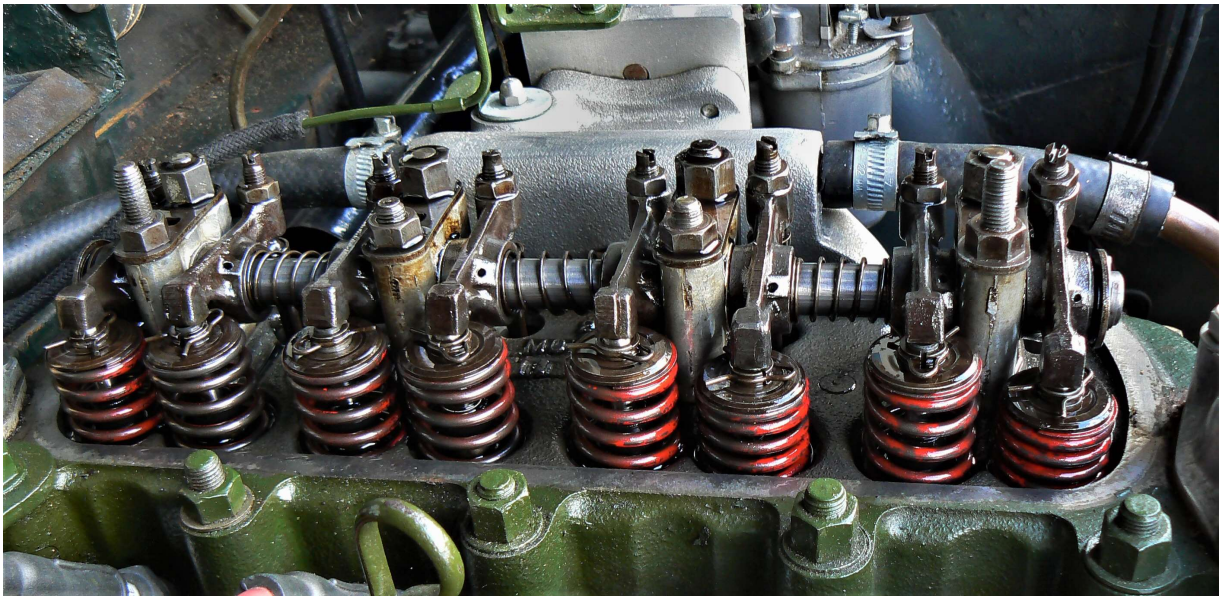
ROCKER COVERS

On most elderly cars with overhead valves the rocker cover joint is often a source of oil seepage which results in a thin coating of oil spreading slowly down the sides of the cylinder head, often collecting around the spark plug recesses. B.M.C. engines are no exception; their thin pressed-steel covers are not ideal and can easily be distorted by rough treatment. Leaks can of course be cured but it must be remembered that eventually seepage will occur again, owing to the temporary nature of the gasket material. The 'rubber' oil seals which lie underneath the retaining nuts are similarly made out of a material which is allergic to oil and after a few years service become badly swollen. For the cost of a few pence these should be renewed along with the gasket.

Rocker cover gaskets are stamped from a sheet of neocork, which is cork granules bonded with a neoprene mixture and formed as a continuous sheet rather like a flexible equivalent of chipboard. It is the best material for the job, but unfortunately it doesn't age well. Replacement will be necessary after say, five years or so, regardless of mileage. Removal of the cover is achieved simply and quickly by undoing the two sleeve nuts on top. Their hexagons are shallow so the best tool is a flat spanner as in fig. 1; sockets and ring spanners have a chamfer which means that there is a lot less contact between spanner and nut. Standard spanner size for these sleeve nuts is 5/8” AF.

Whilst the cover is off, there's a good opportunity to check the valve clearances. It doesn't take long and is another ticked box on the maintenance schedule. It's a simple job which most will be familiar with. The etching on feeler gauges is notoriously hard to read (and to photograph)

see fig. 2, so make doubly sure you have the right one, .012". If you only have metric feelers, use 0.3mm. Use the starting handle to turn the engine or engage top gear and gently rock the car backwards to set the correct position for adjustment.

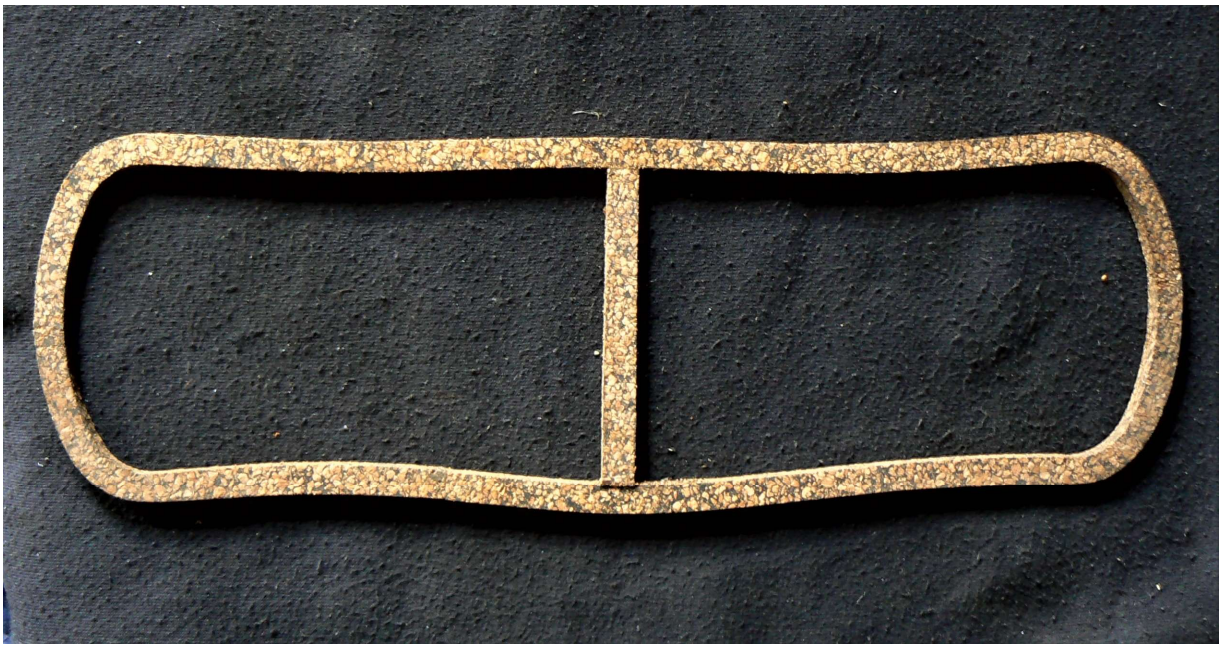


Observe in fig. 3 that two valves are depressed at any one time and the entire set can be checked/adjusted with only two revolutions of the engine.

To ensure the best chance of a leak-free result, some care should be taken whilst refitting the rocker cover and its new gasket. First clean the cover scrupulously and examine it for distortion. The sides must be parallel with an even flange all round (fig. 4). Lay the cover on a good flat surface (a worktop is ideal as in fig. 5) and slip a piece of thin card under the edge to test the clearance. Small adjustments can be made by a little

judicious bending; using a hammer will in all probability make things worse! If overtightening has occurred, the area around the securing bolt holes will be distorted and must be brought back to be flat and even to give the sealing rubbers a chance to do their job properly.

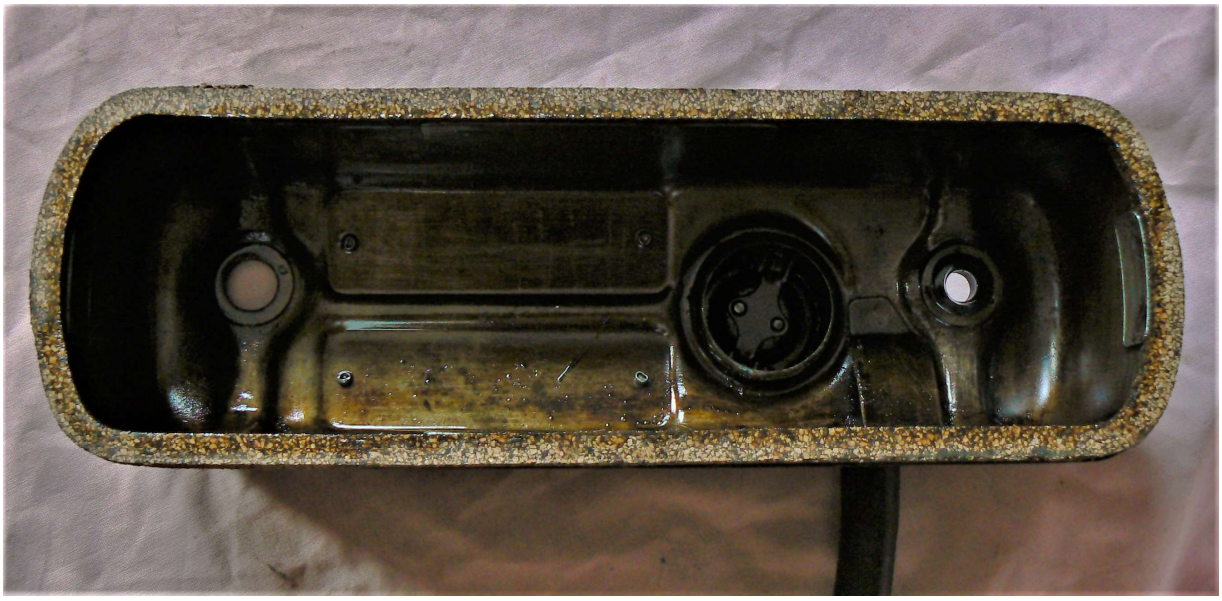
New gaskets, however carefully packed will have some degree of distortion as in fig. 6.



It's hopeless trying to tuck a bendy gasket under the rocker cover and expect it to stay in place whilst you go and find the retaining nuts. A little assistance is required here and by far the best solution is to glue the gasket to the cover.

Nowadays, new gaskets are made with a bridge halfway along, which is there to maintain the shape during the period between manufacture and fitting. This must

be removed prior to use; lay the gasket on a flat surface and use a very sharp knife to neatly trim off the bridge. Now clean the flange of the rocker cover thoroughly and degrease it with a drop of petrol on a rag. Apply a contact adhesive to gasket and flange and when tacky put them together making sure



that, as in fig. 7, the fit is perfect. Lay aside for a few minutes to allow for setting during which time the mating face of the cylinder head should be cleaned. There is no need to glue both sides of the gasket; the glue is for positioning, not oil - sealing.

Lay the rocker cover in position taking care not to snag the new gasket. On 1098 cars this may be tricky as the later type of heater valve can be very obstructive.

(Note that there is an aftermarket re-designed valve now available that has a slightly offset pedestal to overcome this issue.) The retaining nuts, washers and rubber oil seals may now be replaced. Sometimes there are lifting eyes fitted under these sleeve nuts, if not there should be a 3/16" spacer. Omission of either will prevent the cover being tightened down properly. The correct order of parts is shown in fig. 8 and is: 'rubber' oil seal, dished washer, spacer or lifting eye, thin washer, sleeve nut. Sometimes the dished washers have gone missing and should be replaced, as they help to prevent the rubbers

spreading.

There is no need to get carried away when tightening the sleeve nuts, it only squashes the oil seal rubbers. Fig. 9 shows that the standard sleeve nuts have been replaced by some home-made items tightened by the fingers only, which is sufficient. The same illustration shows a new rocker cover gasket fitted evenly along its joint.

The two 'inspection covers' on the side of the block, and partly concealed by the manifold are another source of minor oil leaks. The above instructions may be applied to those also. Most 1098 engines have an improved cover which takes a neoprene seal. Earlier examples have a cork gasket and in view of the awkward location, gluing gasket to cover is almost essential.