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Eric Goes Toyota

(AND GETS A NEW ENGINE - PART 7)

RICHARD LONG







Eric's engine rebuild has come a long way, as documented via this journal, since discovering that awful crack on the LH bank of the block to head face, about a year ago. The closing stages of the rebuild is almost complete, with only a handful of jobs left to do, prior to the work being signed off by Jonathan at "J&E Engineering Services" and the being engine collected. Moving on from Part 6, with the tappet chest lid now secured in position, some work was required on the rockers; as over a period of 45K miles they had developed the tell-tale wear marks. The rocker shaft assemblies were stripped and cleaned ensuring that the blanking plugs fitted in the ends were removed so that the shafts could be cleaned internally. The rockers were re-profiled by grinding to the correct radius to remove wear and ensure proper action across the top of the new valve stem tips. The shafts were checked for size and polished. Any burrs were removed from the lubrication orifices. Once again, the rocker shaft and valve train benefited from the vapour blasting process which has been carried out on numerous other parts throughout the engine rebuild; that warranted such attention. Not only does this provide a good machining start point, but once the work is completed the engine component still looks brand new; which also adds to the aesthetics of the engine when it has been fully rebuilt.

As previously reported (DM October 2019) the cylinder heads had already been overhauled and rebuilt by Jonathan prior to work being carried out on the block. During the rebuild of the cylinder heads, they benefited amongst other things from having K-Line valve guide inserts fitted; along with the valve stem oil seal modifications. Whilst the engine work was progressing, I managed to source a NOS Payen full engine rebuild gasket set at the Beaulieu International Autojumble which was a stroke of luck – one of those right place right time moments. As we know Payen is held in the highest regard where gaskets and gasket sets are concerned; having purchased the set, it was promptly despatched to Jonathan the following day. Having received that, the cylinder heads were fitted to the engine and with those secured in to position; the four sets of valve train plus pushrods duly took their place. From there on, it was the logical process of fitting all the sundry items to build the engine up. One oversight I did make, was failing to supply a new thermostat housing whilst the engine was being bolted together – I meant to do this but completely forgot to do so and it would have saved an unnecessary job further down the line when the engine was up and running !! With the final checks carried out on the rebuilt engine, by Jonathan; we arranged for me to collect it on the 19th December - which you could say was an early Christmas present !!

We agreed that it would be prudent to bring the Lotus Excel 5-speed gearbox (Toyota W58 series) with me, on collection day, to check that there would be no snagging issues with the next stage of the conversion. This was duly done, as I had already fitted the adapted bell housing to the Excel g/box. With the rebuilt engine firmly secured it was just a case of offering the g/box to the engine and as expected the two separate components glided and fitted together perfectly. I should add that during the engine rebuild process, Jonathan had to make a bespoke bronze spigot bearing to fit inside the crankshaft so that the g/box main shaft fitted correctly. This was due to the one supplied, by Conversion Components in New Zealand, being the incorrect size and of dreadful quality. With the engine and g/box fitting together perfectly plus the clutch assembly working as it should, the newly rebuilt Edward Turner V8 was signed off and heading towards East Sussex in my van that afternoon.

To assist me in fitting the engine and g/box conversion, I requested CCK Historic in East Sussex to help with the installation. This type of work is bread and butter for them and it seemed the logical process to follow - especially as they are only located fifteen minutes from home. The engine, gearbox and numerous boxes of goodies was left at their premises over Christmas with work scheduled to commence January 2020.

Back home, I still had a list of jobs that needed addressing to support Eric's ongoing conversion, it is these little tasks that require just as much focus as the main aspects. A couple of examples: 1- the speedometer required recalibrating due to the change of gearbox. I also wanted the main beam red jewel changed to blue and the faulty tripometer would not zero properly – for this I despatched the unit to Speedograph Richfield. In order that the speedo can be properly recalibrated, they require a number of wheel revolutions (six) as matched against a counter on the speedo cable. None of this could be done until the car was rolling under its own power. 2- The clock within the tacho was not working and I sent that to John Ostick of JDO Instruments – he offers two conversions and I went for the quartz option that runs on a replaceable battery. One significant job, amongst the list of less so, that required attention would be the shortening and balancing of the Daimler OE propshaft, once the appropriate new matching sliding joint had been welded to the propshaft. This was required so that it would bolt correctly to the Excel g/box output flange; once the engine and g/box were fully bolted in situ. On the face of it a seemingly straightforward job that became somewhat testing, as the next couple of articles will reveal !!

Before my ink runs out, I note that Jonathan at "J&E Engineering Services" has recently taken possession of a complete Conquest engine and Wilson pre-select gearbox for a full rebuild – photo attached. It is not a customer's unit, but one that Jonathan has acquired directly to rebuild at a later stage and will be available should there be a customer requiring such. Never an idle moment at his excellent engineering premises !! To be continued.....