

Tuning work – MB Inlet, 28/30mm flowed

TUNING WORK MB INLET 28/30mm

I've done a few of these in my time. I don't call this a tune so I've never marked a job like this and logged it into my records to say how many I've done. It's all part of tuning but when I do it for the new Race-Tour cylinder kit it's a 'match and flow bolted on type' as the cylinder is pre tuned already. I also do the same job on the Indian SIL factory cylinders, Rapido and Mugello cylinders and any piston ported cylinders that comes my way. Now our RT kits have finally arrived, every time I pick one up I impress my self. Ok there's a few very tiny niggles that only I know about which is really nothing, it's just me been picky. The kits are mass produced and not hand made like our UK version and any niggles are perfectly acceptable and the cylinder kit is very well made indeed. All clearances and machining is spot on to all the specs I gave the manufacturers and they have copied my piston, cylinder and cylinder head samples perfectly.

They are designed as a simple fit and forget type of cylinder. You don't need a special crank or con rod or a special exhaust. They can be used with any carb from 18 to 35mm, all you need to do is match an inlet manifold if you want to. They will also run on a standard exhaust to a full race expansion but have been developed over many years to work in harmony with our new MBgm Clubman which has the advantage to use 4 mount studs for the exhaust flange. The Clubman flange and gasket fit the exhaust port so there is no grinding required unlike other cylinder kits on the market which need both cylinder and exhaust flange looking at. You can get the flange and gasket back to front so always check which is the right way!

But we can not say what inlet manifolds people will be using, there are so many out there and they all vary. All I could do with the inlet port is make it as good as you could get to suit everyone but erring on the MB design side so the inlet flows nice to make the cylinder work well. All you have to do is match or blend your inlet manifold to the cylinder and match or blend the cylinder to the inlet manifold IF you want to. If you can't be bothered or are not capable then fit the manifold without the work and the cylinder will still work.

Here is one of the many RT kits going out of the door, do this job right and it really helps make for a nice running Scooter. Feedback is, they ride like a standard then when you open them up they go like a fast tuned bike. Here I'm showing one of our very old MB sand cast inlet manifolds which is just slightly out on the matting faces. So I've fitted the two studs and marked the cylinders inlet port from the inlet manifold. The inlet needs slightly grinding to the marked lines, once done it's a case of fitting the inlet manifold and scribe the inlet manifold and again slightly grind to the scribe lines. Most let the inlet and cylinder go like this, I don't, I could polish the sand casting inside to help flow it and clean up the grinding marks. But I prefer on some of the larger manifolds to bolt the manifold to the cylinder with no gasket, I then grind from inside the manifold to work at a clean non

ledge feel. This is done with special tools that most can't afford to buy for this one job, I have tens of thousands of pounds of equipment to do this job. When I'm happy there are no ledges I use my slotted rod technique with 80 grit emery cloth to start and work the full length of the inlet manifold into the inlet port working at that gasket face to really clean out the miss matched ledges on the gasket faces. When I'm happy I like to finish off the inlet track with 120 grit so it looks the part when people open there newly delivered very expensive box of goodies. When I'm happy there are no ledges or humps and bumps I remove the manifold to find the inlet port needs some high and low spot tweaking. More work is required so the inlet port is flowed nice into the inside edges of the bore, taking care not to grind the inlet port where the piston runs, I also make sure I don't grind into the gasket face area that has already been worked on from within the inlet manifold.

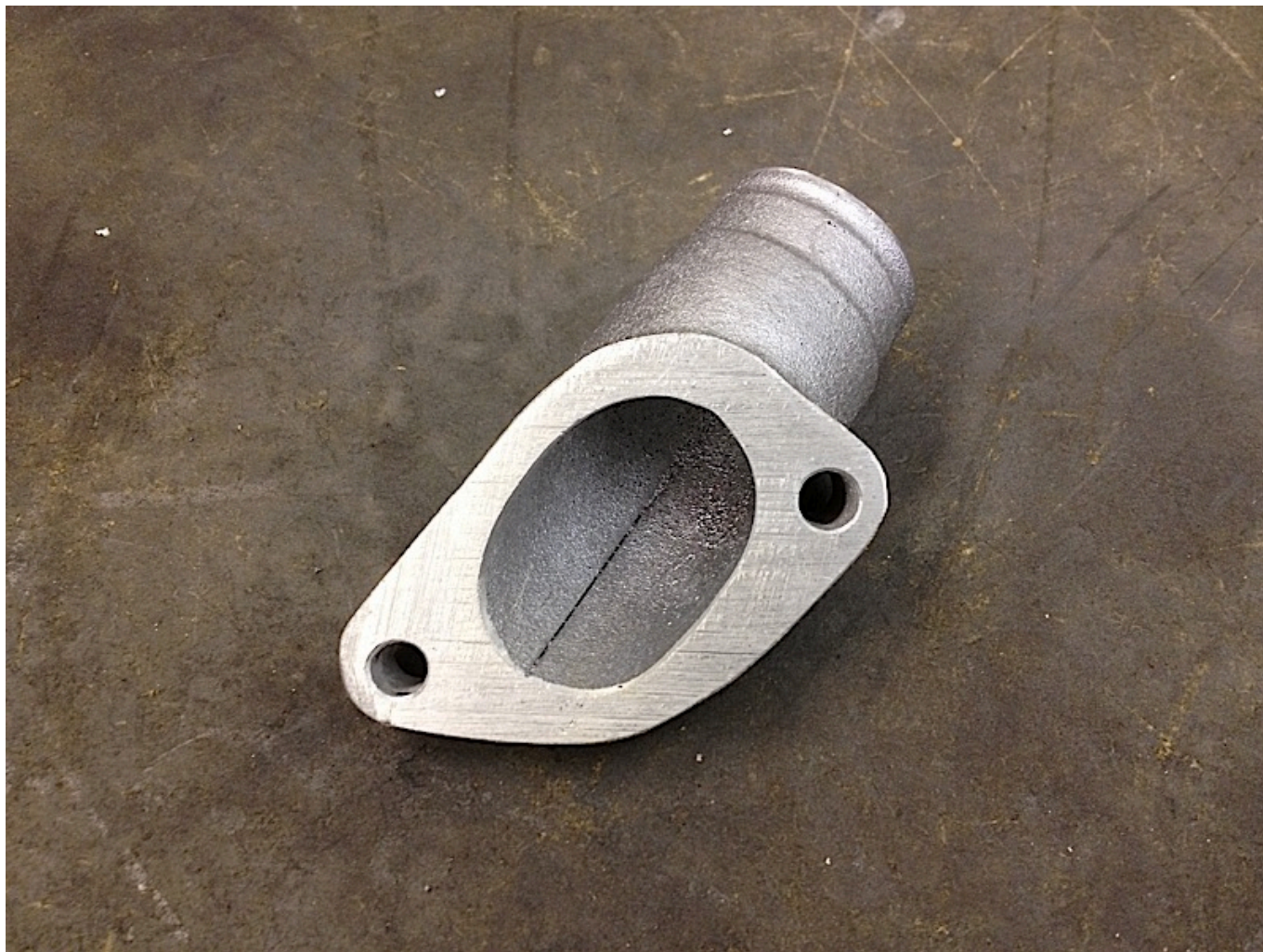
And thats it, when you fit a cylinder and manifold tuned in this manner DONT use an inlet gasket, I always silicone seal the faces, tighten the bolts and screws and wipe any excess away making sure the ports line perfect because all studs have some slop in them with the drill holes.



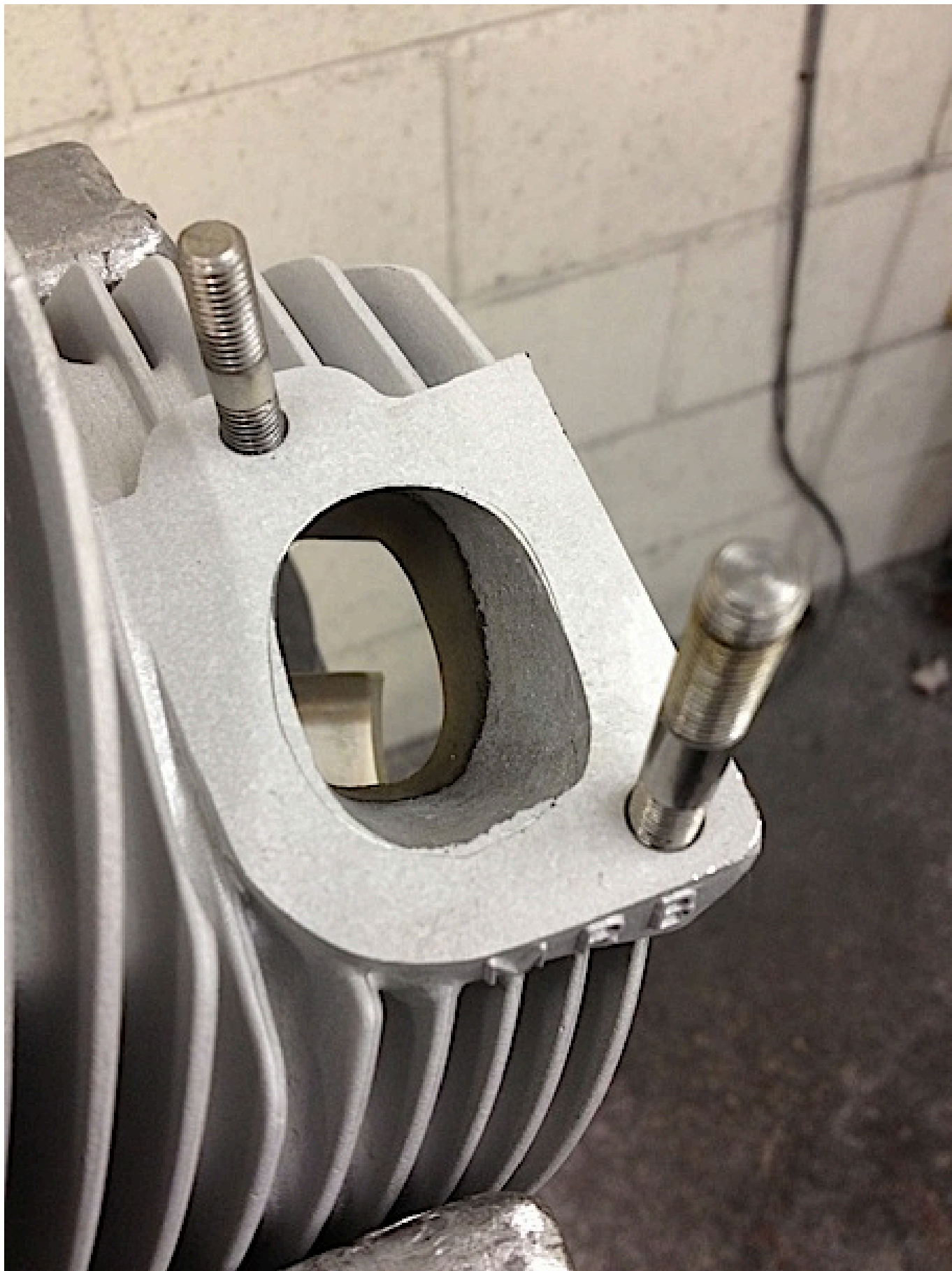
New Race-Tour cylinder kit, ready to be matched to an inlet manifold



MBD old sand cast type inlet manifold



These are rough from new, this makes no difference to how they run, some say it's better this way, I prefer to flow them to the inlet port



Scribe through from the inlet manifold



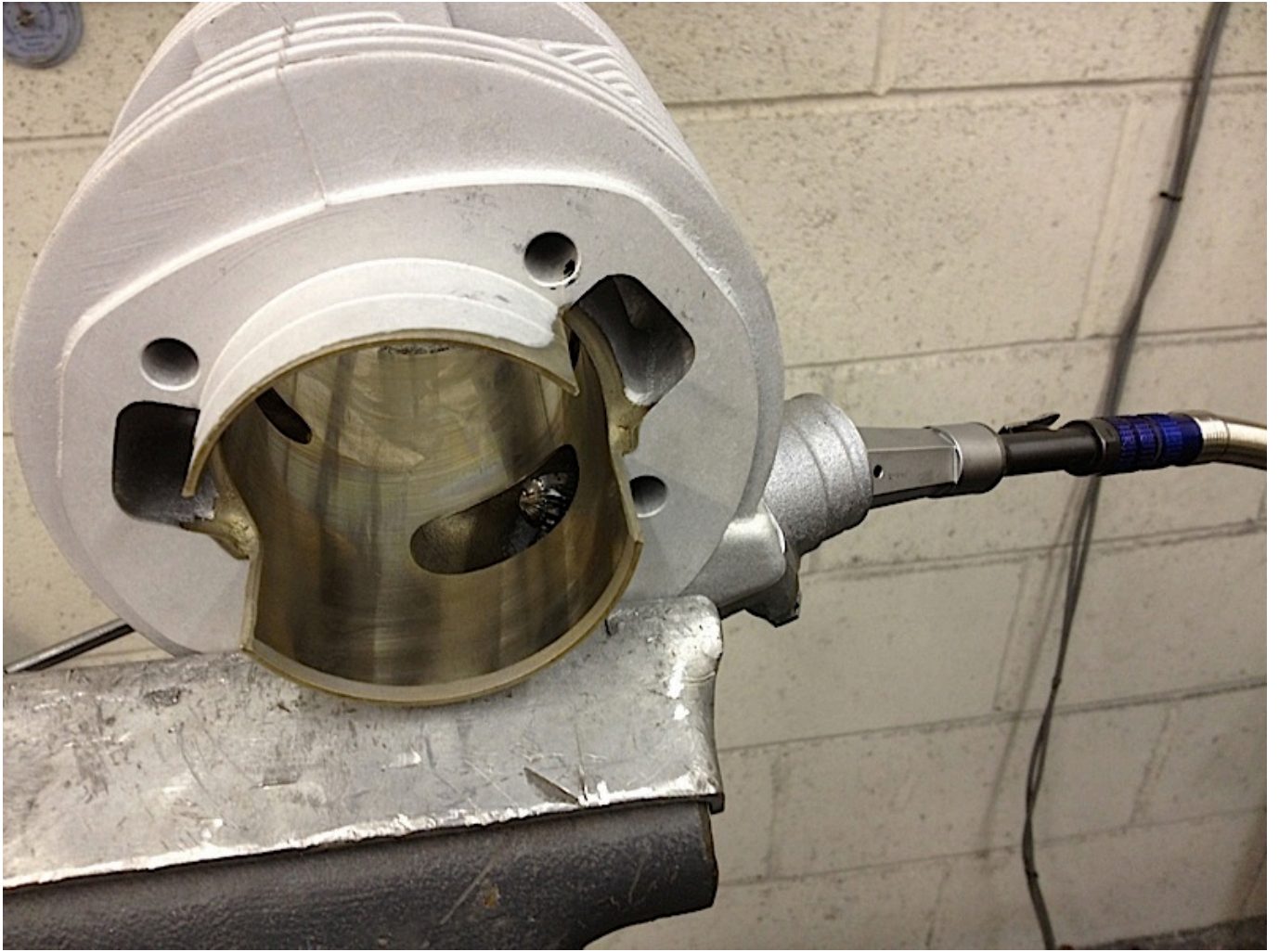
Grind to the scribe lines



Fit the inlet manifold and scribe from the inlet port side



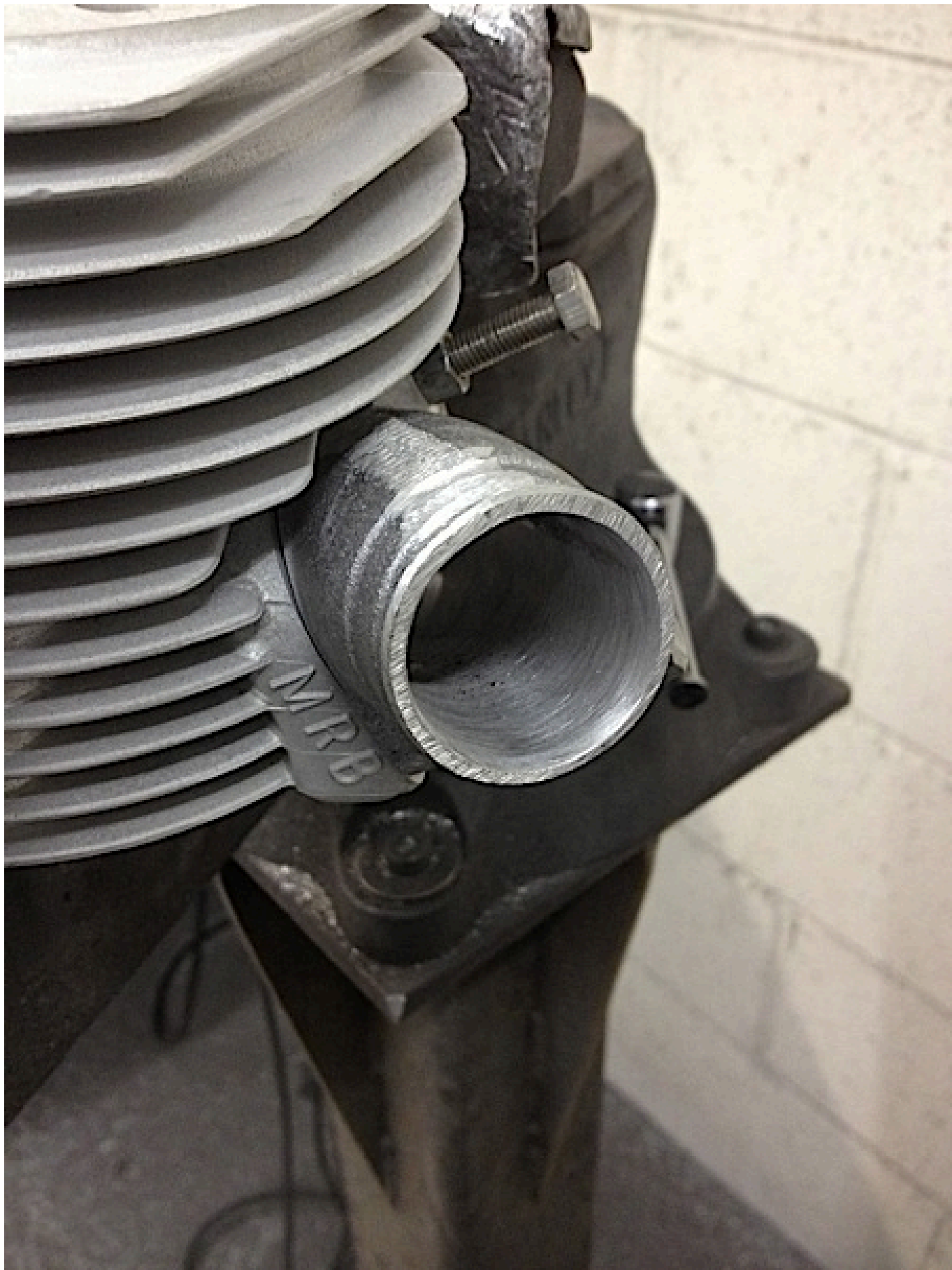
Grind to the scribe lines



Bolt the inlet manifold to the cylinder and I grind through from the manifold with tuning tools to get rid of the steps



Flow the sand casting with rough 80 grit



Then use 120 grit to smooth out the flow into the cylinder, I remove the cylinder and re tweak the inside of the inlet port that can not be got at from the out side



And a finished manifold, flowed ready to use



And a finished inlet port

Mark Broadhurst, if you have any questions email mark@mbscooters.co.uk