

Long Range Fuel Tanks

BRITPART

The quality parts for Land Rovers

FITTING INSTRUCTIONS

Part Number - DA4546



Thanks to Land Rover Owner International for the use of these instructions



GET TANKED UP FOR LONGER RANGE

John Pearson shows how his Defender 110 gained an extra 45 litres of fuel tank capacity – by fitting a Britpart long-range fuel tank

One of my big trips with the Defender later this year is to Algeria with One Life Adventure. It's a big country with lots of desert driving – but not much in the way of filling stations once you get away from the main coastal population areas. One Life's Paul Blackburn recommends having a range of at least 1000km (620 miles), so the Defender's 75-litre tank is going to need supplementing. I could use jerry cans, but they occupy valuable interior space (I'm not a fan of loading them on the roof rack), so I decided to increase the fuel tank capacity.

Various hardware options are available, and you can choose where to fit it from a number of different positions around the vehicle. I decided on the 45-litre tank from Britpart. This neatly designed, well-built unit fits into the unused offside rear wheelarch space between the fuel filler and the original tank. It piggybacks above the tank, which is then filled through it. So there's no need for an extra fuel pump to transfer fuel, which was the case with a long-range tank that I had mounted between the chassis rails on the 9C I had a few years ago. The combined capacity of 120 litres should be sufficient for my trip and other subsequent adventures.

We did the tank fitting in Britpart's own workshop, using a four-post lift. But it's easy enough to do the job using a trolley jack and axle stands: jack it up as high as possible and put the stands under the axle, then use the jack to ease the tank up into position.

It's a pretty straightforward job, as shown by Britpart's Steve Grant in the following step-by-step sequence. The only tricky bit he found was getting his hands in to wriggle the fuel filler pipes into position.

Before starting work, Steve took a look under the Defender's wing where the tank was due to be fitted and spotted a potential problem: the feed pipe for my Defender's Eberspacher heater is routed into the vehicle's filler neck. This meant that, with the long-range tank fitted, there would be nowhere for the Eberspacher feed. Steve scratched his head and decided we could do away with the small equalising pipe that would normally go between the bottom of the long-range tank and into the bottom of the original tank via an inlet that's normally drilled into it. Then we could use the pipe inlet/outlet on the long-range tank to feed the Eberspacher heater.

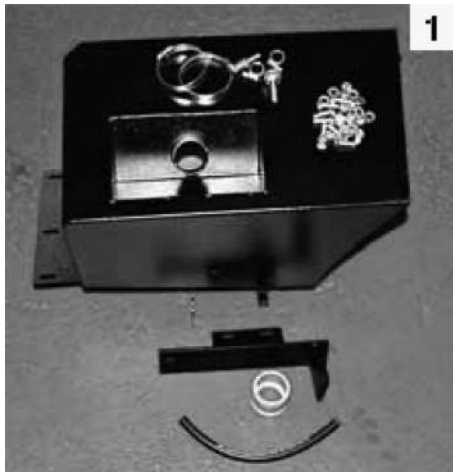
It does mean that a couple of litres of fuel will always be trapped in the long-range tank and unable to run into the main tank, but it's hardly a problem. And in a worst-case scenario, if I ran out of fuel I would have a reserve supply that could be siphoned up.

The long-range tank looks really neat and is unobtrusive. It's also expensive to fill up. I had let the fuel level drop really low before fitting it, so my credit card took a mega-hit at the first UK fuel stop. But the upside is I can go a significant distance between refills; and I'm looking forward to filling it up in Algeria, where diesel is all of 12p per litre.

Disclaimer

These fitting instructions are intended for general guidance only. No responsibility will be accepted for damage to persons, property, equipment or vehicles caused during or arising from the fitment or using of this product. Fitting this item to your vehicle may constitute a vehicle modification and therefore we strongly recommend that you check the product complies with local laws and legislation and always inform the vehicle's insurance company accordingly. Vr. 1.

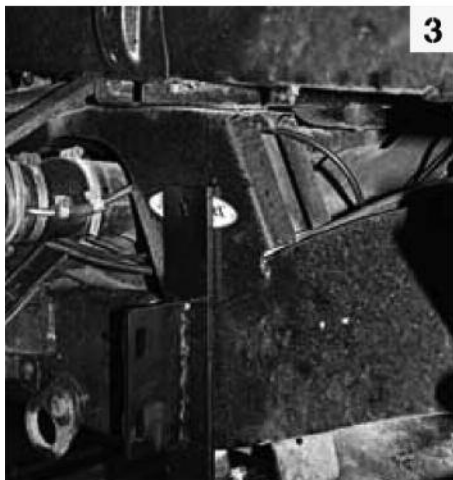




Here's what you get: the long-range tank comes complete with its mounting bracket, along with all the clips, pipes and fixings. The only extra item you could do with is a Rivnut gun and some M8 Rivnuts for the tank's rear mountings.



We did the work on Britpart's four-poster lift, which allowed Steve Grant to position the Defender at the optimum height, but it could be done on your driveway with a trolley jack and sturdy axle stands. First job when jacked up is to remove the rear wheel.



This front mounting bracket is bolted to the offside rear anti-roll bar bracket on the chassis. My Defender doesn't have an anti-roll bar, but the bracket is still there. It's important to fit the bracket on top, as shown. The top of the bracket will need drilling and fitting later when you're sure it's in the right position.



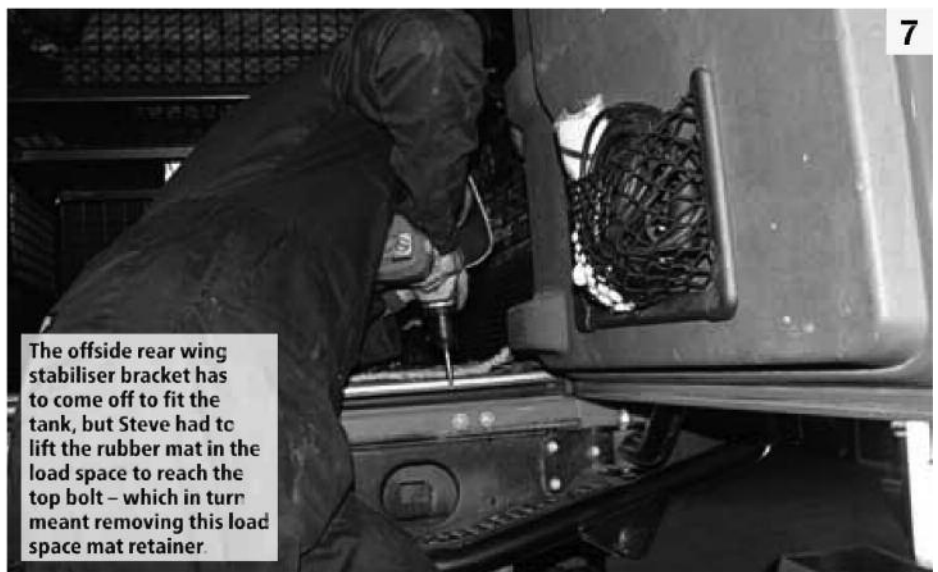
The mud flap and bracket now come off; the bracket is discarded and the flap mounts on a bracket that's welded on to the bottom of the new tank.



The filler-to-tank hose on my vehicle was cut to insert the feed for the diesel-powered Eberspacher heater. This did create a problem, but Steve overcame it by taking the feed from the bottom of the long-range tank.



Next, the filler cap is removed and the fuel filler is withdrawn.



The offside rear wing stabiliser bracket has to come off to fit the tank, but Steve had to lift the rubber mat in the load space to reach the top bolt - which in turn meant removing this load space mat retainer.

Steve trial-fitted the new tank using a trolley jack and strategically placed wooden block. It fitted in the space okay so we carried on with the job.

8



Chequerplate had to be removed from the lower wing to allow access to the stay bolt that needs repositioning to fit the tank.

9



THE EXPERT



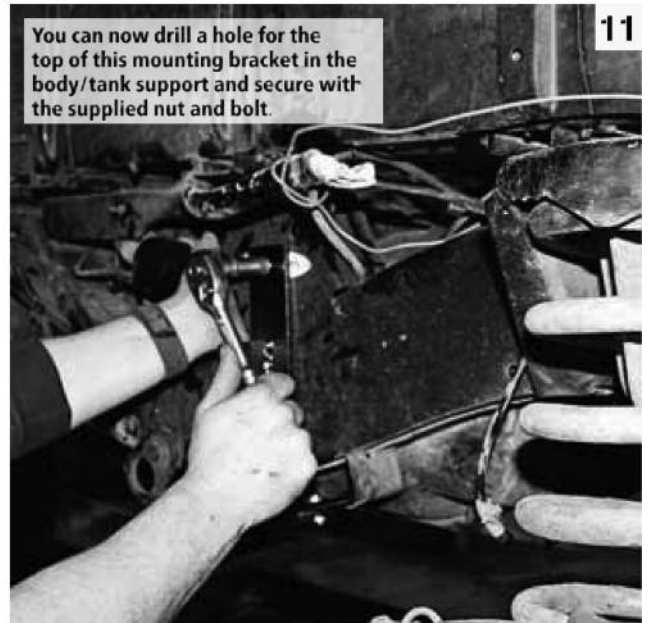
Steve Grant is Britpart's in-house mechanic. He's been around Land Rovers his entire life, owns a very tidy Disco 1 and enjoys off-roading in his V8 Series IIA Lightweight. In his spare time, Steve spacers on the Britpart MSA British Cross Country Championship-spec Land Rover run by Britpart director Paul Myers.



10

You can now drill a hole for the top of this mounting bracket in the body/tank support and secure with the supplied nut and bolt.

11

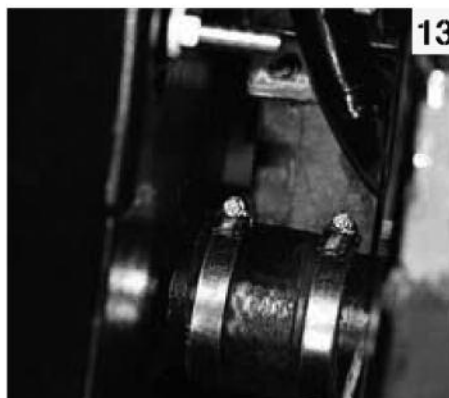


Existing holes in the rear crossmember need drilling out to take M8 Rivnuts for mounting the tank at the rear. You could use nuts and bolts, but they would make it a more fiddly job.



12

This outlet is normally used as the equaliser between the two tanks, but on my Defender we used it to supply the Eberspacher heater. Steve used PTFE tape on the threads to prevent leaks.



13

You need to cut the existing filler hose to fit between filler and long-range tank, and between that and the original tank. You need to take your own measurements and cut accordingly, but Steve ended up with 100mm for the top and 60mm for this one. We found it best to put the lower one on the original tank first and then the top one on the new tank.



14

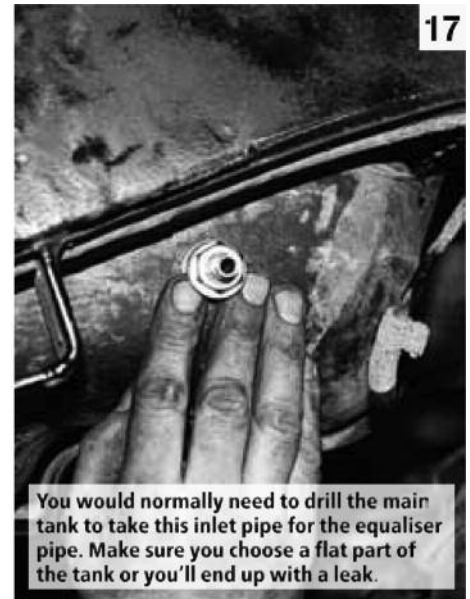
The vent hose from the main tank now attaches to the front of the long-range tank instead of into the original filler neck, which is replaced by a shorter plastic one supplied in the kit.



Reaching in to fit and then tighten the hoses is probably the hardest part of the job. For tightening, you'll need a flexible hose clip screwdriver such as this.



When you're sure the hoses are fitted correctly and the hose clips tightened, you can go around and tighten all of the tank mountings.



You would normally need to drill the main tank to take this inlet pipe for the equaliser pipe. Make sure you choose a flat part of the tank or you'll end up with a leak.



To save time when fitting the equaliser inlet, Steve suggests using a piece of wire in through the filler neck with a loop on the end, as shown, then another piece of wire to hook it out of the hole you've drilled. It should work, but if it goes wrong and you drop anything inside, the tank will have to come out.



Final job is to fit the mud flap to the bracket that's welded to the tank and attach the wing fixing to its bracket.



And there you have it. The long-range tank fits neatly into otherwise unoccupied space in the rear wing.

STAY SAFE

■ Dealing with a fuel tank is potentially hazardous, so run the tank level as low as possible before doing the job. Diesel is less volatile than petrol, but it's still better to take the

precaution of emptying the tank completely before starting work. Plug any open connections and make sure the workshop is well ventilated, possibly with a fan forcing air movement. There's the

possible danger of fumes causing drowsiness if working in a pit; and be careful of causing sparks if working on a petrol vehicle. Always wear eye protection when you're drilling or grinding;

and for this kind of job protective gloves are recommended. We did the work on Britpart's four-post lift. If you use a trolley jack make sure the vehicle is supported on strong axle stands.