

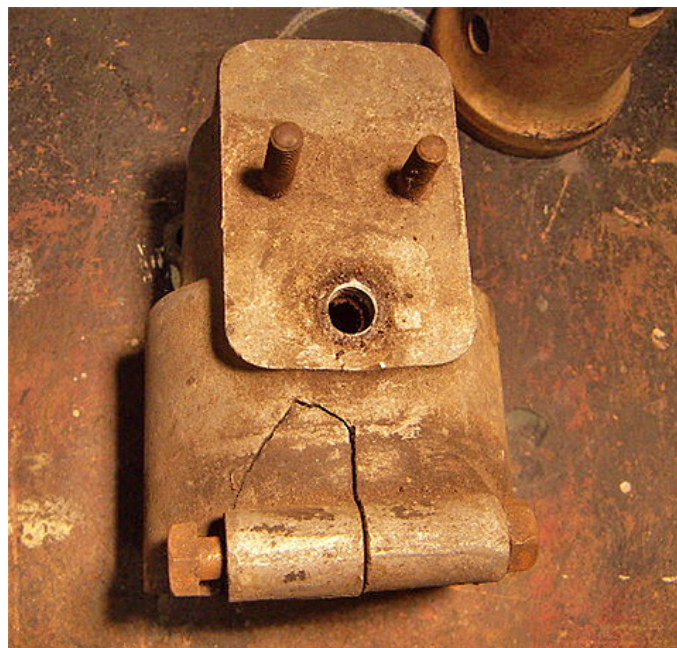


The majority of these tips have appeared in club newsletters over the years. Please note that you use them at your own risk as neither the Bristol Austin 7 Club nor the authors can be responsible for the results of trying to follow the instructions given.

### Dynamo housings - Endangered Species? - by Ian Moorcraft

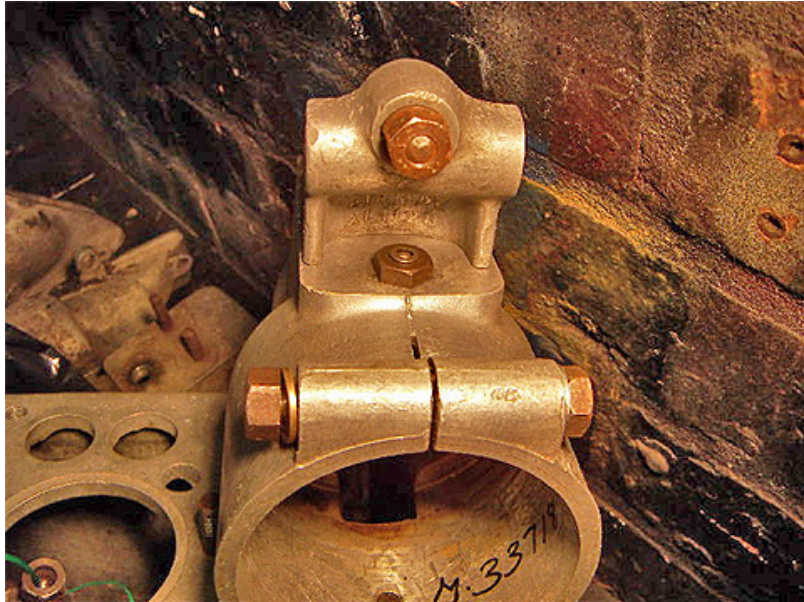
There was a time when every auto jumble stall or job lot of spares had one or two dynamo housings that only required a good rub with a wire brush (and didn't they come up well, no matter how rough they looked) and fitted straight on to the car. Over the last few years it seems that serviceable ones are now quite hard to find; the spares shed always had loads, now most, if not all, are broken.

Having a good look at the damage it is obvious that most have been broken for the simple reason that owners in the distant past were ignorant about how they were assembled.



Pic A

If we look at the magneto housings first, the damage is always the same, being cracked from the end of the slot **Pic A** - not always as bad as this, but if you find 10 of these, nine will have some cracking here. So why is it? Well, people remove the obvious bolt and nut then find they cannot remove the dynamo and wrongly assume it is tight in the casing, so out comes the screwdriver to jam in the slot to force the case apart, and goodbye to another dynamo housing.



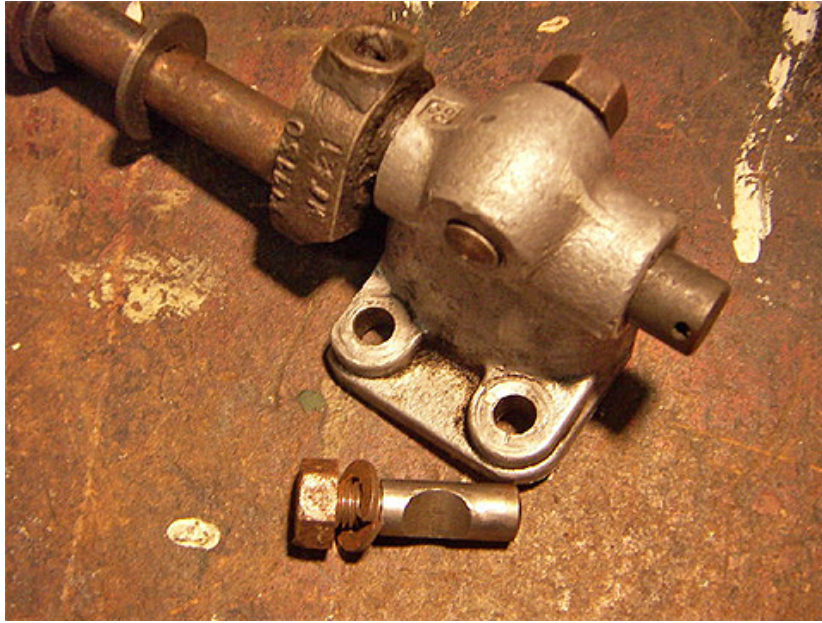
Pic B

Looking at **Pic B** the Bennett Oiler that sits under the small fan bracket doubles up as a locating spigot for the dynamo revealed in **Pic C**; if you don't remove this you cannot remove the dynamo.



Pic C

If you are removing the housing completely, leave the single front nut (hidden when the dynamo is in place) until you have the other three fixings removed. The reason being that there is not enough clearance to remove this nut before it jams against the timing gear case below. If you carry on undoing it after the nut has come up against the case (depending on the length of the stud) you can jack the dynamo housing off the crankcase breaking one of the feet on the housing or, even worse, off the front timing gear cover (which is a matched pair with the gear case itself).



Pic D

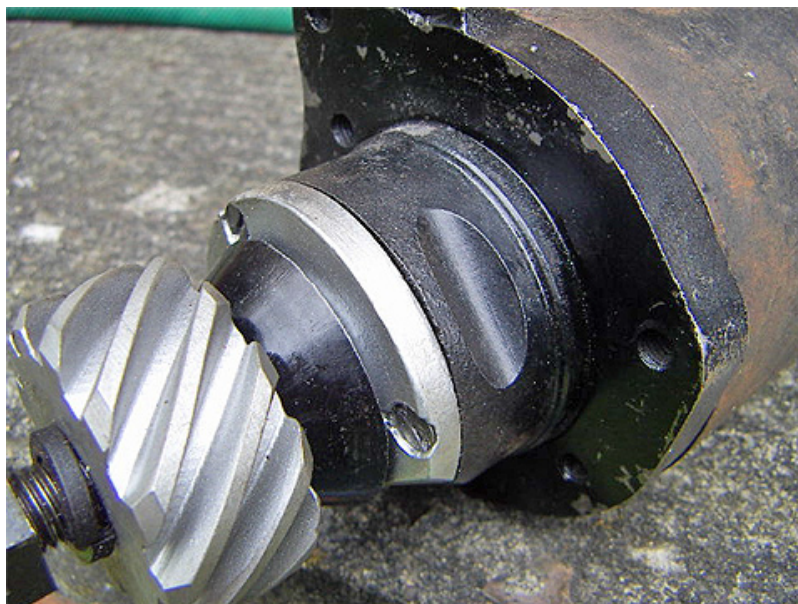
Moving on to the coil engine dynamo housing, four times as many of these were made as were the magneto ones, but of course probably four times as many coil cars that need them still exist today. The damage on these is almost universal; if it's broken it will be the top of the casting where the fan spindle fits and this is simply because people have not realised the cotter\* that holds the spindle in place is not a bicycle type with a flat, but half moon ground in the cotter, it is the same type cotter as the magneto cars shown in **Pic D**. Trying to hammer it out breaks the top off the casting (you can also break the casting on both types by over tightening with the dreaded socket set). All that is needed to remove the fan spindle is to loosen the nut and give the cotter pin one sharp tap and then revolve the spindle back and forth pulling outwards as you do so.

Removing the dynamo on coil cars can sometimes be a problem; the three bolts are out but the dynamo will feel loose but will not come out, so some take off the little tin cover on the other side of the housing (what is it for?) and try to lever or hit the dynamo out with a hammer without success. Looking at **Pic E** shows how the long housing fixing bolt breaks into the space for the dynamo case and **Pic F** shows the corresponding half of the slot ground into the dynamo bearing housing, effectively locking the dynamo into place. If you have this problem you must remove the long housing bolt as well as the three bolts on the dynamo. You

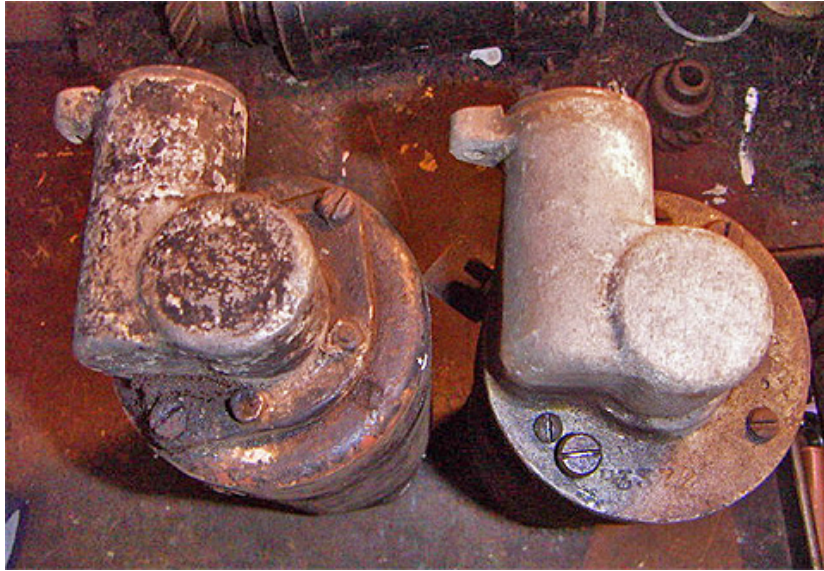
will not be able to tell if you have this slotted type dynamo fitted until you get the problem removing it. There are another two designs of post 1930 dynamos (sorry no pics ); one has a flat ground away from the outer edge of the slot allowing the dynamo to be removed without taking out the long bolt, and the other has a conical shaped bearing housing with no slot at all and is easy to remove.



Pic E



Pic F



Pic G

You will not have this problem with the first coil CAV dynamos. **Pic G** shows the first type introduced in late 1928 on the left with a two piece steel and aluminium end cap and the second type in 1929 with a one piece aluminium end cap; the third type late 1930/31 looks exactly the same but the one piece end cap is steel. All of these are flat at the gear end and give no problems see **Pic H**.



Pic H

If you are building up a spare dynamo for a 1931/39 car, avoid the type in **Pic F**. Removing the long bolt every time is a drag, and it will eventually strip the thread in the crankcase and you will end up with a difficult job on your hands to rectify the thread.

By the time you have the three bolts removed from the dynamo, you will have

learnt how difficult the access is for two of them, so suggest you cut a nice broad slot in the heads of the two bolts on each side of the housing and use a big screwdriver to refit them.

I apologise if this is 'old hat' to many of you, but we do have lots of new members who could benefit from our experience I'm sure.

\* Note this type of cotter is also used on the front axle king pins.