

Anyone trying to rid their engine of the clackety valve gear of an MGB will probably have installed a cast aluminium rocker cover and, whilst there, adjusted the tappets to the correct gap using the well-known sum of nine rule – adjust 1 whilst 8 is down and so on.

The first notable thing may be that it is difficult to get the clearance correct with your feeler gauge usually due to the step that has worn in the face of the 'hammers' (the contact face on the end of each rocker arm) that push the valves and the play in the shaft which will also have steps in it, one for each rocker. The answer to some extent is to renew the rocker shaft and, using an oilstone as used to sharpen chisels, remove the step on each rocker pad. Go gently though as the surface is case (surfaced) hardened and once through to soft metal the rocker is useless.

Whilst doing this you may ask why this is happening at all and to answer that you have to know how the convoluted BMC lubrication takes place.

The oil is delivered to the hollow rocker shaft through a vertical drilling in the rear rocker post and an oilway through the cylinder head. There is also a block from the oil pump via a metering device in the form of a simple hole in the rotating camshaft, thus creating short spurts. It takes cold oil a few minutes to charge the rocker shaft, relying on what was left before for lubrication. This is not a reliable source; overnight the oil will have drained from within the shaft as the supply hole for each rocker is at the bottom.

If you study a rocker, you will see there is a short slot in the bronze (or brass) bearing which is a cup that acts as another metering device. As it rocks, the odd drop of oil emits from the top offset hole in each rocker. The idea is that this drop is flicked from that hole and unfortunately it is the sole lubrication for the top of the valves and hammers, hence the valve stems. It could be five minutes for the oil to be warm enough to be flicked. I use Magnatec 10/40 oil which helps to protect against cold start ups.

About 25 years ago and with a new 18V unleaded engine, I came up with a solution that to date and at least 50K miles later, has given me a quiet engine and I have not found it necessary to adjust the tappets once. It cost next to nothing and I will describe it here.

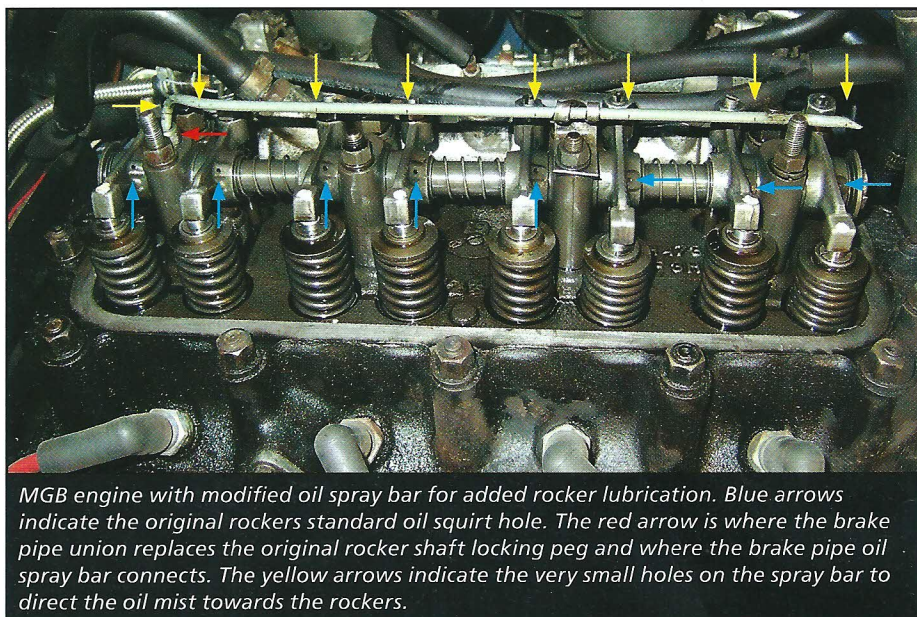
First obtain a length of normal brake pipe with a standard male union at one end. Bend the pipe making a loop at one end and cut to length as can be seen in the photo. Block the open end by flattening.

Then, carefully unscrew and remove the peg in the rear rocker post designed to stop the shaft rotating and insert the male brake union – it's the same thread. The bulbous end will prevent the shaft rotating. Do not overtighten as the bulbous end should not be forced through the hole in the shaft. You may have to file the nut corners down

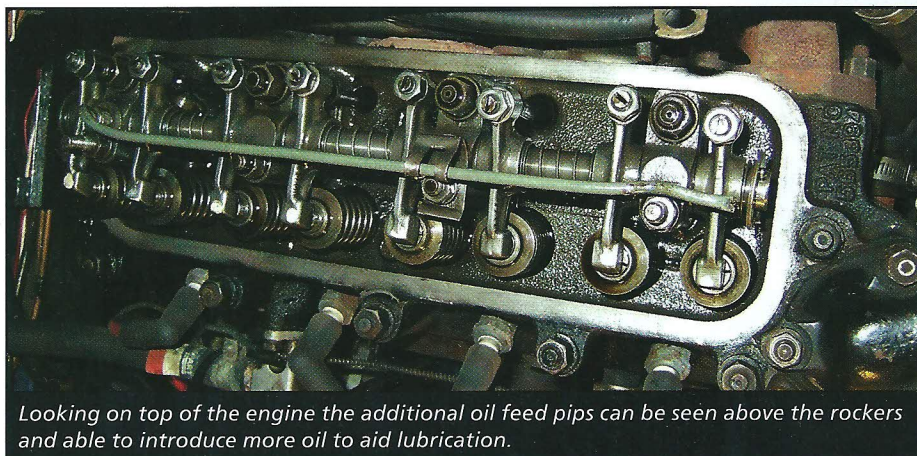
# QUIETEN DOWN!



John Howard



MGB engine with modified oil spray bar for added rocker lubrication. Blue arrows indicate the original rockers standard oil squirt hole. The red arrow is where the brake pipe union replaces the original rocker shaft locking peg and where the brake pipe oil spray bar connects. The yellow arrows indicate the very small holes on the spray bar to direct the oil mist towards the rockers.



Looking on top of the engine the additional oil feed pipes can be seen above the rockers and able to introduce more oil to aid lubrication.

slightly for clearance. An open ended spanner would be adequate.

Mark seven rocker hole positions along the brake pipe. The eighth will be in the loop as rocker eight is past the post. Remove assembly from the engine and, using a standard hacksaw, draw the blade across the underside of the pipe at each hole position thus giving a flat surface to drill the required hole. I have lost the drill-piece I once used but recall it being about 0.5mm – it's not critical. Sourcing such a small drill-piece may be tricky. Make up a support plate at the front post – a flat plate with two forking cuts would do.

From this design you will see oil will arrive and drip onto the rockers almost immediately and be flicked around. As the oil warms the drips become a fine mist,

lubricating everything in the rocker box. It can all be seen working with the filler cap removed. It will not lessen the pressure to the rest of the engine due to metering at the camshaft, as can be seen by the dashboard gauge.

A couple words of warning though. You will need to use a new rocker box gasket and don't be tempted to place the spray bar over the valves. I did as a trial on a previous worn engine, resulting in a lot of blue smoke after seconds in idle. The valve guides were clearly worn out!

If your engine is worn, it may not be for you but certainly it works for me. My oil consumption is 700miles per pint which is what Leyland told me it should be when new back in 1972.