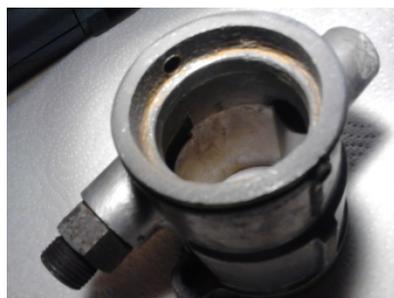


Triumph Roadster Temperature Gauge Repair

On the trip home from the Crathes Castle Rally I noticed that the Temp Gauge was reading low despite the fact that at the time we were driving up a long incline.

The first investigation was to see if the thermostat was stuck or corroded in the open position, this was not the case and in fact the condition of the thermostat housing and thermostat were very clean. These had not been inspected in the last 7 years although the coolant had been changed every 2 years [Blucol].



Further investigation revealed that the temp gauge was not working probably through loss of fluid [ether] there were no detectable leaks at the gauge, in the capillary tube or at the bulb. I have seen this before on old Landys and other classic cars where the ether has leaked out over the years but the leak is too small to detect and a recharge of ether will do the job.

In previous jobs I had access to labs where ether could be easily obtained but to buy it “over the counter” now is not so easy – apparently it is used in the manufacture of Crystal Meths or Crack Cocaine. However 100mls could be bought on the internet from a chemical supplier in Belgium so I sent off for some which arrived in due course. I also purchased an 18swg [1.3mm] x 1½” [40mm] blunt syringe needle and a 5ml syringe both from a well know auction site beginning with E.

I use a method which, while it does not follow the original manufacturing process, does the job and does away with the need to have boiling water and an open ether container on the workbench.

With the temp gauge complete with tubing and sender bulb removed from the car gather the following equipment on the bench

- 1 A bowl with ice and water [you can add salt to lower the temp further if you want to but it is not normally required, in UK at least]. The ether and syringe should be in the bowl at this time.
- 2 Temp gauge complete with capillary tube and bulb
- 3 Medium to large soldering Iron - you need to be quick with the soldering stage so the bigger the better or use a solder pot.
- 4 Solder and flux of your choice
- 5 5ml syringe with 18swg [1.3mm] needle – any size syringe will do but I find 5ml is easy to handle. This should be in the ice.
- 6 100ml bottle of ether in the ice to cool down
- 7 1.4mm drill [no 54]
- 8 Small piece of copper wire to plug the hole, I used the earth line from twin and earth household electric cable which measures 1.36mm diam.
- 9 The drilling device of your choice
- 10 A small hammer

Clean and tin the end of the bulb with a generous thickness of solder; also tin the end of the wire to be used for plugging..



Drill the solder and bulb with the 1.4mm [no54] drill



With the bulb sitting in the ice for at least 10 minutes after drilling load the syringe with ether and inject into the bulb via the hole just made. Because the system works on vapour pressure there is no need to have the system completely full, just inject until the bulb is full.

Immediately plug the hole with the copper wire and tap gently but securely in place. This is important as the ether will vaporise as soon as heat [even the heat of a hand] is applied and possibly force the plug out of the bulb.



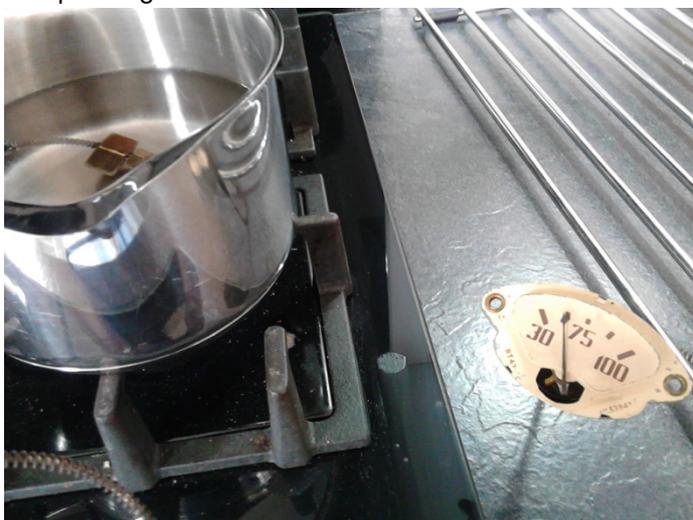
Solder the wire to the already tinned bulb. This MUST be done VERY QUICKLY - the ether will vaporise as soon as any heat is applied. Cut off the excess wire and dress off the solder.



With the missus at her sisters, place the bulb in a small pot and bring to the boil [Gas Mark 8]



Temp Rising



Water boiling, gauge showing 100c - Hurrah!



Reinstall the gauge in the car and go for a trial run



8 o'clock on a sunny morning, 50 mph - 55 psi oil pressure – 75deg C and a full tank, that'll do

Alan M. Morris