

Chapter 2

Jaguar engineering apprentice



Mid-September 1961, I caught the train to Coventry, and then a Corporation bus, which duly arrived at the Main Gate of Jaguar Cars Ltd, Browns Lane, in the far north of the city. Reporting to the Personnel Building, a drab concrete block alongside the Executive Offices, I found my new colleagues, the Jaguar apprentices for 1961. They were a pretty exclusive bunch: Jaguar only took about 24 per year.

Apprenticeships had a long history as a way of learning engineering. When my grandfather was an apprentice, his parents had to lodge a sum of money as a 'premium,' from which he would have been paid. Fortunately, this practice had ceased by the time I reached Jaguar, although the pay was pretty 19th century. I had five years ahead of me, to work in various departments of the business, with time to attend technical college for academic qualifications. I have no doubt that it was a superb way to enter the world of engineering, and adulthood.

My first day in the Apprentice School introduced me to the world of the machine tool. My background had not exposed me to the lathe, or the milling machine, so the instructor, Bob Andrews, had his work cut out. Next to the Machine Shop was the Lecture Room, and, in one corner, was the Apprentice Supervisor's office for one Joe Barker, and, more importantly his secretary, Felicity. If Joe was out when Bob gave a lecture, the apprentice's concentration was diverted to Felicity, who, being some years older and wiser, took no notice.

Christmas 1961 saw me finish my time in the Apprentice School, with the successful completion of the Bob Andrews Standard Test Piece: an adjustable tap wrench. My New Year assignment was the Machine Shop

at the old Daimler works, in Radford. I was put in the Jaguar Gear Cutting Shop to work alongside a tool setter on the hobbing machines. This was a very boring period for me, and the time spent there was an introduction to the tedium which motor vehicle – or any other – mass production entailed.

The next move was to the Fighting Vehicle Department, also at Radford, where the Daimler Ferret scout car was built. Placed in the Experimental Department, I found life much more interesting. The Daimler Ferret was a two-man scout car, composed of a fully welded steel monocoque hull, sitting on double-wishbone suspension to all four wheels. A Rolls-Royce four-litre petrol engine, mounted longitudinally at the rear, drove a pre-selector gearbox. This was very similar to the transmission on ERA racing cars, which allowed one to steer with both hands when actually changing gear. The driver sat at the front, with the steering wheel tilted the opposite way to a car, due to the angle of the armoured hull. The danger of this was that one could turn it the wrong way when reversing, from some strange quirk of human ergonomics.

The transmission had the forward and reverse gears between the gearbox and the axles, so the vehicle could use all five gears in each direction. This gave a governed 60mph (100kph) in both forward and reverse – very good for a scout car caught by surprise and needing to retreat, but not so good if you steered the wrong way at maximum speed in reverse. I took (and passed) my Jaguar company driving test on a Ferret, which also entitled me to drive all other company products, including the 150mph (forwards) E-Type – and the 60mph (backwards) Ferret.

I participated in the activities of the experimental group that was developing an amphibious version of the Ferret. The armoured hull was encased in a glass fibre box, containing foam to provide buoyancy, while the propulsion was by two Dowty ducted propellers, under the central gearbox. These were rather badly sited, hanging under the centre of the hull: they were very vulnerable, when entering or exiting water, if there was a steep bank. As a result, they usually got squashed upon entry, and the four-wheel drive to the knobby tyres was all that was left to propel the machine.

Much testing was done in some ponds at MIRA. After a short journey from the Works, testing usually lasted a few minutes, until the jets detached. With full power, the wheels could manage 4mph (6kph) in still water. The vehicle floated very deep, with only the top of the turret showing, so it was extremely hard for it to climb out onto the bank, if there was no beach. A second, standard, vehicle was taken along to perform towing duties.

One day, the pair of Daimlers set off from MIRA to return to the factory, and a certain competitive spirit led to a race breaking out. Approaching a large floral-decorated roundabout in Nuneaton, the two Ferrets were neck-and-neck, with only space for one. With barely a

bump, the one that I was navigating took a route straight across the middle, scattering ornamental tulip bulbs in all directions. Upon the return to Radford, my job was to lie down, under the thing, and remove a metal plate, which held back all the smelly, oily, muddy water that had leaked in during the day.

A big event followed: I was asked to accompany a full-production Ferret to Scotland for its annual sign-off trials. The 1962 trial was to be the last one required regularly for the Ferret. If it came through without defect, it would be accepted in perpetuity, as it had performed so consistently in the past.

Starting bright and early from the factory, the tank was filled with petrol, and the gun removed, to travel separately in an accompanying Vauxhall Victor. Apparently, it was illegal for civilians to drive around England with a working gun. Contemporary photographs suggest this rule was not too rigidly enforced, as it is clearly in place on one of our coffee stops. We headed north, stopping overnight en route, with the vehicle securely locked in Chorley munitions factory. The next morning, crossing Shap Fell, the driver was greatly assisted by my instructing him on the oncoming traffic status. I was high in the turret, which gave advantageous



The Daimler Ferret scout car in the Radford Works prior to the Scottish trip.



The Daimler Ferret, with its gun mounted, en route to Scotland.

views ahead, over the stone walls. While progress may seem slow by modern standards, it was the traffic, not the old roads, which held us up, as the Ferret could maintain its maximum speed most of the time.

The inspecting Major and Army driver were staying at the Selkirk Arms Hotel, in Kircudbright, while I, the official Daimler representative, had bed and breakfast in a cottage down the road. The trials went well, with the cross-country driving especially spectacular.

The Ferret fired its gun, discharged its smoke canisters, went through a full road test, and fuel consumption trial, and finished with an evacuation through the emergency hatch in the side of the hull. It all took three days and was passed successfully.

Not long after the trip to Scotland, I moved to the Jaguar factory at Browns Lane again, having thoroughly enjoyed playing with fighting vehicles, and I attended various departments, from Exhaust System Welding to the Service Spares Stores.

In an interview with Joe Barker, I explained that I wanted to be a body stylist, and that my training was going nowhere near that part of the business. Barker listened intently, and then suggested that, perhaps, a course on vehicle body building in Birmingham might be appropriate. I had to undertake to get myself there at my own expense, and thus I started to attend one day and

one evening per week. Meanwhile, Barker also arranged for me to enter the Experimental Body Shop, under Harry Rogers.

1964 arrived, and work progressed in the Body Experimental. All the wooden models used to check the development steel panels were made there, along with the wind tunnel models. Malcolm Sayer, the aerodynamicist, would draw these, including detail of the engine bay, and, if an open car, the interior. They were then sent for test in the quarter-scale wind tunnel at MIRA.

While I was in Harry Roger's shop, models were being made of road-going versions of the XJ 13 racing car. The project was shrouded in secrecy, even within the department, and the model maker had to cover them up during tea breaks. At the same time, the lightweight E-Type was being built in the Competition Shop next door – exciting times.

I was put to work at a bench between two people who were complete opposites. One fellow was a straightforward young pattern maker, who was friendly and helpful to me, while the other was an elderly, self-confessed communist. Spotting the 'privileged' background that he believed I had probably had, he pontificated his extreme dogma to any that would listen (not many). Given the close proximity of the workbenches, it was just as well that I managed to ignore most of Albert's jibes, and eventually got to quite