

J2 TECHNICAL ARTICLE

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Barry Dean

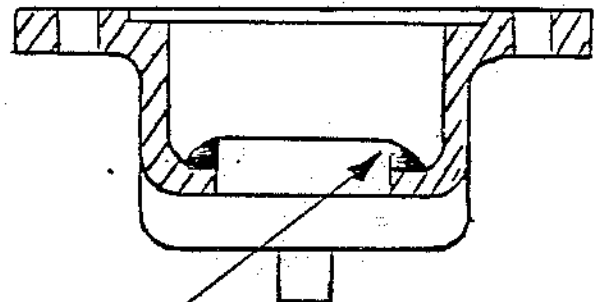
KEEPING THE VERTICLE DRIVE UPPER HOUSING OIL TIGHT

The following modification, which I first adopted over twenty five years ago, is relatively easy to perform and if done carefully, oil leaks should become non-existent. You should in fact probably have to prevent the couplings from rusting or dust the dynamo top down regularly!

The modification does work very well on its own but I expect most engines have already been fitted with a sort of conversion which introduces a lip seal above the oil thrower disc and is sold commercially by the MMM trade. This in itself is an excellent modification and can be used in addition to the one detailed here.

The job is best tackled when the cylinder head is removed for decoking or some other adjustment. Firstly, with the vertical drive shaft and drain housing removed from the head, fit the drive fork on its shaft and mount the complete unit in a lathe with the bevel gear towards the chuck. Proceed to turn away the oil return threads down to 0.750", (a good finish is essential), and remove the sharp corner which will help prevent damage to the new seal on reassembly. The next step is to offer the oil drain housing up to the lathe with the flat side towards the chuck. Bore this out to 1.250" which will allow a lip seal to be pressed in (Payen Seal Part No. NA024 will do the job nicely). It's worth noting that all drain housings do not have the same wall thickness and you may have to build yours up with bronze weld (see shaded portion of diagram). The shaft can now be refitted to the head, followed by the upper seal and oil thrower disc. Carefully press the additional seal into the newly machined bore in the drain housing and offer it up to the cylinder head, leaving the nuts finger tight for the time being (don't forget to replace the same number of shims beneath the housing as these determine the correct meshing of the bevel gears). Finally replace the coupling fork and tighten the central retaining nut. When this has been completed satisfactorily and the shaft turns nicely, centralise the drain housing, nip up the retaining nuts. Oil leaks will fade to be a distant memory!

SECTION VIEW OF DRAIN HOUSING
ON CENTER LINE OF DRIVE



Build up with bronze weld
if required.