ranger canister to OEM canister air inlet line)
- ❑ 1 Installation Guide
- ❑ 1 Warranty Information Sheet and Return Card
- ❑ 1 LONG RANGER sticker

INSTALLATION GUIDE

1. Check that all items listed in the LONG RANGER installation kit have been received, and that nothing has been damaged in transit.
2. Although the LONG RANGER tank has been cleaned and sealed at the factory, it is recommended that its interior be vacuumed again as an added precaution against blocked filters and / or fuel pump damage.
3. If parts are missing or damaged, if foreign matter is found in the tank, or if any problems arise during installation, contact the factory office without delay for advice phone (02) 4953 3288, fax (02) 4953 1916 or visit www.thelongranger.com.au
4. Drain fuel from tank into a suitable container. There may not be a drain plug – in this case use a pump or syphon. ***NOTE: Observe recognised safety practices when handling fuel***.
5. **During installation** - inspect any components to be reused from the original tank for serviceability and replace if found to be defective, eg EFI pump strainers, fuel hoses, gaskets etc.
6. Gain access to the rear cargo floor. Unscrew the carpet trim and lift the carpet where applicable.
7. Remove the fuel pump inspection hatch (where fitted). Mark the fuel hose positions before removing hoses, to ensure they are put back onto the correct fittings.
8. Disconnect wiring to the pump unit.

9. Disconnect fuel hoses at the pump. ***WARNING: Fuel in some hoses may be under pressure – take care when disconnecting***.
10. Remove inspection cover in right hand side rear wheel arch and disconnect main filler and fast filler hoses from filler neck.
11. Disconnect from the check valve the short 6.5mm (1/4 inch) ID breather line near chassis on right hand side and discard.
12. Remove tank. HINT: *Leave centre bolts until last, so that the stone guard can be removed first.*
13. Remove any short pieces of steel piping and plastic clips from drivers side chassis rail.
14. **Custom tank only**
    If you ordered a tank which is lifted up you will need to remove excess metal protruding from back of top shock absorber mounts.
15. Remove the fuel pickup / level sender unit from the original tank. ***NOTE:*** *Extreme care and cleanliness is recommended when handling fuel level sender and submerged fuel pump units*.
16. Carefully insert the pump / sender into the new tank, and secure in place using the original O-ring seal and M5 screws. Aim the fuel lines toward the right hand side of the vehicle. HINT: same side of the tank as the filler neck fitting. Ensure sender float will not foul on baffles.

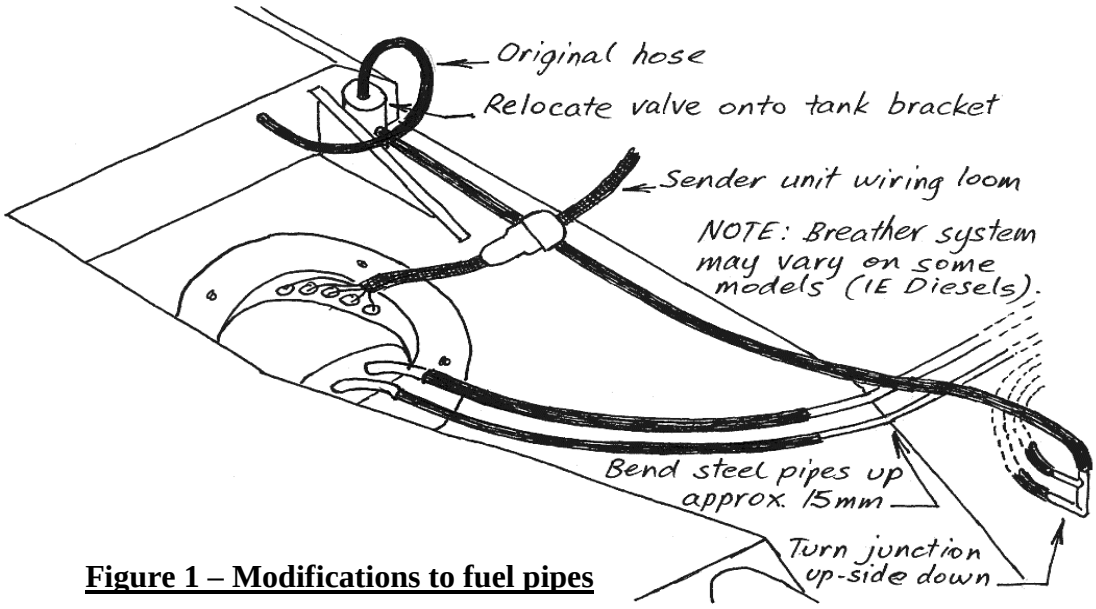

Figure 1 – Modifications to fuel pipes

17. Refer to **Figure 1.** Relocate the tank breather valve onto the bracket on the new tank, and use the original 6.5mm black breather hose to connect to the header fitting. Fit one end of the 6.5mm hose supplied onto the outlet of the breather valve, and secure with the original spring clip.
18. Refer to **Figure 1.** Locate the junction for the 6.5mm breathers along the chassis. This needs to be turned upside-down to allow for easy connection at a later stage.
19. Bend the ends of the steel pickup and return lines up approximately 15mm so they won't foul on the top of the tank.

20. Lift the new tank into place and loosely fit the original bolts. Ensure that there is adequate clearance all round and that there are no wires or hoses caught on top of the tank. On models with rear air check for clearance on top of tank, some vehicles have the pipes protruding through the floor more than others and the only solution is to space the tank down.
21. Tighten all bolts.
22. Connect the fuel pump hoses and the electrical connector through the inspection hole in the floor. NOTE: Ensure that the fuel lines are put back onto the correct fittings.
23. Refit the breather, filler, and filler breather hoses after trimming to length. The following lengths have been found to be correct on most models but ***CHECK BEFORE CUTTING!***
    Filler breather – cut 80mm off end,
    Filler – cut 70mm from tank end.
24. Confirm that adequate clearance exists all round the tank.
25. **As per photo 1 and Canister plumbing diagram**: Fit straight brass barbs to canister using Teflon thread tape, do not over tighten. With fittings towards rear of vehicle, fit canister to bracket with M6 bolts, nyloc nuts and washers supplied.
26. **As per photo 1**: Fit canister mount to right hand side chassis rail below drivers floor with 3 tag bolts, washer and nylocs nuts. Trim excess tag off flush with chassis.
27. **As per canister plumbing diagram Photo 1, 2 and 3**: Fit both 6mm hoses to the brass barbs, run the short hose into hole in chassis, run other hose along, over cross member and connect to pipe inside chassis, *Note: this pipe is the "air inlet" from the bottom of the OEM canister and will connect the new canister into the existing emissions control system. Note: barb selection is not important*.
28. Cable tie all hoses securely.
29. Check that all bolts and hose clamps are tensioned correctly.
30. Check that hoses will not chafe on nearby components, and will not foul as suspension

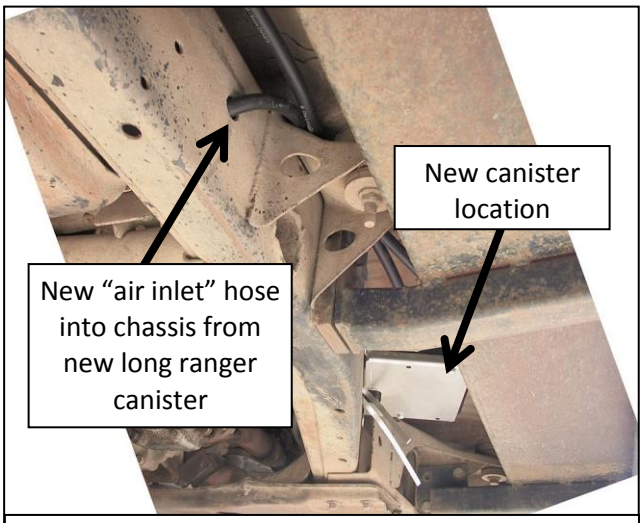

Photo 1: Canister mounting and "air inlet"

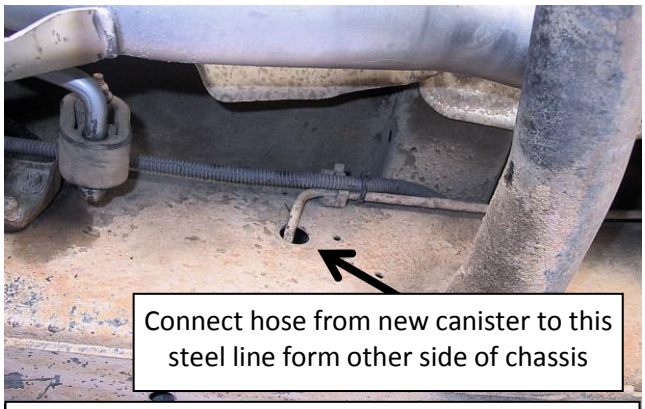

Photo 2: OEM canister "air inlet"

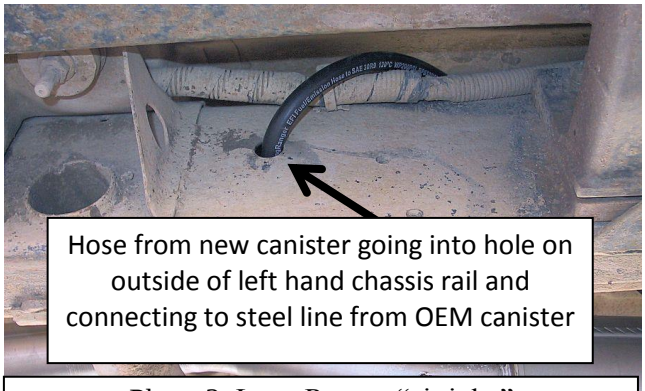

Photo 3: Long Ranger "air inlet"

moves.

31. Check that the steel sections of the pickup and return lines do not foul on the top of the tank.
32. Touch up paint and rustproofing as required.
33. Replace fuel removed from the original tank into the LONG RANGER tank. Check for leaks.
34. We suggest that the tank be filled with a test load of fuel (not included in the quoted price).
35. Test run to ensure correct operation and no air locks.
36. Re-fit the inspection cover and carpet in rear floor, and replace rear wheel arch cover (where applicable).
37. Visually check the job over, make sure all bolts and clamps are fastened correctly, ensure all fuel hoses and electrical wiring will not chafe on nearby components and moving suspension, clean and detail the area involved in the work before returning the vehicle to its owner.

Explain to the owner the operation of the LONG RANGER TANK.

- The LONG RANGER tank will fill in a similar fashion to the tank it replaces, but the operator has the option of carrying a substantially larger quantity of fuel.
- Due to the different shape of the LONG RANGER tank the gauge will measure a larger quantity of fuel and will remain on *FULL* for a longer distance before slowly moving to *EMPTY*. The low warning light (some models) when activated will also measure a proportionally larger quantity of fuel. It is suggested that the gauge readings be cautiously interpreted until familiar with the new readings.
- The quoted capacity of the LONG RANGER tank was determined by a bench test. The actual operating capacity may vary slightly from vehicle to vehicle.
- The vehicle manufacturer selected springs without accounting for a bigger fuel tank. Suspension modifications are available if required.
- The LONG RANGER tank is a premium quality accessory that will provide many years of satisfactory service provided that the **Care and Maintenance** items listed below are taken care of each time the vehicle is serviced.
- Hand these instructions, together with the **Warranty Registration Card** and **Warranty Information**, to the owner. Neatly apply the LONG RANGER sticker to the rear bumper or window.

CARE AND MAINTENANCE

1. After the first **1,000 kilometres,** clean or replace the vehicle's fuel filter and check all hose connections for leaks. Check that all fasteners are correctly tensioned, and that there is no rubbing or chafing of the tank, fuel hoses or associated components.
2. At each of the vehicle manufacturer's recommended services, check all fastenings for the correct tension, that rust preventative has been correctly applied where applicable, release the tank drain plug and confirm that there is no water present, and replace the fuel filter according to manufacturer's recommendations.

Carbon Canister Plumbing diagram