

Really Special

Many newer Porsches may naturally be quicker and more agile than the now 12-year-old 993 RS, but the latter still offers huge performance - and even the best might cost you little more than a well-specified Cayman 'S'. It is, in short, a very hard act to follow - and surprisingly exclusive, too

Story by Chris Horton Photography by Antony Fraser

It is one of the more frustrating paradoxes of human existence - and perhaps even contrary to the theory of evolution - that the better one is at some given task or other, so generally the more difficult it then becomes to make further substantive improvements to one's performance. The first four-minute mile, for instance, was run by Roger Bannister in Oxford way back in 1954, and that figure has, not surprisingly, been under constant attack from other athletes around the world ever since. But the current record of a little over three minutes and 43 seconds is now highly unlikely ever to be reduced by more than a few hundredths of a second at a time - certainly not within the next 50 years or so, anyway.

The problem is much the same for the makers of what might be termed planes, trains and automobiles - with the added complication that any major improvements in specification, and thus all-important performance, generally end up costing a disproportionately huge amount of money; in this case it's the law of diminishing returns. Thanks to the recent much-publicised opening of the high-speed rail link from the refurbished St Pancras station to the Channel Tunnel, for example, you can now travel between London and Paris in a little over two and a quarter hours without the hassle of setting foot in an airport. But is the 20-minute time saving over the old line through Kent really worth the billions of pounds the new one is estimated to have cost us? One suspects not. Then again, if you're reading this in the departure lounge at either Heathrow or Gatwick airport, maybe it is...

As with trains, so with sports cars. Porsche's latest 997-model GT3 RS, for instance, is a truly awesome, breathtaking achievement - 415bhp, 0-62mph in just 4.2

seconds, a maximum speed of 192mph and, in the hands of an expert, levels of grip, roadholding and braking (and thus lap times) that seem not just to defy the laws of physics, but actually to rewrite them. Dull it most definitely is not. But just ask yourself this question. How much better is that new GT3 RS than the regular 997 GT3? (And do bear in mind that while the former costs from £94,280, the latter starts at a comparatively cheap £79,540.) Then again, how much better (in technical terms, at least) is either of those models than the original, first-generation 996 GT3? And rather more to the point as far as we're concerned here, how much better than a 993-model Carrera RS? Even with a mere 300bhp this now increasingly desirable (and thus steadily appreciating) modern classic offers 0-62mph in five seconds, a top speed of 172mph, and genuinely race-bred handling. And all - at the moment, anyway - for quite possibly less than £45,000-£50,000. Tempting, isn't it?

Here, though, we immediately run into yet another intriguing paradox. Which, put simply, is that if you're in the market for a 1990s' 911 RS, then the 993 model was - and remains - a huge leap forward from the 964 version. Don't get us wrong. The 964 RS is a superb car, well worth owning (see the



buyers' guide in our June 2007 issue), and itself no mean performer, whether in terms of forward velocity, driving fun, or simply investment potential. (And the startling fact is that you'll probably pay as much today for a good 964 RS as you would for a comparable 993.) But the 993-model Carrera as a whole brought so many significant and genuinely worthwhile improvements to the entire 911 range that if it's a Porsche to drive far and fast that you're after – as opposed to a sprint special, a trackday toy, or perhaps even just an appreciating work of art – then it's a no-brainer. The 993 RS will (or certainly ought to) win every time, in much the same way that a 993 Turbo is in more or less every significant respect a far more complete and rounded car than a 964 Turbo. That's just the way it was back then.

Back then? Well, it actually was quite a long time ago now. In fact, the 993



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RS was unveiled in the spring of 1995 for the forthcoming 1996 model year – although the records suggest that some cars were, strictly speaking, 1995 models; see panel on page 97. (The mainstream 3.6-litre 964 RS had ceased production towards the end of the 1992 model year, with a limited run of another 100 or so Turbo-bodied and 3.8-litre-engined cars intended to qualify that particular derivative for GT racing during the 1993 season.) The new RS would be available, said Porsche, in Europe in both left- and right-hand-drive forms (with a special version for Switzerland), and also in Japan – but not entirely surprisingly in neither the United States nor Canada. At its heart was another nominally 3.8-litre engine (making the RS the only 993 ever to have an engine of this size as standard equipment), and while this produced more or less the same peak power and torque figures as those run-out 3.8-litre 964 RSs (300bhp at 6500rpm and 355Nm at 5400rpm), Porsche's clever new Varioram mechanism – essentially a system of variable-length intake tracts; see the panel on the right – made the new motor far more flexible than the 964's, especially in the crucial low- to medium-speed ranges.

Improved driveability was a theme that continued throughout the rest of the 993 RS's specification – as it so famously did for the standard 993, too, of course. (Varioram, for instance, would subsequently find its way into the run-of-the-mill

993s for the 1996 model year, although in that installation it also helped boost power, from 272bhp to fully 285bhp.) The six-speed manual transmission, for example, was lifted straight from the mainstream models rather than from the competition department at Weissach (albeit with marginally higher ratios for first, second and third gears, and stronger steel synchromesh mechanisms), and unlike that 3.8-litre 964 RS it was also equipped with a dual-mass flywheel in an attempt (largely successful, let it be said) to reduce drivetrain vibration. Needless to say, though, there was never – officially, anyway – a Tiptronic 'S'-equipped 993 RS.

Ride, too, was notably better than that of any previous 'modern' RS (although any benefits were inevitably somewhat negated by the big 18-inch wheels and ultra-low-profile tyres, never mind the roughly 30–40mm lower

ride height than in the standard 993). This useful refinement was to a large extent the result of the 993's ingenious new so-called LSA (Light, Stable, Agile) multi-link rear suspension, which also offered quantifiable improvements in on-the-limit roadholding, but was also due in part to careful selection of the default (but still adjustable) spring, damper and anti-roll-bar settings. There would be plenty of scope for enthusiastic owners to fiddle about with those to their hearts' content at the side of some circuit. There was, not surprisingly, a limited-slip differential (with a 40 per cent locking action under acceleration, rising to 65 per cent on a trailing throttle) and, perhaps more unusually for a car of this nature at that time, Porsche's ABD, or Automatic Brake Differential, which offered a degree of both traction control and what would later come to be termed stability management. Brakes were from the 993 Turbo, and ABS was fitted as standard.

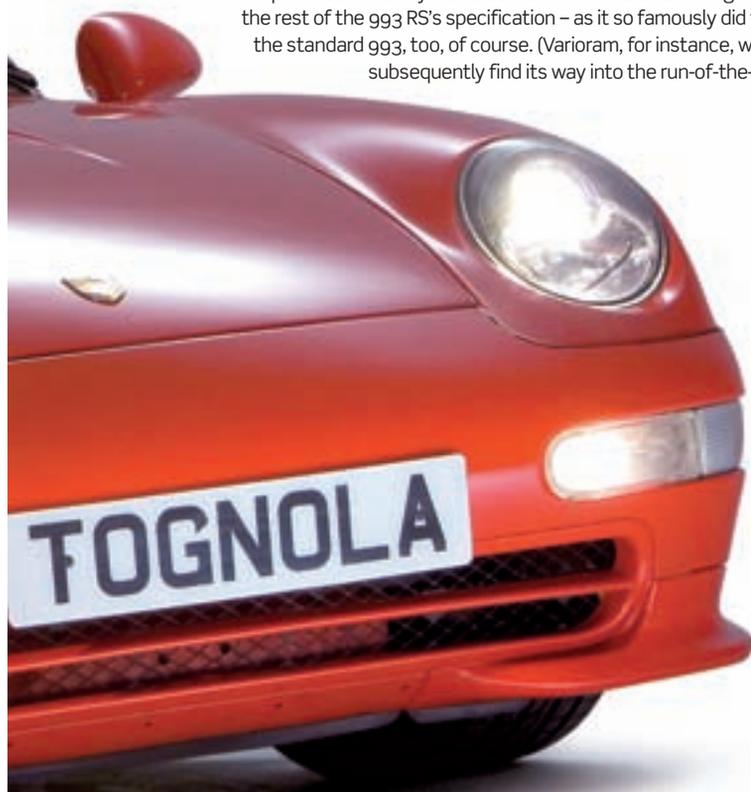
DEEP BREATHING EXERCISES

One of the largely unseen but none the less one of the most interesting features of the 993 RS is its so-called Varioram induction system, not least because it subsequently appeared (for the 1996 model year) in mainstream versions of the 993-model 911 Carrera, in that case helping to boost maximum power from its original 272bhp to 285bhp (both figures taken at 6100rpm), and peak torque from 330Nm at 5000rpm to 340Nm at 5250rpm. Mid-range gains in the engine's volumetric efficiency were even more impressive, with torque from the later Carrera's 285bhp motor said to be as much as 40Nm higher than that of the earlier 272bhp unit at a comparable crankshaft speed.

Varioram offers, via a complex but plainly highly effective system of vacuum-operated valves and sliding tubes, all of them seamlessly controlled by the DME engine management system, what amounts to a three-stage intake manifold. In its most basic form, the two sliding sections (one per cylinder bank) and the fixed central intake distributor (or plenum chamber) are arranged such that the inlet tracts are as long as possible (in fact, under these conditions they're almost double the length of the equivalent pipes in the earlier 993). In very simple terms this enhances the engine's efficiency at lower speeds (and particularly fuel economy and torque), and at smaller throttle openings.

During the second stage – when the engine speed reaches about 5000rpm, and if the primary throttle valve is at least 50 degrees open – an additional throttle valve is opened by the DME, allowing incoming air to fill what's known as the resonance system below the central intake distributor. There is also now a gap between the two sliding sections and the intake distributor. This both reduces the effective length of the internal intake pipes, and also allows the additional air from the resonance chambers to flow directly into those pipes, with a resulting increase in the amount of air reaching the combustion chambers.

During the third and final stage of operation – this time when the crankshaft speed reaches precisely 5920rpm (5800rpm in the standard Carrera), and once again with the primary throttle valve at least 50 degrees open – a so-called tuning flap in the second large resonance tube is opened, significantly increasing the flow area between the two resonance chambers, and thereby allowing the engine to breathe most effectively for maximum power. So racing really does improve the breed.



To a degree still overshadowed by the 964-model RS – and not surprisingly the classic 1973 car – the 993 RS is none the less a rising star, not least because it offers a great combination of performance and practicality, too. But few were built, some have been crashed, and prices are edging upward – so don't leave it too long before you buy



Club Sport interior is about as basic as they come, with no carpets or sound-insulating material. Even the Moo2 wasn't a lot more lavishly equipped, although strangely most of the usual options were available - even a sunroof. Roll-over protection was standard in CS. Note classic RS door cards and wind-up windows

Porsche clearly paid a lot of attention to making sure that its latest RS would stand up to the rigours not only of sustained fast road driving, but also of being routinely bounced off racetrack kerbs, whether that came from trackday use or from full-on professional competition - and the car was both intended, and eminently suitable, for either of those disciplines. The wheelarch edges, for instance, were subtly but distinctively rolled to provide a little extra clearance for the massive tyres when the suspension was fully compressed (think Spa; think Eau Rouge), and the body shell was extensively seam-welded for added strength and durability. All four suspension struts were given so-called Unibal top mounts - with an optional adjustable brace between the two at the front - and various other elements of the front suspension were both beefed up and also redesigned to cater for that lower ride height. More on all this a little later.

And without ever being quite as overtly aggressive as, say, the current GT3 RS, there's no doubt that the 993 RS very much looked the part, as well. Standard Moo2-specification cars (as opposed to the Club Sport; more on this derivative in a moment, too) had a smooth, open 'melted-cheese'-style rear wing, not dissimilar to that of the contemporary 993 Turbo, and a no less distinctive front splitter that was designed to feed high-speed air smoothly round the outer corners and the adjacent wheels. There were also moulded-plastic sill extensions, which - particularly on those cars with light-coloured paintwork - are an instantly recognisable clue to the vehicle's true nature. This was - and remains to this day - a 911 that meant business.

The final - and some would suggest most obvious - defining characteristic of the 993 RS was its cabin. And here, as with the earlier 964 version, it was more a case of what was (usually) left out rather than what was put in. We say 'usually' because, as is so often the way with the later so-called lightweight Porsches, customers could then specify (at extra cost, of course) most of the individual features that had previously been deleted, often

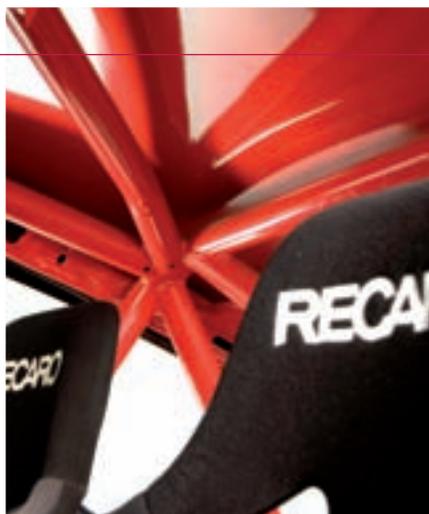
pushing the weight close to what it might have been in the first place. Even so, Porsche had already made worthwhile weight savings by fitting visibly thinner glass for the side and (unheated) rear windows, together with an aluminium bonnet that was supported not by the usual gas struts, but rather by a simple aluminium prop. Indeed, these measures alone are reckoned to have pared over 12kg from the RS's overall mass.

But a further big saving (probably 30kg out of a total of around 100kg) came from the lightweight Recaro bucket seats fitted in place of the usual electrically adjusted items - and the deletion of items such as the electric windows and mirrors, headlamp washers, central-locking, intermittent wiper control, standard door trims and loudspeakers all helped, too. There was also the barest minimum of sound-deadening material (none at all in the Club Sport), just a single interior light (on the transmission tunnel, as featured in the 964-model Speedster, for the record), and even a tiny 1.2-litre windscreen washer bottle in place of the usual 6.5-litre affair. (Why you couldn't simply put less water in the bigger bottle seems to be a question that no one asked at the time. This weight-saving logic certainly didn't stop left-hand-drive cars at least getting a fully 92-litre fuel tank.) No less pedantically, Porsche also got rid of the standard 993's rather stylised front-lid release lever on the left-hand 'A'-post, replacing it with a simple 'T'-shaped device on a metal bracket welded to the body. Every little helps...

And then, of course, there was the aforementioned Club Sport (the Moo3 option in Porsche-speak), which although intended primarily for the GT2 category in endurance racing could none the less be registered for road use in certain countries (such as the UK, where it was also known as the RSR). The cynic might well suggest, of course, that with even less trim than the basic RS, even less in the way of internal features and comforts, this was yet another blatant example of Porsche charging more for less (the standard car cost from £65,250, the CS from £71,500), but it was actually a little more complicated than that. Throttle response - if not overall power and torque - was improved by a lighter one-piece flywheel instead of the dual-mass unit, some of the intermediate gear ratios were slightly different again, and the Club Sport also had not only still more aggressive (and effective) front and

Side view shows immediately how much lower the RS was than the standard Carrera - 30mm at the rear, and 40mm at the front. Suspension - which as a result used many unique components - was fully adjustable, too. Car offers an excellent compromise between handling and ride - arguably far better than previous 964 RS





IS IT THE REAL THING?

It is entirely possible, as we showed in these pages in the September 2007 issue (*Sign of the times*, pages 72-77) fairly easily (if not necessarily that cheaply) to build a pretty convincing 993 RS replica - or a lookalike at the very least. That particular car, constructed and at that time owned by Greg Cranmer from Tognola Engineering in Berkshire, was built purely for fun, and certainly with no intention genuinely to deceive for monetary gain, but others - and especially now given the ever-increasing value of a good RS - may not be. It is absolutely essential, then, first to cross-check any would-be purchase's various identification numbers with the official documentation that should come with it, and also with the published information on the cars that is fairly widely available.

All 993-model Carreras, the RS included, left the factory carrying a number of identifying labels. These are, working from front to back, what Porsche calls the data bank (a self-adhesive piece of paper stuck to the underside of the front lid), the paint-code label (a foil-based decal stuck to the front of the left-hand inner wing, beneath the carpet), and finally the so-called identification plate - a foil-based label stuck to the metalwork above the right-hand door-lock mechanism (and obviously visible only when the door is opened). This last item is designed to be difficult to remove without destroying it, and its absence (by no means unknown) will suggest that the car has had some sort of paintwork repair in this area, whether minor or major. Draw your own conclusions from that.

Both the data bank (which should be exactly duplicated by the paper label stuck at the front of the Guarantee & Maintenance booklet; both should list any factory-fitted options) and the identification plate should carry the car's unique 17-digit VIN, or Vehicle Identification Number, and crucially this should also appear stamped directly into the body metal, first on a tab under the fuel tank (and so in the RS, with its bulky 92-litre tank, almost impossible to see), and then again at the bottom left-hand corner of the windscreen (and so readily visible through the glass). The engine number - no less important in a car of this nature; it's by no means unknown for a standard Carrera motor to have found its way in there over the years - is stamped into the right-hand side of the fan housing,

although in those (relatively few) cars with air-conditioning this can once again be almost impossible to see, even with the help of a torch and a mirror. (The air-con compressor gets in the way, basically.)

As for what might be termed the structure of the VIN and engine number, it's surprisingly straightforward - not least because so few RSs were built in the first place, and then only for the so-called Rest of the World (RoW) market. The first three characters, 'WPO', are what's known as the world make code for Porsche, and these are followed by 'ZZZ', effectively blanks which in US-market cars (and so not applicable here) would be replaced by what is known as the VDS, or Vehicle Descriptor Section. After this comes '99', the first two digits of the model type (993), then another 'Z' or blank. Next comes either 'S' or 'T' for the model year ('S' for 1995, 'T' for 1996), then 'S' (for Stuttgart-Zuffenhausen, the plant where the car was built), and then '3' for the final digit of the type number. After that little lot comes the serial number proper, which here (and seemingly regardless of whether the car is a 1995 or a 1996 model) should be in the range from 390001 to 390274.

The engine number can be similarly deconstructed. Here the first two digits, '63', denote what Porsche calls the engine version (although confusingly its specific type number is actually M64/20; go figure...), the next character, 'S' shows the model year (and it seems that all 993 RS motors were deemed to have been built during the 1995 model year), and then once again comes the serial number itself, which crucially should be in the range from 85001 onward. Anything other than that and it's almost certainly not a genuine 3.8 - which may not be a total disaster as far as the car's overall usability is concerned, but you obviously need to know about it beforehand, and then to adjust the purchase price accordingly. Likewise it's even possible - and potentially very useful - to analyse the number of the G50-type transmission (stamped clearly into the underside of the light-alloy casing). Anything beginning G5031 shows the car to be a basic M002-specification RS; G5032 indicates an M003 or Club Sport; and finally G5033 suggests that the car, whether in M002 or M003 trim, was one of the few built for the Swiss market. (The differences lay primarily in the intermediate ratios.) There, what could be easier than that?

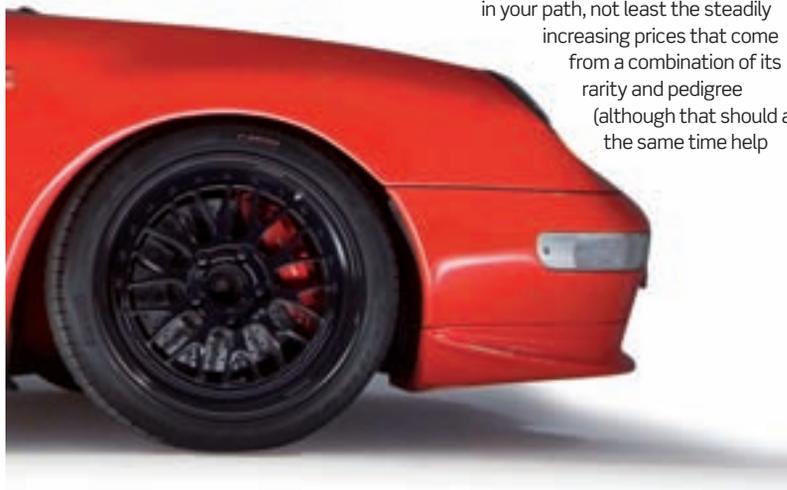
rear aerodynamics, but also a welded-in Matter roll-cage, a strut brace as standard, special bucket seats with six-point competition harnesses, a battery master switch, and not least a fire extinguisher.

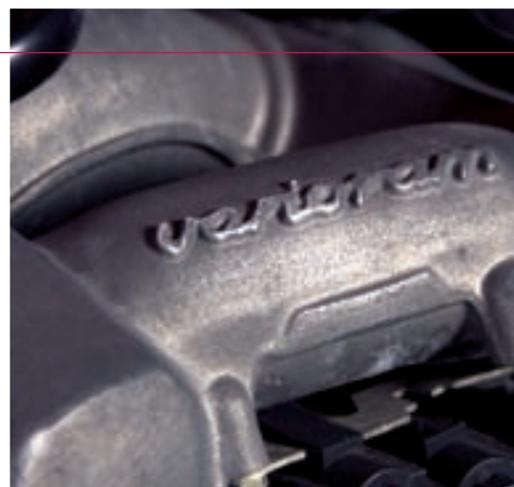
Should you buy a 993 RS, whether of the basic or Club Sport variety? Why on earth not? There will, of course, be a number of fairly obvious obstacles in your path, not least the steadily increasing prices that come from a combination of its rarity and pedigree (although that should at the same time help

preserve the value of your investment). It also remains quite an uncompromising machine, even in its somewhat softer 'basic' guise, making it very much a car for high days and holidays rather than day-to-day transport. (Even for the 20-mile trip to our photo shoot Peter Tognola, the owner of the Club Sport shown here, wore a set of noise-cancelling headphones like those used by helicopter pilots. 'You can't hear yourself think otherwise,' he says.)

You might also have to accept the fact that even before you knew 'your' car existed it was being punted in none too careful a fashion around the world's major circuits, with the possible body and mechanical damage that all too often entails. (So don't get too hung up about virgin metalwork, especially if you're going to track the car yourself.) And unless you know exactly what you are doing, or else are buying a car with a known and unimpeachable provenance, then you will almost certainly have to seek genuinely knowledgeable specialist advice (see page 97 for some useful contacts). Even with all those factors in the equation, though, it remains pretty difficult to think of any genuinely convincing reason *not* to buy one.

Unless, of course, you have the cash to buy a brand-new GT3 RS - although even that, we suspect, might struggle to beat the fun that you will have in both a good 993 RS and the brand-new Cayman 'S' that you would still be able to buy with the change. Just a suggestion, you understand...





CHECKPOINTS

Body structure

Aerodynamics and styling details aside, the 993 RS body shell is based closely on that of the standard Carrera, and as a result suffers from much the same relatively few inherent problems. Note, though, that in all of the cars covered here there is a significantly thinner (in other words lighter) coating of under-body sealant, and as a result the RS had only a three-year anti-corrosion warranty instead of the usual 10 years. This in itself doesn't seem to have had any great effect on the cars' longevity, however, and it's accident damage, whether caused by a routine road collision or out on a circuit, that you really have to be on the lookout for – with the usual added problem that any such damage, if badly repaired, can often much later become a source of corrosion. Additionally all 993 RSs have extensively seam-welded body shells, and the Moo3 Club Sport, or RSR, has a welded-in roll-cage.

The obvious places to start looking for damage are the four corners of the car. Lift as much as possible out of the front compartment to give yourself a really good view of its forward extremities, including the area immediately behind the bumper; likewise carefully examine the longitudinal members in the engine bay for kinks and creasing. Strut towers – front or rear – can be a good indication of major damage. Wings (fenders), too, can suffer, so check for rippling and/or signs of plastic filler. The wheelarch edges should also be rolled for added tyre clearance, remember, and if not the panel might have been replaced with an incorrect part – or else, of course, the car might not be an RS at all. Remember, too, that the front lid is made from relatively soft aluminium: look for the dents that might have come from the car being pushed backwards by hand – and obviously be careful if you ever have to do the same yourself.

Don't forget to have a good look at the underside – primarily for signs of a major 'off' from some circuit or other, but also, and given the lower ride height than a regular Carrera, for comings-together with kerbs and speed humps. Scrapes and grazes under the nose are the obvious tell-tale signs of that now all too common problem, and they can obviously lead to corrosion forming. The sills, too, should be showing no signs of damage, either from kerbs or incorrectly placed jacks or garage lifts, but the plastic extensions can make this difficult to spot, so take your time and both look and feel your way inch by inch along each side of the car.

Needless to say, the extensions themselves should be undamaged, too, but replacing them (and they can get quite scruffy) isn't a major issue. Likewise both front and rear aprons may well be cracked in places, but neither is impossibly difficult (or in the overall scheme of things prohibitively expensive) to replace; this is at the very least a £40,000 car, after all. Again make sure, though, that each model has the right front panel (and rear wing) for its specification; it's not unknown for basic Moo2s to be dressed up as Club Sports.

But there are a number of what might be termed lesser issues that affect the 993 in general, whether naturally aspirated or turbocharged, standard or RS. Probably the best-known of these is the now infamous creaking-windscreen syndrome. Thanks to its slimmer pillars the 993 has both a windscreen and a backlight slightly larger than any previous 911's, and although they appear to be secured with old-fashioned rubber mouldings they are, in fact, bonded in place, with a press-in trim to finish the job off neatly. What happens is that the inevitable slight twist in the body shell as the car negotiates bumps – possibly worse in the RS because of its lower, stiffer suspension, and bigger wheels with lower-profile tyres – causes the windscreen aperture in particular to flex, and the covering trim to fret against the body. It's this rubbing that generates the creaking sound, which predictably can be particularly bad in cars that have done many of their total miles on a circuit.

The solution is either to learn to live with it, or else to have the trim(s) removed (but only by an acknowledged expert) and a strip of a special smooth tape applied beneath it/them in order to minimise the friction, and thus the resulting noise. Accepted wisdom (and particularly in the US) suggested at the time that even in standard Carreras windcreens could crack, delaminate or even pop out of their apertures as a result of this torsional twisting – it was a major talking point in several *Running Reports* we published back in the late 1990s – but we would suggest that this is highly unlikely, if not impossible, unless a replacement has been (very badly) fitted and/or the car has a number of other serious structural issues.

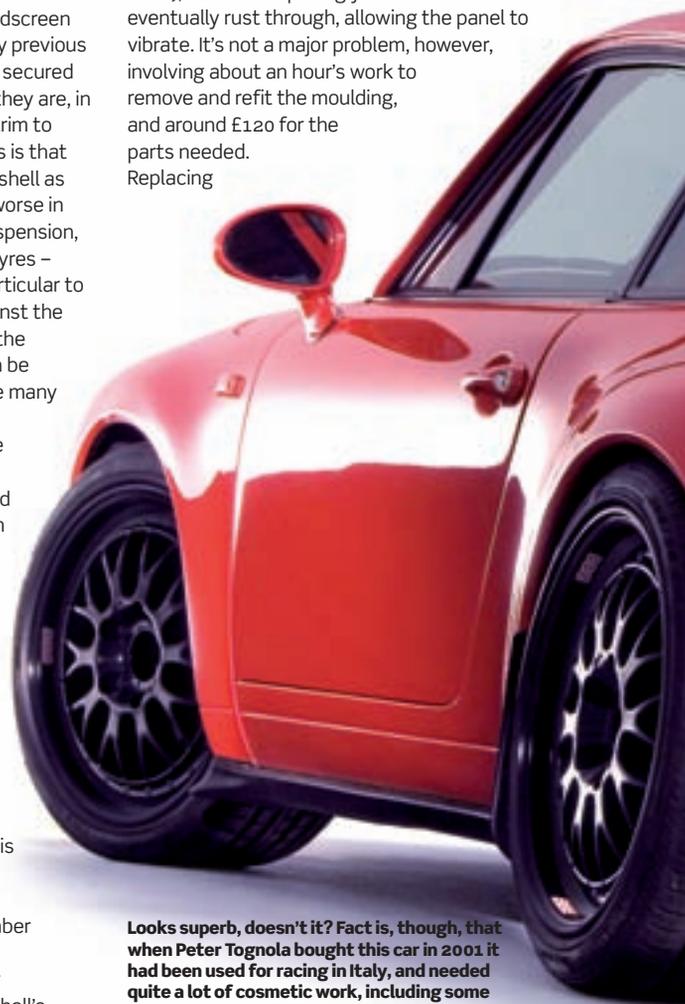
Bear in mind, though, that correctly fitted windcreens are crucial to the shell's overall strength and rigidity, and that some less than diligent fitters routinely make a

3.8-litre engine pioneered Porsche's Varioram system - variable-length inlet tracts, basically, and as a result of which the car was surprisingly flexible for road use. Standard power was 300bhp, but it probably wouldn't be too difficult to push that to around 320 with a few well-chosen tweaks

complete and utter hash of the job, scraping the protective paint off the aperture when they remove the old adhesive, and so providing the ideal conditions for future (and generally very awkward) corrosion. Again, seek genuine expert advice if you are in any doubt about this aspect of your would-be purchase.

Other bodywork issues include the four bracing stays for the rear apron, and fading of the rear-light lenses. Oddly – but not atypically – Porsche used ordinary mild steel for these stays (although the main bumper mounts are plated steel), and not surprisingly one or more can eventually rust through, allowing the panel to vibrate. It's not a major problem, however, involving about an hour's work to remove and refit the moulding, and around £120 for the parts needed.

Replacing



Looks superb, doesn't it? Fact is, though, that when Peter Tognola bought this car in 2001 it had been used for racing in Italy, and needed quite a lot of cosmetic work, including some repainting. So while you always need to buy a machine like this with great care, sometimes it also pays not to be too dogmatic

BEST BUYS – AND HOW MUCH TO PAY FOR THEM

If you thought that, with something like 2,400 cars built, the 964-model RS was a rare and exclusive Porsche, then this may come as something of a surprise, pleasant or otherwise. Total 993 RS production is now widely held to have been less than half that figure, at 1,170. Even the 1973 2.7 RS ran to something like 1,580 cars. Of those 1,170 993 RSs (and who knows precisely how many might have been written off over the last 11–12 years?), around 900 were the basic M002 models, and the remaining 270 or so the even more uncompromising M003 Club Sport, or RSR as it was known in Britain. It's believed that just seven M003s were officially imported to the UK.

All of which means, as we've suggested elsewhere, that you can't afford to be too choosy. No, actually, let's rephrase that. You have to be remarkably choosy, indeed – and at the same time prepared either to hunt down the very best car you can possibly find, perhaps by putting the word out through the trade (see page 97) and/or the clubs, or else – and more likely – to wait until it simply happens along, and then be in a position to snap it up immediately. In which case this guide may be relevant right now, or you might just have to keep it handy for when you do finally need it.

To a certain extent that also answers the debate about which of the two models – M002 or M003 – is best. It's whichever of them you can find, basically. Likewise – and the previous paragraph notwithstanding – you might also have to compromise slightly when it comes to condition and service history, if only because as a neo-competition car any 993 RS will almost by definition have led a fairly hard and active life. Peter Tognola's Club Sport, for instance, was extensively raced in Italy during the early part of its career, and when he bought it in 2001 looked nothing like as smart as it does today. He was able to see its potential, though, and with new M002 front and rear aprons, different wheels, and some modest repainting in the original Guards Red, has created a machine that has a replacement value – and is, therefore, insured for – the thick end of £80,000.

Which hopefully answers the next question. How much might you have to pay for a 993 RS? Again you could just strike it lucky and find a good low-mileage, one- or two-owner car for £40,000, but £50,000–£55,000 is probably nearer the mark, and if, as Tognola suggests of his own car, he needed to find a replacement in a hurry he'd probably be looking at, well, up to £80K. Hence his agreed-value insurance policy. Which might, of course, take the shine off the appealing RS/new Cayman 'S' scenario we painted at the end of the introduction to this story – unless, we repeat, you're prepared to compromise and/or to wait for the right car. Or perhaps to buy a second-hand Cayman 'S', as well!

the lamps will cost rather more – budget for a total of around £500 for the two indicator units and the centre reflector – but unless they have discoloured enough to fail an annual MoT test this is a job that can be left until you can live with the shame no longer. The car shown here, for the record, has been fitted with red US-specification turn signals, and despite their possibly questionable legality here in the UK certainly look better than the orange European-specification items it would have had originally.

Likewise you'll sometimes see the black powder-coating on the door-window frames peeling – it's caused by damp getting through it and attacking the aluminium-based alloy beneath – but again this is usually more a cosmetic problem than a structural one, and while eradicating it will mean stripping and subsequently rebuilding the doors – so it won't be cheap – at least it can't spread to the rest of the shell. Standard RS colours, by the way, were Grand Prix White, Black, Guards Red, Speed Yellow, Riviera Blue, Polar Silver metallic and Midnight Blue metallic, with most available in water-based paint if required.

Engine, transmission

There's no doubt that by the time it was building the 993 Porsche had cracked just about all of the air-cooled engine's few remaining problems, and the good news is that despite its slightly higher-than-standard state of tune (300bhp instead of first the 272 and then the 285bhp of the run-of-the-mill Carrera) the type M64/05 RS motor is in normal circumstances – and obviously given regular oil and filter changes – just about bullet-proof. It also has the hydraulic valve lifters of the standard car, which between them had helped to dramatically slash servicing times and costs compared to the 964 range.

There were, however, a number of interesting differences between



the M64/05 and the standard Carrera's M64/20 engine. Chief among these was its increased capacity (up from 3600cc to 3744cc), which was achieved by the simple means of enlarging the cylinder bores and pistons from their original 107mm to 109mm. This also required the use of additional special barrel-to-crankcase sealing rings, but fortunately these have proved to be thoroughly effective at preventing oil leaks – so beware if 'your' engine shows signs of dampness in this area. Pistons, like those from the 993 Turbo, were silk-screen 'printed' with a substance called Grafal in an effort to reduce noise – piston slap, essentially.

The cylinder heads, meanwhile, were given slightly larger ports (up by roughly 3.0mm), and the camshaft lift was increased, too: from 12.0 to 12.5mm (inlet) and from 11.0 to 11.1mm (exhaust). Even so, the only valvegear issues, as in any other 993, are possibly to make sure the camshafts are correctly timed (unlike in the 964 engine, the sprockets have no positive location, as such, and can potentially slip by a few degrees, with an obvious effect on overall engine power) and, if you're planning to rev the engine particularly strongly for long periods (or suspect that it may have done so in the past), to fit new and uprated valve-spring caps. This should help prevent the unpleasant possibility of a breakage, and the resulting 'dropped' valve being hit by the adjacent piston.

The other air-cooled-engine issues that had not so long before exercised so many minds and magazines' letters pages were largely history. The standard RS's dual-mass flywheel, for instance, is even now not noted for any

particular problems (the Club Sport has a lightweight one-piece item), although it's still worth noting any loud clonking noise with the engine idling in neutral, and an excessive looseness in the drivetrain, in which case you'll be looking at a total of around £1750 including the new clutch that it would be only sensible to install at the same time. Likewise the once frequent breakage of the toothed rubber belt in the twin distributors required by the twin-plug ignition system seemed to have been cured by the breather kit that was also available for retrofitting to earlier 964s. That said, it might not be a bad idea to fit a new belt as a precaution, although such is the relative complexity of the job that it's probably best left to a specialist.

Transmissions, too, are tough and reliable unless seriously and consistently abused – the competition-orientated synchromesh rings are made from high-grade steel – and even then will probably stagger along for ages rather than simply breaking. The clutch, needless to say, should bite smoothly and reasonably progressively, with no sign of grabbing, juddering or slipping, and the short-shift lever should slot neatly and precisely from one ratio to the next. The friction plate itself should last for at least 30,000–40,000 miles unless consistently abused, but since it's an engine-out job that will cost at least £1000 to fit a new one, it's well worth making sure there are no signs of problems before you buy the car. Another good reason to enlist the help of an expert.

Do bear in mind, too, that with a limited-slip differential as standard (and which should obviously show signs of its presence through

tight, low-speed corners, by tending to push the car straight ahead) the gearbox oil routinely takes a bit of a pounding, and Peter Tognola recommends changing it every 12,000 miles rather than the 48,000 miles suggested by Porsche. Have a look, too, at the two drive shafts (the same as fitted at the rear of the four-wheel-drive 993 Turbo) for splits in the rubber covers over the constant-velocity joints; if they're left for too long you might also end up needing new joints as well as new covers.

Suspension, steering and brakes

No great dramas here, either, and nothing that you won't need to check on any just about any other similarly constructed car (ball-joints, bushes, damper leaks and so on; listen for the usual distinctive clonking sounds on rough surfaces), and again mostly just interesting differences compared with the standard Carrera. Probably the most important thing to do is check that the various relevant components are, indeed, genuine RS parts (look for a green identifying dot, and a part number with what Porsche calls an index of .80 or higher), and then – for road use, anyway – regularly to ensure that the various adjustable items are set to their correct positions, if only to obtain optimum wear from the tyres. (Make sure, too, that none of the arms has been bent by an impact or otherwise damaged; that will wear out the tyres in pretty short order, too.)

The front suspension, for instance, is set about 40mm lower than the mainstream 993's, and the rear about 30mm lower. This required modifications to the front hub carriers to lower

As a Club Sport this car would originally have had dramatically upturned corners to its front apron, but instead has been fitted with the standard M002's rather less ostentatious devices. Conversely, watch for basic cars dressed up as Club Sports...





Standard wheels for both the M002 and the M003 Club Sport were three-piece 18-inch Speedlines, but classic BBS rims look no less gorgeous - especially as here, in satin black. Brakes are essentially as in 993 Turbo, and so well able to cope with the RS's massive performance. Make sure suspension geometry is correctly set for road use (right)

the mounting points for the control arms and tie-rods by the same amount. The tie-rods themselves are also slightly less curved than on the standard car, and the control arms have harder rubber mounts. The anti-roll bar should be set so that its connecting links are mounted through the middle of the five holes. The front struts, meanwhile, must likewise be set for road use by turning the Unibal top mountings in the required direction; the Sport setting should be used only on a circuit, says Porsche. It's much the same at the rear, where on the road each connecting link should again pass through the middle of the three holes in the anti-roll bar, and the adjustable arms must also be set in accordance with the published specification.

Power-assisted steering is fitted as standard, with the reservoir (to be filled only with Pentosin CHF 11S hydraulic fluid) mounted on the right-hand side of the engine compartment. The steering wheel should, needless to say, rotate smoothly and quietly from lock to lock, although you will inevitably get a whooshing noise as it nears the stops in each direction. Check for a softened and/or torn concertina-style gaiter at each end of the rack, but at the same time be aware that these are not designed to keep fluid in. Any sign of dampness here means that the rack's inner seals have failed, and you will need a replacement. Check the connecting pipes, too: they might well have been damaged if the car has had an unscheduled trip across the grass.

The RS's power-assisted brakes are in principle similar to the standard Carrera's, but with bigger (322mm diameter) discs both front and rear, all of them both cross-drilled and inner-vented. The four-piston light-alloy calipers - the famous Big Reds, as they're known - are much as you'll find on the 993 Turbo. Once again problems are neither commonplace nor insurmountable, although a car with this level of power will get through friction pads - and discs, as well - at a fairly steady rate, particularly if you routinely use them as hard as the



BUYERS' GUIDE

NEED FURTHER INFORMATION? TALK TO THE EXPERTS

There are, as ever, a number of *911 & Porsche World* back issues that, even if they don't deal specifically with the RS, will none the less give you plenty of invaluable background to this charismatic car. See, for instance, the November 2006 issue for a buyers' guide to the standard Carrera (pages 78-85), and then more recently the July 2007 edition (pages 88-95) for a similarly detailed guide to the Turbo models. No less useful (in our opinion...) is the September 2007 issue, in which the standard Carrera featured as one of the cars in our round-up of ideal first 911s (*Porsches for courses*, pages 94-101), and also as the basis for Greg Cranmer's highly convincing RS replica (*Sign of the times*, pages 72-77). All three of these magazines are currently available from us for £4.95 per copy including UK postage; full ordering details and overseas postage rates at www.chpltd.com/shop, or else by calling us direct on 020 8655 6400.

There are plenty of books, too, of course, with (we think) by far the two most useful titles from *911 & Porsche World* editor-at-large, Peter Morgan: *Original Porsche 911*, published by Bay View Books Ltd, and his *Ultimate Buyers' Guide*, which together with similar modest volumes about most other mainstream Porsches he publishes himself. Again both of these are available direct from us at www.chpltd.com/shop, at £24.99 (plus postage) for the former, and just £9.95 (again plus post) for the latter. You might also want to get hold of a copy of the official Porsche handbook for the car, either before starting to look for likely candidates, or else if the one with your subsequent purchase has gone missing - which not surprisingly does happen. They're available - albeit most likely to special order - from any Porsche Centre. Expect to pay the thick end of £30, however.

As far as specialists are concerned, we would (perhaps obviously in view of who supplied the car for our photo shoot; many thanks, Peter!) recommend Tognola Engineering in Datchet, Berkshire (01753 545053; tognolaporsche@aol.com), and also the no less experienced Russell Lewis at RSR Engineering in Grayshott, Surrey (01428 602911; rsengineering@btinternet.com). We know for a fact that both men know their way round these cars like the backs of their hands, and as an enthusiastic RS owner himself Peter Tognola for one is ideally placed to sort out the most likely problems you might subsequently encounter. Both will in addition carry out detailed pre-purchase inspections - almost essential for a car of this specialised nature, we suggest - and this service is also available from Peter Morgan. Call him on 01672 514038, or go to www.petermorgan.org.uk.

Beyond that it's really a case of contacting any or all of what might (affectionately!) be termed the usual suspects. For car sales try - among others - Paragon in Sussex (01825 830424; www.paragon.gb.com), 911virgin.com (01895 255222), RSJ Sportscars (01753 553969; www.rsjsportscars.com), Charles Ivey (020 7731 3612; www.charlesivey.com), Northway (0118 971 4333; www.northway.co.uk), Specialist Cars of Malton (07000 997997; www.specialistcarsltd.co.uk), Sean Lockyear (01282 844845; www.seanlockyear.co.uk), and not least Gmund Cars (01423 797989; www.gmundcars.com). Additionally H&S Automobile in Germany, specialising in all Porsche Lightweights, might be a good place to source a car, particularly since the majority of RSs have left-hand drive in any case: go to www.germansportscars.de, or alternatively call +49 2504 2741.

For servicing and repairs choose from among the likes of Autofarm (01865 331234; www.autofarm.co.uk), JZ Machtech (01923 269788; www.jzmachtech.com), Parr (01293 537911; www.parr-uk.co.uk), Ninemeister (01925 242342; www.ninemeister.com) and Jaz, in the shadow of the newly opened Wembley Stadium in north London (07002 911911; www.jazweb.co.uk). For those in the north Buckinghamshire area try Neil Bainbridge at BS Motorsport in Westcott near Aylesbury (01296 658422). Tuning? For uprated suspension kits try KW Automotive (0870 990 7536; www.kwautomotive.co.uk), for suspension and brakes Competition Braking Products (01748 831200; www.racepads.co.uk), and for ceramic brake kits the intriguingly named Surface Transforms PLC in Cheshire (0151-356 2141; www.systemst.com). And a full range of high-grade piston and barrel kits is available from Capricorn (formerly Perfect Bore; www.capricornauto.co.uk).

performance will encourage you to. Reckon on about £300 for a set of front pads, fitted, £275 for the rears, and about £400 per axle for a new set of discs, again fitted by a specialist – but obviously quite a bit less if you do it yourself.

As usual with these light-alloy Porsche calipers, though, cars that are used relatively infrequently can suffer from sticking pads. It's caused by corrosion of the alloy caliper body in the areas under the stainless-steel plates that are used to spread the load of the pads' own metal backing plates. The resulting expansion squeezes the pads top and bottom, and prevents them sliding freely within the caliper body – and also makes them very difficult to remove and refit. The usual signs of problems are a reduction in brake efficiency, perhaps in conjunction with uneven braking, and quite possibly a build-up of rust on the face of an affected disc. This tends to be more of an issue on the inner faces of the four discs.

The cure is to remove and dismantle the affected caliper. It's not a particularly difficult job – a specialist will do it for around an hour's labour per corner – but you'll need at least new stainless-plate securing screws (two per caliper) and possibly the plates themselves, too. You'll also have to – carefully – heat the old screws in order to soften the locking compound with which they should have been fitted, so all in all it's arguably best left to a specialist. Budget for around £20 per caliper for a repair kit of the necessary plates and screws, or a total of around £130 per caliper if you farm the job out.

Wheels and tyres

Today you might easily find all manner of after-market rims and rubber on a 993 RS, but all – basic and Club Sport – would have been supplied brand-new with three-piece Speedline wheels (8.0J x 18 at the front, 10.0J x 18 at the rear), and with either Bridgestone S-01 or Pirelli P Zero Asimmetrico tyres: 225/40 and 265/35 at front and rear, respectively, and both No rated. Naturally it's the Speedlines that are the most valuable from an originality point of view, so don't be too surprised if the previous owner has been keeping them for 'best', perhaps using a set of rather less exotic rims for day-to-day driving and circuit work. If so, just make sure that they really do come as part of the package.

Problems, as you might expect, are the usual kerbing damage and corrosion (this often starting round the multitude of bolts and self-locking nuts holding the Speedline rims' components together), and possibly damaged hub nuts, either because of over-tightening or incorrect use of an impact wrench. Either way, haggle accordingly: any wheel suitable for a car of this nature will be expensive to refurbish or replace. Be wary, too, of any multi-piece wheel, Speedline or otherwise, that looks like someone may have tried some DIY dismantling. It's a specialist job, and only for those who really do know what they're doing.

Tyres, too, are expensive – probably around £1000 for a set of four – so you need to see both a reasonable amount of tread on them (bearing in mind the car's strong motorsport orientation),

and no evidence of the uneven wear that might suggest alignment problems. They need to be a good, reputable brand – although such is the huge choice of high-performance rubber these days that can include a lot more than either those original-equipment Bridgestones or Pirellis – and ideally the same make (and type) both front and rear. Beware an obvious mix of tyres, though, and particularly across the car. The vendor may be struggling to keep up with the demands of a machine of this nature, and could have skimmed on other areas, too.

Interior trim

Not much to say here for the simple reason that there's not much of it – and virtually none at all in the Club Sport, although that should still have its dash-operated master battery control (connected to the switch in the front compartment), its simple 'T'-handled Bowden cable for the front-lid release and, of course, its integral roll-cage. General wear and tear are the most obvious problems, and such is the nature of any car such as this that you have to accept that the seats and door cards might be past their best by now, but at the same time that minimalism means that renovation is actually relatively straightforward. Indeed, arguably the most important task is to make sure that said roll-cage is the original Matter item, or in the case of an Moo2 car that has subsequently been fitted with a cage, that the work has been done carefully and sympathetically, and without butchering the body shell in the process. ■

Simple but effective: this Club Sport's rear lights have been replaced with brand-new US-specification items with red lenses – and the rear reflector between them has been renewed, too. They often fade to an insipid pink. Note, too, that this car also has the 'standard' RS's rather more subtle rear spoiler

