

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

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LANDROVER DEFENDER 90 SERIES – 55lt AUXILIARY TANK AUXILIARY FUEL TANK PARTS LIST AND FITTING INSTRUCTIONS PART NUMBER: LDE90A1

| Item # | Description | Quantity | Part No. | P | C |
|--------|--|-----------|----------|---|---|
| 1 | TANK—REPLACEMENT | 1 | LDE90A1 | - | - |
| 2 | DRAIN PLUG—MAGNETIC—M14 (FITTED TO THE TANK) | 1 | | - | - |
| 3 | HOSE – FUEL AND EMISSION - 8mm | 2.2m | | | |
| 4 | HOSE – TMP – 16mm | 1.3m | | | |
| 5 | HOSE – FILLER – 44mm | 80mm (x2) | | | |
| 6 | HOSE CLAMP – STAINLESS – 8-16mm | 6 | | | |
| 7 | HOSE CLAMP – STAINLESS – 12-22mm | 2 | | | |
| 8 | HOSE CLAMP – STAINLESS – 25-40mm | 1 | | | |
| 9 | HOSE CLAMP – STAINLESS – 40-60mm | 4 | | | |
| 10 | HOSE CLAMP – STAINLESS – 50-70mm | 1 | | | |
| 11 | FUEL PICK UP – 5/16" x 1/4" BSP ELBOW | 1 | | | |
| 12 | BRASS FITTING– 5/8" x 1/4" BSP ELBOW | 1 | | | |
| 13 | CABLE TIE - 8" BLACK | 5 | | | |
| 14 | C-CLAMP EXHAUST - 5/16 THREAD - C8 2" | 2 | | | |
| 15 | FUEL GUAGE/SWITCH – CP 309GS LED DASH UNIT | 1 | | | |
| 16 | RELAY/BUZZER – PEEL – CP 5 | 1 | | | |
| 17 | WIRE – TWIN CORE – 3.0mm – BROWN/WHITE—WITH PLUG | 3.5m | | | |
| 18 | CRIMP FITTING – SPADE FEMALE 6mm - INSULATED - RED | 1 | | | |
| 19 | CRIMP FITTING – SPADE FEMALE 4mm - RED | 1 | | | |
| 20 | CRIMP FITTING - RING 5MM - RED | 1 | | | |
| 21 | CRIMP FITTING – JOINER 3mm - RED | 1 | | | |
| 22 | SCOTCH LOCK | 1 | | | |
| 23 | SENDER UNIT - VDO 220-004—FITTED TO TANK | 1 | | | |
| 24 | FUEL PUMP – POSI-FLO | 1 | | | |
| 25 | FUEL FILTER – INLINE – 8mm | 1 | | | |
| 26 | BRASS FITTING-TAIL BARB– 1/8" x 5/16" BSP | 2 | | | |
| 27 | SCREW - SELF TAPPER | 2 | | | |
| 28 | SET SCREW – HEX – M8 x 30mm – PLATED 8.8 | 2 | | | |
| 29 | WASHER – PANEL PLATED – M8 | 7 | | | |
| 30 | WASHER – SHAKE PROOF – M8 | 2 | | | |
| 31 | NUT- PLATED – M8 | 4 | | | |
| 32 | SET SCREW – PAN HEAD – M6 x 20mm – PLATED 8.8 | 1 | | | |
| 33 | WASHER – SHAKE PROOF – M6 | 1 | | | |

KIT CONTINUES ON NEXT PAGE



LONG RANGE FUEL TANKS

LDE90A1

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|--------|---|----------|------------|---|---|
| 34 | WASHER – FIBRE – M6 | 1 | | | |
| 35 | NUT- PLATED – M6 | 1 | | | |
| 36 | SET SCREW – PAN HEAD – M4 x 10mm – PLATED 8.8 | 5 | | | |
| 37 | WASHER – SPRING PLATED – M4 | 5 | | | |
| 38 | Y-FILLER | 1 | TF-LDE90A1 | | |
| 39 | FILLER TUBE | 1 | FT-LDE90A1 | | |
| 40 | 1/2" GROMMET | 1 | | | |
| 41 | WARRANTY CARD & INFORMATION | 1 | | | |
| 42 | BROWN DAVIS AUTOMOTIVE STICKER | 1 | | | |

| | STAFF MEMBERS INITIALS | DATE |
|----------------|------------------------|------|
| KIT PACKED BY | | |
| KIT CHECKED BY | | |

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PART NUMBER: LDE90A1 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



-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.

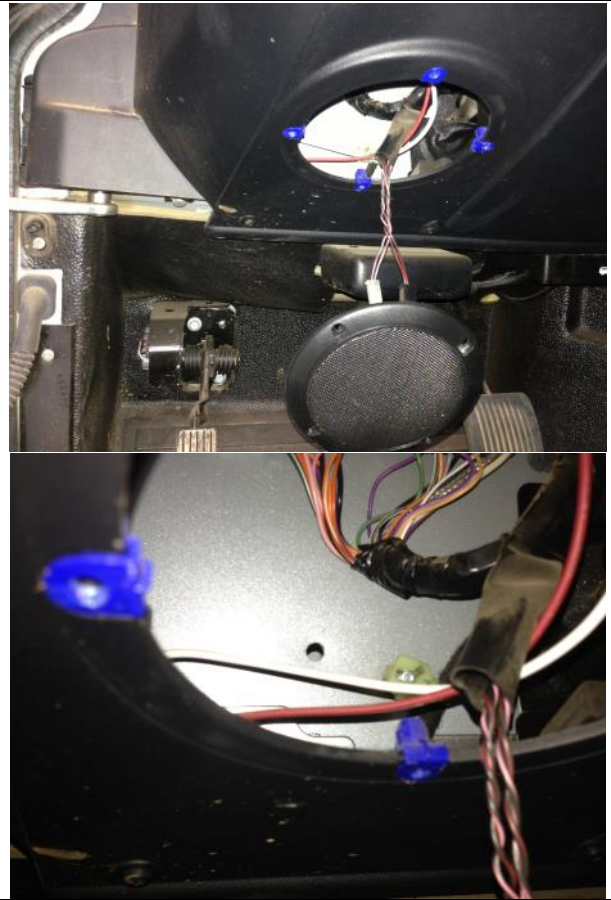
**Phone: +61 (3) 9762 8722
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SETUP FOR AUXILIARY TANK

1. Remove driver side speaker and drill 10mm hole through to engine bay.
 - Fit rubber grommet to hole and feed the twin flex wire through leaving 1 meter of wire in the cab of the car.



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



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| | |
|--|---|
| <p>3. Locate 12 volt ignition wire</p> | |
| <p>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.</p> |  |
| <p>5. Mount the RELAY/BUZZER – PEEL – CP 5 to a metal surface behind the driver side kick panel or dash.</p> <ul style="list-style-type: none">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. |  |

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

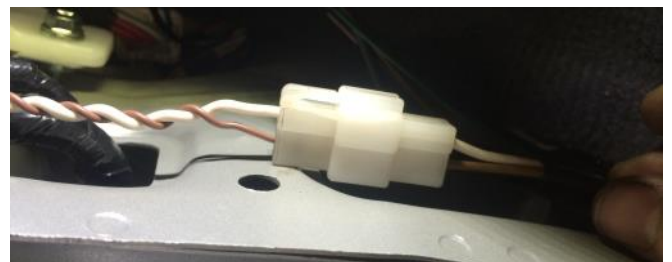


7. Drill a hole and fit the **FUEL PUMP – POSI-FLO** under the car on the drivers side.
- Install using the M6 bolt, washers and nut supplied.
 - Connect the black wire to the chassis to earth the pump.





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.

9. Connect the white plugs from both the **RELAY/BUZZER – PEEL – CP 5** and the **WIRE – TWIN CORE – 3.0mm – BROWN/WHITE—WITH PLUG**.



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| | |
|---|--|
| <p>10. Connect the CRIMP FITTING – JOINER 3mm - RED to the red wire on the FUEL PUMP – POSI-FLO.</p> <ul style="list-style-type: none"> Join the white wire to the opposite end of the CRIMP FITTING – JOINER 3mm - RED. NOTE: The white wire should be trimmed first to avoid excess wire. Keep off cut wire for later step. | |
| <p>11. Attach the CRIMP FITTING – SPADE FEMALE 6mm - INSULATED - RED to the brown wire so it can be plugged to the center plug on the SENDER UNIT - VDO 220-004 (circled in photo) that is fitted to the tank, once the tank is in position.</p> <ul style="list-style-type: none"> NOTE: The brown wire should be trimmed first to avoid excess wire. |  |
| <p>12. The sender unit must also be earthed.</p> <ul style="list-style-type: none"> Using the white off cut wire connect the CRIMP FITTING - RING 5MM - RED to one end and the CRIMP FITTING – SPADE FEMALE 4mm - RED to the other. Plug the CRIMP FITTING – SPADE FEMALE 4mm - RED to the SENDER UNIT - VDO 220-004 (circled in photo). Connect the CRIMP FITTING - RING 5MM - RED to the chassis. |  |
| <p>13. Connect the white plugs from both the RELAY/BUZZER – PEEL – CP 5 and the WIRE – TWIN CORE – 3.0mm – BROWN/WHITE—WITH PLUG together.</p> | |

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14. Fit the FUEL PICK UP – 5/16" x 1/4" BSP ELBOW supplied into the socket next to the sender unit.



15. Fit the BRASS FITTING– 5/8" x 1/4" BSP ELBOW to the socket along side the filler.



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INTSTALLATION OF AUXILIARY TANK

16. Before lifting tank into position, connect the HOSE – FUEL AND EMISSION - 8mm to the pick up.

- Plug the wires to the sender unit. See steps 11 & 12.

17. Using a lifting device, lift the tank into position.

- Fit the 2 C-CLAMP EXHAUST - 5/16 THREAD - C9 2 1/8" with the saddles to the rear bracket. Do the nuts up finger tight.



18. Clamp the front of the tank in position.

- Drill through the brackets and bolt up using the M10 bolts supplied.



19. Tighten all the bolts and U bolts then double nut the bolts.

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20. 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.

21. 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.

22. Remove standard plastic filler from the car.
- Fit the Y-Filler supplied in its place.
 - Push the filler through the rubber grommet.
 - Attach filler to the round post in inner guard with hose clamp supplied.



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23. 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.



24. Fit the Filler Tube to inner wheel arch. The side with the sharper bend goes on the Filler side, the end with the lesser bend goes on tank side.
- Use hose clamps and the 2 HOSE – FILLER – 44mm to fit the tube.



25. Using hose clamps, fit the HOSE – FUEL AND EMISSIONS - 8mm from the tank to the Fast Fill Breather on the Y-Filler, cut the hose to size.

26. Double check all fuel line clamps and security of fuel lines.
- Check to see if pump is working, an orange light should be displayed when switch is on and a humming sound should be heard from the pump.
 - Fill tank and check for leaks. Road test and check for rattlers & squeaks. Re-check for fuel leaks.