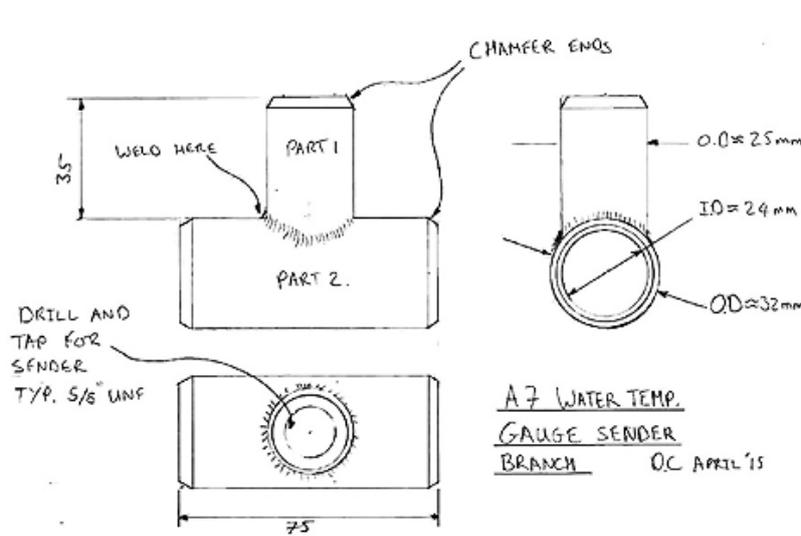




The majority of these tips have appeared in club newsletters over the years. Please note that you use them at your own risk as neither the Bristol Austin 7 Club nor the authors can be responsible for the results of trying to follow the instructions given.

Temperature gauge - fitting to an Austin Seven - by Dan Cole

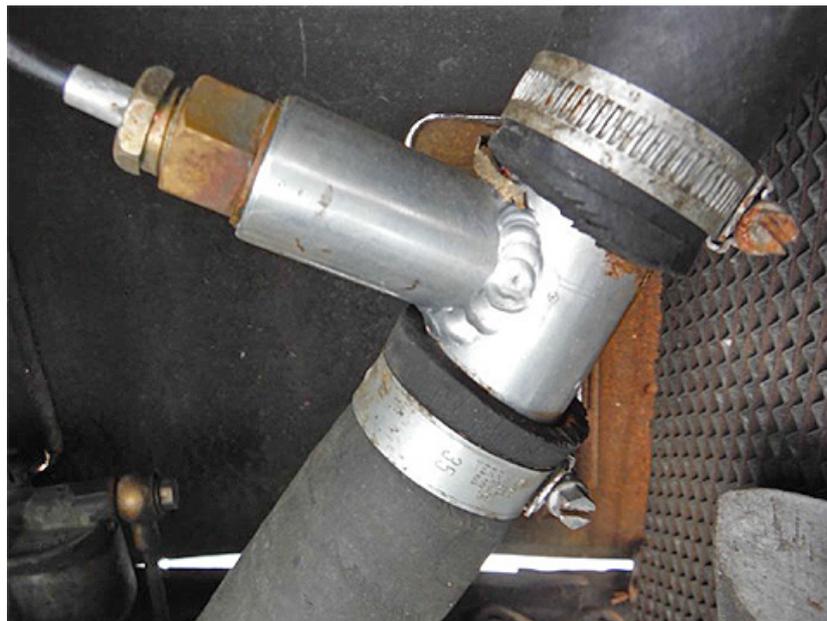
A while ago there was a discussion on the Austin Seven Friends forum about the running temperature in Sevens and the various possibilities in terms of fitting coolant temperature gauges. This reminded me of a little mod I did which has worked OK and may be of interest.



A few years ago, after a couple of overheating issues I decided to fit a temperature gauge to my Ruby. To fit the temperature sender an appropriate fitting was required in the cooling system and this was achieved using a 'T' branch fitted in the top radiator hose. This method benefits from being simple to make and fit and requires no permanent modification to the car itself. Two pieces of scrap aluminium were cut to length and turned to the appropriate diameters shown in the drawing below. The outer diameter of the branch for the sender (part 1) is not important as long as the wall thickness is not too meagre. The diameter

of the section that inserts into the hose may need to be altered slightly to best suit the particular hose type you are using. The dimension shown gives a snug fit in the standard hoses available from suppliers such as Seven Workshop. The length of this should be sufficient to make sure the hoses can be fitted securely whilst not being so long as to make assembly difficult with the radiator in place. Once the two lengths are turned up a hole was drilled in the sidewall of part 2. A scallop was then filed into one end of part 1 (to suit the outside diameter of part 2) whilst the appropriate thread was tapped in t'other end for the sender (in my case 5/8" UNF). If you have the right kit the scallop could be cut in a milling machine or a lathe with a vertical slide fitted.

With the parts prepared all that remains is to weld them together. If you have access to the appropriate welding gear but are not experienced with aluminium welding this is not a bad part to gain some experience on since it consists of 'clean' aluminium and is not too thin. So, seek help from someone with experience and go for it. Cleanliness is essential at this stage and vigorous scrubbing with a stainless steel wire brush helps in this regard (normal wire brushes will impart impurities to the aluminium). If aluminium welding is not a possibility you can make the parts in steel and use a basic MIG or arc welding set. Should you opt for that option though make sure you paint the part well to prevent it rusting. My first version was in steel and worked well except for a bit of rusting.



Once the parts are joined and checked carefully for leaks you can fit the branch to the top hose, remember you will need a couple of extra radiator hose clips and will need to cut a section from the middle of the hose. You could fit this to the lower hose but I opted for the top where the laws of physics suggest the highest temperatures will occur. The sender was screwed into the branch firmly with a little PTFE tape in place (probably not necessary). The sender tube was carefully routed and clipped in place along the bonnet stay and the gauge was fitted to an auxiliary panel on the dash. The running temperature is typically between 80 and 90 deg. C and the gauge gives some peace of mind that all is well

and is interesting if you like this kind of thing. With the crude thermo-syphon (sometimes) system expect quite large variations depending between say long uphill slogs with your foot to the boards and coasting down hill. When climbing Countisbury the other summer a steady 100 deg. C was witnessed – not entirely surprising with an abused and tired engine in a heavy late car ! If you are a worrier and likely to be distracted by wandering gauges it is perhaps best not to fit one. Just enjoy driving your car, keep the radiator topped up and look out for steam !

A further refinement to this design would be the inclusion of a raised ridge near the 2 ends of 'part 2' where the hoses fit over. This would aid secure fitting of the hoses when the hose clips are fitted 'inboard' of the raised ridges.