Engine – Repair bump stop replaced 2

HOW MANY OF THESE HAVE I DONE?

The culprit for missing bump stops comes down to one thing – a 400:10 tyre! A common tuning speed up, gearing upgrade from back in the day!

The tyre diameter was bigger giving a longer distance to one revolution making the motor faster for the same revs – well thats if the cylinder had enough power to pull the higher gearing. Fit one to a GT/Tv200 gearbox and you'd be going backwards!

Today hardly anyone uses a 400:10 tyre and we don't even sell them!

So damage done – it's easy enough to find a scrap donor casing, especially a small block with no value to repair a large block and add value to the large block.

When you get a casing as nice as this, it's easy to cut and clean up the supplied bump stop by spinning it in our lathe, which is ground to fit the best you can. I made a fixture years ago to hold the stops in place. This fixture holds the loose bump stop in as you pre warm the casing and weld the stop in place.

After that, its a case of grind away the welding to shape it back to original looks and if you're unlucky you had some holes in the casing under the weld, these need drilling out and redoing over with weld and grind back again until perfect.

But it doesn't stop there, any welding to the bump stop or engine mount area and it distorts the mag housing face so at least it needs milling off true.

This one had been badly cleaned up on the cylinder face and would have leaked so this face was also faced off – true!

Spare bump stop supplied with a nice clean casing

Bump stop is much easier to turn, trim, cut and shape in the lathe

Bump stop finely ground to shape and offered up in the fixture jig to position it

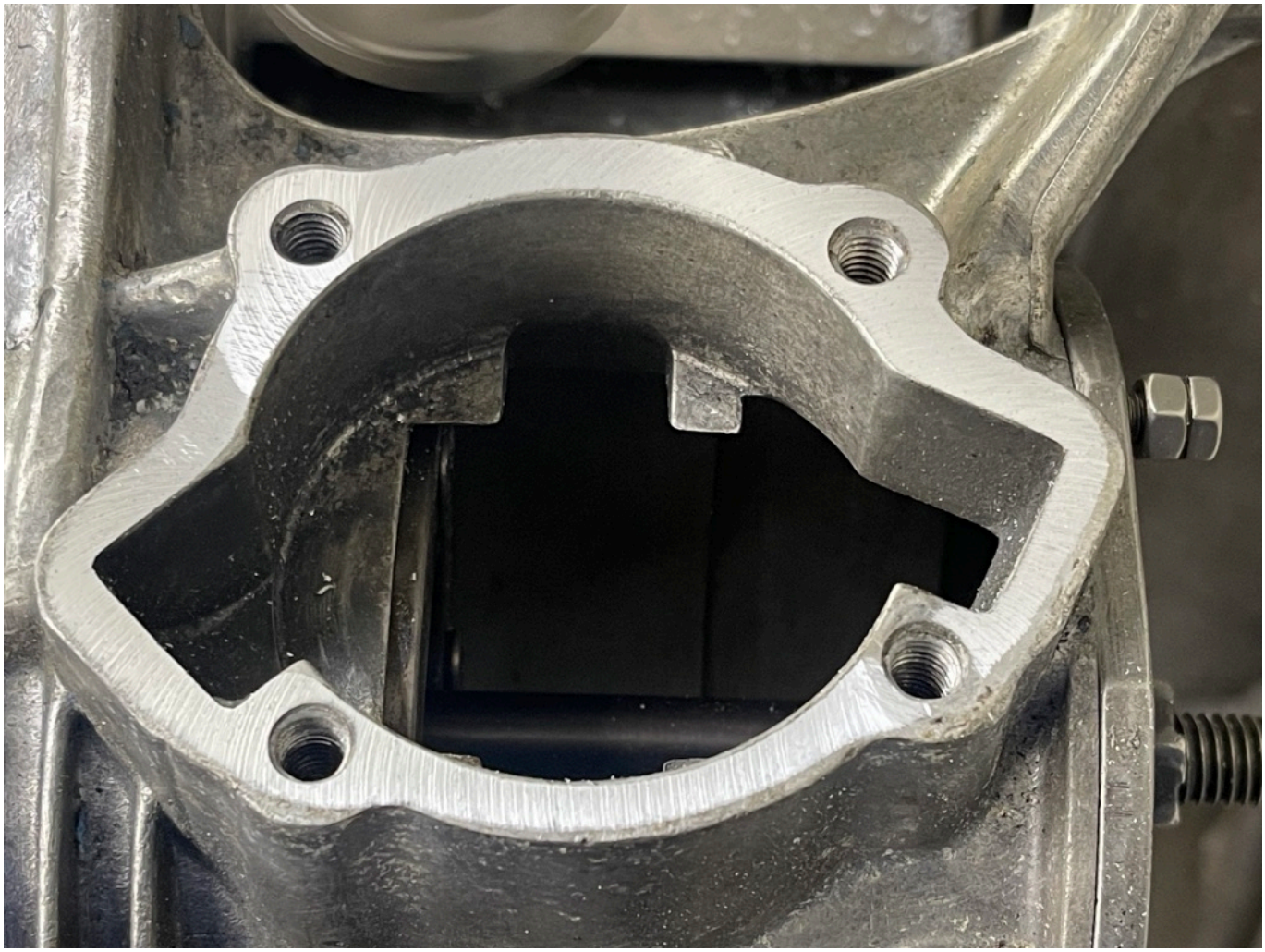
All high spots removed to get the stop to fit

Bump stop tacked in shape, jig removed and welded up

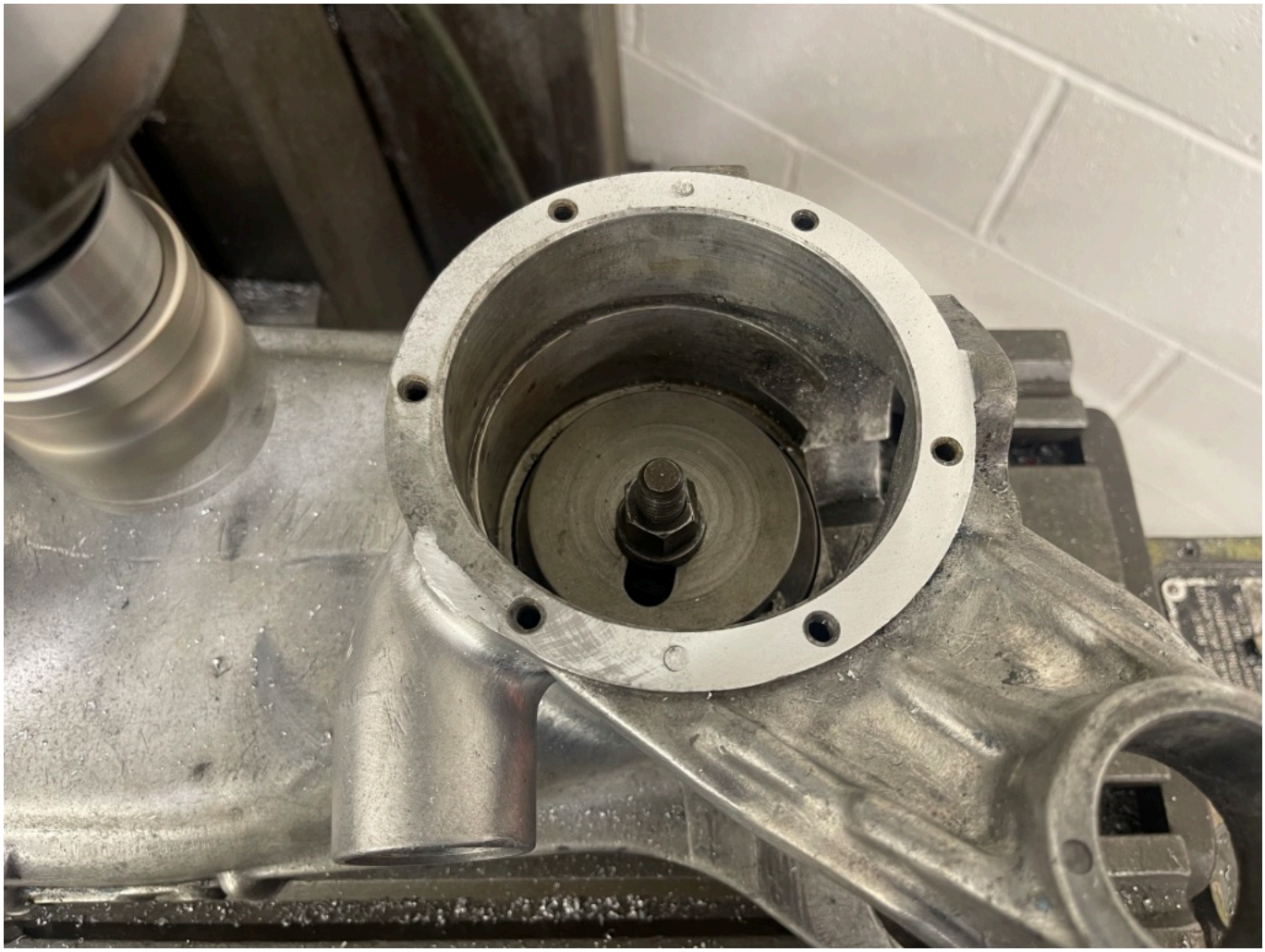
Plenty of penetration all the way around, but you have to be careful near the mag housing so you don’t melt it away

When grinding away sometimes holes appear, these need drilling or grinding away and rewelding

Once finally welded, it needs grinding to shape, flowing and smoothing and blending so its not obvious it been welded



This shows the face had been filed flat, well not so flat, you can see parts on the outside not touched by the milling machine



Any welding to a casing near the mag or base face and the casing will distort, but faces need machining true so they don’t leak

Nice cleanly welded and machine casing back to new