

FOUR SEATS AND THE BEST HANDLING

Ferrari's 2+2 Mondial 8 is meant to be the most practical of Ferrari's exquisite machines. But it also manages to have their best chassis. Rex Greenslade reports

TO THE committed Ferrari enthusiast, a "true" Ferrari has only two seats. It is an uncompromising and uncompromised machine, offering exhilarating and shatteringly fast transport, fully reflecting the sporting involvement that's always been such a large part of life at Maranello. But the reality is that most of the people who can afford Ferraris, and even in these dismal times there still seem to be plenty of those, buy the 2+2 variants.

Thus the latest Ferrari, the Mondial 8, which was launched at Geneva in March 1980, may not cut the most ice with the cognoscenti, but it certainly will with Ferrari customers. In Britain, for instance, Maranello Concessionaires expect that more than half of their 1982 target of 190 to 200 cars will be Mondials, each sold for the asking price of £24,488.25. The traditional (and gorgeous) front-engined V12 400i — again a 2+2 — has amazed many, including Ferrari, with its continuing sales, though as it costs a whopping £35,299.66, there aren't quite so many people falling over themselves to sign for it on the dotted line.

From the start, then, the Mondial 8 was meant to be a major bread-winner for Maranello, to take over where the Bertone-designed 308 GT4 left off. Motor, like many publications, was never a GT4 fan, though in retrospect that may have been because it had to follow the legendary Dino 246 and never managed to capture the smaller car's charisma. In fact, the GT4 was never meant to replace the 246 — the 308 GTB eventually did that — and the GT4 went on to become one of Ferrari's most successful cars of the late '70s. Yet the wedge-shaped GT4 lacked the sensual curves that one had come to expect of the normally-Pininfarina-styled Ferraris, as well as the sharpness of handling that so seduced a 246 driver.

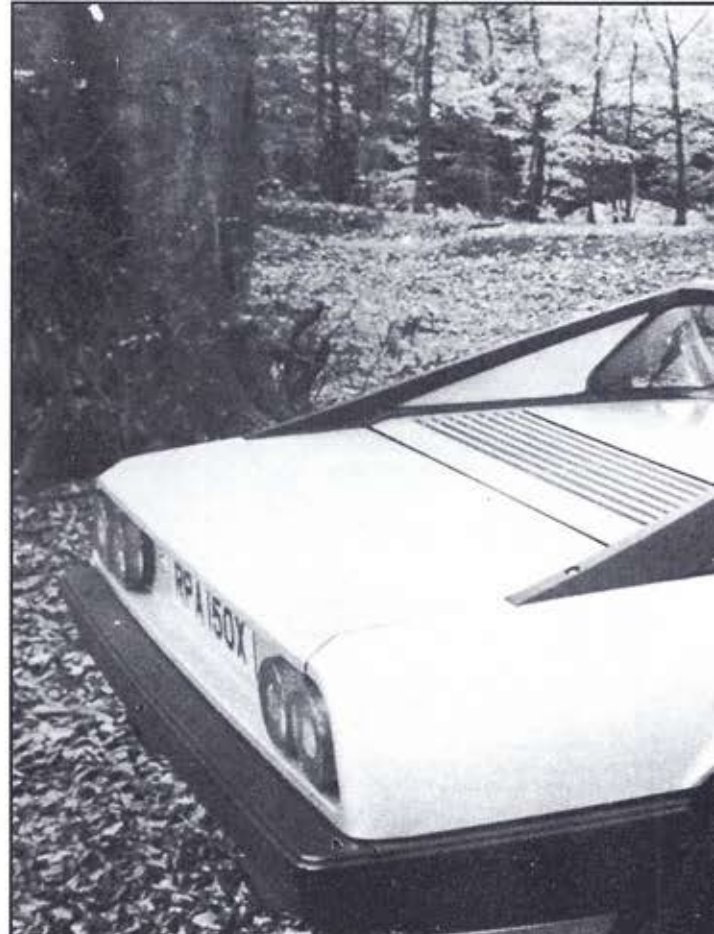
Most of all, it was the severe lack of space in the so-called rear seats that let the GT4 down. So a high priority with the Mondial design — by Pininfarina — was to increase the wheelbase and interior headroom. Accordingly, the Mondial has a wheelbase that's four inches longer than the GT4 and it stands nearly two inches higher. The result is an interior that's remarkably roomy for a car of this ilk, the headroom in the front being exceptional, and in the rear acceptable for even an above-average sized adult. Likewise, front seat legroom is more than enough to please even a 6ft 5in giant, and while an adult would find it

impossible to sit behind such a driver, two above-average sized adults can sit in tandem on the left side of the car without undue negotiations on the front seat position. To balance the increased length (the Mondial now measures 15ft 0in from stem to stern — about 10 inches longer than a Ford Cortina), the Mondial has grown more than three inches wider; that helps the elbow room and general impression of roominess enormously, but it also means that the Mondial is a bulky car indeed, as witnessed by the quoted (dry) kerb weight of 3188lb — 28.5 cwt. With oil, water and fuel for 50 miles (Motor's specification for measuring unladen weight) the figure



would rise to about 29.3 cwt — or about 4 cwt more than the GT4.

The Mondial shape has, to our eyes, an elegance and flow to it wholly lacking in the old GT4. Some people don't like the Garth Vader-style plastic embellishers for the side air intakes (and certainly their finish doesn't stand close examination too well), but overall the shape is a superb embodiment of Ferrari style, Ferrari movement. It's particularly difficult to make a 2+2 mid-engined car look right, as the engine's right where the rear passengers would sit in a front-engined car. But Pininfarina has managed to dis-



guise the forward siting of the passenger cell, by cleverly extending the rear-threequarter glass rearwards far behind the rear seat (one side-effect being excellent rear threequarter visibility) and by extending the roofline almost as far back as the tail (a more usual mid-engined designer's trick).

As with the Boxer and the 308 GTSi and GTBi, the body is built by Scaglietti. It follows traditional Ferrari practice in that it clothes a tubular steel frame; Ferrari designers have incorporated more folded and boxed members in the chassis itself, though, in the interests of enhanced strength with little

increase in weight. Another departure is that the Mondial is the first Ferrari ever to have a subframe at the rear which carries the engine, transmission and suspension complete; this sub-frame assembly can be unbolted from the car to aid servicing. The body panels are mostly of steel, with some aluminium (bonnets/engine cover) and some glassfibre ones (out of sight).

Mechanically, the Mondial is pure 308 GTBi/GTSi, with the all-alloy four-cam 90 deg V8 sitting transversely midships in the chassis, driving the five-speed close ratio gearbox below and slightly behind via drop-gears, Mini-style. A limited slip differential is standard. Double-wishbone suspension (what else?) with coil springs and Koni dampers is used front and rear, in both cases in conjunction with an anti-roll bar. The steering is by rack and pinion. In the Mondial, the wheels, and hubs have been modified to reduce kingpin offset (and hence steering kickback over bumps) while the front suspension's upper wishbone mountings have been angled to give a degree of anti-dive.

Ferrari say that the Mondial even has the same ratios as the GTBi/GTSi but the situation is complicated by the fact that the Mondial has new, fat Michelin TRX 240/55 VR 390 tyres. Ferrari quote a mph/1000 rpm figure of 20.06 in fifth in their sales brochure, stated 19.88 over the telephone, while our calcula-



tions show it to be 19.7. Unfortunately we couldn't clear up these anomalies before we went to press, but there is no doubt that the Ferrari is low-g geared by any standards, a situation highlighted when you remember that even relatively mundane family cars like VW's new Passat have long-legged gearing approaching 25 mph/1000 rpm.

The engine differs from the 308's in two important ways. Firstly, it has Marelli Digiplex ignition (electronic of course, and developed in conjunction with Ferrari) and Bosch K-Jetronic fuel injection in place of four Weber 40 DCNF carburetors. Neither of these changes was made in the traditional Ferrari search for power and performance; even Ferraris must comply with international exhaust emission regulations and comply with these (in the USA anyway) over 50,000 miles. Both the ignition and injection changes enable Ferrari to meet these goals, the ignition because it has no points or centrifugal masses or springs, a selection of advance curves being stored and called upon electronically, the injection because it allows the adoption of efficient feedback control and catalysts for the American market.

But what has been the USA's gain has been Europe's loss. Because the quoted power outputs of the USA and Europe versions of the Mondial engine are so close (205 and 214 bhp), we can only assume that they are identical

apart from the former's catalyst and air pumps. And "our" 214 bhp (at 6600 rpm) is a long way short of the carburetted GT4's 255 bhp (at 7,600 rpm). Still, it is a reasonable output for an engine of 2926 cc (unchanged, as are the bore and stroke of 81 and 71 mm, and the compression ratio of 8.8:1) and it may well be that in 1975 — when quoted figures weren't watched so closely by the authorities — that that 255 was a little more generous than it should have been. Maximum torque, too, has decreased from 209.8 lb ft at 5,000 rpm to 179 lb ft at 4,600 rpm.

With about 16 per cent more weight, more frontal area (wider and taller body, fatter tyres) and less power, there is obviously no way that a Mondial is going to match the superb performance of the GT4 — we called it "shatteringly quick" in our January 1975 road test: as that car had a maximum of 152 mph, a standing quarter mile of 14.7 sec and 0-60 mph and 0-100 mph times of 6.4 and 16.7 sec respectively this was not an overstatement. The Mondial is fast — particularly over winding country roads where full advantage can be taken over its simply stunning cornering and high speed stability — but in absolute terms in a straight line it must be regarded as a modest performer. The factory claims of a top speed of 143 mph and a standing quarter mile of 15 sec look considerably optimistic to us, our car's

notice this right on start-up from cold when you don't need to floor the throttle a couple of times in the time-honoured fashion; you simply climb into the car, turn the key and drive off — no hesitations, no stutter, no stumbles. The most sensitive of mechanical minds may detect a smoothening of the engine during warm-up as all the mechanical tolerances achieve their correct dimensions, but no more than that.

Warmed-up, the engine must have one of the widest power bands of any power unit in production today, for it revs cleanly on full throttle right from the idle speed of just over 1000 rpm right through to the red line of 7,700 rpm. You can make respectable progress using just 3,000-3,500 rpm, when the engine noise is surprisingly well suppressed, with much of the low speed intake gobble of the old unit missing. Cunning exhaust tuning means that there is little of the classic V8 woofle, the engine sounding every bit the competition-sired motor it is. Above 5,000 rpm, the note deepens noticeably, a unique mixture of exhaust rasp with cam and valve scream, and whirring gear whine. At 7,000 rpm it's almost like having a whole GP grid lined up behind you. Yet at no stage does the engine become excessively noisy — from the front seats at least; and if you've got a full complement of passengers would you thrash the car anyway? Mechanical noise and thrash is commendably well suppressed up to 100 mph but the low overall gearing (at 100 mph the engine's already spinning



acceleration tailing off so markedly above 120 mph that we doubt whether it would exceed 135 mph. Certainly that's the figure that the American magazine *Road and Track* achieved when testing a US-spec Mondial; in turn, they measured 0-60 mph time of 9.4 sec and 0-100 mph time of 28.1 sec look way too slow — our car appeared capable of about 8.5 sec and 25 sec for the corresponding accelerations.

While the Mondial might not have the stunning punch of its predecessors, it delivers its power in a wholly new and untemperamental way. You

at over 5,000 rpm) means that at 120 mph the engine's more insistent than it need be.

In our car, the overall gearing's shortcomings were exaggerated by a pessimistic speedometer (2.5 mph slow at 100 mph) and an optimistic rev counter (400 rpm fast at 100 mph/5000 rpm), two characteristics which didn't help to enhance the way the modest performance felt either. But there was nothing subjective about our full-tank-to-full-tank fuel consumption figure of 14.6 mpg, obtained over 470 miles of some hard to very hard driving. Perhaps that's not too surprising in

view of the Government urban figure of 10.6 mpg but is hardly commendable when quite a few 140 mph coupes can approach 20 mpg in our hands nowadays. Perhaps it won't be of too much importance to the Ferrari customer though. . . .

As always, the Mondial has the chromed, slotted external Ferrari gear-lever gate, with the top four ratios arranged in a normal H and first across to the left and back. Again typically, the change is awful when cold — second being well nigh unobtainable — but it loosens delightfully within a very few miles. Our Mondial's change was one of the best yet, being superbly fast and positive provided that the full (and rather long) travel of the clutch was used. There are few more pleasant experiences than zapping a Ferrari through the box, hearing the clunk of the lever as it hits the end of each gear slot and the surge of power as the clutch bites home. One quirk of our car — hopefully untypical — was that occasionally if you rushed it into reverse — on a three point turn, for instance — second was selected in error; perhaps the linkage needed adjustment.

Where the Mondial really shines is in its chassis. Like the GTB and the GT4 before it, the steering is initially unending, managing to feel low-geared yet excessively heavy at parking speeds. Through tight, low speed corners taken gently, the Mondial seems to understeer too, calling for a degree of wheel twirling that hardly augurs well for when you start trying. How misleading those initial impressions are! When you corner quickly, particularly on fast curves, when the car is developing some real weight transfer, the feeling of understeer all but disappears, the chassis becomes alive with feel — it almost seems as if the car can defy the laws of motion, so great is the lateral acceleration that can be developed. The revisions to the front suspension certainly have reduced steering kickback from the thumb-cracking level though there's still a little too much on really bumpy surfaces. But the kickback does help endow — and the TRX tyres too, no doubt — the Mondial with a feel of a quality (dare I say Porsche-like quality?) hitherto lacking in Ferraris. On a twisting country road, the steering writhes gently in your hands, letting there be no doubt of the state of the road under the front wheels.

Enter a corner too quickly and lifting the throttle produces a mild tightening of the line — enough to scrub speed off without requiring a specific steering correction — and even if you're forced to brake in mid-corner, hard, the Mondial slows without an excessive change of attitude. This stability is one of the Mondial's fortes and the Ferrari engineers deserve the greatest compliment for managing to blend such good high speed stability (even at 120 mph on a bumpy country road with the wheels pounding up and down like pistons the Mondial feels rock-solid on line) with a lack of understeer and neutrality in strong cornering.

The scale of the Maranello chassis team's achievement becomes even more evident when the excellent ride is taken into account, and the unusually good (for this class of car) suppression of road noise. The Mondial does feel firm and jiggy at low speed, though never uncomfortable as any vertical



Above left and right: luxury interior, as reflected in the large expanses of leather upholstery. Space is notably better than in the old GT4. Below: full, but shrouded instrumentation and the radio and check control (left) are too far back

jarring has been cunningly removed by subtle tuning of the dampers. At speed, over all surfaces, the ride smooths out to become more than acceptable — on motorway and smooth A-roads it almost qualifies for the magic carpet class.

The only time where caution is needed is on slippery surfaces such as damp leaves (it didn't rain during our test), where excessive throttle can make the tail step out of line very smartly indeed. You have to be very quick and accurate applying opposite lock, though just the right amount of castor action is a considerable help.

Matching this superb road behaviour is a brake system that must be as good as that of any road car in the world today. Massive ventilated disc brakes larger at the rear (11.78 in) than at the front (11.0 in) in deference to the car's rearward weight bias and a vacuum servo provide a progressive and positive pedal action, whether the brakes are hot or cold. The handbrake, on the right of the driver's seat, is of the fly-off type and is sited too close to the stereo speaker in the door: we lost count of the times we barked our knuckles pulling it on.

With a steering wheel adjustable for both reach and tilt, the Mondial is one of the first Ferraris where even tall drivers can become perfectly comfortable. Ferraris are made for driving and the care with which the pedals and footrest have been arranged to make heel and toe changes second nature is obvious. A full three-stalk (Lancia-based) stalk system is offered, which is an improvement though we'd like a slightly longer indicator and a less stiff



wiper stalk.

Only one extra, a UK-fitted sunroof, is available for the Mondial, a high level of equipment, even at this end of the market, being Ferrari's aim. So the car has electric windows, tinted glass, central locking, air conditioning and a Pioneer stereo radio/cassette player as standard. There's lots of deep-cut pile carpet and a veritable expanse of leather trim and upholstery, which certainly endows the car with a feel of luxury. We're generally not fans of leather seat coverings as they tend to let you slide around on corners, but this wasn't noticeable in the Mondial, partly due to seats with good lateral support, partly due to excellent seat belts that help hold you in place.

Incorporated in a rectangular nacelle directly in front of the driver is the instrument display containing all the normal circular dials, plus a separate odometer and a digital clock/stopwatch; the deep top shroud for this nacelle completely eliminates stray reflections but prevents tall drivers seeing the tops of the dials, the clock display or, most importantly, the indi-

The 2926cc all-alloy four-cam V8 is derived directly from the GT4's but now has dual contactless ignition and Bosch K-Jetronic fuel injection



cator tell-tales. To the right of the speedo are touch-sensitive switches for the heated rear window, front/rear foglights and for the electric catches of the bonnet/engineboot lids.

Incorporated in the centre of the fascia (down low) is a row of three individually adjustable air vents together with a pair of face-level vents, one at each end of the fascia, which, in conjunction with a powerful and controllable air conditioner, mean that the Mondial is by far the best ventilated Ferrari yet for hot weather. But in cooler times, the arrangement is less satisfactory, for the heater — though powerful — is slow to warm and it isn't possible to get cold air from the vents with hot air to the footwells; some, barely noticeable, temperature stratification does appear to take place when the heater is switched down low, but it's not enough. Moreover, the air temperature drops at engine idle.

Only the Mondial designer knows why it was necessary to place the heating and air conditioning controls so far down and away from the driver, and to site the radio so far back on the centre console that you can't see its face. The siting of the electronic check control display is also strange — it's even further back than the radio — but the system itself is admirable in theory, if over-complex in practice. Each time the ignition is switched on the system monitors levels of engine water, engine oil, transmission oil, screen-washer fluid and air conditioning fluid, as well as tracking down any failures in the electrical circuits of the brake warning lights (on the fascia), the lights and the stop lights and informing you if any of the bonnets haven't been closed properly. There's even a "service due" light which comes on 3000 miles after the last check. At the end of the display there are three major warning lamps to indicate (and draw your attention to) a major failure, a minor failure or to give you the all systems "go".

Ask a Ferrari salesman who buys the Mondial and he'll tell you that it's the man who wants the traditional Ferrari virtues but can't live with just two seats. It has to look like a coupé, it has to be a sports car — but it has to have four seats, even if most of the time they are occupied by briefcases or coats rather than people. To these customers the Mondial must fit the bill well, being spacious, practical and luxurious — and beautiful. It should be faster and it must surely become more economical. But it must be icing on the cake for the Mondial owner to know that he has bought not just the most rational Ferrari design, but certainly the best handling one. And if that's a surprise to you, it certainly was to us.