



## INSTALLATION INSTRUCTIONS FOR AN AUXILIARY TANK

# THE LONG RANGER

THE BIG TANK FOR A BIG COUNTRY



## 200 SERIES LANDCRUISER

Suits petrol models without factory sub tank  
**TA65LP – AUXILIARY 180-LITRE TANK**

### GENERAL NOTES

- a) Take a few minutes to read through this installation guide before proceeding.
- b) Fitting time is approximately 5.5 hours. No major vehicle modifications are required.
- c) This tank fits behind the rear axle, (the spare wheel needs to be relocated). If there is an OEM sub tank in this location this is the incorrect fuel tank.
- d) This LONG RANGER tank is filled via a “twin filler”. Fuel is transferred as required to the original tank via an electric fuel transfer pump.
- e) Check that tools, clothing and footwear are clean before working on the interior of the vehicle.
- f) LONG RANGER tanks are coated with a high-performance primer. For added protection, a topcoat may be added. If the vehicle has been rust proofed, it is suggested that the tank (and any changes made to the vehicle during fitting) be touched up after installation.
- g) Video tutorials are available at [www.thelongranger.com.au/ta65ls](http://www.thelongranger.com.au/ta65ls) (70lt version)

**Warning:** The 200 series is equipped with SRS airbags and fibre cable technology, working with the electrical system has the potential to cause expensive damage to the vehicle if incorrectly modified.

**Special tools:** An electrical crimping tool, metal grinding and cutting equipment, drill, fuel sealant and 20mm step drill or hole saw are required.



**INSTALLATION KIT TA65L**

**QTY DESCRIPTION** This LONG RANGER installation kit has been checked by \_\_\_\_\_

- 1 LONG RANGER TANK (TA65L)
- 1 TA65SFN1 ( twin filler neck)
- 1 TA65SFH1 (38mm rubber filler neck)
- 1 Canister mounting bracket #TA65CM
- 1 Carbon canister TLR #CC01
- 1 Tag bolt M6 x 25 #SF06 (for carbon canister)
- 2 TA65SSF1 Bolts M8 x 25 with tag (tank mounting)
- 6 Bolts M8 x 25 (tank mounting)
- 2 Self-locking nuts M8
- 8 Flat washers M8 x 24
- 8 Bolts M6 x 20
- 8 Self-locking nuts M6
- 16 Flat washers M6 x 16
- 1 Spring washer M6
- 1 Fuel hose 12.5mm ID x 140mm long (main filler breather)
- 1 Fuel hose 12.5mm ID x 840mm (Aux filler breather)
- 1 Fuel hose 8mm ID x 500mm (transfer hose, pump outlet to filler)
- 1 Fuel hose 8mm ID x 50mm (transfer hose, filter to pump inlet)
- 1 Fuel hose 8mm ID x 850mm (transfer hose, aux pickup to filter)
- 1 Fuel hose 8mm x 3300mm (Long Ranger canister to OEM canister)
- 1 Fuel hose 8mm x 3300mm (Long Ranger canister to OEM canister air inlet line)
- 6 Hose clamps HS24 (filler)
- 4 Hose clamps MH6 (filler breather)
- 10 Hose clamps MH4
- 1 Fuel pump 12-volt (**ELFUPU12V03**)
- 1 Plastic joiner 8mm (PLJORE08MM)
- 1 Brass fittings 1/8 BSP x 8mm straight
- 1 Brass fittings 1/8 BSP x 8mm elbow
- 3 Brass fittings 1/4 BSP x 8mm elbow
- 1 Fuel filter in-line 8mm" Z14
- 1 Convoluted tube 7mm x 1000mm long (use on wiring at sender unit)
- 1 Terminal red male bullet connector
- 1 Terminal red female bullet connector
- 2 Terminal red female spade connector
- 1 Power take off (female)
- 1 Power take off (red male spade)
- 1 Switch/Gauge timer module with wiring loom (**ELSWG406-F**)
- 1 Switch/Gauge LED 24mm round (**ELSWGATIMER12V01B**)
- 1 Fuel level sender unit, # **TLR2-90TA65L**.
- 5 M4 x 8 screws
- 15 Cable ties 200mm
- 5 Cable ties 300mm
- 1 Long Ranger auxiliary tank fitting guide

**Owners information pack**

- 1 Warranty Information Sheet and Return Card
- 1 Long Ranger sticker
- 1 Long Ranger owner operating manual
- 1 TA65 owner's manual supplement (stick on)

## INSTALLATION GUIDE

1. The first thing to do is check that the correct tank has been ordered for your model of vehicle and 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](http://www.thelongranger.com.au) or email any comments about tank fitting to [fitting@thelongranger.com.au](mailto:fitting@thelongranger.com.au)
4. Rust proof or repaint all bare metal parts, which have been modified.
5. Check any reused original parts for deterioration or damage and replace if required.

6. **Refer to Photo 1:** Unclip dash pieces to access wiring and fit switch. Remove the side cover panels on the centre section to remove two bolts, unclip side trims. Pull out power socket surround to gain access to wiring, (but do not remove). Remove panel containing the mirror controls by pulling out the top of the thin panel next to the steering column.



Photo 1: Unclip dash pieces

7. Remove both RHS doorsill trims.
8. **Refer to Photo 3:** Select a position for the switch, we recommend the top right blank panel. Drill a

pilot hole then a 20mm hole and file to size, a little extra filing will also be required on the main switch panel to fit this back into the rectangle hole.

9. Mount timer module under dash in suitable location (black box)..

10. **Refer to wiring diagram:** Plug the switch into loom from timer module, remove the fuse from

holder and plug main loom into module, as per wiring diagram connect earth and power wires under dash. Connect the red wire from the timer module to the 12v green wire on the power socket, (A better alternative to the provided scotch lock would be to solder these connections). Connect earth to bolt in behind switch panel.



Photo 2: Unclip trim

11. **Refer to Photo 2:** Un-clip the top of the bottom half of the RHS plastic trim lining in the rear cargo area. Run the wire loom from under dash



Photo 3: switch location

along sill and pass through floor grommet near jack. Cable tie wiring were appropriate to existing harness. *Note: leave all trim panels off till we test a bit later.*

12. Remove spare wheel, *tools can be found in tailgate pocket on RHS.*
13. Support axle housing, remove rear right hand wheel and inner guard for access to filler. Remove nut from filler mounting behind wheel arch cover.
14. Raise vehicle and undo two inside bolts from inner guard on RHS bumper and mudflap **As per photo 4.**

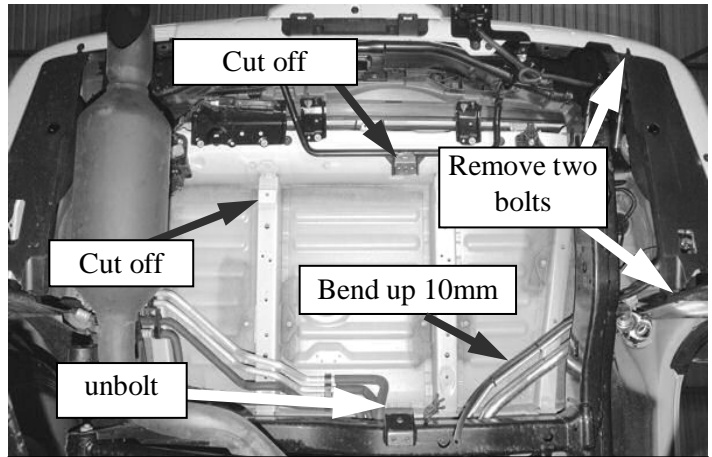


Photo 4: Chassis mods

15. Disconnect the last three rubber exhaust mounts starting at the rear of the muffler just in front of rear diff.
16. Remove spare tyre support cross member and small brackets either side. Also unbolt small spare tyre support bracket from front cross member **As per photo 4.**

17. **As per photo 4:** cut the rear tyre support bracket from chassis. *Note: only the small protruding bracket needs to be cut off, but the whole pipe frame can be removed if never fitting a spare tyre again.*

18. **As per photo 4:** cut two tank support mounts from floor ribs. **WARNING: Ensure safety with fuel or fumes present when cutting metal, (fuel system should still be sealed).**



Photo 5: Cut filler

19. **As per photo 4:** Bend the small steel pipe on the filler assembly up by approximately 10mm, disconnect filler assembly from rubber hoses on tank and remove from vehicle. *Note: the fast fill breather has a pull out retainer clip to disconnect.*

20. **As per photo 5 :** Measure down 185mm from the cap end and cut both pipes, deburr and clean metal filings from pipe. (discard the cap end). **WARNING: Ensure safety with fuel or fumes present when cutting metal.**

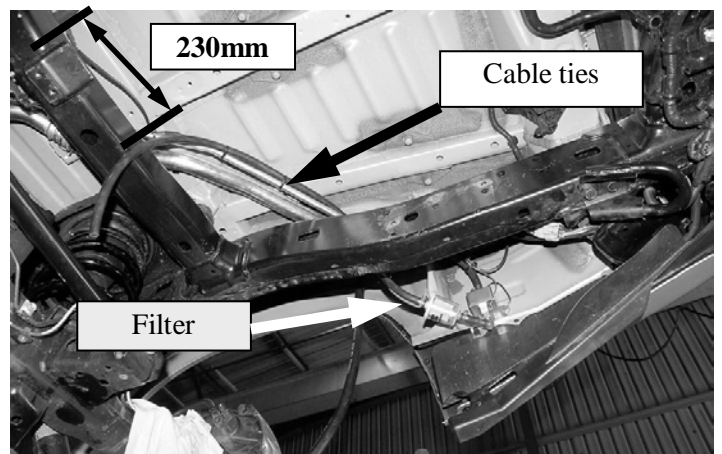


Photo 6: Pump mounting

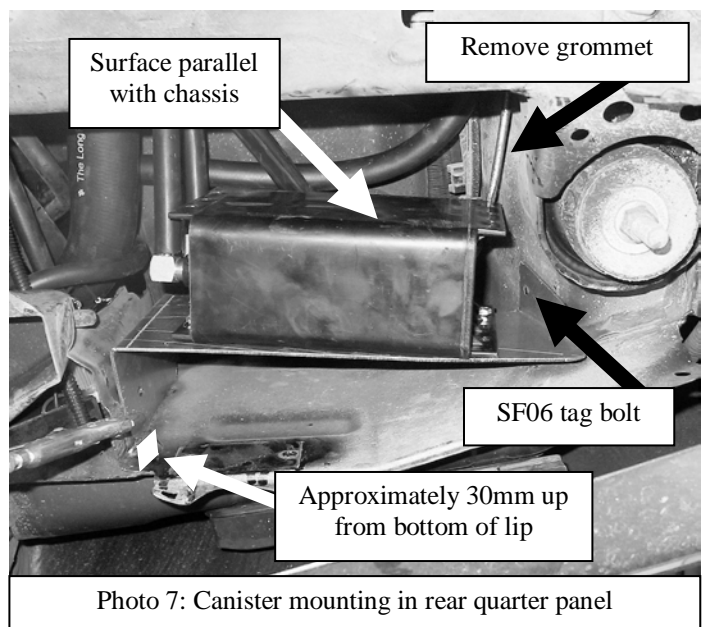
21. Re-fit the shortened filler to tank, fasten hose clamps and fit lower mounting bolt.
22. With a suitable sealant fit the brass straight to the pump outlet and the brass elbow to the inlet, align **as per photo 6.**

23. **As per photo 6:** fit transfer pump to bottom edge of steel inner guard. Mark & drill holes, using 6mm bolts, washers & nyloc nuts, fit pump earth.
24. As per the **plumbing diagram and kit list**, connect the two 8mm hoses to the filter and connect to pump, 8mm x 50 goes on outlet of filter and inlet of pump.
25. Connect the transfer hose to pump outlet and run up towards filler.
26. Strip back sheathing and prepare wiring to correct lengths for sender and pump, connect pump as per wiring diagram.
27. **As per photo 6:** Run the transfer hose and wiring (with convoluted tubing) along the steel filler and cable tie in place. *Note: leave hose hanging down in front of cross member and terminate cable with spade terminals 230mm from floor rib and last cable tie.*
28. Temporarily connect the sender, test the operation of the pump and sender unit. The gauge should be on empty (red LED). The pump should be audible when turned on, the amber pump LED with illuminate and should be flashing. You can also move the float arm and watch the gauge go up after a minute or so. *Note: to engage ignition, push start button twice (without foot on brake), to turn off, push start button once with the door closed and the gear selector in "P" other wise an alarm may sound.*
29. Fit sender unit to tank with screws and gasket supplied, this has been set-up in our factory and when held on side of tank should be just off the bottom when on empty. This should only fit in one position due to hole orientation.
30. With a suitable sealant fit the brass elbow to the tank pickup, aim barb toward centre of tank and parallel with bottom.

31. **As per photo 7:** Fit canister mount up into rear right quarter panel, have lower edge up approximately 30mm, have main face parallel with chassis, mark all three holes.

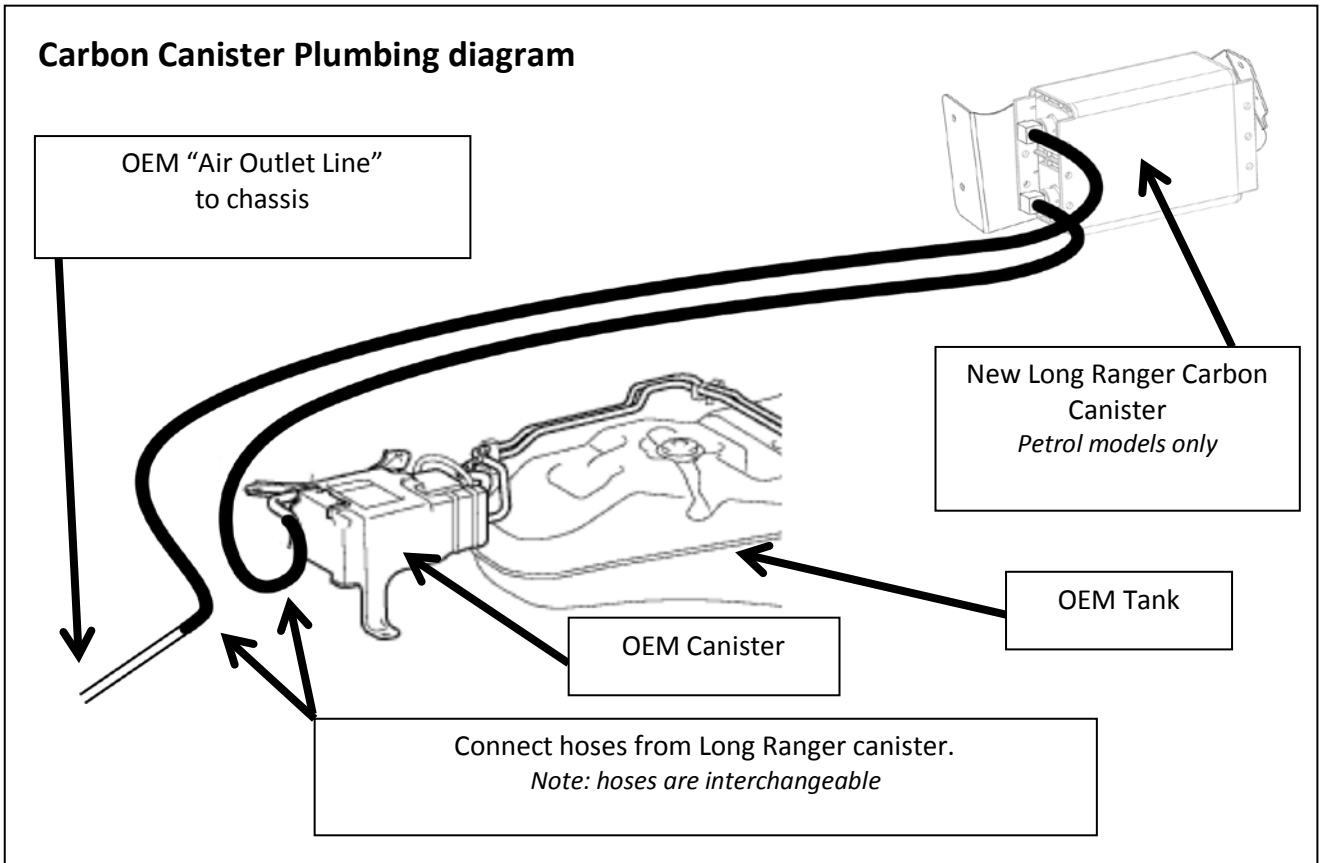
32. Remove grommet from body mount, feel inside hole and make sure hole to be drilled is accessible through double skin, if not remark holes in new location and drill all 3 holes.

33. **As per photo 7 and Canister plumbing diagram:** With correct orientation fit brass elbows to canister using Teflon thread tape, do not over tighten. With fittings towards front of vehicle, fit canister with M6 bolts, nyloc nuts and washers supplied.



34. Mount canister bracket to quarter panel with tag bolt, washer, spring washer and plain nut at rear, bolts, nylocs and washer at front.
35. **As per canister plumbing diagram and photo 7:** Fit both 8mm hoses to the brass barbs, run along chassis towards front of main tank. *Note: Barb selection is not important.*
36. **As per canister plumbing diagram:** Remove the OEM "air inlet hose from steel line at front of OEM canister, fit joiner to rubber hose and connect both hoses from canister using

hose clamps supplied and neatly fasten hose with cable ties. *Note. The hoses can be connected to either line.*



37. Fit tank, support in place and loosely fit all the new high tensile bolts with mudguard washers. *Note: while lifting tank into place, have left hand side bracket below chassis, connect wiring to sender before lifting the front into it's final position.*

38. Check for clearance all round and tighten bolts

39. Re-fit all the rubber exhaust mounts.

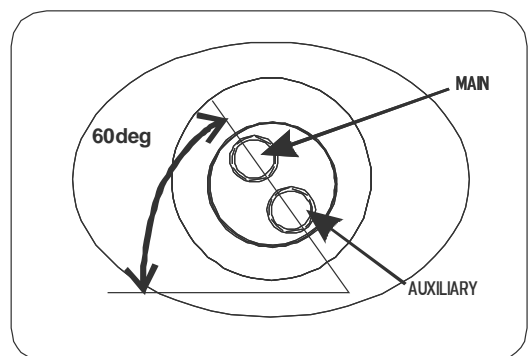
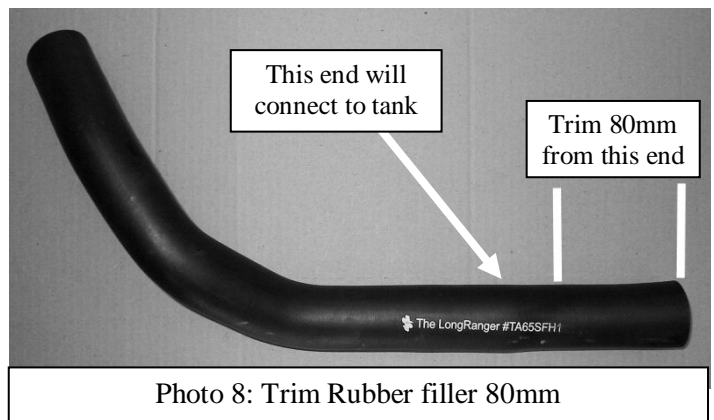
40. **As per Photo 8:** Trim the rubber filler hose 80mm (use as joiner in next step).

41. Using the hose joiner previously cut fit the new twin filler and connect to main filler pipe. *Note 1: have fillers at about 60deg as per photo 9 and diagram.*

*Note 2: If hose appears a bit short, push steel filler up though saddle clamp a bit more.*

42. Connect the auxiliary filler using the new rubber filler neck.

43. Connect both fast fill breathers and 8mm transfer hose to twin filler.



44. **NOTE:** *To ensure trouble-free performance when refuelling, the following principles must be applied to the following steps with respect to fuel hoses. Ensure that there are no kinks, and no pinched or drooping sections. Ensure the filler and breather hoses have a steady and consistent rise throughout their full length, with no low points where fuel could lie (airlock) and hinder airflow during filling. Ensure there is adequate clearance between all hoses and moving vehicle components. Do not over tighten cable ties and squash breather hoses.*

45. Connect the 8mm pickup and the 12mm auxiliary fast fill breather to their respective fittings on the tank. *We recommend running these over the top of the filler as per **photo 9**.*

46. Secure all the hose around the fuel filler ensuring they will not chafe on the body lip.

47. Double-check all hose clamps and fittings, re-fit inner guard and wheel.

48. Clean yourself up and neatly fasten all wiring under dash to prevent chafing.

49. Fit switch, replace all trim and tidy area from fingerprints and off cuts of wire.

50. 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).

51. Place the owner's information pack on the passenger's seat.



Photo 9: Twin filler assy.

