

911 & PORSCHE

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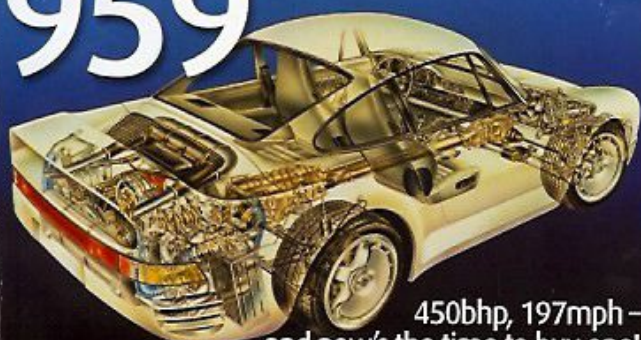
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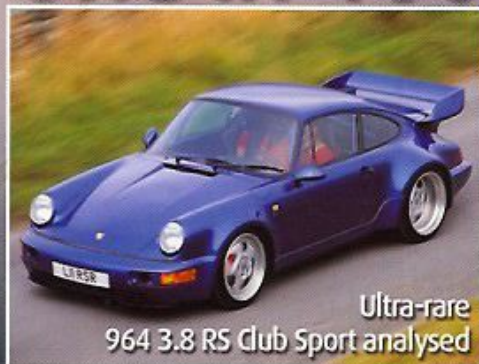
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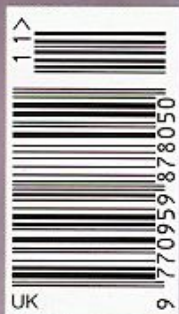


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AN INDEPENDENT PUBLICATION

Recalling a day in 1987 at the wheel of a 959

Editor Horton's brief was simple. 'We're doing a bit of a 959 special for the November issue,' he told me. 'You were right in the thick of it at Porsche when the 959 was being developed, so for your next column why don't you give us all the benefit of your experience?' In fact, Horton had his chronology very slightly wrong - I left Porsche Cars Great Britain in 1983, and the 959 proper didn't appear until 1986 - but I do have some vivid memories of those far-off times.

The arrival of Peter W Schutz at Porsche's headquarters in Zuffenhausen on 1st January 1981 had the effect of pulling a cork out of the 911's bottle. Development of the six-cylinder model had been virtually halted by Professor Ernst Fuhrmann who, as Dr Ferry Porsche realised, planned to abandon the 911 altogether in 1984 and concentrate entirely on a front-engined, water-cooled line-up comprising the 944 and the 928.

Exit Professor Fuhrmann, and enter the brash American, Schutz, whose brief was to turn the 911 around and set the stage for a long and prosperous future. There was euphoria at Weissach where, under the management of research-and-development director, Helmuth Bott, a cabrio-

let version of the 911 had already been prepared...and was discreetly covered up with a dustsheet any time Professor Fuhrmann came visiting!

Nine months later the 911 Cabriolet was unveiled at the Frankfurt motor show. Not only was it based on the Turbo model, but it was also mounted on a mirrored platform revealing a rudimentary four-wheel-drive transmission system, with a 924 propeller shaft running forward to a 924 Turbo differential. It was, in effect, a mock-up called a *Studie* showcasing the ideas of the engineering team.

The man in charge of the development was Manfred Bantle, a senior engineer who first came to light when he designed and developed the 908/3 racing car, and who was later placed in charge of passenger-car development.

Bantle had been researching a Jensen Interceptor for three years, playing around with both rear-wheel-drive and four-wheel-drive systems, and was possibly influenced by the Audi Quattro in believing that Porsche ought to have a four-wheel-drive system for its highest-performing cars.

Little was heard of the project outside Weissach until the next Frankfurt show in September 1983 when the 911 (SC) Cabriolet was launched, and the four-wheel-drive Gruppe 'B' study was



put on display. Now Porsche was prepared to say that 200 examples would be made for homologation into Group 'B' racing, plus a further 50 competition cars, and that there were serious plans to go rallying with its sponsoring partner, Rothmans.

The engine capacity would be 2.85 litres which, multiplied by the FIA's factor of 1.4 for a turbocharged or supercharged engine, would equate to a capacity of four litres. It was, in fact, a detuned version of the 24-valve 956/962 engine developing 450 horsepower for the road (a target considered almost impossible for an engine equipped with catalytic converters) or at least 600 horsepower for competition.

The advance of electronics, a science in its infancy, encouraged



Porsche to develop a hugely sophisticated centre-locking differential, bypassing the cheap but efficient viscous coupling favoured by existing rally teams.

René Metge won the Paris-Dakar Raid in January 1984 in a prototype 959, with a fairly rudimentary four-wheel-drive system and a naturally aspirated 911 engine tuned right down to just 225 horsepower in order to cope with low-grade petrol without undue complaint.

The following year Porsche's factory team consisted of two further developed cars, both of which hit problems in the Paris-Dakar event, but in 1986, the third and final year of the 959's development programme, Porsche entered three definitive cars which swept the board: Metge won the event, Jacky Ickx was second, and engineer Roland Kussmaul, the 'back-up' team member and troubleshooter, finished in sixth place.

A few weeks later I was invited to drive Ickx's 959 (see top of this





The year is 1986, the location the MAN test-track in Germany, and the 959 (above) is Jacky Ickx's second-placed car from 1986 Paris-Dakar Raid. The remaining photos were taken at the 959's press launch at the Nürburgring in the spring of 1987, and our man Cotton (see left) looks only slightly younger than he does today. Note the absence of a right-hand door mirror on this particular car

page) at the MAN proving-ground, an exercise that left me in awe of both the machine and of the men who drove in the event, but little the wiser about four-wheel drive. I must confess that I simply didn't have the skills or experience to make use of the car's amazing capabilities.

The Porsche 959 Paris-Dakar team drivers had at their disposal a 400 horsepower version of the twin-turbo, 24-valve engine, detuned to run on 91-octane fuel. The engines would rev to 7800rpm, and the second turbocharger was set to kick in later than the first, at 4500rpm, to produce an 'afterburner' effect which was very impressive.

A brand-new six-speed gearbox was developed for the 959, but the trick feature was the electronically controlled centre differential which contained no fewer than five plates, oil-bathed, and clamped together by variable hydraulic pressure.

There were four driver-selected preferences (each of which had a



coloured light on the dashboard): P1 sent more power to the front, but with the engine power having greater influence on the torque split; P2 sent more power to the rear, but now road speed had more influence on the torque split; 'T' was for traction, a crawler gear to get out of a sand dune, and 'C' was for constant, sending as much power forward as the driver selected on a potentiometer.

All a bit rich, I thought, and the nuances of the controls were far too complex for any journalists to comprehend in a 20-minute trial, but I think we all came away suitably impressed.

By 1986 the 959's development had been delayed, and the rally programme shelved, as volume manufacturers stole a march on Porsche. Peugeot produced the mid-engined 205 Turbo 16, Ford the RS200, and Austin Rover (now MG Rover) the MG Metro 6R4, all of which were small, light and nimble, and capa-

Cotton Cotton Cotton Cotton Cotton



ble of making the 1250kg Porsche 959 look positively ponderous.

Professor Bott, as he was before his retirement, told me sadly that the building of 200 cars had been delayed by as much as two years by the inability of the components industry to supply suitable catalytic converters in such small quantities. 'Mercedes, Volkswagen, Opel and Ford all take priority over us because of their volumes,' he grumbled.

Even so, the 200 cars would be made and sold by the end of 1987, and in the spring of that year I was invited to drive one of the new wondercars at the Nürburgring. This time I really could savour the explosive power of 450 turbocharged horses on a

The Comfort version was 2mph slower, on account of having a passenger-side door mirror, and reached 100mph in 11.2 seconds.

I should mention the 961 racing-car version which raced at Le Mans in 1986 – when it finished seventh overall, again with René Metge leading the driver team – and in 1987, when gear-selection problems caused an accident. Could the 961 win the race, I asked Kussmaul in a jokey sort of

wide-open, flowing grand-prix circuit, finding, a little to my surprise, that the heavily rear-engined 959 was gently understeering, as the Weissach engineers knew their customers would prefer.

The differential system, with its almost unlimited versatility, meant that they could dial in pretty well any characteristics they chose. I thought I had driven the 959 reasonably quickly, until test-driver Günther Steckkonig took me out for a couple of demonstration laps using one gear higher, and going at least 50km/h (30mph) faster, through each corner!

Most of the 200 production cars were sold with the *Komfort* (or Comfort) pack which included air-conditioning, ride-height control, extra soundproofing and a decent interior, but added around 100kg to the kerb weight.

The Sport version, weighing 1350kg, reached 100mph from a standing start in 10 seconds flat, and had a top speed of 197mph.

way. 'Only if it snows,' he replied, easily capping my humour.

Progress never stops at Weissach. Today Porsche is able to offer the 911 GT2 road car with 483 horsepower and a maximum speed of 198mph – but it weighs 1440kg even as a rear-drive machine – or, if you prefer your six-cylinder engines without turbochargers, the 3.6-litre GT3 RS model with 381 horsepower.

That weighs 1360kg and has a top speed of 191mph, and bearing in mind the passage of 16 years, its £85,000 price tag looks very reasonable against the £155,000 quoted at the time for the 959. Phew, that complexity came at a price, and Porsche said it didn't nearly cover its development costs.

Professor Bott called the 959 an investment in new technology and new systems which would be employed in the future. Even today Porsche is still reaping the benefit. ■

Living legend



Can't quite stretch to a new Carrera GT? Don't worry: the 959 – Porsche's first supercar – is no less sophisticated or exciting, and with fewer than 300 built will always be far more exclusive. What's more, now's an excellent time to invest in one, because prices are probably as low as they'll ever be. Text by Philip Raby and Peter Morgan; photographs by Tom Wood, Peter Morgan and Peter Robain

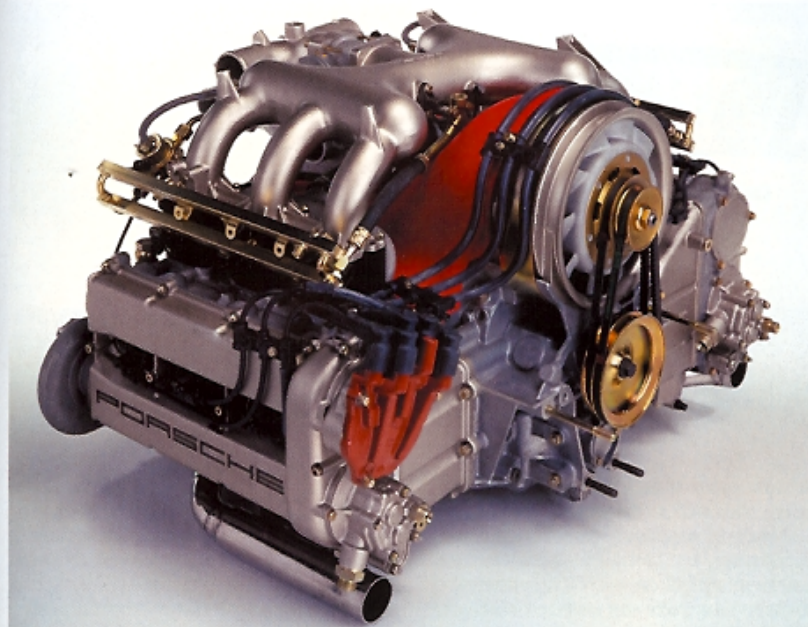
In 1990, at the height of what became known as classic-car mania, a Porsche 959 sold at auction here in the UK for no less than £599,000. Today even a good one will command only around £95,000. Still too much? Maybe, but bear in mind that a brand-new 911 Turbo costs around £90,000, and a 911 GT2 nearly £127,000. Not only is the 959 both rarer and (slightly) more powerful than either of these new Porsches, but it's also unlikely to depreciate much, either.

Just what is it about the 959 that gets we Porsche enthusiasts so excited? To find out we need to go back fully two decades, to the early autumn of 1983, when the company displayed a surprise concept car at the Frankfurt motor show.

Known simply as the Gruppe B, this stunning-looking machine immediately captured the imagination of both press and public alike. It was clearly based on the contemporary 911, but featured space-age lines and – as its name suggested – was designed to compete in Gruppe (Group) 'B' motorsport.

Even for Porsche the 959 was a technological *tour de force*, with four-wheel drive, a twin-turbocharged, 2.85-litre, flat-six engine, and generous quantities of the then new and high-tech carbon-fibre and Kevlar in its construction. It was the brainchild of Porsche's then engineering chief, Helmuth Bott. He set project leader Manfred Bantle (the engineer who had been responsible for – among other great Porsches – the lightweight 908/03 prototype) a task that would probe the very limits of his small team's ingenuity.

Bott wanted a machine capable of competing in



The 450bhp (331kW) 2.85-litre flat-six (above) was developed from the 956's racing unit. While the cylinder barrels were cooled conventionally by air, the four-valve, twin-camshaft heads had their own water-cooling system

the toughest off-road rallies and also of achieving success in endurance racing. In order to qualify the car for the Group 'B' racing class at least 200 roadworthy examples had to be built. Nothing unusual in that, of course, but on this occasion those 200 cars were planned as a super-exclusive (and fearsomely expensive) limited edition. It was an enormous challenge, but one that would demonstrate to perfection Porsche's already strong reputation for building sports cars combining first-class engineering, massive performance, and unmistakable style.

The 959's development took four years – longer than originally planned – because, perhaps not surprisingly, the car's technology proved to be rather more demanding than was first thought. And Boll's goals of race and rally success finally came true in 1986. After several earlier disappointments a 959 won the tough 1986 Paris–Dakar rally, and later that same year a circuit-racing version (known within Porsche by its 961 type number) finished seventh at Le Mans behind a string of Group 'C' 956s and 962s.

The heart of the 959 is an engine derived not from that of the contemporary air-cooled 911, but rather from that of the 935 and 956 race cars, with four valves per cylinder, and water cooling for the hard-working cylinder heads (and so, strictly speaking, the current 996-model Carrera wasn't the first water-cooled 911). In order to meet the requirements of the Group 'B' racing class that was its *raison d'être* – and also bearing in mind the penalties routinely levied in motorsport against forced-induction engines – the total cylinder capacity was set at just 2.85 litres.

A sequential twin-turbocharger system was developed to (largely) overcome the turbo lag that had traditionally characterised the road-going 911 Turbo. At low revs – below about 4200rpm – all of

the exhaust gases drive the right-hand turbocharger to give merely moderate boost. Once the revs start to climb past 4200rpm, however, the left-hand blower cuts in, driven by that side of the engine's exhaust system, to give the full 450bhp (albeit at a relatively high 6000rpm). So you still get a distinct turbo 'kick', but not at the expense of low-speed driveability.

But perhaps the 959's greatest innovation was its drivetrain. It was the first Porsche (not to mention the first true sports car; the Audi quattro was based on a saloon) to be sold with four-wheel drive. Porsche wanted the 959 to have not only unequalled handling and grip, but also to be supremely stable in all driving conditions – qualities that would all benefit from drive to all four wheels. Thus power from the rear-mounted engine passes through a six-speed manual transaxle driving the rear wheels, while a longitudinal drive shaft runs forward to a second differential driving the front wheels.

The torque split between the front and rear axles is controlled by a special hydraulic clutch which Porsche dubbed PSK (*Porsche Steuer Kupplung*, or Porsche Command Clutch). This is electronically controlled, and allows the power split to vary from 20:80 (giving an almost completely

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The 959 bristles with design details that set it apart from every other Porsche. But the dashboard (above) will be familiar to 964-model 911 Carrera drivers. The car was first previewed at the 1983 Frankfurt motor show in the form of this 'Gruppe B' design study (below)



The knowledge: what you need to look for



Bodywork & suspension

Accident damage isn't uncommon on 959s. They are very powerful cars, remember. And then there's the case of one car that belonged to a famous golfer, whose girlfriend allegedly attacked it with a nine iron. Repairing the carbon-fibre and Kevlar body sections is an expensive and highly skilled job, so make sure it's been done well.

The paintwork, like any car's, is prone to damage, especially around the nose and on those big door mirrors. And don't forget that these cars are now up to 16 years old: colours can fade, particularly on those from hot climates, and trim seals may well have hardened. Of the estimated 12 UK-specification 959s, one was finished in Ruby Red, six in Polar Silver, one in Guards Red, two in White, and one in Meteor Grey.

The battery – always a bone of contention in vehicles that see relatively little use – is at the front of the luggage compartment, and is a readily available Bosch item. Changing it isn't easy, though. First you have to remove the carpet trim, and then the reservoir for the windscreen and headlamp washers. In the Charles Ivey 959 (one of the cars seen in this guide, and which also featured in the November 1998 issue of this magazine) a master switch has been installed in the front compartment to prevent the battery draining when the car is standing idle for long periods.

The windscreen is flush-bonded to the body, unlike in contemporary 911 Carreras (if not the current 996-model cars) which have rubber seals. When the 959 was new this was novel and quite hard to deal with, but today any good windscreen specialist ought to be able to replace a damaged windscreen. The bad news is that while the glass may look similar to a 911 Carrera's it's actually quite different; it's more gently raked, for a start. And replacement isn't cheap. The glass alone costs £2078 plus VAT, with fitting on top of that.

The unique exterior mirrors previewed the so-called 'teardrop' versions first seen on the 1991-model 911 Turbo. On the 959, though, they are mounted on relatively soft aluminium door skins. And if a mirror is knocked then the metal skin can easily be distorted.

If you buy a non-UK specification car (and unless it has already been converted) then the headlamps will probably dip the wrong way. If you want to replace them you're looking at around £5000 a pair (again plus VAT...). For this reason many cars will be fitted with cheap-looking stick-on beam deflectors, which although not strictly legal on

vehicles registered in the UK, should none the less scrape through all but the toughest MoT tests.

Despite its specialised nature there are many contemporary 911 Carrera parts in the 959. Check out those rear-light clusters, the door handles, all the glass apart from the windscreen, the windscreen wipers, and numerous other details. That said, the toolkit in the 959 is very specific to the car, so it's essential that everything is still there. Look for the leather pouch containing the full selection of tools, but most importantly the large centre-lock wheelnut socket and top-quality torque wrench.



Engine & transmission

You can't take a 959 just anywhere to have it serviced. Indeed, you can't even take it to most Official Porsche Centres. Because the car required unique diagnostic equipment, Porsche decided to allocate just one service centre to each territory, so you'll need to contact the importer if you want your car serviced through the official network. Here in Britain 959 servicing is managed from the Porsche Centre Reading.

If any area of the car's complex systems have given cause for concern over the years, it's that groundbreaking four-wheel-drive system. There have been problems with the front and rear clutches, for instance, and also with the oil pumps within the individual differentials. Again, though, most faults will stem primarily from lack of use rather than wear and tear.

Most cars were fitted with a 450bhp engine, based on the Le Mans-winning 956 unit. But around eight (including the Autoclassica car shown here) left the factory with 550bhp, the extra power coming from larger turbochargers, a higher boost pressure, and not least a remapped electronic control unit.

Evidence of regular servicing is vital. Stored cars need new oil to help absorb the moisture that invariably collects inside the engine, particularly if journeys are short. Ageing seals and flexible pipes are the main concern. Expect an infrequently used engine to run unevenly when first fired up. It needs a good run to clear out oil deposits, but should then have perfect manners. Beware if it doesn't.

The Ivey car is given a run fairly regularly, but because the mileage is still so limited the oil is changed only every two years (and note that the car is stored in ideal conditions). The engine's ancillary drive-belts should be changed every 36,000 miles, but since this car covers only a few hundred miles each year the change is made only if the belts' condition visibly deteriorates.

Prices for 959 spare parts will, as we've suggested elsewhere, make your eyes water. And, surprisingly for a Porsche, many are no longer supplied. When having the engine serviced, for instance, advise the technician to take great care with that massive outer cover. It's no longer available from Porsche, but when it was would have cost no less than £9718.19 plus VAT. The special twin-outlet silencer costs £4894.98 (again plus VAT). Even the spark plugs are special – each one costs £10.62 plus VAT.

The fuel filler is situated beneath a flush-mounted flap on the left-hand side of the luggage-compartment lid. The filler on the left-hand rear wing is for transmission fluid, and that on the right-hand side for engine oil. There's little chance of accidentally putting fuel in either of these because each external flap is released by a yellow latch inside the engine compartment. The transmission-oil filler cap can be removed only with a special hexagon socket. The coolant filler for the cylinder heads is on the extreme left-hand side of the engine compartment.

All 959s were delivered with air-conditioning that used the old, freon-based refrigerant (see also *Coming up for air* on pages 93–97 of the August 2003 issue). In the Charles Ivey car this has been replaced with modern, eco-friendly refrigerant, and the compressor valving, seals and pipework suitably updated. Expect to pay around £600 for a similar job, but then it does pay to keep cool in this very special Porsche...

The Charles Ivey 959 has covered a total of around 12,000 miles, and has been very reliable considering its special production methods and race-specification engine. For its most recent service it had to go back to Reading for attention



to one of the transmission system's hydraulic pipes. The service took 10 hours, and cost £1200 plus VAT. Routine maintenance is well within the scope of the London-based independent's own technicians, however.

You should never buy a 959 without seeking the advice of an acknowledged expert on the model – which in the UK means going to the Porsche Centre Reading. You may have to spend a not inconsiderable amount of money to get the car there – and no owner serious about selling a car as specialised as this should object to such a request – but if you're planning on spending up to – or even over – £100,000 it could prove to be a very sensible investment, indeed.



Brakes, wheels & tyres

The 959 is fitted as standard with cross-drilled, ventilated steel disc brakes all round, with four-piston calipers and ABS sensing. Since most cars are used infrequently and have low mileages the only real problem is likely to be internal corrosion, or perhaps hardening (or even softening) of the various rubber seals, with subsequent hydraulic-fluid leaks. Check that the hydraulic fluid has been changed regularly (at least every two to three years). And ideally you'll need to see bills showing that the seals have been changed at least once (and better still recently) during the car's life.

Those centre-lock magnesium wheels were very unusual when the car was launched, certainly for road use, and very few specialists could restore them if they became damaged. Now, though, such rims are more commonplace

on ultra-high-performance cars, and they can relatively easily be refurbished. It's well worth at least trying to restore them, too – a replacement rear wheel from Porsche will cost £2681.24 plus VAT.

Sensors in the wheels monitor tyre pressures, and activate a dashboard warning if they drop. Or they should do. Like the system in the 928, though, this wasn't an unqualified success. It's far too sensitive, basically, and detects even the slightest variation in pressure. But the warning appears for only a few seconds when you first drive off, so it's probably something you can learn to live with.

The original tyres for the 959 were special Bridgestone RE71 covers, designed to allow the car to be stopped safely from its maximum 197mph in the event of a puncture. Replacements are available for around £250 each. But the Charles Ivey 959 is fitted with ordinary Pirelli P Zeros – the company's Alvaro Crego reports that they fitted without any problems, or modifications to the rims – and the valuable Bridgestones are carefully stored for posterity. The Pirellis don't have the same run-flat abilities, but at only around £150 apiece they cost a lot less than the Bridgestones.

Interior & electrics

At first sight the inside of a 959 looks much like that of a contemporary 911 – in particular the 964 which appeared within two years of the first 959s – and for that reason is perhaps at odds with the

striking exterior styling. But when you start to look a little more closely you'll discover that at least some of the interior is unique.

Most obvious is the centre console, with rotary controls for ride height and damper settings. The instrumentation, while undeniably similar to that of the then yet-to-be-released 964, has unique warning lights for the four-wheel-drive and suspension systems.



Checking out the interior involves searching for wear and tear, particularly on those deep-sided seat bolsters, around the handbrake, and also on the gear-shift lever. A good trimmer ought to be able to take care of most minor damage, though.

It's time-consuming, but check that all of the electrical systems and gadgets actually work. Many of these cars have spent the greater part of their lives in storage, remember, and electrical switches and contacts can corrode even in seemingly ideal conditions. ■

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Identification and options

959 chassis numbers are unique, and run in the series WPOZZZ95ZHS900001 onward. The engine is a type 959/50 unit, with serial numbers in the series beginning 65H00001. The special type-G59 six-speed manual gearbox can be identified by the serial number 75H00001 onward.

Fake 959s (as opposed to unashamed lookalikes such as Eric Lanz's car in the October 2003 issue; see pages 94-99) are not an issue, if only because the real thing has such obvious complexity once the front and rear covers are lifted. But it's none the less important to check that the serial numbers in the documentation agree with those on the car itself.

The chassis number in a 959 is found inside the front compartment on an aluminium plate near the bonnet catch (above right). It's also found on the right-hand inner wing, behind the carpet, and on a decal on the underside of the bonnet. The engine number is on the vertical cooling-fan support on the crankcase, but you'll need a torch and a mirror to read it.

There were few extra-cost options for the 959 – it really was that well appointed as standard. Indeed, electrically adjustable leather seats, air-conditioning, and a state-of-the-art sound system all came as part of the package (but bear in mind the differences between Comfort and Sport models). Listed below are the options that were available, together with their Porsche code numbers.

- 139** Heated passenger's seat
- 340** Heated driver's seat
- 383** Sport passenger's seat with electric height adjustment
- 383** Sport driver's seat with electric height adjustment
- 533** Alarm system



rear-drive feel) to 50:50 when conditions demand. This torque split is varied according to information received by an electronic control unit about throttle opening, engine load, gear selection, and even the speed of individual wheels. It sounds nothing special today, and in fact the system was in some respects a precursor of the now widely used PSM (Porsche Stability Management), but it was quite some feat for the mid-1980s. The brakes were equipped with ABS, too.

Although the electronics did – and still do – an exemplary job of constantly tweaking the torque split, there was, as might be expected of a true driver's car (and especially a Porsche!), the option manually to override the settings, in this case via a stalk mounted on the steering column. This offers the choice of Traction (with a 50:50 split front to rear), Ice and Snow (with a 40:60 bias to the rear), Rain (varying from a 40:60 rearward bias, to 20:80 as required) and Dry (varying from the same 40:60 rearward bias, to 20:80 under acceleration).

Electronics also control the suspension system – as in the latest air-sprung Cayenne. Gone, for instance, were the antiquated torsion-bar springs of the contemporary 911 (although in the 911 proper these were to last a few more years until the 1989 launch of the 964), to be replaced by coil springs and Bilstein adjustable dampers. The latter come equipped with both automatic and manual settings, so that drivers can choose either soft (for touring and/or rough roads) to firm for high-speed



The 959 comes with a comprehensive toolkit, presented in neat leather bags



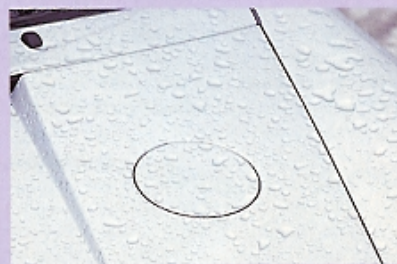
But would any of the 959's original buyers ever have used the contents?



The battery is situated below the large washer reservoir. Note cut-out switch



Chassis number is stamped on right-hand inner wing, behind the carpet



Fuel filler is located beneath this flush-fitting cover in the front lid



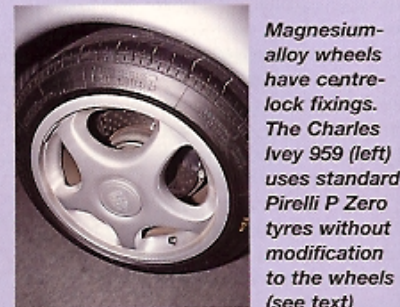
Engine compartment is dominated by the two large air-intake ducts



Cylinder-head coolant is topped up when necessary through this filler cap



Engine cover is a complex Kevlar moulding – and terrifyingly expensive!



Magnesium-alloy wheels have centre-lock fixings. The Charles Ivey 959 (left) uses standard Pirelli P Zero tyres without modification to the wheels (see text)

cornering and track work.

Even more innovative, though (and again pre-dating the Cayenne by at least 15 years), was the adjustable ride height. This can either be left to adjust itself automatically – the faster you go, the lower the ride, basically – or else controlled manually from the cockpit, which is useful for negotiating rough surfaces and speed bumps. Manual height settings of 120mm, 150mm and 180mm are available, although high settings are automatically overridden when the car reaches 75mph. The system is similar in principle to Citroën's hydro-pneumatic suspension – which itself dates back to the 1950s – in that each wheel has a hydro-pneumatic 'spring' which is effectively inflated by an engine-driven pump.

All of this technology was clad in a body shell based on the galvanised-steel structure of the standard 911 Turbo. Beyond that, though, most of the body was unique. The doors and front luggage-compartment lid, for instance, are made from aluminium, while most of the remaining panels (including the wings and both front and rear bumpers) are fabricated from Kevlar, carbon-fibre or polyurethane. The windscreen, unlike that of the 911 Carrera of the period, is bonded into its aperture, and fitted flush with the surrounding bodywork. Interestingly, the glass is also more gently raked than that of a normal Carrera.

Prototypes were one thing, but building the road

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This latch (above), to the right of the engine, releases the engine-oil filler flap



A special tool is needed to top up the transmission fluid (above)



This 'triple-silver' front-seat covering is unique to the 959. Very 1980s...

Facts & figures

Porsche 959

Body/chassis	Two-door coupé; monocoque made from hot-dipped galvanised steel, with aluminium doors and bonnet. Kevlar roof, front wings, sills, engine cover and rear bumper. Polyurethane front bumper
Engine	All-aluminium, air-cooled flat-six; water-cooled cylinder heads. Four valves per cylinder operated by twin chain-driven overhead camshafts per cylinder bank. Dry-sump lubrication system with separate oil tank. Twin sequential turbochargers with two intercoolers. Bosch Motronic engine management system
Capacity	2847cc
Maximum power	450bhp (331kW) at 6500rpm
Maximum torque	369lb/ft (500Nm) at 5500rpm
Transmission	Hydraulically operated single-plate clutch and six-speed manual gearbox. Four-wheel drive with power distribution controlled by hydraulically actuated clutches. Torque split variable from 50/50 to 20/80 front/rear
Suspension	Double wishbones all round with coil springs and twin gas-pressure dampers variable for ride height and stiffness. Front and rear anti-roll bars
Brakes	Front: 322mm cross-drilled and ventilated discs with four-piston aluminium calipers. Rear: 308mm cross-drilled and ventilated discs with four-piston aluminium calipers, and separate handbrake calipers. Wabco anti-lock braking system (ABS)
Wheels & tyres	Hollow-spoke magnesium-alloy wheels with pressure sensors and run-flat Bridgestone RE71 tyres Front: 8.0J x 17-inch wheels with 235/45VR17 tyres Rear: 10.0J x 17-inch wheels with 255/40VR17 tyres
Weight	1650kg
Performance	
0-62mph	3.7 seconds
0-100mph	8.3 seconds
Maximum speed	197mph

Relatively speaking

The 959 might be a rare and sought-after supercar, but the truth is that it's indirectly responsible for one of the major upgrades to the mainstream 911 Carrera.

In fact, the 959's four-wheel-drive system is very similar to that used in the 964-model Carrera 4, which was launched in 1989 (but which doesn't mean that you can use 964 parts to repair a 959). The 964 had a very similar braking system, too – it was the first 911 to be equipped with ABS. The 964 also followed in the footsteps of the 959 by using coil springs instead of the traditional 911 torsion bars.

Although the 959 was turbocharged, Porsche never offered a four-wheel-drive, 964-based 911 Turbo, opting instead for two-wheel drive. There were plans for a relatively affordable car, code-numbered 965 (which, rather confusingly, has since become an unofficial moniker for the aforementioned 911 Turbo) and later 969, with four-wheel-drive, a turbocharged engine (possibly a V8) and a body similar to that of the 959, but this never made it into production.

Interestingly, a much simpler and more efficient four-wheel-drive system was developed for the 993-model 911 Carrera 4, which superseded the 964. And the Turbo version of this car *did* have four-wheel-drive. And the 993 was the first volume-production 911 to use a six-speed manual gearbox – a feature which Porsche debuted in the 959. ■



Further reading

General information on the 959 can be found in the following books:

Porsche 911 Story by Paul Frère: £19.99

Porsche 911 and Derivatives – A Collector's Guide; Volume 2, 1981–1994 by Michael Cotton: now reduced from £14.99 to £9.99

Porsche: Excellence was Expected by Karl Ludvigsen: £159.99

All of the above titles are available through the *911 & Porsche World* bookshop on 01737 814311; fax: 01737 814591; e-mail: chp@chpltd.com. Alternatively you can order securely on-line at www.chpltd.com/shop.

The following aren't available through the *911 & Porsche World* shop, but may none the less be obtainable via specialist booksellers:

Driver's handbook As supplied with every new 959. Ideal if your original is lost, damaged, or in a foreign language: £44.95

Original 959 sales brochures A range of genuine – and often rare – brochures is available. Prices vary from £40 upwards depending on condition

Factory workshop manual A single volume covers the 959, and is available in various languages: £225

The following titles are out of print, but may be available through specialist booksellers or an Internet auction site such as eBay (ebay.com; ebay.co.uk):

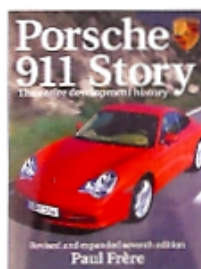
Porsche 959; Art & Car A special-limited edition, numbered book by Jürgen Lewandowski. Includes two sets of original sales brochures and a commemorative coin; also covers every detail of the 959 from production to its race history. Expect to pay at least £400

Porsche 959; Automobilia With French, English and Italian text, this hardback book contains plenty of colour photographs and cutaway drawings; well worth looking out for (see right)

Porsche 959 Published by HEEL, this large-format book is in German only, but features hundreds of previously unseen photographs. Also covers the Paris–Dakar cars

Porsche 959; Christophorus A lower-cost version of Jürgen Lewandowski's *Art & Car*

Finally, and as we've said elsewhere, the Charles Ivey car shown here featured in the November 1998 issue of *911 & Porsche World* (*Rainmeister*, pages 44–51). Sadly, we have no back issues available, but we can supply a black-and-white photocopy of the entire feature for £2.50 plus postage. Call 01737 814311 to place your order. ■



A magic number?

911 & Porsche World reader Sam Quinn is offering the ultimate 959 accessory: the registration number E959 CAR. It's currently on an untaxed Volkswagen Polo (below), but transfer should none the less be a relatively straightforward business. Contact Quinn with a reasonable offer on 07971 958456, or e-mail him at samquinn007@hotmail.com. ■



and sadly, perhaps, relatively few have been driven in anger. It's rare to see one for sale today with more than 50,000 miles (80,000km) on the clock, while most will have covered perhaps a third of that figure. This is no doubt because many owners felt (as they still may) that they needed to protect their not inconsiderable investment, but the truth is that the 959 really is a practical supercar which can easily be used on a daily basis. Indeed, the car – perhaps more than most – benefits enormously from being driven regularly.

The 959 was sold only in those countries that didn't demand a catalytic converter. Even in the mid-1980s this excluded it from all of North America, as well as Japan, Sweden and Switzerland. But that didn't stop speculators offering cars in those countries (but see also the sidebar on page 61, opposite) at hugely inflated premiums. After all, whatever may be the 959's practical qualities, the fact remained that few would ever see daily use. And if you bought the car purely to make a fat profit, who cared that you could never actually drive the thing?

All of the 292 cars were built with left-hand steering, and because the 959 didn't have UK Type Approval the dozen or so that were originally allocated to this country had to be brought in as personal imports. UK-bound cars differed from those destined for mainland Europe only in having a miles-per-hour speedometer, and

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cars proved to be more of a challenge for Porsche than the company seems to have anticipated. Many orders were taken from enthusiastic – and wealthy – customers after the Frankfurt show, and not surprisingly the 959 sold out long before the first production car was even built. But it would be April 1987 before deliveries could begin, and the car remained in production only until early 1988. A few additional cars were built as late as 1992, basically to use up spare parts. This brought the total to just 292 (Carrera GT production will run to fully 1500), with many early buyers taking advantage of a then thriving supercar market that offered them an instant profit on the list price of Dm420,000 (at that time about £158,000).

Many 959s went to collectors around the world,



It was Porsche's first off-roader, too

If you thought the new Cayenne is Porsche's first off-roader, think again. In fact, it was none other than the 959. At the same time that it was developing the road-going car, Porsche was working on a rally version to compete in the Paris-Dakar rally.

This wild-looking machine had a specially built Kevlar body with almost 12 inches of ground clearance. At the rear, and mounted on a tubular spaceframe, was a normally aspirated, air-cooled flat-six from the 1984 type 953 Paris-Dakar car. This had a light-weight magnesium crankcase, and produced a modest 232bhp at 6000rpm. It also had a 9.7:1 compression ratio to enable it to cope with low-octane African fuel.

The engine was linked to an essentially standard 959 drivetrain, complete with six-speed manual gearbox. But the PSK clutch system was manually rather than electronically controlled. Gearing allowed for a top speed of around 140mph. Suspension was straightforward (and set very high), with conventional wishbones and coil-over springs and dampers.

The American dream

The 959 has acquired almost legendary status in the USA, not least because Porsche never intended the car to be sold there. Devoid of the catalytic converters that even by the mid-1980s were a legal requirement in America, it couldn't even be registered – for road use, anyway – as a personal import.

The story goes that Porsche built around 30 US-specification 959 Sports in 1987. But when eight were shipped to the country they were impounded by the authorities because they were deemed not to be road-legal, and seven were later returned to Europe. The eighth car (or so the story continues) was allowed to remain for display purposes only, and remains in the hands of a private collector, although it can't legally be driven on public roads.

But now there's good news for US-based 959 enthusiasts (said to include Microsoft founder Bill Gates among their number). A change in the law means that 959s can now be driven on American roads. But – and it's a big but – they must conform to the local exhaust-emissions regulations that were in place in 1988. And the

959 still doesn't have the necessary catalytic converters for this.

Or at least it didn't until a Californian company, Canepa Designs, came up with a way around the problem. The 959's complete exhaust system is replaced with a custom-made system incorporating 993-model 911 Turbo catalytic converters and brand-new Garrett turbochargers. Because the original Motronic engine-management system can't cope with cats, it's replaced with a modern Motec unit, together with all the necessary wiring and sensors.

No less significantly – and possibly of use to European 959 owners, too – we understand that Canepa Designs also modifies the 959's unique wheels so that they can more easily be fitted with conventional (for which read cheaper!) tyres.

All of this comes at a price, though. A fully rebuilt and refurbished US-legal 959 (complete with custom-made car cover) costs a hefty \$425,000 – that's around £265,000. Still less than you'd pay for a Carrera GT, of course, and much more exclusive, too!

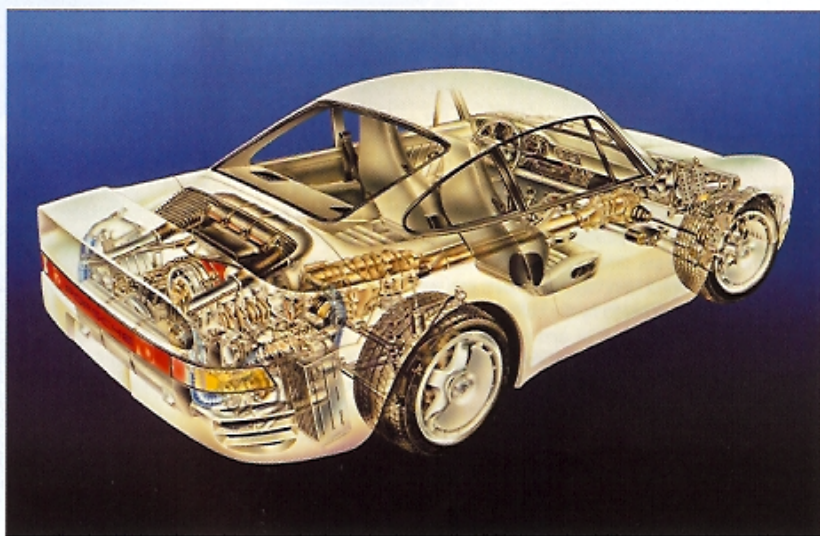
● Canepa Designs is on (USA) 831 423-5704, or go to www.canepa.com.



Three 959s competed in the 1985 Paris-Dakar Raid, but all failed to finish because of crash damage. For 1986 Porsche returned with a much-modified 959 fitted with a turbocharged 959/50 engine detuned to give 390bhp. This time the cars finished first, second and sixth – a superb result made even more impressive by the fact that only 67 of the 488 cars completed the tough race that year. ■



The 959 broke new ground on many technology fronts. This cutaway drawing shows the novel four-wheel-drive transmission and the variable-ride-height suspension system. The 959 was the first 911 model to feature coil springs rather than the traditional torsion bars. The 2.85-litre engine was derived from the Le Mans-winning powerplants used in the 935 and 956 racing cars



Here we go again...

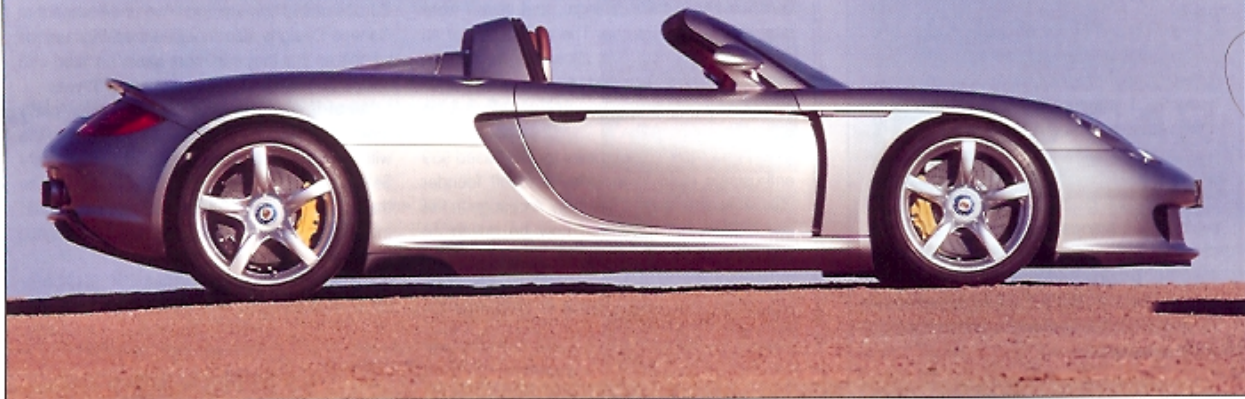
Twenty years on from the conception of the 959, Porsche is finally giving us another supercar – the 612bhp, 205mph Carrera GT (and see also pages 20–26 of this issue).

But the Carrera GT (below) is in many ways a very different animal to the 959, and arguably less sophisticated, too. It draws heavily on race-car design and, as such, is an ultra-lightweight machine utilising space-age materials such as carbon-fibre and magnesium. The power unit, too, has racing DNA in it. In fact, the mid-mounted V10 is a direct descendant of Porsche's stillborn Le Mans racing engine.

The combination of light weight and power gives impressive performance. The Carrera GT's yardstick 0–62mph time is just 3.9 seconds, while the maximum speed is a little over 200mph.

Like the 959, the Carrera GT will be built in only limited quantities (although at the same time it's worth remembering that it will still outnumber the older car by around five to one).

It's fearsomely expensive, as well, with a price tag of around £325,000 (US\$456,000). If you can afford one, though, you'll be buying an important piece of future Porsche history. If you can't, then either wait 20 years, or buy a 959 instead. In its way it's no less impressive a machine. ■



headlamps that dipped to the left.

Two trim levels were offered, with the vast majority of cars built to what Porsche called *Komfort* (ie *Comfort*) specification. A handful (and possibly no more than half a dozen) were so-called *Sport* models, stripped of variable ride height, central-locking, electrically operated windows and seats, air-conditioning, and even a passenger-side door mirror. Between them these measures saved a worthwhile 100kg, but (of course!) customers still paid the same as for a *Comfort* model.

Today it could be argued that the current 996-model 911 Turbo, with similar horsepower (and a far broader torque delivery), is a much more accomplished machine than the 959 – and, at around £90,000 brand-new, better value for money, too. Well, maybe it is, and maybe that's just the way it should be considering that it was developed over 15 years after the 959. But it's missing much of the transmission, suspension and materials technology of the older car, and although certain elements of the 959's styling (not to mention its interior) are now looking quite dated, most Porsche enthusiasts still consider it to be the more stunning-looking machine.

Perhaps more important, though, is the inescapable fact that if you buy a 959 today it should, given suitable care and attention (and reasonable economic stability), be worth at least the same in 10 years' time. Whether the cost of that care and attention (and servicing costs can be substantial) will be covered by the car's resistance to depreciation is a moot point, and you also need to bear in mind the notional cost of any interest you might otherwise have earned on the deal. But you'll have had the benefit of a decade behind the wheel of one of the rarest and most desirable Porsches ever made or – and we say this advisedly in an issue also featuring the new Carrera GT – ever likely to be made. ■

Owner's view

You might well imagine that the handful of 959s currently residing here in the UK are tucked up safely inside air-conditioned motor houses. But Nottinghamshire farmer Robert Sutton has owned his car (right) for three years now, and uses it regularly.

'It's a vehicle that needs to be driven, not put on a podium somewhere for people simply to look at it,' he says with disarming frankness. 'And I've had no end of pleasure out of mine.'

'I bought it when it was 12 years old and had done only 2500 miles. But then the dealer I bought it from went into receivership, and it took me about another year to take delivery. It hadn't been used in all that time, and it had suffered badly. Many of the magnesium and aluminium parts had corroded, there were several leaky pipes, and the electronics weren't working. It took £15,000 to get it back on the road again.'

'What it means is that if you can't afford to buy this car, then you can't afford to run it, either. Having said that, nothing ever really goes wrong with it. It's a magnificent bit of kit, and still better than most of the recent cars. I really love it.'

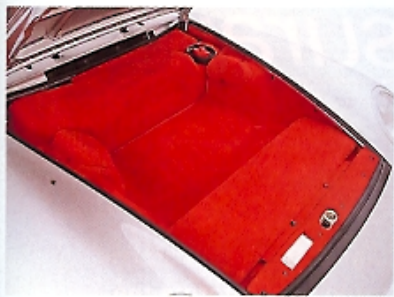
For its annual service Sutton takes the car to the Porsche Centre Reading's John Titcombe, a recognised expert on the model. Robert says the diagnostic procedures for all of the car's complex systems and various minor rectification work can quickly chalk up a £2000 bill.

'But it's cheaper than running any Ferrari, believe me!' he adds. 'And you could put your granny in this car safely. Its capabilities are way beyond my skills.'

His take on the arguably dated styling also points to why the 959 will remain a Porsche classic. 'You have to look at it like, say, an 'E'-type Jaguar or a Lamborghini Miura. You don't buy them unless you get pleasure out of the fact that they're all landmarks in high-speed motoring. And in their way they're all beautiful.'

His obvious enthusiasm aside, Robert's 959 now has 16,500 miles on the clock, and even he's ready for a change. Thus his car is now for sale through Andrew Means of Gmund Cars (see the *Contacts* book sidebar at the bottom of the opposite page). ■





There's not much space for luggage in the front compartment of a 959 (above), but let's face it - you'll want to drive this car through the night in any case... The 959 is in its element when confronted with an open road (below)

How much will you pay for your 959?

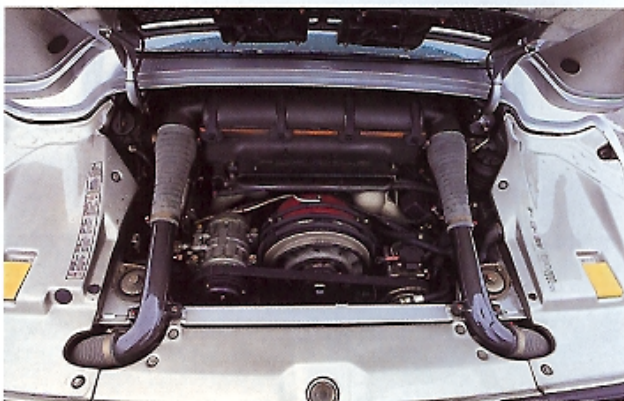
With just 13 cars officially imported to the UK when they were new (and an unknown number of personal imports then and since), 959 prices don't appear to be as stable as you might imagine. This almost certainly reflects the model's specialist appeal, plus a degree of speculation by some sellers.

We looked at a German website - www.mobile.de - for an idea of the price spread of 959s being offered for sale during early October 2003. Surprisingly, perhaps, no fewer than six cars were advertised. Top asking price was £180,000 for a June 1988 example in Silver with just 6600km (4125 miles) on the clock. Three more Silver cars had covered up to 22,000km (13,750 miles), and all were priced above £160,000. These figures seem almost speculative compared to the two non-Silver cars being offered. There was, for instance, a Black car with 29,000km (18,125 miles) for just £92,000, and a 23,000km (14,375 miles) car in White for £113,000.

This might suggest a sensitivity to colour, but it's much more likely that the cheaper cars are simply pitched at a price at which they'll sell. Indeed, Andrew Mearns of Gmund cars is selling Robert Sutton's 16,000-mile Silver car (see owner's view sidebar on page 108) for just £95,000. And that, we would venture to suggest, is a bit of a bargain. ■



If you buy a 959 today
it should, given suitable care and
attention, be worth at least the same
in 10 years' time



Contacts book

Porsche Centre Reading, Bath Road, Calcot, Reading, Berkshire RG31 7SG; tel: 0118 930 3911; www.porsche.co.uk/reading

Alvaro Crego at Charles Ivey, 160 Hurlingham Road, Fulham, London SW6 3NG; tel: 020 7731 3612; www.charlesivey.com

Andrew Mearns of Gmund Cars (07887 948983; www.gmundcars.com), and who also looks after the Porsche Club Great Britain's 959 Register (www.porscheclubgb.com)

Autoclassica, Market Flat Lane, Scotton, Knaresborough, North Yorkshire HG5 9JA; tel: 01423 865600; fax: 01423 860204; www.autoclassica.co.uk