

# Engine – Small to large block

BEEN DOING THESE YEARS

This is a job I've done for a reoccurring customer of 30 years.

I've done loads of work for Max Bygraves over that time from restoring a rotten Model A that won best in show at a Euro rally. I prepped and built his engine in his Babe custom bike. I've designed and made his Yamaha AF 250 cylinder conversion for his Tv200 and I've tuned cylinders for him, his family and friends.

The latest one was a RT Reed motor which like others with plenty of Scootering history said 'That motor is probably the best engine I've ever ridden'!

I've been doing these Spanish small to large block conversion since the late 80's and I imagine I was the first to do this as a conversion. Yes they can be a pain in the arse to do but I don't complain I just set about the jobs and follow the steps that it takes to do them.

It starts with ultrasonic cleaning and dried off, the 4 main cylinder stud holes are drilled and ground out, the casing is pre heated and the holes welded up. After its cooled down, it's put on the milling machine to reface the mag gasket face which always distorts and then the base face is set up, bored out and drilled and tapped. Once done and all true the transfers were tuned to suit another RT kit, then washed off again, dried, blanked, bead blasted then aqua blasted, washed and dry again.

Now this one was a rotten casing to start with, the side casing needing flattening off and some work on the mag and main casing which was blended off in our rumble machine. It's not the best one I've done but you can only work with what you have! With a casing that's had the rot there's not much you can do apart from blend it in the best you can. Seen as every thread is perfect it's still been a good donor for the conversion!

At a quick guess there is over £50'000 worth of tooling to do this job – if your welder/tuner/engineer hasn't got all this equipment in house then they can't do the job properly!



*Start with a cleaned standard Spanish later model casing*



*Drill out the holes*





*Grind out the holes*



*Weld the holes*





*Machine the mag face*



*Set up, face off, bore out, drill and tap new Large block stud spacing*



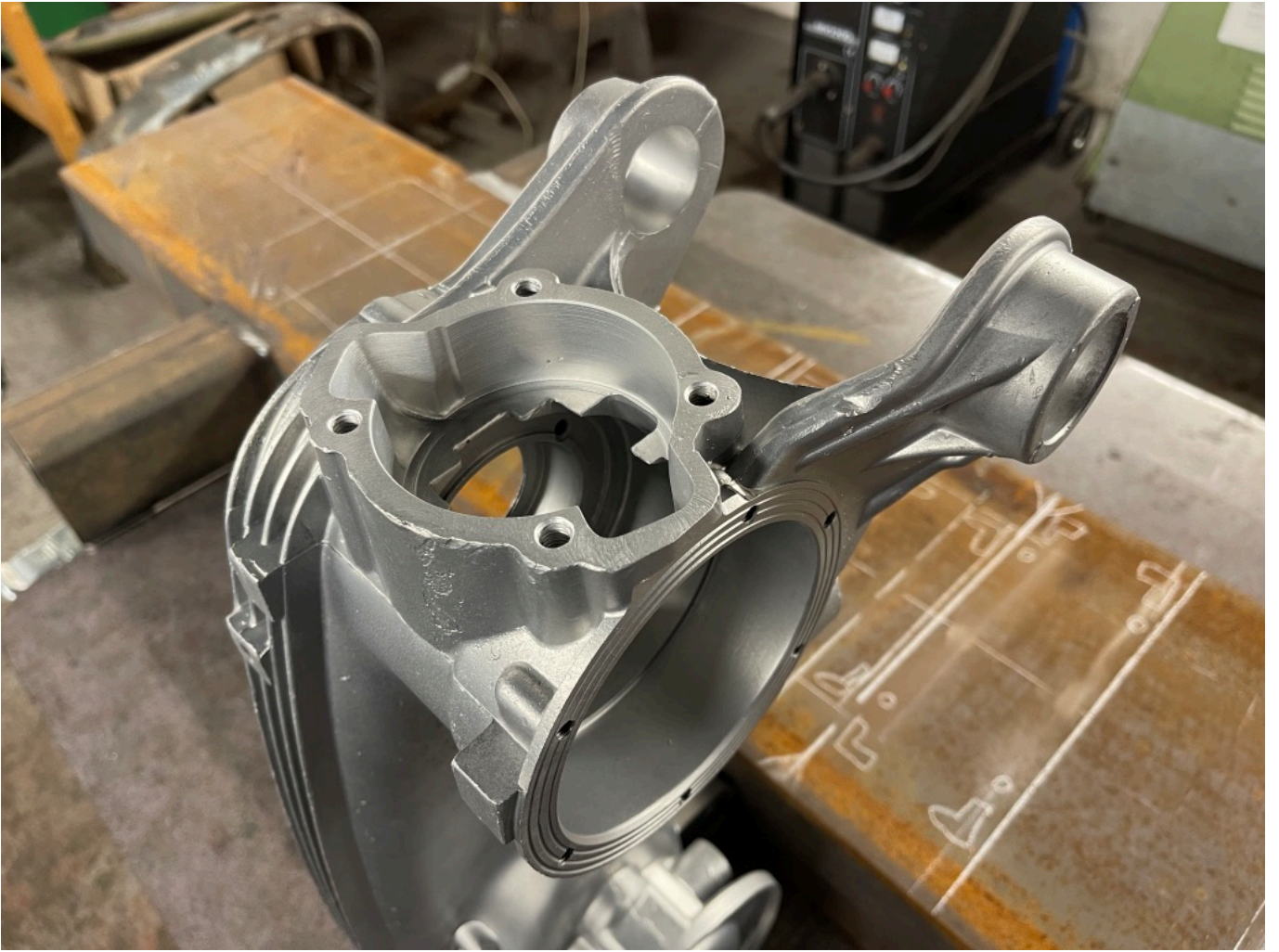


*Grind the transfers to suit whatever Large bock cylinder used*





*Most standard casings come looking like this, with a little work.....*



*New cylinder faces done, bead and aqua blasted so you can't tell*





*And with a finished casing, it's done*

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