The de Havilland Aeronautical Technical School, Lostock

Peter Gillmore (Student 1953-1958)

The stairway to this particular star started each year when de Havillands placed their advertisement in all the local papers offering apprenticeships to suitable applicants. For most teenagers in the Bolton area at the time the options were rather stark, down the pit or into the mill. de Havillands on the other hand offered an apprenticeship and training, with real prospects. In the 1950s they were like all good companies of the time, making sure that they had a steady supply of well trained people, namely fitters and turners. They trained their own shop floor personnel and once you were selected you became indentured as an apprentice fitter and turner. The company, alas no more, was situated at Lostock, where a shadow factory for propeller manufacture was built in 1937. The bulk of the production facilities were moved from Stag Lane to Lostock, but the design and development section stayed on at Stag Lane until it was later moved to Hatfield. During WW2 77,029 propellers were produced at Lostock, plus another 23,210 made from American components. For the football fans the new Bolton Wanderers Reebock Stadium is just a stone throw from the old de Havilland site. (See page 3 for location map)

de Havillands at Lostock in 1953 was purely a vast ocean of machine tools. The place was huge, covering hundreds of acres. When a new production line was created pantechnicons like Dinky toys roamed through the factory removing the old machine tools and replacing them with the very latest available. The major output of the factory covered the infrastructure necessary in the manufacture of all types of variable speed propellers and Comet Mk 1 undercarriage legs.

Each year 25 young hopefuls were picked out of the hundreds of applicants. I just made the cut, possibly because of the four GCE subjects I passed at the age of 16 after attending Worsley Technical School. The training school had a wonderful workshop staffed by highly qualified tradesmen. It was completely separate from the factory. It was here that we spent a year learning the noble art of fitting and turning plus tuition in the draughtsman's art.

During our year in the training school, we ran about five miles each morning to keep us fit, alert and healthy. After six months of practical training we became very adept on all the various types of machine tools. I became a whizz on the thread grinder and for my sins I would be called upon to set up the machine and grind 12BA thread profiles onto blank go/no go thread gauges for use on the workshop floor. Accidents did happen and we had the odd broken arm now and again. I still have a finger that has never quite recovered from a slight altercation with the grinding wheel of a surface grinder. There is still an ex apprentice around somewhere with a finger end that looks like the profile of a gear cutting tool. For the second six month period we learned the skill of precision fitting normally with half-blunt files. It was amazing how quickly we became adept in the skilful use of a file.

One day a week we were lectured on the rudiments of mechanical engineering drawing and practised for hours to hone our printing skills. Most of us attended one day and three nights a week at the local technical school. In my case I returned to Worsley Tech to do the ONC course in Mechanical Engineering.

After our training was over we went into the factory workshop for further on-the-job training. I finished up setting up Ward 7 lathes for ladies on piecework. I found this rather stressful for as the time allotted to complete the task got closer the clicking of knitting needles grew louder and louder, somewhat akin to the tumbrels during the French revolution. After two years I passed my ONC exams and was upgraded to an engineering apprentice and given the option of going into the jig and tool drawing office or going to Hatfield.

Eight of the initial twenty five apprentices volunteered to go to Hatfield and for most of us this was the first real adventure we had experienced. As most of us came from mining, weaving and labouring stock and all those dark satanic mills it came as a surprise on arriving to find Hatfield relatively clean and surrounded with actual green countryside and not a mill or a pit in sight. It all came as a bit of a shock.

Squadron Leader Brown, the apprentice supervisor, met us at the station and a small coach whisked us to Hatfield. They were well organised for by the end of the day we were all fixed up with accommodation in the local area. Three of us took up accommodation at 18 Manor Road, just a few minutes walk to the factory. Initially we found the local folk very hard to get to know, somewhat different to the people from the North of England that we grew up with We very quickly adapted and very soon settled and enjoyed the experience.

At Hatfield in my Comet 1E flight observer days.

The Aircraft Company factory was alongside the Great North Road (A1). On the opposite side of the airfield were the Engine Company and the Propeller Company, with design and development facilities for jet engines, propellers, air to air and air to sea guided missiles. As with most apprenticeships we spent six months in one department and then moved on to another. I began in the drawing office, working on reverse pitch systems for propellers, a development that allowed the thrust from the propeller to be directed forward and so acted as a brake to slow the aircraft down on landing.

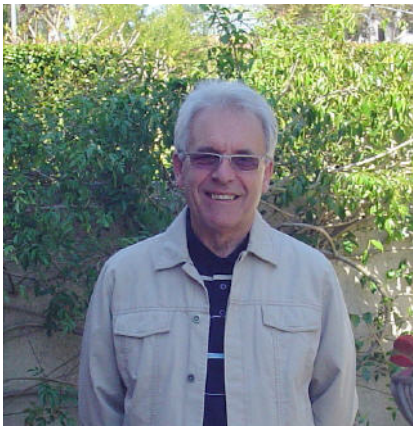
I also worked in the Vibration Fatigue Department, very noisy. In addition to vibration tests being conducted on single propeller blades, we also vibrated huge four bladed propeller assemblies and later became involved with tests on the Comet 1 airliner to try and determine why it kept exploding in flight. To simulate what was happening in flight they built a water tank and in it placed a Comet fuselage complete with wings. They pressurised and depressurised the inside of the fuselage repeatedly while at the same time jacking up and down the wings. It's all history now and a well known documented fact that fatigue cracks started at the window corners which led to the rupture of the fuselage.

All electrical equipment of this era, such as amplifiers, were powered by valves and it was only in the middle to late 1950s that transistors suddenly emerged for commercial use. They were so horribly expensive that a small team of people was employed whose only aim in life was to salvage the transistors from defunct gear for re-use. I moved easily through development department after development department, finally reaching the end of my apprenticeship working on the guidance system for the Firestreak air to air guided missile. I became a flight test observer and it was here that I first had the opportunity to fly.

We spent many days flying up and down England at 50,000 ft in a Comet 1 airliner (suitably modified) which was fitted out as a flying laboratory. We christened it Moby Dick as it was matt black in colour except for the wings which were painted in Dayglo Orange. We flew with all manner of target aircraft such as the Vulcan, Valiant and Fairey Delta 2. They would fly past endlessly all day while we monitored our instruments and recorded the information on film. The FD2 held the world speed record at the time and still reminds me of a mini version of the Concorde. We had a large tank in the cabin of the Comet that contained diesel which we injected into the jet exhaust, resulting in a trail of black smoke which the target aircraft would fly down in order to locate us, as it is very hard to see an aircraft in a clear blue sky. The FD2 flew out of its base at Warton, taking about two minutes to reach 50,000 ft coming up vertically through the cloud like a dart and then taking up position some 100 miles to the rear of us before starting his high speed run. The pilot, who had a very posh English voice would announce "Afterburner on" and would then proceed to fly down our trail of smoke. On one particular day he slightly misjudged his run. At a speed in excess of 1000mph he came over the top of the Comet wing clearing it by 20 ft with his wing tip not more than 40 ft from the Comet fuselage. The Comet was hurled around the sky. He was apologetic and we were more than slightly nervous.

The Comet 1E, early one morning in December 1958 awaiting the off.
I am third from left.
Extreme left is Keith Ratcliffe and sixth from left is John Pennington.

In 1958, at the age of twenty-one, I finished my apprenticeship and also obtained my Higher National Certificate in Mechanical Engineering. I had the chance to go to Woomera as part of the firing team on the Blue streak Intercontinental missile, but when the Government cancelled the project that was the end of that. I was still with the "Guided Missile, Guidance Flight Section" and my pay was £12-13s-6d per week plus £1 a week danger money for my job as a flight observer.



I moved on from de Havilland in 1960 at the age of 23 and now live in Sydney, Australia, where this recent photo was taken.

Peter died in Australia in September 2021

LOCATION OF THE FORMER DE HAVILLAND FACTORY AT LOSTOCK