

DOWNTON

In this series of articles, Peter Garnier talks to the men behind the performance conversion business



ALMOST without exception, one identifies in terms of a single name those concerns whose business it is to make cars go better-than-standard. It is usually "Oh, that's old So-and-so's firm"—but not Downton Engineering, which is inseparably Daniel-and-Bunty Richmond. It is 16 other people besides, of course, working in a small modern establishment near Salisbury, Wiltshire; but it is, I think, unique in its husband-and-wife respect. Without Daniel there would be no Downton conversions; but without Bunty's feminine business sense, cultivated out of dire necessity, Daniel's almost complete lack of interest in cash (except, one day, in using it to buy a boat) would have landed them in ruin long ago. "The customers wouldn't even get bills; nor would anyone get paid."

Individual approaches to tuning problems of gas flow, valve overlap, compression ratios, filling the combustion chambers, port shape and size, and so on, are almost as personal as the treatment by Gainsborough and Picasso of the same portrait subject. It is by no means an exact science, and it is always a source of fascination to discover how each individual approaches the subject—whether it is based, for example, on the impersonal slide rule and graphs, or the far more intriguing "flair" and feeling for what happens inside an engine. In Daniel's case it was not easy to establish this from his "Well, of course I had some engineering training." Bunty, however, supplied the answer in talking about the early days of Downton Engineering.

In 1947, a year or two after they were married, they were discussing the inevitable problem of what they were going to live on. "Well," Daniel said, "My father did once say he'd buy me a garage." Bunty's "What on earth do you know about motor cars?" pigeon-holed his subsequent successes under the heading of "flair"—which was the conclusion I eventually arrived at after a day at Downton. In his case it is flair coupled with an unbounded enthusiasm—not for making money but for making cars go.

They began at Downton, on the Ringwood road from Salisbury, in 1947, father having kept his promise. They sold petrol, mended punctures, and worked into the small hours. What remained of the small hours was occupied by Daniel in doing engine rebuilds on nice old motor cars—Bentleys, 3-litre twin-cam Sunbeams, Bugattis, and Rolls-Royces. He kept in touch with the sport in a single-seater Lagonda Rapiere, two-stage supercharged at 30 p.s.i. with a 13.5 to 1 compression ratio, and giving 200 b.h.p. on special fuel. This car, as he said, taught him a lot about what breaks, or burns into holes, when you start getting near the

limit. The supercharger blow-off valve was provided by the late Freddie Dixon from a 1926 Grand Prix Delage engine—in exchange for an unexpurgated edition of *Lady Chatterley's Lover*. Such ribald recollections follow one another in succession at Downton, related in a gentle voice.

Engine development, as well as rebuilding, joined his enthusiasms, eventually to take pole position, and he provided enhanced performance for sporting owners of inter-war 3½- and 4½-litre Bentleys by fitting Hunter manifolds, produced by two eccentric brothers at Cheam whose main concern is organ building. Then came the B.M.C. A-series engine, which first entered Daniel's life in a Morris Minor brought in for tuning by one of his Rolls-Royce customers. He admired this unit tremendously, being, as he said, streets ahead of anything else as a road engine, and with plenty of low-speed torque. When it appeared in conjunction with the road-holding of the Austin A.35 Daniel decided that here was something really worth working on, and his subsequent close association with B.M.C. products began.

Shortly there was to be a milestone in the career of Downton Engineering, which is worth relating at some length as much of their success hinged on it. As the result of the Hungarian uprising in 1956, Bunty filled in a coupon in the *Sunday Pictorial* agreeing to give a home to a refugee. In January, 1957, she went to Salisbury station to meet him, armed with a phrase book and repeating in her head the Hungarian for "Welcome to Salisbury." When her refugee

Slide rules or inspiration? Daniel Richmond ponders Peter Garnier's question



"Yes, quite a good job!" Sarah, the Richmonds' bull terrier gives her opinion



arrived, Bunty trotted out her party piece—at which a great smile spread over Janos Odor's face, accompanied by a burst of Hungarian, which subsequent searches through the phrase book translated into "You're the first person I've met since I left home who can speak my language." As he could not speak a word of English, nor Bunty of Hungarian, their subsequent lunch together went somewhat flat.

Daniel bore with him reluctantly, insisting that he did not, in any circumstances, enter the workshop. "Entertain him somehow," he said, "Take him to the cinema." One afternoon, Janos was found in the sacred works, peering at a lathe and looking happier than usual. The overworked phrase book again came to the rescue when he said "I can use one of those things."

It happened that a Rolls-Royce customer, worried about having his "Flying Lady" mascot stolen when the car was unattended, wanted a replacement radiator cap. Daniel gave Janos some metal, indicated what he wanted, and said, "You happy boy—see you at lunchtime." Within half an hour Janos appeared, bowing and respectfully removing his beret, and thrust into Daniel's hand a superbly made, perfect replica of the radiator cap. The phrase book worked overtime as it was laboriously established that Janos had been a toolmaker, and a particularly brilliant one. Though he had not, until he came to Downton, had any connection with motor cars, he was soon to perfect that side of his knowledge in rebuilding Rolls-Royce engines, and he became Downton's greatest asset. Together, he and Daniel built up the conversion business, until the demand became so great that extra staff had to be taken on.

"Professor" Ray Shepard

Ray Shepard builds all the racing engines; he is another of Downton's assets. He was brought in by his father, from a neighbouring village, in search of a job; and Daniel agreed to give the boy a trial, subsequently blessing the day he turned up. Because of his spectacles he is known as the "Professor," and has had only two lapses. The first when testing Bunty's Austin A.35. He came back looking a bit crestfallen and reported, "I've had a slight mishap with your car." Horror-stricken, Bunty asked, "You haven't bent it?"—to which he replied, "Yes, but only on the roof." The other was back at the works on the Tuesday following Jimmy Blumer's remarkable performance in beating, with a Downton-tuned Austin Seven, Jeff Uren's Raymond Mays-converted Ford Zephyr at Brands Hatch in 1960. Bunty rushed up to congratulate him, "Did you see the television . . . hear the radio . . . yesterday?" Shepard, with a completely unconcerned look, replied, "Min's done no more

than I would have expected of her." It has become the custom at the works to write off every success with this nonchalant remark.

Racing is not necessarily an asset to the firm, and as Daniel says it can be the quickest way to ruin. Cars are entered only when there is a good reason for it—for example, in long-distance Continental events such as the recent Targa Florio. The public, reasonably enough, say: "You can make a Mini-Cooper do 100 m.p.h.—but how long will it last?" Such races prove that the engines will survive. In fact, tuning an engine—provided it is to be driven sensibly—will lengthen its life. Everything is stripped down, balanced, and meticulously reassembled; compressions are matched, and the running becomes very much smoother. The life of a tuned 850 c.c. Mini engine will be shortened if it is driven at much over 6,000 r.p.m., due to torsional vibration of the crankshaft, which destroys the timing wheels and chain, and eventually the crankshaft. It also lifts the lips of the crankshaft oil seal, allowing oil into the clutch. Therefore, to keep people from over-revving, Downtons fit valve springs that will make it impossible.

Competition cars account for only about 1 per cent of the 30 or so enquiries received daily for conversions. The remainder are accounted for—as is the case with most such establishments—largely by professional people, doctors, solicitors and such like. There are, unfortunately, also the irresponsible "boy-racers" on which Daniel has very strong views, worrying lest the speed and performance which he makes available to them may end in tears. "They cover their cars with go-faster tape, and set upon some harmless man in a Jaguar cruising along happily at 75 m.p.h. to a business appointment, listening to *Housewives Choice*." As he says, he doesn't sell maximum speed, since you can seldom use it; what matters is acceleration for overtaking—and tractability. To support this, using a highly-tuned Mini with 13 to 1 compression ratio and 100 deg valve overlap, he drove smoothly along at 1,200 r.p.m.—and accelerated away at full throttle without snatch. "You see, racing engines don't have to be rough, even on premium fuel."

The days of caring for nice old motor cars are long past, though their ghosts still remain, in the old Downton En-

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Janos Odor looks proudly at the Targa Florio Mini-Cooper—and Daniel Richmond's old Lagonda



DOWNTON . . .

CONCLUDED FROM PAGE 137

gineering workshop, in the shape of a Type 57S Bugatti coupé and an old 20 Rolls. Nowadays, when you pass through Downton, on the way to Bournemouth, you might be forgiven for thinking you've bungled into the output end of a Mini production line—save for the fact that many of them bear competition numbers. And if you stop and peer into the workshop you might be forgiven for thinking almost anything, for the walls and rafters are festooned with an unending variety of exhaust pipes and manifolds. Making engines breathe properly provides the Richmond bread-and-butter, while racing preparation pays for the jam and,

occasionally, for the bottle of Mirabelle you see in Gordon Horner's drawing.

Daniel discussed tuning, and engines, sitting in their pleasant cottage on the side of a very green valley. "You pleak and work on a head. Then, suddenly, some small feature, perhaps a bump in a port, or something, gives you a shade more power. Then you find out why, and so it goes on." I could understand Bunty's "Sometimes, at 11 o'clock at night, he'll get an idea. Off he goes to the works; and the next I see of him is at breakfast time the next morning, for a minute or two, while he has a cup of coffee."

Slide-rules, or inspiration. . . ? I would say the latter. But it has worked in that, despite the small proportion of their output devoted directly to racing, Richmond customers in B.M.C. ADO15s, Sprites, and other A-series engined cars, have won just about twice as many awards as similar cars prepared by all the other tuning establishments put together. This is by my reckoning, not Daniel's.