



Brown Davis Automotive Pty. Ltd.

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TH97R4

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Last edited: 1/09/2010

Fuel Tank Part List and Installation Instructions

TANK P/N: TH97R4

1997 TOYOTA HILUX (4WD) ALL MODELS to 03/2005
118ltr REPLACEMENT TANK

Item	Description	Quantity	Part number	P	C
1	TANK – REPLACEMENT	1	TH97R4		
2	HOSE – FUEL AND EMISSION – 6.5mm	1.3m			
3	BRASS – TAIL BARB - 5/8" x 1/4" BSP	1			
4	BRASS – TAIL BARB - 1/4" x 1/4" BSP	1			
5	BRASS – PLUG - 1/4" BSP	1			
6	DRAIN PLUG – MAGNETIC – M14 (fitted to tank)	1	DP-M14		
7	SET SCREW – HEX - M8 x 25mm – PLATED 8.8	2			
8	WASHER – PANEL PLATED – M8	2			
9	SPACER BLOCK 10mm – SINGLE HOLE - 40 x 40mm (used in single and extra cab only)	1	SP-10-040040		
10	TANK BRACKET - FRONT MOUNTING BRACKET SPACER STRIP	1	TB-TH97R1		
11	WARRANTY CARD & INFORMATION SHEET	1			
12	BROWN DAVIS AUTOMOTIVE STICKER	1			

Packed by (P): _____

Checked by (C): _____

Date Packed: ____ / ____ / ____

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All Brown Davis Automotive fuel tank kits are manufactured to Australian Standards and the Australian Design Rules where applicable and carry a full **3 Year Warranty**. Construction in 2.0 mm (14 gauge) cold rolled, aluminium coated, steel ensures maximum strength and durability and minimum corrosion susceptibility. This gauge of steel is sufficiently impact resistant that an additional tank guard is not necessary (most standard tank guards are thinner than 1.5 mm).

All tanks are M.I.G. (Metal Inert Gas) welded to assure the strongest possible seams and are baffled to prevent fuel surge. They are then pressure tested using two different techniques to eliminate the possibility of leaks. Drain plugs are fitted horizontally to prevent them being damaged if the tank is scraped over rocks and are magnetic to collect any metallic dirt that may enter your fuel system.

In all cases, Brown Davis Automotive fuel tanks are designed with severe off road use in mind and will not compromise ground clearance, entry, exit or ramp over angles.

REPLACEMENT TANKS This tank is a replacement for the standard tank and fits in the same location. The standard filler is retained as is the fuel gauge sender unit which still works in the same manner except it takes longer to reach empty. Rearrangement of the exhaust system **IS NOT** necessary with this fitment.

FITTING (fitting time is approximately 4 hours)

- 1 Place vehicle on hoist (or similar) and raise to convenient working height. Remove the standard tank guard and fuel cap, and then drain the fuel into a suitable container.
- 2 Disconnect the fuel hoses and vent hose from the steel lines under the middle of the vehicle at the front of the fuel tank. Make note of which hose goes where for reconnection later.
- 3 Remove the tailshaft making sure to mark both the flange and spline ends for correct alignment when refitting later. For turbo diesel models the exhaust should be dropped to one side. Undo the front exhaust flange just in front of the muffler and the right hand side muffler exhaust hanging rubber and let the exhaust swing away from the fuel tank to give more removal and fitting room.
- 4 Remove the plastic panel that protects the filler hoses under the right hand side wheel arch. Remove the three 10mm bolts around the filler neck in the filler recess. Unbolt the standard tank then carefully lower it and the filler assembly partially, until you can access the fuel gauge wiring above the tank. **CAUTION DO NOT LOWER TOO FAR AS THE VEHICLE WIRING CAN BE DAMAGED!!** Unplug the wiring harness. Also you can now

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get access to the top filler neck hose clamps to disconnect the rubber hoses from the steel filler neck assembly. The tank can now be lowered to the ground and removed from under the vehicle.

- 5 Although your Brown Davis Automotive long range tank has been cleaned and sealed at the factory, check it is perfectly clean inside before assembly and installation by rinsing out the inside thoroughly, as should always be done with any new component installed into the fuel system of any vehicle. Use 4 to 5 litres of petrol, kerosene or methylated spirits for this rinsing process which should be drained and discarded afterwards, and to confirm absolute cleanliness it is not a bad idea to perform a second rinse. Install all brass fittings and the magnetic drain plug into the new replacement long range tank using teflon tape or the like to seal all threads. **(Refer Diagram 1).**
- 6 Remove the fuel gauge sender unit from the standard tank. Position unit in the new tank's back corner and check float arm does not foul on the sides (The float should stop about 5mm off the bottom of the tank). There should be no need to modify the standard sender from Toyota. Fix unit into tank reusing original screws and gasket.
- 7 Remove the pickup/pump and return hose assembly from the top of the original tank.

IMPORTANT! IMPORTANT! IMPORTANT!

Check the depth of the standard tank (there are 2 different tank depths 265mm & 285mm up to the flange face where the pickup assembly bolts in). Fit, using the original gasket and screws to secure it, to the new long range tank after bending the pickup tube down if standard it is the shorter assembly. Check you can feel the pickup touching the tank bottom. The hoses should point forward over the top of the new tank towards the front ready to be reconnected when refitted into the vehicle. Transfer the filler and fast fill breather hoses to the new long range tank.

- 8 Lift new tank up into position supporting it on a jack or similar and leaving it low enough to reconnect the fuel pump wiring if applicable and fuel gauge sender wiring using the extension loom supplied in the kit. The filler hoses can also be rejoined before finally lifting the long range tank all the way up into position. Bolt the front and rear tank support brackets to the original rear tank mount on the chassis and the original tank guard mount at the front. Use the 3 original bolts and the panel washers supplied in the fitting kit at the rear and the 2 x 40mm set screws, spring washers and large washers from the fitting kit at the front, with the spacer strip used between the front tank mount and the chassis crossmember to space it down to clear the lip on the crossmember. .
- 9 Bend the muffler heat shield away from the tank on some models to give clearance and stop it rattling. Refit the tail shaft removed and exhaust moved in "step 3" confirming correct alignment.
- 10 Re-bolt the filler neck assembly up into the body of the vehicle. Reconnect the fuel hoses and vent hose back to the steel lines up under the floor of the vehicle at the front of the new tank. Refit the plastic filler protection panel under the right hand side rear guard.

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- 11 Check over all bolts and hoses, check clearances. Confirm the drain plug has been sealed into the tank. Return vehicle to the ground and refill with the fuel drained as part of the initial "step 1" of this installation. Confirm the fuel gauge is reading and replace filler cap.
 - 12 Road test the vehicle. Note the owner information sheet attached and replace the fuel filter under the bonnet after the first 1000km or 2 to 3 tank fills of the new tank and double check mounting bolts. On some diesel vehicles it is necessary to bleed the fuel system after such a tank installation.

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OPERATION INFORMATION

The operation of your new Brown Davis Automotive long range fuel tank is little different from the original tank.

Simply fill the long range/auxiliary tank exactly as with a standard tank. (It just takes more fuel to fill, and a dual filler will be used for filling auxiliary tanks).

The fuel gauge on the vehicles dash will read as with the standard tank. It should read with the same degree of accuracy as it did with the standard tank other than staying on full for most of the new increase in capacity. For about 20% more than the standard tank held the gauge will now read in proportion from full down to empty. Auxiliary tanks come with a separate tank gauge to show separate fuel level to main tank.

The low fuel light will still function as normal with it coming "on" at about 20% more fuel volume left to go than it used to, to warn you of low fuel.

Remember your new long range tank(s) are carrying a lot more fuel than standard. Remain aware of how much fuel has been used during the initial period of the gauge remaining on full for future reference in estimating fuel usage and consumption.

Maintenance and service of your new Brown Davis Automotive long range fuel tank other than the recommended 1000km check and filter change should be in align with the normal vehicle Manufactures service schedule and guidelines. Remember the long range tank has a magnetic drain plug that the standard tank did not. With the fuel level low the drain plug can be removed and cleaned to remove any metal fragments introduced from the filler bowser scraping on the filler tube when filling or particles and rust flakes from jerry cans used on long trips. This facility is supplied to protect the in-tank fuel pumps fitted to most modern vehicle fuel tanks.

Finally make sure the warranty card is filled out completely and returned to Brown Davis Automotive and that the warranty information is read and understood. If there are any queries about this or any of the above information please contact us at Brown Davis at the attached address or phone and fax numbers for assistance.

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