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Ensuring reliability

Old cars are different to modern ones in their need for regular attention, despite the manual giving instructions for work to be done at service intervals, things can often go wrong in between. Furthermore, unless the people servicing the car really know it, there is a risk things will be missed so I have itemised below the common causes of failure and advice on avoiding them.

Petrol Pumps

Probably the most common cause of failure of our cars is the SU fuel pump now made and supplied by www.burlen.co.uk

If you are able, then it is a good plan to remove it from the car and thoroughly service it. Start by removing the end covers and establishing the condition of the points. Any signs of arcing or wear and they should be replaced. The best method of reducing arcing and prolonging the life of the pump is to fit a diode (available from Burlen) across the coil.

Instructions on rebuilding SU pumps are widely available so will not be repeated here. Alternatively Burlen now offer as an alternative, an electronic pump and this should be much more reliable.

Classic Racers and rally drivers do not trust SU pumps and fit a Holley conversion from Derek@flexolite.co.uk these cost less than an SU one and are claimed to be absolutely reliable.

A useful feature of the Pre-War cars was a pair of switches, one for each end of the pump. It enables you to check each end separately and it is well worth modifying your car to do the same. Appropriate switches can be obtained from the likes of Tim Hodgekiss on 01692 535802 (he may now have a website so search Google).

Ignition Coils

Ignition coil failure on these cars is quite common so if yours still has the originals, then it is sensible to replace them. Use a Lucas type HA12. The ignition switch wire should be connected to the positive terminal. Under no circumstances should any sort of high output coil or Sports coil be used, as it will draw excessive current from the battery and cause premature failure of the distributor cap or rotor arm through arcing. If in doubt buy them from a Morris Minor spares centre! If you cannot get a Lucas type coil then any general-purpose 12-volt ignition coil will do as long as it is not one that requires a ballast resistor.

Points and Condensers

If your car still has points and condensers then it is important to make sure they are adjusted as per the manual and properly lubricated. If the cam that opens and closes the points is dry then both it and the heel of the points will wear, the points will close up retarding the ignition timing and ultimately stopping the engine.

Points should be replaced if they are pitted and burnt. Condensers are reliable but the long TTC ones that came with the car are no longer available. It is perfectly OK to use a modern Lucas type as a replacement.

www.classicheads.com do a conversion to electronic ignition for about the price of 3 sets of points. It is tiny, all fits inside the distributor and is very easy to install and requires no maintenance. If your car needs new points or condenser, it is well worth considering an electronic conversion.

Fuel Filter

Located on the inside of the offside rear chassis leg just in front of the petrol tank is a fuel filter. Nobody ever cleans them out and they are usually pretty disgusting inside. It is not unheard of for these filters to be the cause of a breakdown so check it and clean it annually.

Carburettors

To avoid carburettor problems, check regularly for fuel leaks or signs of flooding. SU carburettors have a short overflow pipe which can drip petrol onto the dynamo causing a fire if the car floods. This pipe should be extended with a plastic fuel down to the level of the sump.

If in doubt carburettor overhaul kits are available and should be fitted. The important things to remember are to set height of the levers that cut off fuel supply to the float chambers to the correct height, to set jet heights on SU's to 0.035-0.038" down and to make sure the butterflies are opening at exactly the same time. To do this, remove the dashpots and use a thin 0.0015" feeler gauge.

Otherwise it is a case of following the manual.

Dynamo and Regulator

Charging problems are usually caused by neglect so, if in doubt, remove the dynamo, dismantle it and clean it out. Use the two " BSF threaded hole to extract the pulley as it will break very easily if you pull on the outside edge. Clean out bearings and repack with grease or replace if in doubt. Make sure brushes are in good condition and not sticking in their holders and check condition of commutator. If in doubt it can be skimmed in a lathe bearing in mind that if you have to take so much off that the insulation material reaches the surface, you will have to make a tool from a hacksaw blade and cut it back by at least 1/32".

The manuals contain instructions on setting the regulator but there is no need to remove the wires to the dynamo, just put a piece of cardboard between the cut-out points and measure regulated output off load. Tim Hodgekiss (mentioned earlier) can supply replacement regulator if you are in doubt.

Starter Motor

Just like dynamos, starter motors rarely give trouble so yours should be serviced if you are not sure when it was last done. The principals are the same as for the dynamo (and as in the manual) but do make sure that the gearbox gaskets are in good condition and will hold oil. All too often oil drains out and they run dry for years – not good.

Radiators, Water Pumps and Hoses

Check regularly for leaks, signs of deterioration or corrosion.

It is difficult to tell if a water pump is OK so change it if you do not know how old it is. Make sure hoses are good and inspect radiators carefully for leaks. If the engine boils for any reason and the block is full of silt, this will all end up in the top of the radiator necessitating replacement so check carefully.

Brakes

It is important to make sure all brake linkages are lubricated, that there are no leaks from master or slave cylinders. I believe in changing brake fluid every year to reduce the chance of corrosion in the cylinders as they are extremely expensive to replace. Also make sure that the rubber covers are on the rear expanders as road dirt getting on will eventually lead to seizure.

Rear Gearbox Mounting

Please see Norman Geeson's article elsewhere on the site.

