

MB Services – End plate skim

IS IT ME OR ARE MOST LAMBRETTA ENGINES A PAIN IN THE ARSE TO DO

The amount of times over the years Ive pulled my hair out with problems no one else seems to get or can't cure! I hardly remember an engine that's simple which just strips and rebuilds with no stress. Standard 125/150's yes. But I tend to get engines where all the parts are made somewhere different and nothing fits!

Gearbox setting up really can be a pain to get the shimming perfect and I mean perfect. I try to work within 0.10mm (0.004") and set up gear box shimming to around 0.002"! Thats tighter than the usual 0.003 – 0.012".

To do this, everything has to be machined perfect. But the amount of times it's near impossible to get anywhere near with out machining the shim area on the end plate or marking the end plate finding the high spot and lightly grinding the end plate many times over.

One engine was impossible to set the gear shimming correctly. Where you put the feeler gauge you could get a size, then add what you thought was the correct shim and it locked up. After many hours of pulling my hair out it became obvious the end plate wasn't right. I normally improve the machining by mounting the end plate in the miller by the layshaft bush and milling around the raised area which I did and it made it just as bad.

You would think the manufacturers would get everything true, but oh no! Okay this was a SIL motor and probably our most common rebuild. But last year I even had this issue on a must have shinny shinny latest have Italian CNC version!

This one was so far out it was tapered at the back where you can't see and can't get a feeler gauge.

I had another think and thinking out of the box, made a new tool for the machine shop. This tool mounts the end plate upside down, so the face that bolts to the engine casing is true to the miller and now I can machine the shim area true to the end plate face and the casing face.

And hey presto – the end plate becomes true and the gear shimming is true.

Now if you haven't got a machine shop like ours! How some engines are put together I don't know! Its a constant conversation with the employees and we dread to think what a £300 engine rebuild looks like!

Now we offer this as a service and every end plate is lightly machined before fitting. I showed a photo to one of our test pilots who asked will this help the 5 speed gearboxes that don't fit and you need a rear hub bearing shim and you end up with a really thin main gearbox shim and yes it will cure that issue as well.

Its simple and it's obvious – but why didn't I do this tool years ago? I know – it took 3 hours to make and had to work late into a Friday night to find the time.

