INSTALLATION INSTRUCTIONS FOR A REPLACEMENT TANK

THE LONG RANGER

THE BIG TANK FOR A BIG COUNTRY

MADE IN AUSTRALIA

LANDCRUISER 150 SERIES

Prado SWB 3 door Diesel

TR69S – REPLACEMENT 133-LITRE TANK

GENERAL NOTES

a) 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 tank locates under the vehicle behind the rear axle, in place of the standard tank.

c) The original filler, fuel level sender unit, roll over valve 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.

d) The new 133lt capacity is a 53% increase over the standard 87lt tank. The low warning light will come on with approx 16lt left in tank (368ohms), this is an increase of 25% over the standard 13lt.

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 during the tank installation.

j) At time of release this tank fitted with the genuine Toyota Australia Towbar #.PZQ64-60161, no other towbars were available for testing. The tank has also been confirm as compatible with the Kaymar rear bar.

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

l) **Special tools :** Metal cutting and Silver soldering equipment are required.

INSTALLATION KIT – TR69S

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

- ❑ 1 LONG RANGER TANK (TR69S)
- ❑ 2 Side Mounting brackets #TR69SB1
- ❑ 1 U-bolt M10 UNC #FAUBOLTA61 (*front mounting*)
- ❑ 1 Sender extension 100mm long #ELSEFLOATEXT100
- ❑ 2 Bolt M10 x 30mm (*rear mounts*)
- ❑ 8 Self-locking nuts M10
- ❑ 8 Flat washers M10 x 20mm (*rear mounting*)
- ❑ 2 Flat washers M10 x 30mm (*front mounting*)
- ❑ 4 Bolt M10 x 25mm with tag #SF11M (*rear mounting through chassis*)
- ❑ 1 Fuel hose, 6.5mm ID x 1300mm long (*system breather extension*)
- ❑ 3 Cable tie, 300mm
- ❑ 3 Cable ties, 150mm
- ❑ 1 Blanking bung 12mm #BUPT012-12R
- ❑ 1 Blanking bung 10mm #BUPT009-12Y
- ❑ 1 Owner's manual update sticker #TR69STK01
- ❑ 1 Installation Instructions
- ❑ 1 Warranty Information Sheet and Return Card
- ❑ 1 LONG RANGER sticker

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 for online contact form.
4. Place the sticky backed owners manual update opposite the "Gas Station Information" page 632.
5. Drain fuel from tank, remove the original bash plate and fuel tank. Disconnect wiring and hoses as you lower the tank. Note: there is an access hole in the floor, but not essential to use.
6. Remove (unbolt) all strap-mounting brackets from vehicle. Hint: Remove the rear trim from top of bumper to access bolts.
7. Clean all fuel from the area and fit the two bungs supplied to pickup and return hoses.
8. **As per photo 1**: Cut flush from floor ribs the front two protruding tank support mounts.
9. **As per photo 1**: Cut from chassis the front bash plate mount and bend the other up and flat to the chassis (or cut off), rust proof all bare metal.

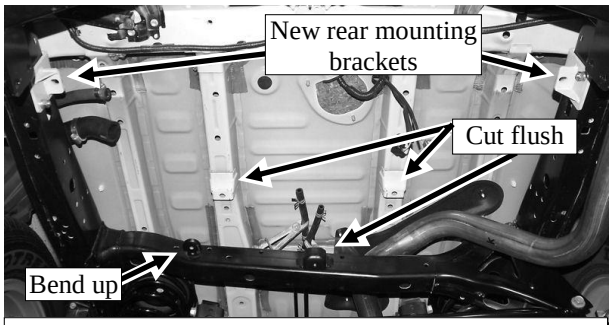


Photo 1: Cut mounting brackets from vehicle

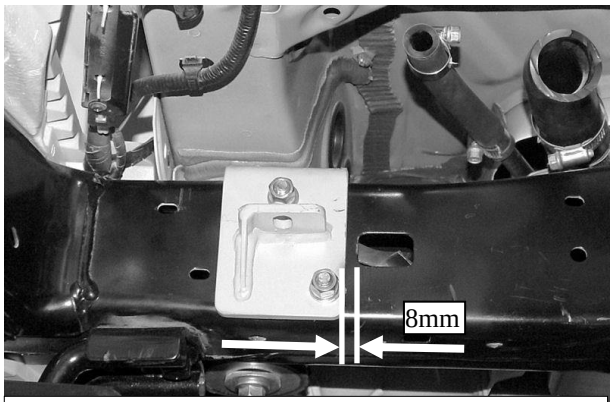


Photo 2: Rear mounting

10. **As per photo 1& 2**: Fit the two rear mountings to either side chassis rail, drill 10mm holes and fit SF11 (bolt with tag), washers and nylocs. *Note: Have an 8mm gap between edge of bracket and rectangle hole in chassis*.
11. Clean around all the fittings on top of the tank before removal, retain all screws to re-use.
12. 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. Check quality of fuel and report any contamination to owner.
13. **As per photo 3**: Remove sender and gasket from original tank. Carefully bend and extend float arm by 60mm (20 overlap of extension piece). Draw two parallel lines 340mm apart to simulate the tank, have a 5mm gap between the float and the bottom. Check that the sender will read accurately when the tank is near empty. **Hint:** Look in a hole to check opperation. ***Note****: we recommend using silver solder or similar to extend float*. Fit modified sender to The LongRanger.
14. **As per photo 4**: Unclip the plastic retaining clamp on the steel fuel lines and bend both pipes up approximately 40mm (parallel with top of tank). Remove pickup unit from original tank and fit to new tank. Ensure pipes don't fowl on the new tank.
15. Remove the rollover valve unit from the original tank and fit to The LongRanger. An extended breather hose has been supplied to move the breather to a higher place, fit new hose to valve on tank.
16. **As per photo 5**: Remove filler neck unit from original tank, Cut and straighten as per picture. Fit to The LongRanger tank. Note: if bend not cut off the tank will not fill to capacity.
17. **As per photo 6**: Lift The LONG RANGER tank into position. Lift front bracket up between panhard rod and cross member, lift LHS up over rear mounting bracket, then lift RHS up over mounting bracket. Support with U-bolt, washers and nuts at the front. Fit bolts, nylocs and washers on the rear.
18. Check that the tank lies evenly between chassis rails and check for clearance all round and tighten all mounting bolts
19. Connect original filler and fast fill breather to new tank.
20. Connect pickup and return lines at front of tank. ***Note****: Bend pipes to align, trim approximately 60mm from p/up and 50mm from return lines.*

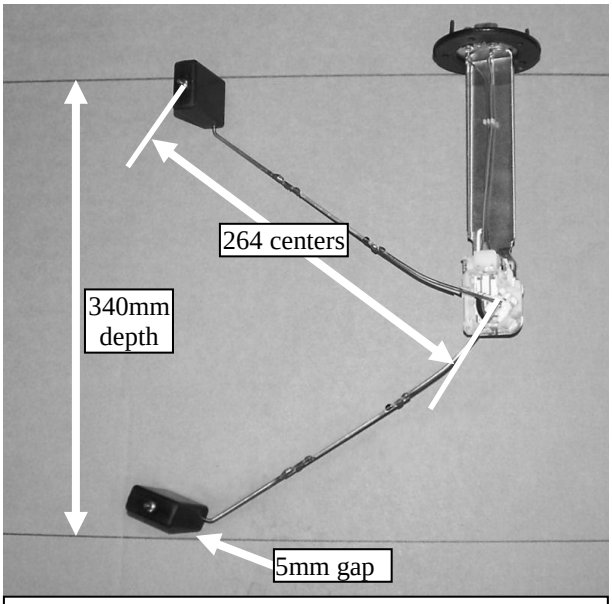
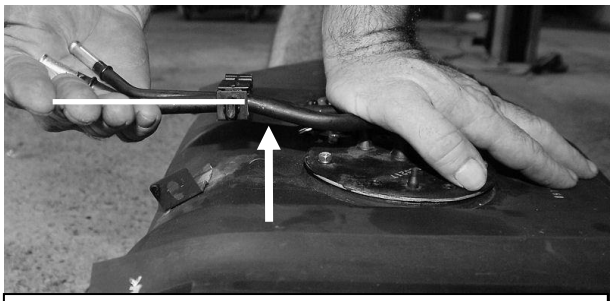


Photo 3: Extend float arm


Photo 4: Bend fuel lines up parallel with flange

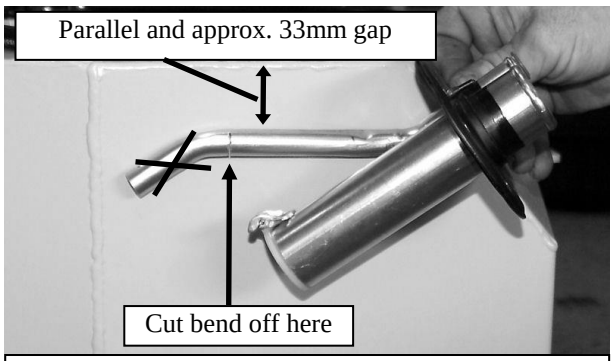


Photo 5: Cut and straighten fast fill breather

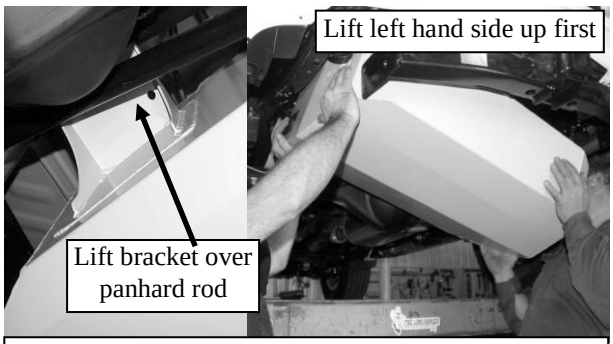


Photo 6: Lifting tank into place

21. **As per photo 7**: Fit the new extended breather along cross member, and secure high up on the filler neck ensure the valve is upright. We have added this extended breather to ensure no water will enter tank as the warm fuel cools and contracts when water crossings are encountered.

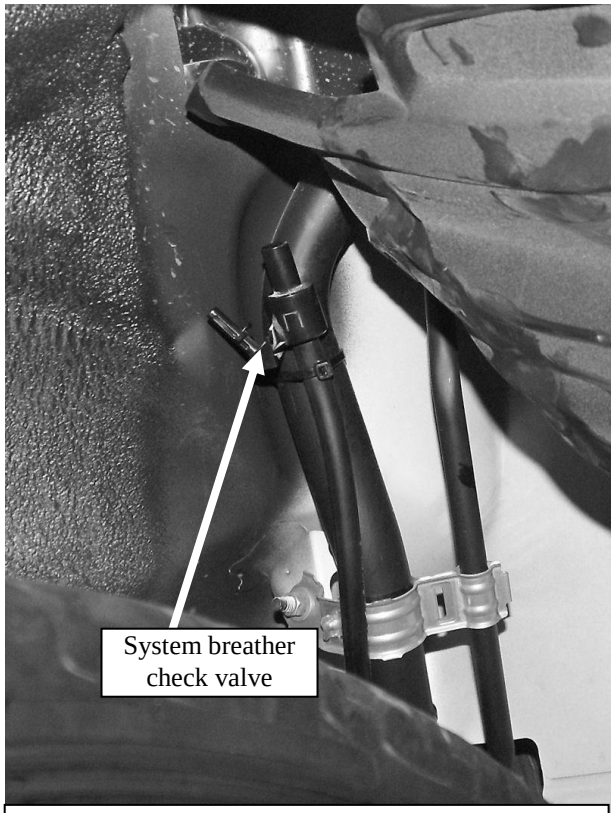


Photo 7: Breather valve mounted virtical

FINAL CHECKS

22. Check that all bolts and hose clamps are tensioned correctly.
23. Check that adequate clearance exists all round the tank.
24. Ensure that all fuel hoses and electrical wiring will not chafe on nearby components and moving suspension.
25. Transfer the fuel removed previously to the new LONG RANGER tank.
26. We suggest that the tank be filled with a test load of fuel, test drive vehicle and inspect all fittings for leaks (fuel not included in the quoted price).
27. 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.

1. 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.
2. 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. We estimate the low warning light to come on with approximately 16lt left in tank (compared to the standard 13lt) It is suggested that the gauge readings be cautiously interpreted until familiar with them.
3. 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.
4. The vehicle manufacturer selected springs without accounting for a bigger fuel tank. Several suspension modification options are available.
5. 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, release the tank drain plug and confirm that there is no water present, and replace the fuel filter according to manufacturer's recommendations.