DOCKYARD OUTSTATIONS

Blackbrook Farm

It is a fact that the vast majority of us 'Dockies' had little or nothing to do with anything work related that went on outside the walls. It is also true that for some management within them came responsibility for facilities outside.
A point in case was an Inspector within the No. 1 Electrical Shop, who had responsibility for its plating shop was, for whatever reason, lumbered with a plating/cleaning facility at Blackbrook Farm and would visit this place on a Wednesday afternoon.

Wait a minute! .This author from previous offerings is an Engine Fitter of his own admission. So why did he know about the management of plating baths inside No 1 Electrical Shop??

Well some things are just hearsay and .....Look.... it had nothing to do with me! The fact that most rabbits were done in the plating baths at No. 1 Electrical Shop on a Wednesday afternoon, I knew nothing about. I had no idea there was a scale of charges dependant on the size of the job.....somebody told me there was! My motorcycle only looked really good because, I used to polish the chrome and other plating quite a lot.

As far as I know there were many spots dotted about the South Hampshire area that Dockyard management was responsible for whether because of there size or it fell under a particular discipline or department. Even the gunnery practice facility at Eastney was equipped fitted out and maintained from the yard. I know this because a close friend carried out part of the wiring.

Everything from the odd lifting appliance, crane or emergency electrical generation beyond the Dockyard constituted 'Outstations' and for many apprentices these places meant extra 'perks' and thus were part of the information grapevine.

The prime one of these beyond the walls was Blackbrook Farm. Most of us, who carried the Engine Fitter and Turner label desired a stint there to gain in depth knowledge of engines, get float time and extra expenses.
Did I say 'float time and extra expenses', no I didn't mean to say that! My interests were purely scholastic. To be honest it was the perfect site of learning for any apprentice bent on more knowledge of the internal combustion engine as I was.

Unless you have worked there and old enough to know of its history I have to say its origins are not crystal clear to me. Okay, I will assume you did not work there (please excuse me those who did) and tell you that I believe it really was originally a farm and I suspect traditionally part of the Blackbrook Estate in Fareham of which the main house was none other than the Blackbrook Maternity Hospital or what was. The Blackbrook Farm Engine Repair Depot was located just off Gudge Heath Lane, in Blackbrook Road and I am told

survives today as a small industrial estate. Unfortunately I am unable to confirm this as I have been for many a day, upside down on a staple diet of kangaroo steaks and platypus sandwiches.

It is evident however that the once great innovative (now no more) company of Vosper refitted engines for the Admiralty on this site during the war years and the site passed into permanent use post war as the RN Engine Repair Depot. The style of some workshops construction certainly had a WWII era look about them.

Basically whatever the RN used of an internal combustion engine type was refitted at this facility (ASR aside) and in late 1967 / early 68, my progression report grades were good enough (plus lobbying Mr O'Leary, the training officer) to allow me a stint at this engine repair holy of holy's.

The list of engines refitted at Blackbrook in my time was quite extensive and please try to resist dropping off while I have a go at naming those I knew of.

Enfield VS1 A single cylinder 4 stroke diesel.(I cannot for the life of me remember what they were used for (other than in the yard Lister Trucks), possibly an emergency generator for external radio comms on Leanders or earlier hulls, as they certainly were in the Leander hulled Australian Destroyer Escorts.

Enfield HO2 Used for the ships powered whalers.

Perkins P4 Ships' boat.

Perkins P6 Not sure but likely ships boats or pinnace.

Foden FD6 (MKI and MKII). This was a marinised truck engine used in the cross harbour ferries which produced a peeky haunting sound from those ferries skinny exhaust. We called them Liberty Boats. It was also used for generation in the 'Ton' class minesweepers.

Paxman YHA12 A V12 turbo blown ships main generator set and main propulsion for the Ham class minesweeper and other uses because it was designed as a low magnetic signature engine. They were also used in Survey vessels and the big diesel electric Dockyard paddle tugs Griper and Grinder.

Napier Deltic This mighty engine replaced the Mirrlees I think it was, in the Ton Class Minesweepers and enjoyed a long life with British Rail. Dare I say, a more exciting engine has never been built. It's not every day someone makes a triple crankshaft 36 piston engine, a magnificent piece of design.

Rover IS60 Gas Turbine Used for ships emergency fire fighting pump (replacing the much heavier Enfield HO 2). This was essentially the same design that Rover tried out in a P4 Rover car in the 50's. Once started this turbine was an awesome device. A piston engine in the same cradle would have got nowhere near its performance.

As you can imagine the facilities and supply of spares was very comprehensive to enable the refit of such a range of engines which seemed a bit out of order with the 'ex farm' impressions of Blackbrook. I recall clearly the first few days at the farm and the clocking-in shed just inside the gate on the right was obviously once a milking shed or similar from the filled-in drain gullies in the floor and stall fixings still evident in the walls. As you walked down the gentle slope of the yard past a couple of apple trees to the rear workshops, the canteen on the left was given a visit to order your lunch and/or cooked breakfast. This conjures up an image of a world apart from the yard and this is exactly what it was with a pace of life which was in step with the sites previous farm use, at least as I had been told and appeared evident. Not to say that the staff, or the work pace were slow but more like steady, as is wise when you are responsible for building engines especially the larger versions.

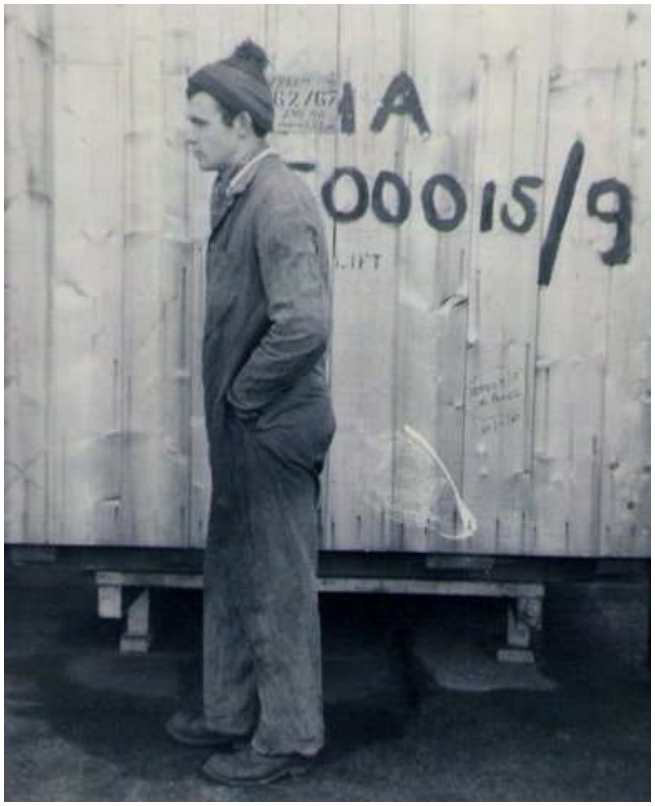
Blackbrook Farm as it appears today

To the right of the site lay Blackbrook Road and to the left the back gardens of bungalows whilst to the rear boundary new detached houses were under construction to finally surround its entirety. From gossip of that time various builders/developers of these perimeter houses told prospective owners the site was shortly to close. It was many years before that came about and in the meantime the various engine test houses must have annoyed many residents

despite attempts at sound proofing. *(Editor's Note: Complaints regarding the noise led to a Parliamentary Question in 1970.)*

My first stint of this rotation was the Foden build shop just under the fuel pump/injector facility. Working with Mick Madden just a couple of years my senior we carried out the modification and build of a Foden MK I to MKII. In mentioning Mick he upheld one of the rules of working life. Living as he did only about 650 metres from work, he would always struggle with clocking-in on time. For me, cycling about 8kms, sorry 5 miles, always seemed to get me to the clock with a few minutes to spare.

Between us we also represented the very best in Dockyard style as can be seen. Whilst Mick had a new line in freestyle ventilated footwear I stayed with traditional steel toe caps making my fashion statement with hats, of which this knitted pom pom was an absolute winner. The irresistible appeal of the oil treated overalls completed these outfits of desire. Luckily these images have remained hidden until now or Mick and I may well have been enticed to a life on the catwalks…….. Okay put it your way. The pictures should have remained hidden.



Another character of the Foden shop was Harry (sorry I cannot remember his second name) who brought a number of his colleagues to work, all the way from Hayling Island in his flash blue 'new age' van called a 'Ford Transit' which I think came out in about 1965. 'I don't expect they carried on making them though, well, maybe one or two'.

Please stay awake.

The complete kit for a Foden engine rebuild (changing then from the MKI to MK II) was a store-issued kit. The block was bored from dry liner to take wet liners by two passes (one rough to remove the dry wall and a second to finish cut the precise diameter suitable for the seals) under a large radial drill. This operation was performed with two special cutters, no doubt crafted in the Dockyard Tool Room. This type of job would traditionally have been carried out using a vertical borer but not at the Farm.
In addition to this change was the replacement of the two cylinder heads to 6 individual items. Our finished engine passed in the test house (near the gate end of the site) after a minor oil leak was fixed and like many other Fodens was close coupled for generator work.

Next stop for me was a spell in the upper floor to the Foden shop where Dennis Rothwell passed on a little wisdom whilst testing his umpteenth CAV internal camshaft diesel fuel pump (with fluid governor) on one of the Hardinge test benches.
I had some head scratching to do before it dawned on me how the governor actually operated. The Blackbrook facility was one of very few places in UK at that time that was equipped and licensed to cope with the exacting work that fuel pumps have always demanded.

I mentioned the mighty Deltic and to go with this powerhouse was a governor that had to be totally reliable since the runaway rate of this engine meant destruction in seconds. Tom (can't remember his second name) had the air and hospital garb of a doctor whilst taking his 'patient' (Deltic governor) by trolley, laid out with the surgical theatre tools to perform calibration. He would wheel his patient in to his totally self contained perspex cell within the test room early morning and reappear (if all was well) mid afternoon having completed the operation. His fastidious lone persona was probably the correct make up for the job.

The Perkins build shop nearer the front gate was another stint to assist with the build of a P4. Even then I thought the design and oddities of the engines ancillary bits were rather outdated. However the truth is, if it works don't change it, and the fact that these P4 and P6 donks in various guises (a Chapman design of the early thirties) are still propelling vessels to this day is testimony enough to getting it right.

Adding, shall we say, spice to the day in this shop was Godfrey Cave whose active mind could make even the most joyous occasion one of very base humour. Sorry I cannot tell that story. It is far too crude for a pupil of The Flathouse Academy for the Sons of Gentle Folk to tell. I was one of those

respectful chaps who on hearing a tale with colourful expletives would request language be moderated, even if there was so much as a ladies bicycle parked outside..... No, I didn't think you were convinced.

I spent some time watching the set up of engines for test and as part of this learning was directed to report to Royal Naval Aircraft Yard (RNAY) Fleetlands (as it was called then) to see a rebuilt Deltic put through its paces before return to the fleet. Due to the horrendous noise, this engine could not be tested at Blackbrook. Hence a purpose built facility at Fleetlands close to the Fareham Creek end of Portsmouth Harbour and adjoining the Helicopter landing area was used.

Two technicians in a sound proof cell above the test engine would run the motor up whilst a third skilled labourer chap would complete the odd adjustment. In a building where the sound levels would make your inner ears vibrate in your skull, this skilled man would carry out final checks then proceed to fall asleep (whilst the engine ran) on a stool with his back propped against one of the engine cooling jackets. Noise was such a problem with the Deltic that acoustic lagging sections for it were part of studies and cladding of the ship borne engine in the very early 70's.

To this day, what was Fleetlands (now Vector Aerospace) Deltic Test House building is referred to as the Deltic Cell and serves as part of the sites Maintenance Department.

To work at Blackbrook on a temporary basis meant I was entitled to two things, 'Float Time' (I think was 30 minutes for lunch and leave 30 minutes early at 4.00pm instead of 4.30) and travel expenses. Travel expenses were only payable for motorised transport which was fortunate for me as I had use of my fathers 'Cyclemaster' and therefore entitled to mileage allowance thus gaining extra shillings every week. The fact that my father had sold this particular machine some years earlier and that my cyclemaster was remarkably similar to the remains of a 'sit up and beg' green Raleigh roadster cycle with rod operated brakes is merely a coincidence. Anyway the ten mile round trip on my dinosaur kept me fit. Please bear in mind, I had to make up some financial ground for the lack of overtime and, filling-in at home, the weekly application for the shillings was work in itself.

I have to own up to involvement with Dave Peach (I think I have his name right) and the testing of one of his babies, the Rover IS60 gas turbine fire pump. Dave (brother of the Foden shop manager) worked his craft on the Rover in a self contained small cell in the corner of the Foden shop. Although dynamic balance and running anything at about 45000 revolutions per minute was difficult to comprehend when you talk of piston engine speeds, this was a chance to see something a little different.

I accompanied him one frosty morning to the rear of the Paxman test house cooling tower where he was able to secure the 4 inch suction hose into the reservoir pond and start the turbine to prove that the refurbishment of this wonder was suitable to go back into service. Yes it was quite a unique test facility, fully instrumented by the oil pressure gauge on the turbine frame and

not much else plus that rustic outdoor feel to this obviously fully accredited test house. I dare say the lashing rope for the 4 inch pipe stuck in the pond was probably calibrated too!

For those of you who are blessed or cursed with engineering knowledge this is not the best routine to test such a device. Before you start to scoff let me advise a few pertinent facts. There was no test facility. There was no flow, or pressure requirements for this beast to comply with (or if there was we had other things to occupy our minds) and best of all the hand crank starter handle had a 100 to 1 ratio which this silly bugger was attached to, to get the turbine underway. To clarify the 100 to 1 - it meant 1 turn of my crank handle to 100 turns of the turbine. An absolute doddle!

Let's talk about the next minor problem. The Rover gas turbine needed about 12 to 15000 revs before you ignited the fuel and started it. Alright if maths is not your strong point I had to turn this crank handle about 2 or more complete turns a second to assist with starting. Let me digress to say that this state of the art acceptance test was conducted in open air on the dirt during winter but even more relevant to my tale is the fact that the gas turbine consumed huge amounts of air through sprung loaded closures to its inlet ducts.

In the mind boggling task of turning the crank handle at supersonic speed whilst Dave checked the oil pressure, or lack of it, I inadvertently shut one duct with a knee. This was just after the igniter was activated, and a huge lick of flame exited the rear end and the revs soared. Immediately the turbine made the sound of a diesel (due to it being suddenly starved of air) and I was convinced the whole thing was about to 'part company'.

With preservation of life in mind I dived into a nearby pile of leaves leaving Dave (after watching my antics) to control the urge for bladder release. I emerged red faced trying to convince my self this was the right thing to do, as he wiped away the tears. Bloody clever tradesman!

Once the Rover was underway its capability was remarkable, actually sucking the leaf debris up off the bottom of the pond and blocking the hose strainer despite being tethered well above it. It was not surprising to know that these pumps eventually saw a fairly long service period with the RN.

Blackbrook from my perspective was and must remain perhaps the best place an apprentice or anyone wanting knowledge of the internal combustion engine could spend time. What other facility could claim the build of such a variety of engines from so many manufacturers?

Whilst I was not allowed time in the Paxman or Deltic build shops I did see work in progress on the phase gear end of a Deltic on a few occasions and saw the insides of its individual injection pumps. I was permitted however to access most locations within the work place and in hind sight must compliment the management of the time in this freedom, knowing as they did the value of observation. I'm not sure they were aware that yours truly ventured into the innards of the Paxman cooling tower but at least I found out

how those large wooden structures actually achieved their job. Sorry I can't bore you with that or you will know more than me!

Though now many years removed from my tools and close to retirement I still possess a very good understanding of diesel engines, which is without doubt down to my stay and the tolerance of the good people that made up Blackbrook.

Footnote.

The Fareham Internal Combustion Engine Depot (Blackbrook Farm) was closed by the MOD (N) in 1984 following the 1981 Defence Review, as part of the run-down of Portsmouth Dockyard that led to the establishment of the Fleet Maintenance and Repair Organisation, Portsmouth.