

# Slow Slow

# Quick Quick

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Does the fourth car built by BMW Motorsport live up to the reputation of previous M-cars? Brian Laban drove the second generation M5, then voiced reservations





The cosily quiet cellar bar of the Beach Hotel, Pendine, is a fascinating place for anyone with an interest in motor sporting history. On the umpteen-mile stretch of firm, flat sand outside, fringing Carmarthen Bay in South Wales, the World Land Speed Record was raised four times between September 1924 and February 1927, starting at 146.16mph, finishing at 174.88mph. Both those marks were set by Sir Malcolm Campbell, but in between, in April 1926, the record was raised to 171.02mph by flamboyant Welshman Parry Thomas in his chain-driven 400hp special, Babs.

The walls of the Beach Hotel bar are almost entirely lost under photographs of those record runs and others, some of them relatively recent and a few of them ending in

catastrophe. One in particular ended in a tragedy with a deeply local impact. Exactly 63 years and two days before we took our BMW M5 onto Pendine Sands to have its photograph taken in the watery sunshine of an icy, wind-blasted day, Thomas had been killed on this beautiful stretch of Welsh coast. While trying for 180mph or more, the driving chain of the mighty Babs snapped and decapitated him as it spun away.

In the mid 1920s, those speeds were the ultimate frontier; today our luxuriously equipped saloon, with leather seats and electronic everything, would run to 155mph as a matter of course – and would stop at that only because BMW, in deference to the German government, have voluntarily restricted it to doing no more. Without that chip-based limi-

tation, the M5 wouldn't be too far short of Thomas's April 1926 mark of 171.02mph, but it would also transport four people in considerable luxury, corner, stop and ride with the utmost poise, and do it all with huge reserves of safety and little more drama than sitting in your favourite armchair. Such is modern performance.

And like many of the cars of the better-heeled spectators who always lined venues like Pendine or Brooklands in the 1920s and 1930s, the M5 is 'bespoke', as hand-built as any car is nowadays, not in the old traditional manner exactly, but with the same purpose – to give the discerning buyer an expensive edge over the common herd.

It's the fourth 'hand-built' production model to emerge from BMW Motorsport GmbH, following in the



Photography: Michael Ballie



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wheel tracks of the M1, the M3, and the original M5, as introduced in 1985.

Motorsport now have two works; the first, established in 1972, in Munich proper, and the second at Garching, a Munich suburb. The M5 is built at the latter and based on 535i shells from the main factory at Dingolfing. They arrive complete with radiators, trim and plumbing, but the trim and seats are removed before the shells are given the Motorsport treatment. Each car is fitted to an individual jig and assembly is done on garage lifts rather than on normal assembly lines – each car being the responsibility of one mechanic up to the rolling chassis stage, using engines and suspension assemblies prepared on site.

Completed cars are driven back to the main shop for rolling road testing and every car is also road tested over a 30km route before delivery. Every

car is pre-ordered to an individual spec by the customer, and in terms of trim, at least that can be almost whatever you're ready to pay for, including a leather trimmed boot if that's your whim.

The M1 and the M3 were built with motor racing in mind, the M5 most clearly isn't; BMW haven't used the 5-Series in racing since the early 1980s, when the regulations favoured the 528i and BMW made the most of them to win their customary European Touring Car Championship. The single word that first springs to mind, though, as you settle yourself into the plush cabin of the M5 and survey all that surrounds you is 'big'. And big, for racing at least, is no longer really beautiful.

For the road, of course, the priorities are different, and the M5 offers a combination of virtues which leave it with few, if any, mainstream chal-

*The fourth 'hand-built' Motorsport car boasts BMW's classic six, but is less of a racer than its predecessors*





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lengers. As BMW (GB) managing director Paul Layzell puts it, 'the M5 is a sophisticated merger of performance and refinement in an understated package for the discerning few'.

### Built by hand

'Few' is right, for the new M5 is being built at a rate of just 2000 cars a year, and only 200 right-hand-drive examples will find their way to Britain in 1990 – at a list price of £43,465 (plus, in our case, £487 for electric seats with memory, and £515 for BMW's hi-fi speaker system, for a total of £44,467).

If you wanted to, you could add £3194 for all-leather upholstery, £955 for automatic air-conditioning, £243 for front-seat heating, £643 for thief-proofing, £348 for cruise control, £102 for a dipping mirror and £104 for a rear window blind. On the other



hand, ABS, self-levelling rear suspension, a limited-slip diff, manual air-con, trip computer and many other worthwhile odds and sods are standard equipment – all on top of across-the-range 5-Series niceties like central locking, electric windows, tinted glass, power steering and so on. You'll need to find another £420, too, for delivery, road tax and number plates, so your basic choices range from £43,885 out of the box, to £50,476 for a fully loaded car.

At a minimum of £12,790 more than the otherwise top-of-the-range 5-Series, the 535i Sport, the M5 has to be a good deal more than just one more hyped up cafe-racer, and, of course, it is.

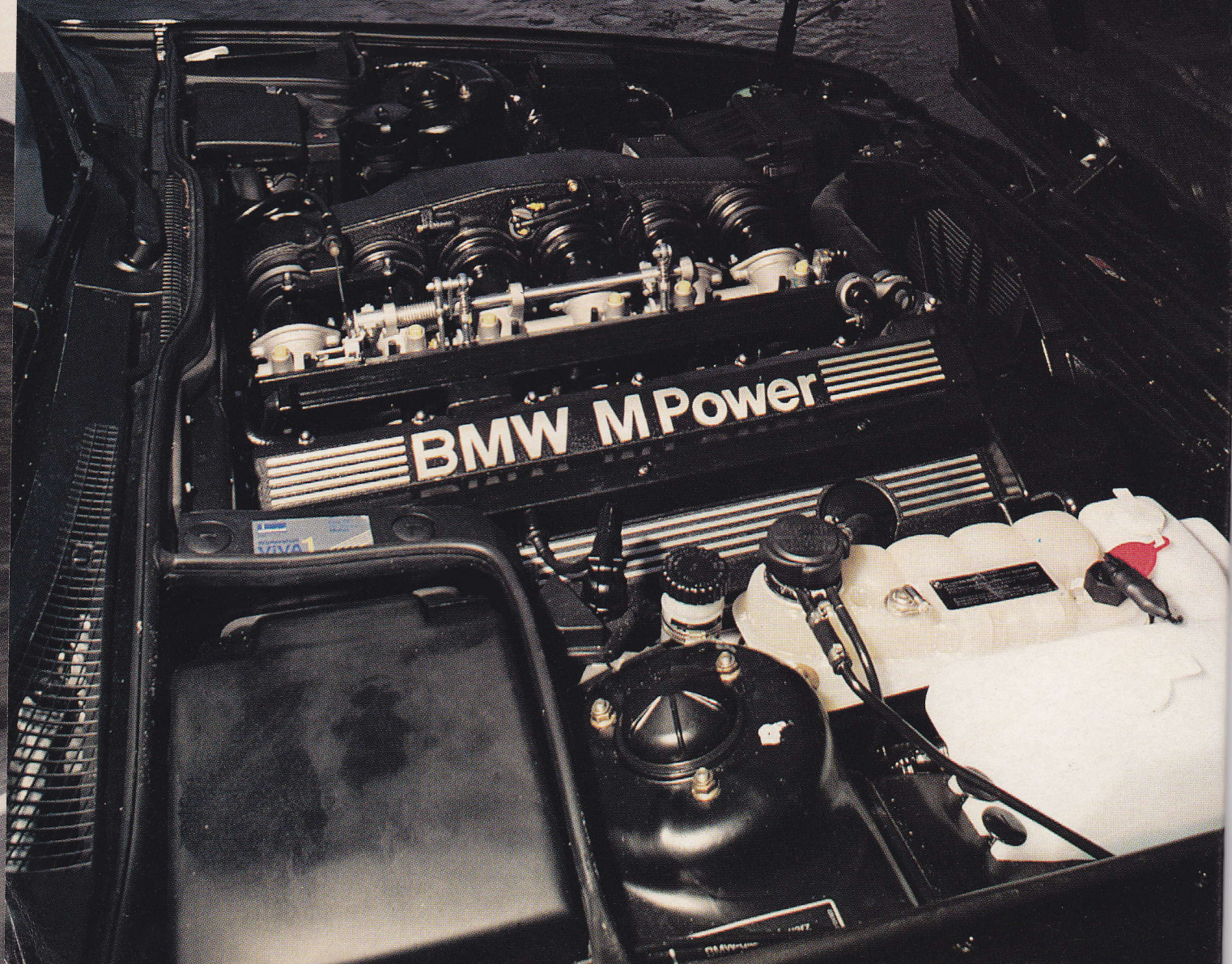
You don't need an engineering degree, for starters, to be impressed by what lurks under the bonnet – just one look generally prompts sharp intakes of breath and muttered exple-

*Although quick against the watch, the M5 is difficult to rouse, but its handling comes alive when pushed hard*





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*The new M5 is distinguishable from a 5-Series car by its lower ride height, discreet badging and distinctive wheels*

tives from anyone you care to show it to. And the more knowledgeable you are, the more impressive it is.

For one thing, it virtually fills the entire underbonnet space: the back of the black cam covers with their polished alloy ribs run almost right up to the bulkhead, the front stretches towards the radiator and its aircraft propeller-sized fan. The whole near-side of the engine bay is filled with the imposingly complex six-port layout of the Bosch DME injection, everything around is filled with ancillaries and accessories.

A miracle of packaging, in fact, and in case you've still missed the point, there's the classic label writ large in cast polished alloy along the upper cam cover, the bit that makes the M5 so very different from any other 5-Series (including the new 'cooking' 24-valve twin-cams), the bit that says, simply, 'BMW M Power'.

This isn't just an uprated six with its origins from lower down the range, this is the ultimate BMW six, a race-bred engine dating back to the mighty, mid-engined M1 'Procar' of

the late 1970s, and steadily developed ever since to remain one of the world's great sporting engines. For the new M5 there is another new version – bigger, more powerful still, more refined and environmentally (with standard three-way catalytic converter) cleaner too.

The 24-valve twin-cam version of the classic BMW six was first seen in 1978, in the M1, with mechanical injection and mounted vertically. In 1984, for the M635CSi and the first M5, it was updated with Bosch Digital Motor Electronics management, and the latest version is updated again, to give more power, more torque with a better spread, cleaner exhaust and better economy. The stroke has been increased by a couple of millimetres (to 86.0mm) while the bore has stayed the same, at 93.4mm. That gives a capacity of 3535cc, which is the largest six-cylinder BMW have ever offered, and the most potent.

There are different camshafts, with more overlap, and a heavily revised inlet layout which has been redesigned from the air cleaner inwards. Most visible are the racing-style individual trumpets, which now have new injector nozzles and all-steel fuel pipes, but there are bigger ports too, reshaped with the help of CAD technology, and there's a new housing for the hot-wire air-mass metering – the whole lot designed to reduce resistance to inlet air flow.

Cleverest of all the new tweaks, perhaps, is an electronically-control-

led auxiliary throttle butterfly which exploits the inlet manifold resonance charging effect by effectively varying the length of the inlet tract depending on engine speed and load. The new exhaust system is also tuned to exploit its own resonance effect, while at the same time using diffu-



sers on the catalytic converter housing, plus a version of the big V12-type silencer, to meet even the strictest noise regulations.

That takes away some of the immediacy of the engine when compared to the raw power of the previous M5, and this engine is a good bit smoother than that raunchy predecessor, too, with a lightweight flywheel and no less than 12 counterweights balancing the forged crank. It revs higher, to 7200rpm, and ranges wider, with six per cent more torque and a more even spread in the crucial range between 3000 and 6000rpm.

At first, rather than being a bonus,





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it all adds up to a slightly cheated feeling for anyone who remembers the overt aggression of the original, and substantially lighter, M5. The rounded, soft-edged newcomer feels bigger and more pampering; there isn't the same instant shock of aural excitement through the new environment-conscious silencing and de-toxing. But under it all there's a new power peak of 315bhp at 6900rpm – 29bhp, or ten per cent, more than the previous 286bhp M5 engine in non-cat form, or a hefty 55bhp (that's 21 per cent) more than the older catalysed engine.

Yet it takes a little while to come to terms with just how much potential lurks within this car. Remember that allusion to understatement? Well, that is almost an understatement in itself. The M5 is unlikely to aggravate anyone by looks alone, it's just another sleek 5-Series BMW with a

touch more muscle – subtle, not silly, with just a slightly lower ride-height, distinctive wheels and the classically discreet M badges.

Inside, there are a few bits to distinguish the M5 from run-of-the-mill 5s, but nothing terribly dramatic. There's a thick-rimmed, three-spoke M-style wheel, bigger numbers and an oil temperature gauge rather than an 'economy' gauge on the otherwise familiar 5-Series dash, and (unless you chose the £3194 option) seats with leather sides but cloth centres – in a pale grey flecked with M-Technic stripes that give a rather incongruous MFI look to the upholstery. Choose the clever fixed rear centre armrest with pull out oddment drawer and the car becomes strictly a four-seater.

So it's a comfortable and well equipped car, for sure, but there's a subtlety about it which might cloud the

*Although competent, the latest M-car has neither the lightness nor the lightning reflexes of its stablemates*

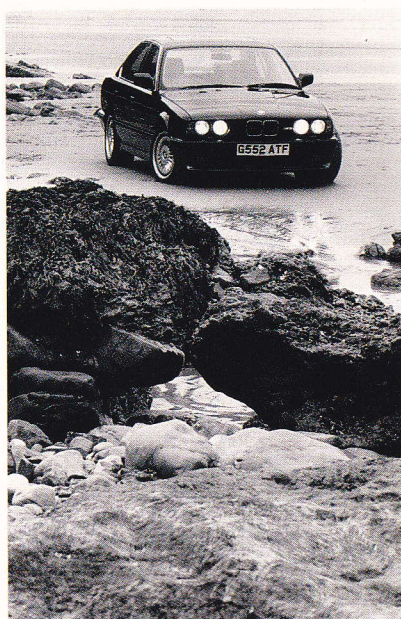




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first opinions of anyone looking at it as the world's fastest saloon. Yes, the numbers say it's massively quick, but is this really an M-car? Is it really lean enough or has it gone the way of all flesh, to rounded complacency, the way so many great sporting cars eventually do?

Setting off into the early morning rush, bound for a rendezvous 150 miles and just two hours away, with



traffic clearing beyond Heathrow and the clock getting ahead of where we're supposed to be, but there's a strange feeling again that we're having to be very insistent in the asking. According to our Millbrook figures, the M5 is exactly as quick as BMW say it is, and that is very quick indeed for a big, four-door saloon; they claim 0-62mph in 6.3 seconds, we had no trouble at all in reeling off 0-60 in 6.1. That top speed is electronically limited to 155mph, our runs round the high-speed bowl saw 154.6mph laps, notwithstanding the substantial tyre scrub that's starting to build at those sort of numbers. Yet on the road there's still that nagging feeling that you're forcing the performance, it's not coming looking for you.

The deep engine burble and the overall feel suggest, maybe, that very high gearing is part of the equation, but at barely 25mph per

*Unless one chooses the £3149 all-leather upholstery, the interior has little to distinguish it from an ordinary 5-Series*

plenty of crazy London crawl to negotiate before the catching-up high-speed cruise of the M4, there were unexpected seeds of doubt. Should an M-car really feel more like a limo than like a sports car? Why do you have to work so hard to find the sharpness, the instantaneous punch that used to be the hallmark? It's not such a tight new engine, there's mileage on the clock, but the initial impression is terribly disappointing, as much because of the stifled remoteness of the action as for that perceived lack of sharpness.

### Motoring lethargy

And it still feels so big and lazy in traffic – even to the extent of almost stalling once as the webs of sleep rolled away, while waiting for the non-existent automatic to change gear while trickling up to a junction. The real gearbox is the five-speed 'sports' manual, with a conventional rather than dog-leg layout for first gear, which saves you having to think too hard. And there isn't even an automatic option.

The clutch is quite heavy, as befits a unit which has to cope with transmitting 315bhp to 3680lb of car, but it's smooth and consistent. So are the brakes in traffic, so is the nicely weighted power steering and the precisely chunky gearchange; all smooth and heftily consistent but all somehow stifling the feeling that you really want to feel.

Onto the motorway now, with the





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1000rpm in top and not quite 20mph in fourth, that isn't it, not with as much as 315bhp on tap.

In fact the figures all across the board are every bit as impressive as they ought to be – 100mph in 14.9 seconds, for instance, a standing quarter in 14.7 seconds at just a whisker short of 100, no lack of punch off the line, with 30mph in only 2.2 seconds, and certainly no lack of in-gear performance as the fourth/fifth gear increments show. But still it's just a feeling.

The feeling that you need to use the gears to get the benefit of that iron fist punch.

### **Sleeping giant**

Even on the motorway, our M5 wasn't a car that we suddenly kept finding on the wrong side of 100mph without thinking about it, the way

you do with so many cars in this performance league. It doesn't compute. How can a car that is demonstrably as super-quick as this against the watch feel so hard to rouse on the road? Maybe it's a case of refinement gone overboard.

The performance spread is massive, yes, but it's oh-so even, with no steps anywhere, no feeling of coming on the boil, just a massive, low-key insistence coming from somewhere deep within the velvet cocoon. To get any real punch from the engine you need to use the gears and to be beyond the 3-4000rpm mid-range, and then, yes, there's a real surge, with accompanying throaty sound effects, but that means over 100mph in top before the feel is there. With the electronic cut-out set at 7200rpm, that leaves you with a narrower than expected band of real responsiveness for a 3.5-litre

*Parry Thomas died on Pendine Sands trying to achieve speeds which the M5 will attain with an air of complacency*





24-valve twin-cam of this pedigree.

Are the old muscles giving best to the spreading, comfortable girth of respectability? Still doesn't compute, the numbers say gung-ho, the heart says ho-hum.

And then, of course, you have to hit the real roads – off the end of the M4, onto the quick Welsh primaries like the A48 to Carmarthen and the gradually smaller routes beyond, down towards Pembroke. Maybe the really fast A-roads are where the new BMW M5 is in its element, the arena in which the strangely stifled six-cylinder punch is brought out of hiding by the superb chassis, and the gentle giant turns into a real tiger.

Well, yes, up to a point, but you still have to work at it – it certainly doesn't flow naturally. It's just such a shame that it's the trip computer and the big numbers on the dash that tell you how quickly you're going, not the adrenalin rush or the ear-to-ear grin. It's massively, massively competent, and maybe one of the greatest sporting saloon car chassis in the world, but it is left to the driver to do all the work.

That said, fast, open roads are where the M5 is at its best. The basic suspension layout is pure 5-Series, with MacPherson struts and lower wishbones at the front, semi-trailing arms at the rear. For the M5 the springing, gas damping and both front and rear roll-bars are all beefed up, the chassis is lowered by 20mm, there's less steering assistance, self-levelling at the rear (to maintain constant camber with heavy loads), and the limited-slip diff. The 5-Series chassis is already one of the world's best, the M5 is well worthy of the Motorsport badge – again with the proviso that the driver is willing to do his or her bit.

On the sort of road in which a quick driver revels, that means matching the M5's competence with your commitment; it's not a car to pussy-foot in if you want your money's worth. At first, like the power, the handling can feel a little dead and remote, but drive it harder and it comes alive. The more direct steering has more weight, more feedback; the car turns in well, but with noticeable roll towards the outside leading edge in sharper turns, which can feel ponderous at first. It isn't really, though; just another feeling.

## Wasted performance

The brakes are on your side; ventilated discs all round, with ABS as standard. They get further cooling help, too, from the specially designed wheels. Those have a very open five-spoke pattern in the wheel itself, and what you actually see from the outside is a bolt-on, pressure cast

magnesium cover, with two rows of concentric blades which give both axial and radial airflow. The covers are 'handed', and the spare is left naked, but the swap-over looks relatively simple. According to BMW, they improve airflow at the discs by around 25 per cent, and we never had the slightest problems with fade, even on the downhill runs out of the Black Mountains.

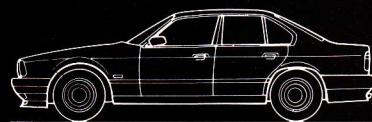
There, the grip on 235/45ZR17 Michelins (on standard 8J rims) was very impressive indeed, and even the ride is perfectly acceptable – supple over big bumps, a bit thumpy over smaller pock-marks, with more emphasis on the damping than on the springs. Its manners towards the limit are impeccable, with minimal understeer even when pressed very hard, and flawlessly smooth and communicative transition to oversteer beyond that, especially under power. It's so controllable in this mode that you can almost make it dance on the road, sharing input between wheel and throttle pedal to balance slides and darts without fear of evil temperament.

But there's a caveat again. Pace needs space; it is big, and however brilliant the handling, that first intimidates on smaller British roads and even with familiarity always defaults towards caution – especially in less than perfect conditions, where picking up a sudden wet or greasy patch could be a major embarrassment. And what it's least good at is constant, swinging direction changes, where the bulk is always on the move. It's massively competent, but it doesn't have the lightness and the lightning reflexes of the M3, for want of a better comparison, nor quite even those of the original, lighter first-series M5.

Perhaps in the end what we're looking at here in terms of overall appreciation is a touch too much anticipation. The fastest saloon car in the world? Yes, almost undoubtedly. But the most exciting? No, 'fraid not. There are times when BMW's own description of the latest M5 as 'A Master of Understatement' is just too close to the truth for a car with such sporting credentials. 'A sophisticated merger of performance and refinement in an understated package for the discerning few' is all unarguable, but there are times when you can feel like a passenger, times when you're just not in the mood to meet the demands, to rise above the nagging intimidation. Times, in fact, when the new BMW M5's massive capabilities might be wasted just because the bait, however tempting, is a little bit too far away to keep rising to.

It's a strange thing to pay so much money for. ○

## BMW M5



All tests with a crew of two and full tank of fuel

### THROUGH THE GEARS (seconds):

0-30mph	2.2	0-70mph	8.1
0-40mph	3.5	0-80mph	10.1
0-50mph	4.8	0-90mph	12.3
0-60mph	6.1	0-100mph	14.9

STANDING 1/4 MILE: 14.7sec

TERMINAL SPEED: 99.5mph

AVG TOP SPEED BANKED CIRCUIT: 154.6mph

### ACCELERATION IN 4th/5th (seconds):

30-50mph	6.2/8.5	60-80mph	6.6/9.5
40-60mph	6.7/9.1	70-90mph	6.7/10.0
50-70mph	6.1/9.0	80-100mph	5.5/9.4

### MAX SPEED IN GEARS

FIRST	39mph	FOURTH	134mph
SECOND	64mph	FIFTH	154.6mph
THIRD	99mph		

OVERALL FUEL CONSUMPTION (CORRECTED): 18.6mpg/4.0mpi

PROVING GROUND FUEL CONSUMPTION (CORRECTED): 11.3mpg/2.5mpi

GOVT FIGS: Urban 16.5mpg; @ 56mph 34.5mpg; @ 75mph 30.0mpg

TRACK CONDITION Dry

TEMPERATURE 10°C

WINDSPEED 19mph

ATMOSPHERIC PRESSURE 1013.0mb

## SPECIFICATION

ENGINE TYPE: In-line, six cylinder, longitudinal

DISPLACEMENT: 3535cc

BORE: 93.0mm

STROKE: 86.0mm

COMPRESSION RATIO: 10.0:1

MAX QUOTED POWER (DIN): 315bhp @ 6900rpm

MAX QUOTED TORQUE (DIN): 265lb ft @ 4750rpm

BHP PER LITRE: 89.1

POWER TO WEIGHT RATIO (UNLADEN WEIGHT): 191.7bhp/ton

POWER TO WEIGHT RATIO (TEST WEIGHT): 177.9bhp/ton

FUEL SYSTEM: Bosch DME electronic injection/management

CYLINDERS: Cast iron block seven main bearings

CYLINDER HEAD: Aluminium alloy, four valves per cylinder operated by twin OHC

GEARBOX: Five speed manual

### GEAR RATIOS

TOP:	0.81	2nd:	2.08
4th:	1.00	1st:	3.51
3rd:	1.35	Reverse:	3.71

FINAL DRIVE RATIO: 3.91

FRONT SUSPENSION: Independent by MacPherson struts, lower wishbones, coil springs

REAR SUSPENSION: Self levelling, independent, by semi-trailing arms, coil springs, anti-roll bar

BRAKES: Ventilated discs front and rear

STEERING: Power assisted, recirculating ball

WHEELS AND TYRES: 85 X 17in light alloy wheels with cooling covers; 235/45 ZR17 Michelin MXX

UNLADEN WEIGHT: 3680lb

TEST WEIGHT WITH CREW AND EQUIPMENT: 3967lb

WHEELBASE: 108.7in

TURNING CIRCLE: 36.0ft

FUEL TANK CAPACITY: 19.8galls/90 litres

BASIC PRICE (INC TAX): £43,465

PRICE AS TESTED: £44,467

### OPTIONAL EXTRAS FITTED TO

TEST CAR AND PRICES: Electric seats £487, Hi-Fi speaker system £515