

Brown Davis Automotive Pty. Ltd.  
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### LAND ROVER DEFENDER - 110 - 110 TD5 WAGON- MODELS WITH PLASTIC FUEL TANK – 72lt AUXILIARY TANK AUXILIARY FUEL TANK PARTS LIST AND FITTING INSTRUCTIONS PART NUMBER: LDEA3

Item #	Description	Quantity	Part No.	P	C
1	TANK—REPLACEMENT	1	LDEA3	-	-
2	DRAIN PLUG—MAGNETIC—M14 (FITTED TO THE TANK)	1		-	-
3	HOSE – FUEL AND EMISSION - 8mm	2.8m			
4	HOSE – FUEL AND EMISSION - 10mm	350mm			
5	HOSE – TMP – 16mm	1.5m			
6	HOSE – FILLER – 38mm	100mm			
7	HOSE – FILLER – 44mm	120mm			
8	HOSE CLAMP – STAINLESS – 8-16mm	6			
9	HOSE CLAMP – STAINLESS – 12-22mm	8			
10	HOSE CLAMP – STAINLESS – 32-50mm	2			
11	HOSE CLAMP – STAINLESS – 40-60mm	2			
12	CUSHION CLAMP - 40mm	2			
13	FUEL PICK UP – 5/16" x 1/4" BSP ELBOW	1			
14	BRASS PLUG - 1/4 BSP	2			
15	BRASS FITTING– 3/8" x 1/4 BSP ELBOW	2			
16	BRASS FITTING– 5/8" x 1/4 BSP ELBOW	1			
17	CABLE TIE - 8" BLACK	5			
18	BRASS FITTING-TAIL BARB– 1/8" x 5/16" BSP	2			
19	FUEL GUAGE/SWITCH – CP 309GS LED DASH UNIT	1			
20	RELAY/BUZZER – PEEL – CP 5	1			
21	WIRE – TWIN CORE – 3.0mm – BROWN/WHITE—WITH PLUG	4m			
22	CRIMP FITTING – SPADE FEMALE 6mm - INSULATED - RED	1			
23	CRIMP FITTING – SPADE FEMALE 4mm - RED	1			
24	CRIMP FITTING - RING 5MM - RED	1			
25	CRIMP FITTING – JOINER 3mm - RED	1			
26	SCOTCH LOCK	1			
27	SENDER UNIT - VDO 220-004—FITTED TO TANK	1			
28	FUEL PUMP – POSI-FLO	1			
29	FUEL FILTER – INLINE – 8mm	1			
30	SCREW - SELF TAPPER	4			

KIT CONTINUES ON NEXT PAGE



# LONG RANGE FUEL TANKS

## LDEA3

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Item #	Description	Quantity	Part No.	P	C
31	SET SCREW – PAN HEAD – M4 x 10mm – PLATED 8.8	5			
32	WASHER – SPRING PLATED – M4	5			
33	SET SCREW – HEX – M10 x 30mm – PLATED 8.8	4			
34	WASHER – FLAT PLATED – M10	4			
35	WASHER – SHAKE PROOF – M10	4			
36	NUT- PLATED – M10	8			
37	Y-FILLER	1	TF-LDE90A1		
38	FILLER TUBE	1	FT-LDEA3		
39	1/2" GROMMET	1			
40	WARRANTY CARD & INFORMATION	1			
41	BROWN DAVIS AUTOMOTIVE STICKER	1			

	STAFF MEMBERS INITIALS	DATE
KIT PACKED BY		
KIT CHECKED BY		

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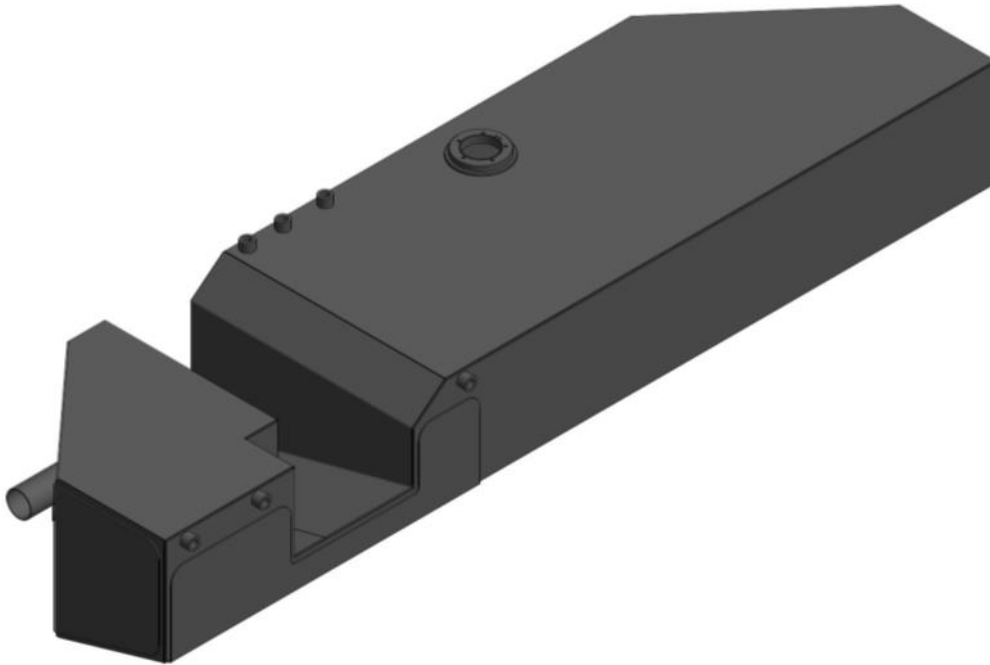
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### PART NUMBER: LDEA3 AUXILIARY FUEL TANK PARTS LIST AND FITTING INSTRUCTIONS



#### WARNING:

THIS FUEL TANK IS HEAVY. DO NOT ATTEMPT TO LIFT THIS FUEL TANK WITHOUT APPROPRIATE ASSISTANCE OR SERIOUS INJURY MAY RESULT



#### WARNING:

ENSURE A FIRE EXTINGUISHER IS AVAILABLE WHILST WORKING NEAR EXPOSED FUEL



- SOME MODEL SIDE STEPS MAY NEED MODIFICATIONS TO FIT TANK
- CHECK CONTENTS OF KIT BEFORE COMMENCING FITMENT
- DRAIN VEHICLE FUEL TANK TO LOWEST LEVEL POSSIBLE BEFORE COMMENCING FITMENT
- BEFORE INSTALLATION THE BROWN DAVIS LONG RANGE TANK SHOULD BE WASHED OUT WITH THE SAME FUEL TYPE AS THE VEHICLE IT'S BEING FITTED TO

Any questions or information required in relation to the below instructions please do not hesitate to contact Brown Davis head office or one of our distributors.

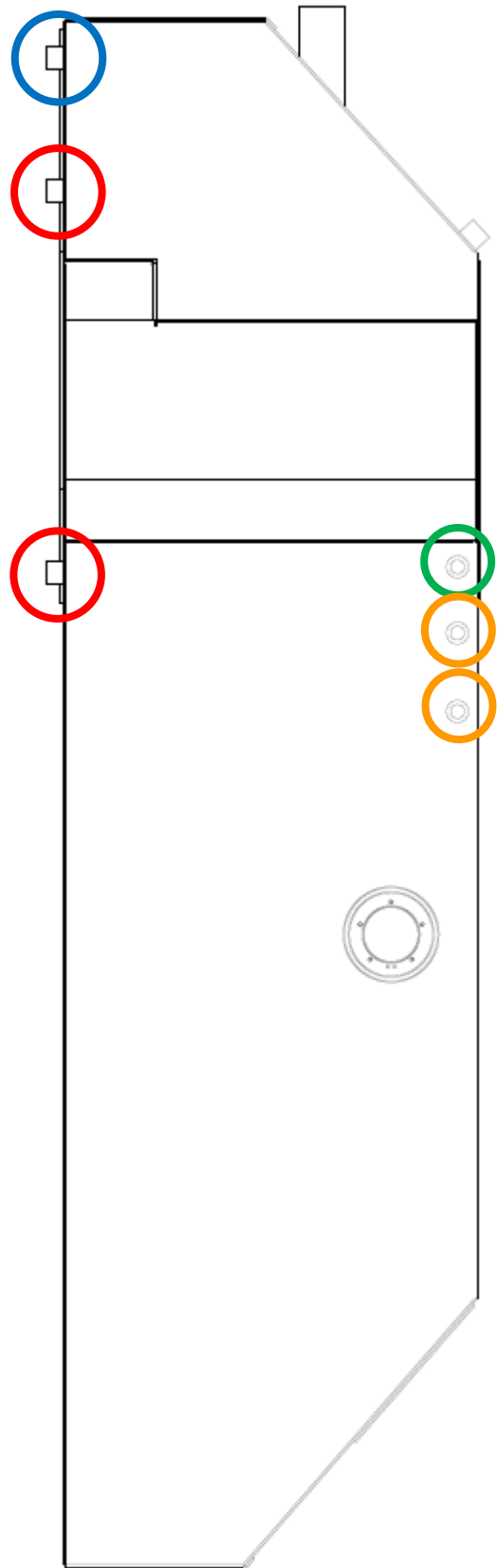
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### SETUP FOR AUXILIARY TANK

1. Install all brass fittings into the new replacement long range fuel tank using Teflon tape, thread sealant or the likes on all threads.
  - ⇒ **2x BRASS – ELBOW - 3/8" x 1/4" BSP - Circled in Red**
  - ⇒ **BRASS – ELBOW - 5/8" x 1/4" BSP - Circled in Blue**
  - ⇒ **FUEL PICK UP - 5/16" x 1/4" BSP ELBOW - Circled in Green**
  - ⇒ **2x BRASS PLUG 1/4" BSP - Circled in Orange**



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2. Locate somewhere on the dash to mount the **FUEL GUAGE/SWITCH – CP 309GS LED DASH UNIT**. *\*photo is for reference only\**
  - Drill a 20mm (approx.) to install.



3. Locate 12 volt ignition wire. Can be found in at a point in the fuse box. It is red with a yellow trace.
4. Connect the single red wire from the **RELAY/BUZZER – PEEL – CP 5** to the 12 volt ignition wire using the supplied SCOTCH LOCK or by soldering.



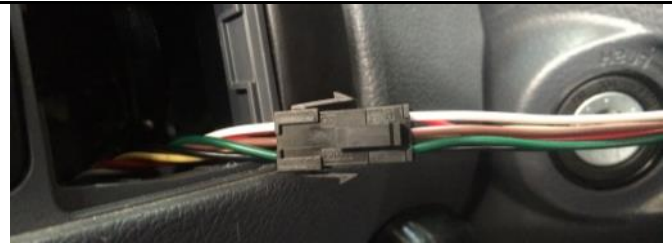
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5. Mount the **RELAY/BUZZER – PEEL – CP 5** to a metal surface behind the driver side kick panel or dash.
- NOTE: Most vehicles will have a metal tag with a bolt that can be used (shown in photo) but in some cases the unit will need to be installed with the **SCREW - SELF TAPPER** supplied.
  - The eyelet must be touching a metal surface to earth the setup.



6. Connect the plugs from the **FUEL GAUGE/SWITCH – CP 309GS LED DASH UNIT** to the **RELAY/BUZZER – PEEL – CP 5**.



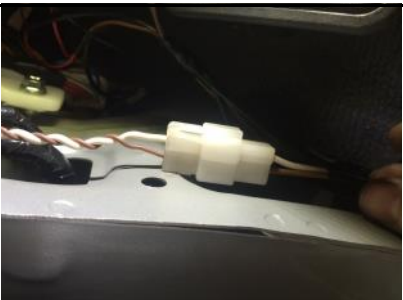
7. Mount the **FUEL PUMP – POSI-FLO** in a suitable location close to the tank.
- Brown Davis suggests inside the chassis rail running parallel with the tank
  - Connect the black wire to the chassis to earth the pump.





8. Run the **WIRE – TWIN CORE – 3.0mm – BROWN/WHITE—WITH PLUG** from the dash to the tank location, ensuring the wire is safe. Feed the wire through an existing loom or grommet.
- The end with the plug should be in the vehicles cab at the dash.
  - Brown Davis recommends to follow existing wiring where possible or other wise, follow fuel lines or air conditioning lines where applicable.

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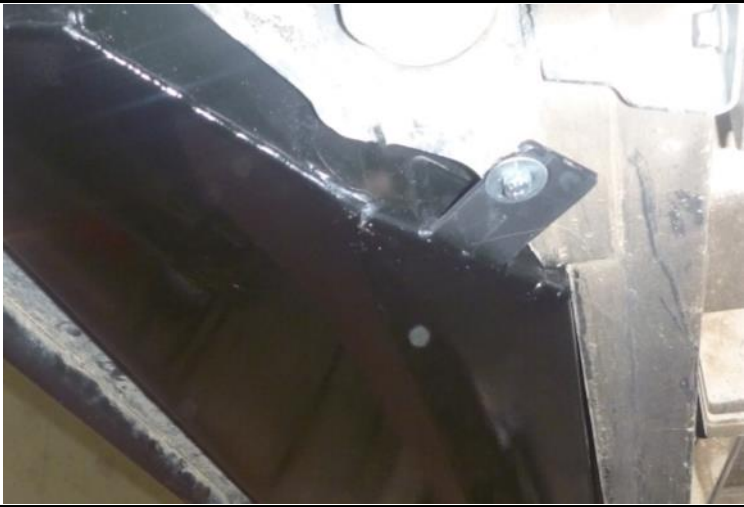


<p>9. Connect the white plugs from both the <b>RELAY/BUZZER – PEEL – CP 5</b> and the <b>WIRE – TWIN CORE – 3.0mm – BROWN/WHITE—WITH PLUG.</b></p>	
<p>10. Connect the <b>CRIMP FITTING – JOINER 3mm - RED</b> to the red wire on the <b>FUEL PUMP – POSI-FLO.</b></p> <ul style="list-style-type: none"> <li>Join the white wire to the opposite end of the <b>CRIMP FITTING – JOINER 3mm - RED.</b></li> <li><b>NOTE:</b> The white wire should be trimmed first to avoid excess wire. Keep off cut wire for later step.</li> </ul>	

#### INTSTALLATION OF AUXILIARY TANK

<p>11. Before lifting tank into position, connect the <b>HOSE – FUEL AND EMISSION - 8mm</b> to the pick up.</p>	
<p>12. Attach the <b>CRIMP FITTING – SPADE FEMALE 6mm - INSULATED - RED</b> to the brown wire so it can be plugged to the center plug on the <b>SENDER UNIT - VDO 220-004</b> (circled in photo) that is fitted to the tank.</p> <ul style="list-style-type: none"> <li><b>NOTE:</b> The brown wire should be trimmed first to avoid excess wire.</li> </ul>	
<p>13. The sender unit must also be earthed.</p> <ul style="list-style-type: none"> <li>Using the white off cut wire connect the <b>CRIMP FITTING - RING 5MM - RED</b> to one end and the <b>CRIMP FITTING – SPADE FEMALE 4mm - RED</b> to the other.</li> <li>Plug the <b>CRIMP FITTING – SPADE FEMALE 4mm - RED</b> to the <b>SENDER UNIT - VDO 220-004</b> (circled in photo).</li> <li>Connect the <b>CRIMP FITTING - RING 5MM - RED</b> to the chassis.</li> </ul>	

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<p>14. Using a lifting device, lift the tank into position.</p>	
<p>15. Drill a hole for the front two brackets and use two M10 bolts with the washers and nuts supplied to fasten in place.</p>	
<p>16. Drill two holes through the rear bracket and again use two M10 bolts with the washers and nuts supplied to fasten in place.</p> <ul style="list-style-type: none"><li>• Double nut all the bolts for extra security.</li></ul>	
<p>17. Remove the standard filler.</p> <ul style="list-style-type: none"><li>• Replace with the supplied Y-filler.</li><li>• Push the filler through the rubber grommet.</li><li>• Side bracket on Y-filler not used on 110 series wheel base.</li></ul>	



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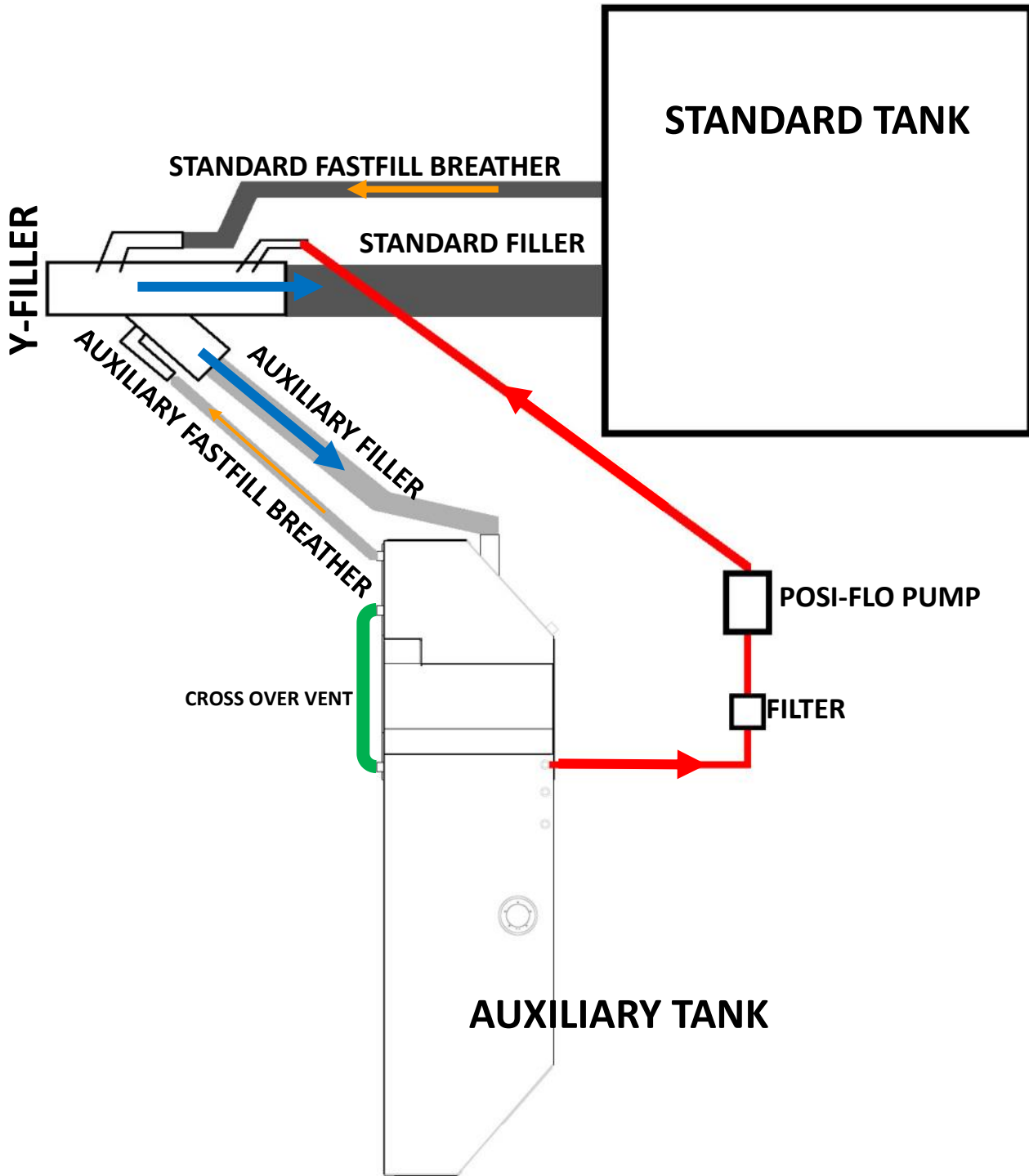
18. Using the supplied cushion clamps, mount the filler tube in the wheel arch.
  - Use hose clamps and the HOSE – FILLER – 44mm to fit the tube to the Y-filler.
  - Use hose clamps and the HOSE – FILLER – 38mm to fit the tube to the auxiliary filler.



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⇒ Diagram below shows the working fuel system



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19. Run the HOSE – FUEL AND EMISSION - 8mm, attached to the pick up, to the fuel pump.
- Connect the fuel filter between the Pump and the Tank, cut the hose to size.
  - Rout the line towards the cars filler.
  - Fit it to the smallest pipe on the Y-filler (circled in photo).



20. Fit the HOSE – TMP - 16mm hose the BRASS FITTING– 5/8" x 1/4 BSP (fast fill breather).
- Rout the line towards the cars filler.
  - Fit it to the fast fill pipe on the Y-filler (circled in photo).



21. Connect the Standard rubber filler tube to Y-Filler with hose clamp.
- Fit the standard 16mm fast fill breather hose to the Y-Filler with hose clamp.



22. Double check all fuel line clamps and security of fuel lines.
- Fill tank and check for leaks. Road test and check for rattlers & squeaks. Re-check for fuel leaks.