Petrol Tank: Repairing Pin Holes and More!

I bought a bike last year where petrol tank had been repaired with fibreglass to fill some holes, plus some small rust spots turned out to be pin holes (it was a good price and the rest was in lovely condition so I took the risk). Now the bike in question is Japanese from the 80's so I hope you don't mind it's found its way into the MAC but the repair method I used, I thought was fairly simple to do yourself and I think hopefully it will be more permanent. Oh, and Dave was desperate for content this time, so you only have yourselves to blame for not sending him articles, leaving him room for…

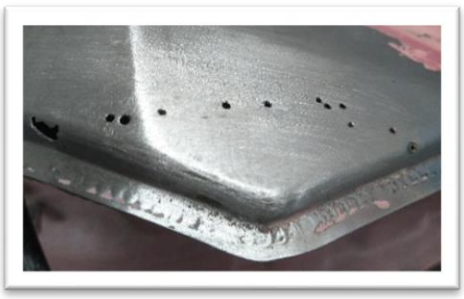
Image 1 The Pink Gag!

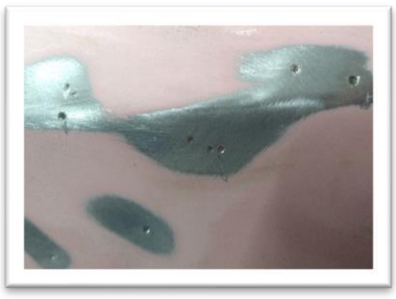
…***the Pink Gag*** or to be correct a Suzuki RB50 from 1986 (see image 1).

Tanks are pretty rare for this bike, so repair was the only option.

In the next image, you can see that the ethanol in the petrol has started to expand and push out the fibreglass.

So after some Google research, watching YouTube videos and reading some forums there are a few different ways to repair a tank. Some might weld / braise in new metal, some suggested solder and some just to line the tank. Straight away I rules out the weld / braise approach as beyond my current skills and after cleaning up some of the tank lining on it's own would have struggled so that left the soldering. Again research and there were 2 options lead (soft) solder or silver solder, with an acid flux. I would also need to upgrade my trusty Weller electronics soldering iron as well to something that could pack some heat! After research I decided to go the silver solder route, and so purchased some Warton ACTIVE8 Acid Cored solder of 96.5% Tin, 3.5% Silver (https://cpc.farnell.com/warton/activ8-1-2mm-100g/solder-wire-acid-cored-1-2mm-100g/dp/SD02793) and large 200W soldering iron also from CPC Farnell (https://cpc.farnell.com/multicomp-pro/mp740102/soldering-iron-200w-240v-uk/dp/SD02511). Added to this I bought some plumbers flux from Screwfix (https://www.screwfix.com/p/fernox-powerflow-flux-100g/239pp) a cork block and 120 grit Emery cloth.
A quick rub down showed the extent of the damage on both lower edges and also the pin holes.



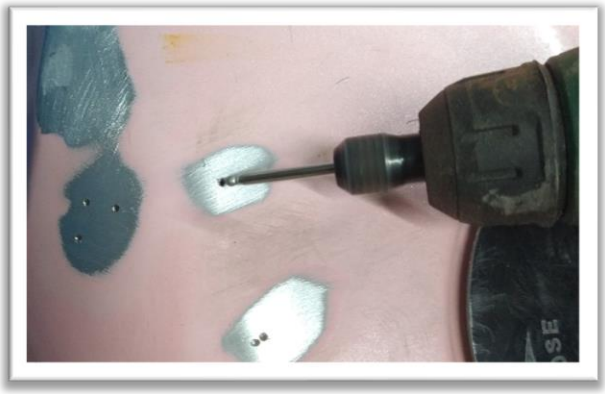


Step 1:

Clean up the affected areas to bare metal. Then for the pin holes I used a straight pointed pick tool to open the hole a little which also removed the small amount of rust in the hole.

Step 2:

I used a Dremmel with a round burr tool to clean and slighytly countersink the pin holes. This gives a little well for the solder to sit in.
For the larger holes along the bottom edge, I carefully pushed in around the edge of the hole, again to give the solder a better seat.



Step 3:

I took the Screwfix flux and applied to each hole then with the soldering iron, working one hole at a time I melted the flux so it cleaned the metal around the hole…

Step 4:

…then got the solder and filled the hole. I used enough solder so it flowed onto the bare steel and was slightly raised. This can take some practice – did initially try with an old gash tank Martin Naggs lent me 😊 I then repeated with the next hole.
With the larger holes I flowed the solder around the chamfered edge and gradually made the hole smaller until I could “wick” the melted solder over the smaller hole.

Step 5:

Clean the old flux off with some solvent of choice, then with the emery cloth on the cork block, rub down until a nice smoth finish is achived.

It's probably a little hard to see in these images, but I was really pleased with the result, especially as my first time trying. Below you can see the the result of the filled larger holes.

Obviously the tank will have to be painted, so I did give it a quick layer of rattle can primer to stop any flash rusting.

Love it or loathe it, with this tank there were so many holes, I have decided to line it (Caswell clear has been recommended - https://www.caswelleurope.co.uk/caswell-clear-fuel-tank-sealer-up-to-15-litres/ but there are others). As a precursor to that I did a de-rust with Flowliner Bio-Rust (https://cwylde.co.uk/product/flowliner-bio-rust-rust-remover/) which worked well. It isn't an acid type remover which I preferred, but even so, the rust it removed caused another 4 or 5 small pin holes to appear (which I repaired in the same way, so it was worth doing for that. Once those were fixed, leaving that in the tank for another 12 hours also proved to me the tank was also finally leak free.

That is where I am now, the next stage is finding someone to try and match and paint the pearlescent Pink paint! I had wanted a Gag bike since seeing them at the BMF in around 1990, and am happy with this one, as since 1996 it had only done 1000 miles and the rest was like new, but you can see what damage ethonol in petrol can do if it it left for longer periods.

OK, it wasn't necessararily the colour I would have choosen (my 11 year old daughter loves it!), but the condition for the price was too good not too; I'm 6'3" so people were going to laugh anyway.