



## INSTALLATION INSTRUCTIONS FOR A REPLACEMENT TANK

# THE LONG RANGER

THE BIG TANK FOR A BIG COUNTRY



### V6 Petrol/Gas Ford Ranger Raptor

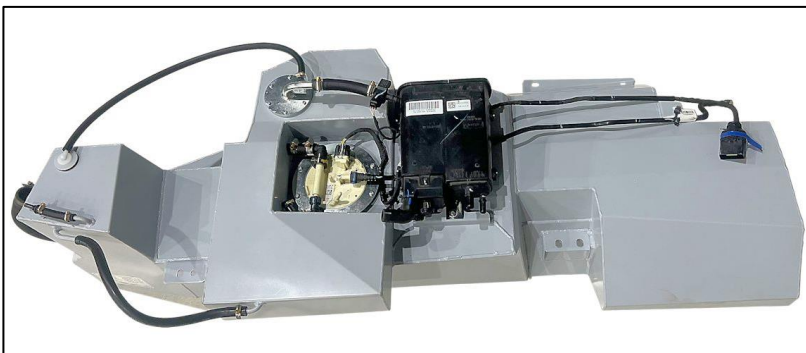
#### **TR98 - 140lt,**

Fits 2022 Next Generation Ranger Raptor V6 petrol with 80lt OEM capacity tank  
sits at the same height as OEM tank bash plate

#### GENERAL NOTES

- a) Fitting time is approximately 3 hours. No major vehicle modifications are required. This LONG RANGER tank locates under the vehicle in place of the standard tank.
- b) A hoist is not essential but will speed the job up significantly.
- c) The original filler, fuel level sender unit, pick-up unit, are reused 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) Check if the vehicle owner wants to retain the original tank and any associated parts.
- e) 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.
- f) The trip meter distance to empty will no longer work as intended by the manufacturer.

Observe safety precautions during the installation of the LONG RANGER fuel tank



**INSTALLATION KIT TR98****QTY DESCRIPTION**

- 1 LONG RANGER Tank #**TR98**
- 1 Plastic bag 800mm long
- 1 Rollover valve #**VAROLL07** (Factory fitted in top of tank).
- 1 Rollover valve grommet #**VAROLL08** (Factory fitted in top of tank).
- 1 Clamp ring #**R83CR**
- 1 Rollover valve mount/cradle #**TR94RVP** (OEM rollover valve)
- 1 Carbon canister mount #**TR98CM03**
- 1 Fuel Tank Mount #**TR98B1**
- 1 Blanking rod, aluminium, 16mm OD x 25mm Long (Sender unit)
- 1 Blanking rod, aluminium, 10mm OD x 25mm Long (Sender unit)
- 1 Plastic joiner quick release #**PLJOQC0808B**
- 1 #**SF18** M10 captive/tag bolt
- 1 O ring 3.53 x 69.85 #**BS232N70**
- 1 Carbon Canister TLR #**CC01**
- 6 Screw M4 x 8mm (Large FLVV cradle)
- 11 Screw M5 x 12mm (Sender unit clamp ring and OEM carbon canister)
- 3 M5 x 19 Flat washer (OEM carbon canister)
- 3 Bolt M6 x 16mm long (OEM carbon canister mount)
- 6 M6 flat washer (OEM carbon canister mount)
- 3 M6 nyloc nut (OEM carbon canister mount)
- 2 Bolt M8 x 30mm long (TLR carbon canister mount)
- 2 M8 nyloc nut (TLR carbon canister mount)
- 4 M8 x 24 x 2 flat washer (TLR carbon canister mount)
- 4 Bolt M10 x 25mm long (Tank mounts)
- 4 M10 nyloc nut (Tank mounts)
- 1 M10 nut (Tank mounts)
- 9 M10 x 30 x 2.5 Flat washer (Tank mounts)
- 1 M10 Med Spring washers (Tank mounts)
- 6 Cable tie 5mm x 300mm
- 4 Hose clamp MH4 (8mm hose)
- 4 Hose clamp MH6 (10mm hose)
- 8 Hose clamp HS8 (16mm hose)
- 2 Male/Female 45-degree brass fitting
- 2 ¼ BSP x 16mm straight brass barb
- 1 Fuel hose 6mm x 600mm (System breather - VAROLL07 to TR94RVP)
- 1 Fuel hose 8mm x 50mm (Plastic joiner to tank breather fitting)
- 1 Fuel hose 10mm x 50mm (Blanking hose on pickup unit)
- 1 Fuel hose 10mm x 400mm (Link breather)
- 1 Fuel hose 16mm x 50mm (Blanking hose on pickup unit)
- 1 Fuel hose 16mm x 100mm (Roll over valve cradle to carbon canister)
- 1 Fuel hose 16mm x 1000mm (Carbon canister)
- 1 Fuel hose 16mm x 1150mm (Roll over valve cradle to carbon canister)
- 1 Fitting instructions
- 1 Warranty information sheet and return card
- 1 LONG RANGER sticker

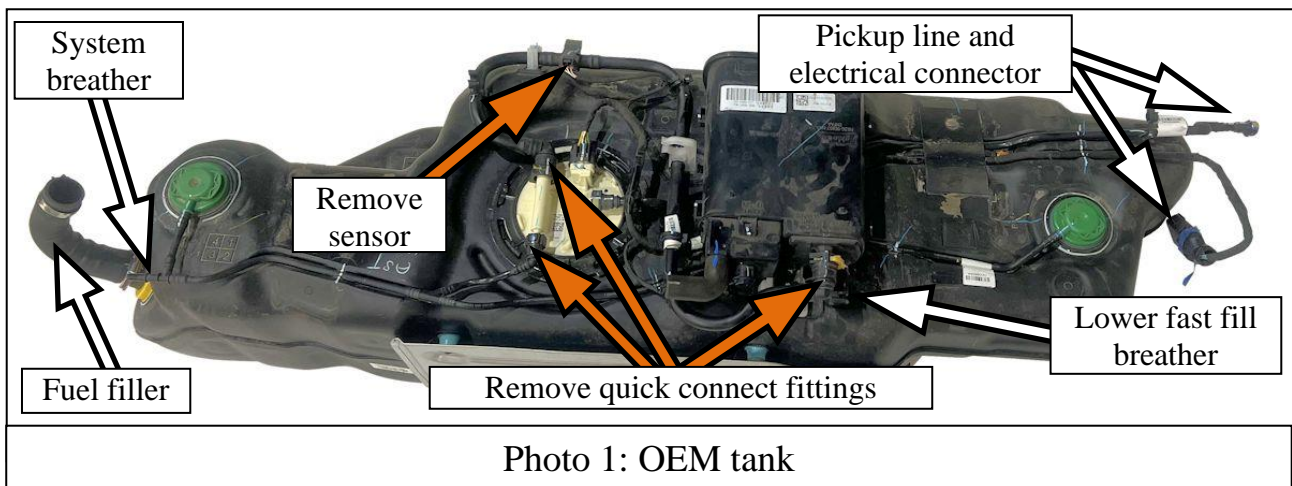


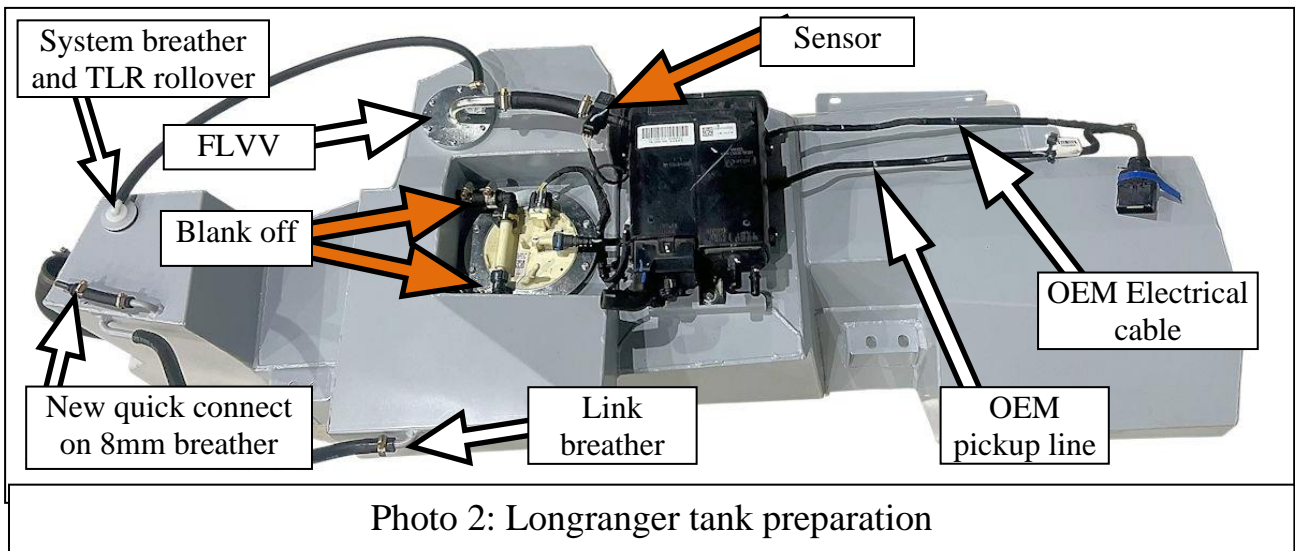
**DANGER - WHILE WORKING WITH FLAMABLE LIQUID  
AVOID FLAMES, SMOKING AND GRINDING SPARKS WITH FUEL PRESENT  
BE PREPARED WITH SUITABLE FIRE FIGHTING EQUIPMENT ON HAND**



## **INSTALLATION GUIDE**

1. Take a few minutes to read through this installation guide before proceeding
2. Check that all items listed in the Longranger kit have been received, and that nothing has been damaged in transit
3. Although the Longranger 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 email [fitting@thelongranger.com.au](mailto:fitting@thelongranger.com.au) Our web page also contains an FAQ, so some of your questions may already be answered
5. Raise vehicle and disconnect tail shaft at rear
6. **As per photo 1:** Disconnect fuel pickup line and electrical connector located at the front of the tank. *Warning: Fuel lines will be under pressure*
7. **As per photo 1:** Disconnect fuel filler hose at rear of tank
8. Support tank and remove all 4 main tank bolts and 3 bolts mounting guard to chassis rail. *Note: keep fixings for fitment of Longranger tank*
9. **As per photo 1:** Lower tank approx. 100mm, disconnect the 8mm system breather at rear of tank and the lower canister purge hose on the carbon canister
10. Remove tank from vehicle and disconnect plumbing and electrical fitting from carbon canister
11. Un-bolt and remove carbon canister from OEM tank and install to Longranger tank using 3 off M5 x 12 screws and 3 off M5 19 flat washers
12. Clean around and disconnect hoses and electrical fitting from pickup unit and remove from tank. **WARNING:** *Cleanliness and care in handling the fuel pickup unit is essential. Contamination or rough handling may damage the unit*





13. **As per photo 3:** Unclip and remove purple Fill Limit Vent Valve (FLVV) from underside of sender unit and clip into supplied TLR94RVP roll over valve cradle. Secure with cable tie

14. **As per photo 2:** Fit FLVV cradle assembly to Longranger tank with supplied O ring, BS232N70, and 6 x M4x8 screws. *Note the Orientation*

15. **As per photo 2 and plumbing diagram:** Fit the 6mm system breather hose to the small outlet on the FLVV cradle



16. **As per photo 1:** Cut the hard plastic hose away from the quick connect fittings and electronic sensor on the fast fill breather line from OEM canister to expose the barb, there should be 2 x 90 deg fittings and 1 sensor. *Note: be careful not to cut the barbs and damage the sealing surface. Note the direction of flow on the sensor*

17. **As per photo 2 and plumbing diagram:** Blank off one end of the 16mm x 50mm rubber hose using 16mm diameter alloy blank, connect hose to a 90 degree quick connect fittings removed in previous step using HS8 hose clamps and fit to OEM sender unit

18. **As per photo 1:** Cut hard plastic hose away from the 45 Deg. quick connect fitting on the system breather line at the pickup unit to expose the barb. *Note: be careful not to cut the barbs and not damage the sealing surface*

19. **As per photo 2 and plumbing diagram:** Blank off one end of the 10mm x 50mm rubber hose using 10mm diameter alloy blank connect hose to 45 degree quick connect fittings removed in previous step using MH4 hose clamps and fit to OEM sender unit

20. Fit pickup/sender unit to Longranger tank using OEM “O” ring and supplied clamp ring (R83CR) and 8 off M5 x 12 screws. *Note the orientation*

21. **As per photo 2 and plumbing diagram:** Remove pickup line from top of OEM tank. Slide under OEM carbon canister, connect to sender unit and leave other end at front left corner



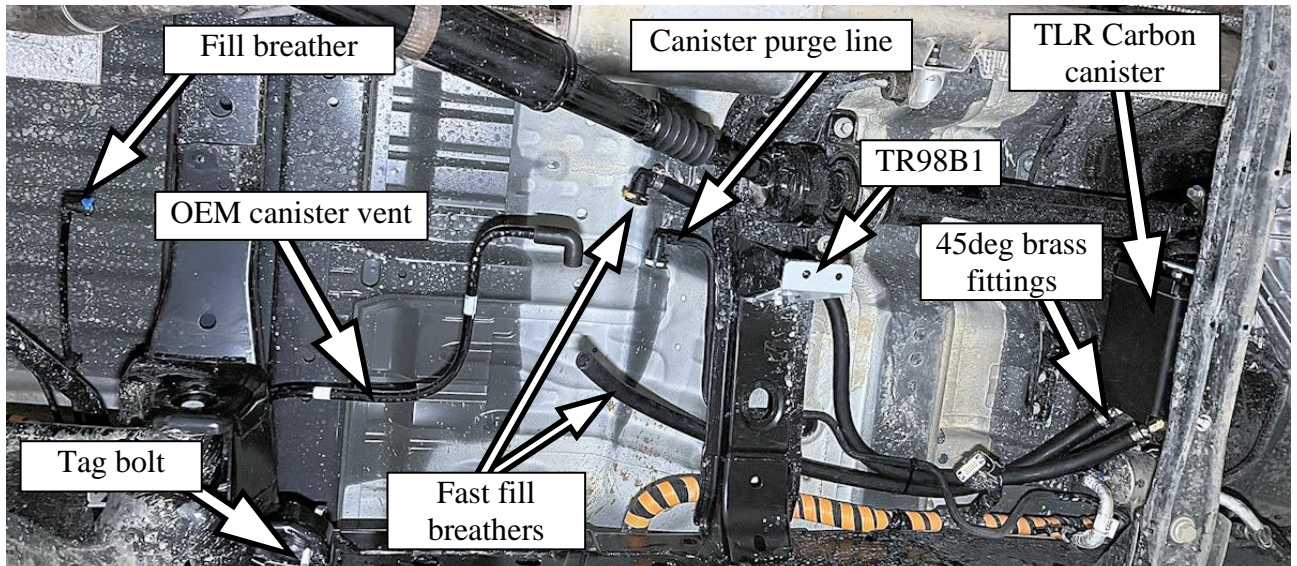


Photo 4: Tank area preparation

22. **As per photo 2 and plumbing diagram:**  
Remove electrical harness from OEM tank, slide under OEM tank under carbon canister and reconnect to canister and pickup unit

23. **As per plumbing diagram and photo 2:** Fit 16mm x 100mm hose to FLVV cradle and sensor from step 16 to the other end of hose using 2 HS8 hose clamps

24. **As per photo 4 & 5:** Fit Longranger carbon canister to TR98CM03 canister mount with 3 M6 x 16 bolts, 6 M6 Flat washers and M6 nyloc nuts

25. **As per photo 4 & 5:** Using a suitable sealant, fit 2 off brass 45-degree elbows to canister then fit 2 off straight fittings to the elbows. *Note: orientation*

26. **As per photo 5:** Drill out hole in cross member at the rear of the transfer case and mount canister bracket using 2 x M8 x 30 bolts, 4 x M8 flat washers and M8 nyloc nuts

27. **As per photo 4:** Bolt supplied bracket, TR98B1 to OEM right front tank mount using 2 M10 x 25mm bolts, 4 off M10 washers and M10 Nyloc nuts

28. **As per photo 4:** Fit SF18, M10 tag bolt, adjacent to left rear OEM mounting hole. Bend tag bolt to sit over top of chassis rail. *Note: check that the tag bolt does not foul or rub on brake lines*

29. **As per photo 4 and plumbing diagram:** Fit supplied 16mm x 1000mm hose to remaining 90 degree quick connect fitting using HS8 hose clamp. Connect to the Longranger carbon canister

30. Fit 16mm x 1150mm hose to a 45 deg fitting on canister using HS8 clamp

31. **As per photo 4 and plumbing diagram:** Run the two 16mm hoses from the canister over cross member. Cable tie both hoses to the canister purge line behind the electrical plug

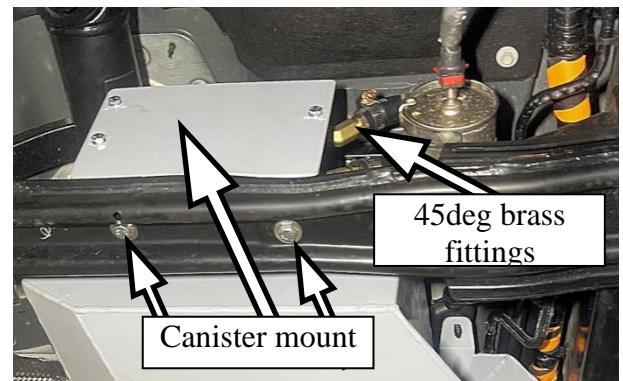


Photo 5: Canister mount

32. Remove rubber filler hose from OEM tank. Turn hose 180 degrees and fit to new tank
33. **As per photo 2 and plumbing diagram:** Fit 8mm x 50mm hose to supplied 8mm quick connect barb fitting and fit to 8mm breather fitting on rear left top of tank
34. Raise and support tank approx. 300mm from final fitment location
35. **As per photo 2 and plumbing diagram:** Run system breather hose from FLVV over cross member and connect to Longranger roll over valve with MH4 hose clamp
36. Connect electrical plug at front and secure to Longranger support bracket
37. Pick up hard-line will go between Longranger and cross member and re connect to fuel filter. *Note: check clearance and line not squashed as securing tank into final position*
38. Raise tank and refit four OEM M10 bolts to each corner of the tank
39. Fit M10 flat and spring washers and M10 plain nut to left rear mount
40. Fit an M6 OEM bolt to left front mount
41. Fit supplied M10 x 25mm bolt, flat washer and M10 nyloc nut to right hand front mount
42. Drill remaining hole in right rear mount and fit supplied M10 bolt, nut and washer
43. Clamp rubber filler hose to steel filler pipe
44. **As per photo 2 and plumbing diagram:** Fit 10mm x 400mm link breather hose between two barbs on top of tank at right rear using MH6 hose clamps
45. Reconnect OEM 8mm filling breather at the top rear of tank
46. Clean old Loctite off tail shaft bolts. Reapply Loctite and torque to manufactures specifications
47. Check for clearance all around tank on brake, fuel lines and electrical wires, tighten all tank mounting bolts
48. Check that all bolts and hose clamps are tensioned correctly
49. Clean tank to remove any dirt or grease from the installation process
50. Transfer the fuel removed earlier to the new Long Ranger tank
51. We suggest that the tank is filled with a test load of fuel, test drive vehicle and inspect all fittings for leaks (not included in the quoted price)
52. 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

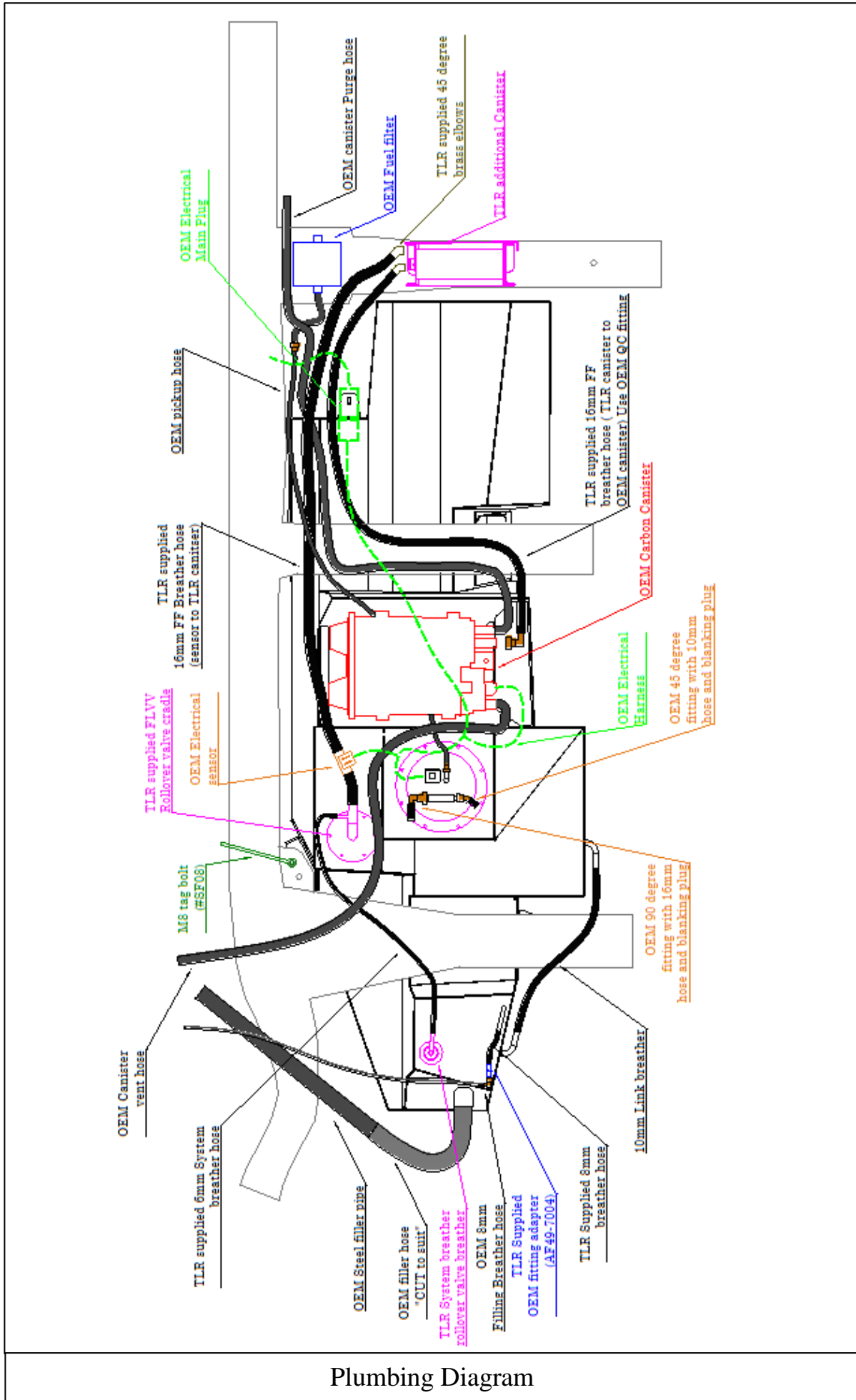
## **Explain to the owner the operation of the LONG RANGER TANK.**

- 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) 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 top half of the new tank is bigger than the bottom half.
- c) The **trip computer** with distance (driving range) to empty will no longer accurately show the distance left to travel. The computer still thinks the tank only has 80lt and will not give a larger range reading with the new tank installed. It is suggested that the readings be cautiously interpreted along with the gauge until familiar with the new readings. As a rough guide the DTE will be approximately 75% greater with a 140lt tank fitted.
- d) 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.
- e) The vehicle manufacturer selected springs without accounting for a bigger fuel tank. Several suspension modification options are available.
- f) 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 kilometers, 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.



Plumbing Diagram