1997-2002 Toyota 4Runner 3G 29 Gallon Auxiliary Tank Instructions

Product Information/Install Instructions for

Toyota 4Runner 3G 1997-2002 Gas/Diesel

Kit P/N TSURF97A





NOTE: This product is NOT FOR SALE TO, OR USE BY, CALIFORNIA RESIDENTS. This product has not been approved, certified, rated or otherwise passed upon by any Federal or State regulatory agency

D. INSTALLATION KIT CONTENTS

HARDWARE	HOSES & CLAMPS	MISC PARTS
2 x M10 x 85mm Bolt	1 x 6mm Hose @ 55" long	1 x Twin Filler p/n TSURFA
4 x M10 x 25mm Flat Washer	1 x 8mm Hose @ 47.25" long	1 x 12mm Y Piece
2 x M10 Nyloc Nut	1 x 12mm Hose @ 25.6" long	1 x Fuel Transfer Pump
5 x M5 x 10mm Pan Head Screw	1 x 12mm Hose @ 39.4" long	1 x Z14 K Filter
3 x 8mm Tek Screw	1 x 38mm Hose @ 3.2" long	10 x 7" Cable Tie
FOR VEHICLES WITHOUT TOWBAR:	1 x 32mm Hose @ 4" long	5 x 11" Cable Tie
2 x M12 x 30mm Bolt	8 x 1/4" Hose Clamp	Magnet (for use in new tank)
2 x M12 x 30mm Bolt w/11.8" straps welded on	8 x 1/2" Hose Clamp	
8 x M12 Flat Washer	4 x 1-1/2" Hose Clamp	
4 x M12 Nyloc Nut		
BRASS	**ELECTRICAL**	
1 x P6 1/4" x 1/4" Elbow	1 x 3mm Twin Core Wire @ 236" long	
2 x P6 5/16" x 1/4" Elbow	3 x Red Insulated Terminals	
4 x P6 1/2" x 1/4" Elbow	3 x Red Eye Terminals	
1 x P6 1/4" x 1/8" Elbow	2 x Red Male Terminals	
	1 x 0-90 Ohm Sender Unit w/19.7" ground wire	
	1 x LRA PG-210 Switch/Gauge	
	4 x 3mm Heat Shrink Tube @ 1" long	

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

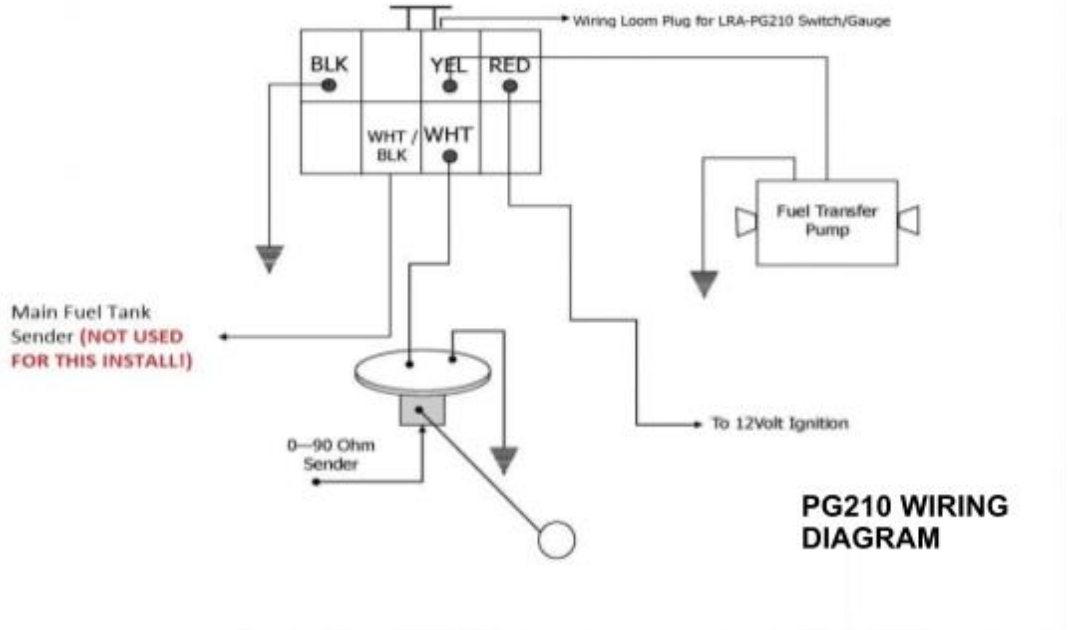
A. INSTALLATION

1. Select a suitable location in the dash to mount the switch/gauge unit., we recommend using one of the switch blanks.
2. Create an appropriate hole in your preferred location (make sure there is enough room in the dash for the gauge/switch and wiring). Use a Uni-Bit stepped drill bit to drill a 20mm (.78") hole. Be very careful to not over drill the hole—slightly small is OK, it can be adjusted using a small file to widen the hole as needed. The switch is fairly sensitive to installation, the hole diameter needs to be just the right size (20mm, or .78"). If the hole is too small, and the switch is forced into place, the switch is likely to be damaged or not function properly. You will need to carefully test-fit and remove 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. WIRING

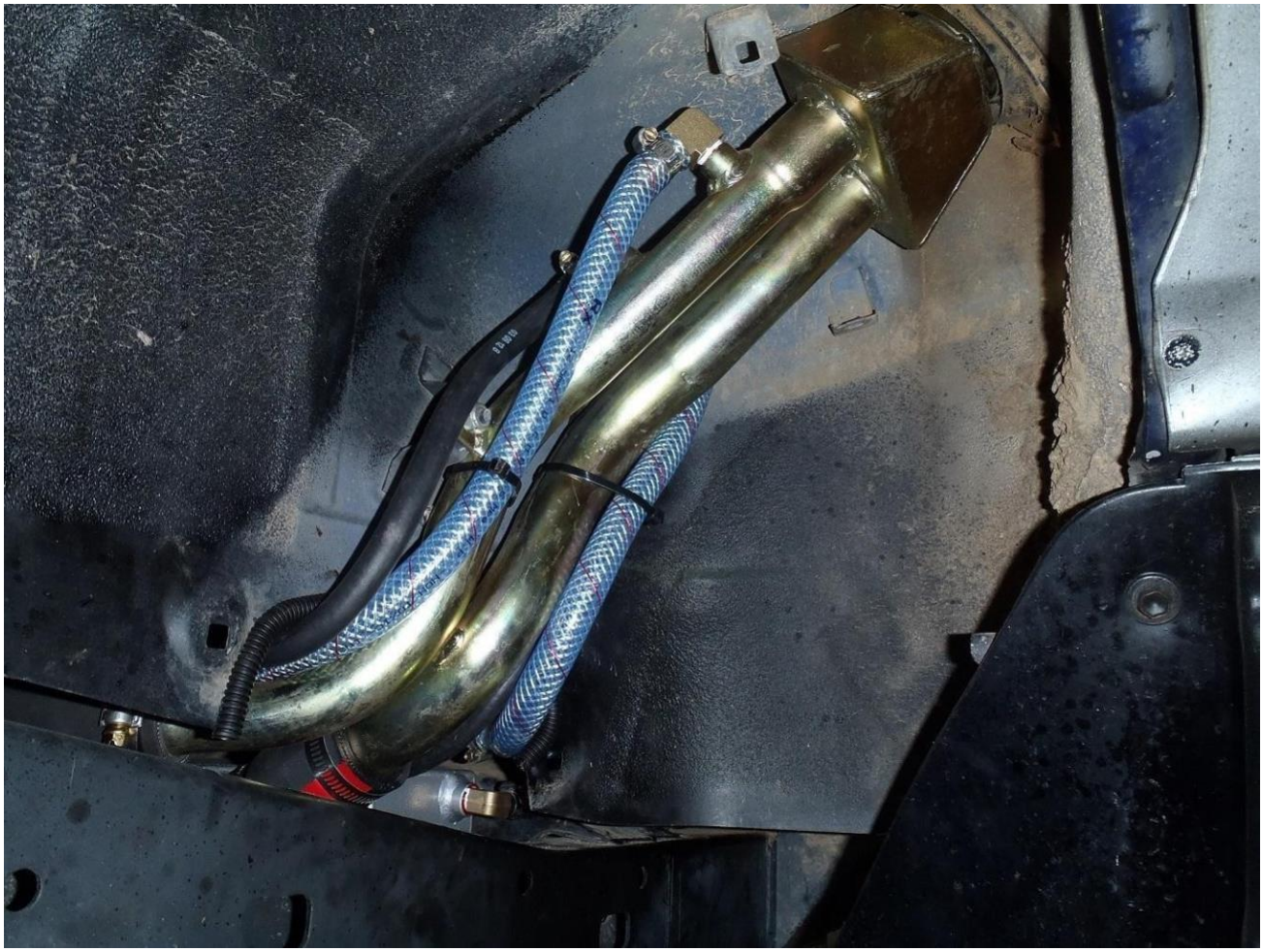
1. Find a 12 volt ignition power source (check this with test light). Carry out wiring as per the wiring diagram on this page.
2. Run the 3mm twin core cable to the outside rear of the vehicle. Leave enough wire to reach the sendingunit.

PLEASE REFER TO OPERATING INSTRUCTIONS FOR THIS UNIT ON PAGES 12 & 14



A. PREPARE AND INSTALL THE NEW FILLER

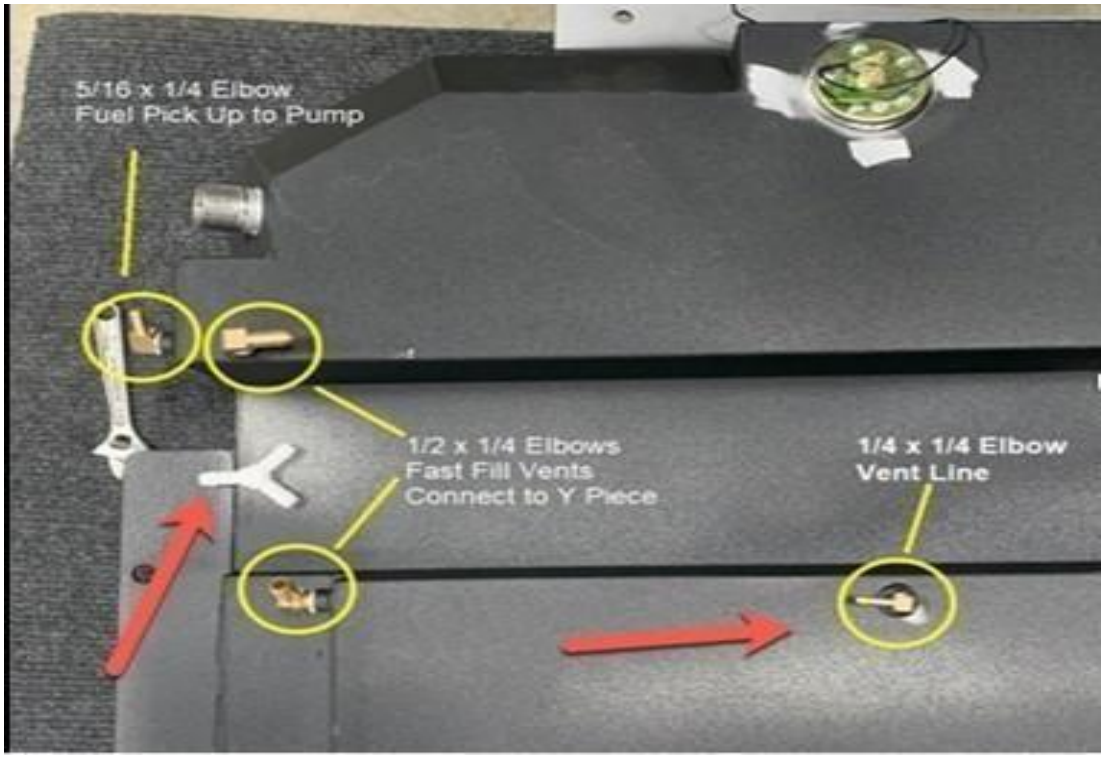
1. Remove the driver-side rear wheel and the plastic filler pipe cover.
2. Remove the OEM fill pipe and cut both pipes at points shown in drawing (included in tank kit).
3. File off sharp edges, install 4-inch length of 32mm hose to lower section of fill pipe (NOTE: OEM filler pipe is 35mm OD, so warming up hose and oiling pipe is advised to assist in fitting hose). Also install 25.6-inch length of 12mm hose to the lower section of steel tube, then refit lower section of filler pipe to vehicle.
4. Install brass fittings to sockets on new twin filler as shown in the diagram (included in tank kit).
5. New twin filler can now be installed to vehicle and secured with the same M8 nut that secured the original filler. Install 3.2-inch length of 38mm hose to the twin filler neck and slide up neck as far as comfortably possible. Don't clamp hose yet, this simply puts hose in good position to make tank installation easier.



If a towbar is fitted to the vehicle, remove bar. If towbar is a genuine Toyota bar, locate and remove 6mm spacer plates from the mounting surface of the towbar (these plates are only tack-welded on in two places, these welds can be easily ground off and any lumps ground flat)

A. PREPARE THE AUXILIARY TANK

1. Install brass fittings to sockets on new fuel tank as shown in drawing (included in tank kit).
2. Drop the supplied magnet into the tank, as close to the fuel pick up point as possible.
3. Install vent hose, fuel pick up hose, fast fill hose and Y-piece to tank. 1/4" vent line connects to the auxiliary vent P6 1/4 x 1/4 elbow on the twin filler. The outlet of the "Y" connects to the P6 1/2 x 1/4 elbow Auxiliary Fast Fill on the Twin Filler. NOTE: DO NOT CONNECT FAST FILL HOSE FROM Y-PIECE TO REAR HALF OF TANK UNTIL TANK IS IN PLACE—THIS HOSE RUNS OVER CROSS MEMBER.
4. Check gauge sending unit Ohm readings at full and empty by rolling tank. Empty should be 0.2 - 2.5 Ohms, Full should be 88 - 92 Ohms.



B. INSTALL THE FUEL TRANSFER PUMP

1. Mount the fuel transfer pump in the left-hand rear corner of the vehicle (directly to the floor pan behind the left-hand rear wheel arch is a well-protected area). **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. Run twin core wire from switch/gauge to this area and complete 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**.

A. JACK TANK INTO POSITION/CONNECT HOSES AND SECURE TANK

1. Safely jack the tank into position, slide fill hose down onto tank fill neck as tank goes into position and centralize tank between chassis rails.
2. If no towbar was fitted to the vehicle, mark and drill holes in the chassis rails, using the tank brackets as templates. Secure with bolts provided. If a towbar was fitted to the vehicle, refit towbar with tank and secure with original towbar bolts.
3. Drill mounting holes in front cross member and install bolts.
4. Connect all remaining hoses and wires, taking care not to kink fast fill hoses.

B. FINISH INSTALL

2. Check all clearances and neatly cable tie all hoses and wiring away from any moving parts or heat sources.
3. Refit plastic filler pipe cover and left-hand rear wheel.
4. Reconnect vehicle battery.
5. To test, fill main tank half-full, and the auxiliary tank full, check for leaks. 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 normal when the pump is running).
6. 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!**