INSTALLATION INSTRUCTIONS FOR A WATER TANK

LONGRANGER
MADE IN AUSTRALIA SINCE 1976
The Big Tank for a Big Country!

2017-CURRENT 78 SERIES LANDCRUISER

TW17SS – 49 LITRE WATER TANK

Designed to suit both V8 and 4 Cylinder Troopcarrier variants (pre-facelift & facelift models)

GENERAL NOTES

a) This **LONG**RANGER water tank locates under the centre of the Landcruiser, between the chassis rails. There are no chassis or exhaust modifications. The tank is filled from a point under the bonnet. Fitting time is approximately 4 hours. This tank will not fit models with the old brake proportion valve on rear axle.

b) These fitting instructions have been developed and checked while designing and fitting tanks in our workshop. However, as part of our ongoing product development programme we would appreciate hearing how they relate to your particular model, and especially of any difficulties you may have encountered. This will assist us to maintain the best products, and most accurate and helpful instructions possible.

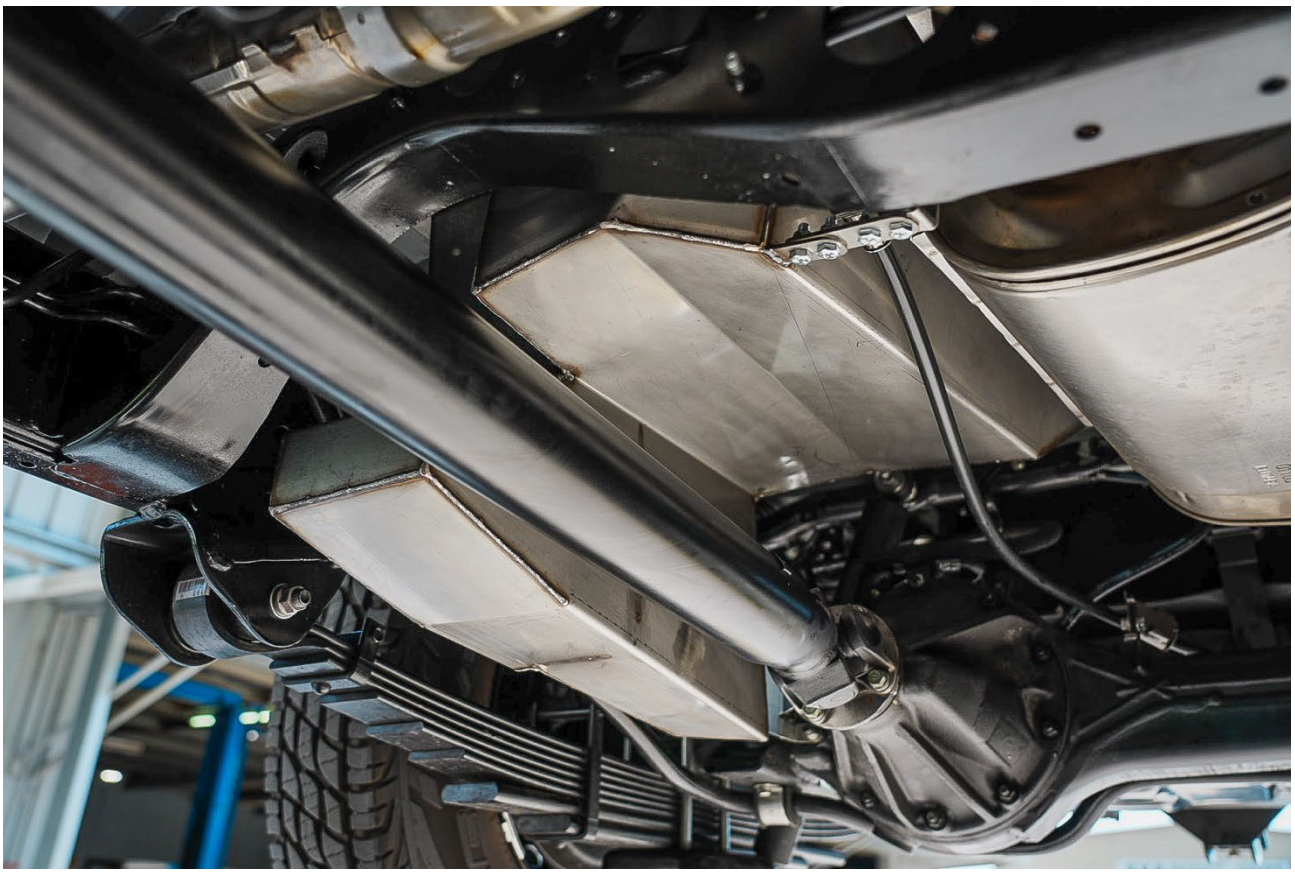
c) All **LONG**RANGER water tanks are manufactured from low corrosion / low maintenance materials, including stainless steel for the tank itself. We suggest that the tank should be drained and flushed periodically. Drinking water should always be appropriately treated before consumption. If filling up from garden hose always run briefly to purge any tainted water.

d) The capacity quoted above is the actual bench tested liquid capacity of the tank, and the design of the tank system is such that virtually the total contents of the water tank will be available for use. However, the useable capacity may vary slightly from one vehicle to another and should be verified by the user.

e) A 12 volt water pump with inbuilt pressure switch is supplied with this kit, discuss with vehicle owner the most practical (and preferred) location for both the switch and the water outlet, we have suggested locations in these instructions.

f) From 2023 on this tank fits the ARB terrain tamer GVM upgrade with new sway bar upgrade.

g) Observe safety precautions during the installation of this **LONG**RANGER tank.



TW17SS fitted to a Facelift 4 Cylinder variant

INSTALLATION KIT TW17SS

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

- ❑ 1 **LONG**RANGER TANK - **TW17SS**
- ❑ 1 Face Plate for Switch Mounting – **TW23FP**
- ❑ 1 Pump Mounting Bracket – **TW17B1**
- ❑ 1 Tap Mounting Bracket – **TW17B2**
- ❑ 4 Tap mounting spacer washers - **TW17FW** 14.5 x 26 x 1.5
- ❑ 1 Filler Mounting Bracket – **TW03B3**
- ❑ 1 4-Cyl Handbrake Adapter Bracket – **TW17B4**
- ❑ 1 4-Cyl Heat Shield Brace – **TW17B5**
- ❑ 3 Bolt M10 x 25 x 1.25 -**FAM101.2525HZ** (pump and tap mounting)
- ❑ 3 M10 Flat Washer - **FAM1020FWS**
- ❑ 4 M8 x 20mm Hex Head Bolt - **FAM820HZ** (handbrake mounting)
- ❑ 4 M8 x 90mm Hex Head Bolt - **FAM890HZ** (tank mounting)
- ❑ 16 M8 x 20mm Flat Washer - **FAM820FWZ**
- ❑ 10 M8 Nyloc nuts - **FAM8NNZ**
- ❑ 4 M5 x 20mm Pan Head Screw - **FAM520PPOZ** (pump mount)
- ❑ 4 M5 x 12mm Pan Head Screw - **FAM512PPOZ** (pump earth and heatshield brace)
- ❑ 8 M5 Nyloc nut - **FAM5NNZ**
- ❑ 6 M5 x 19mm Flat Washer - **FAM5FWS**
- ❑ 1 M8 Large Flange nutserts – **FAinsertM8ZPLF**
- ❑ 2 Brass fitting 1/4 BSP x 1/2" elbow - **BRASS1214MEL**
- ❑ 1 Brass fitting 1/4 BSP x 45deg M/F - **BRASS14MAFE45EL**
- ❑ 1 Brass hose adapter ¼ BSP -click on - **BRASSclickon12x14BSP**
- ❑ 1 Ball valve ¼ BSP F&F - **47026-04M**
- ❑ 1 Plastic 20.0mm cap # **PLCAP20MM**
- ❑ 1 Plastic straight barb 20mm tail x ¾ BSP (filler)
- ❑ 1 Plastic straight barb 12mm x ½ Female bsp (pump outlet #**PLFST1212W**)
- ❑ 1 Plastic elbow barb 12mm x ½ Female bsp(pump inlet #**PLFEL1212B**)
- ❑ 5 Hose clamp - **MH6**
- ❑ 2 Hose clamp - **HS12**
- ❑ 1 Water pump with pressure switch and ½ bsp fittings - **#3206 (TLR890001)**
- ❑ 1 TLR Switch 12 volt on / off push button - **ELSWONOFF12V03**
- ❑ 2 Terminal, female spade crimp, blue
- ❑ 5 Joiner, crimp, blue
- ❑ 2 Terminal, lug, 8mm blue
- ❑ 1 Fuse Holder inline Blade Type
- ❑ 1 Wire, single core double sheathed gas, 4mm x 6m long
- ❑ 1 Hose, PVC, 20mm ID x 3.3m long (for filler)
- ❑ 1 Hose, PVC, 10mm ID x 1.6m long (for breather)
- ❑ 1 Hose, Drinking Water, 12.5mm ID x 1.6m long (Tank to pump)
- ❑ 1 Hose, Drinking Water, 12.5mm ID x 1.0m long (Pump to outlet)
- ❑ 2 Cable tie, 30 cm
- ❑ 10 Cable tie, 20 cm
- ❑ 1 Fitting instructions
- ❑ 1 Warranty information sheet and return card
- ❑ 1 **LONG**RANGER sticker

INSTALLATION GUIDE

1. Please read these instructions right through before starting to fit your **LONG**RANGER tank, and follow them step by step during fitting. It may save you time and work in the long run, and will ensure the tank is fitted as it was designed to be. If you have any difficulties, contact the **LONG**RANGER factory office without delay for further advice – phone (02) 4953-3288, or visit www.thelongranger.com.au

2. Before starting the job, check that you have received all items listed in the fitting kit above, and that nothing has been lost or damaged in transit.

3. Vacuum out your new water tank to make sure it is clean inside. It was thoroughly cleaned and sealed before despatch, but although we take all possible steps to ensure cleanliness and protection in transit, sometimes foreign matter can be found after shipping from our factory to you. Foreign matter can block or damage your pump.

4. Remove handbrake cable support from centre crossmember and discard on V8 variant, or simply unbolt from floor rib on 4-cyl variants.

5. Remove the rear driveshaft.

6. On 4-cyl variants disconnect the exhaust and lower down, remove heat shield from the floor of the vehicle and rest aside.

7. Position tank on floor ribs above rear driveshaft and to the driver's side of the muffler and support in place. ***NOTE:*** *Take care not to damage brakes line while lifting into place.*

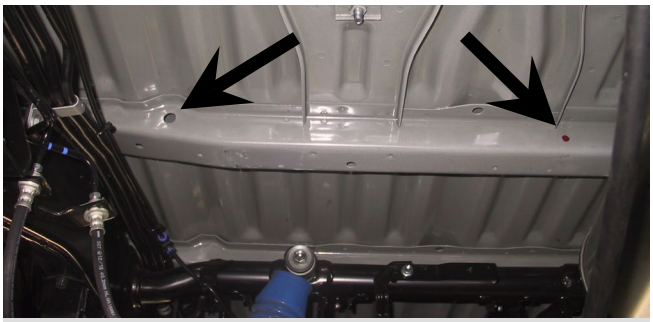


Photo 1: Align rear mounting hole

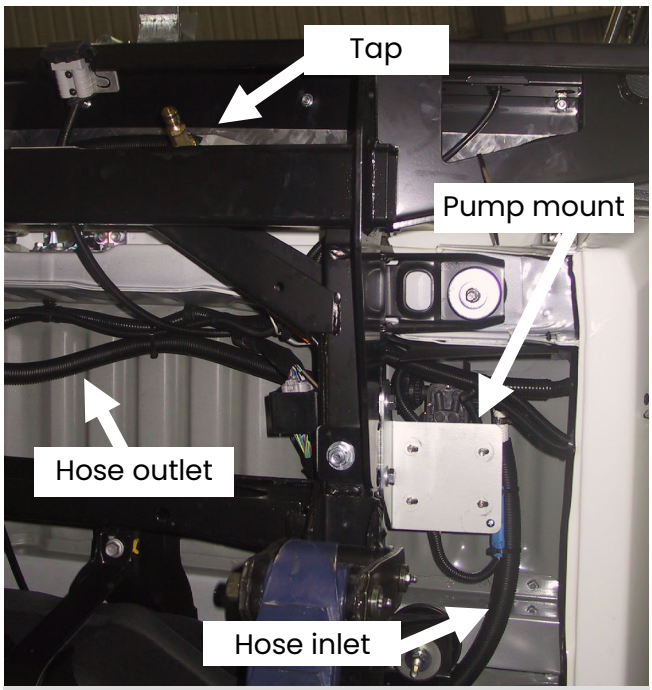


Photo 2: Pump mounting

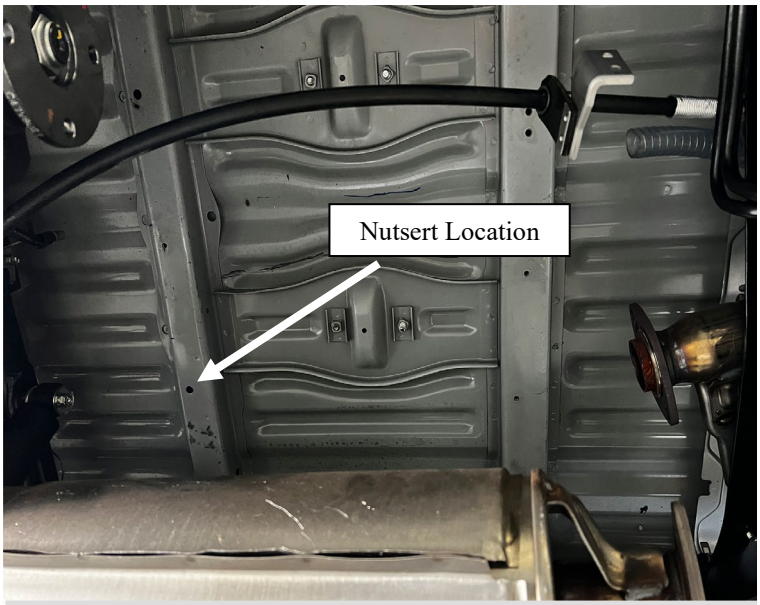


Photo 3: Nutsert Installation

8. Slide the tank along the floor ribs towards the driver's side chassis rail, tank should have clearance on the spring bolt/sway bar and be approximately 75mm off chassis rail. ***NOTE:*** ***As per photo 1****: Rear RHS hole should align with hole in floor rib near chassis rail.* ***NOTE:*** *ensure that fuel and brake lines are not fouling at front right hand corner of the tank, if necessary, bend or relocate these items*.

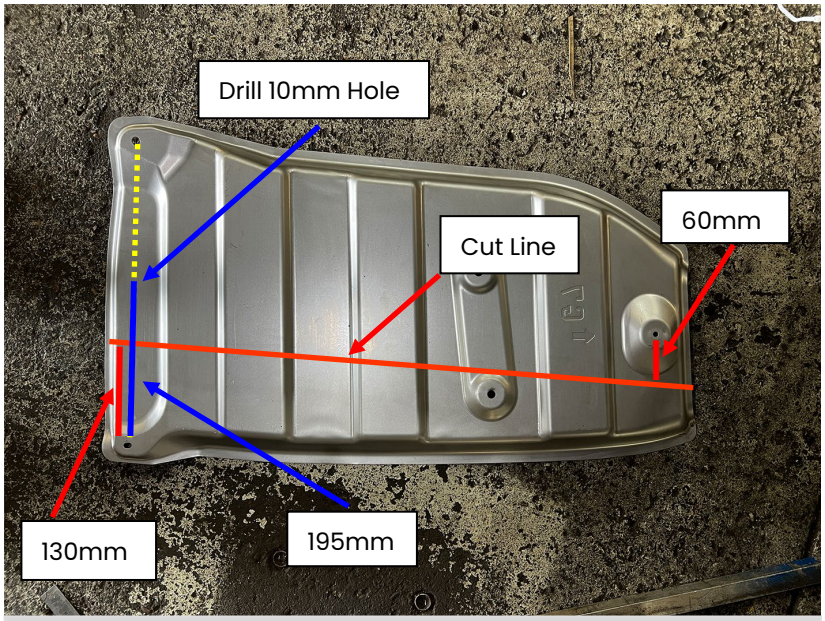


Photo 4: 4-Cyl Heat Shield Modification

9. **As per photo 1**: Mark all mounting holes and remove tank and drill 12mm holes and apply rust proofing. Re-fit tank, place supplied bolts and washers from front side of mounts and securely fasten nyloc nuts.

10. **As per photo 3**: Install Supplied M8 nutsert into OEM hole located in the floor rib.

11. **As per photo 4**: Cut and Drill the OEM heatshield and install supplied brace along cut edge. For cutline, measure 130mm in from rear hole and 60mm out from front mounting hole as per photo and create straight line between the 2 points. For additional mounting point, mark line between both rear mounting holes then measure 195mm as per photo 4.

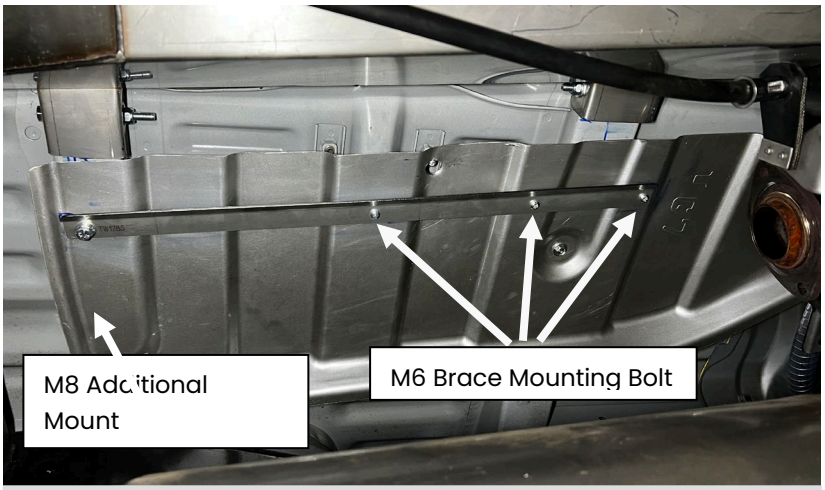


Photo 5: Modified Heat Shield Installation

12. Place heat shield brace over the heat shield aligned with previously drilled mounting point and mark the 3 x M5 brace mounting holes along heat shield.

13. **As per photo 5:** install the brace to the heat shield using the M5 hardware supplied then Refit Modified heatshield back into original location and add the additional M8 mount through the brace, heatshield.

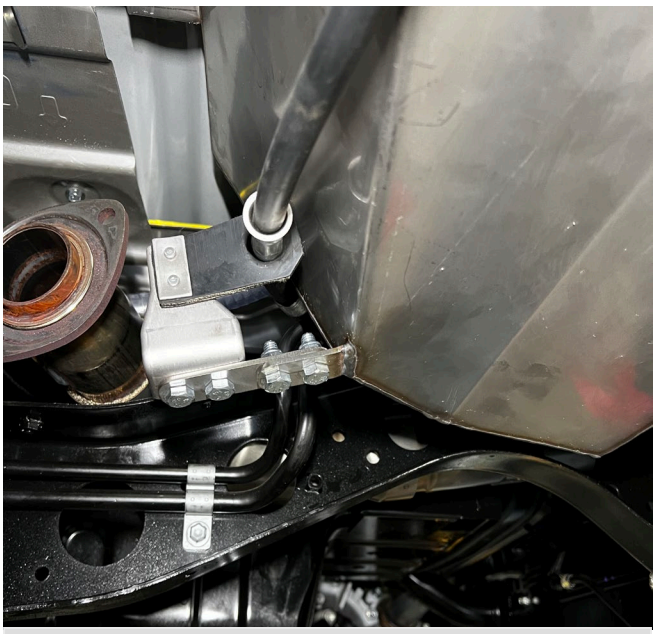


Photo 6: Handbrake Cable Mount with 4-

14. Re-fit the handbrake cable to the mounting bracket on the tank using the M8 x 20 long bolts, washers and nuts supplied for V8 variants, for 4Cyl variants use the TW17B4 adapter bracket supplied and install **as per Photo 6.** The handbrake cable mounting bracket on the diff housing may require a tap with a hammer to ensure the cable clears the tank and the muffler at full suspension travel.

15. Refit Tail shaft

16. Fit brass elbow to thread hole at rear of the tank with suitable thread tape.

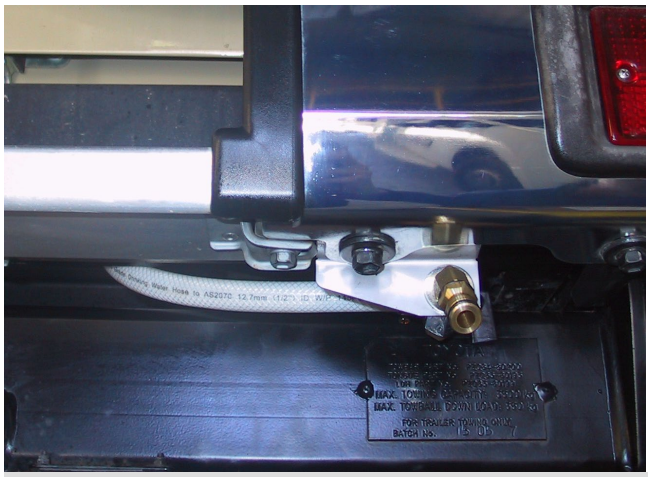


Photo 7: Tap mounting OEM rear bar

17. **AS per photo 2**: Fit plastic elbow to pump inlet and straight barb to outlet with suitable thread tape. ***Warning: remove the sealing bungs from the pump outlets, these could be internal***.

18. **AS per photo 2**: Secure water pump to bracket using M5 bolts and nyloc. Note the correct orientation.

19. Using supplied cable lug connect the pump earth to the hole provided in the pump mounts.

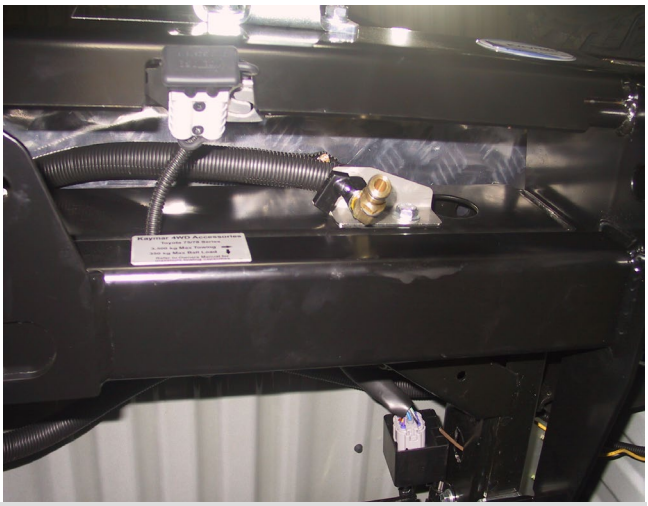


Photo 8: Tap mounting with Kaymar rear

20. **AS per photo 2**: Fit pump mount to vehicle, if towbar fitted use the two existing bolts, if no towbar supplied we have provided M10 bolts and washers.

21. Fit 1.6m length of 12mm drinking water hose to tank and pump inlet, 1.0m length of hose to pump outlet and secure with hose clamp.

Photo 9: Possible filler location on V8

22. **AS per photo 7 & 8**: Mount tap to bracket with supplied brass fittings and connect hose from pump. ***NOTE::*** *We have supplied a universal bracket and brass fitting that are compatible with both Kaymar rear bars and OEM bumper, it should work on most other setups.*

23. **For V8 Variants**, connect filler hose to front of tank with clamp supplied, route hose along the right-hand side of fuel tank and above shielded section of exhaust. Run hose towards front of vehicle approximately above the right-hand chassis rail and pass hose up the firewall and into the engine bay. ***NOTE:*** *Do not cable tie in place just yet in case adjustment is required later, be mindful of exhaust.*

Photo 10: Possible filler location V8

24. **For 4-cyl Variants,** connect filler hose to the front of the tank with clamps supplied, route hose along back of the OEM fuel tank to the left hand of the vehicle and follow the left chassis rail and firewall up into the engine bay area. ***NOTE:*** *Do not cable tie in place just yet in case adjustment is required later, be mindful of exhaust.*

Photo 11: Possible filler location for 4cyl variant

25. Connect fast fill breather to fitting on front of tank and secure with clamp supplied, loop it up into fuel tank filler pipe area, as high as possible. Check for adequate exhaust clearance, and secure with ties. ***NOTE:*** *check that overflow water will discharge clear of body. Also remind the owner that the filler is higher than this point and that some of the water will discharge when the filler hose has been filled to the top.*

26. Connect wiring to pump using crimp joiner supplied.

27. Run wire to location selected for switch and cable tie in place. As most setups will have drawer units, we recommend the isolating switch be mounted in a rear corner panel.

28. Lower vehicle and mount switch in selected location, this switch is designed for mounting in thin plastic or steel, if you have timber panels, we have provided a face plate for easier mounting (we recommend consolation with owner). Connect to fused power source for switch.

29. **AS per photo 8,9 & 10**: Attach filler bracket to RHS inner guard for V8 models, LHS Guard for 4-cyl models (or other suitable location), Shorten hose as required, fit cap section to hose, and attach filler unit to bracket using large hose clamps. Check hose along chassis rail is clear of exhaust and will not chafe on sharp metal edges and cable tie in place.
NOTE: *Check that hose will clear under-bonnet components and filler will not foul when bonnet is closed. (The bracket supplied may need to be modified, depending on under bonnet layout, model, chosen location or other accessories already fitted.*).

30. Fill tank, check for plumbing leaks, and test pump operation.

FINAL CHECKS

31. All bolts and hose clamps are tensioned correctly.

32. Adequate clearance exists all-round the tank.

33. Hoses will not chafe on nearby components and will not foul as suspension moves.

Explain to the owner the operation of the LONGRANGER TANK.

a) 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 water.
b) 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.
c) The vehicle manufacturer selected springs without accounting for additional fuel and water tanks. Several aftermarket suspension modification options are available.
d) 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 Tank.

CARE AND MAINTENANCE

1) 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.

2) At regular intervals, drain and flush the **LONG**RANGER water tank to guard against the accumulation of contaminants.