1998-2007 Toyota Land Cruiser 100 Series 40 Gallon Auxiliary Tank Instructions

Product Information/Install Instructions for

Toyota Land Cruiser 80 Series/ LX 470 Main Replacement Tank

Kit P/N TLC100AX-US (40 Gallon)





HARDWARE	HOSES & CLAMPS	MISC PARTS
3 x M8 x 25mm Bolt 12 x M8 Flat Washer 2 x M8 Spring Washer 2 x M10 Flat Washer 4 x M12 Flat Washer 2 x M10 Nyloc Nut 1 x M8 Nut 10 x M8 x 20mm Bolt - Strap welded on 10 x M8 Nyloc Nut 2 x M12 x 30mm Bolt 2 x M12 Nyloc Nut 5 x M5 x 8mm Pan Head Screw (for Fuel Gauge Sending Unit)	1 x 8mm Hose @ 59" Long 1 x 12mm Hose @ 16" Long 1 x 12mm Hose @ 22" Long 1 x 35mm Fuel Hose @ 4" Long 1 x 32mm Fuel Hose @ 6" Long 6 x 1/4" Hose Clamp 4 x 1/2" Hose Clamp 4 x 1-1/4" Hose Clamp	1 x TF100TLCEXP-US Twin Filler Neck 1 x Front Tank Mounting Bracket 1 x Rear Tank Mounting Bar 1 x Fuel Transfer Pump 1 x Z14K Fuel Filter 1 x Fuel Transfer Pump Mounting Bracket 12 x 7" Cable Tie 5 x 3mm Shrink Tube @ 1" Long Magnet (to be used inside auxiliary tank)
BRASS	**ELECTRICAL**	
1 x P3 5/16" x 1/4" Hose Barb Straight 1 x P6 5/16" x 1/4" Elbow 1 x P3 1/2" x 1/4" Straight 1 x 1/4" BSP Plug 2 x P6 1/2" x 1/4" Elbow	1 x 3mm Two Core Cable @ 236" Long 3 x Red Insulated Terminal 1 x Red Eye Terminal 1 x 8mm Blue Eye Terminal 2 x Red Male Terminal 1 x 4mm Single Core Blue Wire @ 11.8" Long 1 x 5 Amp Fuse 1 x Fuse Holder 2 x Fuse Holder Terminals 1 x LRA-PG210 Switch/Gauge w/ Wiring Loom 1 x Fuel Gauge Sending Unit 0-90 Ohm, set up and tested in tank with 20" Long Ground soldered on	

NOTE: If a replacement fuel filler cap is needed, they are available at AutoZone (Duralast, p/n 6817A)

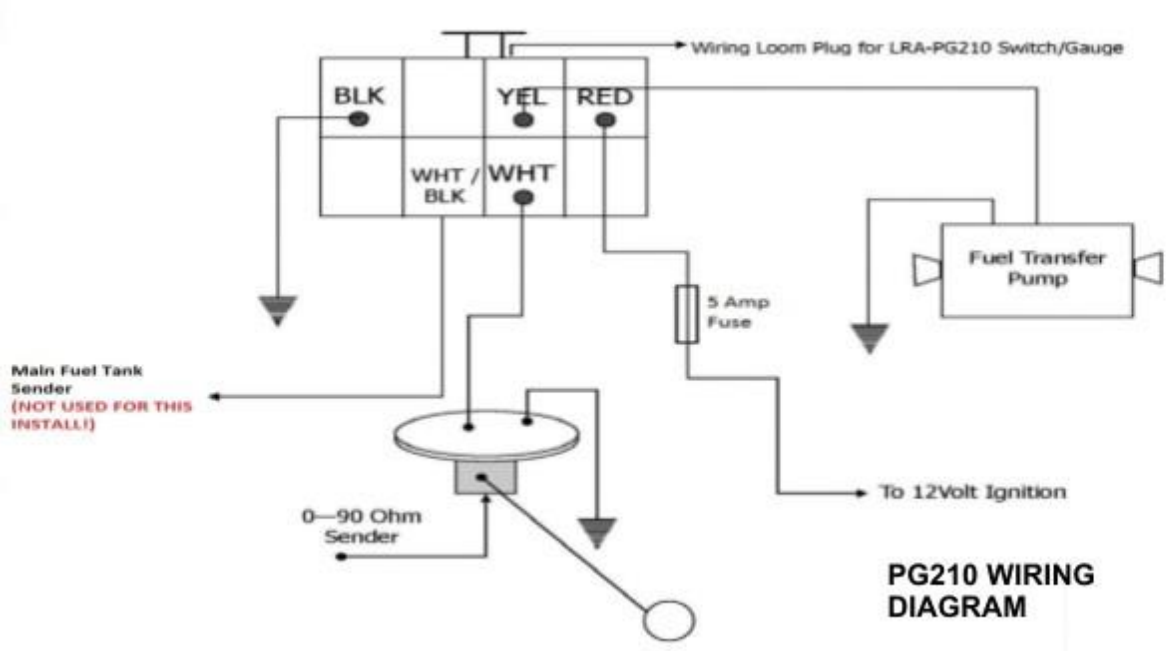
A. INSTALL THE FUEL TRANSFER SWITCH/GAUGE

1. Select a suitable location in the dash to mount the switch/gauge unit.
2. The switch is fairly sensitive to installation. The hole diameter needs to be just the right size (20mm or .78"). If it is too small, and the switch is forced into place, the switch may be damaged or not function properly. Use a Step Drill Bit to drill a 20mm/0.78" hole, using the pilot hole as a guide. Use a small file to carefully adjust the hole size as needed. You will need to test-fit and file or cut out more material if needed. **DO NOT FORCE SWITCH INTO PLACE WHILE TEST-FITTING.**
3. Connections should be soldered and heat shrunk, **not just crimped**.
4. Double-check all connections when done.

B. WIRE THE FUEL TRANSFER SWITCH/GAUGE

1. A 12 volt ignition source can be found under the hood, in the loom that goes to the wiper motor (black wire). Carry out wiring as per the wiring diagram, below. The 5 amp fuse is to be installed in the red wire that taps into the ignition power source.
2. Run the twin core sheath cable under the left-hand scuff plate, under the carpet to the rear scuff plate and out through the grommet, exiting the vehicle beneath the rear scuff plate.
3. Leave enough wire to reach the fuel gauge sendingunit and fuel transfer pump.
4. The white and black striped wire will not beused.

PLEASE REFER TO OPERATING INSTRUCTIONS FOR THIS UNIT ON PAGE 15 & 17



PG210 WIRING DIAGRAM

A. GET READY

1. We recommend power washing the underside of the vehicle, to remove mud and debris.
2. Unpack tank and installation kit. Review packing list and kit.

B. REMOVE THE SPARE WHEEL, SPARE WHEEL CARRIER & EVAP MUFFLER

1. Remove spare wheel and spare wheel carrier. The spare is to be relocated for this install, and will not be reinstalled at this location.
2. Remove evap muffler from the evap canister and set aside (will be relocated later).

C. INSTALL MOUNTING BRACKETS

1. Install front cross member bracket to factory holes and drill the required two extra holes.
2. Using supplied 8mm strap bolts, secure the last two holes.



3. Install the rear tank mounting bar to frame using six 8mm strap bolts each.
4. Drill required extra two holes (per diagram on page 10) and fasten with the last two 8mm strap bolts.





A. RELOCATE EVAP MUFFLER ASSEMBLY

1. Cut down factory mount for the evap muffler to appropriate length. Mount with supplied screw to inner left-hand side quarter panel.



2. Route 3/4” hose from evap canister to evap muffler.





3. Using the factory 90° hose and supplied filter and adapter, route filter up next to the new filler neck.

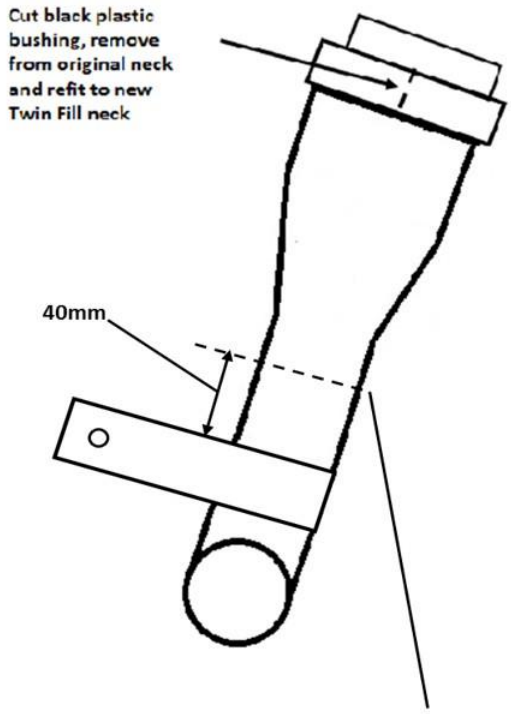
A. PREPARE & INSTALL NEW FUEL FILLER

1. Completely remove the factory filler neck from the vehicle.
2. Cut the plastic bushing from the top of the factory filler neck and trim to fit the top of the twin filler neck (per diagram on page 10).
3. Install plastic bushing and fittings to twin filler neck (per diagram on page 11).
4. Install the elbows to the twin filler neck, pointing downward from the filler (per diagram on page 11).
5. Fasten hoses to twin filler neck at this time.
6. Cut the factory filler neck down at measurement (per diagram on page 10).
7. Install new twin filler neck to the vehicle using the upper factory threaded hole.

B. PREPARE AUXILIARY FUEL TANK

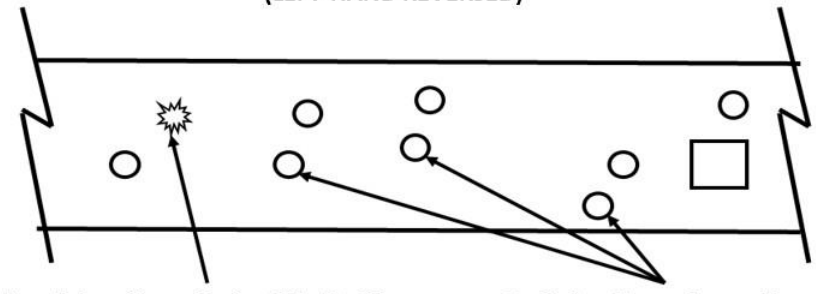
1. On auxiliary tank, drop the supplied magnet into the tank in the vicinity of the fuel inlet or swirl pot.
2. Install the 1/2” barb next to the fuel inlet.
3. Install the 5/16” barb into the front of the tank.
4. Install the longer piece of 5/16” fuel line onto the tank with clamp.
5. Install remainder of original filler pipe to the main tank.
6. Connect the main tank fill hose to the factory tank piping and 1/4” breather.

TOYOTA LAND CRUISER 100 SERIES
REMODELING ORIGINAL FILLER

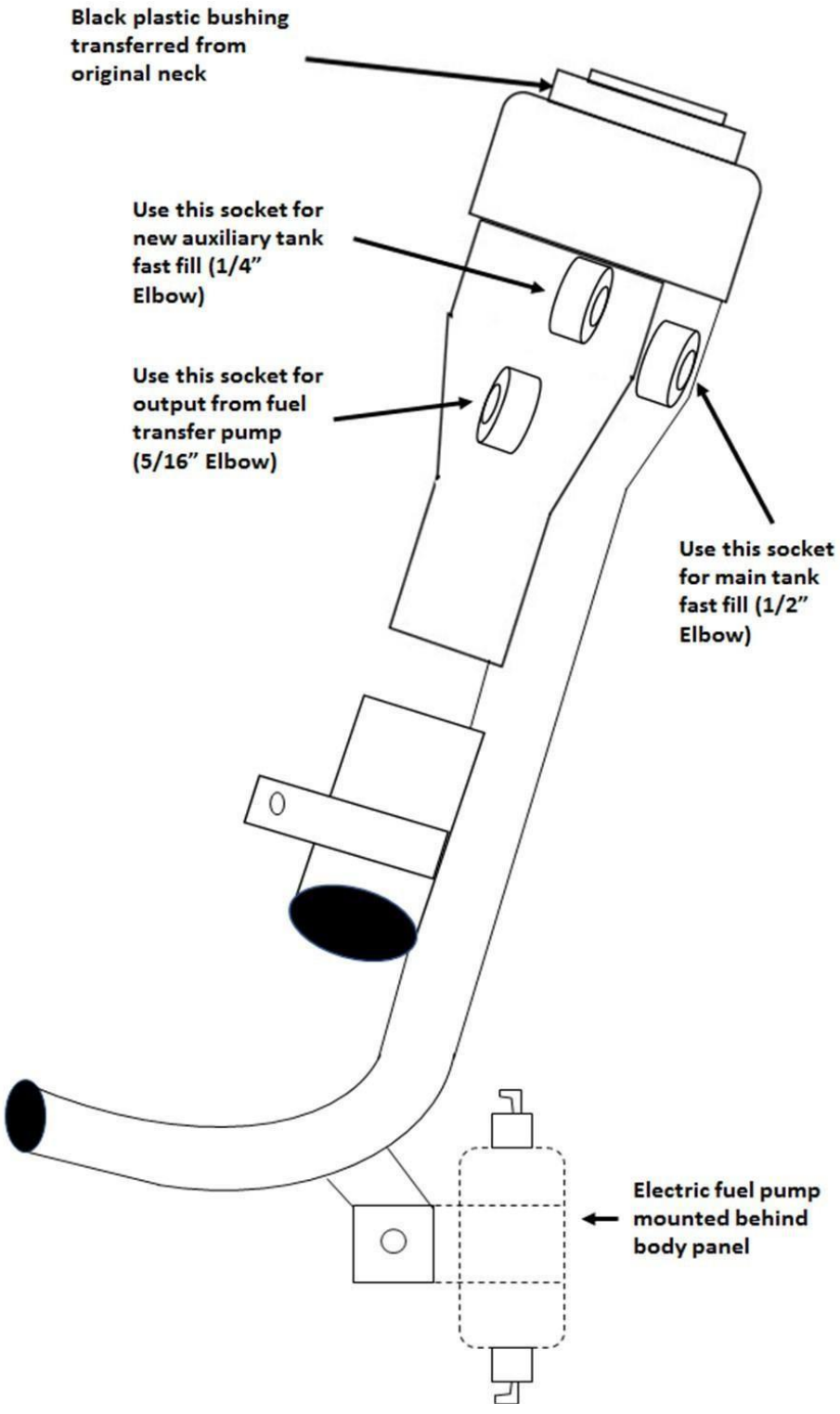


VIEW OF RIGHT-HAND CHASSIS RAIL SHOWING CRADLE LOCATING HOLES

(LEFT-HAND REVERSED)



TOYOTA LAND CRUISER 100 SERIES
TWIN FILLER SCHEMATIC



A. INSTALL FUEL TRANSFER PUMP

1. Mount fuel transfer pump on the back side of filler neck mounting bolt with supplied bracket (as shown on Twin Filler Schematic drawing on page 11). **THE PUMP MUST BE INSTALLED ABOVE THE FUEL LEVEL OF THE NEW TANK, AND WITHIN 12 VERTICAL INCHES OF THE NEW TANK BOTTOM. THE FUEL PUMP SHOULD BE MOUNTED WITH THE OUTLET HORIZONTAL OR ABOVE THE INLET. THIS WILL HELP TO PREVENT LOCATION-RELATED GRAVITY FEED, CHECK ENGINE LIGHTS (CELs), AND VAPOR LOCK ISSUES.**
2. Complete pump wiring. **DO NOT** ground the pump to the mounting bracket, instead, drill a hole in the body and clear an area for the body ground terminal to be firmly connected to bare metal. The transfer pump is sensitive to power interruption when on and a good ground is **imperative**.

B. LIFT AUXILIARY TANK INTO POSITION AND INSTALL

1. Lift tank into position and fasten onto studs and 2 supplied 12mm bolts (route 5/16” fuel hose over cross member at the same time).
2. Attach the auxiliary tank filler to the filler neck and connect the fast fill vent hose.
3. Connect the 8mm feed line from the auxiliary tank to the in-line filter, then to the inlet side of the fuel transfer pump. Connect the auxiliary fuel feed line from the twin fill neck to the outlet side of the fuel transfer pump.
4. Check all clearances and neatly cable tie all hoses and wiring. Check over all hoses and connections.
5. Reconnect vehicle battery.
6. To test, fill main tank half-full, and the auxiliary tank full. Test transfer pump operation and make sure the gauge is working properly, the level lights are correct and listen for undue noise (a “tic-tock” noise is nor- mal when the pump is running).
7. Check again for leaks.

A. **Are all hose clamps tight and secure?**

B. **Are all nuts and bolts secured?**

C. **Are mounting brackets and straps secure?**

D. **Are Fuel Gauge Sending Unit bolts secured?**

E. **Are all fuel lines secure with no kinks?**

F. **Does tank interfere with, or rub on, other vehicle components?**

G. **Is tank calibration accurate?**

☐ **Congratulations! You have completed the install!**