Racing Golfs

RICHARD LLOYD is a man of vision. He spotted the racing potential of the splendid little Volkswagen Golf GTi in 1977, went on to totally dominate the up to 1,600 c.c. class with the model in the British Saloon Car Championship for the next three seasons, started a highly successful business to specialise in GTis and thanks to all this has now landed a contract with VW-Audi GB and Akai to prepare a team of Audi GLEs for himself and Stirling Moss to drive in this season's Tricentrol-backed Championship.

Inspired by my enthusiasm for the road test 5-speed GTi (see page 328), last month I took up Lloyd's long-standing invitation to visit his GTi Engineering company in some of the old wartime buildings on the Silverstone perimeter track, where a Brooklands-like village of racing specialists is growing up, to try a spot of very special Golfing. Lloyd's Group 1 and Group 2 Akai Golf GTis from last season were dusted down from their winter hibernation and I was sent out to play Golf on the club circuit, while Lloyd and Moss performed in front of film cameras with their first racing GLE.

Lloyd, in pop star management with Cliff Richard before he started motor racing with Triumph Spitfires in 1968, and well known for successes with a Chevrolet Camaro in the mid '70s, took up Golfing in the 1977 British Saloon Car Championship with an almost standard road GTi prepared by Broadspeed and backed by Volkswagen GB.

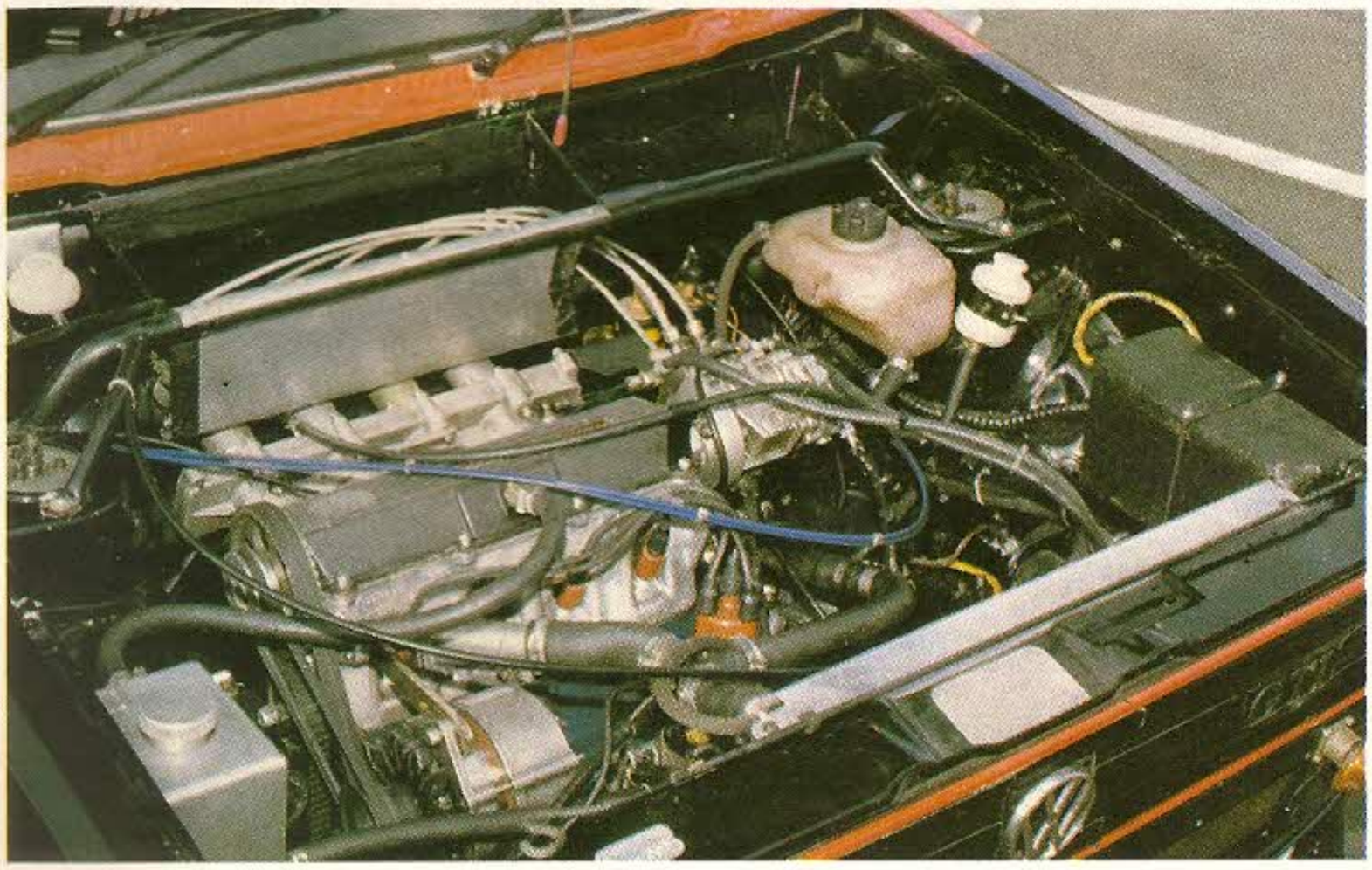
He won the up to 1,600 c.c. class and came third overall in the Championship, opening a lot of eyes in the process. Inspired by this and with support for another season forthcoming from VW, he set up GTi Engineering in March 1978 with Brian Ricketts, a racing saloon preparation "ace". They developed a brand-new GTi for the 1979 series and took the class again, together with second overall in the Championship. Lloyd used the same car, now with Akai as well as VW backing, to notch up his hat-trick of Championship class wins last season and finish third overall.

This Group 1 GTi has a fine racing record, with 19 wins out of 24 races in two seasons. It failed to make the start once, when the fuel pump failed on the warm up lap, had only one DNF and on three occasions was relegated to second place by Win Percy's Toyota. Somewhere amongst that list should be a disqualification, too, when the scrutineers took a dislike to the rear anti-roll bar mounting, happily accepted for the previous 18 months. Undaunted, Lloyd changed to a standard anti-roll bar and promptly shattered the lap record at Thruxton. Indeed, Lloyd and his Golf hold lap records at most British circuits. On top of this UK performance this Golf boasts second in class in the 1978 Coupe de Spa 4-hour race, driven by Lloyd and Fitzpatrick.

This was the first car I was to try on a mild and dry February day. The other, the Group 2 car, was a very different kettle of mechanical fish, a very swift little racer indeed, but one thing both black, red and white, Akai-liveried cars shared was an outstandingly immaculate standard of preparation, an essential for attracting both success and strong sponsorship. The Group 2 car, new last season, and veteran of only three races, has no success to its credit, yet. It was second in practice to Bergmeister's Audi in the Zolder 4-hr. race, but retired from the race when the cam followers broke up, a fate which also afflicted it in the Zandvoort 4 hrs., where it was quickest in the class in practice. Lloyd and Derek Bell shared it in last September's Tourist Trophy, but Bell had to retire from second place in class when the gearbox oil deposited itself on the Silverstone tarmac. Again the car had been quickest in its class in practice. The Group 1 car had its rare share of misfortune in that same race, firstly when a front hub broke with Lloyd at the wheel, then finally when the clutch fell off while Barry Sheene was driving, spoiling Sheene's four-wheel racing debut. Group 1 Golf clutches tend to behave like that when they are revved to more than 7,500 r.p.m., I was told, a good encouragement for me to stick to that rev limit.

Fundamental differences between the two 1,600 c.c. saloon cars are an engine output of 185-190 b.h.p. at 8,200 r.p.m. for the Group 2 car, shown on this page, and 145-150 b.h.p. at 7,200 r.p.m. for the Group 1 car, on page 364. The former weighs 775 kg., ballasted to the regulation limit by 55 kg. of steel bolted to the passsenger floor. The Group 1 car weighs in at 790

The Deputy Editor at Silverstone with the wide-arched Gp. 2 Akai Golf. Note the comprehensive electrical control box, Motolita wheel, Aley roll cage and ASS seat. The 1,600 c.c. engine packs 185-190 b.h.p.



kg. Visually the Group 2 car can be identified by the flared wheel arches over 9″ wide BBS wheels and a deep front spoiler. The Group 1 car has standard bodywork, including bumpers, and for my test the Dunlop "slicks" were mounted on standard alloy wheels.

On more specific details, I'll begin with the Group 2 car simply because it seems to have crept in first pictorially. Its Ricketts-built engine is bored out from the standard 1,588 c.c. to 1,598 c.c. and breathes through Kugelfischer mechanical fuel-injection, with slide-type throttles, identical to the set-up used on the Formula Two BMW engine. The standard VW crankshafts and connecting rods are immensely strong, tough enough to withstand the diesel application and so adequate enough to take the Group 2 engine's 12.5:1 compression ratio and additional 80 b.h.p. over the standard GTi, though the rods are shot-peened as a precaution. Everything is fully balanced. The 12.5 mm. lift camshaft came from Schrick, the top German VW tuning specialist. Valves are enlarged to 40 mm. inlets, 35 mm. exhausts. Combustion chambers are let into the head, the Mahle flat-top pistons protruding 40 thou. through the gasket. A lightened flywheel is fitted, along with a four-pad, sintered plate, Fichtel and Sachs Group 2 clutch. GTi Engineering rely on the VW factory to supply the special close-ratio, four-speed transmission, in which is fitted a pawl-type limited slip differential and one of a choice of 10 final drives, the most usual being the 3.4:1, fitted on this occasion. Driveshafts are standard items modified in terms of angles and lengths by GTi Engineering.

This little rocket is braked by 11½″ x 1″ Can-Am type ventilated front discs, fitted with Lockheed four-piston calipers, and 10″ × ½″ solid discs with Lockheed F2 calipers at the rear. The front uprights are standard but fitted with special brake bells to carry the big discs. Fixed rate Bilstein Group 2 dampers are fitted all round, together with 350 lb. front springs and 185 lb. rear springs. Adjustable, aluminium abutments are built into the tops of the McPherson struts at the front. Wishbones are strengthened standard items and the entire suspension is bushed with PTFE. The 225/240 × 15″ Dunlop racing tyres, in 768 compound and D15 construction are carried on 9″ wide BBS wheels, their excesses sheltered by Zender body panels, for which GTi Engineering are the importers. A regulation 90-litre fuel tank, incorporating twin Rellumit fillers, is located in the normal boot area, the fuel fed by two low pressure pumps from it to a collector pot under the bonnet and thence by Bosch high pressure pump to the injection.

The Group 1 engine is more a matter of careful blueprinting. The capacity remains at 1,588 c.c., though it could legally be taken out to 1,598 c.c, the standard bottom end and bowl-in-crown pistons are used (shot-peening will be allowed this season, but wasn't when this engine was built), valves remain at 38 mm. inlet and 31 mm. exhaust and Schrick again supplied the camshaft. Bosch K-Jetronic fuel-injection is retained, pressures varied from standard to achieve a suitable mixture, and an independent pressure valve fitted. Fichtel and Sachs supplied the Group 1 competition clutch and driven plate and the OE flywheel is machined down to the homologated weight. The factory-built, strengthened, four-speed close-ratio gearbox is identical to that in the Group 2 car, as is the pawl-type limited slip differential, but only three final drive ratios are homologated on the GTi for Group 1, the 3.7:1, 3.9:1 and 4.54:1, of which the 3.7:1 was fitted. Unfortunately, the new five-speed gearbox has not yet been homologated.

Running gear is much less modified. Bilstein shock absorbers are similar to those on the Group 2 car, but spring rates are a much softer 240 lb. front, 110 lb. rear. The standard front disc brakes are fitted with Mintex 171 compound pads and Ferodo VG95 linings act on drilled-for-cooling rear drums. PTFE bushes stiffen things up. The Dunlop racing "slicks", 185/530 × 13″, are the same 768 compound as those on the Group 2 car, but of D60 construction, a vital point on the Group 1 car because it gives less flex in the sidewalls and a big improvement in the car's behaviour. Wheels are of the standard 5½J width.

There is no compulsion for proper safety fuel tanks and safety fillers in the British Saloon Car Championship, so the standard, but glass-fibre-covered, fuel tank is retained underneath the centre of the floor, without additional pumps.

Both cars have gone down in my memory as

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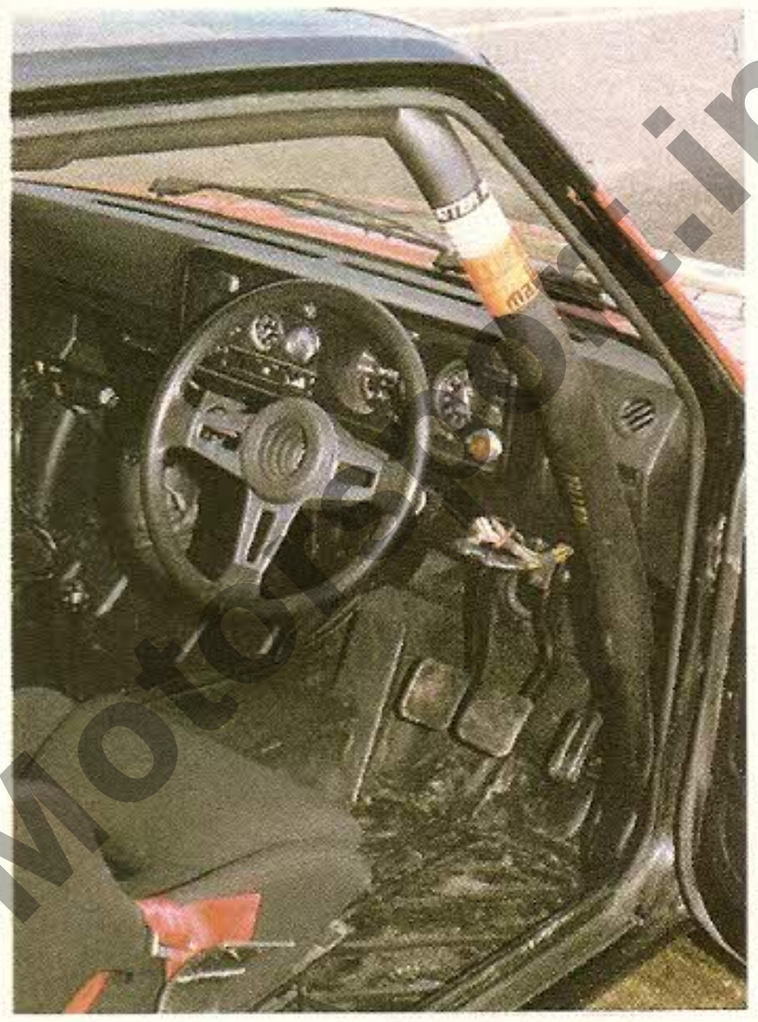
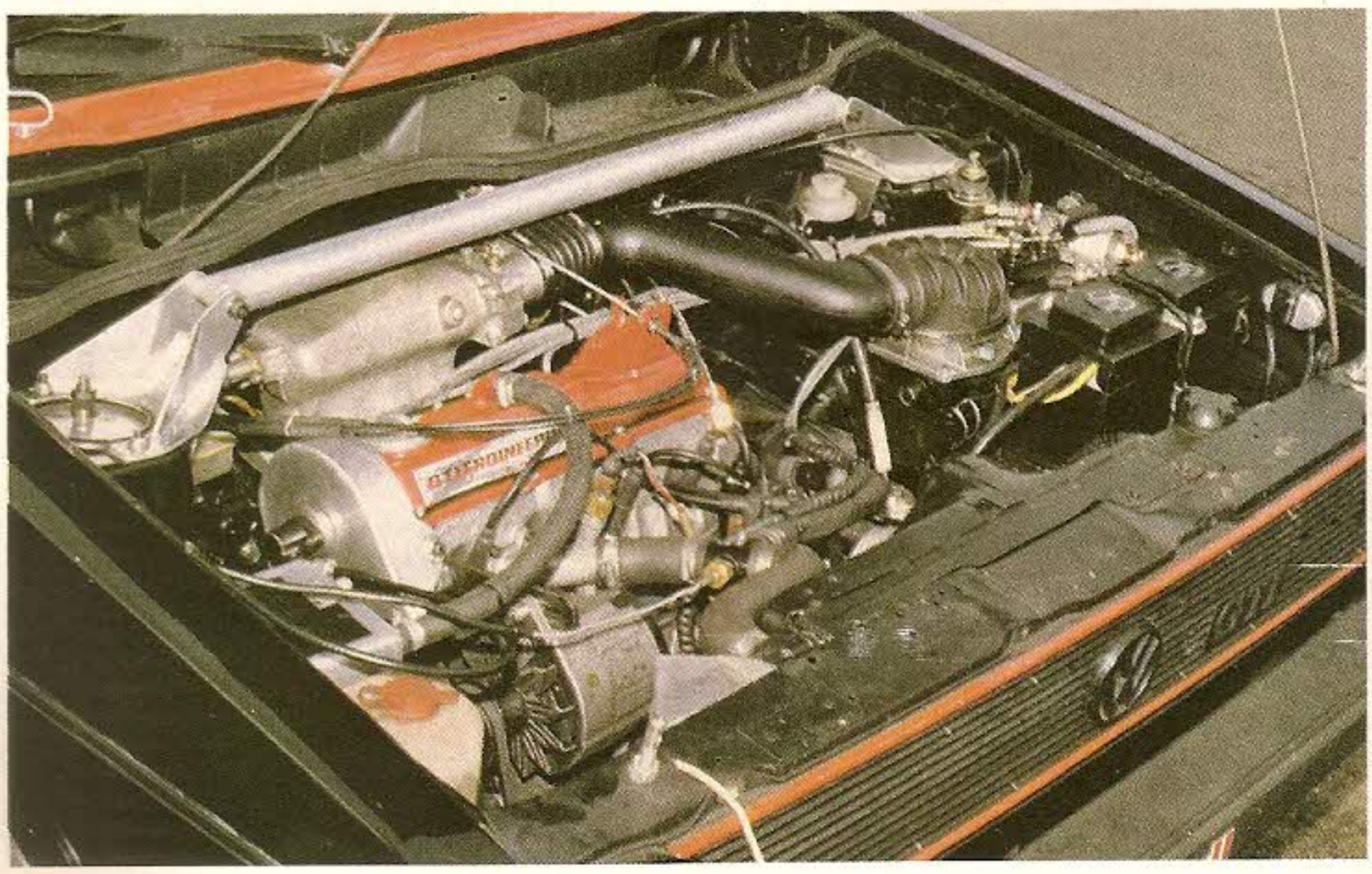


Lloyd's Group 1 Golf, dominant in the 1,600 c.c. class of the British Saloon Car Championship for two seasons. A standard steering wheel is preferred on this car. Note the cross-bracing between the struts. Power output is 145-150 b.h.p.



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two of the easiest to drive, forgiving and vice-free racing saloons I have driven, basic characteristics which they share with the standard GTi road car, but employ in angrier fashion. This is not to denigrate Lloyd's performance; this ease of driving is marvellous up to a point, but those last few fractions of a second which count, and which Lloyd achieves, must be as hard to crack as in any car when you're right at the edge of its capabilities. Where they must score by such ease of handling and predictable behaviour is in race traffic.

The Group 1 car was just like a little motorised roller skate, so easy to point and totally snatch-free through the steering wheel, unusual for a front-wheel-drive car with a limited slip differential; Mini racers, used to their limited slips fighting their little front wheels, wouldn't believe this one. Understeer to any degree was only noticeable at the Becketts hairpin. Generally it was such a well set up car that attitude didn't matter; point it at the corner, squirt the throttle and it virtually took care of itself, so smoothly, with no need to fight the wheel. Not even a gearchange in the middle of Woodcote would upset its line, this being essential because of unsuitable gearing for the circuit. Third was too high for Woodcote, so revs dropped off too far to power out of the corner, while keeping up the revs by going into the corner in second forced a change to third right on the apex, but this was the fastest method of attack. The engine had no power below 4,000 r.p.m. and reached its maximum revs of 7,200 or so in top down the Club Straight. I'm not familiar with the current standards of Group 1 brakes, but I wouldn't have thought Lloyd could have complained too much about these either in performance or stability. All in all a very refined little racing car, even down to a good ride, but capable of times in the 1 min. 8 sec. bracket.

The Group 2 car was much more violent in its power output, but again far from fearsome to drive, once it had dragged itself on to its cam up the pit road, for with this engine nothing happened below 5,000 r.p.m. This one will do a healthy 1 min. 4 sec. on Silverstone's short circuit, an average of 90 m.p.h. or so, which meant that it needed treating with a little more respect. Again the gearing was unsuited to the circuit, though second could be held all the way round Woodcote. But then it was third all the way into Copse, with just a sharp prod on the superb brakes before powering it at the apex. The long third stayed in almost to the clipping point at Maggotts before the Smiths chronometric tachometer showed 8,000 r.p.m, the advised maximum on the new engine (8,500 r.p.m. is the norm) and time for a gear change. Even with the extra power there was no misbehaviour from the limited slip differential, no tugging and pulling through the front wheels to overcome. I gather our photographers enjoyed this quick Golf's habit of waving its inside rear wheel at them round Becketts, a characteristic which felt to do nothing at all untoward to the handling or grip.

Moss thoroughly enjoyed himself in the Group 1 Golf later in the afternoon, while acclimatising himself to front wheel drive, and put in some very competitive times. Vic Elford, there in his new capacity as Audi Team Manager, couldn't resist the temptation to rush round in the Group 2 car and he too came back with a smile on his face. These Golfs were really good fun.

Their future is currently undecided. Though they are still bedecked in Akai colours, the sponsorship has of course moved to the Audis. The Group 1 car will probably be sold (don't bother queuing, there are several potential customers already), but Lloyd is tempted to keep the Group 2 car to run in the European Touring Car Championship, if he can find a sponsor.

The racing programme is only 50 per cent of GTi Engineering's business and the road car side is expanding rapidly since the RHD GTi came into Britain. Since the company started they have offered a RHD conversion service for LHD cars. Their work is mainly concerned with expensive modifications on Golfs and Sciroccos and to this end I had the chance to try their latest creation, an 1,800 c.c., 130 b.h.p. GTi road car shod with Pirelli P7 tyres on 15" ATS rims. I think I exhausted most of my superlatives on the standard GTi road test car elsewhere in this issue, for this conversion has left me lost for words of praise. On the rolling road it produces 110 b.h.p. *at the wheels* at 5,500 r.p.m., the standard car's maximum power *at the flywheel* at 6,100 r.p.m. While the standard car needs 5,500 r.p.m. to produce 85 b.h.p. at the wheels, the 1800 is giving that power at 4,000 r.p.m. Torque is considerably increased too. The effect is electric, the disadvantages nil, for there is no loss of smoothness or refinement, simply performance enough to make it a Porsche-eater. Combined with those incredible tyres, the 1800 power pack gives a new dimension to small car motoring.

The engine is both bored and stroked, to 81 mm. × 86.4 mm. against 79.5 mm. × 80 mm., Mahle pistons being used. A road camshaft developed by GTi is fitted and 40 mm. inlet valves. The fuel injection pressures are modified to richen the mixture, but Lloyd claims that the converted car will average 25 to 30 m.p.g. Full blueprinting and balancing is included. The same amount of skilled work is required as in building a racing engine, so it is necessarily an expensive conversion, at £1,300 plus fitting.

Some of GTi's customers are spending anything up to £10,000 on Golfs and Sciroccos, "people who at one time would have bought BMWs as second cars," said Ricketts, looking at a partly completed £10,000 GTi for a customer with a Porsche 3.3 Turbo as his first car. Some of the individual wares and services GTi offer include electric window conversions, leather trim, Bilstein and Koni suspension kits, a full range of BBS and ATS road wheels from 5½J × 13 to 6J × 15, a boot spoiler (£25), a twin headlight grille (£56), and lowered, strengthened road springs to customers requirements.

I have a feeling that GTi Engineering are going to find themselves in the right business at exactly the right time. — C.R.