RECOLLECTION OF WORKING AT VINCENTS 1948-1950

R.A. Keane ***MPH 673*** ***Page 23***

It all started in June when I read in the Classic Motorcycle magazine that the `Vincent-HRD Owners' Club was to erect a plaque commemorating the building of Vincent motorcycles at the site in Stevenage between 1927-1955. Readers were advised to contact Bryan Phillips for more information; this I duly did. Bryan asked me if I was a Club member, I explained that I wasn't, but that I had a great interest in Vincent motorcycles. I had worked at the Stevenage factory in 1948 and had been a proud owner of `White Shadow', registration KLH 461.

Bryan invited me to attend the commemorative event on the 10th September where I would have the opportunity to meet members and view the bikes. What a sight for sore eyes it was to see the Vincents coming home to their birthplace. I stood looking at all those Series `B' and `C' Rapides thinking that I must have assembled the majority of the cylinder heads.
At the meeting I was introduced to Peter Bell, the Club Archivist, and we talked about what it had been like to work in the factory during the time I was there. At the end of the event we stood and looked at the empty space where the factory had once stood; it was now a car park! It seems a pity that today's Vincent riders would have no idea of the original layout of the factory so I offered to produce a line drawing of the building as it was in 1948 and completed it a few weeks later. Peter told me he was going to put it onto the Vincent Owners Club web page and asked if I would write an article to accompany the drawing. I said I would have a go, hoping that my memory would still be accurate after 50 years.

I saw the first advert for the Series `B' Rapide whilst still in the army and thought, 'that's for me when I get my De-Mob'. Six months after De-Mob I applied to Vincents for a job in the factory, as my home was only five miles from Stevenage. At my interview I was shown into the Works Manager's office, where I met Jack Williams, an ex-RAF Group Captain and ex-Vincent pre-war works rider. He asked if I had been in the R.A.F. and I replied that I had been in the R.E.M.E. I could see this hadn't gone down too well, so I quickly went on to say that most of my 4 years of service was spent working on motorcycles as a vehicle mechanic. I added that during the final 18 months I had been attached to the `Intelligence Corps' looking after 50 Matchless bikes at the training depot at Aldershot. I showed him my `Intelligence Corps' special pass which stated my job classification and ten minutes later found myself a Vincent employee. It was to be the start of some of the happiest and most memorable days of my working life.

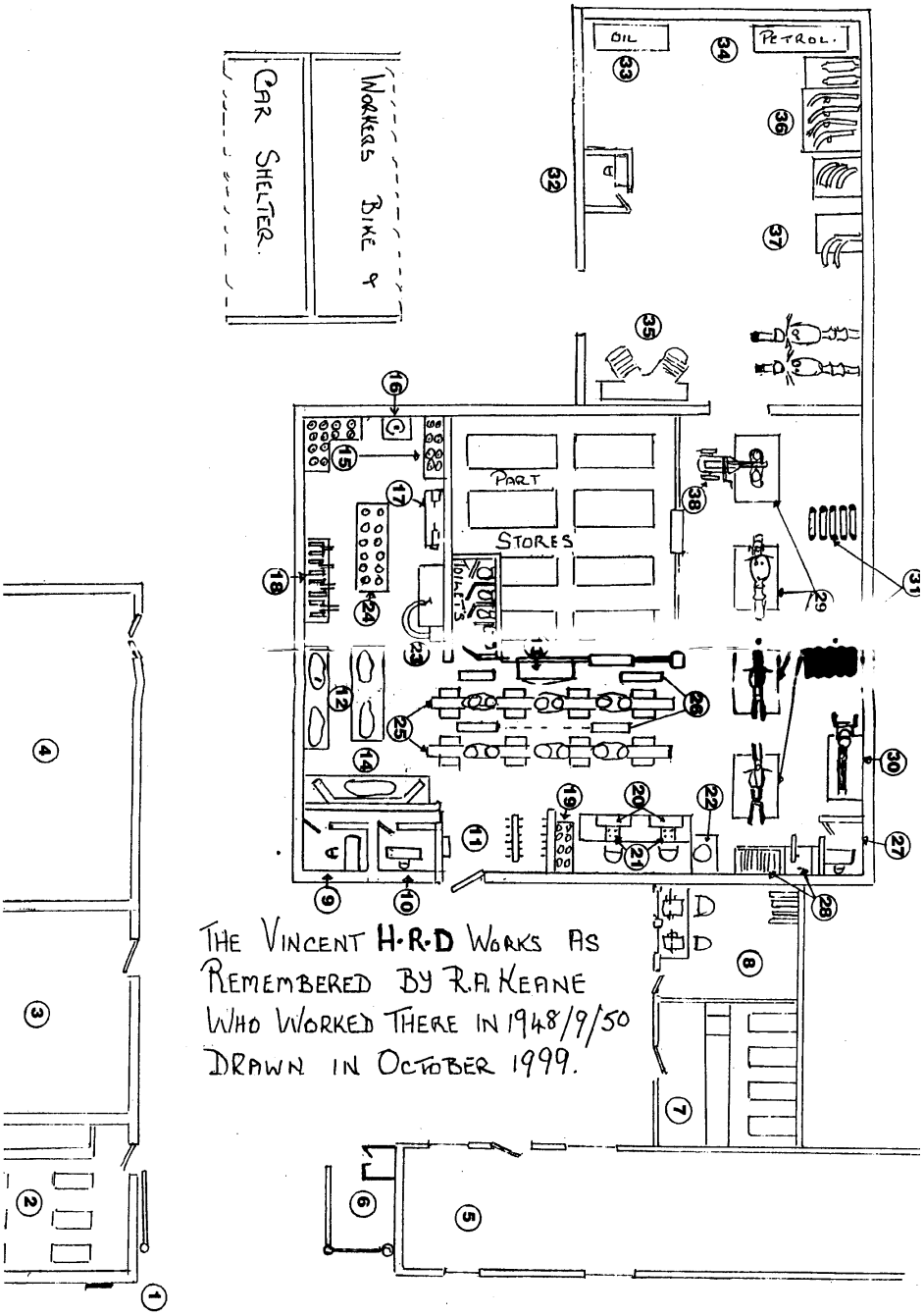
On my first day I was put to work with 'Paddy' on cylinder heads and flywheel assemblies. Paddy assembled the flywheels and I assembled the cylinder heads. Working with Paddy gave me a chance to brush up on my 'big-end' fitting, skills, however the cylinder head assembly in those days was rather antiquated. I used to sit on an upturned box with a folded sack for a cushion and grind the valves into the head with the head on my lap. The method which was used to grind in the valves was as follows: Carborundum paste was applied to the seat of the valve which was then inserted into the cylinder head. A pre-war `T bar' was clamped to the valve stem, which was then rotated pulling the valve on to its seating in the cylinder head. This was repeated until the valve had been ground in correctly. When both valves were ground in, they and the head were washed out clean in a paraffin bath. The valves were then checked for their seating air tightness by holding the valve on its seat and filling the manifold with paraffin to check for leaks. Not one ever, did, which says a lot for the machine tolerances. Then it was back to the bench to assemble the head using the valve spring compressor in the time honoured way.
This method was hard on the wrists! One day, as I sat nursing my aching joints, Phil Irving came up and enquired if I had hurt myself. I explained that I hadn't but, that this was an extremely painful exercise. I suggested grinding the valves in using a sucker tool with a jig to support the head. About a month later, not one, but two jigs appeared, together with an arm attachment to compress the springs when assembling the cylinder heads.

When assembling the flywheels, the first step was to insert the big-end pin into one half of the flywheel; tightening up the holding nut to the correct torque with a torque spanner. Then the rollers would be built up with the space washers; i.e. 3 rows of rollers and 4 washers over which was slipped the 'con rod'. This was repeated again with the next 'con rod' slipped on and finally the other half flywheel with the big-end nut on finger tight. The assembly was then put into a jig which would hold the flywheels in line ready to tighten the final nut up to the correct torque. After this the whole assembly was put between centres on the cast iron bed to check for accuracy of alignment which was never more than one or two thousands of an inch out and was checked using dial test indicators (D.T.I.)

To get the flywheels perfect, the assembly would be taken out of the centres and holding the two con rods in the left hand and one main shaft in the right hand the other half of the flywheel assembly was `bumped' on to a lump of lead (12" x 12" x 1"), to bring the flywheels into alignment. The assembly was then put back into the centres and checked again with DTI. This was repeated until the assembly was perfect. Bumping was a `knack' which was acquired only after much practice. Also I should mention that during the assembly of the rollers, liberal amounts of oil were used which may seem a crude way to align flywheels but is a method used the world over; even today, on hand built engines. When the cylinder heads were finally finished each one was hand lapped onto a cylinder barrel on a machine which rotated the barrels very slowly, whilst the heads were turned hack and forth lapping with a medium grinding paste until a uniform surface was achieved. Then both items were washed perfectly clean in a paraffin bath and stacked together on a table waiting to be fitted on the engine line.

The two crank case halves were put into an oven and heated up, they were then placed on a bench so that the main bearings could be inserted. As the heated crank case halves cooled down this ensured a correct fit, they were then built up with the flywheels, cylinder holding bolts, prop stand hanger plates, oil pump etc. and forwarded to the engine build line where they were fitted by hand onto the engine platform and held in position through the prop stand plates ready for completion.

The engine was further built up with the cylinder barrels and heads, magneto, gearbox internals etc. ready for the timing disc on the main shaft of the drive side. With DTI on the valve and spark plug holes. The timing wheels were fitted and the engine was set up and timed. The timing wheels were centre popped in relation to each other, this was then recorded in the register book together with the engine number which was also stamped on the crank case. The engine was finally finished with primary chain, clutch, dynamo, primary chain case, clutch/foot change and timing covers, and each engine had a job card attached to it. Each stage of the build of the engine fitters initials were entered so a check could be made later on road test if anything went wrong.



Factory Layout Key:

1 Vincent Plaque
2 Canteen
3 Exhaust pipe forming shop

4 Chrome plate shop
5 Main office - Phil Vincent's office, Phil Irving's office, drawing office, wages, etc.
6 Security box
7 Spares sales shop (prefabricated wooden building)
8 Wheel building shop (prefabricated wooden building)
9 Jack Williams, Office Manager
10 Dennis Minnett's office, Foreman Engine Build
11 Workers' time keeping clock & cloak hanging area
12 Crank case's L/H & R/H awaiting assembly
13 Oven for heating c/cases ready to insert bearings
14 Crank case assembly area together with bearings - cyl. bolts, etc.
15 Flywheel halves awaiting assembly
16 Jig to hold flywheel fitted big-end/assembly - con rods & other flywheels
17 Centres to check flywheel alignment
18 Finished flywheels ready to fit to crank cases
19 Cyl. heads & barrel's waiting build
20 Cyl. head assy. area with springs, valves, collars, etc.
21 Two jigs to assemble & grind in valves into Cyl. heads
22 Rotating base to lap head to cylinder
23 Paraffin (kerosene) wash for cyl. head valve seating test also to wash all carborundum after valve/grind/head lapping
24 Bench holding finished cyl. heads & barrels
25 Engine lines that hold finished crank cases ready for completion with all parts in racks & shelves at the sides of line, magentos, carbs, dynamos drawn out of stores for each engine. Each fitter to sign build sheet of each engine for these
26 Racks for engine nuts, washers, bolts, primary chain clutch., etc.
27 Ted Hampshire's office
28 Bowden cable oil soak tray & cable pre-stretch jig
29 Bike build stand bench
30 Front fork assembly
31 Finished wheels
32 Jim Sugg's office, Test Foreman
33 Oil Bowser
34 Petrol Bowser
35 Air compressor
36 New exhaust pipes
37 Slave exhaust pipes
38 Mobile hoist for lifting engines

When ready, the engine was lifted off the line by a hand operated mobile crane and taken to the cycle line and lowered on to a cycle build bench where Ted Hampshire the foreman supervised the fitting of the backbone oil tank and forks to the engine. the headlamp and wiring harness were added together with the rear frame, wheels, prop stand, mud guards, saddle, footrests, carburettors, Bowden cables, etc. All Bowden cables (e.g. brake, clutch, etc.) were soaked in oil in a large square flat tray and then put in a jig and pre-stretched before fitting.

When finished, the bikes were wheeled to the road test shop. Each road test rider would fill the bike with oil and check tyre pressures, brakes, tappets, clutch adjustment and finally put petrol in the tank. He would then fit his own set of exhaust pipes known as slave pipes which he kept and used for setting the carburettors (blue pipes) and for use on the road. When the bike was ready for sale these pipes were replaced with a brand new untarnished set. The same procedure went for the petrol tank if the bike was having an extended road test.

Each road tester used to carry a haversack containing his tools, ready to make any adjustments on the road. He also fitted his own slave speedometer to the bike he was testing, again this was changed when the bike went to the sales department. I must say that each and every bike went out a first time starter in perfect condition!

The lads who worked at Vincents were a very happy bunch; they considered it a privilege to have the opportunity to work on these bikes. Every year in June the TT. races were broadcast on the works tannoy system for the whole week which was great, unfortunately the BBC does not give the same extensive coverage today.

To end on a lighter note, some lunch times we would have impromptu races on our own bikes against the clock to `Jack's Hill Cafe', 3 miles up the Great North Road and back, or ride dirt-track style around the bike shed outside the road test shop. I remember too that the canteen meals were the best I ever had, just like Mum cooked at home.