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MOTOR SPORT

Rally-raids: constructive or disruptive?

Robin Herd interviewed

Two decades on in Formula One

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ROAD TEST

Everyday supercar

Can any Ferrari in the current range be called a family car? If it can, then the 2 + 2 Mondial t is that *Pininfarina*-designed coupé.

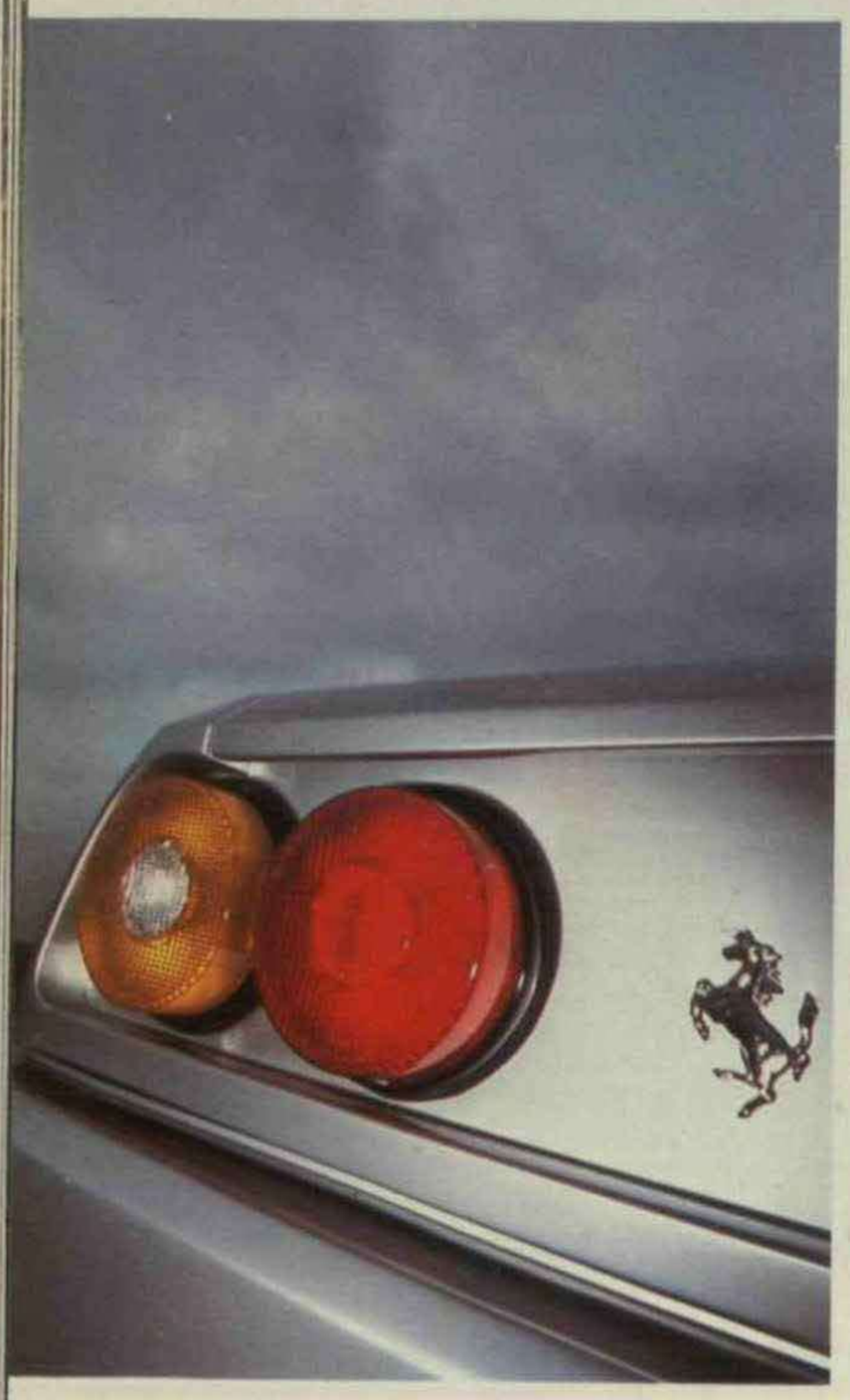
It has never been easy for Ferrari to meet the tastes of the 2 + 2 cognoscenti, for its strict two-seaters always seem to steal the limelight. Ferrari's mid-engined V8s, back to the 308 GT4 2 + 2, always struggled for recognition alongside the 308 GTB/QV series. Today the 348 tb remains the most popular choice amongst British market Ferraris, but since the now TKM-owned Maranello Concessionaires is still not accepting orders for new Ferraris, any new Ferrari, this is a somewhat academic statement. The small 't' suffix to the Mondial name plate is not for the usual turbocharger connotation, but to recognise the transverse mounting of the gearbox behind a longitudinal 300 bhp V8. The powertrain is shared with the two-seater 348 t, providing a claimed 158 mph in the Mondial. As the cheapest Ferrari in Britain, a positive snip at less than £70,000, the Mondial t ironically also boasts the longest list of showroom incentives in the Ferrari line, items such as power steering, air conditioning, ABS, central locking, partial leather trim and electrical operation of side glass and mirrors are included. There is more, but the point is that the Mondial provides a well padded contrast to the £197,500 F40 (still in production for the USA), where even a brake servo is absent in the interest of purist driving pleasure.

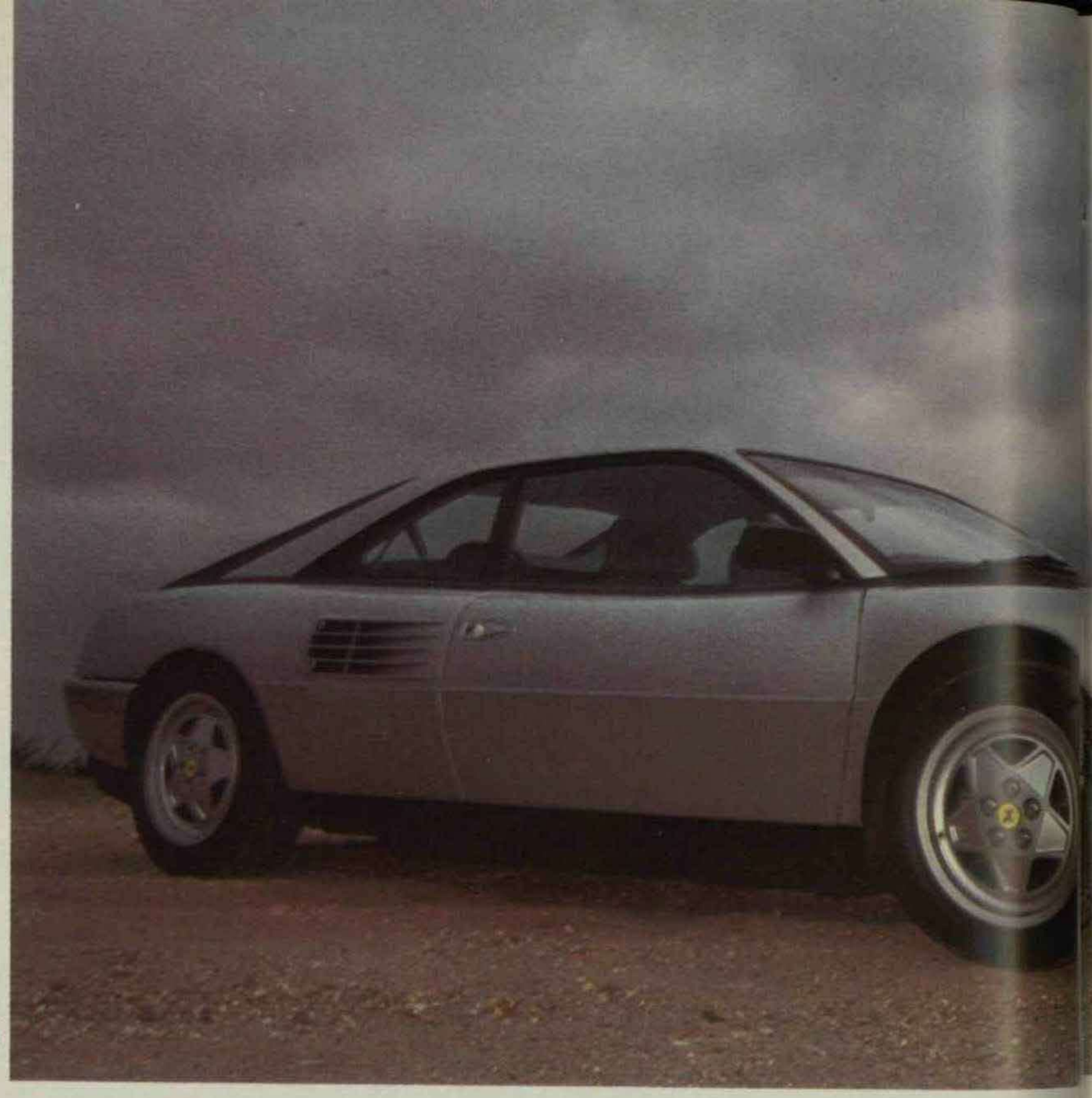
Does the Mondial measure up to a Ferrari pedigree, or is it more redolent of Fiat product planning? We were allowed a long weekend to find out, one that included a trip to our test track as well as the Welsh borders.

The UK range

The £69,310.31 Mondial t is one of the oldest bodies offered by Ferrari in 1991, having debuted as a three-litre in spring 1980. Thus it has been adapted to technical and body introductions at regular intervals, taking on the four valves per cylinder version of the V8 in 1982, listed with the alternative cabriolet soft top from 1984 (which now costs £74, 720.21 in the UK) and implanted with a 3.2-litre/270 bhp V8 from 1985.

The 3.4-litre layout tested here was introduced at Geneva Show, 1989. An automatic clutch system from Valeo was shown at Paris in 1991: it is not listed for British customers, but this ingenious unit (working upon vacuum servo principles) has been promoted actively for North American customers. We used the transverse five-speed gearbox, equipped as standard with a ZF limited slip final drive. The only extras on the test car were the slowest electric sunroof we have ever commanded (£1,378.57) and a leather dashboard finish for £969.96. Other Ferraris listed for Britain are the popular 348 in open and shut form, but we are only talking of less than a total 300 Ferrari imports per annum in the rigidly controlled production totals, so the 'popular' adjective is simply to define the model that sells most on our home market. The 348 tb (closed coupé, b for Berlinetta) would retail for £76,534.12 and the 348 ts (s for Spyder, convertible) for £78,348.02. I say "would" because Alan Mapp, spokesman for the official importer, reports that waiting lists are still measured "by the year" although he admits that the recession has seen customers ask for their deposits back, or for a place further down the priority lists. As an average, we understand that the primary effect of the recession has been to cut Ferrari delivery times from seven to five years: not in the Morgan class for tardiness, but they are a mite more expensive.





Photography: LAT

The real supercar Ferraris in most minds, rated as capable of 171 and 201 mph respectively, comprise the £127,005.25 Testarossa, and the £197,501.93 F40. The Testarossa is no longer made: a basically similar 512 TR successor has been unveiled, existing orders merely transferred for deliveries that will begin next summer (lhd production from February). The powertrain remains based on the Boxer 12, now yielding 422 bhp from five litres.

Our test car came from the sole importer for Britain, Maranello Concessionaires at Egham in Surrey. We were also allowed a few hours to look around the new multi-million pound technical centre.A detail examination of the five Ferrari F40s on the premises showed a number of running changes which reflect the lessons learned about public road practicalities in a production run of more than 1100 that continues in modified form for the States. Star exhibits are the restoration facilities that are literally capable of fabricating and jig building a complete Ferrari, even the most abused,'chopped top' convertible conversion.

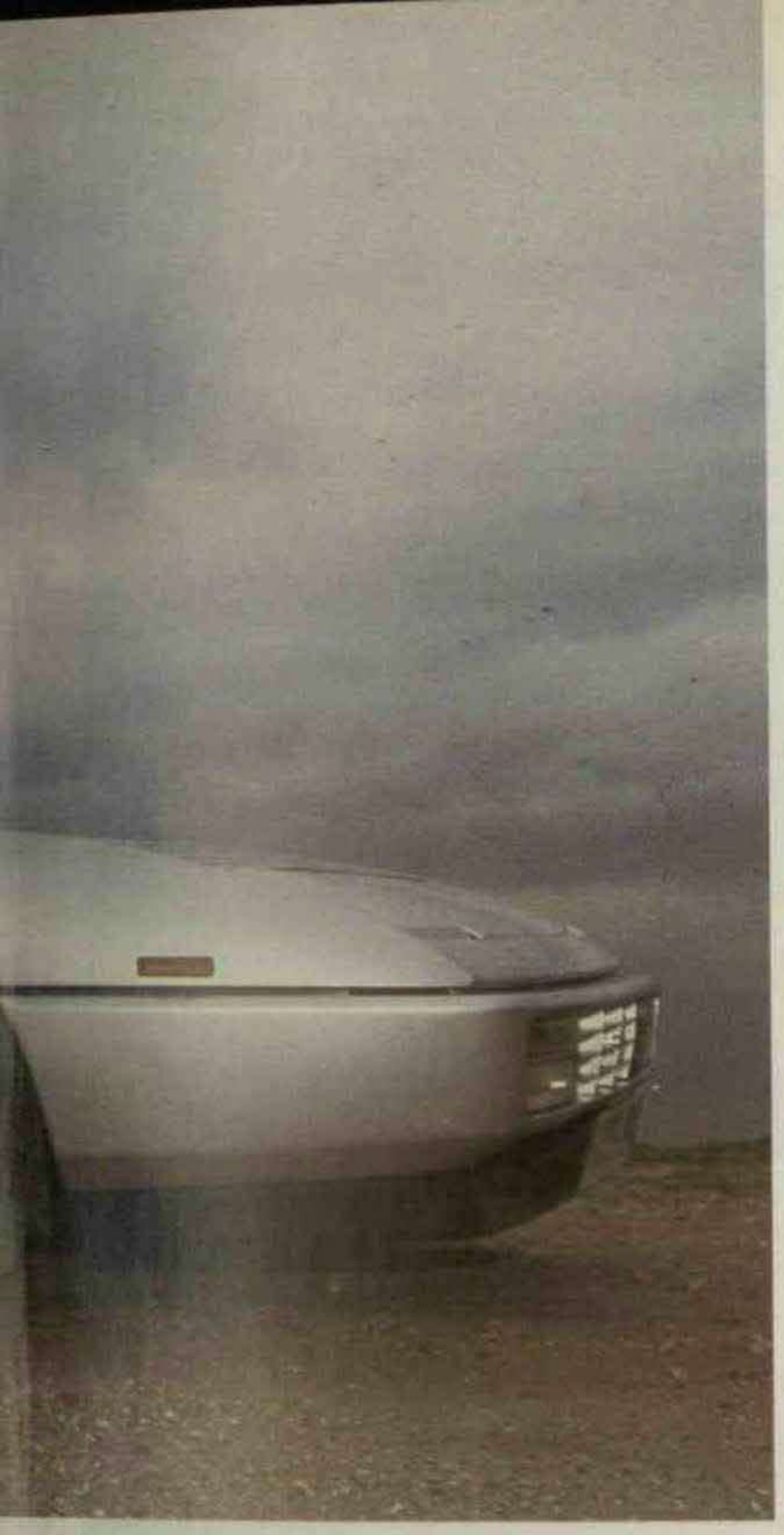
Technical analysis

The Ferrari legend has been built around 12-cylinder engines of varying configurations, but the V8 at the heart of the Mondial and 348 ranges is a far cry from those operatic performers. The competitive heritage emerges in items such as the generation of 88 bhp per litre, dry sump lubrication and a 7500 rpm limit for its short stroke 3.4 litres. The 300 bhp generated at 7200 rpm has to shift over 3300 lb. The company claims a Mondial accomplishes 0-62 mph in 6.3 sec with a maximum of 158 mph, figures we found credible after our test session.

The body (left and top) is built by Ferrari to a Pininfarina design.

There is a handbook recommendation to check oil level every 500 km/310 miles and replenish from the two containers of Agip sent out with every new Ferrari. After 704 test miles the contorted dipstick reported no need for replenishment. In other key areas the alloy V8 is a much more routine motor, its twin overhead camshafts on each bank driven by one belt and its fuelling and ignition needs efficiently managed through the thickest of London Christmas traffic by Bosch M2.7 Motronic. The technical novelty amongst the mid-engined classes is the disposition of engine and gearbox, Ferrari adopting a longitudinal engine location and transverse gearbox in 1989 for this model.The advantage is a particularly compact power pack when installed in the 348, the gearbox/transaxle wrapped tidily aft of the V8.

Power is taken from the crankshaft directly through a gearbox mainshaft, which has the flywheel attached on the far side of the gearbox, not the engine crankshaft output, and the flywheel is a twin mass unit that allows power transference via a clutch to a transverse pinion that turns the power through 90 degrees.The rest of the gearbox is described as "a pretty conventional twin shaft unit" by Maranello technical director Peter Whittle. He adds proudly that "the plus point in service is that the clutch can be changed in 20 minutes, no bother." The body is built at Ferrari to a Pininfarina design and features a mixture of external steel panelling and the traditional Ferrari tubular and box section chassis sections; the company also panels its underbodies to provide the equivalent of a racing car's flat form. The aerodynamic drag factor is not quoted (above 0.36Cd is the informed guess), but it is worth noting that this Ferrari is significantly lower, wider and heavier than the two Porsche 911 derivatives tested last month. When Ferrari built a 2+2 it chose a generally bulkier platform (wheelbase is in the middleweight saloon car league at



104.3 in) than the 911. The traditional Ferrari steel chassis is massively rugged tubular and box section structure that shows up well in the restoration booths of Maranello. This plump approach increased comfort levels rather more than the three-position electro-hydraulic damper ride comfort adjustment selector provided in the cockpit to activate a Bilstein-Ferrari system.

Action

Although the handbrake is mounted to the right, in the perfect trouser turn-up ambush position, and works along fly-off principles, there are few other tricks to operating the Mondial.

These days, even the steering column adjusts (vertically) and you soon adjust to a markedly offset driving position, one that does allow room for a decent footrest. There are far too many controls, and far too much Fiat in the switchgear, just as there are too many ex-Rover ancillaries in a Lotus Esprit, for any Mondial owner to become unduly snooty about his purchase. It is also similar to the Lotus in the fact that the instrumentation is far from clear, but the reason is different. The six Veglia dials of the Ferrari (complete with prancing horses on 180 mph speedometer and 10,000 rpm tachometer) are finished in an orange hue which renders the smaller gauges almost illegible, whilst the fuel gauge needle is afflicted with extreme melancholic bouts of depression followed by equally annoying bursts of optimism about how many of the 21 gallons remain at a steady 15.5 mpg.

At night, when the instrument lighting adds to the confusion, the Mondial would be an easy car in which to run out of fuel, despite the 20-litre reserve. Ferrari has adopted the Japanese habit of cockpit release buttons with such enthusiasm that there is a line of them across the centre console to cover the plastic fuel filler lid (a stark contrast to the beautiful spun aluminium caps of oil and petrol reservoirs, each a work of Ferrari-embossed art), boot lid, engine cover and front luggage area. Inspect the contents of each compartment and the slim boot proves sufficient to take weekend or sports bags, whilst the front compartment is unusually spacious because there is no spare wheel or tyre at all! Instead, an exquisite brown leather satchel is strapped behind the capacious front radiator with its twin fans. Within is a useful tool kit and selection of all the spare bulbs you could need, plus a canister of gunk to squirt within the (completely) deflated tyre that will get you home at speeds beyond that of a Run Flat tyre or an emergency slimline cover.

A modest set of keys, one of the few items to lack the Prancing Horse insignia, command an engine that starts promptly and idles at a slightly rapid 1000 rpm. The car is well equipped to deal with adverse weather conditions, having excellent pop-up lights and windscreen washer that imitate the old rallycross trick of mounting the jets on the operating arms. Also, the heating and ventilation are notably effective, along with the electric elements in the U-curve of the rear screen. The front screen bears a deep blue shaded band at the top and the only time you are really conscious of the bonnet extremities is when the headlamps are raised.

Cabin trim is erratic: we benefited from a leather finish instead of plastic to the dash panel, yet two unprompted onlookers commented on its spartan appearance. The handbrake and its surrounds are in a variety of plastics and fits that do not belong in this price bracket and the variety of cabin noises was more akin to an orchestra, albeit an unusual one, for there were gulps (distressed ventilation valving?), buzzes (excited by particular low speed engine rev ranges) and some authentic transmission speeches. These covered everything from a gentle whinge to an occasional hard gear whine that was a modest imitation of the toothed audibility of competition car transaxles.

The barren cockpit is somewhat at odds with the opulence of leather seats.

There was one overwhelming cold start bugbear: the traditional Ferrari aversion to selecting second gear with anything other than steamy Agip temperatures. It sounds simple enough, just miss out second and take advantage of the excellent torque curve and closely stacked initial ratios (fourth and fifth are widely spaced) to putter along for the couple of miles that it takes to warm-up from four- to five-speed gearbox. In fact the four-speed characteristic made us feel pretty vulnerable after a clean start at minus five degC, for 400 yards after said ignition, the Ferrari would face the morning qualification session that takes place on our local dual carriageway, hard pushed to blend in with the traffic when we were using a self-imposed 3000 rpm (the oil pressure soaring above the usual 70 psi when cold) and were forced to shift from 3000 rpm in first to little over 1500 in third. This was not a fault peculiar to one Ferrari. We were warned about the trait when we took delivery and can actually remember it occurring on other Italian brands with all kinds of power train layouts, particularly front-engine, rear-gearbox Alfa Romeos. That aside, driving the Mondial was an unmitigated pleasure.

The driving position, offset aside, was a pleasant surprise, as was the vision offered by the Mondial's low (it cuts a couple of inches from the roofline of a 911) but excellently glazed cabin. The only operational snag was that the seat upright moved half an inch or so under braking and acceleration, but we learned to live with that. Initially the steering simply seems like any other power assisted device for tackling tight confines, assitance being vital because of the poor lock. A welcome opportunity to cover an hour's run on remarkably empty A and B roads revealed the truth: Ferrari engineers have wrought a power system that chats constantly with the driver, yet the vehicle itself remains stable despite the constant messages at the wheel rim about the cambers and surfaces that are passing beneath. The Mondial also rides over bumps and crests equably, so much so that we only needed to resort to the 'soft' setting on the cockpit adjustable Bilstein layout for the slowest and roughest of city streets.

The 'hard' position was only selected for maximum speed and some track handling research. The steering has to be outstanding in its perception of the road and the Mondial's position, because the Mondial has more low speed oversteer than any current production vehicle assessed by the author in the last 10 years.

At first you simply think that it cannot let go at this speed, that it must feel worse than it is. The Ferrari can be easily (and enjoyably) recovered from such situations, but it might be better if they provided more grip in the first place. We have the

Despite its in-line V8, the Mondial has a usable, though not capacious, boot.

additional dimension of a test track to explore these characteristics, and the ultimate speed potential. Under such circumstances, a clear morning emphasised that the combination of Goodyear Eagles and a ZF limited slip differential would provide the kind of acceleration figures claimed by the manufacturer, provided that we took advantage of the engine's outstanding flexibility to motor away at no more than 2500 rpm – otherwise the wheelspin and histrionics were truly spectacular. The straightline performance was not a match for £60,000-plus Porsches tested last month, but an honest 153 mph on the banking of Millbrook and 0-60 mph in 6.5sec was excellent in conditions that were not perfect for performance tests.

"At speed the Ferrari lost all trace of its second and third gear tail-happiness and seemed to become more stable the faster it went"

At speed the Ferrari lost all traces of its second and third gear tail-happiness and seemed to become more stable the faster it went. Settling into an easier rendition of 150 mph than the BMW 850i, equating roughly to the now far more stable 911 Porsches. Another Ferrari bonus point was the exhaust and engine note: even cynical bystanders from other magazines commented that the harder it worked, the better it sounded.

Inside the cockpit the V8 sounds vaguely sporting, almost buzzy, until 4000 rpm, when the note entices you to explore further. By 5000 rpm there are some faint echoes of a glorious parentage, fully confirmed if you keep the motor between 5500 and the 7500 limit in pursuit of performance. The gearchange promises more than it delivers. The slim wand of the chromed selector, topped by simple black knob and the favoured orange to indicate shift patterns (spring biased to the strongest extent we have encountered) marches through the traditional polished and formal gate. The shift speed is enough to cope with the demands of clipping tenths away on acceleration runs, but in less hectic use, the change never loses its slightly ponderous action, clanking from slot to slot. At least the ratios are a pleasure to utilise: rounded off they provide 40, 63, 89 and 120 mph in the first four ratios at the 7500 rpm limit, which was also indicated when we recorded consistent maximum speed runs of 152.9 mph (2.029-mile lap) and 153.06 mph (best flying quarter mile).

Ferrari provides gear and tyre diameter charts to cover most of the four tyre companies that provide standard equipment for the Mondial.

From these we can see that the rpm counter should have been showing the equivalent of 7236 rpm. The ability to pick up speed in third, fourth or fifth without any fancy drag strip antics should be more valued by most motorists than the 0-60 mph statistic, and here the Ferrari is an outstanding performer. Third gear is particularly muscular between 50-70 mph, so that you would find the Ferrari totally unembarrassed, even in the company of last month's Porsches, when confronted with ordinary road overtaking situations, rather than shifting its 1500 kg bulk from a standstill.

Where permitted, the Ferrari is also an exceptional consumer of motorway miles. The gearing is shortish at 21.15 mph per 1000 rpm in fifth, but the highish rpm limit means the Mondial feels unstressed at 5000 rpm (106 mph) and would be perfectly happy to run from 5000 to 6000 rpm (127 mph) from one end of Germany to the other. Only the oil temperature gauge shows how hard the alloy V8 is working, rising to 210 degC when worked in the 5000 plus zone regularly. No sign of oil consumption could be found in 700 miles despite conscientious and trying sessions with the dry sump stick.

Verdict

There were some areas in which the Ferrari did not measure up to its obvious Porsche 911 opposition – particularly in the number of assorted buzzes, squeaks, trim deficiencies and a slow gearchange – but the Mondial emerged as that motoring contradiction: a practical Ferrari.

The Mondial t has enough performance to be enthralling, ride comfort enough to teach some mid-range saloon car manufacturers a thing or two and a mild whiff of the Prancing Horse mystique. This becomes positively rampant when the V8 is busking in the higher rpm ranges and the plump tyres are being asked to do some work.

Maranello Concessionaires candidly admits that it is not easy to persuade customers to try the charms of the Mondial, "but once we get them into one, they swear by them and are quite likely to buy another." After a 700-mile long weekend and our track sessions, we can understand why this Ferrari, a modest performer by the standards of the marque, is the model for those who want to use a Ferrari every day of the week. **J W**

ENGINE	
Location	longitudinally mid-mounted
Cylinders	90 deg V8
Bore × stroke	85 × 75 mm
Capacity	3405 cc
Compression ratio	10.4 to 1
Valve gear	dohc, four valves per cylinder
Power	300 bhp/7200 rpm
Torque	234 lb ft/4200 rpm

TRANSMISSION	
Type	five-speed manual, rear-wheel drive

GEARBOX		
Gear	ratio	mph 1000 rpm
First	3.214	5.66
Second	2.105	8.65
Third	1.458	9.71
Fourth	1.094	12.49
Fifth	0.861	21.15
Final-Drive	3.706	

SUSPENSION	
Front	double wishbones, co-axial coil springs, cockpit adjustable Bilstein dampers
Rear	double wishbones, co-axial springs, cockpit adjustable Bilstein dampers
Wheels	light alloy 7x16 (f), 8x16 (r)
Tyres	Goodyear Eagle 205/55 ZR16 (f), 225/55 ZR16(r)

BRAKES	
Front/Rear	ventilated discs all round

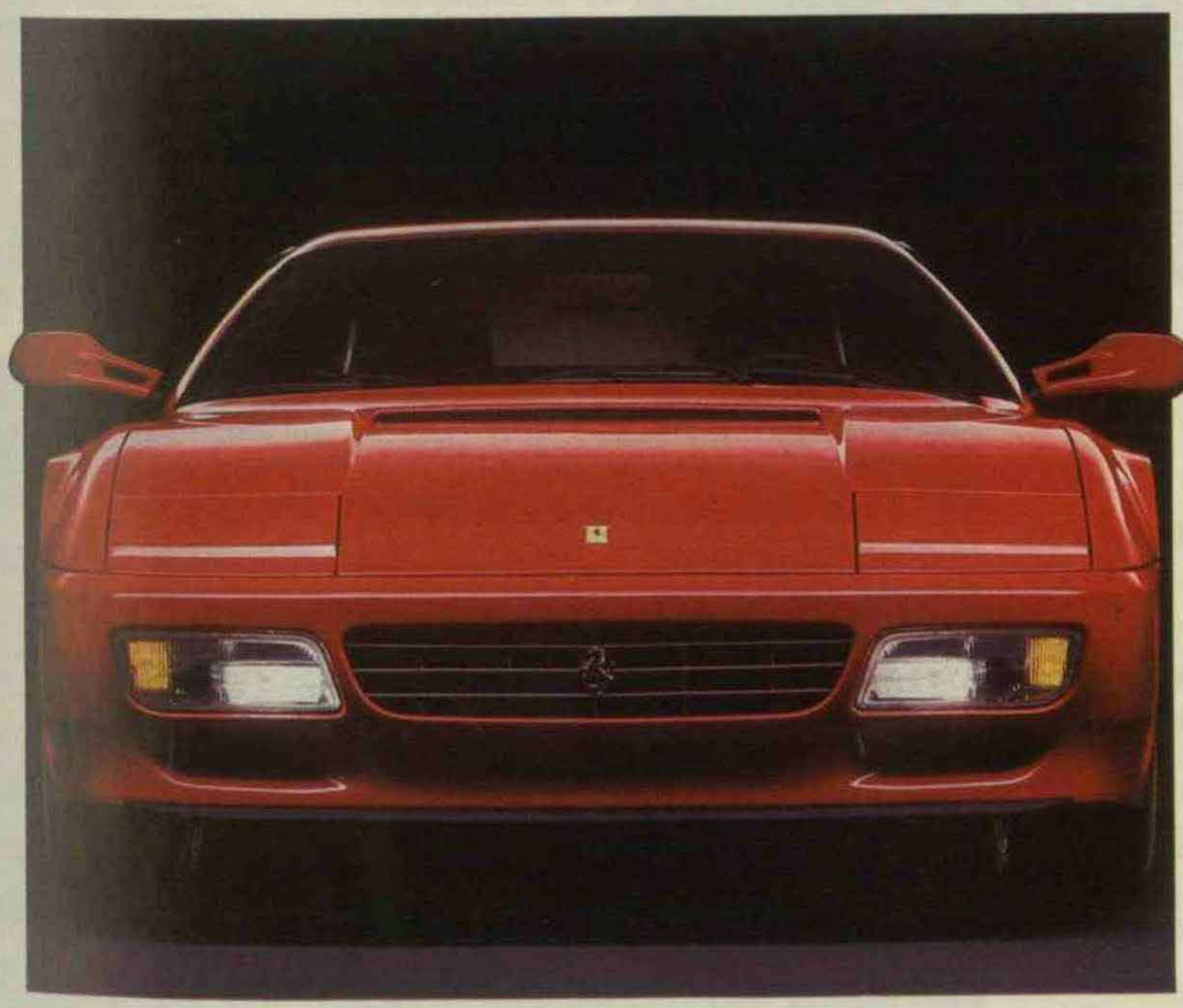
STEERING	
Type	rack and pinion, servo assisted
Turns, lock to lock	3.0

DIMENSIONS	
Wheelbase	2650 mm
Front/Rear track	1522/1560 mm
Overall length	4535 mm
Overall width	1810 mm
Overall height	1235 mm
Kerb weight	1503 kg
Fuel tank	21.1 gallons

PERFORMANCE			
0-30 mph	2.66 sec	0-80 mph	10.25 sec
0-40 mph	3.87 sec	0-90 mph	12.96 sec
0-50 mph	5.27 sec	0-100 mph	16.33 sec
0-60 mph	6.52 sec	0-110 mph	19.17 sec
0-70 mph	8.26 sec	0-120 mph	23.14 sec
50-70 mph in fourth/fifth gears			5.3/7.5 sec
Maximum speed			153.06 mph

FUEL CONSUMPTION	
Average for test	15.51 mpg
Government figures:	
Urban	12.8 mpg
56 mph	30.0 mpg
75 mph	25.2 mpg
LIST PRICE	£69,310.31

Son of Testarossa



On January 2, the Ferrari 512TR was unveiled at the Los Angeles Motor Show. This replaces the Testarossa, launched at the Paris Salon in 1984, in the Ferrari range.

Ferrari claims improved handling, thanks to refinement of the double wishbone suspension and increased chassis rigidity.

Although emphasis has predictably been placed on keeping exhaust emissions to sufficiently low levels, both power (422bhp/6750rpm) and torque (387lb ft/5500rpm) figures are superior to those of the Testarossa.

Claimed performance capabilities are 0-62mph acceleration in 4.8sec and a top speed of 194.5mph.