

**INSTALLATION INSTRUCTIONS
FOR AN AUXILIARY TANK**



THE LONG RANGER

THE BIG TANK FOR A BIG COUNTRY



LANDCRUISER HJ/HZJ75 TROOPY

TA48 – 180lt, SUITS MODELS WITH SPARE TYRE UNDER REAR

GENERAL NOTES

- a) Take a few minutes to read through this installation guide before proceeding.
- b) Fitting time is approximately four hours. No major vehicle modifications are required, but note that an accessory spare wheel carrier is required. This LONG RANGER tank locates under the rear of the vehicle in place of the spare wheel.
- c) A vehicle hoist is not essential but will speed the job up significantly.
- d) This LONG RANGER tank is filled by the addition of another filler which utilises a neat fibreglass recessed panel. Fuel is transferred as required to the original tank via an electric pump. An optional 6 port solenoid valve can be fitted instead of the transfer pump for independent tank operation.
- e) An optional sender unit can be fitted.
- f) Check that tools, clothing and footwear are clean before working on the interior of the vehicle.
- g) 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.
- h) The LONG RANGER is designed to fit with most towbars
- i) We recommend inverting the shackle hangers before fitment of the tank.
- j) *Observe safety precautions during the installation of the LONG RANGER fuel tank.*

Special tools : An electrical crimping tool, a drill and 95mm hole saw and a jig saw are required.

INSTALLATION KIT TA48

QTY DESCRIPTION This LONG RANGER installation kit has been checked by _____

- 1 LONG RANGER TANK (TA48)
- 2 Bolts ½” UNC x 2”
- 2 Self-locking nuts ½” UNC
- 4 Flat washers ½ x ¾”
- 2 Doubler plates B66
- 2 U-bolts 3/8” UNC
- 4 Self-locking nuts 3/8” UNC
- 4 Flat washers 3/8” x ¾”
- 2 Bolts ¼ x ¾” UNC for pump
- 2 Self-locking nuts ¾” UNC
- 4 Flat washers ¼ x 5/8”
- 1 Filler panel FP008
- 5 Pop rivets 1/8 x 5/8
- 1 Filler neck FN55
- 1 Filler cap
- 1 Fuel hose 12.5mm ID x 500mm for fast-fill breather
- 2 Fuel hose 12.5mm ID x 550mm for link breathers.
- 1 Fuel hose 8.0mm ID x 1800mm for fuel pickup/transfer
- 1 Fuel hose 8.0mm ID x 1800mm for tank return/overflow
- 1 Fuel hose 6.5mm ID x 3000mm for system breather
- 1 Filler joiner 50.0 x 75.0mm
- 2 Hose clamps HS32 for 50.0mm hose
- 8 Hose clamps MH6 for 12.5mm hose
- 6 Hose clamps MH4 for 8.0mm hose
- 6 Spring clips for 6.5mm hose
- 1 T-piece 6.5 x 6.5 x 6.5mm OD
- 1 Junction 16.0 x 16.0 x 9.5 x offset 8.0mm OD MJ13
- 1 Fuel pump 12-volt
- 2 Brass fittings 1/8 BSP x 5/16” straight barb
- 1 Fuel filter in-line 8.0mm ZI4
- 1 Switch rocker on/off 10-amp with pilot light 58327-01
- 1 Sheathed wire single core (red) 4.0mm x 5.0m
- 1 Sheathed wire twin core (red/black) 4.0mm x 3.0m
- 4 Terminal blue female spade connector
- 1 Terminal red male spade connector
- 2 Terminal blue lug 6.5mm
- 1 Blanking plate for Toyota gauge flange
- 5 Screws M4 x 10.0mm for blanking plate
- 1 Sender unit gasket (Toyota)
- 2 Cable tie 30cm
- 15 Cable ties 15cm
- 1 Warranty information sheet and return card
- 1 Long Ranger sticker
- 1 Long Ranger auxiliary tank fitting guide

INSTALLATION GUIDE

1. Check that all items listed in the LONG RANGER 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. Remove spare wheel and winch unit.
5. Remove or trim any bolts etc protruding into tank area by more than approximately 6.0mm.
6. Bend the bracket on the RH side of the pipe cross member on the opposite side to the rear shock absorber up to clear the tank.
7. Turn shackle hangers around for easy removal after tank installation.
8. Lift the LONG RANGER auxiliary tank into position with the filler at the right and support with suitable equipment. Centralise tank between chassis rails. Loosely fit the U-bolts at the front and **check for clearance all round**.
9. For the rear mountings drill ½” clearance holes through chassis using rear brackets as a guide. Clean and apply rustproofing. Secure tank using doubler plate on top of chassis and ½” Bolts. Tighten front ubolts and **recheck clearance all round**.
10. Refer to figures 1 and 2 for the following steps. On the RH side of the vehicle, hold the filler panel plumb with its uppermost point slightly below the bodywork crease, and its front edge approximately 40.0mm from the wheel arch. Trace the filler housing outline. **NOTE: this is NOT a cutting line.**
11. Measure in 15.0mm from the line previously traced. Cut on this line.
12. Using a 95.0mm hole saw, cut a hole in the inner body panel approximately centred on the hole previously cut.
13. Extend the 95.0mm hole approximately as illustrated to allow clearance for the filler neck. **Check by holding filler housing and filler neck in place.** Apply rustproofing to all cut edges.

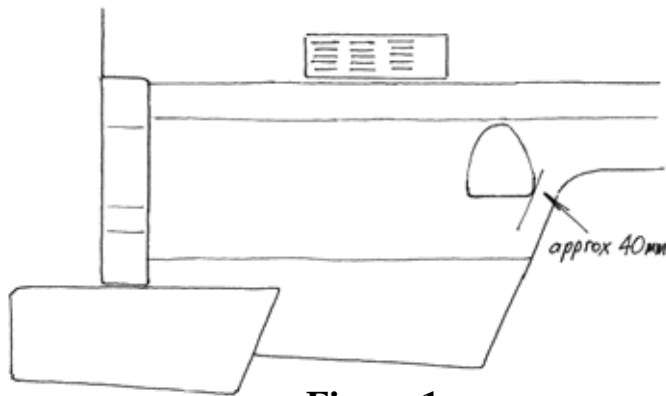


Figure 1

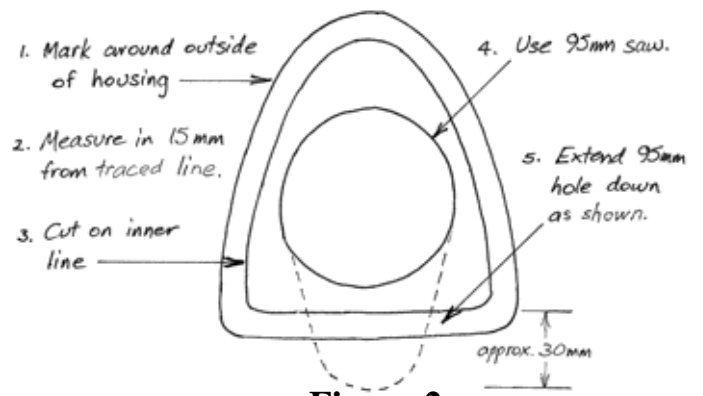


Figure 2

14. Install filler panel, securing with pop rivets.

15. Insert filler neck using 50.0mm joiners and clamps.

16. Seal inner guard with silicone or similar material to prevent dust entry into vehicle.

17. Seal sender hole in tank using plate, gasket, and screws supplied in the kit. **NOTE:** A Toyota fuel level sender unit may be installed and connected to the existing dash instrument through a suitable ON/ON switch (not supplied).

18. Refer to Figure 3. Fit the two link breather hoses, one to each side of tank, connecting front and rear tank sections.

19. Fit fast-fill breather and secure to filler neck with a large cable tie, Note: The body lip may be bent up to prevent chafing on the sharp edge.

20. Refer to Figure 3. Cut original tank's 12.5mm fast-fill breather and insert the 4-way junction supplied and secure with hose clamps. **NOTE:** The 9.5mm branch must point horizontally to the rear.

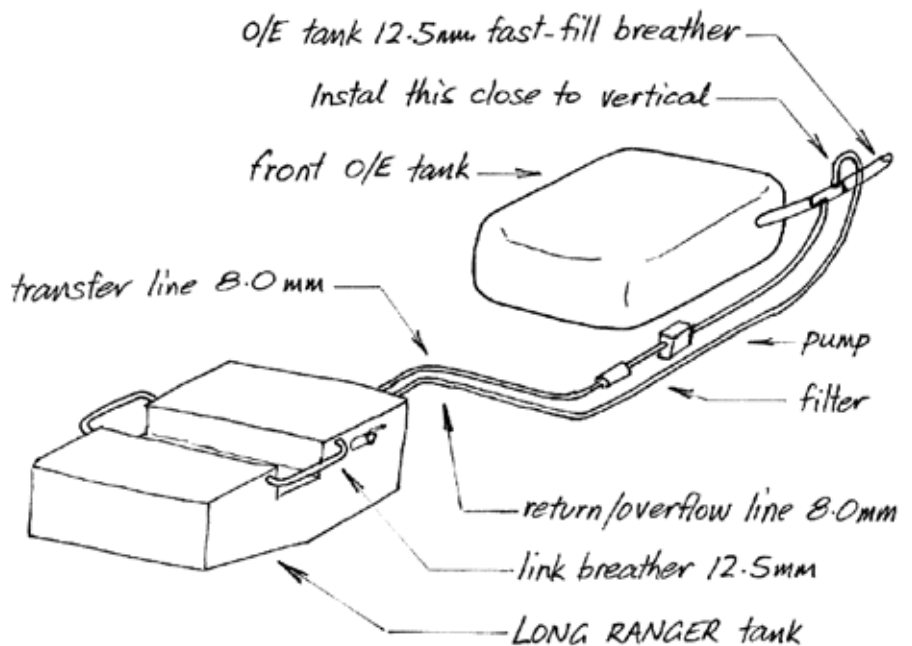


Figure 3

21. Connect 8.0mm ID x 1800mm overflow line to the vertical junction branch and secure with MH4 close clamp.

22. Connect 8.0mm ID x 1800mm pickup/transfer hose to the remaining junction branch and secure with MH4 hose clamp.

23. Apply a suitable sealant to the brass barbs and screw them into the fuel pump. Select a suitably protected and convenient mounting point for the pump and drill clearance holes, and secure with bolts, nuts, and washers supplied, mount the earth lug under one of the bolts. **NOTE 1:** Refer to photograph for a possible position providing that a TA42 or TW02SS will not be fitted in the future (additional M8 bolts required). **NOTE 2:** Check that direction of flow is from the LONG RANGER tank to the original front tank, and that the earth wire is secured under a fixing bolt.



24. Cut the 1800mm pickup/transfer hose adjacent to the fuel pump outlet barb. Connect the hose to the outlet barb and secure with an MH4 clamp. **Don't cable tie at this stage.**

25. Connect the remaining section of pickup/transfer hose to the pump inlet barb and secure with a MH4 clamp. Insert an in-line fuel filter between the pump and the LONG RANGER tank.

26. Run both pickup/transfer and return (overflow) hoses along the chassis rail to the LONG RANGER tank. Connect the PICKUP hose to the 9.5mm tank spigot and connect the RETURN hose to the 8.0mm tank spigot after trimming to length (if required). Secure each with an MH4 clamp. **Don't cable tie at this stage.**

27. Connect the 6.5mm system breather hose to the 6.5mm outlet tube at the top of the LONG RANGER tank. Run hose along chassis rail to the front tank.

28. Cut an original 6.5mm tank system breather hose (between the tank and any check valves or other emission control fittings, this can be found at the front left hand corner or on the drivers side of the tank depending on model), insert the 6.5mm T-piece and secure with spring clips.

29. Connect the LONG RANGER tank system breather to the T-piece and secure with a spring clip. **NOTE:** Trim hose length to suit.

30. **REFER:** to Figure 4. Connect red wire, 4.0mm x 5.0 m to red pump wire using terminal spade connectors (black wire should already be earthed under fixing bolt). Seal connection to prevent water entry and corrosion.

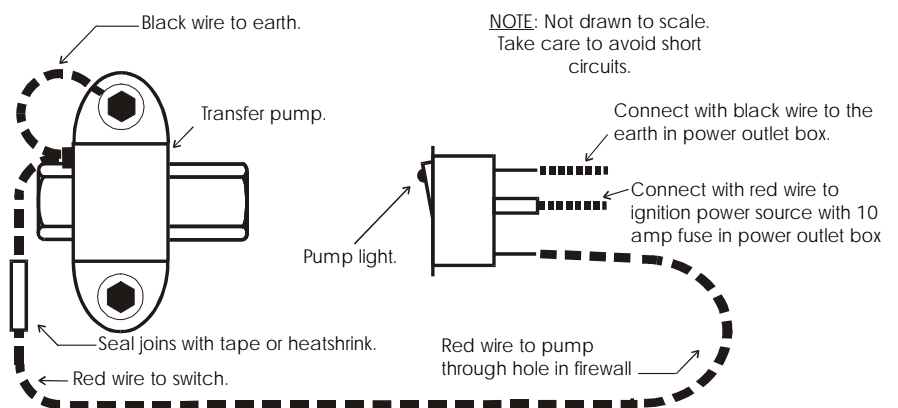


Figure 4

31. Run wire along chassis and up firewall past the clutch master cylinder, and through a large firewall grommet.
32. Select a mounting position for the switch. Run red wire to the switch, cut, strip, crimp on spade terminals, and connect to the switch.
33. REFER: to Figure 4. Connect the twin core wire to the switch and run the wire to the power outlet box in front of the battery. Using the terminal lugs supplied connect the black wire to the earth and the red wire to the ignition power source (**10 amp fuse**) in the power outlet box.
34. Check the operation of the fuel pump secure wiring and all hoses neatly along chassis rail and firewall using cable ties supplied.
35. 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, detail the area involved in the work before returning the vehicle to its owner.
36. We suggest that the tank be filled with a test load of fuel, test drive vehicle and inspect all fittings for leaks (not included in the quoted price).

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

- a) The electric pump should be switched on to transfer fuel from the auxiliary tank when the fuel gauge indicates that the main tank is substantially empty. Turn switch off when the main tank gauge approaches the “full” mark or listen for the change in the tone and volume of the sound the fuel pump makes when operating to determine whether or not it is actually pumping fuel and hence fuel transfer is complete. The auxiliary LONG RANGER tank carries considerably more fuel than the original LandCruiser tank.
- b) The electric pump is covered by its manufacturer’s warranty, which does not include damage caused by incorrect use. It is important that the pump is not operated for more than a very brief period without a flow of fuel.
- c) It is important to listen for the change in the tone and volume of the sound the fuel pump makes when operating to determine whether or not it is actually pumping fuel.
- d) The quoted capacity of the LONG RANGER tank was determined by a bench test. The actual operating capacity may vary slightly.
- e) Under some driving conditions a portion of fuel may automatically move from tank to tank through the transfer junction.
- f) The transfer pump is connected through a 10 amp fuse in the power outlet box in the front left corner of the engine bay.
- a) The vehicle manufacturer selected springs without accounting for a bigger fuel tank. Several suspension modification options are available.
- b) 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 fuel filter, check 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.

