

BEWARE OF THE RECONDITIONED MOTOR - Part 1

When I was in the Motor Recondition Trade we used to call some of these motors Micro-peened throughout. Micro-peening was a method where if the pistons had collapsed slightly there was a machine with three little hammers which pounding on the inside of the piston opposite the cutaway side would expand the piston up a few thousands of an inch and complete with new rings bring the motor back with no noise. It only lasted about 15 thousand miles but was long running on a Morris 8 – depending when it was done. A lot of these reconditioned motors were like this with thicker oil and generally patched up. Am not sure if any of these little machines are still around as it was a long time ago I was in the trade

Obviously it is easier to check a motor if it is still in the car. You can check the oil dipstick and if there are little white bubbles clinging to it could indicate water leaking into the oil. Obviously listen for knocks and rattles.

If possible start the motor up cold to check if any blue smoke comes out the exhaust pipe, (not a good sign). If the motor is warm on arrival someone may be hiding problems as the heat with expansion could hide some faults and noises. Do a compression test. All cylinders should be even and around 90 PSI. If one is down on pressure a little oil down the spark plug hole may bring the pressure up and could indicate rings on the way out.

Morris 8 motors should have a good oil pressure but a lot of motors today are running too low which could indicate oil pumps not performing or oil could be weeping through worn camshaft bearing housings. In future some of these are going to need the cam tunnels bored out and bearings fitted as the camshaft runs directly in the cast iron block. (Expensive procedure)

With an engine out of the car you can take the cover off the tappets and check if there is any wear at the point the valve impacts onto the cam follower. Wear at this end could indicate wear at the other end on the lobes of the camshaft also which makes it hard to get a correct clearance.

If the head is off you can check any side piston play, also any sleeved cylinder. A sleeved cylinder has better cast iron than the original bore and when I was on the boring bar at Smith Regrinds often saw little rough patches in the bores where sand had leaked into the casting.

For high performance motors we would leave a little step at the bottom of the bore which even if the motor boiled dry the sleeve never moved. For the average motor so long as the correct loading was used there never would be a problem.

I did sleeve a few early Morris Minors and hated them because once the sleeves were in I had to grind out the cut-outs at the bottom for the conrods.

After six years on the boring bar at Auto Engineers Timaru with an impeccable record we shifted to Christchurch where I blotted my record boring an early Morris Minor out to 65 thousands of an inch instead of 60. Fortunately Dennis Smith found a suitable sleeve without having to buy one in and after fitting of course had to grind out those damn cut-outs. The worst motor to have to sleeve!! After that I was extra cautious and after having a short stint on a crankshaft grinder, decided it was getting too nerve wracking, so tossed in the job and bought a Rawleighs franchise selling Rawleighs door to door – much less taxing. But that's another story.

If road testing a car, worn gudgeons usually rattle going downhill or decelerating, so if you use old pistons it probably pays to get oversize gudgeons fitted. A word of caution, get this done by professional motor reconditioner. If you can push the gudgeon through a cold piston, scrap the gudgeon. Warming up the piston and the gudgeon will just push through with a resistance is all right.

Some earlier motors had brass plugs fitted in the end of the gudgeons and a lot of these were replaced with Teflon plugs which worked well. The bolt in the conrod going through the gudgeons is pretty well indestructible in the Morris 8. Circlips can come out!