John N. Dickens – Brymore School 1960/1964

As the bubbles cascaded down my nose from an over-enthusiastic gulp of sparkly wine, my introduction to Reg Adcock was very embarrassing. I was helping on a farm in Devon that was hosting a ''Farmer's Weekly'' course for Young Farmwomen; my mother was one of the course supervisors and Reg was a guest at the 'How to host a Cocktail Party' evening. I cannot recall what I spluttered, but later that year I had an interview for a place at Brymore and passed. I worked on farms in my spare time, and enjoyed the stints with the village blacksmith who looked after the machinery, grain dryer and rolling mill – which always fascinated me. Brymore was to be my key to working with tractors for Massey Ferguson or Ford.

I was soon off by train for the best part of a day's journey, less my 'trunk' which had been despatched PLA (passenger's luggage in advance) to Bridgwater station and a final taxi to the school. Fortunately, my trunk always arrived before me (although I think others were sometimes less fortunate!). I quickly took to 'the workshops' with Messrs. Evans & Freer, (Bill & Ben) and spent many happy hours in there with hot metal, either welding, forging or later in the fledgling Foundry, which we built in the pit of the garage in the corner of the stable yard. My simple aluminium casting of a 'yoke' was I think, the first casting from the foundry; Mr Evans helped me with the beechwood pattern and I machined the parts after casting for fitment to the forged-steel gun-rack: it is currently a flower-stand/firescreen at home in Northampton.

After managing a respectable tally of 'O levels' (but not English Lit – sorry, Mr Small), I was advised to study for a National Diploma rather than 'A-levels' for the National College of Agricultural Engineering at Silsoe, Beds., (now part of Cranfield University), so off I went to Corby Technical College. The Diploma course required me to undertake 'industrial training' in the vacations, so for the first session I worked in a local Engineering factory helping to make 'flying saws' for Corby Steelworks. Naïve as ever, I learned a lot about being sent to the stores for 'a long weight, please', and other such pranks.

John and family

I applied to a Potato Machinery maker in Northampton for the next stint, and was offered a job at 1/9d (about eight new pence) per hour. That evening, the local paper mentioned a Racing Engine company that had just moved to Northampton from London. Wow! That would be a REALLY exciting place to work. A few days later, an interview with the General Manager and I was goaded into the defence of ''bloody square-nut engineering'' as he put it. My spirited defence of Combine Harvester technology and Harry Ferguson's force transfer hydraulics got me the job, and the offer letter stated 3/6d an hour. I was elated!

I became the first Student Apprentice that Cosworth employed as employee number 31. I asked if I could come in on Term-time Saturday mornings and was offered the

job of cleaning out the Machine-tool sumps and starting a record system (an early version of Preventative Maintenance); dirty, but by then I was very grateful for the petrol money! My car acquired twin SU's, and a rorty exhaust, and I started Club rallying. Another Corby student and I decided to design and build a Kart as our college project, and we managed to make it in double-quick time with lots of evening sessions, enabling us to race about some weekends, before finishing our course. I 'moonlighted' as a race mechanic for Mike Costin (the company founder with Keith Duckworth), who drove an F2 Brabham car with various R&D engines. This proved to be the downfall of my academic progress. All this competitive stuff started to affect me, and when my diploma arrived, somehow the option of Silsoe didn't seem as attractive as earlier. I stayed-on at Cosworth and did some Further Education at Northampton, followed by specialist courses at Reading and Birmingham Universities in Metallurgy and Tribology, which enabled me to become the company 'guru' in those early pioneering days.

Talking to Keith Read at FBA Production Line 1991

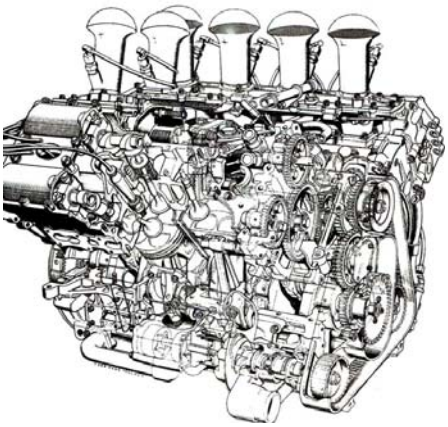
There were many exciting incidents, one when I first met Ron Dennis (boss of McLaren-Mercedes F1). We were working late one night on the race car, when there was a rap at the door – ''Can we drop off our last race engine for rebuild please?'' (Ron's team had just raced back in their van from the Rouen F2 race; we rebuilt the engines between fortnightly races on a first-come, first-served basis, so it was useful to head the re-build queue in order to ensure the engine was returned in time for the next race). ''Tell you what, if you go off and get 2 portions of Fish & Chips for us, and some for yourselves, you can bring the engine in and eat them in the warm with us.'' That was the first and last meal Ron Dennis ever bought me!

I was fortunate to be part of the team to bring the world-famous DFV F1 Grand Prix engine to life in 1967. During the day, I spent most of my time building and testing engines; in those days we had to stand in the test-cell with the engine to test it, one person adjusting the dyno-brake, the other on throttle and visual alert (for anything falling-off, leaking etc.). That wasn't too bad with the 4-cylinder engines, but when the DFV arrived, life became rather more precarious. It was of course a V8 engine, and the throttle was positioned in the 'vee' between the banks of cylinders. That meant that the throttle-man had to stand between the two knee-high exhaust pipes while the engine was running. This was worrying when the pipes were literally red-hot, but not nearly as worrying as the prospect of slipping while trying to cock one's leg over a pipe in order to get out if anything went wrong at 10,000rpm! Fortunately it never did.

As the DFV became 'de rigeur' as the only engine to have in F1 (they cost £7,500 new in 1967), we had tens, then hundreds of parts and engines to make and service. There were failures of course; not everything was made to specification, some materials were not as good as they should have been, and gradually I became the person who took an interest in these things, and started to report on them and create what we now know as a 'database'. No one had ever done this before, since very few F1 engines of a given type were ever produced; some said that no part of a F1 Weslake or Ferrari V12 engine could be substituted for another since every part was unique. The opposite was true of Cosworth; parts were made to a standard, and apart from one or two special build processes, any part would fit in any engine – we prided

ourselves on the quality of manufacture; Design it right, make it right and it will be alright!

As the DFV engine continued to power winning cars derivatives went on to conquer Indycar racing in America, and Le Mans. We set up a new office and factory in California, and I spent several enjoyable stints at Redondo Beach. One of our biggest problems – especially with the Indycar engine, was the failure of Aluminium castings. By this time (1973), I had been appointed Chief Quality Engineer and Inspection Manager, and so I spent many hours at the supplying foundry, (much to the annoyance of my wife Diane, whom I had married in that year). My colleagues had heard about a scientist with some novel ideas about casting technology, and he was hired to help us with the upshot being a new COSWORTH Aluminium Foundry, which was established in Worcester. After about a year we succeeded in producing cylinder heads for the racing engines which were usefully better than we had ever had before. That early experience in the corner of the Brymore Stable yard was extremely helpful!



Theo Page Drwg of DFV

While COSWORTH race engines were very profitable, there was always a concern that someone would come along and 'trump' us sooner or later, and that foundations should be laid for a longer-term business. We undertook sub-contract manufacturing and this led us into making the initial 16valve cylinder-heads for SAAB, cylinder blocks for BMW marine engines and Ford Transits, gearboxes for Supertanker Washing machines, crankshafts for Norton Motorcycles, fuel-pumps for missiles and many other parts. I had to liase with these new 'outside' clients, and so began another chapter, as I travelled more and learned about industrial quality approvals. Soon, we were making cylinder heads for the MG Metro Rally car; we had started to evolve a useful facility that others could use for the production of 'short-run' engines and components.

We undertook design and manufacture of the GM-OPEL Rally engines leading to the manufacture of cylinder-head assemblies for their special Road-cars at the rate of 5000 or so per annum. This needed more facilities, so we built a new factory at Wellingborough – just for these special projects; a Sales manager was appointed, in order to keep the flow of work going. After 3 such Sales Managers – none of whom seemed to 'fit-in' with our culture, I stepped up to the plate and said that I knew little of sales, but lots about the culture! The MD laughed, and said that I'd better give it a go then as Contracts Manager.

Our daughter Jodi was born in 1977 and she used to help on Saturday mornings in the office as soon as she was old enough to feed the shredder! Later, when about 14, I was astounded to find that her teacher of Biology in Northampton High School was Bob Cox (brother of Bill), with whom I'd broken bread at Brymore about 30 years earlier!

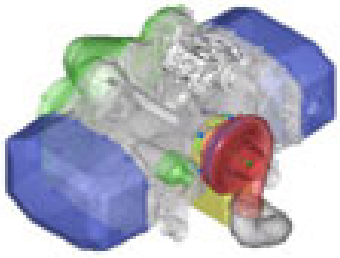
I developed the Contracts job over 6 years from 1983, largely with Mercedes-Benz (190E-2.3/2.5-16V), Ford (Rally engines) and GM (Pontiac Fiero and Buick special projects). I was working with FORD, as I had planned way back in 1960, but not on their tractors! I was able to travel extensively, and the 'calling-card' of Cosworth (which was still winning innumerable races around the world in many championships)

was a great door opener. We managed to provide a brother for Jodi in 1981, but I sadly missed much of both their early years as I was away so much.

One day a call came through from the M-B Purchasing Director in Stuttgart – could I get over immediately for an urgent meeting? It turned out to be an offer of a job for me to run part of their UK business. When I explained embarrassedly, back in the office, I was greeted with another offer, Director and General Manager of the new 'Engines Group' – formed to manage all the non-core-racing activities of COSWORTH. I was delighted to accept this offer, and so started another chapter – 6 years in various Board positions as the company underwent many changes under corporate owners. We bought new CAD stations, Test-cells, and undertook design and development work for many companies, the most well-known, being FORD, for the Sierra Cosworth, Escort and Scorpio 24v engine programs, both road-going and rally/race competition. We won the world Touring Car Championship, the World Rally Championship and several other accolades during this period, while the 'Racing' division was helping Michael Schumacher and others into winning positions in F1.

Hylton Road Foundry

I enjoyed the interaction with Auto-Industry people, learning about the intricacies of launching a new car, getting all the international folk together in a meeting and trying to find a way through the maze of difficulties that each had in his/her briefcase. Meeting the needs of styling sign-off, assembly procedures, finishes, transmission durability (while towing an overweight caravan up the Grossglockner Pass in Austria) and many other hurdles. Dealing with the Press on the first test-drives – the blood on Innes Ireland's Sierra-Cosworth bonnet when he came back from his afternoon thrash around Andulucia.



World travel continued as I endeavoured to maintain the pace of growth of the company, and many interesting experiences came my way. I felt like a WW II refugee-child in Tokyo, when a friendly Japanese secretary sent me off on the Shikansen and a couple of local trains to the other end of the country, with a special note written in Mandarin (''if you find this man lost, please help him ……..……..''). I managed to endure that trip without mishap, and particularly relished the opportunity to visit the Peace Park in Hiroshima when my visit to Mazda took less time than anticipated. Korea was quite fascinating, and their Trade Centre in Seoul, where one could buy absolutely anything for export at seemingly trivial prices was a major eye-opener – how about, 'High Fertility Underpants'? I kid you not!! I was less keen on the speciality chickens-feet soup, and the gross drinking-bouts.

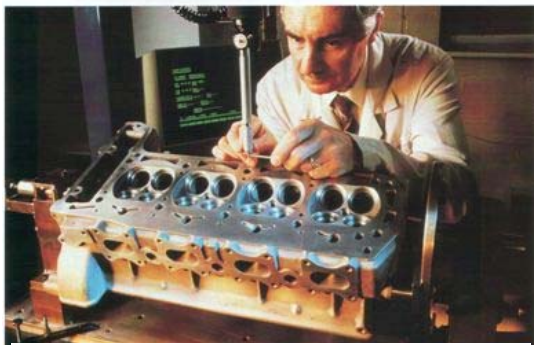
Back home, things were changing. The founding directors had mostly retired, and the owners had hired new blood – we were being prepared for sale! There was inadequate money in the corporate coffers to finance all the businesses in the group, and ours was the 'cash-cow', and supposedly most saleable asset. I left in 1995, now

one of about 1500 employees, having had a great career at COSWORTH and with plenty of ideas for ploughing my own furrow. I soon picked up some interesting work in the Industry, which led to me being offered an NED - Non Executive Directorship in a Paris and Rotterdam-based British company founded by a Bulgarian Émigré, who had some interesting ideas about cheap automatic transmissions. This role introduced me to another side of international business and Engineering, that of the real entrepreneur, starting from very little, with a big mountain to climb. We had some very bleak times (financially), but it was technically exciting. I never learned Bulgarian, but I have learned a lot about Central European culture, and if you too have any interest, I am the publisher of a book, **''My Story''** *by Roumen Antonov* (available from me @ £7-50 incl. P&P – email johnndickens@btinternet.com), which is absolutely fascinating. Roumen has written a sequel but it has yet to be published.

Gondola

Networking has always been important in my business life. The editor whom I recommended to Roumen for his story in due course introduced me to his friend David, who had some grand ideas about a new Aero Engine. I spent some time with David listening to his view of how an update of the WW II Junkers diesel engine would be a world-beater. By this time, I had some experience of raising seed capital in the City for innovative engineering and so I offered to help. In due course, we found a group of investors who bankrolled the project providing that both Keith Duckworth and I (by now, also long retired from Cosworth) joined the Board. So it was that Keith and I spent another 4 years working together from 1997 to 2001 (not full-time), trying to coax life into a very difficult project. Engines were built and tested, very much under 'shoe-string' methods, and the first engine flew in 2000. We sold engines and eventually the whole company to our main customer, who used the engines in small Airships for Chinese Coastal patrol work.

Above: The Mercedes 190E now benefits from a 2.5 litre WAB. Below: Inspecting a Mercedes cylinder hea



Mercedes 190E2.5 16v, car and Cyl-head on Inspection

As this chapter of aviation faded, I was contacted by another David, who had been the FORD Project manager on the Scorpio programme. He was coming to the end of his FORD career, and wondered if I could help him with some ideas for a 'pre-pension' entrepreneurial fling. We set up DIMUBA Ltd. (an acronym of our names plus the 'bank') as an Engineering Services company and ran it profitably for 3 years, providing staff and tech consulting services to the Auto Industry. Sadly we closed it down following a client's bankruptcy and some family concerns of David. I decided to return to JND Consulting on a small scale, which is what I still do part-time, working in the Motor-Sport and Industrial arena.

That pretty much completes the story. Diane has now joined me in semi-retirement,

and we have built a small coastal house near Pembroke which has been a great pleasure to us, and allowed me to indulge some ideas for special features such as Stained Glass design and stairway balusters shaped as Tensile Test-pieces! Jodi is a Cardio-Metabolic specialist to Hospitals and doctors around Birmingham, and our son Paul runs an Engineering Recruitment company in Leeds.

In case you were wondering, the bleeding Sierra in Spain was actually leaking bright red Power-Steering Fluid through the bonnet louvres, having been caned around the hills by a very enthusiastic ex-racing driver! The problem never happened with anyone else – ever!