Brown Davis Automotive Pty. Ltd.
ABN: 72 657 573 544

Last edited: 1/09/2010

Fuel Tank Part List and Installation Instructions

TANK P/N: ***FCR4***

FORD COURIER DUAL CAB - UP TO 03/1996
100ltr REPLACEMENT TANK

Item	Description	Quantity	Part number	P	C
1	TANK – REPLACEMENT	1	FCR4		
2	HOSE – TMP - 6mm	0.7m			
3	HOSE – FUEL INJECTION - 8mm	1.0m			
4	HOSE CLAMP – STAINLESS - 12-20mm	1			
5	HOSE CLAMP – STAINLESS - 40-60mm	1			
6	BRASS – ELBOW - 5/8" x 1/4" BSP	2			
7	BRASS – ELBOW - 1/4" x 1/4" BSP	4			
8	BRASS – PLUG - 1/4" BSP	2			
9	DRAIN PLUG – MAGNETIC – M14	1	DP-M14		
10	WARRANTY CARD & INFORMATION SHEET	1			
11	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 INFORAMTION REQUIRED IN RELATION THE BELOW INSTRUCTIONS PLEASE DO NOT HESTITE 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.

FITTING

1 Remove the rear section of tailshaft, by unbolting it at the differential flange end, taking care to mark the correct alignment of the splines at the front for refitting, before sliding it out. Remove the two nuts holding the tailshaft centre bearing and tie the back of this front section over to the passenger side of the vehicle leaving its nose still in the rear of the transfer case and hence making access room for the new tank installation. (Oil will leak from the transfer case if the front half of the tailshaft is completely removed.)

2 Remove the standard tank guard. Remove the filler cap and drain the remaining fuel out of the standard tank.

3 Disconnect the rubber (50mm) fuel filler hose and (16mm) fast fill breather hose from the steel filler neck in the body under the drivers rear wheel arch. Undo the hose clamps and slide off the plastic convoluted protection outer sleeve from the filler hoses.

4 Support the standard tank under the vehicle, unbolting it front and rear. Carefully partially lower it, until you can fit a hand over the top to access the fuel hoses and pump/gauge wiring. Unplug the wiring loom and disconnect the three fuel hoses. (2 from the top of the pump/gauge assembly and 1 vent hose from the body of the tank itself) Lower tank to the ground and remove from under the vehicle.

5 Bend the bracket on the driver's chassis rail that holds the standard steel fuel lines, up and parallel with the rail to ensure clearance with the new tank fitted. Trial lift the new long range tank up into position starting the mounting bolts into their captive holes to support it. Check the exhaust muffler mounting bracket clearance near the heat shield on the tank. Variation has been found in these brackets - 15mm clearance is an acceptable gap - tap the bracket across to the passenger side as necessary once you have lowered the tank back out of the way.

6 Confirm that the Brown Davis long range tank 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, diesel or methylated spirits for this rinsing process which should be drained and discarded afterwards. Wiping out the inside of the injection pump swirlpot with a clean rag down through the pump entry boss in the top of the tank to confirm absolute cleanliness is not a bad idea, nor is a second rinse.

7 Remove the fuel gauge/pump assembly from the standard tank and install it into the new long range tank using the original screws and gasket. Take care not to bend or damage the float arm assembly.

8 Install all brass fittings into the new replacement long range fuel tank using teflon tape or the like on all threads. Do not forget the drain plug not shown. (Refer diagram 1)

9 Remove the small plastic expansion box from the top of the standard tank and reinstall it on the top of the new tank, again using the standard screws. (Refer diagram 1) Connect the expansion vent hose from the bottom fitting of the plastic box down to the 1/4" brass elbow in the side of the steel expansion box welded to the new long range tank. Use the standard spring clamps on each end. (Refer diagram 1)

10 Transfer the filler hose and fast fill breather hose from the standard tank to the new long range tank. Take care to twist the 50mm rubber filler tube with the bend directing it up.(Remember to tighten the clamps)

11 Remove the old fuel hoses from their respective steel lines along the driver's chassis rail. Fit new longer (red) pickup and return hoses to their respective steel fuel lines on chassis. (Refer diagram 2) Use the standard spring clamps on these new hoses. Connect also the new (black) vent hose supplied to the white plastic vent check valve above the drivers chassis rail, again the standard clamps should be used. WARNING: Incorrect refitting of hoses to the pump/sender can damage pump unit.

12 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. Hold up in place with a jack or similar. Remember to reconnect the wiring to the fuel gauge sender unit and also both new fuel hoses and the vent hose as one lifts the tank into position. WARNING: Incorrect refitting of hoses to the pump/sender can damage pump unit. Using the bolts with the large washers that held the rear of the standard tank guard, mount the front of the new tank into the captive nuts in the chassis. Mount the rear of the new tank re-using the standard rear tank mounting bolts.

13 Tighten bolts, check clearances. Refit centre bearing and tailshaft, noting again the alignment.

14 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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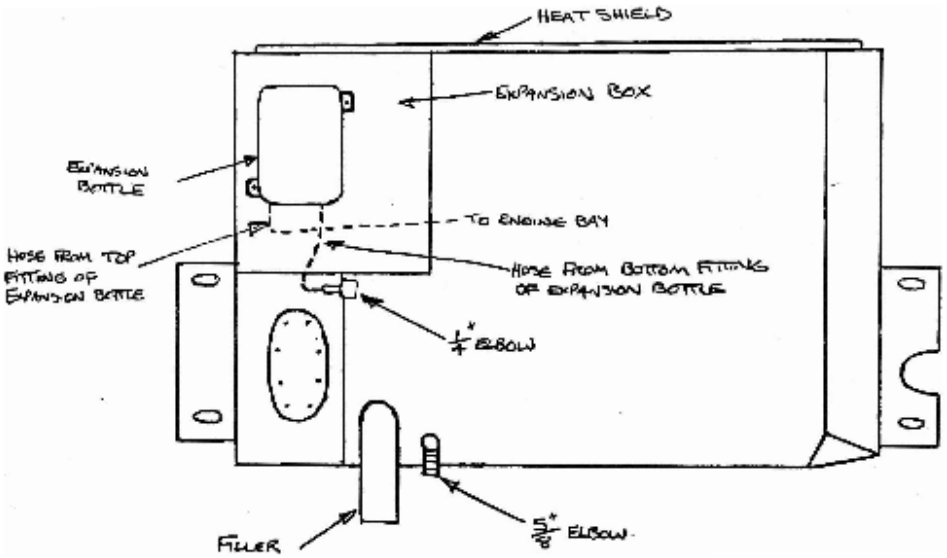
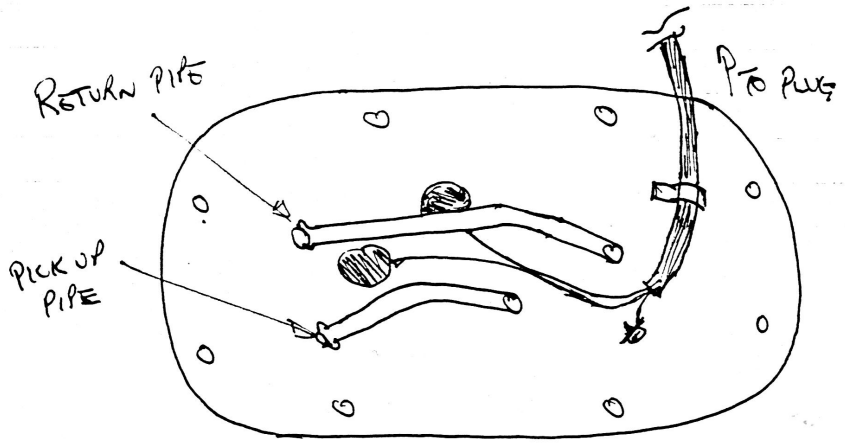
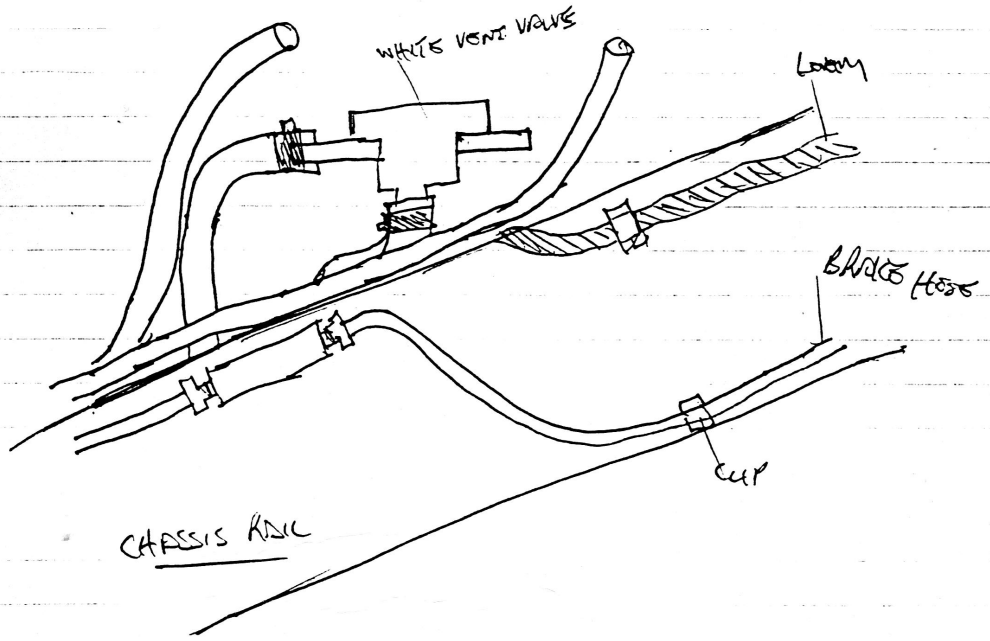


TOP VIEW

DIAGRAM 1



Sender unit.



Hose connection above drivers chassis rail

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.