INSTALLATION INSTRUCTIONS FOR A REPLACEMENT TANK

THE LONG RANGER

THE BIG TANK FOR A BIG COUNTRY

MADE IN AUSTRALIA

LANDCRUISER 100 SERIES

(Independent Front Suspension Models)

TR52 – 182 litre Diesel Replacement Sub Tank

GENERAL NOTES

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

b) Fitting time is approximately three hours. No major vehicle modifications are required. This LONG RANGER fuel tank locates under the vehicle behind the rear axle, in place of the standard sub tank and spare wheel. ***Note:*** *spare wheel must be re-located.*

c) The lowest point of the LONG RANGER tank lies within the LandCruiser's departure angle and gives 50 to 70mm more ground clearance than the original spare wheel location.

d) Extreme care and cleanliness is recommended when handling fuel level sender and submerged fuel pump and intake 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) This LONG RANGER tank is filled via the original sub tank's filler. Fuel is transferred as required using the original sub tank switch.

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

i) 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.

j) The LONG RANGER is designed to fit with most towbars and in most cases they are best fitted after or during the tank installation. Tank will not fit with a towbar which bolts to spare wheel crossmember.

k) ***IMPORTANT****: The LandCruiser is fitted with SRS Air Bags. Exercise EXTREME CARE when working on the electrical system.*

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

m) **Special tools:** Silver soldering equipment or similar is required to extend the sender unit float arm. Apart from this a normal mechanical toolkit is sufficient - no other special equipment or tools are required.

INSTALLATION KIT TR52

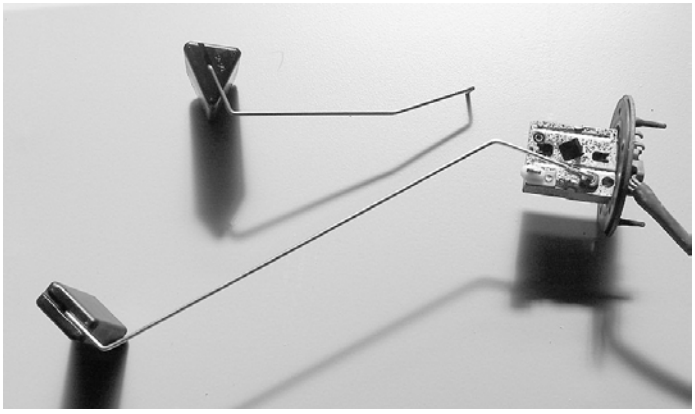
QTY DESCRIPTION This LONG RANGER installation kit has been checked by _____

- ❑ 1 LONG RANGER TANK **(TR52)**
- ❑ 2 Mounting brackets **(B77)**
- ❑ 2 U-bolt M10 x 120mm long **(TR52)**
- ❑ 2 Bolt M10 x 25
- ❑ 2 Bolt M10 x 40
- ❑ 8 Self-locking nuts M10
- ❑ 10 Flat washers M10
- ❑ 2 Flat washers 10 x 30 x 2.5mm
- ❑ 1 FLARTR51 Replacement Float Arm
- ❑ 5 Cable ties 150mm
- ❑ 1 Installation Guide
- ❑ 1 Warranty Information Sheet and Return Card
- ❑ 1 LONG RANGER sticker

INSTALLATION GUIDE

1. Please take a few minutes to read through this installation guide before proceeding.
2. Check that all items listed in the LONG RANGER installation kit have been received, and that nothing has been damaged in transit.
3. 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.
4. 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
5. 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. Remove the spare wheel and the spare wheel support cross member – discard bolts. **Note:** A towbar that mounts to the spare wheel crossmember will not be able to be re-used after the installation of the Long Ranger tank.
7. 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.*
8. Remove the rear spare wheel support rod and retain the bolts.
9. Temporarily mount the left-hand and right-hand brackets (B77) to the captive nuts in the chassis using the bolts removed in the previous step.
10. Drill the third hole in the chassis using the hole in the brackets as a guide. Remove brackets, deburr, and apply rustproofing to the two holes.

11. Mark fuel hoses for identification during reassembly. Disconnect pickup and return lines at the solenoid valve and release the hoses from their support clips. ***WARNING:*** *Fuel in some hoses may be under pressure – take care when disconnecting.*
12. Disconnect filler and fast-fill breather hoses and wiring from the standard sub tank.
13. Remove the sub tank and support straps.
14. Remove the front spare wheel support rod.
15. Remove the fuel pick-up unit from the original tank and install it in the LONG RANGER tank using the original gasket and screws. ***NOTE:*** *Check the condition of the fuel intake strainer and clean or replace if necessary. Verify that the strainer will not come into contact with the bottom of the tank or the magnet when installed – it can wear through causing pump damage or failure.*
16. Remove the filler assembly from the original tank. HINT: Free the inner end of the breather pipe from spot welds by vigorously working the pickup in and out.
17. Trim the fast-fill breather on the filler assembly to a length of 210mm from the mounting flange and deburr.
18. Install the filler assembly in the new tank using the original screws and gasket. ***NOTE:*** *The fast-fill pipe should be about 5 to 10mm from the top of the tank. If it is substantially lower, the tank will not fill to capacity.*
19. Fit supplied float arm. Take extreme care not to damage the sender unit.
20. Verify that the float of the sender unit lies approximately 5mm from the bottom of the tank.





21. Install the sender in the tank using the original screws and gasket.
22. Re-route the wiring for the pickup and sender unit so it ends up near the centre of the front cross member. Secure to steel filler pipe with cable ties and plug harness back into rear connection.
23. Lift the LONG RANGER tank into position and support with a jack. Allow approximately 25mm clearance to the chassis rail. Secure the front of the tank using the two U-bolts, four self-locking nuts, and two plain washers at the rear with two 10 x 30mm washers at the front. Install the two rear mounting brackets using the original M8 bolts and one 3/8- x 1-inch bolt in each. Drill holes in tank brackets, apply rustproofing, and secure the tank with the 3/8- x 1½-inch bolts.

24. Check for clearance all round the tank – adjust if necessary.
25. Connect the fuel lines using the original hoses and clamps.
26. Connect the sender and pickup units to the wiring harness.
27. Secure fuel lines and sender unit wiring with cable ties to prevent rubbing and chafing on vehicle components.
28. Fit the original filler hose and the original fast-fill breather hose to the new tank, trimming as required for the best fit.
29. Check that all bolts and hose clamps are tensioned correctly.

30. Transfer the fuel removed in an earlier step to the new LONG RANGER tank.
31. We suggest that the tank be filled with a test load of fuel (not included in the quoted price), test drive the vehicle and inspect all fittings for leaks.
32. 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.
33. Neatly apply the LONG RANGER sticker to the rear bumper or window.

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

a) 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.

b) The operation of the Landcruiser fuel gauges will be essentially the same as standard, but due to the different shape of the LONG RANGER sub tank the sub tank 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 interpreted cautiously until familiar with the new readings.

c) 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.

d) The original vehicle springs do not take into account the additional weight of a bigger fuel tank or relocated spare wheel. Suspension modification options are available if required – please enquire.

e) 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 followed each time the vehicle is serviced.

Hand these instructions, together with the Warranty Registration card and warranty information, to the owner.

CARE AND MAINTENANCE

1. After the first **1,000 kilometres,** clean or replace the fuel filter on the LONG RANGER tank transfer pump, 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.

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