

# **Brown Davis Automotive Pty. Ltd.**

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## **Fuel Tank Part List and Installation Instructions**

TANK P/N: TL79R1

### HZJ79 LANDCRUISER TRAY & UTILITY 170ltr REPLACEMENT MAIN (FRONT) TANK

Item	Description	Quantity	Part number	Р	С
1	TANK - REPLACEMENT	1	TL79R1		
2	HOSE – TMP - 6mm	1.0m			
3	HOSE - FUEL AND EMISSION - 6mm	1.4m			
4	HOSE - FUEL AND EMISSION - 12.5 mm	1.4m			
5	HOSE CLAMP – PLATED - 7-15mm	6			
6	HOSE CLAMP – STAINLESS - 12-20mm	2			
7	HOSE CLAMP - STAINLESS - 40-60mm	2			
8	DRAIN PLUG – MAGNETIC – M14 (fitted to tank)	1	DP-M14		
9	BRASS – TAIL BARB - 5/8" x 3/8" BSP	1			
10	BRASS – ELBOW - 1/4"x 1/4" BSP	1			
11	BRASS – ELBOW – 3/8" x 1/4 BSP	1			
12	FUEL PICK UP - 1/2" x 3/8" BSP ELBOW - 430mm	1			
13	SET SCREW - HEX - M10 x 30mm - PLATED 8.8	2			
14	SET SCREW - HEX - M10 x 30mm - ON WIRE - PLATED 8.8	3			
15	NUT – STANDARD PLATED – M10	10			
16	WASHER - SHAKEPROOF INTERNAL PLATED - M10	5			
17	WASHER - PANEL PLATED - M10	5			
18	SET SCREW – HEX – M8 x 25mm – PLATED 8.8	1			
19	WASHER - SPRING PLATED - M8	1			
20	WASHER - PANEL PLATED - M8	1			
21	CABLE TIE - 8" BLACK	10			
22	SPACER BLOCKS 5mm - SINGLE HOLE - 40 x 40mm	2	SP-05-040040		
23	TANK BRACKET - MOUNTING BRACKET	1	TB-TL79R1		
24	WARRANTY CARD & INFORMATION SHEET	1			
25	BROWN DAVIS AUTOMOTIVE STICKER	1			

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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 approximately 4.0 hours)

- 1 Unbolt the rear tailshaft at the diff and transfer case flanges and remove from under the vehicle making room for the fuel tank to be removed.
- 2 Drain all the fuel from the main (front if vehicle has 2 tanks) tank. Disconnect the filler hose and the fast fill breather, from the filler neck on the body. Do not remove these hoses at their tank end at this stage.
- Disconnect the fuel pick up hose, return hose and vent hose from the steel lines at the front of the main tank near the passenger side chassis rail. As with the filler hoses do not disconnect these hoses from their respective tank fittings at this stage.
- 4 Unbolt the tank and carefully lower it, until you can access the fuel gauge wiring and unplug it. Then lower tank to the ground.
- Check to confirm that the Brown Davis tank is perfectly clean inside before assembly and installation, by rinsing out with petrol or the like, as should always be done with any new component installed into the fuel system of any vehicle. Remove the fuel gauge sender unit from the standard tank and then refit it into the new long range tank, unmodified, using the original screws and gasket.



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- Install all brass fittings into the new replacement long range fuel tank using teflon tape or the like on all threads.
- 7 Transfer the filler and fast fill hoses to the new long range tank and fit new fuel pickup, return and vent hoses supplied.
- Lift the new tank into position at an angle up on the driver's side to allow the filler and fast fill hoses to be fed over the chassis. Remember to reconnect the wiring to the fuel gauge sender unit as one lifts the tank into position and carefully rout the new fuel lines and vent hoses along the left hand chassis. Hold in place with a jack or similar. Drill holes through the new bracket location on the chassis at the front left mounting point, space with the 2 x 5mm spacers supplied and use 2 screws with positioning wires fed into the chassis to secure the tank in place (use shakeproof washers and double nuts supplied).
- The front right mounting bracket uses a standard M8 captive thread in the chassis for 1 hole and a second hole will need to be drilled with the third supplied bolt with positioning wire should be fed into the chassis and double nutted to secure the tank. The rear support bracket should be bolted to the lower flange of the u-channel chassis cross member with the remaining 2 screws supplied. Check all mounting bolts for tightness.
- Connect all hoses to their original positions noting it will be necessary to trim the filler and fast fill hoses before reconnecting to suit the new tank positioning. Run a new 6mm vent hose (supplied) from the vent fitting on the new replacement tank.
- 11 Confirm the new long range tank has at least 10-15mm clearance on the cabin floor pan as it moves on its rubber mounts with respect to the chassis and tank. Adjust mounting if clearance is not enough.
- Confirm the drain plug has been sealed into the tank and fill with the fuel drained in step 2. 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 (refer manufacturers handbook).



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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.