

# Geoff Cleall continues his Citroen 2CV rebuild



While beginning to scout around for replacement body panels, I started work on the engine. It seemed to be in good nick having shown excellent oil pressure and no smoke from the exhaust. 2CV engines are pretty bullet proof. They are twin cylinder and are air and oil cooled. The crankshaft/con-rod arrangement is unusual. The one-piece con-rods complete with big-end sleeve have to be fitted to the crankshaft. For this to happen the crank shaft is made up of separate crank pins and webs. The pins are temporarily

shrunk by immersion in liquid nitrogen, the con-rods and webs are slipped on and it becomes a robust and solid unit once returned to normal temperature. They very rarely fail. The picture shows the engine from the front. The cylinders are finned as are the missing cylinder heads. The substantial oil cooler is mounted across the front.

I was able to buy pattern part replacement floors, sills and bulkheads and I welded them in. I cut out all of the other rust and made up the replacement parts from mild steel sheet and welded them in too. I'm a bit short of pictures on this but I've got a picture of me welding in a door sill. The body tub is on its side supported by scaffold tubes running across the garage.



It was about this time that I decided to change the colour. I didn't really like the acid green of the Bamboo Model and went for another Citroen 2CV colour, Bleu Celeste. However, The Bamboo Special Additions are rarer so it probably would have been worth it to keep the green. I also decided to brush paint the car. This was because my compressor wasn't big enough and I wanted to avoid overspray in the garage. After preparing the metal, I brush painted six coats of cellulose primer over the panel in the 'Union Jack' fashion. ie, first coat brushed vertically, second coat brushed horizontally, third coat at 45 degrees one way and 4<sup>th</sup> the coat the other way so as to minimise brush marks. I left it for a couple of weeks to get really hard and flattened it back with 400 wet and dry used wet with soap. The cellulose gloss coat was the same except that I used retarder to slow the drying time and I used 400, 800, 1000, 1200, 1500 wet and dry followed by polishing compound. That rubbing back process on a wing would take a morning and the end result was that it looked as if it had been sprayed.

There was much to do in the rebuilding of the chassis but I'll just pick out a few interesting points. The rear brake drums contain the wheel bearings and they are held on by a massive nut that has to be done up to 250/300 lb/ft. It required a suitable socket, a massive 'T' bar and about 6 feet of scaffold tube. The front brakes are inboard discs. Inboard is good because it reduces unsprung weight. Each disc has two pads for the foot brake and two smaller ones for the hand brake. So, with the hand brake on the front wheels, handbrake turns are a no-no.

The steering rack was in good order but the king-pins and the track rod ends were in a sorry state. I made up a copy of a Citroen special king-pin extractor to help. I mentioned the suspension in Part 1.



remaining body panels. More of that in the final part.....

Well, the rods that come from the suspension arms to the springs are adjustable in length and by such means it is possible to change the ride height at the front and the back.

The last pic shows the body tub mounted on the galvanised steel chassis, duly repainted with the re-con gearbox, suspension, brakes and steering fitted. Next, I chased about the countryside tracking down the