

Sods Law #1- Emma's Cooling System:

Most of us know that antifreeze will seek out any suspect areas in old cooling systems and cause a leak, but I didn't expect it to happen quite so soon, especially as Emma was used to antifreeze. Maybe Bluecol is more adept at searching out the weak points but I can't say I've noticed it before.

Within a week or so of putting Bluecol in Emma's cooling system I ended up with two leaks at; a) the heater valve and b) the heater matrix. A new valve at £11.25** cured the first problem and replacing the heater matrix with the one I took out of the rolling chassis I bought off Mark Sadler cured the second problem, with hindsight the leak may have been there for a while as the passenger footwell carpet was quite wet.

Note.

** *This brings the total expenditure on the cooling system to date to £101.15.*

To remove the carpet to dry it out I had to remove the seat and the seat belt, not too bad a job. With the carpet out I rinsed it on both sides with a hose pipe and hung it up over a stepladder to dry. I was pleased with the nice clean carpet and decided to do the drivers side as well.

Returning to the seats, the runners were sitting on plywood spacer blocks which I didn't like (I'm not complaining Dan! not every kit car builder has access to a lathe), but the seats were a comfortable height so I decided to fit some metal spacers; an alternative would be a stack of penny (now called repair), washers.

Short story:

A couple of years ago Roger (my son's best mate), said "Andrew I need twenty stainless steel spacers 10mm thick, 50mm diameter and with a 6mm hole in the centre, any ideas? Andrew said "if you pay for some 50mm diameter stainless steel round bar I'll get Dad to make them." When Dad heard the good news he thought "bugger that for a game of soldiers" and rang his mate Adrian (a Director at a local metal fabrication company), and asked him to laser cut them out of some 10mm thick stainless plate. When Adrian rang up with the price Dad said "how much to make some extras for me?" Adrian said something like "for you my man let's call it twenty five pence each", 'my man' got 30 for £7.50.

Suffice it to say that these stainless spacers have been on the shelf in my workshop (posh shed), for a couple of years or so gathering dust. Eight were quickly liberated and dusted off. The first job was to bore the 6mm hole out to 8mm and if you have ever drilled stainless steel you will know that it can sometimes be a pig of a job; in production holes in thin stainless are normally cut or punched.

Tips for drilling stainless:

1. Some grades of stainless work harden very easily and I try to avoid centre punching them if possible.
2. For best results you can buy special drill bits for stainless that have more appropriate cutting angles and flutes, but they are rather difficult to get on a Sunday morning! Second choice is a good quality drill bit; something like Cobalt. Third choice is a new drill bit of unknown origin and the last choice is a used drill bit out of your box of bits (no pun intended).
3. Select a slow drilling speed.
4. Don't let the drill bit rub without cutting if you do it will quickly go red and weld itself to the job.
5. Lubricate the drill bit, you can buy special lubricant but I generally use lots of WD40. Blasting continuously with air from an air line/gun can also help cool the drill and disperse the swarf.
6. Take small bites. I never drill more than around a millimetre or two at a time, then withdraw, lubricate and clean the swarf away with an old paintbrush as stainless swarf is very sharp.

7. If using a hand drill I 'squirt' the drill bit by switching it on and off quickly.
8. If you overheat stainless steel it often turns the swarf into a golden colour, heat it much more and then you're bugged!
9. To clean up I don't use a file, you will ruin it, instead I use an angle grinder, fitted with a stainless steel cutting disc (not a grinding disc).

It took around 30 minutes to drill all eight spacers and deburr both sides with a countersink.

Note.

I have just described a system that works for me! No doubt there is a Forum member with more knowledge of drilling stainless steel than me. By all means feel free to contribute your knowledge. But please try not to extract too much urine from my humble offerings.

Before refitting the seats I wire brushed the bolt threads and applied WD40. To retain the spacers in position while I refitted the seats I slipped a rubber 'O' ring over each bolt and used new Nyloc nuts and washers on assembly. I have a selection box of 'O' rings and they'll perish long before I get round to using them all for their intended purpose. Once the seats were bolted in I cut short lengths of rubber fuel pipe, put a blob of Copaslip grease inside and slid them over the protruding bolts, the seats will come out a lot easier next time.

Once the drivers seat was fitted the upper seat belt mounting was fouling the hood frame pivot, I then realised why Dan had used thicker wooden blocks on one side of the drivers seat. I then drilled two more stainless spacers, took the seat out, fitted them on the right hand side and bolted the seat back in. Fortunately it canted the seat over just enough to clear the hood frame pivot, but is not noticeable when sitting in the seat.

I didn't reconnect the heater valve cable as it's a bit crappy so it will be renewed next time I place an order with Car Builder Solutions; in the meantime I'll turn it on and off at the water valve itself.

I've put in a photo of the heater valve so Mike can see I made an attempt to polish the rocker cover when I adjusted the tappets "if there's a photo it happened eh Mike?" At the end of the day the carpets were still damp so I hung them up in the carport, vacuumed the interior with a wet and dry vacuum, put a fan heater in the car to dry it out and had an early bath. The next day the carpets were still a bit damp, this was a few weeks ago before the sun came out, so I moved them to Margaret's greenhouse. 24 hours later they were dry and with everything fitted Emma was mobile again. The final test was to put a load of paper towel under the heater then give her a quick run along the A47 to Wisbech for the 'Big Breakfast' at the 'Bygones Café' (just off the Horsefair and very highly recommended if you are in the area, we make the journey regularly just to have their breakfast). Then it was back to Peterborough cross country a nice round trip of 52 miles, not a trace of a leak at the end of it and all the water still in the radiator when I checked it after it had cooled down. Now I wonder what's going to go wrong next?

