MG TA (MPJG) Rear Rocker pillar modification

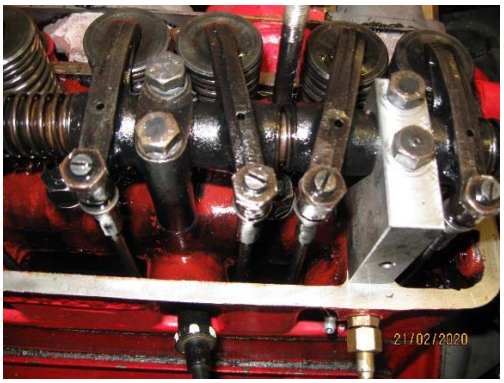
Many TA owners suffer from an accumulation of oil in the radiator header tank. This is often caused by a crack in the cylinder head normally on the top around the area above cyls. 2 & 3 exhaust port which gets incredibly hot. Another possible cause of the problem is the pressure oil feed into the cylinder head due to porosity in the casting. This modification moves the oil feed to the rockers to being outbound of the back of the head where coolant is present. This modification can be done without the need to strip the cylinder head down, and should not be beyond the scope of a competent home mechanic. You will need a couple of BSF spanners, a scriber, electric drill and a small allen key. You will be replacing the rear rocker pillar.

(1) Remove the rocker cover and the rocker shaft making sure that no pushrods drop down into the sump! Then disconnect the oil feed pipe to the cylinder head, and remove the male/male union in the head.

(2) Clean the area around the base of the rear rocker pillar, then put clean rag into the head oil drain cavities where the push rods protrude. Cover the valves/springs with another rag to ensure no swarf gets into the engine. Place some gaffer taper around the edge of the rear rocker pillar mounting area.

(3) Scribe a centre line through the two 8mm clearance holes & current oil feed hole to the edge of the head, then mark a spot along this line 12 mm from the rear edge of the outer M8 tapped hole for the rocker pillar mounting bolt. This will be the position for the new oil supply hole. Centre pop the mark and carefully drill a 1/8th inch hole down vertically through the head into the oil feed gallery. If possible have a vacuum cleaner ready to suck away all the swarf! Then take a ¼ inch drill and enlarge the hole that you have just drilled. Clean away all the swarf from around and within the oil feed gallery.

(4) Now you will need to take the 1/4in BSF tap supplied with the kit, apply a little bit of cutting oil (or 3in1) to the end of the tap, and carefully tap a 1/4bsf thread into the oil feed gallery. Be careful and watch the tap go through into the first rear mounting bolt hole. It is not necessary to cut the tread all the way along the gallery. Once again clean all swarf out of the gallery using a vacuum cleaner, and blowing down the hole.



(5) Now take the ¼ in BSF grub screw that came with the kit, apply a drop of Loctite or thread sealant to the grub screw and using a small allen key screw the grub screw into the newly tapped hole in the oil gallery. You only need to screw it in until it just goes past the rear of the new oil feed hole drilled in step 3. Finally blow down the newly drilled oil feed hole using a short piece of tube, or cycle pump or air-line if you have one. Cleanliness is very important. Carefully remove the gaffer tape, and rags from around the valves/springs and oil drain cavities.

(6) Take the rocker shaft assembly, remove the rear circlip, spring & spacer, plus No 8 rocker and the old rear rocker pillar. Fit the new rear rocker pillar, and replace No 8 rocker, spring, spacer and circlip.

(7) Refit the rocker shaft assembly, ensuring that the pushrods are correctly located. I usually put a bit of Loctite (or thread sealant) on all 8 bolts. Do not over tighten these M8 X 1 bolts, certainly no more than 15 lb/ft if you use a torque wrench. Then screw the male/male union back into the head complete with its copper washer and reconnect the oil feed pipe to the cylinder head. Quickly check the tappet clearances using the rule of 9 (adj 3 with 6 open etc), 15 thou exhaust and 10 thou inlets. Start the engine and just visually check that oil is flowing around the rockers. If all OK replace the rocker cover and run the engine until it is hot. Then remove the rocker cover and set the tappets correctly with the engine hot, replace rocker cover gasket if necessary and replace the rocker cover.

(8) Drain the radiator and cylinder block, re-fill with water and a flushing agent such as Holts Speedflush etc, then run the engine until the thermostat opens and the engine is hot. Drain the cooling system again and this time fill it with 50% clear water (preferably de-ionised water) and 50% blue antifreeze. The job is now complete.