



**Brown Davis Automotive Pty. Ltd.**

ABN: 72 657 573 544

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**LDER3**

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Last edited: 13/05/2014

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

**TANK P/N: LDER3**

LAND ROVER DEFENDER 110 & 130 TD5 – DIESEL  
(STEEL STANDARD TANK)  
130ltr REPLACEMENT TANK

Item	Description	Quantity	Part number	P	C
1	TANK – REPLACEMENT	1	LDER3		
2	HOSE CLAMP – STAINLESS – 12-20mm	2			
3	HOSE CLAMP – STAINLESS – 50-70mm	2			
4	DRAIN PLUG – MAGNETIC – M14 (fitted to tank)	1	DP-M14		
5	BRASS – ELBOW - 5/8" x 3/8" BSP	1			
6	SET SCREW – HEX - M8 x 25mm – PLATED 8.8	8			
7	WASHER – FLAT PLATED – M8	16			
8	NUT – NYLOCK – M8	8			
9	SET SCREW – HEX - M10 x 30mm – PLATED 8.8	3			
10	WASHER – PANEL PLATED – M10	3			
11	WASHER – SPRING PLATED – M10	3			
12	DISCRIMINATOR VALVE	1			
13	DISCRIMINATOR VALVE SEAL	1			
14	TANK BRACKET – REAR SWAY BAR DROP BRACKET	1	TB-LDER1-a		
15	TANK BRACKET – REAR SWAY BAR DROP BRACKET	1	TB-LDER1-b		
16	STEEL TUBE EXTENSION – 55mm	200mm			
17	DISC MAGNET (fitted in swirl pot)	1			
18	WARRANTY CARD & INFORMATION SHEET	1			
19	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 cold rolled, aluminium coated steel ensures maximum strength and durability and minimum corrosion susceptibility. More than 30 years of testing within the field has shown that 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 ensure 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 general off road use in mind and are designed not to compromise ground clearance, entry, exit or ramp over angles.

Please remember it is the driver's responsibility to operate their vehicle in a sensible manner in 4WD conditions, Brown Davis Automotive cannot be held responsible for the abuse of your vehicle and subsequent possible fuel tank damage.

**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.

**ANY QUESTIONS OR INFORMATION REQUIRED IN RELATION THE BELOW INSTRUCTIONS PLEASE DO NOT HESITATE TO CONTACT BROWN DAVIS HEAD OFFICE OR ONE OF OUR DISTRIBUTORS.**

**PLEASE ENSURE ALL CONNECTIONS AND MOUNTINGS ARE CHECKED A SECOND TIME AFTER FINISHING YOUR INSTALLATION TO CONFIRM THERE ARE NO LEAKS AND THAT ALL BOLTS ARE TIGHT. ALWAYS ROAD TEST THE VEHICLE AND MAKE SURE THERE IS COMPLETE SUSPENSION TRAVEL CLEARANCE.**

**BROWN DAVIS CAN TAKE NO RESPONSIBILITY FOR AFTER MARKET SUSPENSION SYSTEMS INTERACTING WITH THE TANK, IF FITTED.**



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### **FITTING**

- 1 Install all brass fittings, the vent valve and its seal and magnetic drain plug into the replacement long range fuel tank using teflon tape or the like on all threads (**Refer Diagram 1**). Although your Brown Davis Automotive long range tank has been cleaned and sealed at the factory, it is essential that a final rinse and inspection is carried out to ensure that the new fuel tank is impeccably clean before fitting to your vehicle. Use 4 to 5 litres of petrol, diesel or methylated spirits for this rinsing process which should be drained and discarded afterwards to confirm absolute cleanliness.
- 2 Drain the fuel from the vehicle's original tank. (If there is no drain plug, use a pump or syphon hose)
- 3 Disconnect the filler hose and the fast fill breather hose from the standard tank (at the tank end).
- 4 Unbolt and remove the two rear towing eyes from off of the chassis at the rear of the standard tank. Unbolt the rear stabiliser bar mountings to the chassis each side and allow the bar to swing down forward towards the rear axle. Support the tank up under the rear of the car, unbolt and lower the tank down slightly to enable access to unplug the fuel gauge wiring and then disconnect the fuel pickup hose and return hose (at the tank end in the fuel gauge). Also disconnect the 6mm vent hose from the top of the standard tank while it is partly lowered. Remove the standard tank. Remove the front mounting bolt assembly, the bolts and their rubber mounts and discard them as they are not used for remounting the **Brown Davis Automotive long range tank**.
- 5 Remove the fuel gauge/pump unit from the original tank by twisting / rotating the retaining screw ring. Refit the fuel gauge sender/pump unit into the new long range tank using the original rubber seal and screw ring (this can be tightened using a pin punch and hammer - do not tighten too tight as the plastic retaining screw ring can be damaged).
- 6 Lift the tank almost up into position and reconnect the pickup, return and vent hoses and re-plug the wiring together. Completely lift the tank up into its final position and bolt in place reusing the original bolts at the front and the three M10 x 30mm bolts, spring washers and panel washers supplied in the fitting kit at the rear. The original tank mounting captive points are not used at the rear. Additional mounts further rearward in the back chassis crossmember are used for the **Brown Davis Automotive long range tank**.
- 7 Refit the filler and fast fill breather hoses to the new long range tank after cutting the filler hose in the middle and extending it with the extension tube and clamps supplied in the fitting kit to enable it to reach the new filler position of the **Brown Davis Automotive long range tank**.



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- 8 Fit the new steel stabiliser bar mounting blocks (extensions) to the original mounting position on each side of the chassis, and then refit the sway bar to these new mounts. (ONLY REQUIRED ON SOME LATE MODELS). Refit the 2 rear towing eyes back onto the chassis where they were removed from in step 2.
  
- 9 Confirm the drain plug has been sealed into the tank and fill with the fuel drained in step 3. 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.**