

# MB Services – Cylinder honing

TOOLS, TOOLS, TOOLS AND MORE NEW TOOLS, ALWAYS SPENDING – NOW ITS A DIAMOND HEAD!

I must have £100'000 worth of tooling in our workshop. Im obsessed, I buy any tool I need. Not only that but we have so many work stations some tools are more than doubled up.

If I need a job doing – as the saying goes 'do the job yourself'. I'll buy a tool for one job and maybe never use it again or 20 years later I use it.

Years ago I was fed up with subbing work out and waiting or it was badly done. I gave up and invested in the company workshop and bought what I needed.

Now as a Tuner/Engineer you can not work on Lambrettas without certain tooling. Along with the thousands of pounds worth of tuning grinding equipment you need other machinery. A decent tuner should have a boring bar to do rebores. I have three!

Along with reboring cylinders you have to hone them to size. Honing is the cross hatch 30-45 degree scratch marks you see on the bore, this is to smooth out the bore after a rebores and to aid lubrication. Honing is a very specialist job requiring correct tooling. Non of that cheap Ebay rubbish 3 legged spring loaded glaze busters or those multi balled affairs but a proper 4 legged honing head. I have a few of these, some are hand used honing heads which keeps the bore true when your working on a cylinder to microns and I have my upright honing machine.

Not only does a tuner need to be able to hone, but he needs to measure the bore correctly. I use a special 4 point expanding tool where anyone can use it and get the same readings unlike a standard micrometer. You can't measure a bore with a vernier or with feeler gauges, you will get a reading but the chances are the reading is wrong.

Every tuned kit I do has the bore and piston measured and written down in the tuning notes. If it comes back to me I can see if the bore or piston is worn and do something about it. And whist your at it, you have to know how to read in imperial and metric and be able to convert each way to check and double check and know where the decimal point should be! Sounds like basics but you will be surprised who can't understand these figures!

So what have we got now? I've managed all these years not to have this tool – why? Because of the expense!

But as the designer of the Race-Tour kit and the tuner who's tuned more than anyone I get lots of cylinders in for measuring, checking, matching pistons and replating cylinders.

The majority of cylinders these days are aluminium and plated. The plating is

super hard and our normal stone honing tools for iron bores doesn't touch the plating! If a cylinder it's worn, then armed with graded over sized pistons you can hone to clean or hone to bore out and match to a piston.

Alloy cylinders are designed to cool better and they don't seize or blow up as often as a cast iron would do. But it does happen, if you've ever damaged an alloy bore you will see scores and alloy stuck to the cylinder. Getting these bores clean can be a pain.

After tuning a cylinder even when it's new I always hone the bore, it finds any high spots your finger nail or eyes can not see and cleans the bore straight – not tapered or offset into the ports like the cheap glaze buster will do.

This four point diamond honing head cost us..... £1850! Which we had specially made to suit the majority of cylinders we work on.

Now next time you're talking with Fred the tuner – ask – who does your rebores and who hones your cylinder? It's normal working practices if you're a real tuner.

Add to the fact that a tuner needs even more machinery to cover all bases of any problem that may turn up. Cylinder heads need machining, you need a lathe and one big enough to mount all the different head shapes. You need a milling machine, to sort casings and cylinders. You need welding equipment to repair damaged cylinders and casings. You need a surface grinder, you need thread inserts or be able to make them yourself. And you will need various finishing machines, table grinders and you will need a polishing machine and a bead blasting machine. And after all that is done you need to clean the parts – we use a big ultra sonic machine and a drier.

If your friendly Fred the tuner doesn't have any of this equipment how does he tune correctly?

So now we can hone your Nicasil and Ceramic plated cylinders if you want the job done correctly, just another job we do day to day.



*£1850 ..... what? Did I really spend that amount of money to earn not a lot on honing!*



*Hones alloy bare cylinders, ceramic, nicasil or iron cylinders*

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