



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.

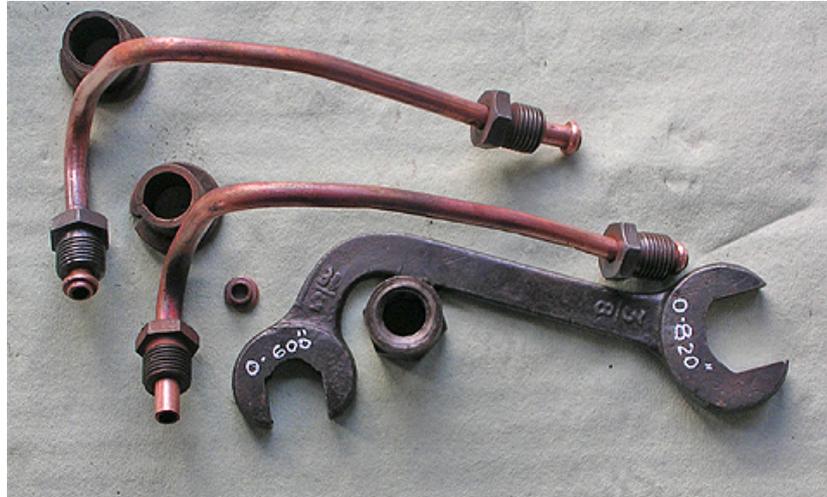
### Engine - three bearing - oil feed - by Ron Hayhurst

The centre bearing on the three bearing engine, fitted from about 1936 onwards, has its own oil supply route. This is through a copper pipe fed from the gallery at the rear of the engine to the bottom centre bearing cap. Failure of this pipe will almost certainly lead to failure of the centre bearing and may sufficiently by-pass the oil supply to other parts of the engine to present disastrous consequences. This is just what happened a few months ago to Cornwall member Ian Leaver. Their January club newsletter had a sad picture of the big hole in the crankcase knocked out by the broken con rod. The previous month, in an article on this topic, Mike Davies showed that the root cause was a fracture of the pipe at the point where it enters the bearing cap. This can be seen in the picture below. Mike comments that he has found that six out of ten engines he has worked on had failed oil pipes! Because the pipe remains in situ, the separation where it enters the cap may not be immediately obvious, e.g. when taking the sump off for some other task.

I am in the middle of an engine rebuild so Ian and Mike's warnings were very timely. Presuming that the failure was due to the work hardening of the copper, and the original strength could be restored, I set about annealing a couple of these pipes by heating to red heat and quenching. I needed two goes at it so as to shift the back nuts which masked some of the first effort. I burnished up the copper with some steel wool and then did a double take! With no effort at all, the end had completely come off as shown in the picture I took. Another accident waiting to happen! There is definitely a need for a detailed check.

Removing the pipe from the crankcase is not straightforward unless you have a cranked spanner. The picture shows "the one I made earlier". An old spanner was taken to red head and whacked around to the shape shown. Then with an angle grinder and finally with a file the jaws were made 0.820" and 0.600" wide. The larger size jaw is to undo the threaded union (also shown in the picture) which is

at the feed end of the pipe. This needs to be undone at the same time as slackening off the back nuts. It is worth noting that the removal of this pipe is one of the earlier tasks when you are stripping the bottom end of a three bearing engine, so such a spanner is an important part of your kit. As an aside, do not attempt in an engine strip-down, to remove the banjo bolt (the one hidden behind the flywheel) and to which this union is bolted, without removing the union first.



The picture also shows a couple of spring bushes. These are there just to prop up the pipe to show the best angle.