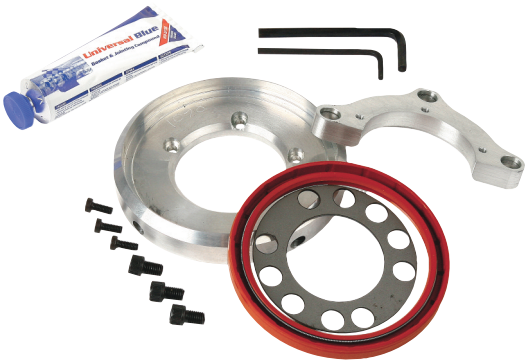
MGS108321



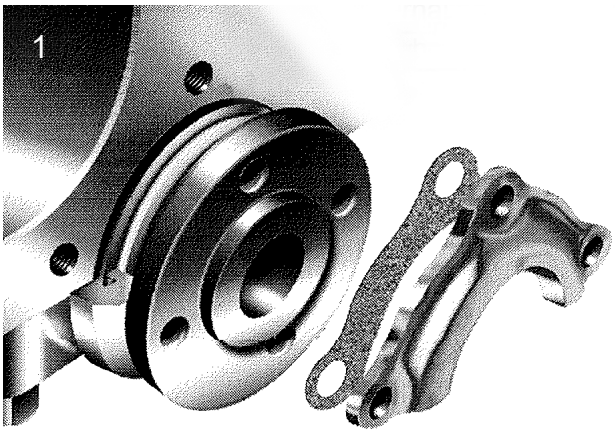
MGS108322

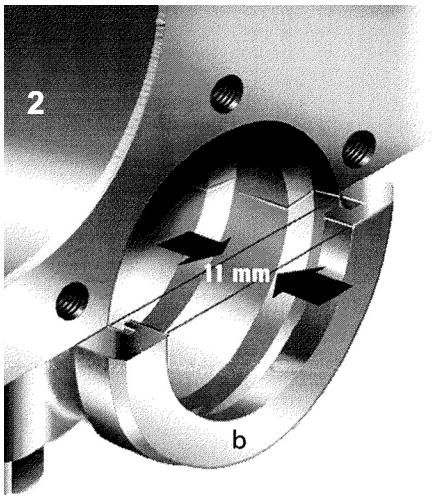
Oil Seal Conversion Kit Fitting Instructions

Part Number:	**MGS108321 & MGS108322**
Description:	**Oil Seal Conversion Kit, Rear Crankshaft, lip Type Seal**
Applications:	**MGS108321 - Morris Minor & Sprite & Midget 1098cc (10CC)**
	MGS108322 - Morris Minor & Sprite & Midget 948cc & 1098cc (10CG)

Instructions

Remove the flywheel, back plate, sump and the half round cover above the rear main bearing cap. Carefully clean up the rear block face adjacent to the main bearing cap (image 1), removing all traces of the gasket and burrs etc. The new oil seal will run on the outer horizontal edge of the flywheel mounting flange on the crank (image 3). This will need careful cleaning up, it must be checked for damage and carefully polished smooth with wire wool or fine emery. If it is really badly scored then a maximum of .25mm can be machined from the edge to provide a good surface; this should only be done in extreme cases, keeping the metal removal to a bare minimum. Please do make sure the face the seal is to run on is smooth. The ideal flywheel flange diameter should be 82.62mm for the 948 and 1098 Minor engines and 89mm for the 1098 MG engines with the 10CC engine prefix. Extremes should not exceed .5mm in either direction.





Remove the main bearing cap, take out the shell and clean it all thoroughly. Looking at the main bearing cap you will see that the end face (image 2) is not flat, it having been left "as cast" from manufacture; consequently the height of this end face from the block will be uneven and variable. The triangular alloy packing piece supplied fits above the main bearing cap, against the block and is exactly 11 mm thick. To ensure an oil tight seal in this area and for the oil seal to run square to the

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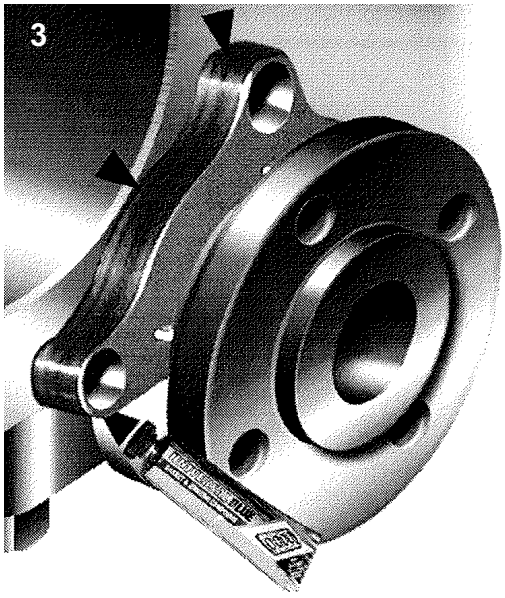
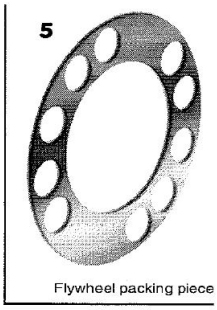
flange, the end face of the main bearing cap must be be machined both flat and square to the block and at 11mm from it (image 3).

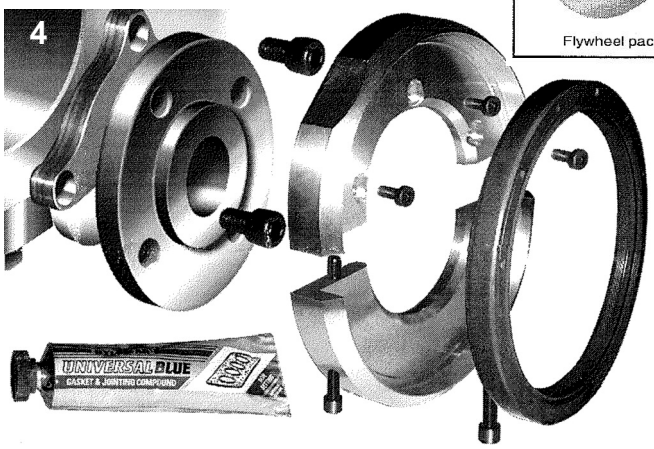
This is critical to the sealing of this kit, I deliberately repeat here that when the alloy triangular part of this kit is screwed to the block its outer face must be level with the end face "B" (image 2) of the main bearing cap throughout its length and in all planes. This part of the fitting process is the longest and requires a good deal of accuracy as it is essential to the complete sealing of the kit to the block. In the very unlikely event of the height already being less than 11mm, you can remove up to 1mm from the alloy triangular part to compensate.

The silicon sealant in this kit will accommodate a small degree of tolerance in the dimensions, adequate for a correctly assembled unit. But it will not seal large gaps or irregularities effectively against the engine oil pressure at this point.

Having completed the above, refit the main bearing cap permanently, (not forgetting the shell!); temporarily fit the triangular alloy part to the block with the three socket head screws and check the back plate will pass over it. Although the alloy packer is machined to the same shape as the original component, some careful filing may be required here.







Remove the alloy triangular part again and apply a coating of sealant to its mating faces where it meets the block and the main bearing cap, but do not use a gasket. Secure it to the block ensuring it sits snugly against the main bearing cap faces (image 3). Refit the engine backplate now.

Separate the two halves of the circular carrier by unscrewing the two 4mm socket screws in its periphery. The upper half is held to the alloy triangular part by the three 4mm x 1 0 screws, access to which is through the bolt holes in the flywheel mounting flange. You will notice that the three fixing holes in the upper half are slotted, this will enable the seal to be centralised on the flange prior to final tightening (image 4).

Put a coating of sealant around the back of the upper half and assemble to the alloy triangular part with the small screws, but leave them slightly loose to allow a little movement of the carrier. The oil seal has a double lip, pack some grease between them before fitting, also lightly pack the inside of the seal (where the spring is). Use sealant around all the joint faces including where the seal sits inside the carrier, lubricate the flywheel flange with oil and slip the seal over the crank into the upper half. The seal is fitted in the normal way; cavity inwards and the flat face visible from the outside.

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Put more sealant around the lower half (anywhere there is a joint face!) and slide it into position behind the already fitted seal. Insert the two long screws in the rim and tighten to about 31bs pressure. The seal should now have centralised on the crank and the three smaller screws can now be tightened also. Apply some more sealant around the joint between the lower half and the main bearing cap just for good measure and allow the sealant to cure for at least 8 hours before running the engine. The metal ring supplied is a flywheel packing piece (figure 5), designed to keep the flywheel away from the seal face, and must be fitted between the flywheel and the crank. Rotate the packer until four of the eight holes line up with the bolt holes.

Notes

If you are fitting this kit to an engine that has either been re-bored or had new piston rings fitted then use running-in oil for the first 500 miles or so (or as recommended by the oil supplier). This will allow the piston rings to bed down into the bore as fast as possible, thus making a gas tight seal. Using a normal oil during this initial running in period will seriously lengthen the bedding in process, causing excessive piston blow-by and leakage from even this rear seal arrangement.

This kit is not designed as a magic cure all for a worn out engine. If the main bearings are worn the flywheel will whip about and cause premature wear of the seal. Likewise if the thrust bearings are past there sell by date, the end float caused will affect the seals performance. Compression blow-by from worn cylinder bores or pistons can also cause leakage.

Failure to observe any of the above could well cause your engine to leak oil past even this new sealing arrangement due to high internal engine pressure.

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