

## Installation Instructions for RRAS Landrover Rangerover EFI & Carby 45L Auxiliary Tank

This sill tank fits underneath the left or right hand sills of the vehicle. They have their own filler neck and can be filled from either the left or right hand rear wheel arches respectively. The system operates via a fuel transfer system where the fuel is pumped from either tank back to the main tank via an electric fuel transfer pump. The sill tank has its own fuel level sender which is compatible with the dash fuel gauge. The way the system is wired the dash fuel gauge will show the level of main tank or by switching the gauge switch, the dash fuel gauge will display the contents of the auxiliary tank. By turning on the fuel transfer pump you are able to pump from the sill tank into the main tank.

- 1. Carry out electrical wiring as per wiring diagram. Running sheathed cable to the rear of the vehicle for the connection of fuel tank sender unit and fuel transfer pump.
- 2. Check the underside of the floor pan above the sill tank location for any screws or bolts that protrude through and would foul or rub on the top of the tank. Bend the vertical metal flange flat out of the way, being careful with the pipes in this area.
- 3. Remove the lower gearbox crossmember bolt and fit front inner tank mounting bracket. Measure 480mm to the rear from this bolt and drill hole at the same height as the gearbox crossmember bolt. Fit the rear inner tank mounting bracket.
- 4. Fit fuel sender unit to tank. 12mm hose barb elbow fitting into top of the tank pointing towards the rear. 8mm hose barb elbow into fuel pick up and plug into fitting next to fuel pick up.
- 5. Lift tank into position (don't forget to connect the sender unit wire and earth). Secure tank to front and rear inner brackets leaving a minimum of 5mm clearance at the front of the tank to the sill edge of the body. Level tank left to right and secure front and rear of tank to chassis out riggers with 50 x 50mm angle brackets.
- 6. Fit the fuel transfer pump into place and complete wiring and connection of all hoses and fittings. Mount the filler neck using M6 bolts and nuts provided and connect fast fill hoses. Tee the 6mm vent line from the top of the filler neck into the vent line that runs from the rear tank to the emission canister.

7. Fill tanks with fuel and check operation of fuel sender units on the dash gauge. Check operation of the fuel transfer pump from either the left or right hand tanks.

**FUEL TRANSFER PUMP SWITCH:** When pressed on, providing there is fuel in the sill tank, fuel will be pumped from the sill tank into the main rear tank. The red LED in the switch will be on to indicate that fuel is being transferred. The fuel transfer pump is a self-priming pump. DO NOT pump for extended periods with the auxiliary fuel tank empty or fuel pump damage may occur.

**FUEL GAUGE SWITCH:** When the fuel gauge switch is pressed on it allows you to check the level of the sill tank from your standard dash board gauge. Press the switch off to return to reading the fuel level of your original tank.

**FUEL TANK FILLER:** The fuel filler is located in the rear wheel arch of the vehicle just forward of the rear wheel. The sill tank will hold 45Lt of fuel.



## FITTING KIT CONTENTS RRAS

FITTING KIT CONTEINTS KRAS	
Brass	Electrical
$\circ$ 1 x P6 5/16 x 1/4 (8mm hose barb elbow)	<ul> <li>3 x heat shrink tubing @ 30mm</li> </ul>
$\circ$ 1 x P6 1/4 x 1/4 (6mm hose barb elbow)	$\circ$ 1 x red insulated terminal
• 1 x P6 1/2 x 1/4 (12mm hose barb elbow)	<ul> <li>1 x red earth eye</li> </ul>
○ 1 x P3 1/2 x 1/4 (12mm hose barb	<ul> <li>1 x 8mm blue earth eye</li> </ul>
straight)	<ul> <li>1 x 4mm single core wire @</li> </ul>
$\circ$ 1 x P14 x 1/4 (6mm hose barb tee)	1500mm
○ 1 x 16mm x 8mm reducing tee	o 1 x 3mm two core wire @ 5000mm
o 1 x 1/4 BSP plug	
Bolts / Nuts	Misc Parts
0 2 x M6 x 16 bolts	<ul> <li>4 x secondary mounting brackets</li> </ul>
o 2 x M6 nuts	<ul> <li>1 x filler neck #FN4490XIN</li> </ul>
<ul> <li>2 x M6 flat washers</li> </ul>	<ul> <li>1 x fuel cap to suit tank</li> </ul>
○ 1 x M8 x 100mm bolt	<ul> <li>1 x LRA-PG210 switch/gauge unit</li> </ul>
o 1 x 8mm x 30mm washer	
o 6 x M8 x 25mm bolts	
<ul> <li>6 x M8 Nyloc nuts</li> </ul>	
o 6 x 8mm x 20mm washers	
$\circ$ 4 x M5 x 8 pan head screws (for sender	
unit)	
Hose Clamps	Cable Ties
o 10 x 1/4 hose clamps	$\circ$ 6 x 7" cable ties
<ul> <li>2 x 1/2 hose clamps</li> </ul>	<ul> <li>5 x 11" cable ties</li> </ul>
<ul> <li>2 x 5/8 hose clamps</li> </ul>	
o 2 x 1 1/2 hose clamps	
Hose	Sender
○ 1 x 6mm CMP hose @ 2500mm	o 1 x 0-90 OHM fuel sender
○ 1 x 8mm fuel hose @ 2000mm	
○ 1 x 1/2" fuel hose @ 400mm	
○ 1 x 44mm hose @ 180mm	
Filters	Instruction Pages
○ 1 x Z14K filer	2 pages fitting instructions consisting of:
○ 1 x fuel pump	<ul> <li>1 x pages fitting kit contents</li> </ul>
	<ul> <li>2 x page fitting instructions</li> </ul>
	<ul> <li>1 x drawing #WDSPG210</li> </ul>

Kit Checked By \_\_\_\_\_

