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# UP FRONT

Bennett reckons that his 996 Carrera C2 is within touching distance of GT3 greatness. True? Or is he just making a virtue out of a necessity?

Way back in 2006, when I started on *911 & Porsche World*, I got the opportunity to spend some serious seat time in a freshly restored 2.7 Carrera RS. I commented in this same slot, at the front of the mag, that I was 'now truly experienced in the ways of the 911.' It was a memorable experience and I've driven a few since, but I remember feeling gratified that it wasn't actually so far removed from my own Carrera 3.2, or a humble 911SC, and that a lot of the thrill came from its rarity, value and that RS badge.

And I had a similar epiphany in this issue returning from Gmund Cars after a day punting a 996 GT3 and 996 GT3 RS around some great



#### Aboard my humble 996 C2, I should have felt rather short-changed

"

Yorkshire roads for this issue's front cover test. Aboard my humble 996 Carrera 2, I should have felt rather short-changed, but I didn't. In fact I couldn't stop smiling. All three cars rolled down the same production line, use largely the same narrow body shell and largely the same underpinnings and, get this, the Carrera 2 is actually lighter than either of them. Sure, my C2 is lacking the legendary Mezger engine, but hell it will still pull a sub 5sec 0–60mph and 175mph seems fast enough to me. In terms of driving it gets within 5% of the two GTs for a fraction of the price.

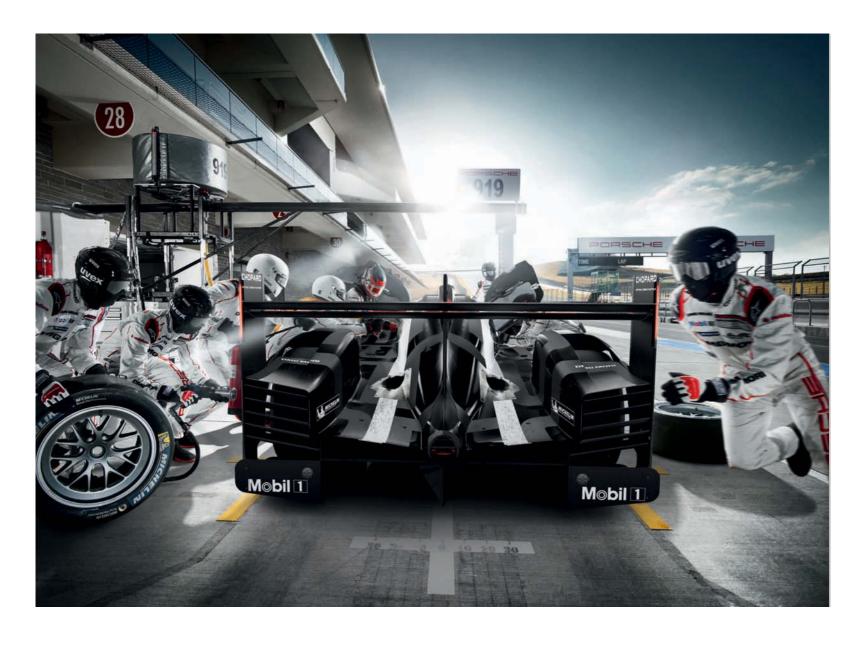
We give Porsche a hard time for rationing the GT and RS models, but Porsche is still the everyman sports car co and for that we should be very grateful, I guess. That my £13k 996 can get close to a £169,000 GT3 RS is a reason to be cheerful in these times of crazy values.

STEVE BENNETT
PORSCHEWORLD@CHPLTD.COM









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Chris Drummond and his 'Stand up to cancer' Carrera 3.230

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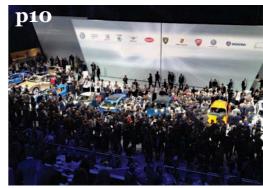
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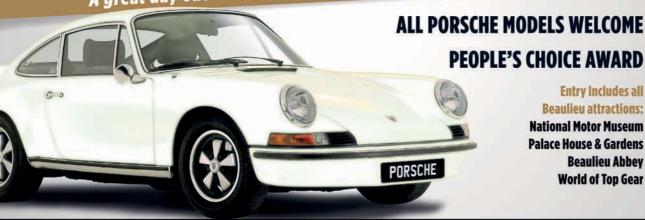
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ALL THE PORSCHE NEWS AND VIEWS

# NEWS

Platform sharing between Porsche and Audi on the table. Porsche has best sales year ever. First right-hand drive 911 up for auction. More power for 991 in 2018. Electric 910 racer replica. V8 powered 911 track car





911 and Audi R8 to become close siblings

# PORSCHE AND AUDI PLOT FUTURE PLATFORM SHARING

orsche and Audi have announced plans to collaborate more closely than ever on vehicle architectures. Co-operation on electrification, digitisation and autonomous driving were the key areas of common endeavour highlighted in the joint statements from Porsche and Audi. However, it's thought the plans are wide ranging and will include core elements of the iconic Porsche 911. That's right, the 911 will eventually share its platform with a non-Porsche model.

"Together, we will make faster progress in the race for the mobility of the future. We will utilise the expertise of both companies and take advantage of synergies," said Oliver Blume, Chairman of the Board of Management of Porsche AG.

"We will cooperate wherever it makes sense. But we will also be very careful to maintain the differentiation between our brands. A Porsche is always a Porsche, and that will remain so in the future."

Inevitably, the details are vague at this early stage. But the most obvious and least controversial aspect of the new relationship with Audi will be collaboration on hybrid technology. The next 911, codenamed 992, is expected to adopt petrol-electric technology during its lifecycle and partnering with Audi on key technologies such as motors, batteries and control units would dramatically reduce costs for Porsche given the relatively low-volume status of the 911 in true mass-production terms.

The same sentiment applies to digitisation and autonomous driving

technology. Partnership with Audi will help Porsche bring new capabilities and features to market faster and at a lower cost. But what about platform sharing? Could future 911s share a platform with Audi models or even models from further afield within the broader Volkswagen Group?

The short answer is yes, that is precisely the direction Porsche is thought to be going. The next 911's entire front-end architecture, including steering and suspension systems, could well be part of this new platform sharing push with Audi. In short, the front end of future 911s and R8s will be largely the same under the skin.

If that sounds implausible given the 911 is rear-engined and the R8 is mid-engined, it's worth remembering that this shared

When it comes to platform sharing within the Volkswagen Group, Porsche has a lot of potential partners, but Audi is the most obvious in terms of synergy. Expect the next 911 to share much with the new R8 and both to share with forthcoming Lamborghinis







#### 911 FAMILY UPDATED FOR 2018

#### New colours, more connectivity and an extra 30bhp

We're not yet half way through 2017, but Porsche is announcing a range of model-year 2018 updates for the 911. The whole 911 range, of course, recently received a major overhaul including the introduction of turbocharged engines for the Carrera models for the first time.

The tweaks for 2018 are less dramatic and begin with improved connectivity. The Connect Plus is now standard on the 911 and features an integrated SIM card that supports the high-speed LTE or '4G' standard. The package includes a flat data rate for using navigation and infotainment services. Later this year, the new Porsche Connect package will offer the option to buy 1GB or 7GB data packs to enable additional data usage. Using the optional data packs gives customers the opportunity to also stream music or to use the WiFi hotspot integrated in their vehicle.

Next up is the new range of interior and exterior colours. Kicking the new colours off is Crayon. First seen with the new second-generation 991 GT3, it's now available for all 911 and 718 models. Reserved for the 911, meanwhile, is four-coat paint in Saffron Yellow Metallic with intermediate sanding. This colour option is said to create a particular impression

of depth. The 911's optional sports exhaust system, meanwhile, is now also available with tailpipes in high-gloss black and the Targa's bar or hoop is now also available in satin black on request. Inside, the interior colour range has been expanded to include Sport-Tex equipment in Black or Graphite Blue/Crayon.

Last but most certainly not least is a little more power in the form of the new Power Kit option. For all new 911 Carrera S, 911 Carrera 4S and 911 Targa 4S models, Porsche Exclusive offers a kit to increase power by 22kw or 30bhp to 331kW or fully 450bhp. The package goes well beyond a mere tickle of the ECU and includes larger turbochargers, the Sport Chrono package, dynamic engine mountings, a modified brake cooling system and a sports exhaust system with two central tailpipes in a unique design.

It's essentially the same engine spec as seen in the latest 911 Carrera GTS models. Prices for the kit start from £7717 depending on vehicle equipment. From June 2017, the Power Kit will also be available from Porsche Tequipment as a retrofit option for vehicles that already feature the Sport Chrono package.

The 2018 991 will feature all sorts of high tech communications gizmos, that we don't really understand, plus some new colours We do understand the concept of more power, however, and the new Power Kit option will take oomph up to 450bhp, thanks to bigger turbos and new exhaust



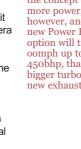
# PORSCHE'S SHARED FUTURE

So, Porsche has announced plans for closer ties with Audi. Those plans almost certainly include the 911 and that in turn means the 911 will likely no longer be built on a bespoke platform that's unique to Porsche.

For now, it's hard to gauge just how significant this move will be. There have been plenty of other major inflection points in the 911's history. How about the introduction of power steering? The passing of the air-cooled engine. And perhaps most relevant of all, the sharing of its platform with another Porsche model, namely the 986 Boxster.

Porsche has continued with that latter strategy ever since and it's testament to the cleverness of the idea and the deftness with which it was executed that few Porsche customers truly understand that 911 and Cayster are really two versions of the same car. Would sir like his Porsche sports car with the engine in the middle or the back?

In that sense, it's not hard to imagine how Porsche will maintain the 911's unique characteristics even when it shares much of a front-end structure with a future Audi R8 and perhaps a small Lamborghini, too. In fact, it may be the Boxster and Cayman that actually suffer. Already, they've lost the flat-six connection with the 911. Next to go could be the platform sharing with the 911, too, if Porsche and Audi do indeed develop a new mid-priced sports car platform together.



#### 2016: PORSCHE'S BEST YEAR YET

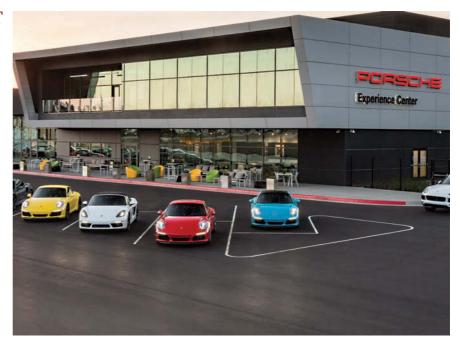
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It's official, 2016 was the most successful year yet in the entire history of Porsche. Porsche AG achieved record highs in terms of deliveries, revenue, operating result and number of employees. Deliveries increased by six per cent to 237,778 vehicles, revenue ticked up four per cent to 22.3 billion euros and operating profits were up by an even more dramatic 14 per cent to 3.9 billion euros. Put simply, Porsche nailed it in 2016.

What's more, by the end of 2016 Porsche's workforce had grown by 13 per cent to 27,612 employees. "The successful annual financial statement attests to the quality of our strategy. Porsche represents value-creating growth. We're concentrating on delighted customers, solid returns and secure jobs," said Porsche's head honcho, Oliver Blume. And so he might.

But what to do with all that cash? Porsche is preparing for the mobility of the future, that's what. Research and development expenditure was deliberately increased to 2.2 billion euros, including the development of new plug-in hybrid vehicles and the purely electric Mission E vehicle. That trend is set to continue.

"In line with the Porsche Strategy 2025, we're preparing the company for the future", Blume said. "At Porsche, the mobility of the future is as much about new technologies and electrification as it is about purist, emotive sports cars. We are emphasising our tradition and shaping the sports car of the future." Here's to another killer year in 2017.





- THE -

# STORESTORE



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### VERY FIRST UK 911S UP FOR GRABS

The very first right-hand drive 911S bought by a UK customer will shortly be offered for sale. Auctioneers Historics at Brooklands are putting the 1967 car on the block on May 20th. The pre-sale estimate price is a hefty £220.000 to £250.000.

The original 911S, of course, was the first 911 to offer a little more spring in its step over the standard model. Its zingv 2.0litre flat six upped the 911's ante from 130hp in the standard model to 160hp. That's an increase of 30 per cent. Map that to the current base 911 Carrera which packs 370hp and you'd be looking at a Carrera S with the thick end of 500hp. Anywho, back then 160hp was enough for 140mph and thus membership of an exclusive club of genuinely quick cars for the time. It was also the car that bequeathed the 911 with its signature fivespoke Fuchs alloys. In total, only 3174 copies were made of the original 2.0-litre S.

This particular example has an official build date of 17th August 1967 and was registered in the UK by Porsche dealer AFN on the 4th September, the very same date that AFN registered their own 911S demonstrator car. However, OUW 6F was a customer car, namely Mr. G. Berry of Market Harborough, the stylish so-and-so that he surely was and the very first private UK owner of a 911S of any kind.

Impressively, Mr. Berry maintained possession right through to 2000, when it

passed to the second of just three owners overall. Its final owner is said to have spent the past six years comprehensively restoring the car. The bodywork has been stripped and only genuine replacement panels used as required and the ivory white paintwork was carried out by Porsche specialist George King.

The interior was removed, revealing the dash-top signature and VIN from the factory in 1967. Although interior panels were replaced where necessary, Historics at Brooklands say the vendor has painstakingly tried to retain as much of the original trim, including the rare elephant hide seats which are described as being in 'splendid' condition.

The matching numbers engine and gearbox have been totally refurbished and rebuilt and, as the car was registered for auction, had covered no mileage. In short, Brooklands reckon this Porsche 911S is as close to the specification and condition when it left the factory 50 years ago as can be hoped for, with even the original Fuchs alloy wheels retaining their date stamps. Supplied with the original buff logbook, a current MOT test certificate and an interesting history folder, this one-off 911S will surely be an interesting test of just how buoyant the market for air-cooled classics remains. Head for www.historics.co.uk for more information about both the car and the sale.



#### PURE-ELECTRIC PERIOD PORSCHE

Sling an iPhone 7 over your shoulder at one of the world's big motorshows of late and odds are you'll take out half a dozen electric supercars. But few of them are even half as tantalising as the stunning new Kreisel Evex 910E.

As the name implies, the bodywork is a dead ringer for Porsche's classic 910 racer of circa 50 years ago. But the new car is a joint effort between Kreisel, an Austrian electric motor specialist, and Evex Fahrzeugbau GmbH, a German boutique sports car company that rebooted the Porsche 910 for limited production back in the 1970s and 1980s and was itself rebooted for the same purpose last year.

However, this revised 910 is decidedly modern. The headline figures include 360kW of electric power, or around 490hp, a 53kWh lithium pack and an operating range of 350km or roughly 220 miles. As ever, the yardstick in the land of electric vehicles or EVs is the top Tesla Model S, which packs a 100kWh battery and 600hp.

There is, of course, a catch. The top Tesla also weighs a mind-boggling 2239kg. The Kreisel Evex 910E clocks in at a claimed 1100kg. The upshot is zero to 62mph capability of just 2.5 seconds and a top speed of 300kph or 186mph. To enable both the kidney crushing acceleration and an unusually high top speed for an electric vehicle, Kreisel developed a two-speed automated transmission with a gear transmission ratio of 8.16 (in first gear) and 4.67 (in second gear), as well as self-locking differential and an integrated electric oil pump to ensure lubrication and cooling.

To accommodate the high-performance 53kWh lithium-ion battery pack as well as the powertrain in the rear, the frame of the original 910 design was slightly modified. The old school air-cooling of the historical 910 was also ditched in favour of a cutting-edge cooling system, again developed by Kreisel.

Boosting the Kreisel Evex 910E's sustainability credentials is the ability to hook into advanced home energy management systems and act as a bi-directional energy store. Just 35 of the original Porsche 910 were produced and Kreisel says this new car will be very low volume itself, so let's just say you're unlikely to see another coming in the opposite direction, be it petrol or 'leccy powered. Oh, and one last detail. The price. It's a cool one million euros. Find out more from kreiselelectric.com.



Porsche hasn't gone fully electric just yet, but you can now buy an all-electric replica of the 910 racer, with the electric equivalent of 490hp. Weighing just 1100kg, that should be enough for a top-speed of 186mph, which is unusually high for an electric vehicle, but possible thanks to its two-speed automated transmission



#### 911 DOMINATES CLASSIC CAR TRADING PLATFORM

Classic Trader, said to be Europe's leading online marketplace for classic cars, has announced that Porsche dominates its listings with four different 911s featured in its top ten rankings, including the top two spots.

Classic Trader says the total value of cars currently on the site has eclipsed a slightly bonkers value of 1 billion euros for the first time in its two-year history. It's this huge volume of cars that allows the site to data mine its listings for trends indicating the most popular makes and models in the classic car sphere. Thus, it has published the top ten cars, by number of listings, that currently appear on its site.

The Porsche Impact Bumper 911 is the most popular on its platform, presumably covering all Impact Bumper 911 models from the early narrow-body 2.7 through the late 3.2 Carrera, with an average asking price of 65,000 euros. In second spot is the catch-all category of Pre-Impact Bumper 911 with an average asking price of 115,000 euros. The

911 dynasty caps off its strong showing with the Porsche 964 and Porsche 993 notching up fourth and eighth on the list, respectively.

Elsewhere in the rankings Mercedes features highly with three models scoring well. The SL-Class R107 takes third place for popularity and commands an average price of 29,000 euros. The SL-Class W113 and SL-Class R129 feature in sixth and ninth, meanwhile.

Making up the rest of the top 10 are the Fiat 500, Alfa Romeo Giulia and Jaguar Etype Series I. The trading volume of these models represents almost 12 per cent of the



Porsches dominate on Classic Trader, Europe's leading online marketplace for classic cars, with pre '74 911s taking the number one sales slot, closely followed by impact bumper 911s

total trading volume on Classic Trader, or an epic 118 million euros. Dizzying numbers all round, we think you'd agree. Check out the action for yourself at classic-trader.com.

#### V8 MAKES OLD 911 GREAT

Speaking of slightly crazy Porschebased concoctions, how about this 912E with a 965 Turbo body kit and a Chevrolet LS-6 V8 motor. Yes, really.

The car is the brainchild of Roy Taylor, a Porsche enthusiast in the US who already owned a 991 GT3 RS but was looking for a quick track car that he could beat on without worrying about stone chips and other track-related tortures. First, Taylor picked up an old 912E that had already been treated to a 965 body conversion. Then he applied some serious track mods including Elephant Racing suspension, 930 brakes. bucket seats from a 996 GT3, a limited-slip transaxle from a 930 Turbo and more.

So far, so Porsche. But not the engine. Instead, Taylor sourced that Chevy V8 from Renegade Hybrids, a Las Vegas-based outfit that specialises in shoehorning V8s into 911s. With reliability a major concern, the V8 is in a relatively low state of tune. But it still cranks out 343hp. Believe it or not, the motor also weighs some 20kg less than a standard 911 flat six of the era thanks in part to the simple engineering of the all-aluminium push-rod V8.

Up front, there's a radiator for the water cooling and a racing-style fuel cell. The front radiator is connected to the engine via aerospace-grade hoses running through the sills. Not one for the purist, perhaps, buy surely quite a ride.

SIMPLY PORSCHE RETURNS TO BEAULIEU

[\*Images courtesy www.flatsixes.com, Ronald Sieber]

The weather's getting warmer and the evenings longer and that can only mean one thing. Yup, it's nearly time for the Simply Porsche gathering at the glorious Beaulieu estate in the New Forest, Hampshire on June 4th.

The event organisers invite all Porsche owners to drive into Beaulieu and park up within the museum complex for what promises to be a superb day out for both Porsche owners and enthusiasts. Whether you drive a Boxster, 911 or something a little older such as a 924, all models in all conditions are welcome at Simply Porsche.

Along with the huge number of Porsches (around 800 cars attended in 2016) several events will punctuate the day, including the People's Choice Porsche in which all participants have the chance to be awarded best-in-show by public vote.

New for 2017 is the Domus Lunch Package in which visitors can enjoy a delicious two-course lunch. Set in the historic setting of The Domus, once part of the 800-year-old Abbey, join in a unique experience with sumptuous food prepared by the chefs of Leith's at Beaulieu. Yours for £37.50 a head including reserved seating.

Several car clubs and forums, such as 911UK, will be attending and have their own areas and stands arranged. So be sure to check your favourite forums, clubs and registers. Admission for those arriving au Porsche is £10 for adults and £5 for children. Traders interested in getting involved with the event can contact Sean Smallman at The

Independent Porsche Club on sean.smallman@tipec.net and everyone can find out more at **beaulieu.co.uk/events/simply-porsche**.

Beaulieu's postcode for your satnav on the day is SO42 7ZN or take Junction 2 of the M27 and follow the brown and white tourist signs to Beaulieu and the visitor entrance.



Porsches and Beaulieu combine for Simply Porsche on June 4. Put another way: Great cars at a great venue. Remember to check out the National Motor Museum, which gets better and better every year



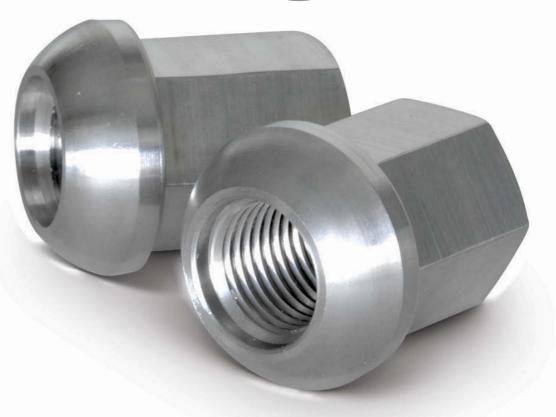
#### PRODUCT BRIEFING

# ESSENTIALS

The tempting trinkets that enhance Porsche ownership

#### **NUTS AND BOLTS**

Pathologically particular about attention to detail? Then we've got a little something for you and your air-cooled 911. Get a load of these lovely titanium wheel lugs from World Motorsports. Designed to the precise dimensions of the Porsche factory lugs, including the unique-to-Porsche original radius seat, they're available in both open and closed formats. The former are perfect for competition use and are not only 40 per cent lighter than the standard lugs, but also the only lug nuts legal for all Porsche Club America events. The latter make for the perfect replacement for knackered factory items. Of course, thanks to the impervious properties of titanium, none of them will ever rust or corrode. Example pricing for a full open-ended set to cover all four corners is \$260 plus taxes and duties. Worldwide shipping from world-motorsports.com is free.



#### **SOUNDS GOOD**

The deft chassis tuning. The distinctive mid-engine proportions. The smooth revving flat six. Yup, the 987 Boxster and Cayman are modern classics in the making. But that doesn't mean they can't be improved. Those with a penchant for aural firepower, for instance, might like to consider AWE Tuning's new 987 back boxes. AWE says they transform the 987's mild-mannered grumble into a heinous howl. The boxes' modular construction means they can be had in a variety of different configurations depending on budget or personal taste. Big-bore exhaust outlets, for instance, are a finishing touch available in chrome or diamond black. Or preserve the stock exterior appearance by buying back boxes alone, which are compatible with the OEM tailpipes. Prices start at £1664.50 from awe-tuning.co.uk



#### IT'S A COVER UP

Super soft, super stretchy and super strong? This one could be right up your alley, if you store your Porsche pride and joy inside for extended periods. Specialist makers of bespoke car covers, Richbrook, has a new line of custom-fit lycra-blended satin fabric covers available available in blue, black or red. The precision design ensures the cover clings to the contours of your car, whilst the tightly woven fabric protects against dust and other pollutants and, importantly, remains breathable to prevent condensation forming. The super snug fit and low profile seams ensure a sleek finish and a cover which not only looks amazing but also provides protection against knocks and dings. Supplied in a zip-up bag, the covers clock in at £99 and are exclusively available from **richbrook.co.uk** 





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#### PERFECT PANELS

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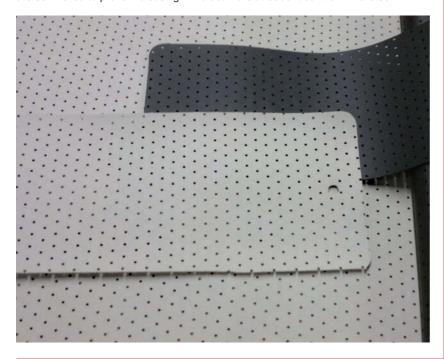
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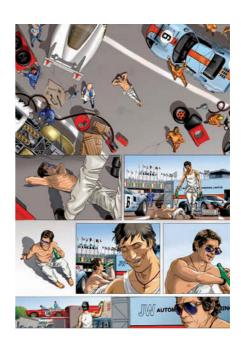


#### **COMICAL STEVE MCQUEEN**

Famous Porsche fancier Steve McQueen has taken on such legendary status, he almost seems fictional. Now he kind of is, having been immortalised in a new comic-strip-come-graphic-novel based on McQueen's cult classic movie, Le Mans. A two-part publication, the first entailing 64 pages of hard-bound, heavy-weight quality is available now with part two arriving in 2018. What with the recent vogue for both graphic novels and bringing comic book heroes to life, what chance that this could be realised on a streaming platform near you soon? A Netflix series based on the graphic novel based on the film based on the race? We wouldn't bet against it. In the meantime, you can pick up part one of 'Steve McQueen in Le Mans' from garbo-studio.com for \$32 or roughly £25 plus shipping and taxes.









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#### YOU WRITE, WE READ

# LETTERS

Got something to say? Need to express an opinion on the Porsche world? E-mail us on porscheworld@chpltd.com

#### **MODIFYING? JUST SAY NO**

While I enjoyed last month's modified extravaganza (911&PW, May 2107), it was more from a 'thank goodness I've got that out of my system,' than a desire to actually modify my current Porsche. I've been there and got the T-shirt, when it comes to messing about with Porsches, and as one of your bunch said – modifying is like a drug. Fortunately it's a drug that I've kicked now!

Have I ever truly improved on the original? Looking back at a lifetime of Porsches, I can safely say 'no, I haven't.' Indeed I've made a fair few worse, and some others just sort of different, but improved? How do you improve on something that is so good in the first place?

Starting with suspension mods, I've learnt the hard way – quite literally – that UK roads are simply not good enough to be tolerated by Porsche's (or anything else for that matter) with lowered and stiffened suspension. If your Porsche doesn't work properly on a typical stretch of UK B road, then it's not fit for purpose. End of. Likewise big wheels. They are for vanity and nothing else and I'm guilty of going down that route. Low looks great, but rarely does it drive great.

Engine mods? Without doubt the most ruinously expensive pursuit I've ever undertaken, but I've at least had more positive outcomes than suspension mods. Air cooled Porsches can be mixed and matched with some success to achieve bigger capacities, which do work, but don't go chasing power through revs, because you'll just end up with something with a power band that's too peaky for the road. Turbos make sense, though, because they can be easily tweaked without opening them up.

Taking weight out? I've built a few lightweights and it's a good way to go faster for free, but they've all been uncomfortable, and of course not helped by the above lowered/stiffened suspension. Look great, of course, and we all like to imagine that we're in a pukka works racer, but the

novelty soon wears off.

So the best Porsche I've ever owned is the one that I've never modified. It's a 997 Carrera 2 and sadly it's taken me 25-years to realise that. Still, I can make up for all that lost time by just enjoying driving it!

Tony Lawrence, via email

Steve Bennett replies: Tony, you're probably right, and I'm as guilty as anyone, but Porsche Nirvana is always just a tweak away...



911 & PORSCHE WORLD

#### **MODIFYING? JUST SAY YES**

I always look forward to 911&PW landing on the door mat. In particular I like the fact that you all own and drive Porsches, which gives the magazine credibility in my view. The latest issue was a real treat for its modified content and – in particular – the re-engined 924S. I almost had to do a double take because I've got one, too! My own 944S2 engined 924 is a dead ringer for the feature car, although mine is red rather than white.

I can agree with transaxle fan, Chris Horton, 200+bhp in a lightweight 924 body, makes a very rapid machine. I built mine myself after stumbling across an engine at a local breaker's of all places. It was complete with ECU and other bits, but no one seemed to quite know where it had come from or its mileage. They only wanted £350, though, so it was worth a crack.

I learnt a lot by getting stuck in, but starting with a 924S made the job easier

from an engine mount point of view and gearbox etc. Going for the stealth look, I've stuck with the standard wheels, but dropped the suspension a bit. It's, er, quite lively as you can probably imagine, but then I like a car that moves around.

All in all it's cost well under £4000, and that includes buying the car. That's what I call cheap thrills. Of course I'm not finished with it yet. My ultimate ambition is for a 924 Turbo. Not an original one, but fitting a 944 Turbo engine in place of the S2 engine and tickling it up to 300bhp or so. Still going to keep those skinny 15in wheels, though!

Neil Warrington, via emal

**Steve Bennett replies:** Let us know when it's finished. I can feel a group test coming on...

#### **996 FAN**

You should call your magazine 996 & Porsche World magazine. That's not a dig, BTW. I've got a 996 C2 and I love it. I laugh every time I drive it because I bought it when 996 prices were even cheaper than they are now. So, I love the fact that the 996 is the Porsche of choice for you lot too on 911&PW.

I used to have a 993. It was a fabulous car and I loved it to bits, but I got the fear. By that I mean I just got out of the habit of driving it because it became just too valuable. So I

cashed in and flogged it and bought the 996 (and a first car for my learner driving son) and I haven't looked back. It's pampered, but I'm never afraid to just use it — even in the rain or winter, which is something I would never do in the 993. It's an early one, too, and as far as I can tell it's never had any engine work, despite its 120,000-miles.

Keep the 996 stuff coming. In these days of mad air-cooled prices and collector Porsches it's good to have your feet on the ground.

Jim Mason, via email

#### IF YOU'VE GOT TO GO...

I regret to inform you that I have decided to take a break of a year or so before I renew my subscription to 911&PW again.

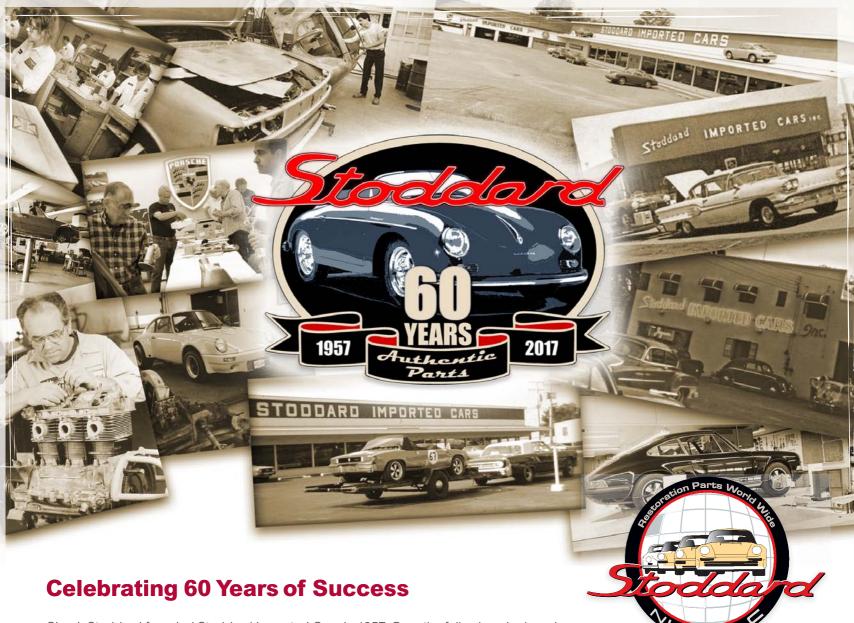
renew my subscription to 911&PW again. Why? I have a Porsche 996 C4S, black with 155,000kms on the clock. I drive maybe 10,000kms a year. I often drive from Zurich to Copenhagen going at 280kph through Germany, with a smile on my face.

But once a month the smile fades away. That is when I receive and read your magazine – 911&PW – because then I have to read that I have the wrong engine, all about the troubles with such engines and your promises that my engine, sooner or later, will blow-up. This destroys my Porsche feeling and the smile on my face for a whole week.

Otherwise your magazine is the best on the market. I just need a break. Henrik Tvenge, Menzingen, Switzerland

PS. Good to see the Macan getting a review in the March issue. It, too, is the popular choice even if not your first choice.

Steve Bennett replies: Great news Henrik. We've discovered some doom and gloom relating to Porsche's DFI engines, so that should take the heat off the M96, eh! Seriously, we're sad to see you go. All we've ever sought to do is inform and don't forget most of us here on 911&PW drive M96 engined cars, too, so we're all in this together.



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#### 911&PW WRITERS ON MATTERS PORSCHE OR OTHERWISE

# THE USUAL SUSPECTS



ADAM TOWLER He's a gonna!

Adam Towler is hanging up his freelance hat and heading for the world of PAYE and job security. Well, he's got a 996 to feed, not to mention a wife and three kids! So allow him the indulgence of looking back on nearly nine years scribbling for *911&PW* and a whole host of amazing Porsches driven and stories told. We'll miss him...

his is going to be my last Usual Suspects column, at least for the foreseeable future. I'm hanging up my freelance, err, whatever it is freelancers hang up when they stop being freelance, and I'm taking up a full time job with a certain UK-based magazine – one with a title composed of just three letters and that concentrates solely on performance cars.

Your editor has encouraged me to take this opportunity to look back on nearly nine years of contributing to this great magazine. That sounded like a pleasant thing to do, until I realised I was opening the floodgates to so many great memories of working with Porsches that it would be hard to know where to begin.

My start with 911 & Porsche World came in August 2008. I'd been freelance for exactly one year, following a career as a road tester journalist on one of Britain's weekly motoring mags. During that time I'd been fortunate enough to drive all the contemporary Porsche cars that were launched onto the market, which was a useful grounding. There followed then a year contributing to a different Porsche title that began to give me some experience of the classics. But it was with this magazine that I got to really work my way through the back catalogue. What a golden opportunity: a chance to really feel how mk1 944 and mk2 2.5-litre 944s compare; what a 914 really drives like; why a 993 GT2 really is fabulous and fearsome in the same breath.

My first feature was comparing the newly launched gen 2 997 Carrera with an original

spec 911SC. Two cars 30 years apart, and both, as it happened, Guards Red. Steve gave the story the space on the page to breathe, and for me it was fascinating to try and eke out the similarities, not so much contrast their differences.

We've since done many comparisons of old and new, and they've come to be some of my most favourite tasks. Stories like 986 2.5 versus gen 2 987, or 993 Turbo versus gen 2 991 Turbo S – each one has unearthed something new for me about the cars, even if I've driven that model in isolation before.

Some of my fondest memories will be of the big productions. On our day, I'm really proud of the work Steve, snapper Antony Fraser and I have managed to put together, and all on a budget a good deal less than the main monthlies have to play with. I'm thinking in particular of our Magnus opus on the 944, and our day with 928s, too. On both occasions we could reasonably be said to have one of every derivative present. From a writer's perspective, how fortunate: what a privilege to chop and change between every single model. Even today, I often refer back to those experiences in other work, for there's no substitute for being able to say that one minute you've been driving a 928 S, the next an S2.5, and then an S4, and this is how they compared. The 944 test was a real treat, because we had Blyton Circuit for the day, in the rain, and the keys to every variant, the cars just sat there raring to go. A well-sorted 944, rain, and a deserted circuit is some of the most fun it's possible to have in a car.

I'll never forget our modified 997 Turbo

test, held, mystifyingly on reflection, in the heart of the good old British winter. At the last minute it became obvious that our usual haunt for such high speed investigation -Bruntingthorpe - was subsumed by ice. Ice and 200mph Porsches just don't mix. I lost my nerve: rang Thomas Schnarr of Cargraphic and frantically tried to pull the plug on a feature that involved not just him driving across Europe in a demo car, but the 9FF guys, too. Ah yes, 'The Egg', the 9FF car that turned up with the big turbochargers on it. Absolutely bonkers. All I actually got from Herr Schnarr on a weak mobile phone line was that he'd already nearly reached the Euro tunnel and that he wasn't going to be turning back now! Where they eventually arrived was Dunsfold airfield, famous for being the home of BBC's Top Gear. At the very last moment we'd found a location for our test, and the relief I felt meant I could have slept for two days solid.

If I have to think about the really great cars, then guite a few spring to mind. The day we got together genuine Carrera RS 2.7s in Touring and Lightweight specifications was something really special. Even then, it was a heavy burden to insure the cars, but the combined figure has probably doubled by now. Driving a different 2.7 RS together with the then-new 997 GT3 RS 3.8 was very memorable as well, especially seeing as the owner of the classic was prepared for a big day trip to Wales. Talking of that part of the world, I'll never forget driving a 3-litre Turbo across the border into the hills: that car was perfect, and completely redefined what I thought about Porsche's first Supercar.

I can't overlook the 924 Carrera GTS

Master of group tests! It takes tenacity to set up these big stories, but the rewards are worth it for journalist and reader. Notables include 928s from first to last; ultra modded 997 Turbos at Dunsfold and the memorable 944 shootout at a wet Blyton Park. Never have so many 944s got so sideways





Say what you like about them, but 911 & Porsche World's elite squad of journalists and Porschephiles have opinions aplenty on all manner of automotive matters. And this is where they get their two-pages' worth



BRETTFRASER













STEVE BENNETT KEITH SEUME

IE CHRIS HORTON

JOHNNYTIPLER



Great drives? Too many to list, but how about a near priceless 924 Carrera GTS in the snow on the North Yorkshire moors? Brave, and equally brave of Specialist Cars' John Hawkins for allowing it out in such conditions

either. For sale at Specialist Cars of Malton, it had done barely more than delivery mileage on the clock and utterly perfect in every way. The fact that I took it up onto the moors in the snow and salt was bizarre, but I loved driving that little coupe as much as anything else. I suppose my other front engined ultimate would have been a one-off 3-litre 944 Turbo built by Barry Hart of Hartech. That car was just so much fun and devoid of the lag that blights the standard 250hp car.

Driving the latest and greatest has undoubtedly been a thrill in itself. Having a first steer of the 3.8 997 RS in the mountains above Nice sticks in the mind, particularly as we then got snowed in at the airport afterwards. Oh but the sound of that Mezger 'six' echoing off the rock face and drifting along the valleys, it was so special. A 24-hour slot with the press 4-litre RS was something to cherish as well. To be honest, I really miss the 997 and 987 loans, and always hated having to give them back to their maker. Frankly, with the latest products that feeling has definitely waned. 718 and 991, however brilliantly competent, just don't get under the skin in the same way.

The above realisation probably comes under the banner 'changing times'. There's no

doubt the cars Porsche now makes have changed in spirit, but even more drastic are the changes to the overall Porsche used market. Very few thought of Porsches as investments at the end of the last decade, bar a few specials like the 2.7 RS. Early. chrome bumper cars were readily affordable at sensible money, and impact bumper trusty favourites like the SC and the 3.2 Carrera were simply old car stalwarts, available from ten grand upwards. I firmly believed this was where my own journey into Porsche 911 ownership would begin, but of course, it didn't. The massive rise in prices has its benefits, for starters leading to cars being restored that would never have been considered for work a few years previously. It's meant the survival recently of many a desolate 944, and a huge surge of interest in Porsches in general. I was amazed at the Silverstone Classic last year at the huge turnout of Porsche owners - dwarfing the next largest owners' club there. Porsches were everywhere one looked, which is surely testament to the enduring quality of the cars and also the real passion of owners, certainly in the UK and overseas as well. But this rise in the market has also priced so many out of the cars they'd love to own, and has left

many cars parked up in cool, dark, air conditioned spaces, never to be driven for fear of harming their financial prospects. I hate all of that and can't deny it's soured my enjoyment of the older stuff. Certainly when they're so far out of reach that you know you'll never be able to own one, it does personally make you view them differently.

Finally, none of the above would have been possible without the generosity and enthusiasm of all the car owners, vendors and everyone associated with the Porsche industry in the UK and beyond. I owe all of you a massive 'thanks' for enabling us to create the stories we do; your dedication never ceases to amaze me.

And a last word of thanks has to go to the captain of our ship, Mr Steve Bennett, for giving me the opportunity to get all enthusiastic over what has been one of my favourite subjects since I was barely five (and tolerating the odd deadline pushed to the limit of its definition). 911 & Porsche World remains by far the best Porsche magazine in a crowded marketplace, written and put together by people that really know the subject and love the cars. It's a wonderful thing to work with what you've loved most of your life, and for that I'm truly grateful. **PW** 



Far left: Adam looking all manly at the wheel of a 928. Well, he's a GT kind of chap! Left: Not all motoring journos can do this, but Adam could extract the max from any Porsche he drove







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#### YOU AND YOURS: CHRIS DRUMMOND

# RACE AGAINST TIME

Sounds exciting, but in fact it's a tale that stops you in your tracks. Chris Drummond has terminal oesophageal cancer. But rather than wallow in the chemo, he took the positive decision to raise money for cancer charities. We met up at Autofarm where they're prepping his RAT88P 3.2 Carrera as a figurehead for his Race Against Time charity

Words: Johnny Tipler Photography: Jon Whitmore/Peter Robain

his is one very brave guy.
Chris Drummond has had the hard word: 'it's terminal.' Last year he was four days out of New York on the England-bound leg of the Clipper Round the World yacht race when he was taken ill.
Helicoptered off the yacht and flown back to Halifax, Nova Scotia, MRI scans revealed he had cancer. Devastated, as you would be, he picked himself up and decided to capitalise on the time remaining by utilising his Porsche connections, built up since 1998 when he first embraced Porsche ownership.

Over coffee at Autofarm, he tells us of his

plight, while his 3.2 Carrera is being suitably liveried as the RAT-P88 Porsche – because it's a 1988 3.2 Carrera on a Race Against Time. 'I've had the car since October 2008,' he reflects, 'and I bought it aware of some blemishes. But by then it was 20-years old, with 94,000 on the clock. It came from Portiacraft in Mill Hill, North London. Part of the deal with Martin Robinson the sales guy was a top-end rebuild, and I agreed to foot the bill for the bottom end as well.'

In the late 1990s Chris was working in Harrow when he bought a copy of 911 & Porsche World, and within a week he'd visited AFN at Chiswick and bought his first

Porsche. 'I had a couple of 944s, then a 968. They were toys really, and my wife enjoyed them so we joined the Porsche Club, and then I had a 964 and a 993.'

Personal circumstances meant Chris, an HR manager, relocated, and apart from spells using Peter Tognola and Greg Cranmer at Heritage Autoworks, he's been coming to Autofarm since 2003. Chris still thinks the best car he owned out of all those was the 993 C2, although he only had it for eight months. 'You could use it every day, and it became my principle car. Then in 2001 I went down to PC Swindon and bought my first 996, and that became my main car. I didn't go back to the older ones until I

Spreading the word: Chris Drummond's 1988 Carrera 3.2 at Autofarm being liveried with Chris's 'Stand up to cancer' graphics



bought this 3.2 in 2008. Greg Cranmer did most of the backdating bits, but the guys at Autofarm have looked after it for the last couple of years. I like the classic look, especially the 15in Fuchs wheels with the slightly fatter profile tyres, which really fill the arches out well. I wanted to retain that impact bumper look, so I replaced the front valance with one that has no driving lights to get it to something like Club Sport spec. I took the back seats out, fitted Recaros, a Momo wheel, lightweight carpets, and removed the radio, too. I tailored it to what I like rather than anything that's already out there. The only difference with the 3.2 engine is that it's been chipped and it breathes and exhales a lot better, and I've got a fruity Turbo Thomas exhaust on there, so it's a bit roarty, it's got a bit of attitude, and that's what made me think about Stand up to Cancer: it's quite an aggressive brand in some ways, and I thought the car matches it quite well in terms of its attitude and its noise. So I think it fits quite well with what I'm trying to achieve over the summer months.

The car was restored in 2010 by Paul Stanley at Classic Preservations. 'I've got the photographic evidence of the work, which included typical 911 problems like the kidney bowls and some rust around the rear screen, and we decided to go for two completely new front wings and a glass-out respray. It's currently on the 7in by 16in Fuchs on the front and 8s on the back, with Bridgestone SO2s.

A lifelong golfer, Chris's divorce in 2012 prompted him to try a completely different sport, so in 2016 he opted for the global yachting adventure. 'I was taking part on the last leg of the Clipper race. I had no sailing experience at all, and these are 70foot clippers, stripped-out racing vessels, between 18 and 20 crew on board. You can go completely around the world or you can do the leg between Rio and Cape Town or Sydney to China, and the leg that I joined was New York to England. Four days out from New York I was on watch and was taken ill. The air-sea rescue people from Halifax in Nova Scotia sent a helicopter and a Hercules aircraft who met up with the yacht and they sent two guys down a rope onto the yacht, and Davina our medic and I were briefed and told that I was to grab hold of one of them and was hoisted back up to the helicopter. I was in hospital in Halifax for two weeks and, after numerous tests, scans and MRIs they told me, "look, your heart's fine, but the bad news is you've got advanced cancer of the liver," I'd had a biopsy of the liver and through that they were able to track back and find that the primary cancer was in the oesophagus, which is in the gullet. I've learnt that oesophageal and pancreatic cancer are the two that tend to come up and grab you; there's perhaps no evidence of them being around, but something happens and you find out that they're there.

Chris has undergone several courses of chemotherapy, which he started in September 2016, which has shrunk some of the tumours on his liver, but as for the oesophageal cancer, it is simply about prolonging his life. 'They said to me, "you've got between 12 to 18 months, depending on how the chemo treatment works," so hence the name, Race Against Time.

There's a strong element of 'what if?' in

Right: Chris reckons that as a brand 'Stand up to cancer' has got a bit of attitude. rather like his Carrera 3.2. Middle: Chris Drummond, not a man to be phased by a tricky diagnosis, one which came after he had been taken ill during a global clipper race on the New York to England leg, from which he had to be helicoptered off



They told me: "Look your heart's fine, but you've got advanced cancer of the liver"







Chris's car is built very much to his own spec and with a retro vibe to it, as witnessed by the ducktail (left) and the lightweight interior



#### HISTORY

The Carrera 3.2 was the last roll of the original 911 dice, that could be traced back to the 911's genesis in

Launched 21years later in 1984, it was the ultimate 911 evolution taking the engine up to 3.2-litres and 230bhp and adding yet more useability and flexibility to the 911 mix. The Carrera 3.2 also benefited from the G50 gearbox, which arrived in 1987, and was a the shifters of old.

stayed in production until 1989, when the 964 took over, and remains probably the definitive 911.

Chris's story. 'My partner Janet kept giving me a nudge, because for a year before this all kicked off I was chewing Rennies and drinking bottles of Gaviscon, and that is a sign that you've got a problem with your oesophagus, and for a year I was ignoring the symptoms. I was working my proverbial off, and I had this sailing race, and I was saying to myself, when I get back from the race I'll go and get myself sorted, but if there was anything wrong with my car, that would have been sorted straight away. That's how we should look after our bodies as well. So now we have a Race Against Time Facebook page, and we've got a "just giving" page. I'm doing a weekly blog, and the donations for the first ten days were really promising - £1650 - and my target is

Chris has a schedule of Porscheorientated events lined up over the summer: 'Porsche Club Great Britain has been excellent - they've said I can have space for my car in their marquee at the Silverstone Classic, and we've got about eight events on the calendar so far, and I'm trying really hard to get into either Goodwood Revival or the Festival of Speed;

there's some talk of getting the car to go up the Hill if we do Festival of Speed, in which case we'd want Jürgen Barth or somebody like that. We're doing Classic Cars down at Sherborne Castle, and now that Classics at the Castle is back on - thanks to Simon Bowrev and Fred Hampton – we'll be at Hedingham on the 3rd September as well. Autofarm normally have a big presence there and we're going to be part of that.'

team who've put together a flyer, and meanwhile the 3.2 Carrera is being liveried by Autofarm with decals designed by their in-house IT-man, Jon Whitmore.

So the gospel that Chris is promoting is very simple and to the point. 'You cannot take the chance that you're OK. It's like an MOT, isn't it? You can't sidestep it.'

As far as is possible, Chris is reconciled to his situation. 'I didn't want to be sitting at



# I didn't want to be sitting at home dwelling on my illness

The bottom line is that the car will eventually need a new owner, and Chris has faced that prospect head on. 'The plan is. at the end of term, we're going to auction it. A fair chunk of the proceeds will go to Cancer Research UK, and I'm obviously thinking about my kids as well.' He's working alongside Cancer Research UK's Stand up to Cancer in-house marketing

home dwelling on my illness, and this has enabled me to do something meaningful, which I hope will save other people from a similar situation. It's providing me with a great focus over the summer months and beyond, however long there is, it's given me something to run with.

The Race against Time has become a reality. PW





Above and left: Chris has got a summer of events lined up for his liveried Carrera 3.2, including the Silverstone Classic and Classics at the Castle, so look out for him and his car

CONTACT Follow on Facebook, **'Chris** Drummond -Race Against Time" or contact Chris via Autofarm on +44 (0) 186<u>5 33</u>1 234



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1986 Porsche 944 Turbo Cup, Guards Red, German Car, road registered, £74,995



1973 Porsche 911 T 2.4 Targa, fully restored, Beige Grey w/black, great car, £69,995



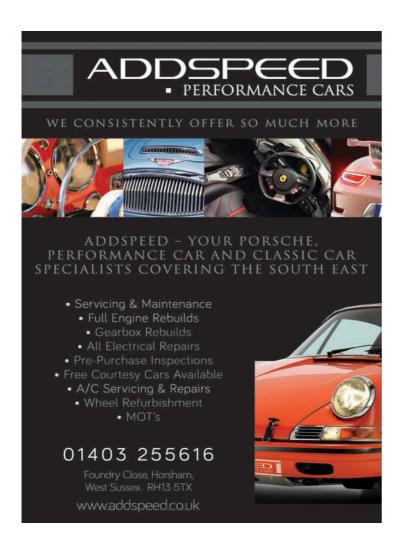
1978 Porsche 911SC Coupe, Turbo body, White with black leather/tartan, 61k mls, Sportomatic, £55,995



1993 Porsche 964 RSR, three cars to choose from, can be made road legal, call for info and specs, £POA



1987 Porsche 930 Turbo, Guards Red w/Linen, full history, great car, £79,995





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911 (997) "45" 3.8 pdk (58 - 2008) Meteor grey with black leather



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911 (997) "45" 3.8 pdk (58 - 2008) Meteor grey with black leather 54,000 miles......£44,000



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911 (997) "45" 3.8 tip cab (07 - 200 GT Silver with black leather 40.000 miles......£36.000



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48,000 miles.....**£34,000** 



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**911 (997) "45" 3.8 tip cab (06 - 2006)** Atlas grey with grey leather 38,000 miles.....**£34,000** 



911 (997) "45" cab 3.8 tip (56 - 2006) Basalt black with black leather 54,000 miles.....£33,000



911 (997) "25" 3.8 tip (07 - 2007) Meteor grey with grey leather 49,000 miles.....£33,00



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911 (997) "25" 3.8 (08-2008) Meteor grey with grey leather 55,000 miles.....£33,000



Silver with black leather 43,000 miles......£33,000



**911 (997) "25" 3.8 tip (08 - 2008)**Silver with black leather
57,000 miles......£33,000



911 (997) "25" 3.8 tip (07 - 2007) Cobalt blue with grey leather 55,000 miles......£33,000



**911 (997) "25" 3.8 (06 - 2006)**Seal grey with black leather
45,000 miles ......**£31,000** 



**911 (997) "25" 3.8 (05 - 2005)**Silver with terracotta leather
52,000 miles.....£**30,000** 



911 (997) "45" 3.8 tip (56 - 2006)
Basalt black with black leather
62,000 miles......£30,000



**911 (997) "2S" 3.8 (55 - 2005)**Silver with ocean blue leather 53,000 miles.....**£28,000** 



911 (997) "25" 3.8 tip (55 - 2005)

Basalt black with grey leather
58,000 miles.....£28,000

62,000







Cayman "S" 3.4 pdk (13 - 2013)
Basalt black with black leather
3.2 0.00 miles
5.42 0.00





Red with black leather





49,000 miles.



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# CAYMAN OVER ESSEN **Words & Photos: Keith Seume**

It's that time of year again when Features Editor Keith Seume heads off to the world's largest classic car show, Techno Classica Essen. As usual, he drags a reluctant Delwyn Mallett along with him, who's kicking and screaming about not wanting to go – until he learns of the chosen means of transport: a 718 Cayman. Is this really the thinking man's Porsche? Seume seems to think so...

o, here we are - that time of year again. The time when Messrs Seume and Mallett arouse from their winter hibernation, poke a head outside their respective front doors, scratch their heads and say 'Ooh, spring! Must be time for Techno Classica Essen. Cool!' Or in Delwyn Mallett's case: 'I said I was never going to Essen again. Not coming...'. But he's always wrong. He can't keep away and neither can many people who visit the world's largest classic car show.

It is like a drug peddled to you by some backstreet dealer: 'Here, try this. You'll love it. You don't have to go every year...' But of

course you do - or rather, I do. And so does Mallett. I've been making the trip for the last 20-plus years, certain in the fact that if I missed the show all I'd hear from others was 'Wow! Did you see that (insert name of ultra-rare, history-laden, one-off Porsche) at Essen? Wasn't it great?' leaving me to mumble something about how I'd had to reorganise my sock draw - or, worse still, meet something called a 'press deadline', whatever that is.

This year's show was the 29th such event and promised over 2500 cars on display, plus no fewer than 1250 exhibitors, all working their socks off over a five-day period. To be honest, it's pretty daunting for anyone, visitor or exhibitor - if you wanted to cover the whole show you'd probably end up walking something in the region of 15 miles. And, of course, having made the trek, you will want to see the whole show - but I bet you won't do it, no matter how hard you try. Go onto Facebook or one of the Porsche forums the day after you get home and there'll be plenty of photos of cars you didn't even realise were there...

For hardened Essen-ites like Del and myself, part of the fun is the journey there and the challenge of finding something suitably interesting to drive. It needs to be a car big enough for two people and luggage, comfortable enough for two old men (well,





Opposite: Is there a better colour combination than Graphite Blue with black wheels?

Above, left and right: Mallett couldn't resist Essen trip in 718 Cayman. Dover-Calais ferries were virtually empty in both directions

Below left to right:

€1,200,000 would

gorgeous 904 GTS...

€435,000 could have

have secured this

.whereas 'just

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911R on sale with

Center Gelderland

**Porsche Classic** 

one old man with a worn-out hip joint - and me) and fun enough not to make it a dull as dishwater slog along crowded motorways. Past transport has included my old '74 Carrera, a VW Scirocco R, Panamera GTS and, last year's choice, a Cayenne GTS. In Peridot Green. With dark windows. And black wheels. That proved to be an unexpected gem from my point of view, especially as Mallett disapproved.

We'd managed to max out the Cayenne at a rapid 161mph (not bad for something so big, heavy and, well, 'blunt') and Editor Bennett was keen for me to do the same with whatever I could lay my hands on preferably a 991 Turbo. Gulp. I started to sweat at the prospect. 200+mph on a drag strip is one thing, on a public road is quite another. As it turned out, a call to the friendly gents at Porsche elicited the news that a Turbo wasn't available for the dates we needed (sigh of relief on Seume's part...) - in fact, the choice was limited. In fact, there was no choice - it would be a 718 Cayman or my ageing C-Class Merc (sorry about that). So, much to Mallett's delight, a Cayman it was.

You see, last year I'd got his hopes up when I told him we'd be going in a Cay... 'A Cayman? Great!", he exclaimed. '...enne', I finished. 'Oh,' was his repost. But this year, he couldn't believe his luck when I

announced that our trans-European transport would be nothing less than his current favourite Porsche in his current favourite colour. Except he didn't know it was going to be his current favourite colour until he saw it: Graphite Blue - which is grey. He likes grey - it matches his hair.

Readers of last month's edition of this very magazine will have seen Adam Towler's report on driving a 718 Boxster through mid-Wales. 'His' car was Graphite Blue, too, and he also observed that it

the shade of the day. I'd like to think it's the latter as, with its black optional 20-inch Carrera S wheels, 'our' Cayman looked great, and I fell instantly in love. But I get ahead of myself.

718 CAYMAN

I have to be honest, I didn't know what to expect of the new-look Cayman, not in terms of its styling, which I think is little short of stunning, but - and you knew I'd have to bring up the subject sooner rather than later, didn't you - in terms of its drivetrain. Or rather, the lack of cylinders



# How could a base-model 2.0-litre Cayman hold its head high...?



looked more like a solid battleship grey, which it does. OK, there is a slight hint of blue in certain lights but, as far as everyone outside Porsche's marketing department is concerned, it's grey - and a very attractive shade, too. The fact that both 718s (Boxster and Cayman) on the current press fleet at Porsche GB wear Graphite Blue speaks volumes. Well, let's put it this way: either there's a job lot of unsold cars in this colour that needed to be moved on, or it really is

compared to its predecessors. How could a base-model 2.0-litre four-cylinder Cayman (or Boxster, for that matter) hold its head high against earlier versions with their 2.7 or 3.4-litre 'sixes'?

The earliest incarnations of the entrylevel mid-engined coupé came with just 241bhp, a figure which rose to a heady 330bhp with the 3.4-litre Cayman R. The 718 boasts, if that is the right word, a capacity of just 2.0-litres, but pumps out







Above: A crowd favourite, Porsche's techno-triumph, the 959, still draws attention some 30 years after it was conceived (yes, it really is that old!)

Below, left to right: Restoring a car? Looking for some treasures? You'll find all you need at Essen - at a price to make your eyes water; PS Automobile showed off some two-wheeled classics, too; Art Wheels seems to have cornered the market when it comes to restored Fuchs wheels

296bhp (call it 300 - it sounds better) and an impressive 280lb ft of torque from just 1950rpm. The big brother 718 Cayman S offers an extra 50bhp from its 2.5-litre engine. Whether we'll see a 718 Cayman R remains to be seen (and if we do you can be sure it will trounce its forebears in the power stakes), but in the meantime let's talk torque.

Take a blank sheet of paper, a pencil and a ruler. Draw a basic graph, with the vertical scale marked 'Torque', the horizontal marked 'RPM'. Now place the ruler on the paper and draw a horizontal line from one side to the other. That, dear reader, is what the torque delivery feels like. No peaks, no troughs - just instant, shove in the back torque from low rpm (you can feel it build from little more than 1200rpm if you are so inclined) all the way to the red line. In fact, if the truth be told, there is little point in redlining the four-pot in any intermediate gear as, whatever the rpm, planting the throttle gives the same result.

The magic, of course, is the sum of many elements, not the least of which is the use

of a turbocharger for the first time on the Cayman. We all used to cry out for a turbo Cayman, but Porsche refused to play ball -'they' knew that a blown six-cylinder midengined Cayman would run rings round a 991, and that just wouldn't do. But nowadays turbos are used for more than outright power gains - small-capacity engines boosted by a turbo can be far more

But – and it is a very big but – there has been a price to pay for this leap in technology: sound. You knew I'd eventually have to get round to this, too. The moment it was announced that the new generation of Boxster and Cayman would be powered by a four-pot, everyone was anxious to hear what it sounded like. 'Spy' recordings from the Nürburgring suggested it was not as



## No peaks, no troughs – just instant torque from low rpm...

fuel efficient (and emissions friendly) than a larger normally-aspirated motor with a similar power output. And with variable valve timing, there need be no loss of torque - this is the case with the 718's engine, which matches the pulling power of the old 3.4-litre Cayman R despite a 40 per cent reduction in capacity.

disappointing as people expected, but then most of those sound clips were on drive-by, with sport mode selected on the exhaust. Even then it was obvious this was no 911 with its sexy six.

To be frank, either Porsche has misjudged the importance of the way a car sounds (which I'd find hard to believe, especially as







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Above: Bare-metal 930 Turbo bodyshell was a highlight of the Porsche Classic stand, showing off the lengths to which the resoration shop goes and what panels are available

Below left to right: Dansk told us it will be 10 years before they can offer a new bodyshell, but in the meantime their range of repair panels continues to expand; DP Motorsport showed pair of 964based hot-rods switchable exhaust systems are available across the range) or they don't care and expect customers to a) just get used to it or b) just get on with it. I suspect it's a case of the latter. Either way, the 718 Cayman sounds disappointing to my ears.

On cold start-up, there is a distinct rasp to the exhaust note, which quickly calms to a rather Subaru-like burble. There, I've said it: the 'S' word. Subaru. It's an odd, off-beat note which is as far from the mellifluous tone of the original six as you can get.

Is it really that important? Well, frankly, yes it is. Porsche, you need to rethink this. Clearly going back to a six-cylinder engine is not going to be an option, but the exhaust engineers need to put their collective thinking caps on and come up with a more

sonorous solution.

Let's get the criticisms out of the way. Oh, I just have. To be honest, I cannot, without getting absurdly picky, think of anything about the 718 Cayman that offends me. Considering this is the base model in the Porsche line-up - the Cayman is nowadays cheaper than the Boxster - the fit and finish is exemplary. Sitting in the supportive 'Sport-Tex' leather-trimmed seats (that'll be £2174 extra, thank you, plus an extra £312 for the 'Sports seats Plus' electric package) while gripping the heated GT Sport steering wheel (£501, ker-ching!), it is hard to come to terms with the fact that this represents the lower end of the Porsche spectrum, albeit with a few 'extras'. The quality of the interior is impressive and

a far cry from that of the original Boxster, which always left me feeling underwhelmed.

An early ferry from Dover to Calais called for an early start, seeing us head out of Farnham in Surrey at about 4.30am. Misted windows quickly responded to a burst of aircon and the lumpy idle soon settled to a steady off-beat thrum as we sped (strictly observing all speed limits, naturally) along the A31 to Guildford and then up an empty A3 to Junction 10 of the ever-busy M25. The Cayman was a delight, refined, smooth and...OMG! What's that noise? Our early morning stupor was broken by the most awful road noise imaginable.

As soon as we hit the concrete sections of the southerly part of the M25, the tyre roar rose to such levels that, quite literally,







Above: 718 Cayman, even in 'basic' 2.0-litre form, is an undeniably appealing car, offering 170mph performance from just 2.0-litres and, of course, four cylinders. Doesn't she look sweet? Seume's already fallen in love

we could not hear the radio without turning up the volume – it may automatically respond to road speed, but the radio sure doesn't respond to road surfaces. Dropping the speed to 60mph made no difference – we quite literally had to grin (grimace?) and bear it. Surely Porsche's test team must have driven the cars on similar road surfaces in Germany?

The ferry – run by DFDS – was virtually empty. Ours was one of just six cars on board, which makes you question how profitable ferries can be these days. Maybe it's the fear of what awaits you in Calais that puts some people off this route. If that's the case, then it's a fear which is unfounded – certainly on the way out.

The crossing was smooth, the breakfast unmemorable, the escape onto the Autoroute a welcome relief. If only British motorways could be this smooth and this empty. Even the occasional sections of concrete passed by in relative silence.

The Cayman had thus far proved to be a perfect cross-continent express, comfortable, relaxing to drive and more than quick enough to dispense with any annoying traffic. On the odd twists and turns encountered in Surrey, the car felt planted, although we hardly gave the PASM (Porsche Active Suspension Management) or PTV (Porsche Torque Vectoring) systems a workout.

But the peace and relaxation went out of the window as soon as we hit the first roadworks in Germany. Traffic ground to a near standstill several miles short of Essen, leading us to ignore the sat-nav and take a different route into the city. It worked and we soon arrived at the Messe Essen ready for action. Of course, 'action' is all relative – for the Cayman's two 'mature' occupants that meant a cup of coffee and a piece of cake first... Well, it is Germany, after all.

Hall 3 is traditionally the main hall for Porsche exhibits, with several of the heavy hitters in the Porsche world exhibiting their wares. What sets Techno Classica apart from many other classic shows is that virtually every car on display is for sale. Not all, as many are used to show off the given company's products or capabilities, but for the most part you'll find the exhibits bearing a show card complete with price tag at the

companies had 1967 911Ss in Sand Beige, both in original – or mostly original – paint, both with matching numbers drivetrain and price tags to match. How about €375,000 (roughly £318,000) for one, and a 'please enquire' for the other?

. If the idea of running an old 911 didn't



. ))

bottom. I'm sure we needn't tell you that prices are not cheap and bargains are few and far between.

Unrestored, if not necessarily original, early 911s are hot property, with many dealers trying their luck with cars of varying quality and originality. Two different

appeal, you could go to the other end of the spectrum and pick up a 991-series 911R. We spotted two on offer, one at €525,000 (£445,000), the other – at Porsche Classic Center Gelderland – at a relatively bargain €435,000 (£368,500). Of the two, we rather preferred the latter, as it was finished in

#### SO, HOW MUCH DOES THE 718 CAYMAN REALLY COST?

Base price: £ 39,878.00 Price as tested: £53,605.00

Extras as fitted to roadtest car:	
Graphite Blue Metallic	£558.00
Sport-Tex leather interior in Graphite Blue & Crayon	£2174.00
Model designation '718'	£ No cost
Bi-Xenon headlights including Porsche Dynamic Light System (PDLS)	£591.00
ParkAssist (front and rear)	£599.00
Six-speed manual gearbox	£ No cost
Porsche Active Suspension Management (PASM)	£971.00
Porsche Torque Vectoring (PTV) incl. mechanically locking rear differential	£890.00
Sport Chrono Package including mode switch	£1125.00
Sports exhaust system (incl. sports tailpipes in black)	£1530.00
20-inch Carrera S wheels	£1700.00
Wheels painted in Black (high-gloss)	£801.00
GT sport steering wheel	£186.00
Heated multifunction steering wheel	£315.00
Sports seats Plus (two-way, electric)	£312.00
ISOFIX child seat mounting points on front passenger seat	£122.00
Navigation Module for Porsche Communication Management (PCM)	£1052.00
Connect Plus	£801.00







Above, left to right: Dig out those shades, man. Rubystone RS next to Lime Green Carrera made for quite a show; evidence of crumplezone testing on prototype 928 bodyshell; dealer service material was plentiful but costly

Below, left to right: Just a small portion of Hall 6 where many of the truly high-end exhibits were located; Gulf chairs? The one thing they lacked was style...; KW used an RSR-inspired track car to draw people to its stand, where all the latest suspension parts were on show

Speed Yellow with black trim, just to make a pleasant change from the usual white.

Opposite the Gelderland stand was the always impressive showing from Early 911S, who can be relied on to spring a surprise or two. This year's 'What on earth is that?' exhibit was a design study based on a 1965 911 coupé, chassis number 301751, making it a very early production example. As far as we could make out, it was designed and built by students at the University of Aachen in 1966 and later sold to a customer in Switzerland. The lowslung, targa-topped, er, 'Porsche' was certainly different and very much a product of its time. By that I mean it would have been better if they'd left it as a stock 911...

Prices of '73 Carrera RSs appeared to be levelling off, with none that I could see anywhere near approaching the €1,000,000 level of a year or two back. But '74 Carreras continue to rise, with close to €300,000 not being uncommon, even for a US-spec non-MFI example. Of course, the advertised price and what is achieved are two different things...

Other examples of hot property? Not

surprisingly the 964 RS continues to command a premium, while late-model limited run models such as the 993 RSR and similar will make any bank manager wince with pain. Former race cars (or modern builds with potential to run in current historic series) are strong, too, with one particularly nice 1965-build 2.0 coupé

a 934 and an ST. All highly desirable and all, undoubtedly, highly priced - but justifiably so. We spent some interesting time with Dansk, too, hearing of the company's plans to gradually increase the range of Porsche repair panels (don't forget, Porsche parts only form a relatively small proportion of its business) leading,



## The advertised price and what is achieved are two different things...



at €185,000. Another, equipped with a set of highly desirable magnesium American Racing wheels, was a case of 'please enquire for price' - dealer-speak for 'expensive' or 'we haven't a clue'.

The best Porsche displays were, in my mind, those of Mittelmotor (with a very nice 914/6 GT and a selection of ready-built engines on offer) and Jan B Lühn, who, with Kobus Cantraine, had on show a 911R ultimately, to talk of new bodyshells. That, however, is probably as much as ten years away, so don't hold your breath quite yet.

To be absolutely honest, Techno Classica wasn't quite as impressive as past years, even though there were still a lot of great exhibits. Attendance seemed to be down, too, and maybe that's partly due to a nervousness about large gatherings in the wake of recent terrorist-related events. Who















knows - it was still huge compared to any other similar shows

The Cayman looked right at home in the underground garaging at the show, nestling alongside a pair of 997 GT3 RSs, one in orange, the other bright green. The Graphite Blue and black certainly gives the options list when it came time to place your order (see list on previous spread).

So, did we max it out on the way home, as ordered by Oberleutnant Bennett? Sadly not. Friday afternoon traffic restricted play to just 131mph on the speedo, a speed which it attained with impressive rapidity

driving style. Honest.

One last thing. Our car was equipped with a six-speed manual gearbox. There was nothing wrong with it at all, but I honestly feel that its days are numbered. Porsche's PDK transmission is so damned good that I can't honestly see the need for the manual other than to prove how manly you are. And this from someone who wrestles with a five-speed manual 'box in his own Porsche. Trust me - go PDK.

But you can't get away from that engine note. It really doesn't do the car any favours at all. Please, Porsche, give the 718 some balls. That small gripe aside, looking back I don't think I've ever enjoyed driving a 'base model' Porsche so much. In fact, all this trip has done is reinforce my belief that the Cayman is the choice for people who remember what the 911 used to be before it morphed into the 996, 997 and ultimately the 991. I call it the thinking man's Porsche. PW

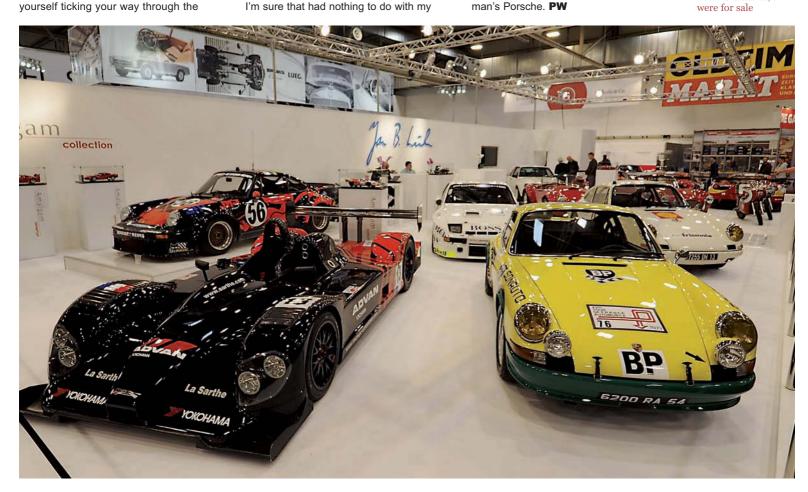
Above, left to right: On close examination. the strange space-age 356 Roadster sported numerous unusual modifications; 964 RSR was a two-time finisher at Le Mans, winning its class in 1994; Early 911S stand was a feast of colour. Sign on wall said it all...

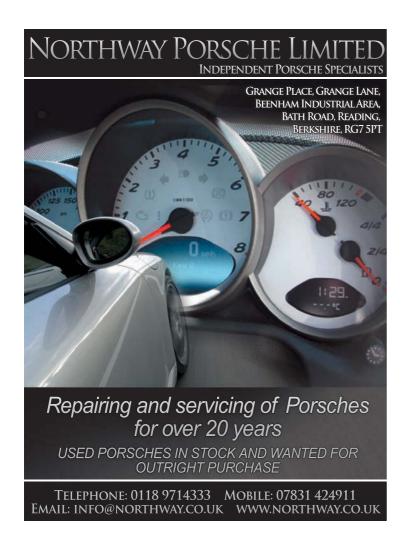
## The choice for people who remember what the 911 used to be...

young upstart presence alongside its more potent older siblings. For a total as tested of £53,605, I reckon it's a pretty good buy. At a basic cost of £39,878 it's a positive bargain, although, like Adam Towler last month, I can't help feeling that you'd find

and ease. But that's a long way short of the 170mph claimed by the factory - guess I'll just have to try that another time. Economy? Well, the factory reckons you should be able to get a combined average of 40.9mpg, but we only saw 32.9mpg. I'm sure that had nothing to do with my

Below: Jan B Lühn display included several historic race cars, among which were no fewer than five Porsches. Like most exhibits at Techno Classica, all were for sale









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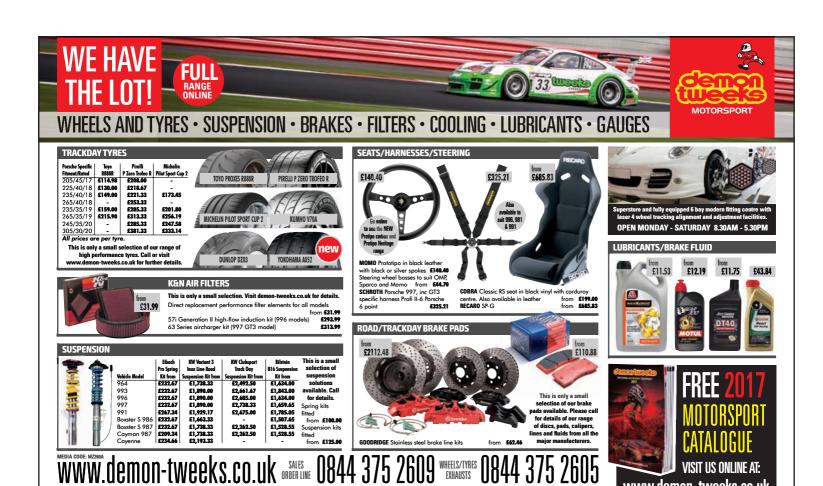


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# TOPLESS TWINS

Boxster 986 and 996 Cabriolet: they're of an era, affordable, and they access the great outdoors while you're driving – in subtly different ways. So which top do you fancy removing?



rue, we've spent most of this so-called spring dodging showers, downpours and lightning strikes, and the opportunities of getting the top down for a blast in the sunshine have been few and far between, but make no mistake, summer is on its way. But this ain't no meteorological appraisal, it's which rag-roof you gonna go for, when the sun finally does deign to show its face.

Both our candidates – supplied by dealer,

Both our candidates – supplied by dealer. Paul Stephens – in this beauty contest hail from the same era of Porsche production: one is a 996 C4 Cabriolet from 1999, the other's a 986 Boxster S, a run-out 2004 model, and a 550 Spyder 50th Anniversary special edition to boot. It would be discourteous of me not to declare that the Boxster used to be mine, so I suppose I have a vested interest. But I also run a 996 – a coupé, mind – so as I write this I don't know what the conclusion will be. Who's going to be the canvas canapé, and who'll be the rag-top roister-doister?

So although the Boxster is fundamentally a two-seater sportscar and the 996 is a two-

plus-two grand tourer, they are indeed siblings on the Porsche family tree. The road to economic recovery started in 1996 with the mid-engined Boxster two-seater followed by the rear-engined 996 grand tourer, equipped with similar water-cooled powertrains and the same frontal chassis architecture including headlights and front lids. As Head of Design at the time, Harm Lagaaij explains, 'In the beginning of the

decided what could it be. When that decision was taken, then you start looking back at the form of the 550 Spyders and the 718 RSK, so there is some form of language from those cars. (When the Boxster project was first unveiled at Detroit in January 1993, the prototype styling concept was displayed alongside a Porsche 550 Spyder sports-racing car, which is considered to be its spiritual forebear.) The

The road to economic recovery started with the mid-engined Boxster

'90s, it was completely clear that Porsche could not continue as it was with the car line-up we had, and therefore a very interesting two-year period began, deciding what to do next, and in that period there was a group of people comprising engineers, concept engineers, design engineers, and the sales and marketing people who

commonality of platform, which was between 30 - and 35-per cent between Boxster and 996, was a stroke of genius, because it meant that Porsche was back, it had the potential to become a healthy company again.' While the 986 Boxster looks relatively petite, the 996 is a bigger car than the air-cooled 993 it replaced. As Paul

Stephens says, 'Fast forward 18 years and the 996 series looks positively dainty and retro cool compared to current 991s.' While the front end of the 996 C2 was the same as the 986 Boxster, the rear suspension was inevitably different, given the rearward mounted driveline, and the 996 employed a version of the multi-link rear suspension used in the 993. This naturally made both models cheaper to build in the first instance, getting the project off the ground, and enabling Porsche to offer the Boxster as an entry-level model. At the time of the transfer from aircooled to water-cooled engines, the majority of 986 Boxster chassis were built by Valmet Automotive at Uusikaupunki in Finland, with only a small number constructed at Zuffenhausen, though final assembly of the Finnish cars was also carried out at the Stuttgart base. The easy way to tell if it's an Uusikaupunki-built car is by the letter 'U' for

the 11th character in the VIN, rather than an 'S' for Stuttgart.

The benefits of the mid-engined configuration are critical in the context of this feature: compactness of driveline, central weight balance within the chassis, and hence unimpeachable handling. One downside might be that a Boxster's driver and passenger are, at most, little more than 2ft (60cm) from the heart of the action, but massive insulation takes care of potential noise and vibration issues. The electrically operated soft-top and built-in roll-over protection brings a whole new level of sophistication to open-top motoring, with genuinely usable luggage space up front and behind the engine for practical touring purposes and everyday usage, like the constituents of a decent supermarket expedition.

By the time we get to this 2004 model-year

Boxster, the original design and spec has moved on. The base model's engine capacity rises from 2.5-litres to 2.7-litres and 225bhp in 2000, when the S version appears with its 3.2-litre engine offering 252bhp. During the evolution of the 986, the most significant facelift arrives in 2003 when a smaller glass window replaces the plastic rear window in the canvas top, the cockpit receives a glove compartment, and a new electro-mechanical hood and boot release mechanism is installed, with an emergency release in the fuse box panel. The steering wheel is updated, and a reworked exhaust pipe and air intake are fitted, and the amber fried-egg front indicators are replaced with clear lenses. The rear light cluster adopts translucent grey indicators instead of amber ones. The side marker lights on the front wings swap from amber to clear lenses, except on American market cars where they remain amber. The

There's more than one way to go roof down in a Porsche. If you want traditional rear-engined Porsche, then go 911. If you want modernist midengined, then it's the Boxster





Dead side on is perhaps not the Boxster's most flattering angle, but it does neatly demonstrate its 911 connection. The front end, windscreen and doors are effectively interchangeable

bumpers take on a more chiselled aspect, and new wheel designs become available. Which brings us to our subject car. Launched in September 2003 as a limited-edition model, the 550 Spyder 50th Anniversary Boxster S sees the original 986-series enter its final year of production, ahead of the launch of the new 987-series in autumn 2004.

Performance-wise, the 550 Anniversary S

sporting feel without making the shift seem notchy. But it's in the suspension department where the most significant upgrades are evident. The ride height of the 986 550 S is reduced by 10mm compared to the normal Boxster S, and the suspension settings are changed to give a firmer ride. Porsche Stability Management (PSM) enhances safety in all driving situations, demonstrated to great

The limited edition Boxster is finished in Carrera GT silver

Fancy chrome bits and a chrome effect Boxster S badge denote this Boxster as being a special edition. If you plump for a more basic Boxster, then doubtless these trinkets are aftermarket available

has a top speed of 165mph (266kph) and 229lb ft torque, at 4600rpm, sprinting from 0-62mph (100kph) in 5.7s (Tiptronic S 6.4s). This increase in horsepower is largely down to the redesigned Sport exhaust system with its distinctive double-decker tailpipe, adding a sharper edge to the exhaust note. The sixspeed transmission (Tiptronic was optional) benefits from a short-shift modification to the gear lever, which helps give the car a more

effect last summer on Porsche GB's Silverstone skidpan. The Boxster S 550 is fitted with cross-drilled discs, 318mm at the front and 299mm at the rear, with its fourpiston aluminium monobloc calipers treated to an aluminium finish and on display behind the five-spoke 18-inch Carrera-style wheels (regular 986 Boxsters have 17-inch rims) with spokes finished in Seal Grey with coloured Porsche-crest centre caps. They're shod with

Falken tyres, which last and last, with no compromise on grip. Each wheel is bolted to a 5mm spacer, giving the car a more aggressive stance and improving the roadholding slightly. The Boxster S lettering on the rear lid is polished chrome plate, while the colour of the padded front of the roll-over bars matches the interior. An on-board computer, Litronic headlamps with dynamic beam angle adjustment and a cleaning system are also standard. The horizontal slats in the front valance and meshed vents in the lower rear valance also help to visually differentiate the Boxster S 550 Anniversary model from the regular S - and the limited edition cars are also finished in Carrera GT Silver Metallic, a hue that was reserved exclusively for the Carrera GT supercar and the 40th Anniversary 996. For the first time, the Boxster was offered with a brown Cocoa canopy, with the same coloured upholstery applied throughout the cockpit. Alternatively, dark grey leather with a black soft-top was available, like the spec you see here. Silver painted seat backs and roll-hoops, along with colour-matched padding, are yet more features specific to the Boxster S 550. Sill

225/40 (front) and 265/35 (rear) ZR-rated









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Rear of the year! Back end of the Boxster hides a surprisingly spacious boot, while the 911 conceals an engine!

plates also bear the Boxster S legend in polished lettering on a black background. The rear section of the centre console, the handbrake lever, the grooved bar on the dashboard and the switch panel are all finished in GT Silver to match the exterior. On the dashboard, chrome rings surround the black-faced gauges, and there's an intriguing gap between them and the arched moulding that defines the top of the dashboard binnacle. The Boxster 550 S's gear-lever knob is made of aluminium, trimmed with leather, while the optional Tiptronic S gearshift cover is highly polished. Snazzy, yet understated. The Boxster 550 Anniversary S's 3.2-litre

flat-six develops 266bhp at 6200rpm, 6bhp up on standard, largely thanks to the exhaust system and ECU massage. The usual airconditioning and the Porsche CDR-23 audio package are standard in the efficient, no frills Boxster S cockpit. Finally, to acknowledge the car's special status for those who like to have it spelled out, there is a Limited Edition numbered plague on the centre console. Just 1953 examples were built, commemorating the year the model first appeared, and this one is number 1602. 'Special edition cars command a premium over a standard model, for sure,' comments Paul Stephens, 'and because they're generally based on a very late car in a model line they invariably come with guite an amount of extra equipment. And that means that when they come up for sale they look great alongside a standard car, so they should command a bit more money. If they're in limited numbers as well, that should help cement their values, and that will go on as time goes by.' Now, at 51K miles, the 550 S needs a bit of detailing to lift it to perfection, and Paul Stephens employs just the man for the job: Detailer Dan (Garnham) will apply

some leather feed to the passenger seat, which betrays slight evidence of a canine presence, plus a few minor stone chips on the front lid. As Kool and the Gang sang, "Get Dan on it..."

To put a bit more flesh on the history and spec of our two soft-toppers, the 996 Cabriolet was launched in April 1998 and in production till the 2001 model year, with 23,598 cars built during that time. This one is a C16 UK-spec Carrera 4 originally purchased by a Mrs Susan Ahlers in Jersey in May 1999. It's finished in Arena Red, with grey leather interior and upholstery. It has now done 69,540 miles, having had a replacement engine under warranty at 26K miles. Paul

the Boxster, often running at very high speeds, but then again, perhaps the Cabriolet's Tiptronic transmission makes it thirstier. Its straightforward Tiptronic shift immediately gives it the aura of a tourer rather than a fighter. Upholstery is dark grey leather, with carbon inserts in the top and bottom of the steering wheel hoop to leaven the predominantly grey cockpit. Its early spec also predates the glove locker that was fitted post-2003, so there's just the air-bag ahead of the passenger. There's no doubt that it's in pretty good shape for its 70K miles, with just a few very minor scars in the paintwork. Our subject car is on a set of wheels that appear to be exclusive to the 996 Cabriolet - I haven't



## Tiptronic gives it the aura of a tourer rather than a fighter

Stephens believes that it was partly its low mileage, short-run usage that could have been responsible for the failure of its intermediate shaft bearing in 2006. While resident on Jersey the 996 Cab was regularly maintained by the island's PC until 2005 and then by specialists Oakhurst until 2008, when it relocated to the British mainland with 30.000 miles on the clock. Since then it's been cared for by PC or independent garages, including a new soft-top fitted in 2013, complete with the later heated glass rear window. The on-board computer tells me it's averaging 20mpg, suggesting that someone's been using it to the full - because by comparison, I regularly achieve 28mpg in my 996 and 30-35mpg in

been able to find evidence of them on a gen 1 996 Coupé, at any rate. They are 7J and 9J x 17s, shod with 205/50 ZR 17 and 255/40 ZR

The electric seat adjusters in the gen 1 996 Cab are superior to the ones in my gen 2 996, enabling me to approach the optimum seating position I used to enjoy in my 964, though the chairs themselves aren't as supportive. The Boxster seat adjustment is similar to my 996, so although it is adequately comfortable I would ideally wish to go a further notch back or have at least a slightly more tilted backrest, but the confines of the two-seater cockpit preclude that.

At first the 996 Cabriolet is presented in off-



Both hoods are well made and electrically operated and stow neatly away. The 911 has more interior space, thanks to its 2+2 layout, but the Boxster boasts more overall luggage space thanks to front and rear boot layout

season format with its matching factory lid – a worthwhile accessory in wintertime, though far from essential. Like the Boxster, which can be similarly cosseted with a works hard-top, the normal fabric shroud is perfectly capable of withstanding the rigours of the northern European winter. Detaching the factory hard top involves undoing the Allen bolts located in the speakers in the rear parcel shelf with the spanner provided. While a Boxster hard-top can just about be transposed by an individual,

the 996's lid is a different matter as it encompasses a two-plus-two cockpit and is accordingly far weightier, and it's definitely a two-person job to heft off the car and into storage. As for the Cabriolet's canopy, it is simplicity itself to retract, being entirely electronically operated. Press the switch on the centre console, hold it down, and it releases the catch that secures the rigid front hoop of the hood onto the windscreen header-rail, and the canopy arches back

overhead to the accompaniment of a mechanical whirr, while the door windows lower themselves deferentially and the rear three-quarter side windows also retract into the slots either side of the cockpit. The folding roof then buries itself snugly into the hold to the rear of the cockpit and is neatly hidden away from view by the closing lid.

Raising the roof is the same in reverse, and pretty much the same as the 986 Boxster; you keep your finger on the button throughout the





It's fair to say that the 996 Cabriolet is a slightly different beast to the Boxster and, with the often specced Tiptronic transmission, more of a cruiser

whole procedure, which lasts around 15 seconds. There's a delay of a second or so after pressing the button before the 996's hood erection process starts. The lid rises behind the cockpit and the canopy emerges skywards, arcing overhead while the rearthree-quarter triangular panes pop up and the side windows retract slightly in anticipation, as the canopy lowers itself down to the windscreen where it settles neatly on the header rail and locks itself into position. Job done. The difference with the Boxster is that

So, who's the hoodlum in a hoodie, and who's the bosun in a boater? Having played around with the lids, it's time to have a go on the Suffolk backroads. The Boxster is so light and agile compared with the 996, which feels, well, sorry to say, like a barge by comparison. The slightest input has the Boxster going where I want it to go, whether applied by throttle or steering. It tracks beautifully straight and true, and I can swing it about in the most death-defying attitudes, darting into corners of any angle with a quality of finesse that the

literally a breath of fresh air when topless, and it encourages the laid-back approach to a leisurely jaunt. Sure, it delivers everything you'd expect from a 996, turning in nicely – and that's the appropriate word for this car – mmm, nice, in a jazzy sense. The Boxster on the other hand is Miss Feisty, ready for a polka whenever you fancy turning on the gas.

And what is the point of this discourse?

Surely we had a good idea that this would be

Surely we had a good idea that this would be the case before we started? Yes, and no. The question is, not about which is the better car in the performance and handling stakes, though that undoubtedly has a bearing in defining one's opinion; it's which one is the preferred summertime sunshine cruiser, and although the Boxster knocks spots off its lardy cousin in the handling department, it is the one-trick pony here: the 996 Cabriolet is the easy rider in the grand touring manner - for four people, as long as two of them are small - and it can still pile on the beans in the backroad dash should it be required. From the armchair comfort of my 996 coupé I would take the 986 as my summer funster. But overall, the internal dimensions of the 996 cockpit win out in the all-rounder stakes. "The sun has got his hat on," goes the chirpy cockney jingle, and so, hopefully, will I. PW



#### Being a Tiptronic, the 996 isn't the slightest bit demanding

"

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you need to clip the hood and header-rail into place with the manual handle, which then slots unobtrusively into the recess behind the header-rail, at which point the windows automatically resume their upper position. In both cases, if the operation fails to complete it's simply because you haven't kept your finger on the switch for long enough.

996 can only dream of. Though its 3.2 flat-six delivers 266bhp against the 996 3.4's 300bhp, its better power-to-weight ratio means it can easily hold the Cabriolet's flat-six, so it won't lag behind on the straight, and since it outhandles it, it'll be ahead on the cross-country point-to-point as well. Being a Tiptronic, the 996 isn't in the slightest bit demanding,







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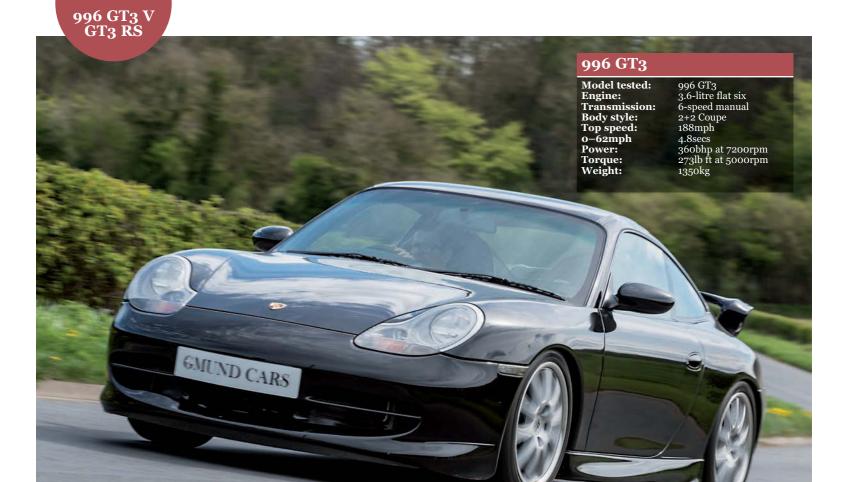
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Words: Steve Bennett Photography: Antony Fraser The difference between a 996 GT3 and a 996 GT3 RS? Well, it could be as much as £100,000. The difference in terms of driving and dynamics? Next to nothing. Leave the RS to the investors and grab yourself one of the last Porsche bargains, while you still can... GMUND CARS





Mean and moody. This immaculate 996 GT3 looks very 'stealthy' in black, which is a lesser spotted colour for a GT3. With 360bhp and 100bhp per litre, it was a big deal in 1999. Now, that's entry level power for a 991 model 911

Leather, fixed back seats dominate the interior. Bennett at the wheel

take a few guid. To fully get to the point the rather gorgeous and understated black 1999 GT3 is currently on the market at £69,000 and the rather more shouty 2004 GT3 RS is on the market at £169,000. That is the madness of the RS badge and its seemingly keeping prices of mere GT cars at levels that are rather more sane, which can only be a good thing. I mean, take the RS badge out of the equation and what have you got? Two narrow bodied GT cars separated by 21bhp and 10kgs - the former in favour of the RS and the latter in favour of the plain GT. Indeed, if you want a true lightweight narrow bodied 996, then go for a base C2, which is lighter than both: 996 C2 = 1320kg; 996 GT3 = 1350kg; 996 GT3 RS = 1360kg. Makes you think, doesn't it?

Both of these cars are on the market at Gmund Cars and Gmund's ever ebullient

Andrew Mearns and is very happy for us to take them out for a damn good thrashing on some of Yorkshire's finest roads. Indeed, he's so happy that he comes along too. It's easy to accuse dealers like Andrew of

queered the pitch it's this competitive arena egged on by whooping auctioneers driving buyers into ego-driven combat. The actual cars are almost forgotten as another record breaking price is notched up. It's a big deal



# If you want a true lightweight 996, then go for a base C2

profiteering, but the reality is that he and others are just responding to the market, one that of late has been driven by the auction houses, where willy-waggling punters compete to break records, as if that is the ultimate goal. Indeed, if anything has

to own the world's most expensive something, apparently.

But back to the plot. The difference between these two cars is not night and day, or £100,000, which for the rather less badge/production no/mileage obsessed









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buyer/driver is the point. Rewind to 1999 and the arrival of the 996 GT3 was a big deal. The new world, water-cooled 911 needed a hardcore halo and the GT3 delivered just that. With 360bhp and 100bhp per litre it was the most powerful naturally aspirated road-going 911 ever and while that figure might seem fairly pedestrian now, it was viewed with shock and awe in the context of the very late 20th Century. It wasn't called the 'Mezger' engine, then, either. Its mythical status was some way in the future, but it was certainly lauded for its bite and harmonics.

As an aside, though, it's amusing to note that *Autocar* mag – the paragon of the road test and figuring – couldn't get the GT3 to better the standard 996 C2's 0–60mph time, or 0–100mph for that matter, nor its in-gear 30–50mph and 50–70mph figures. That's weight for you,

but does rather leave the base C2 as the elephant in the room! Actually, these days, the fact that the GT3 was introduced with more weight on board tends to get forgotten. Back in the day it was assumed that when or if an RS version arrived, that would get the lightweight treatment. Not so, as we know. Why was the GT3 a bit of a porker? Well, it used the heavier C4 bodyshell for a start and the engine and gearbox combo were heavier than the standard C2 pairing and some of the chassis components were built to be more robust. It all adds up I guess, but that extra weight was never pared back.

With the GT3's extra weight came some serious depth, though. The engine based on the Le Mans GT1 unit had titanium rods and lightweight pistons and demolished the standard C2's 3.4-litre unit at high revs, spinning reliably to 7800rpm.

Bespoke springs and dampers and a chassis that was 30mm lower, with adjustable roll bars, virtually banished body roll. Geometry was readily adjustable for those who wanted a pointy front end and aero appendages were there because, let's not forget, the GT3 was a Supercup racer first and a road car second. Oh, and the GT3 was entirely analogue too because 360bhp was and still is a reasonably sensible power output to put folk in charge of, without the need for traction control.

Comfort or Club Sport versions could be specced. Club Sport is the market choice these days, with fixed back buckets, quite often a half cage and a single-mass flywheel for a sharper throttle response. Beyond that the GT3 was actually fairly well equipped for a road racer, with standard leather trimmed seats, air con





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hard to imagine how the 996 GT3 RS can possibly be £100,000 better. And, of course, it can't. That's market forces, not dynamic forces at work.

The 996 GT3 RS followed on rather rapidly from the 996 GT3 gen 2, which arrived in 2003, and with even more weight than the GT3 gen 1 that I've just extricated myself from. This hadn't been lost on the press corps of the day and the RS was Porsche's riposte, entering the ring fully 20kg lighter at 1360kg as opposed to 1380kg and with the instant cachet of the RS badge, last seen on the 993 RS and a production run of 200 cars ostensibly for homologation purposes. That was always going to make it a cast

Two very different

driving experiences on offer here. The GT3 is by far the better road car. Yes, it's firm, but nothing

like as manic as the RS, which requires a much more physical

driving interaction

iron collectable classic. Weight saving was achieved with a carbon fibre bonnet, complete with Porsche logo sticker – rather than metal/enamel badge – and Perspex rear window, plus other detail tweaks. Power – at 381bhp – was identical to the standard GT3 gen 2, as was the gearbox and brakes. Suspension was more aggressive in terms of set-up, and multi-adjustable, too. Over and above the standard GT3 it had revised wheel hub assemblies and better location for the lateral control arms.

Inside, the RS benefits from the 996 gen 2's interior upgrades in terms of materials and plastics. It comes with a cage, but it has never been fitted and there's tactile

enhancement of Alcantara wrapping the steering wheel and gear lever. Unlike the 996 GT3 I've recently hopped

Unlike the 996 GT3 I've recently hopped out of, you can't just let the RS go and do its thing. It's utterly hyper. The throttle response is vivid, thanks to a single mass flywheel, which adds to the frantic buzz of activity. There's still the trick of relaxing and going with it, but you have to be prepared to roll up your sleeves and 'get a grip' on the proceedings and catch the occasional 'moment.' Low speed ride is uncompromising, while body control is ruthless. The steering turns chatty into gobby, with a hint of Tourette's. There is a storm of feedback and filtering it requires concentration and commitment. It's





Shouty graphics and red wheels not to everyone's taste. 996 GT<sub>3</sub> RS is an exhilarating drive though and matches its lairy looks

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GT<sub>3</sub> RS interior lifted by tactile delights of Alcantara trimmed wheel and gear lever. Bennett just not man enough for the RS? You decide

exciting, hardcore, physical and rewarding, but ultimately just too manic to live with. Extended seat time feels like you've been in a fight. Maybe that's why they all have such low mileages?

Viewed by any measure the car that is £100,000 less is the better car. It's easier to get the most out of. Not because it requires less skill, but because it's fit for the purpose of being a road car, rather than a road racing car, which is what the RS always was/is. Sure, it has that badge cachet but with too many compromises. For me, at least, the 996 GT3 RS is definitely an occasional light snack, in the same way that I occasionally crave a hot curry. For further context here, my all time favourite 911 of any era is the 997 GT3 RS gen 1, a 911 with a chassis that is simply sublime and more in keeping with the 996 GT3 gen 1.

The RS will always command a premium. It's Porsche's less is more sleight of hand for what - in this instance at least - is fundamentally the same car, but with built in compromises. Factor in Porsche's current collector status and hysteria for lowmileage cars and you've got the perfect storm, which renders a mere GT car with barely a look in. Gmund's Andrew Mearns freely admits that the black GT3 has been in stock for six-months, while the RS will probably have shifted by the time this issue

being beaten up by it.

But, of course, I'm missing the point. How I rate the RS as a driver's car is almost irrelevant because that's not its purpose anymore. Its purpose now is to be enjoyed in a rather less dynamic fashion, regardless of whether its owner agrees or disagrees with mine or anyone else's opinion of its



# The 996 GT3 RS is definitely an occasional light snack

hits the shelves. Sure, the GT3 isn't cheap, but comparatively it's the absolute bloomin' bargain of the century and achievable - at a stretch perhaps - for more of us. Oh, and you might actually want to use it, too, because its value won't put you off and you'll actually enjoy driving it, rather than

attributes, good or otherwise.

At the end of the day there's a third 996 in the day's proceedings. It's one of those 'lightweight' Carrera 2s and it's mine and it's got to take me home. It cost me £13k and you could have 13 identical ones for the price of the RS. The world is truly an odd place. PW











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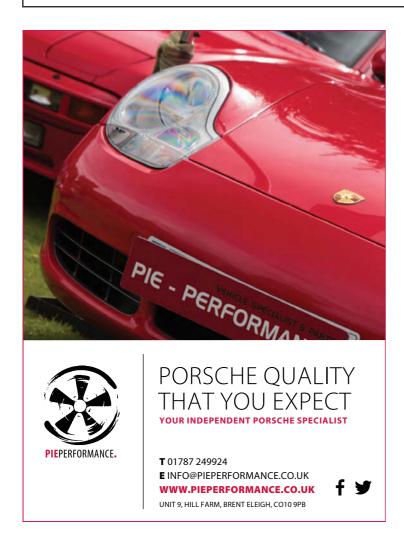
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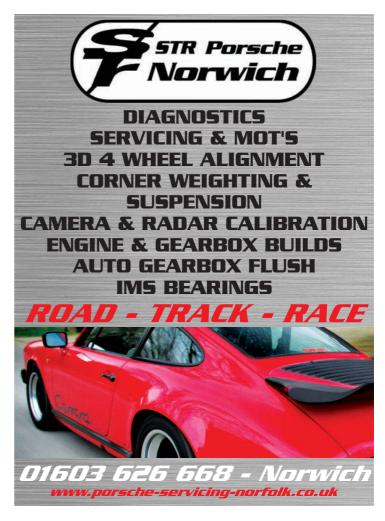
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paint an idealised picture of their products' place within the world, but this publicity shot of one of the latest Panameras driving towards Berlin's famous Siegessäule, or Victory Column, conveniently ignores the fact that many city streets are in near-gridlock for much of the time. And while modern DFI systems reduce exhaust emissions and fuel consumption to 'acceptable' levels, their frugality - and associated stop-start systems - come at a hidden price, especially once the vehicle has started the inexorable ageing process. Cutaway of petrol V8 (right) shows how fuel is now injected directly into the combustion chambers rather than as before – the inlet tracts, upstream

t is often said that we humans have no real sense of our own mortality until the age of about 30. True or false? Well, consider some of the things you did back then that you wouldn't dream of today, now that you are older and perhaps a little wiser.

It's much the same with modern cars. Brand-new, fresh from the showroom, they have somehow acquired a go-anywhere, do-anything persona – and especially so these days, when the most basic small hatchback is marketed as some kind of high-tech, long-distance adventure capsule. Or when the largest and genuinely most sophisticated of luxury GT saloons and SUVs – or even near-200mph sports cars – are sold on their ability to survive and thrive in the urban jungle. Only after they have been around the block a few times do you suddenly become aware of their mechanical shortcomings and perhaps even frailties.

Ironically, however, it is arguably the relatively inexpensive city car that is ultimately the more versatile and resilient of the two genres. Drive a Volkswagen up! (and what a daft name that is) at more or less legal motorway speeds from central London to the middle of Glasgow and back once a week, and with regular servicing – or as regular as VW now deems necessary, anyway – it will

probably serve you for 100,000 miles or more. Maybe twice that if you are genuinely interested in saving money by fully amortising your investment, rather than simply trading it in for one with an empty ashtray every year.

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however – and such appears to be the fate of most Cayennes, almost every Panamera or Macan, and a depressing number of 911s and Caymans, especially in famously affluent London – and even with the occasional motorway journey you could soon run into some major technical issues that neither you nor possibly even the cars' designers envisaged. (And do remember that even at 90mph your 991 will still be travelling at only around half its designed maximum speed.)

To some extent those problems are inevitable; perhaps even their drivers' own responsibility for casually buying something so inherently unsuitable for the job. Ninety years ago, in 1927, Charles Lindbergh flew the Atlantic behind a simple Wright Whirlwind radial-piston engine producing all of about 200 horsepower. But asking a now typically 350–500bhp V8 to adapt faultlessly to life in

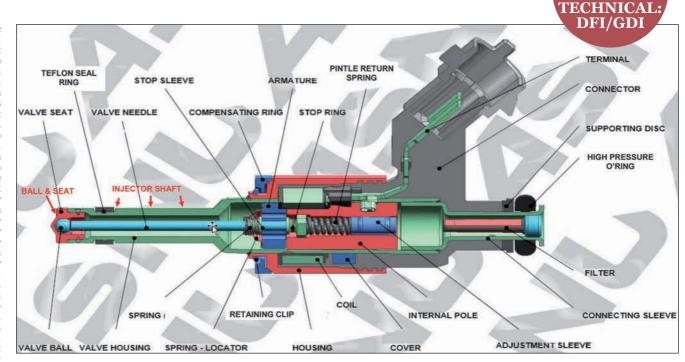
almost permanent gridlock is a bit like using an English Electric Lightning to commute from London to Birmingham. (Which seems an appropriate analogy for the madness that is HS2, but that is another story.)

What we are leading up to here is that more and more modern Porsches – and, to be fair, many other petrol-fuelled cars, crucially all of them equipped with DFI, direct fuel injection – are now suffering from what might be called driveability issues. Misfiring, basically, leading to poor performance and poor fuel economy, and eventually to excessive – and effectively unlawful – exhaust-gas emissions. Which is all rather ironic, of course, since that is precisely what DFI, among various other frankly rather desperate measures, was meant to address.

Opinion is divided on the precise cause and

of the valves

ASNU's schematic of a typical GDI/DFI injector reveals that it is essentially a simple solenoid-controlled valve. What you cannot tell from this diagram, however, is just how precisely it is manufactured, with tolerances down to mere microns. Clean, good-quality fuel is obviously vital to help avoid blockages (see also next spread), and likewise the regular servicing which, thus far at least, neither the injector manufacturers nor the car companies seem to consider worth suggesting. That is itself both relatively easy and inexpensive, but the design of modern engines - Porsche's in particular - is such that they could cost thousands actually to remove. And inevitably that process brings with it the danger of damaging the delicate mechanism by careless handling: ASNU has produced a special tool to aid removal, though



even nature of the problem, but Phil Ellisdon of fuel-injector specialist ASNU in Bushey, Hertfordshire, has absolutely no doubts. 'It's the injectors,' he states simply. They are fantastically clever devices, he continues, built to almost unimaginably tight engineering and electronic tolerances, and to function in the harshest possible automotive environment. 'But it's hard to ignore the notion that they were designed for some sort of idealised world,' he adds, 'and without much regard for the unintentional neglect or even abuse that, out here in the real world, they so often have to deal with.'

(Even so, continues Phil, it's worth pointing out that DFI petrol engines suffer fewer problems than the equivalent common-rail diesel engines – which also feature in many modern Porsches, of course – and cost garages and owners far less to service than oil-burners. 'Workshops equipping themselves to service gasoline direct injectors might spend around £10,000 to cover every unit currently in service,' he suggests, 'whereas someone tooling up to service every diesel injector might have to spend up to £100,000. And almost invariably the petrol injectors themselves are far less expensive to buy if they need to be replaced.' And as a Porsche

owner himself, Phil concedes that DFI delivers the goods in terms of fuel economy. 'The best I ever got from my gen 1 997 was 22mpg, driving very carefully, and in normal use that was down to 17mpg. In the 991 that I have now I can easily get 33mpg when driving normally, and never less than 29mpg.')

And in truth, says Phil, it's not really the injectors themselves that are at fault, more a combination of the quality and the cleanliness of the fuel passing through them, the use to which the vehicle is routinely put (see above), and not least the car manufacturers' growing reliance on stop-start systems that cut the engine during momentary halts, supposedly for that little extra – but one suspects largely irrelevant – reduction in exhaust emissions. 'And to cap it all,' he says, 'you have ECU-controlled short- and long-term fuel trims making all kinds of compensatory adjustments to the fuel delivery, but not corrections.'

Certainly some of these latest-generation DFI injectors can, and do, develop internal electrical faults, and then the only answer is to fit new ones. But Phil is firmly of the opinion that much of what is now taking place on city streets around the developed world could be avoided by some relatively straightforward injector servicing. (Or straightforward servicing

once the injectors have been removed, that is. In the Porsche V8s that means taking off the inlet manifold, and in a 911 will probably entail removing the engine. That is beyond doubt what Porsche itself would recommend.)

'I think it is extraordinary that these injectors are effectively fit-and-forget, supposedly able to last the life of the vehicle with no interim servicing,' argues Phil. 'They work in the most difficult of environments, just about the most unfriendly anywhere on the car. They are required to operate under extreme pressures and in extreme temperatures at millisecond durations, and to deliver millilitres of fuel with a highly specific spray pattern and droplet size. I have seen a great many of them, admittedly mostly from engines that have started to suffer from problems, but in all of those the tiny - and I do mean tiny - holes through which the fuel is sprayed are partially or even totally blocked with carbon. And that after as few as 20,000 miles.

'So, what should have been a carefully calculated fan of fuel mist that burns easily, even with air/fuel ratios as weak as 40:1 in stratified mode, becomes simply a jet – or several jets. In the same way that carelessly blasting your patio with a pressure-washer with the nozzle set to a narrow angle might

#### DFI OR GDI? OR EVEN SIDI? HOW IT ALL WORKS, ANYWAY

There is a wealth of detail to be absorbed for the fullest understanding of direct fuel injection, but for the purposes of this feature it can be boiled down to a few essential facts. (See also the useful Wikipedia article at https://en.wikipedia.org/wiki/Gasoline\_direct\_injection.)

Direct fuel injection, or DFI, and also known as gasoline direct injection.

Direct fuel injection, or DFI, and also known as gasoline direct injection (GDI), spark-ignited direct injection (SIDI) or fuel-stratified injection (FSI), works in much the same way as a modern common-rail diesel-injection system – although obviously with the ignition of the fuel/air charge by means of a high-tension spark rather than compression alone.

means of a high-tension spark rather than compression alone.

The fuel is pressurised, typically to between around 50 and 175 bar, and injected directly into each of the engine's combustion chambers, downstream of the inlet valves. In the previous multi-point or port-injection systems (such as in the gen 1 997 and its predecessors) the fuel is, as logic and the terminology suggest, injected into each cylinder's inlet tract, typically at only around 3.0 bar, and crucially upstream of the valves.

(Modern common-rail diesel systems operate at up to a staggering – and potentially highly dangerous – 2500 bar, or 35,000psi, at which point the liquid fuel itself is partially compressed, and certainly acquires a considerable amount of heat. Any jet resulting from external leakage at that pressure is sufficiently powerful to slice through steel plate.)

The first practical mass-produced application of GDI was in the Mitsubishi Carisma in 1997, with Porsche adopting it for the gen 2 997s and 987 Boxster and Caymans in 2008 for the 2009 model year. By 2015 the system was said to be a feature of around 45 per cent of all new cars sold around the world, and today that figure will surely be higher still, at least among those that still have internal-combustion engines.

The big advantages claimed for GDI are improved fuel efficiency and

reduced exhaust emissions, together with potentially higher power outputs. These are achieved by the far more precise control of fuelling and injection timing than is possible with the older port-injection systems.

timing than is possible with the older port-injection systems.

The engine can be made to operate with widely differing air/fuel ratios: stoichiometric, for moderate loads; full power, providing a slightly richer mixture for rapid acceleration and heavy loads; and ultra-lean burn or stratified charge for light loads and either constant or reducing speed. Under those last conditions the fuel is injected not during the intake stroke but toward the end of the compression stroke, and at an air/fuel ratio (up to 65:1 on some systems) that would be far too weak to sustain combustion in conventional carburettor-fed or even port-injection engines.

Another benefit of GDI is that the engine speed can be controlled entirely by regulating the amount of fuel passing through the injectors, allowing the elimination of the throttle flap – again as in common-rail diesels. This reduces what are known as pumping losses within the engine and offers further improvements in both power and exhaust emissions. (And it is the reason why modern Porsche engines – and others – require an engine-driven vacuum pump to operate their brake servos. As so often happens in physics, there is no such thing as the proverbial free lunch.)

Significantly, the Wikipedia entry concludes with a paragraph on GDI's 'drawbacks'. Chief among these is the absence of fuel passing over the inlet valves, and thus washing off any dirt in the intake air and carbon from the crankcase ventilation system. The resulting build-up can eventually restrict the port sizes, with an obvious effect on the engine's power and performance. It is also possible that a piece of this carbon will break off and, even if it causes no problems within the combustion chamber, might damage the vehicle's catalytic converter(s).







Cutaway above is of a VW DFI injector, but Porsche units, right, are similar. Ring at base of stem is a Teflon seal; staining above it indicates leakage. Note also deposits on nozzle plates. Microscopic before-and-after views (below) show how clogged the tiny drillings can become. DFI spray patterns are less symmetrical than in port-injection systems, so it's vital that all fuel goes to the right part of each combustion chamber

tear lumps out of the surface, so these jets of fuel can wreak havoc on the piston crowns.

'Even if they don't damage those, there is always the danger of washing vital lubricant off the cylinder walls and eventually, by contaminating the engine oil, knocking out the main and big-end bearings. And the fuel that does get in certainly won't burn as efficiently as it is supposed to, with all of the obvious effects on consumption and emissions. This can also cause problems when the change in the oxygen content in the combustion chambers makes the coil packs work harder, thereby shortening their life expectancy. In my experience those are often changed repeatedly before workshops start to look for the underlying cause of the failures.'

Stop-start systems merely add to the

problem, perhaps even exponentially, continues Phil. 'Think about it. The engine is hot, and inside the combustion chambers especially so. You halt at traffic lights, for however long or short a period is necessary, and each and every time you do so inevitably a small quantity of liquid fuel dries on the end of the injector nozzle. That leaves a residue of carbon, especially if you are using poorquality petrol, which once again over a period of time can partially or even completely block one or more of those microscopic drillings.'

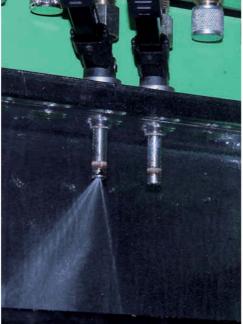
And the cars' highly sophisticated engine management systems aren't much help, it seems. 'They cannot detect a deteriorating spray pattern,' says Phil. 'What happens, in fact, is that as the carbon blocks some of the holes in the injectors, the ECU doesn't reduce

the amount of fuel being delivered, just the shape and distribution of the highly specific spray pattern. But it continues to gather data from the various sensors in the combustion process, and through what are known as its fuel trims decides that the mixture is too weak. As a result it simply delivers more fuel, and so now is merely adding to the problem rather than actually resolving it.'

The answer, Phil believes, is the routine servicing we touched upon a few paragraphs ago. Plus some ultra-simple, back-to-basics diagnostics. And it is difficult to ignore the logic of his argument, whatever you might think about his plainly vested interest. 'Today, as always, you can tell a great deal about a petrol engine's general health just by looking at the spark plugs,' he says. 'We all know —

















TECHNICAL:



It's difficult to show in photographs - and the high pressures involved can to some extent mask all but the most significant carbon blockages but 'dirty' and 'clean injectors (above, left and right) highlight the effect of ASNU's ingenious ultrasonic tank. After just 15 minutes or so the nozzle plate is back to bright steel again. Interestingly, the collector tubes show that the overall flow rate of the cleaned injector remains slightly lower than that of the control item, but that is probably due to wear and tear, says ASNU's Phil Ellisdon - and is in any case far less significant in terms of engine performance and efficiency than it would be in an older power unit. All current Porsches have engine stop start systems, and they will soon be mandatory in all new cars, but common sense suggests they might not be the panacea for urban air quality that the

legislators seem to suggest. Photo near right shows a typical DFI injector pulse at cranking speed; image far right when the engine is idling. So cutting the motor for mere seconds at a time is arguably counter-productive – never mind the wear and tear on battery, starter and various other systems

or used to know, anyway – that if they are black and sooty, then the mixture is too rich, or not burning properly. And if they are chalky and white, then it is too weak. A brownish coffee colour is about right. That is just as relevant in a 2017 Panamera V8 as it was 40 and more years ago in a Rover V8.'

After that simple first step has confirmed or perhaps eliminated a problem in the combustion chamber – and fully aware that many of these modern units are by no means as easy to get at as they used or perhaps ought to be – Phil still recommends removing and overhauling the injectors themselves. How often? 'That's a tough question, because so much depends upon the car's "lifestyle".

'Your service workshop should be able to identify an issue by diagnosis of the fuel trims, which, as I have said, tend to mask a developing problem until it become a more serious one. You can request to have them serviced as often as you feel necessary, perhaps if the vehicle is lacking performance, or has other driveability issues. But it should certainly be more often than the simple "never" that the manufacturers seem to endorse. Perhaps it should be based on engine-hours, as in aircraft and boats —

and bearing in mind that running at or near idle speed for long periods is far harder on the injectors than working them under load at higher speeds. It wouldn't be impossible to incorporate some kind of warning into the engine management system, based on time elapsed and average engine speed.'

Fortunately, continues Phil, injectors can quite easily be checked, in situ, for those internal electrical problems we mentioned earlier by a good specialist with the right knowledge and equipment – something we shall come back to in a future how-to story, we hope – but to do a proper job there is no alternative but subsequently to remove them, whatever pain that might entail.

'In some ways, they are little different to the simple, old-fashioned devices you see in 944s, 928s, 993s and the like. We run them through our standard ultrasonic cleaning tank, and that deals with the carbon and other dirt, both inside and on the nozzles, and naturally we test them all for both the correct spray pattern and their overall delivery – although surprisingly the latter is far less crucial than it was in older-style port-injection engines. We also replace the Teflon sealing sleeve around the stem of each nozzle. Otherwise

there's a chance of combustion gases escaping. You can tell if that's been happening previously, by the way, if there are brown stains in evidence on the stem.'

That is never going to be an inexpensive process. Remarkably, even for these highly sophisticated DFI units ASNU charges just £25 plus VAT per injector for the company's standard spray/delivery test and cleaning process, and then another spray/delivery test to verify the work. So even for a Cayenne or a Panamera you are looking at only £240 including VAT. But there is nothing to be done with those that still fail to spray correctly other than fit new ones - at around £250 apiece and in any case the labour charge alone to remove and refit them is likely to run into many hundreds of pounds, if not several thousands. In the V8s, as we've said, you need to take off the inlet manifold, and in the 991 and Boxster/Cayman ranges you are almost certainly looking at having the engine removed. And that, as ever, will surely lead to expense in several other areas.

Phil urges extreme caution, however, to anyone planning a DIY injector removal – and even to those independent Porsche specialists who don't (yet) know exactly what













In all of the later Porsche petrol engines it is necessary to remove the inlet manifold for access to the injectors for servicing or replacement – and in the sports cars (911, Boxster, Cayman) that is most likely going to mean taking out the engine Such fun... In this Panamera at JZM a number of - but perhaps significantly not all – the inlet valves were caked in a thick layer of oily carbon. In truth, it's a scenario that seems to be affecting an increasing number of GDI/DFI engines – perhaps because of the sedentary lifestyle that many urbandwelling cars lead, and almost certainly because the backs of the valves are no longer kept clean by the passage of petrol across them. Either way, the deposits can be removed by blasting them with crushed walnut shells, and it's a process we hope to show soon with JZM's newly acquired machine. Photo on the far right shows V8's air/oil separator, which is conveniently mounted on left-hand camshaft cover. At least that's a bit

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01923 269788;
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easier to get at than

in the 996/997

they are doing. 'We have produced a special tool – a small slide hammer specifically for GDI/DFI injectors, basically – which you carefully attach to the top of the injector, and thus pull it out perfectly straight. The trouble is, some people simply lever them out with one or more screwdrivers, and that risks bending the stem. Even just a one micron discrepancy will most likely prevent them ever working properly again. That's how accurately they are designed and built. For the same reason they don't like being dropped, either.'

Even after all that, however, the travails of the modern DFI Porsche owner are far from over, it seems. Go to all the trouble of removing the manifold for access to those troublesome injectors, and it is only natural to peer down into the ports at the backs of the inlet valves to see what's going on. But some or even all of them will almost certainly be coated with a thick, black, oily residue that looks a bit like charred wood. Indeed, such was the situation in the 2012 Panamera that, after visiting Phil Ellisdon at ASNU, we saw later the same day at JZM in nearby Kings Langley, Hertfordshire.

Quite where this stuff is coming from is so far a bit of a mystery. Certainly in DFI engines there is none of the fuel present in this area that you get with old-fashioned port-injection systems, and which naturally tends to keep the valves clean. And arguably the deposits might have no great bearing on the way the engine runs, unless perhaps they become so thick that they prevent the inlet valve(s) seating correctly. (And it is both interesting and perhaps potentially significant that in the

engine we witnessed only about half of the eight such pairs of valves were thus affected.) But it isn't very nice to look at – or to know that it is there, especially in a vehicle of this nature and value – and again its presence on only some of the valves could itself be indicative of a rather more serious problem. Perhaps it is related simply to faulty injectors – but at this stage there is once again no overwhelming consensus.

Phil Ellisdon, not unreasonably, blames the presence of the unburned fuel that is the result of a faulty injector(s) - and that would certainly explain the seemingly partial nature of the phenomenon. In certain engines it could be a fault in the EGR (exhaust gas recirculation) valve, but the Panamera's V8 doesn't have one, points out JZM's Steve McHale, just the usual air/oil separator to deal with crankcase fumes and pass those - minus, one hopes, the oil - back into the combustion chambers. Perhaps, then, it's a problem in that area, and perhaps in those cylinders which, having been adversely affected by faulty injectors, are suffering from excessive combustion-gas blow-by. But then the same single air/oil separator ultimately feeds all the ports, and so logic suggests that all the valves would be affected equally.

Either way, all are agreed that it's best eliminated, and to that end JZM has ordered an ingenious German-made machine with a special nozzle that simultaneously blast-cleans the ports – with crushed walnut shells – and vacuums out both the soiled medium and the contaminant. 'It's a simple enough job,' says Steve McHale, 'although naturally

you have to rotate the crankshaft such that each pair of inlet valves is closed before you clean them. The engine won't run at all well if the cylinders are full of crushed walnut shells... But you would surely carry out the job only in conjunction with attending to the injectors, and even then there's nothing to say that it won't happen again in the near future.'

So there you have it. Yet another nightmare scenario for the hard-pressed modern Porsche owner. Or perhaps not. The simple fact of the matter is that, dealt with soon enough, all of the issues discussed here are far more easily fixable than any bore-scoring or intermediate-shaft-bearing collapse - and, viewed in the context of a vehicle of this nature, not overly expensive. (Or not yet, anyway. That will surely change when your 2014 Panamera is 10 or even 15 years old.) They are also quite easily avoidable, one suspects, simply by using the car for its intended purpose, rather than indulgently driving the kids half a mile to school each day. And, thus far at least, you can always turn off that annoying stop-start function - although we understand that even that may eventually become impossible. First-world problems? It's hard not to think so. PW

● We were hoping to show JZM's brand-new port-cleaning machine in action on the engine whose inlet port is shown in the photo above middle, but unfortunately it had not arrived by the time this issue closed for press. See – we hope – *Technical Topics* in the July edition. Watch out, too, for a future story on the common-rail diesel problems hinted at here.

#### **KEEPING UP WITH THE TIMES**

Our first contact with ASNU was in 2002, when we showed how the company, based in a quiet suburban street in Hertfordshire, had developed a machine, originally designed in Australia, for testing and ultrasonically cleaning what would now be considered the relatively low-tech and low-pressure injectors then in widespread use. Established in 1990, it now has distributors and agents in over 60 countries, who between them test and service around 600,000 fuel injectors a year from car and motorcycle and even boat engines.

In January 2013 we examined how in light of changing technology the

company had cleverly re-engineered a small number of modern injectors, such that they could be used in older engines. And more recently still this

writer had the partially blocked injectors from his own 944 project car overhauled by proprietor Phil Ellisdon himself. See pages 110–113 of the April 2017 edition.

The company has routinely responded to developments within the industry. It was the first in the world to devise (in 1997) a system for testing GDI injectors, crucially realising that a machine running them at their normal working pressure would not only be expensive and create a potentially dangerous working environment (GDI engines' fuel systems typically operate at between around 50–175 bar; that's 700–2450psi), but would even be counter-productive.

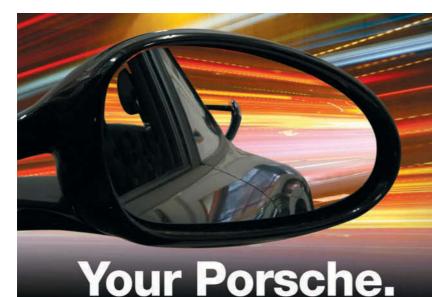


'Understandably, the injector manufacturers have to be able to test new units at full system pressure,' admits Phil, 'but out here in the after-market it's a different story. Experience has shown us that the higher the pressure, so the tighter the pintle – the valve at the business end, basically – is forced into its seat, and any visible evidence of a leak because of wear tends to be masked.'

Phil has also concluded that the most important aspect of a GDI injector is not, as in port-injection systems, its flow rate — and their evenness from one cylinder to another — but the distribution and atomisation that between them form the spray pattern. And that pattern itself, created by the fuel blasting through microscopically small holes, may well appear 'wrong' to anyone

accustomed to looking at the older units. You have to think of each spray cone as a number of individual jets working in unison, each one directed at a particular part of the combustion chamber. They really are the most extraordinarily precise devices.'

Trouble is, continues Phil, engine management systems are now so 'clever', for want of a better term, that they can instantly adjust the amount of fuel delivered to any one injector in order to compensate for any differences. 'Sadly, though, they still cannot correct what has caused that difference, which here, as we have seen, is most likely to be that carbon build-up on the end of the injector. As always, you have to go for the root cause of the problem, not just its consequences.'



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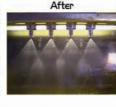
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# TECH: HOW TO

# MIND THE GAP

Just when you think corrosion has become an automotive problem of the past, the 997 – and particularly, it seems, the 3.8-litre 'S' – is showing signs of rust in one of the most unlikely areas. And while repair is by no means a five-minute job, it can be easier and cheaper than you might imagine to fix it, once and for all

Story and photographs by Chris Horton



arely do you see more than a trace of corrosion on a modern Porsche body shell - although the cynic might liken that to the tip of the proverbial iceberg, of course. Since the mid-1970s the company has made increasing use of zinc-coated and other high-quality steels, and while even those and various factory-applied rust-proofing measures are not 100 per cent effective against creeping tinworm - particularly where the vehicle has been damaged in an accident, and then not repaired correctly - the fact is that no one is going to get rich quick offering after-market repair panels for 986s and 996s or their derivatives.

Or are they? Robin McKenzie, the innovative proprietor of Bedfordshire-based

Auto Umbau, and until recently himself the owner of a 2005 997 Carrera 'S', is arguably the first independent to have identified a potential structural problem in this particular 911 range, and almost certainly the first to have commissioned the production of a component specifically – and as simply and as economically as possible – to deal with it. Sadly, we feel, he could well be on to a winner.

Actually, structural problem is perhaps too strong a term for it. The affected area is the relatively light-duty crossmember between the engine and the rear apron (although it does also tie together the two engine mounts, of course), and while any rust hole in any box-section can in theory compromise the vehicle's overall integrity, in practice the gaps would have to be pretty

substantial to be a major cause for concern. It is doubtful whether a small to mediumsized hole would even prompt an MOT-test failure, not least because the examiner is unlikely to be looking for it in such an out-of-the-way area.

For that reason alone you, too, might not be overly concerned about it. Out of sight, out of mind, and all that. And bigger (mechanical) fish to fry. Perfectionist Robin certainly was, however – just as we would be – and pragmatically set about designing and then having precision-made a small but repeatable batch of part-panels that would not only enable him to offer a cost-effective solution to other sufferers but which, by virtue of being pressed from what amounts to stainless steel, would also last longer than the original – if not indefinitely.

takes the edge off the ownership experience. Porsche will sell you a full replacement for £360 plus VAT, but fitting that would entail quite a lot of cutting into the body shell or else excising from it just the small area you actually need making Auto Umbau's £187 plus VAT for this repair panel (above) pretty good value, we reckon. And it's made from a special weldable stainless steel, so it won't rust. Job should come in at around £600 plus VAT, all told, which seems pretty reasonable to us



Problem - barely visible from the outside of the car. even with the rear bumper and the engine removed - is most likely caused by the close proximity of catalytic converters, and specifically the oxygen sensors. Anecdotally it seems to be only the 3.8-litre 997s that are affected, with the photo top right, of a contemporary 3.6's engine compartment, suggesting this to be true: crossmember is in pristine condition. It's an ill wind, though: having the power unit out for the duration offers a great opportunity to tackle all those jobs that would otherwise be difficult or even impossible, including replacement coil packs, and perhaps a (cracked) coolant expansion tank



Significantly, it is by no means all 997s that show evidence of this latest malady. The underlying cause, believes Robin, is in 3.8-litre 'S' models the proximity to the metalwork of the necessarily hot catalytic converters (and primarily the one on the right-hand side). In the 3.6s the slightly

smaller-diameter cats are not exactly miles away from the crossmember, but sufficiently so that neither the paint nor then the zinc coating is burned off, allowing the bare steel to be attacked by a combination of moisture and yet more blistering heat. (And later cars, Robin believes, may have

been fitted with heat-shields.) Either way, he says, you owe it to both your car and to yourself to inspect and action as necessary.

If the damage has reached the genuine hole stage – and to an extent you will have to rely on a combination of sight and touch to assess that, such is the limited space,



This feature is by no means intended as a beginners' guide to structural repairs, more to show what's involved so – unless you already have the necessary skills - you understand why it's better to pay an expert. Either way, the secret of a successful outcome is first the careful removal of all the old, rusty metalwork, either by drilling out spot-welds and then prising the two surfaces apart, or by straightforward cutting. It's obviously vital to have due regard to the shape and dimensions of the repair panel, too, setting out appropriate guide lines. Measure – and mark – twice; cut just the once. Don't be afraid to remove additional components for better access – here, for instance, the engine mounts (far right, middle row) and, far right on this row, the heat-shields

above the silencers

# TECH: HOW TO



especially with the car on the ground then sadly a good repair is going to mean taking out the engine and gearbox. If it is just a case of peeling paint, and surface rust below that, then you might get away with removing part of the exhaust system alone, for access with abrasive discs and a paintbrush, but given the likely difficulty of even that process you are still best advised to bite the bullet and have the power unit right out of the way.

Even that is something you might choose to turn to your advantage, however, using the opportunity to tackle various otherwise awkward-to-impossible jobs. Robin, for instance, replaced not just his engine's auxiliary drive-belt, but also the belt's

tensioner and idler-rollers, plus both the coolant pump and the so-called tandem pump (see the how-to story in the October 2014 issue for more on this subject), and not least one of the coolant hoses and its corroded cast-alloy elbow. Both the clutch slave cylinder and the badly worn clutch operating arm were renewed, too.

Other obvious candidates would be the air/oil separator, the coil packs and the spark plugs, the alternator lead (see the December 2013 edition for a how-to on that), the brake pipe that passes over the engine (arguably a potentially far more serious corrosion issue than the crossmember; see the April 2011 issue) and perhaps the coolant expansion tank, which may be showing signs of

cracking, and which at the very least requires the engine to be lowered away from its mountings to remove and replace. And then, of course, there is the clutch itself, and the giant can of worms that is the crankshaft oil seal and the intermediate-shaft bearing.

Yes, suddenly it is all starting to look rather expensive (no great surprise there, then), and certainly for what began as a simple rust hole. But such can be the world of the neglected late-model Porsche - and better that than the even greater cost of having to deal with the problems that can arise from any of the above items if you choose simply to stick your head in the sand and ignore them. A stitch in time does, indeed, save nine. PW

There is an easy way to make sure that your repair panel has a trimmed edge that exactly matches the cut on the car. With the bottom and outer parts of the boxsection cut away. such that the panel can be slid neatly into position from beneath, fasten it temporarily – but securely - with welding clamps or, as here, with ordinary self-grip wrenches. Draw a horizontal guide line across the inside face of the box-section and then, using as thin a disc as possible, cut through both layers at the same time. Naturally it is absolutely vital that the panel remains undisturbed during this part of the operation

#### TRICKS OF THE TRADE

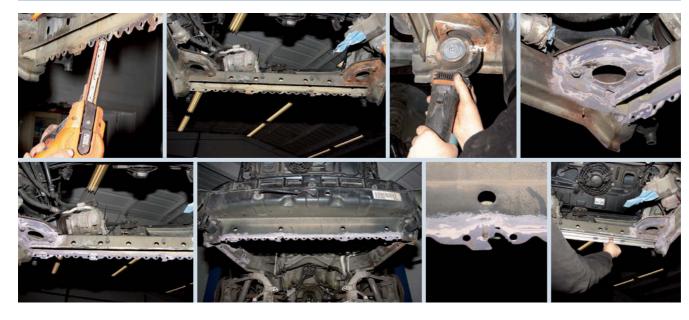
Key to the success of any task such as this is either genuinely knowing what you are doing with an angle-grinder and a MIG-welding set, or else finding someone else who does. Auto Umbau, for instance, although the company is more than happy to sell the repair panels alone for installation by another specialist, or even by competent and confident DIYers.

In truth, the work is pretty straightforward – and that includes removing and refitting

the power unit — but by the same token it would be all too easy to mess it up big-time with just a few elementary errors. To borrow a phrase from the carpentry trade: measure twice (or three or even four times, if in this context you are as cack-handed as the author), and then cut just the once.

What you are aiming to do, as we hope will be obvious from the photos, is first to eradicate all of the actually quite localised rusty metal,

partly by cutting, and where necessary by drilling out the factory spot-welds. This will allow you to clamp the new Auto Umbau panel accurately and firmly into position, and then crucially to make a simultaneous horizontal cut through both car and new panel, such that you are left with two neat and above all perfectly matching edges. Those can then be welded together and the surface ground flat to leave an essentially invisible joint ready for painting.



If that cutting is arguably the trickiest part of the job and naturally we are assuming that you are capable of using a MIG-welder – then the subsequent derusting of the remaining areas is probably the most time-consuming. A belt-type linisher is useful for getting into all the nooks and crannies - be careful not to take off too much good metal, though – but this MBX Metal Blaster (top row, right of middle) is a genuine must-have. It's not exactly cheap -£396 including VAT from Rustbuster at www.rust.co.uk - but its clever use of small metal 'bristles' wrapped around a flexible belt makes it almost as effective as a media-blasting gun. Once clean and bright, any previously corroded areas can be treated with good, old-fashioned Kurust or the like, and perhaps a so-called weld-through primer

Just as when cutting out the rusty metal accuracy is essential in lining up the new trimmed panel prior to welding. Straight bottom edge of the repair panel is set at the same height as the lowest part of the wavy edge on the car. The eroded area to the right of the stud in first photograph in this group is not important; it will be adequately supported by new panel. Use as many self-grip clamps as possible and then one or two more for added security... In order to avoid distortion from heat, tack-weld the butt joint at fairly widely spaced intervals, and then go back and fill in the gaps, as it were. Holes that you drilled in that wavy edge to unpick the original spot-welds now allow you to create what amount to new ones. Smooth all joints and welds as necessary – do that diligently and your finished repair can be as effectively invisible as this (bottom of this page, far right). That was another car repaired by Robin and Terry at Auto Umbau, but offers a perfect illustration of just what is possible



#### THE KNOWLEDGE

THE KNOWLEDGE

Auto Umbau's 997 crossmember repair panel is priced at £187 plus VAT. Robin McKenzie is the first to admit that this sounds expensive for such a relatively small piece of steel, but it requires precise cutting and folding to make, he quite correctly points out, and not least the punching of the original-style drain holes to replicate the factory look. (Robin is always insistent that any such repair to a Porsche should be effectively invisible.)

The material itself – a special ferritic stainless steel, which allows it to be welded to the car's original metalwork – is naturally quite costly, too, and the project has occupied a fair amount of time in terms of design and development; it wasn't simply sketched on the back of an envelope. 'Needless to say, you can expect that figure to come down if the panel

proves to be "popular" and we can have a larger batch made,' says Robin.

The alternative is a complete crossmember from Porsche, at around £360 plus VAT, but fitting that would require either the same complete section to be excised from the vehicle — and that would necessitate the use of a jig, as well as considerable expertise — or just the relevant area cut from it to provide a repair panel much the same as Auto Umbau's. Which would itself be both time-consuming and potentially quite tricky, as well as wasteful.

Fitting costs depend on how bad the damage is. The job can possibly be done with the engine in situ, suggests Robin, but you will have to remove the exhaust system at the very least, and given the likely difficulty of that task it is probably best to have the power unit out — which also has the benefit of allowing you to tackle various other jobs if necessary.

'With the engine already out of the vehicle we allow six hours to do the necessary cutting and welding, as well as cleaning off and derusting the relevant adjacent metalwork.

Say £600 plus VAT to supply and fit – plus the cost of removing and refitting the engine, of course, and any other jobs that the customer wants us to do.

'We also zinc-coat the joint between the new metal and the old, and naturally paint the whole area so that it looks as original as possible. Finally, we inject the crossmember with cavity wax to protect the areas inside it, which by definition we can't reach once the box-section has been closed up.'

Auto Umbau is at Wrest Park, Silsoe, Bedfordshire. For more information on this or any of the company's many other Porsche activities, call 01525 861182, or else go to www.autoumbauporsche.com.

Even if you buy one of those MBX Metal Blasters - and needless to say it is on the author's shopping-list – you are unlikely to splash out on a stud-welder like this (right); even second-hand they cost upwards of £1000. Very handy to know someone who has one, though like Auto Umbau. Remarkably, in one simple action it replaces the short and usually coarsethreaded studs found all over modern cars' body shells for attaching all manner of peripheral components - in this case the rear apron













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# TECH: SPECIALIST

## **AUTOTHORITY**

Based in Christchurch, New Zealand, Autothority builds and preps racing Porsches as well as servicing road cars. We dropped in on a trip down under

Words and photography: Johnny Tipler



roprietor Wayne Graves shows me into his Autothority workshop and my eye alights on the RSR replica he's recently finished building for owner Brent Jones, who's racing it in New Zealand's Classic & Historic Meeting. With an all-steel shell hand-crafted by local metalworker Jason Burke, it's a beautiful copy of RSR-R7, with its distinctive extended ducktail that's known as the 'Mary Stuart' collar, which placed 4th at Le Mans in 1974. Brent has already validated Autothority's capabilities by winning first time out at the recent SKOPE historic meeting at Ruapuna circuit.

Less esoteric, though probably no less proficient on track, I note a 997 Carrera Cup car that's burned a valve and is having a total engine rebuild; then a Roock 3.8 RSR which is in for a re-fit, while a pair of 944s and a 968 comprise a trio of frontengined racecars. A 964 with Ruf wheels is up on a hoist, and there's also an SC, a

964 Turbo, a Cayman and a Boxster in for routine servicing and maintenance.

Wayne set up Autothority in 2000. A born and bred Kiwi, he caught the Porsche bug while living in London in the early '80s, when he was given a ride in a factory lightweight RS Carrera. 'It had been a German rally car, and I was just staggered at the performance of it, and I thought, "I've just got to have one of these," and within six months I'd saved up and bought my first 911, a 1973 2.4E, which I repaired and exported back to New Zealand in 1987. In those days there weren't a lot of Porsches here, but because I'd done a lot of work on my own car and learnt a lot about them in the UK, I realised there was a niche for a Porsche business here. Originally I was in partnership with Glyn Jones from Fast Forward in Auckland, and after 13 or 14 years he retired, so I bought the business and it has continued to grow. We've got the highest ownership of Porsches in the world, per capita, here in New Zealand, though you only see that when we have a club

event. We had the highest market penetration of 996s in the world when our economy was good, and of course there's lots of imports from the UK, being right-hand drive. We hardly have a rust problem here at all on account of the climate. If you look under all these cars they're rust-free, so they're much easier to work on than English cars, where a job takes twice as long because you've got to free-up rusted bolts. We have a lot of left-hand drive cars from the States, and 356s have a really strong following in New Zealand.'

Indeed: there's a right-hand drive 356 1600 Super in the workshop that's approaching the end of a full restoration. 'We don't do the body work ourselves, but we do the final fit and get it all going. Over here is a '66 2.0 right-hand drive, which is another very rare car, and that's coming to a close. The very early sunroofs had a slot for the rainwater either side of the rear window rather than going straight down the gutter tube, and that's unusual. The 964's come down from Auckland, and there are

A workshop full of tasty Porsche treats at Autothority in New Zealand. The 964 racer is a Cup replica and belongs to main man, Wayne Graves, along with the raspberry hued RSR replica on the lift



Right: Wide-body project has some way to go. Far right: Replica RSR-R7 is an example of Autothority's meticulous work. It's already won first time out with owner/driver Brent Jones





cars moving around all the time from North to South Island, and we end up with a lot of very interesting cars. Christchurch is car mad, it's got more car clubs than anywhere else in the world. Until we de-regulated in the '80s all you could buy were Holdens, CKD from Australia, and at the time the country was on its knees because we'd lost all our exports to the UK when you joined the EU, so they floated the NZ dollar and the floodgates opened, and in the long run that's been very good for us.'

The other string to Wayne's bow is building racing cars like Brent's RSR and the two 944s in the workshop. There's a tasty Rothmans liveried IROC-look 3.0 Carrera sitting outside, based on a '73 S shell and harbouring a 3.4-litre flat-six with special factory high-induction manifold. 'I've seen him go round the outside of RSRs and GT3s,' enthuses Wayne. The silver '72 S is Wayne's own car: 'It came in from Switzerland and was owned and raced by the Vice President of the Porsche Cub of

New Zealand. He won hillclimbs in it, and eventually he sold it to me because he knew that I'd look after it. It's not immaculate because it's come off the racetrack, and last season I stopped racing it because it's become too valuable to race, though I will use it for special events. It's running a 2.7 RS engine at the moment,

here is quite an eye-opener: on the hoist is a Rubystone pink RSR replica, while alongside is a 964 Cup Car, a Martini liveried SC, plus a '73 2.4 S road car in what can only be described as Mint Green! Help! I'm swooning... Actually it's probably Leaf Green but it sure looks minty to me. 'It belonged to Aussie racing driver Peter



#### We hardly have a rust problem here at all on account of the climate

"

and all the wings and lids are glassfibre, though I have got all the original steel panels. The original 2.4 engine is currently being refurbished, and we'll go back to steel and it will get a complete re-spray, though that's not a priority.'

We ease into the annexe behind the workshop. The number of 911 race cars in

Fitzgerald,' says Wayne. The take-home car? Very possibly. And what's this, a 356 hardtop? 'Yeah,' says Wayne, 'a T6 Karmann "Notch", very valuable, and they didn't make many right-hand drive ones. It was crashed in Canterbury in 1975 and has never been back on the road since because they didn't have the parts or the inclination,



The Autothority team left to right: Workshop manager, Iain Langham, Boyce Paki, Robyn Rump, George Coates and Wayne Graves

# TECH: SPECIALIST



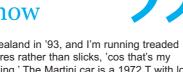
Autothority chief, Wayne Groves, with part of his own Porsche collection. Wayne caught the Porsche bug living in London in the early '80s, after a ride in a factory lightweight RS Carrera

so I've been gathering up bits for it. We're fitting out the interior, and the seats are there ready to go in, just doing all the fiddly stuff at the minute. I've also got a '58 356A in right-hand drive, and it's known as

there's a madness about it."

This season Wayne is racing a replica 964 Carrera Cup Car which looks pretty convincing to me: 'all the graphics are taken from the actual car that came to New

# Even we struggle to keep up with international prices now



Number 7 here because it was the seventh Porsche ever to be registered in New Zealand! I paid NZ\$50k for it about a decade ago, and no one else would put their hand up for it. Mind you, even we struggle to keep up with international prices, and everyone watches the markets and

Zealand in '93, and I'm running treaded tyres rather than slicks, 'cos that's my thing.' The Martini car is a 1972 T with lots of race history in Hong Kong and Macau, though not in this colour scheme: 'it's a twin-spark 2.8 mechanical injection engine, so I'm keen to race this one as well, but in

fact I'm going to work on it over next winter. And the Rubystone RSR rep? 'I built that some years ago; it's a 2.8 RSR replica, and the colour is actually Raspberry, a factory colour that they made just three of in that colour in '73. I wanted to do something that no one else had done, and we either call it the Pink Pig or the Raspberry Rocket, depending on who's asking. It's got the most pukka engine, a 2.8 twin-spark with flat-slide induction, same as Brent's, so it's making about 300bhp, and we do special race studs to hold them together. The heads on this car are genuine RSR and there's nothing else like them. If you look at a 2.7 RS head and compare it to a 2.8 RSR head the valves are much larger and in order to do that they changed the whole cylinder head design. I bought a container load of parts from an independent Porsche





Workshop manager, Iain Langham, with potent 2.8 engine featuring all the right bits including mechanical injection and slide throttle



Racer receives an oil change. It's not all race cars at Autothority, though. Regular road cars and servicing get a look in, too





repairer in Hong Kong and there were these heads, all wrapped up, and I opened it up and thought, these look unusual, and it turned out that they're the real McCoy, which effectively gives this engine a factory-spec top end. I reckon the 2.8 RSR is the ultimate development of the pre-impact bumper 911 because of the lightness and the styling. It's got three louvres down each front wing to let the heat from the brakes out, which is what they did in Australia: it's a kind of Down Under thing.'

But there's another more serious aspect to New Zealand life: 'Did the earth move for you?' is not a question to be taken lightly here. Six years on from the three devastating earthquakes of 2011, areas in the centre of Christchurch are still derelict – including the Victorian gothic Cathedral – while insurance companies and the government prevaricate. Wayne's business also took a knock: 'The ground shakes and the soil turns to mud, and a lot of buildings were buggered because the foundations

moved so much with the liquefaction. It throws you to the ground, cars fell off the lifts, all the Porsche magazines were flung on the floor as a river of mud flowed through the building. But since then it's been gutted, and underneath the floor there's now tons of steel. Fortunately, the building was still basically sound so we patched it up and then dealt with the

so we still had the regular servicing and we still had race cars. In the midst of all this we lost our house as well. They pulled down about 6000 homes and 1000 commercial buildings, and those people were paid out by the insurance companies and the government bought the land that couldn't be rebuilt on.'

Wayne and his staff of four - Boyce Paki,

# 'Did the earth move for you?' is not a question to be taken lightly here

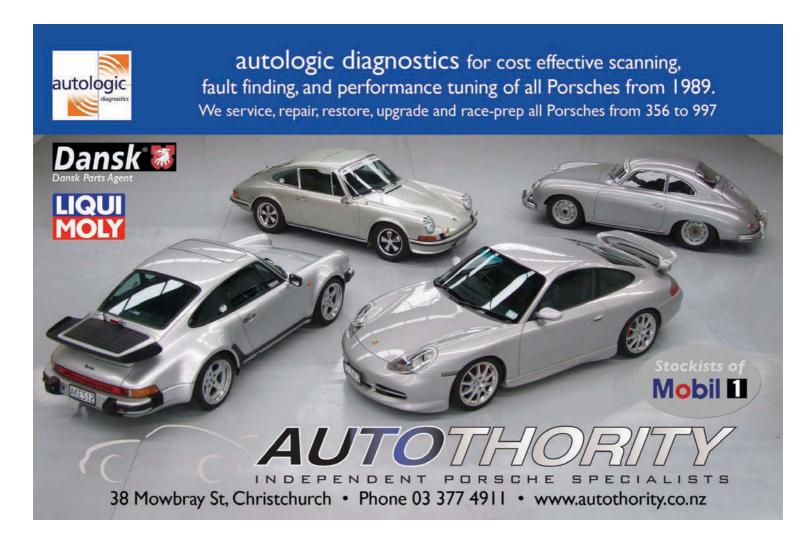
insurance companies, which is worse than dealing with the actual earthquakes. We were lucky we were able to keep operating during this time, and the thing that saved our bacon was that the local race track at Ruapuna wasn't damaged, so a lot of our customers thought, "stuff it, let's go racing,"

George Coates, workshop manager lain Langham and secretary Robyn Rump – calmly take it all in their stride, showcasing Autothority's services and accomplishments in competition cars like the 'Mary Stuart' RSR, which is already a winner. That's Autothority in action! **PW** 



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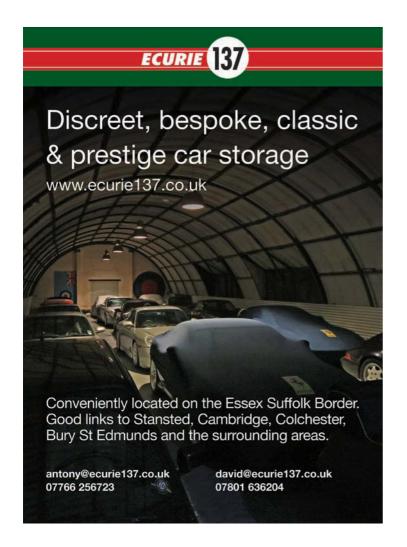
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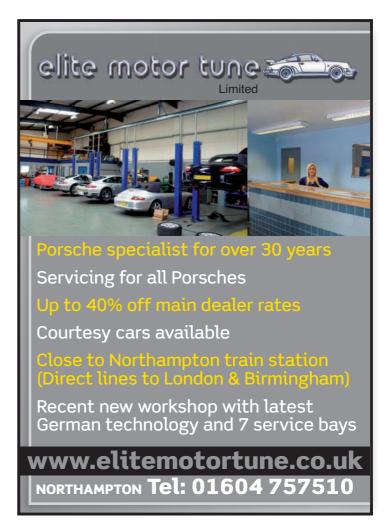


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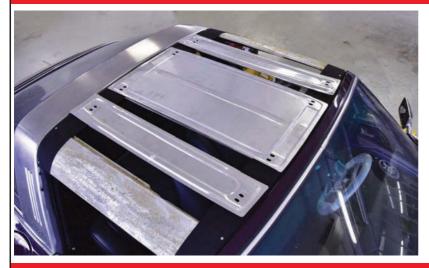
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# TECH: PROJECTS

#### **PROJECTS**

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#### STEVE BENNETT 996 C2/944 LUX





#### KEITH SEUME 912/6 'EL CHUCHO





#### CHRIS HORTON





#### PETER SIMPSON 911 2.7 TARGA





#### BRETT FRASER



BOXSTER 3.2S



#### JOHNNY TIPLER





#### ANTONY FRASER 996 GT3, SC, TRACTOR



#### **GETTING BACK ON TRACK**

MOT time for the Fraser Boxster. It passed (hooray) but the front tyres are worryingly worn on the inner edges. Cue a full geometry set-up and all good now. Just a bump to the rear to sort now. There's always something



#### BRETT FRASER BOXSTER

986 S Occupation: Freelance writer, Dep Ed, *911&PW* Previous Porsches **Current Porsche:** Boxster 900 c Mods/options: Eibach springs and anti-roll bars, **Contact:** brett@brettfraser. This month: MOT time, plus tracking and a bump

Up on the ramp at Cleverley Repaired Cars, with full geometry kit fitted

ne of the many things I enjoy about life in rural Suffolk is that personal service still exists. My local MOT station, for example, posts me a reminder that it's time to test my car. And if I need it done in a bit of a hurry because I've stupidly ignored that reminder, they'll try to squeeze my car in the next day between other jobs, if I leave it with them all day. Then, when the MOT is done, they give me a courtesy call to say the car's ready to collect.

So I was all smiles when my phone's display registered "Devil's Handbasin Garage". 'Hello Mr Fraser, your car's all done and it passed the MOT. However...'

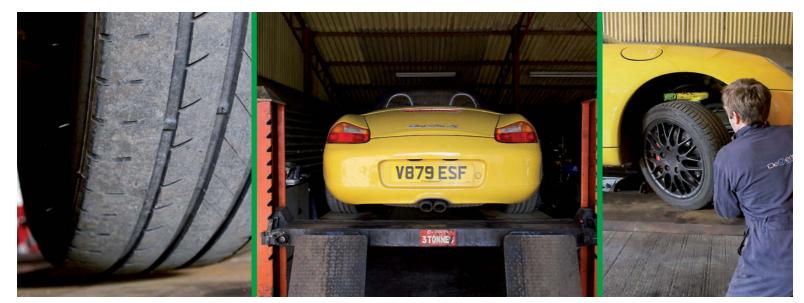
The dreaded however. The main message in the advisories panel was the

bad news that the inside edge of one of the Michelins on the front was worn to the point where it is only just legal. And when I showed up at the garage, it was clear that the other front tyre wasn't much better. Wasn't expecting that, not at all. My regular mechanic, Lowgate Dave, has often expressed his concern about the inner edges of the rear boots because of the camber the wheels adopted when we lowered the suspension. The fronts I'd given no thought to because their camber angle didn't seem to have changed and the Boxster steered well enough, even on track.

The frustrating thing was, those Pilot Sports on the front still had plenty of tread left on them, except for a 5mm or so strip around their inner edges that was almost bereft of pattern. Damn and bother. But no



Main man, Michael Cleverley, gets to grips with Brett's Boxster



point in replacing the tyres until whatever was amiss with the suspension was sorted. Until this point I hadn't even considered looking at the geometry and alignment for the simple reason that after the lower Eibach springs were fitted, the Boxster's handling seemed so much sharper and more responsive.

Ordinarily I'd head for my nearest Porsche specialist to get this sort of work done, but the closest of those that I have experience of, Pie Performance, is about 40 miles away and I was a bit short of time. Fortunately in my other life as editor of 911 & Porsche World's sister magazine, Total MX-5, I've been frequenting the workshops of a local MX-5 specialist, Cleverley Repaired Cars, and Michael who owns the place works on a number of local Porsches and is very experienced at setting up cars for track use. And when I say he's local, he's a mere five miles away.

So off to Cleverley's I headed to have the tracking and geometry checked and adjusted. Michael took the Boxster for a quick run down the road before sticking it in the workshop, just to get a feeling for the way the car drove - far better than Bennett's 996 was the conclusion, though Steve has since had his suspension overhauled... But, like me, Michael thought

the Boxster felt stable and rode pretty well.

Back at Cleverley's farm-based workshop there was momentary concern that the car's low ride height might make it difficult to get onto the ramp and then get the alignment equipment attached. It was tight, but we managed; first task with the car up on the ramp was to check that the wheels were round and true, else they distort the readings.

Meanwhile I had a peek at the condition

acceptable. I think the time is nigh for replacements: in which case, OE-spec or something a little sportier?

Before attending to the rear wheel alignment Michael measured the camber of the back wheels. The nearside was exhibiting 31/4 degrees of negative camber, the offside 23/4 degrees: apparently the offside figure is normally the larger, to compensate for the weight of the driver. Adjusting the lower arm sets the camber

Left: There's not much life left in the front Michelins! Bit of a shame given that they haven't been on the car for very long. Low Boxster just managed to scrape on to the ramp



# 66 Until this point I hadn't even considered looking at the geometry

of the nose end of the chassis, as in recent times on bumpy roads the Boxster has been smashing itself against the ground with considerable force. Sure enough there were scrape marks underneath, some of which were as far back as the front axle line - that surprised me, given how long the Boxster's front overhang is. Michael also pointed out that the front bump-stops were shot to pieces. Although the dampers look fine and the ride quality is generally

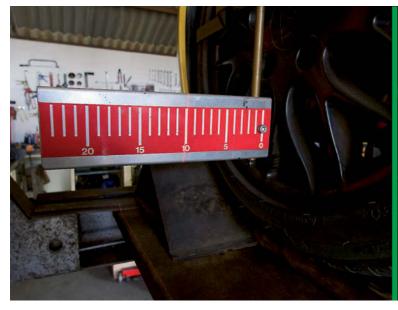
and Michael could only get the nearside wheel to achieve 23/4 degrees of negative camber, but at least both rear wheels were now even. Moving on to the rear wheel tracking, Michael first equalised the thrust line - the angle each wheel points towards or away from an imaginary line running right down the centre-line of the car - of each wheel, before making the correct adjustments. With the thrust lines matching the back wheels were toeing in by 1.5mm

Longacre kit takes the guesswork out of geometry set-up. Brett's Boxster drove surprisingly well considering all its wheels were pointing in different directions or "off the scale," as Cleverley put it!











which was way too much: with proper adjustment they now toe-in by 0.5mm.

Up at the front end there is no camber adjustment, but Michael measured it anyway, just to check - the offside wheel showed 1 degree of negative camber, the nearside slightly more than 1 degree, which is fine, at least in the context of there being no adjustment available. The tracking, on the other hand, was 'off the scale!' according to Michael. The fronts were toeing out by 5mm, a massive amount, and somewhat puzzling given that lowering the suspension usually results in more toe-in. Laughing about how far out of whack the front wheels were, Michael adjusted them to 0.5mm toe-in and then sent me out on a test drive.

And there was me thinking that the Boxster had been driving all right... The steering is now more accurate and responsive, particularly either side of the straight-ahead, where previously it was a little bit dull. Loaded up in a corner, there's less kickback and fidget through the steering wheel, so it feels as though the

wheels and tyres are staying true to your commands and not fighting against them ever-so slightly. With the greater sense of control comes better fluidity when stringing a series of bends together. In short, the car's even more enjoyable and I'm looking forward to getting hold of a pair of new Pilot Sports for the front to explore the Boxster's newfound agility more fully.

#### THINGS THAT GO BUMP

Kerdunk... Well, that's relieved the boredom of being stationary in the traffic on the M42. The guy behind me has rolled into the back of the Boxster at about 3mph, but he's in a bluff, deep-fronted Hyundai SUV and it seems unlikely that there won't be any damage.

The guy is very apologetic and I do feel sorry for him – that kind of sludgy stop-start inch along traffic can really sap your attention and most of us, if we're being honest, have probably almost done what he just did. At first glance it looks as though he may have got lucky, but when I stare a bit

closer I can see a slight indent on the back bumper's upper surface and the paint has cracked around it. Lower down, by the number plate recess, there are a couple of sharper creases in the plastic that while small, aren't going to polish out. Annoying, but nothing more than that.

Before elevenses the following day, the guy's insurance company, Aviva, has been on the phone and left a message. When I call them back, the lady I speak to is friendly and super-efficient and wanting to get the Boxster fixed quickly and with minimum disruption to my good self. The car is to be repaired only with Porsche approved parts, Porsche approved paint, and in a Porsche approved bodyshop. A courtesy car can be supplied, and when I decline I'm told that a low-loader will come up from Essex to collect my car. I'm so accustomed to hearing bad news stories about insurance companies that Aviva's reaction somewhat blows me away. And I simply don't have the heart to explain that my Boxster really isn't worthy of the treatment they have proposed for it. PW

Left: There is no front camber adjustment on the Boxster, but with everything else as it should be, there is 1 deg of negative camber on the offside wheel, and slightly more than 1 deg on the nearside, which is perfectly acceptable

CONTACT Cleverley Repaired Cars Valley Farm Business Unit, Stradbroke, Suffoll IP21 5JL mx5expert.com

Below: Crunch! Not much to see, but slow-speed bump up the rear caused a surprising amount of damage. Aviva Insurance deserve credit for being on the case quickly



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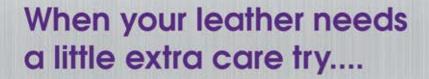
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# TECH: PROJECTS

#### **HIGHS AND LOWS**

Adam Towler's 996 C2 is leaving the 911&PW fleet, but not without a fight, as the alternator calls it a day. Time, then, to recall the highs and lows of Porsche ownership, with which we're all so familiar



#### ADAM TOWLER

996 C2

Occupation: Previous Porsches: 944 S2 Mods/options: Standard – so far **Contact:** adam@adamtowler. This month:
All going well. A
great drive, and
then the alternator
failed. Still, at 15years old, I guess i

Remember it like this. Last appearance in *911&PW* for Adam's 996 C2. A largely positive experience, but tempered by a 'to do' list which isn't getting any shorter...

ontinuing the usual theme of glacial progress with my 996 this month, I have finally chosen a path to sorting out some of the issues with it but little more than that. Naturally, it's had something to say about matters itself, adding in a few new issues for good measure. Moreover, for reasons explained in my Usual Suspects column this month towards the front of the magazine, this is going to be the last time you'll read about the car here - although you will be able to continue reading about it in the 'Fast Fleet' section of the magazine I'm joining

The list of new issues is headed by a suspected alternator failure, and as I type the 996 is stranded on the drive awaiting recovery. It was all going so well, too, relatively speaking. I was returning from Autofarm after a long day spent driving a 924 Carrera GT all the way to Wales and back, and wasn't sure what the 996 would feel like after a day both loving and feeling disappointed by the 924. As it turned out, the 996 didn't let me down: the moment I fired it up I smiled at the smoothness and response of the flat six behind me, and the lightness of the controls didn't make them feel remote, just useable after the heaviness and rather long-winded mechanisms that characterised the 924, particularly the steering. It was a clear, dry

night, and pretty soon the pace had got a bit quicker, and then a bit quicker still. You know how it goes. I'd vaguely muttered something under my breath to myself about not pushing it too hard until the suspension was sorted, but pretty soon we were scything along with me once again reflecting on how quick this thing is, and how much fun it is to drive - even with suspension that's well, well past its best. I just love driving the Carrera; I'm convinced it's every inch a 'proper' 911.

In fact, I was experiencing one of the best drives I've had in the car, right up until the moment there was a 'clunk' from the rear, followed almost immediately by the battery warning light on the dash glowing red in my peripheral vision. It also came up with a warning message, which may have been something along the lines of 'Warning: battery/regeneration fault'. I seem to remember sighing in resignation at the time.

So I limped back the last few miles to home, presumably running on residual battery power, and chuckled to myself that cars always have a habit of injecting a bit of reality into proceedings when you're about to become too enamoured with them. Oh. just when it was all going so well...

Another fault on the list? How about a rather sticky driver's side window, which doesn't want to lower with much enthusiasm to start with. I wonder if that's connected with the increased wind noise that seems to be coming from that area -I didn't notice that when I first got the car, but it's definitely there now. Overall, the fact that it's service time seems all rather timely, but the amount of work required I must admit has me quaking in my boots. Given the 996 also needs attention to the suspension and a few other areas, as documented in these reports recently, I'm resigned to not seeing it for quite a while, followed by the appearance of a rather large bill.

As to those renovations, I had a last minute U-turn and decided against the 'keep it standard' route. I had thought this would be the way to go, with one eye on future values and such like. However, I'm afraid to say the lure of modification and making things 'better' has taken hold, and it will become a project car after all. The way I see it, everything that will be done to the car - even mechanical changes - are all reversible in future, so that if values of these cars do rise significantly, there's always the possibility to change the car back to a standard example. I shall keep all the parts that come off the car - both those in great condition, like the seats, and also the bits that are knackered, like the dampers.

My main motivation for going this route is that I want the 996 to thrill that little bit more





when I 'just go for a drive'. As a 'daily' I suppose I wouldn't be so bothered, but then I'm not going to be using it in that capacity. I've had to for the past few months, not all the time but on some occasions, and I've hated doing short journeys in it that haven't let the engine warm up properly, or leaving it in places I rather wouldn't, and not to mention piling on miles to it while shunting around the M25 or on other similarly dreary roads. I cringe at the thought of the salt caking to its nether regions.

So with that change of use comes a change of perspective. If I want to tighten up the handling, then there's no way I can stick with the standard seats, for example. They're in such nice condition that I've always shied away from taking them out, but as they're the standard seats without any shoulder bolsters there's very little lateral grip during cornering. I also sit too high in the car, and that's never any good for driving quickly. Those aren't issues in the 997, it must be said, but then they're a lot more money to buy in the first place. I foresee a potential problem being the steering wheel: I might be able to get a seat that mounts lower in the car, but I really need a bigger dish on the wheel to bring it nearer to me. Do I fit an aftermarket one and get rid of the airbag? I know that can be very effective from having driven 996s

with that mod made, but I don't feel like doing that to mine so we'll have to see. I do intend to get rid of the lower centre console, GT3 style, so that my knee doesn't keep banging against it. It's weird how that section bulges out into the leg area.

Suspension wise it'll probably be something adjustable, and expensive, but my one overriding objective will be to not make it ride too harshly. I want it to retain the relaxed gait it has on long journeys, and to work well on typical bumpy British B roads as well as on circuits. Having said all of that, I will be getting a limited slip differential in there – it just has to be done! I've thought about getting a GT3 aero kit fitted, apart from anything because a slight rub against a kerb recently for the front end means what would have been a nice thing to do to get rid of the stone chips - a front PU re-spray – has now become pretty much a necessity. However, I like the idea of some really sorted components hiding beneath what still looks like a fairly standard 911, and I remain a fan of the gen 2 Carrera's styling.

I'm so glad I made the leap to Porsche ownership. If nothing else, because however in tune I thought I was with the Porsche-owning world before through simple natural enthusiasm, there really isn't any substitute for actually being an owner.

Only when you've tasted the highs and lows of ownership can you really understand why we put ourselves through it. It's another reason for not worrying about making some changes: I don't intend to sell the car anytime soon. I can't envisage myself affording to change up to a GT3, not at my stage in life, and air-cooled cars are all so expensive now that that ship seems to have steamed well over the horizon. And in any case, the really nice thing is that I still get a real buzz just from seeing the car. I can never walk past it without giving it an affectionate pat - crazy, I know - or doing a double-take. That's what owning a Porsche should be all about.

I've learnt a lot, too. Plenty about my approach to running a car, and where I should probably learn to relax a little and not keep searching for perfection. They're old cars, they're never going to be as perfect as a new one, but I doubt I'll ever be able to be any different. Whether I'll manage to get 'OCL' to the point I'm searching for remains to be seen, but I'm determined to remember to enjoy the journey as much as the result at the end of the line. Most of all I'm amazed at the feel-good power, still, of owning a 911. There really is something special about it, which I guess we all enjoy, whatever model or generation we have. It makes us part of a huge, global club. Enjoy your cars. PW

Above left: The face of 996 ownership! Above: Great cars are built for great drives. Immediately after buying his 996, Towler took it off to the west coast of Scotland



OK, so there's been a fair amount of time in the workshop, but not for anything major. Suspension is top of the list for a refurb, but which way to go? Modified, of course!

# TECH: PROJECTS

## GOODBYE TO THE GT<sub>3</sub>

Antony Fraser bids a fond farewell to his 996 GT3 after seven high-speed years. No pampered garage queen, this, and the new owner promises to give it plenty of use, too





ANTONY FRASER 911SC, JUNIOR

TRACTOR

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photographer
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This month:
Bye, bye GT3. You
were great...

The Fraser GT3 joins a new fleet of Porsches, thanks to new owner, Metin, who already has a 964 RS replica and a 996 C4S Cabriolet. He's stuck some rear seats in the GT3, so he can take his kids to school

e last saw the GT3 hanging by its fingernails from a cliff. It had been to the brink of being sold on eBay, but stalled at the last minute, courtesy of a disappearing winning bidder. (May the fleas of a thousand camels infest his armpits). But over the hill comes the cavalry, in the form of a very nice fellow called Metin, who had been out-bid by The Incredible Disappearing Man. Metin rose to the challenge, and proved himself to be the better man. A deal was struck over the phone and within a couple of hours the car was in his hands, joining a 996 C4S and a 964 RS rep. What is more, our man was very keen to get his mitts on a pair of rear seats I had kicking around, so he could take his kids to school in it. While I miss the car tremendously, I am genuinely comforted by the thought that it will be used regularly, for Real-World tasks. Thank goodness! I wish

hope he enjoys it as much as I have.

Cue the wobbly screen for a look back through the mists of time at our ownership of the car. Bought in a hurry in April 2010, it was the first car we looked at. Editor Bennett and I acted against every maxim of used car buying and just went for it, because it was the right car at the right money – why look elsewhere? We specifically avoided a Clubsport model, as it would have left less scope for the mods we had in mind.

And mods are what it got! Over our time with the car, we threw in more power and better handling – and a touch more drama. The extra horses arrived courtesy of a Cargraphic stainless exhaust and DMS Automotive remap, turning a slightly underwhelming 358bhp into a whopping 403, with huge gains in the mid-range. And what a difference it made on the road. It turned a rather peaky car into a lovely torquey mile-muncher. The exhaust, while a little rude at idle, emitted a sonorous wail under power, of which I never tired.

Although residents along my regular routes might not necessarily agree...

The handling department had no reason to feel neglected, either. We replaced and upgraded virtually everything down there. Eibach springs over Bilstein dampers joined rose-jointed Rennline control arms and topmounts, all put together and set up by our friends at RPM Technik. The end result was a beautifully balanced machine, which would eat up a winding road like it owned it.

Adventures there were, too, with forays to the Continent, high-speed autobahn dashes (170mph, since you ask – traffic...), camping trips with a teepee on the roof, and not forgetting the occasional tyre-shredding trackday.

But I think what will really live on in my mind is the feeling that our GT3 represented the last of the truly analogue Porsches. No traction control, no switchable exhaust, no Sport button – just a proper, old-school sports car. They really don't make 'em like that any more.

#### GO NOW!

Amazing how a couple of weeks in hospital concentrates the mind: the upshot is that I've decided that Pig Energy (P16 NRJ) 996 C2 has to go; a decision not uninfluenced by the need for a new bathroom and kitchen extension at my new Cromer abode

him the very best of luck with the car, and I

So the car's now fully sorted, thanks to a month at Autofarm, and now boasts their IMS roller-bearing, new coffin arms, clutch, recent front discs, ECU re-map, dual-pipe air intake, H&R springs, brand new PPE- made Cargraphic silencers, plus genuine Ruf ducktail engine lid, along with spare GT3 and original lids, plus original fivespoke alloys shod with hardly used winter Nokians. Very well cared for. Several features in 911&PW "Our Cars" support its provenance; all bills, books and keys, 66K miles. £22,500.

I'll consider taking a similarly low-miles 986 Boxster S in part exchange.

Contact Johnny Tipler on 07762374758 or email: johnny@johnnytipler.co.uk







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#### SILENT WITNESS

I don't know who carried out the after-market IMS bearing conversion on this 996 engine (below), and I presume fitted a new crankshaft RMS, or rear main (oil) seal. Suffice it to say, however, that their efforts were not entirely helpful.

They could, perhaps, be forgiven the broken-off fragment of crankcase, wherein locates one of the clutch-housing screws. All of the latter can be famously difficult to undo thanks to our old enemy. galvanic corrosion, although here the problem could well have been exacerbated by someone simply 'gunning' off the screws, rather than undoing them by hand, after first applying some localised heat. And they really ought to have bought a new screw for one of the lower fixings, instead of using again the chewed-up item shown in one of the accompanying photos.

Altogether harder to excuse is the way the RMS had been installed. Use the Porsche tool made for the job (costly, yes, but no more so in terms of its practical value than any other such specialist item), and the seal has no choice but to

enter its rebate dead-straight, and then to sit at the correct height. Do it the old-fashioned way, with a hammer and a piece of wood – or worse – and, well, judge for yourself. (Although it's difficult to see how even that low-tech method could have pushed part of the seal *lower* than the surrounding crankcase.)

Ironically, though, much if not all of the oil that prompted this most recent foray inside the power unit appeared to be emanating from the aforementioned IMS bearing or to be more accurate from its outer mounting flange. It wasn't immediately obvious why, but once the mixture of lubricant and clutch dust had been rinsed off we could see the tell-tale slivers of brown material that showed where the perimeter seal had been shaved away by the sharp edge on the crankcase as the flange was pushed into place.

Neither did there appear to be much in the way of an oil seal around the central spigot via which the flange and the bearing are secured to each other. Look carefully at the relevant photo (blown up as large as we have space for), and you can just about see what looks like a tiny groove for an internal 'O'-ring, but I would have thought that needed to be assisted by some sort of (copper?) washer between the back of the multi-point nut and the flange — and there was no sign of one of those. Maybe our mechanic had forgotten to fit either, or both.

(In truth, of course, this area of the engine was intended by Porsche to run 'dry', that is to say with no significant amount of liquid oil, as such, inside the intermediate shaft. In practice, however, and for reasons that are not entirely clear, there is usually a greater or lesser quantity of the stuff sloshing around, and this is believed by some to be one of the reasons why the standard IMS bearings fail prematurely, after the grease with which they are packed by the manufacturer is eventually washed away, and then the oil supply - intermittent, at best, and invariably less than clean - dries up.)

So, where to from here? The good news is that the bearing itself, obviously a

quality job, feels reassuringly smooth and free-running. (It remains within the end of the intermediate shaft at the time of writing, because to remove it would mean pulling it out, with another special tool, via the spigot and the inner track, and after that it naturally ought not to be used again.) There is a small but discernible axial movement in it if you wiggle the temporarily free end of the spigot up and down, but personally I would not be too concerned about that; it will surely be located suitably rigidly again once the outer flange has been refitted.

The specialist now working on the car is inclined simply to return the engine to the standard Porsche-style IMS set-up, with a roughly £20 (or less) proprietary bearing sourced from an industrial supplier - and I can see the logic of such an approach. But that, of course, would require not only the originalstyle Porsche outer flange, but also the genuine Porsche spigot. And you can't buy the latter separately, without the entire intermediate shaft. That is itself expensive - currently around £800, apparently

and would also require the no less costly stripping and rebuilding of the engine in order to install it. (Or, of course, you simply discard the new shaft. Either way, financially it's going to hurt.)

No surprise, then, that the job has for the time being come to a halt, while the car's owner decides how he wishes to proceed. Who could blame him, though, if he asks for everything to be put back together as it was with the obvious exception of the IMS bearing flange's perimeter seal and the rear main seal; leaving those as they were really would be false economy - and then either lives in the hope that the oil leak has been stemmed, or else simply moves the car on so that it becomes the classic SEP, or 'someone else's problem'.

I fully appreciate the potential benefits of after-market IMS bearings. Like any such upgrade, though (or even any standard component, for that matter), they do need to be installed correctly. And sadly there is no end to some people's talent for getting that wrong.



Leaking RMS – despite the fact that it wasn't sitting correctly within rebate in crankcase – soon began to look more like leaking IMS bearing flange, evidenced by 'shaved' seal. Bearing itself – an after-market item – appeared fine, but removing it would ideally preclude using it again, and cheaper OE-style bearing would need a genuine Porsche central spigot, which isn't available without the expensive-to-buy (circa £800) and certainly expensive-to-fit genuine Porsche intermediate shaft. Decisions, decisions...



### THE ADJUSTMENT BUREAU

The defining feature of any so-called MFI 911, built from 1969 through to 1977 is, of course, the entirely mechanical fuel injection from which derives that now well-known abbreviation

Designed and built by Bosch, and using principles dating back to the Second World War, it has at its heart an engine-driven fuel pump, capable of delivering precisely metered quantities of petrol to each cylinder's individual injector at the right moment, and all the time fully cognisant of essential parameters such as throttle position, load and ambient temperature - and even altitude. It was a broadly similar device that made German fighter aircraft like the Messerschmitt Me109 such a fearsome adversary for the Supermarine Spitfire and Hawker Hurricane.

In modern DFI engines – and even the classic Motronic systems that still control so many Porsche power units from the 1980s onwards – all that behind-the-scenes work is handled by solid-state microprocessors, but back in the MFI days it was rather different. The pump's central shaft, driven by a short

toothed rubber belt from the left-hand camshaft, operates six 'plungers' – each one essentially a tiny piston inside an equally tiny cylinder – to generate and then distribute the required fuel pressure.

At the far end of the shaft is a pair of speed-sensing bobweights and, crucially, the so-called space cam upon which they act — essentially a 3D map, in solid metal, of the engine's fuelling requirements under a whole host of different circumstances. (Examine one of these space cams in detail and it will appear badly worn, with seemingly random ridges and bumps all over it, but in fact it is those that contain and transmit the vital information.)

As a result an MFI pump is a genuinely remarkable little machine – you might even say an engineering masterpiece, or a work of art – and unsurprisingly lies at the very heart of not only the dramatic increase in power and torque that made the 2.4-litre 911S and later the 911 Carrera 2.7 RS such formidable cars back in the 1970s, but also continues to enhance their stellar reputation to this day.

The pump requires, as you

might imagine, not only due care and attention – clean, moisture-free fuel, for a start – but also careful handling (pick it up, once separated from the engine, by that tempting-looking canister on the top of the body, and you will most likely destroy the delicate pressure-sensing device inside), and not least extremely precise and thus knowledgeable adjustment.

There are a number of specialists, primarily in Germany but also here in the UK, who claim to be able to set up these systems, but I would be surprised if any other has the facilities offered by Neil Bainbridge at BS Motorsport in Westcott, Buckinghamshire (01296 658422; bsmotorsport.co.uk). Or the expertise and not least the extraordinary patience, for that matter, to work at it until everything is as it should be. As anyone who has ever tried adjusting multiple carbs will surely know, tweaking one function often has unintended and unwanted consequences as far as others are concerned.

For some years Neil had a then state-of-the-art Bosch machine to drive and calibrate the increasing number of MFI pumps he was working on, as an adjunct to his renowned engine-building activities, but a couple of months ago that was replaced in his extensive workshop by a KMA 802 – bigger and more powerful, even more sophisticated and easy to use (well, easy if you know what you are doing, of course), and itself likely to be one of the last of its type the company will ever produce.

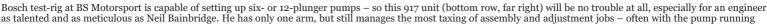
Neil also has a wide array of highly specialised tools and jigs for stripping, overhauling and rebuilding the pumps, some generously donated by a former Bosch technician, others designed and painstakingly made by Neil himself – and in certain cases allowing him to perform certain complex tasks with just his one arm.

I tell you this because over the Easter weekend I spent a fascinating few hours watching and photographing Neil set up a newly rebuilt six-plunger pump from an RS, and since the resulting images are (I think!) quite appealing, I wanted to share them. The session also brought the even more tantalising prospect of soon seeing a 12-plunger unit from none other than a 917 race car undergoing the same treatment (you don't get asked to work on one of those, itself worth a small fortune, without a reputation built on quantifiable results), and that is something worth publicising for maximum benefit to all concerned – not least you, our many readers.

It's all about as far removed from a DIY how-to story as you can get, of course, but I doubt there is a Porsche enthusiast anywhere – and certainly not one who owns an MFI car – who wouldn't want to see what makes his or her engine tick so effectively, even after more than 40 years.

It's hard to imagine a DFI engine (see pages 72–76 in this issue) arousing such enthusiasm in 2057. Or even in 2027. Anyway, watch this space. And if in the meantime your MFI pump needs attention – and I doubt there is any such unit, anywhere, that could not be made to perform better than it already does – well, you know who to call. Oh, and I don't mean Ghostbusters... **PW** 

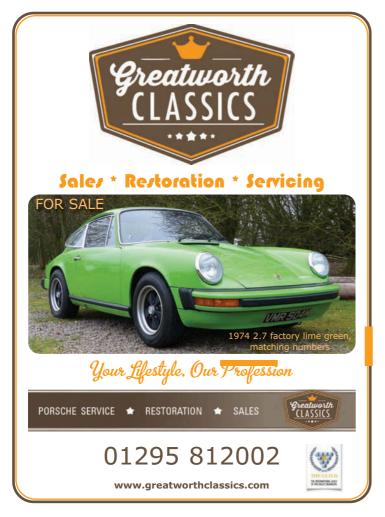










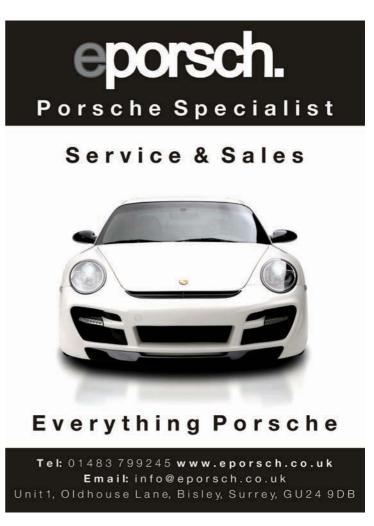










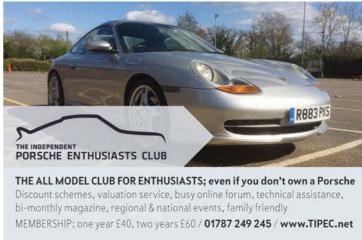
















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### **BUYERS' GUIDE: PORSCHE 997 GEN 2**

# 997 EVOLUTION

The 997 model 911 drew heavily from the previous 996, which itself was the first of the truly modern 911s. In its gen 2 form, the 997 was heavily updated with new engines, featuring direct fuel injection, and PDK transmission, which was a big step-up from the outgoing Tiptronic. Fancy one? Here's what to look out for

he 996-model of 1997 set the template for the present day 911, and the succeeding 997 launched in mid-2004 polished and honed the idea to what at the time looked like perfection. But just four years later a mid-term revamp that left the rear-engined coupe barely changed visually delivered engineering updates that would not only significantly modernise the Porsche, but change its perception as a used car purchase.

The so-called "gen 2" 911 was the first model to receive Porsche's all new, seven-speed double-clutch gearbox, the Doppelkupplungsgetriebe (PDK), which, with its adaptive programmes and manual sequential shifting option, for the first time made an automatic 911 a true enthusiast's car. Of equal importance was the all-new Direct Fuel Injection engine family which did not just boast sharply improved fuel economy but closed the uncomfortable chapter of premature cylinder bore wear – at least we think

it did. Furthermore, the new design eliminated the possibility of IMS (Intermediate Shaft) bearing failure, a blight on all Porsche's past water-cooled flat-sixes

So, did this introduction mark the point where the Porsche 911 become a simple to own car, one that can now be purchased in the same care-free way you might, for example, buy a seven-year-old BMW or Mercedes? Here we find out, concentrating on the various Carrera models, leaving aside the GT and Turbo cars, which are in a different price league.

### **DESIGN, ENGINEERING**

Porsche announced the revised 911s in June 2008, rather than wait for the new model year beginning in September, the cars going on sale in Europe in July. The direct-injection engines (whose technology had been introduced on the revised Cayenne V8 engines a year previously) lifted power on the Carrera's 3.6-litre

engine six per cent to 345bhp, at a slightly lower than before 6500rpm, and torque five per cent to 287lb ft at a marginally peakier 4400rpm; the Carrera S 3.8-litre unit gave 385bhp also at 6500rpm (up nine per cent) and 310lb ft again at 4400rpm (five per cent). If these were hardly significant output increases, owners in the UK would notice the reduction in CO2 of up to 15 per cent, dropping the Porsches down to a lower road tax band.

The introduction of the PDK gearbox – 10kg lighter than the old Tiptronic S unit despite its two extra gears – marginalised the 911's six-speed manual gearbox, overnight becoming practically the default choice. It marked the point where automatic Porsches were faster than the manual versions, for example the Carrera S PDK hitting 62mph in 4.5sec compared to the manual's 4.7 and 125mph in 14.8sec against 15.2.

Uprated brakes accompanied the new powertrain, but on the outside the car was unchanged apart from restyled 18- and 19-

As is the Porsche way, design tweaks over the gen 1 997 were minimal, concentrating on the front and rear aprons. There was more under the skin, though







Interior took another step forward, with a new, improved infotainment system, with touch screen and iPod connectivity. PDK 'box could be controlled via transmission tunnel mounted stick or steering wheel mounted buttons (right), which, after much criticism, were augmented with the option of paddles

inch wheels, LED lights and larger door mirrors. Inside, the Porsche Communication Management featured a larger, 6.5-inch touchscreen. You paid £63,070 for the Carrera, £7290 more for the Carrera S and a further £2338 for the PDK gearbox.

### **EVOLUTION**

Almost immediately the 44mm wider bodied Carrera 4s were added to the range, boasting a new, electronically regulated four-wheel drive system, the 4 and 4S with the same output as the 2WD cars, while a month after that, in late July, the 911 Targa with its full length electrically operated glass roof was launched, offered in all-wheel drive 4 and 4S forms.

In early September 2009 Porsche unveiled what was arguably the first of the limited runs of models it knew would go straight into investors' collections: the 911 Sport Classic based on the manual Carrera S. Built in a 250 batch and offered in Sport Classic Grey, its stubby "ducktail" rear wing saluted the 1973 911 Carrera RS 2.7, and the £140,049 price included a power increase to 402bhp (torque was unchanged); these cars now change hands for £300,000 to £400,000.

That engine spec was seen in the Carrera GTS, launched a fortnight later and

using the 4/4S wide body. Then just days later the 911 Speedster followed, with the same engine, shortened windscreen and "double bubble" hard cover for the hood.

There had been grumbling about the switches on the steering wheel which operated the PDK gearbox in manual mode, because both switches pushed forward to change up and pulled back for downshifts, which many found unintuitive. Hence more normal paddleshift levers that had been first seen on the gen 2 911 Turbo were offered as an option on the Carrera as from November 2009. In January 2011, with the end of the 997 in sight, the Black Edition was released in Coupe and Cabriolet form, special trim and equipment adorning the 1911 cars built

### **DRIVING THE GEN 2 997**

The PDK is a multi-mode gearbox that really does do what it says on the tin. Keep it in automatic and the 911 is as well behaved and easy to drive as a modern executive car. But use the Sport Plus setting and you have a clutchless car with real attitude: the box holds on to its gears far longer, and in this mode the chassis hardens up and you have the perfect trackday weapon. You would really have to be a manual gearbox diehard to shun

the PDK 911.

Otherwise the gen 2 is the 997 we know and love: an engine that begs to rev, beautifully balanced handling, and refinement and comfort close to prestige car levels, the only major downside being the tyre noise that can make long journeys a bit wearing. The upgraded infotainment of the gen 2 is a worthwhile advance, allowing the use of Bluetooth hands-free phone, iPods and the like.

### WHAT YOU'LL PAY

As ever, there are two price levels: the lesser condition gen 2 cars offered in the classifieds, and the well prepared examples laid out by Porsche Centres and independent Porsche specialists. The baseline for the first category is around £30,000, but if you want the reassurance of a reputable dealer, add around £10,000.

'We would have them in the late thirty thousands, which gets a very solid car,' says Jason Shepherd at Porsche specialist Paragon in Five Ashes in Sussex. 'Prices go up to just over £50,000, the price of an early 991 – and some people definitely go for a 997 rather than a 991.' However, the more specialist GTS is still over £70,000.

All gen 2 cars were well equipped as standard, so the "orphan" 997 with its

### 997 GEN 2 TIMELINE Early June 2008

Gen 2 cars announced, with DFI engines and PDK option

Late June 2008
Four-wheel drive
Carrera 4 and Carrera
4S added to range

**Late July 2008** 911 Targa with electric glass roof revealed

September 2009 Limited run Sport Classic, GTS and Speedster announced

**January 2011** Special equipment Black Edition on sale

May 2011 GTS offered with four-wheel drive

### SPECIFICATIONS 997-model en 2 911 Carrera

Engine (cyl/cc)
Power (bhp/rpm)
Torque (lb ft/rpm)
0-62mph (man/auto, sec)
0-125mph (man/auto, sec)
Max mph (man/auto)
Average mpg
CO2 (g/km)
Weight (kg)
Wheels (front, rear)
Tyres (front, rear)
All figures from Porsche

911 Carrera Flat 6/3614 345/650 287/400 4.9/4.7 18.3/20.4 179/178 27.4/28.8 242/230 1320/1365 8Jx18-inch, 10.5Jx18-inch 235/40 ZR18, 265/40 ZR18 911 Carrera S Flat 6/3800 385/6500 310/4400 4-7/4-5 17-5/20.4 187/186 26.7/27.7 250/240 1370/1425 8Jx19-inch, 11Jx19-inch 235/35 ZR19, 295/30 ZR19 911 Carrera GTS Flat 6/3800 402/7300 310/4200 4.4/4.2 18.3/21.4 190/189 26.7/27.7 250/240 1495/1550 8Jx19-inch, 11Jx19-inch 235/35 ZR19, 305/30 ZR19

Maintenance costs, 997 gen 2 911 (including VAT)
Replace front discs and pads Carrera/4 £765 Carrera S/4S £830
Fit two new air conditioning condensers £880
Fit front road springs (pair, including geometry) £476
Four premium brand tyres (Pirelli P Zero N2 235/35 ZR19, 295/30 ZR19) £915
Servicing and repair costs supplied by JZM

### WHAT YOU'LL PAY

£30,000-£35,000 2008/2009 gen 2 Carrera and Carrera S, usually private sale

£35,000-£40,000 Starting price at Porsche specialists £40,000-£50,000 2010 cars at specialists and Porsche Centres

£50,000-£60,000 Very last, 2011 997s with low mileage

unwanted spec doesn't really exist, but there are some options that make for easier resale, including 19-inch wheels on the Carrera (they were standard on the S) and sat nav. Colour matters, but preferences vary according to where you live, Jason reveals. 'In the south east of England colour was always important, with blacks, greys and silvers preferred. But in the north, say Manchester, Guards Red is more acceptable, although these cars must have a dark interior.'

Although the majority of gen 2s are PDK, that doesn't mean manual cars are unwanted even if they're worth slightly less. 'There's a growing interest in manual cars and I think that will grow, some of it is nostalgia,' comments Jason.

### WHAT TO LOOK FOR **ENGINE AND** TRANSMISSION

The much discussed and dreaded cylinder bore wear problem that had affected Porsche's previous water-cooled flat-sixes does appear to have been passed on to the

new DFI engine - but is only seen on early gen 2 cars, insists Steve McHale, director at Hertfordshire Porsche specialist JZM. 'This was resolved by Porsche changing the piston rings and also the way the cylinder bores were honed,' he explains. The buyer's check for this is simple: look at the tailpipes for oil burning smoke.

There are various other engine maladies. 'Early cars had no catalyst heat shields and the cats, which need to be kept at an optimum temperature of 430C to convert exhaust gases, would cool down in wet weather and thus not operate correctly,' Steve explains. This would be an MOT failure.

He also feels that these cars need to be properly driven: 'They don't do well in London traffic or for short journey work especially if they're PDK, because left in drive they change gear around 2000rpm, resulting in valve carbon build up and injector clogging. And valve lift solenoids are still failing as they did on the gen 1 and are still doing on 991s! This can cause a total, partial or intermittent misfire on multiple cylinders, and even a total misfire

### WHAT THE PRESS SAID

This new power unit feels even gruntier at the bottom end and sharper at the top. Whatever gear you've hooked, and no matter where you are in the rev range, the DFI engine always has something to add. It's the best flat-six yet, tempered only by a tappet ticking noise at idle, a characteristic of the high pressure fuel injectors.

### 911 & Porsche World, "Revised 997 Launch", August 2008

'The car we tested was fitted with Porsche's new seven-speed twin clutch PDK transmission. Apart from the counter-intuitive arrangement of its steering wheel shift buttons, this is a mightily effective gearbox that also makes the car faster and this Carrera is staggeringly quick: its 4.4sec o-6omph time matches that of the Ferrari F430. Autocar Road Test Yearbook, 17/24th December 2008

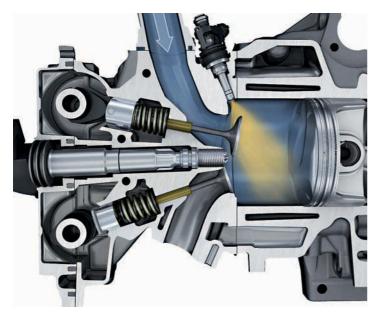
on one bank of the engine.' Early cars suffered problems with the PDK transmission, resulting in a jerky gear shift.

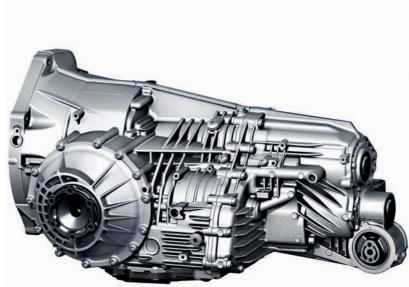
### **SUSPENSION AND STEERING**

The suspension gives little trouble other than road springs snapping occasionally at the bottom end, which Steve says 'seems to be a general problem with water-cooled Porsches.' Unless you hear the twanging noise when the spring actually breaks, it

The 997 gen 2 range as of its 2007 launch. The glass roofed Targa would follow on. Note minor changes to rear lights







Above: Direct fuel injection sees the injectors firing straight into the combustion chamber for improved emissions, economy and power. Right: PDK gearbox features seven speeds and transformed the auto version of the 997 over the outgoing Tiptronic

will probably not be obvious that it has happened, thus it is something often revealed only at the MOT test.

Early gen 2 cars may have worn dampers by now, and the steering geometry may be out of true, causing uneven tyre wear and/or the car feeling unstable at speed. Front steering arm outer ball joints wear.

### **BRAKES**

Undertake the usual check on the brake discs, looking for a lip on the outer edge that indicates severe wear, but otherwise the system should be trouble-free. Some 997s will have the optional Porsche Ceramic Composite Brakes (PCCB), indicated by yellow calipers, and whose advantage is reduced unsprung weight rather than extra braking power. 'The PCCB ceramic discs are still as fragile as ever, but as these cars rarely venture on track and don't get too hot they last well,' Steve comments. Each ceramic disc costs around £4200, with a set of pads £450.

Braking can be affected by an engine bay problem. 'The engine-driven tandem vacuum pump mounted on the right-hand cylinder bank corrodes due to close proximity with the exhaust, and if it gets a hole in the casing you lose vacuum, and the brakes won't work very well.'

### **ELECTRICS**

Although the 997 brought with it added electronic functions, Steve has not noticed any major problems, and reports that any faults have tended to be quite minor ones. 'We've had a few problem with the small, 0.3mm wires used in the wiring looms going "open circuit", in other words wires becoming disconnected.'

He adds: 'The main battery positive cable where it joins to the power distributor

corrodes, causing total electrical power failure, but a modified part is available from Porsche.'

# BODYWORK AND INTERIOR

The bodywork is galvanised and well protected with PVC coating underneath, and the doors and bonnet are alloy, so even early gen 2s ought to be totally free of rust. If there is corrosion, it is inevitably a sign of an accident repair.

The interior is smart and durable, although test all the powered functions to ensure they work properly. If the air conditioning does not give cold air, the system may simply need a re-gas, but it is more likely that one or both of the condensers are leaking; these are mounted at the front of the car on either side, and pick up road salt, leaves and damp, which rots them.

If a PDK transmission 997 has paddle shifts instead of steering-wheel buttons, it may have the paddle shift wheel which was and still is a retro-fit dealer accessory costing around £900 fitted. However, in gaining the paddle shifts you lose the multifunction capability of the original wheel. As an alternative, Steve recommends the paddle shift kit from Porsche tuner TechArt.

### **VERDICT**

For those who consider the present shape 991 too much of a computer on wheels, the gen 2 997 is the finest 911 you can buy. Most of the issues on the earlier 997s were eliminated, and the introduction of the PDK gearbox finally made sense of the 911 in automatic form. At over £30,000 for even the cheapest ones, these are still an expensive Porsche, but they are a joy to drive, sensible to own, and are likely to hold their value well, being seen as the last of the much loved, "old" 911s. **PW** 

### SPOTTED FOR SALE

Private sale

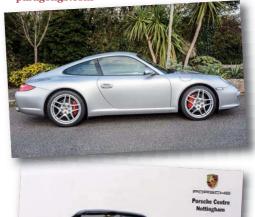
2009/59 911 Carrera, PDK, Silver, black leather, 40,000 miles £34,999, Hertfordshire

### **Porsche Centre**

2010/10 911 Carrera S, PDK, black, black leather, 43,100 miles, £46,308 Porsche Centre Nottingham porschenottingham.co.uk

### Porsche specialist

2009/59 Carrera S, PDK black, black leather, 64,492 miles, £39,995 paragongb.com





### USEFUL CONTACTS JZM Porsche A long established

Hertfordshire-based specialist with a deep engineering knowledge of modern 911s and their performance tuning; our technical consultant for this buyers' guide.

jzmporsche.com

### **BUYERS' CHECKLIST**

On early cars, smoking could mean a cylinder bore problem Early cars' cats ran too cool, thus not operating correctly Valve lift solenoids can fail, causing misfires Early PDK gearboxes had problems, so ensure change is smooth Ensure front and rear road springs are not broken A feeling of instability at speed may be due to incorrect steering geometry

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### 911 (996) Turbo Tiptronic 2002

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### 911 Turbo

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£39,000 P0617/008

### 911 Coupe

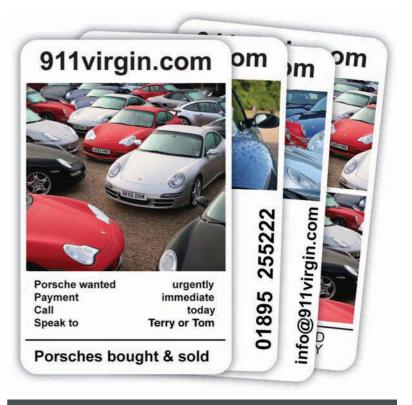
Perfect mechanically and electrically with original Pasha interior in excellent condition, exterior subject to bare metal respray end of 2015, Swiss delivered and comes with original log books and good options, located in Amsterdam, the car drives beautifully. Tel: +31 652 783222. Email: michael@matthews.org.uk (Netherlands).

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P0617/015



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### **DEALER TALK:**

# RDER REIVERS

After building up a successful Porsche repair centre in Glasgow, Tom Fitzsimmons' next move was to establish a classic Porsche sales operation – which, based on the banks of Loch Lomond, is possibly in the most scenic area of any UK Porsche shop



### How long have you been in the Porsche business:

I started out as a traditional panel maker/beater on leaving school, and by 1980 was working in a Porsche dealership in Australia. I set up my own workshop specialising in Porsches in Glasgow 1998. Porsche Cars Great Britain approached me in conjunction with Porsche Centre Glasgow to become the first independent Porsche Approved repairer in Scotland, and by the time the company was sold 10 years later we had 65 staff and were the largest Porsche approved bodyshop in Europe. In Border Reivers we still have close connections with both Porsche Cars GB and the factory.

### What Porsches do you specialise in?

All air-cooled, I have a real passion for the early cars, 356s and pre-1973 cars. We've now started selling some selected water-cooled cars, mostly GT models. We also like 996 Turbos but it has to be Tiptronic, which may surprise a lot of people, however as a Tiptronic it's just so usable, as quick as modern supercars on twisty country roads and just a joy in ever increasing traffic jams - it's the perfect modern everyday 911.

### What's your cheapest, and most expensive Porsche presently in stock?

Our least expensive Porsche is a road-legal but track focused 968 at £26,000, which we think represents fantastic value. The most expensive car in the showroom is the 3.8-litre 964

RSR which was built by the factory for the Daytona 24 Hours, and which won the American IMSA series, priced at £800,000. We also have access to a pair of 918 Spyders and a Carrera GT that clients don't want advertised - the 918s are £1m plus each.

### What would you recommend as the best "first

Porsche" to buy? Difficult question, I would need to know customers expectations and budget before I could steer them into the correct car. But the first of the Boxsters are now such good value as a starter Porsche.

### Where do you get your stock from?

We have a strong network of worldwide contacts built up over a number of years. My brother Richard is based in Ireland and deals with our Irish clients, and he finds some amazing cars

### What warranty do you give, or sell?

We give a standard six-month Gold warranty, which the client can extend. Before a sale we carry out our own extensive checks, and to date have not had a single warranty claim.

### What's "hot" at the moment?

Low-mileage air-cooled with a proper history always sells well last week we had a 1989 930 Turbo Targa with 44,000 miles, which sold within hours. Manual 993s and 964s with low mileage and air conditioning we can sell with a phone call, most

of them going abroad.

### What's best value at the moment?

"Gen 2" 997 Carreras can't get much cheaper, and 997 Turbos in manual form sell quickly.

# Name a car that you recently sold, that you would happily have kept for yourself

We have the saying, 'We only buy cars we would love to own', so I would be happy to have kept any of the cars. I supplied the red "slant nose" 930 Turbo that sold at Silverstone Auctions for £212,000 a year earlier to the seller for £90,000 – perhaps I should have held on to that?

### What car do you drive every day?

I currently run a 1973 911S and on Saturdays I use the Emory 356 [in photo] to take my son football training. We both love it, it's so well sorted.

### What are your plans for the future?

Keep doing what we doing, well, better! It took a five-year fight to get our shop in the Loch Lomond national park authorised, so now we would like to extend the showroom. We'd also like to introduce more "brokerage" cars to the mix – funding our stock is getting silly.

**Contact Border Reivers Lomond Bank House** Balmaha Bay G63 oJQ +44 (0)1360 870103 or +44 (0)7591 112581 borderreivers.co

### **BUYING YOUR PORSCHE**

### CLASSIC CAR FINANCE

If you need a loan to purchase your classic Porsche, you might assume that a bank will be the best source. But if you require over £25,000 for a car, banks either won't want to know or will insist on securing the loan against your house, which no one wants, one reason buyers are increasingly turning towards specialist finance brokers who are geared up for higher end classic car loans.

"The main advantage of specialist finance is that the loan is secured on the car itself," says Rob Johnson, managing director of Oxfordshire-based Classic & Sports, whose average classic car loan is £70,000. 'It's also easier to settle off the loan should you sell the car before the term is up.

With their detailed understanding of the classic car market, specialist finance companies will allow a "balloon" payment, which lessens monthly payments, its size often depending on how they judge the car's investment potential. Many very rich classic car buyers use this type of finance even although they have plenty of cash, we understand. **classicandsportsfinance.com** 



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It comes in a neat canyas case, and, as can be seen.

It comes in a neat canvas case, and, as can be seen, with a collection of cables and attachments, allowing it to be charged just about anywhere, including from the car itself and from a computer. More information is available at **classicadditions.com** 



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964 MC

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Guards Red, engine no: 43G04883, first

reg: 17.1.1986, mileage: 140,320, spec:

electric sunroof, electric windows, power

steering, sundial wheels, Recaro Porsche

logo Sport seats, condition: A1. New

clutch 2011, wheel bearings renewed

100,000m, brakes overhauled inc new discs and handbrake assembly 2014, all

engine seals, belts and hoses 2014, full

rear decals now applied. Heater overhaul and replacement blower pack, rear

heated window relay replaced, rear light

fitted, power steering overhauled and new

666101. Email: mike\_bianchi@hotmail.com

P0617/013

pipes fitted 2016, new MOT. Tel: 07454

seals replaced and bulb holders overhauled, new stainless steel sports exhaust

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### 944

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### REGISTRATIONS

R444CCY

### 'R444CYY' and 'R444CCY'

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### GTO3 DK1

### 'GT03 DKT

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P0617/004

### C4 TGA

### 'C4 TGA' number plate

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£2000

P0617/014

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c.p.s@hotmail.co.uk (Derbyshire). P0617/016

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### Registration for sale

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### REGISTRATIONS



### 'P9RKA'

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£2500 ono

P0617/005

# SSY 911

Reg number fees paid and on retention. Tel: 07955 000911. Email: timandlisa911@aol.com. £2100 P0617/035

# AI 4NDE

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£1950 P0617/003

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### **AUCTION/SHOWROOM/CLASSIFIED**

# MARKET WATCH

The 924, 944 and 968 were the "cheap" Porsches for many years, but have now caught collectors' eyes – prices are rising and they are even now appearing at international classic auctions. David Sutherland investigates the upsurge in interest in them



It was only a matter of time, but the 924, 944 and 968 are on the move. This 944 Turbo SE, sold for £37,000

The recent batch of international classic car auctions attached to the Amelia Island Concours d'Elegance event in Florida in March extracted the usual breathtaking prices for top collectable Porsches: the \$5.66m (£4.53m) collected by Gooding & Company for one of the 20 road going examples of the 1998 Le Mans winning GT1; \$1.38m (£1.1m) for a 1974 Porsche 911 Carrera RS 3.0, a record commission-inclusive price for this model, sold by RM Sotheby's; and the \$308,000 (£246,400) handed to the same auction house for ownership of a 1997 997model 911 Turbo S.

But frankly this kind of saleroom activity is now very predictable, and what's been catching our eye recently is something at the opposite end of the Porsche price range – the rise of the frontengined, water-cooled models, the 924, 944 and 968. It's payday for owners wanting to sell, and a curse for those who like their classic Porsches cheap, but

after many years of being largely unwanted, they are now rising in value probably at a similar proportional rate as the six-figure blue chip cars at the swanky auctions in exotic locations.

Actually, some were to be seen at the Amelia Island sales. At the RM Sotheby's Retromobile sale in Paris in February a Swiss collector unloaded 13 911s, predominantly GT versions of the 996, but saved some cars, including a 924 and three 944s for RM's Florida event a month later. They obviously didn't fetch prices in the 911 GT category, but when a humble 1987 924S, albeit with just 43,500 miles, can make \$19,800 (£15,850) you know that this Porsche 'sleeper" is waking up.

A 1988, 58,200-mile 944 Anniversary made \$26,400 (£21,150) and a 944 Turbo two years older but with under 22,000 miles fetched \$33,000 (£26,400). However what may cause 944 fanciers' jaws to drop was the \$46,200 (£37,000) paid for the 1988 Turbo SE with 39,000 miles and a high spec including the desirable M474 Sport suspension pack. In fact the highest price of the weekend achieved by a frontengined Porsche was in classic 911 price territory, the \$220,000 (£176,000) paid at a Gooding sale for a 1981 924 GTR, one of the 17 cars – turbocharged to give 400bhp – that the factory built for IMSA and Trans Am racing in the USA.

But there's no need to scour international auction results to find these cars making relatively big money. Recently Classic Car Auctions, based in Warwickshire and specialising in "everyman" classics up to £50,000, sold a 1987 944 Lux with 19,940 miles for £25,850, while CCA's associated auctioneer Silverstone Auctions hammered a restored 1991 944 Turbo for £32,650 and a Turbo Cabriolet from the same year for £32,063.

Surrey-based Historics at Brooklands has also been handling a few of the cars of late, selling 1985 and 1989 944 Luxes for £20,160 and £14,280, and a 1994 968 Sport for £20,000. The 944S2 Cabriolet looked comparatively cheap at £8680.

Cars making big sums at auction are almost certainly destined to a life in a little if ever used collection, but what is happening at the real world end of the 1976-1995 924/944/968 market where cars are bought for transport and enjoyment? 'We've seen prices rising sharply in the last 18 months,' reports **David Barker of Augment** Automotive, a Gloucestershire based 944 specialist. Then, an early "non-oval" dash (pre-1985) 944 in reasonable condition would be around £2500 but now it's a grand more. And oval-dash 944s that were £3000 now start at £4500.

David has also noticed that owners are becoming more willing to restore these cars, thus basket cases are up too. 'Last week I was trying to buy a 944S at a trade sale, which was scruffy but not rotten, but which had half an inner wing

missing, and its engine lying on the floor beside it with no guarantee it was running,' he tells us. 'A while ago I would have expected to buy it for £1000 to £1500 but it was bid up to £3200.'

Time was when you would see a selection of cars for sale for under £1000, perhaps under £500, on the likes of Auto Trader and eBay. These have now largely disappeared and David knows where: 'We don't see them but they get stockpiled by owners who are waiting to see how much further in value they're going to go.' In fact the most coveted of these four-cylinder cars, the 968 Club Sport, has been collectors' gold for some time, with the equipment-pared model now seen advertised in up to £40,000. From specifically the 944 line-up, the Turbo is unsurprisingly the most in demand: 'I've seen Turbos traded at £25,000.

The often shunned 924 is appreciating in value, especially the Turbo. A random dip into Auto Trader revealed the cheapest one, a 1984 924, to be £4999, while a 1988 2.5-litre 924S carried a £9995 asking price, and the most expensive was a 1980 924 Turbo with 53,000 miles and a £19,995 sticker.

There may be some people reading this article who are annoyed that we're reporting this, feeling that we're helping drive prices of these previously inexpensive Porsches up to unaffordable levels. All we can say is: don't shoot the messenger, do something practical like buying one while you still can! They are still out there for affordable money, but for how much longer?



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With 911 & Porsche World's roving tyre kicker, Kieron Fennelly

### BOXSTER 987 TIPTRONIC SPECIAL EDITION 2008 '08' 34,000-MILES £14,995

n its 20-year career the Boxster has become the most democratic Porsche, and entirely usable examples exist from £5000 up. This Tiptronic model is on offer at three times that, a good sum you might think for an eightyear- old, but in that time this 987 has averaged barely 4000 miles per annum. A run-out model which marked the end of the first generation 987 and the 2.7 M96 engine, Porsche enhanced its appeal with a discreet bodykit which adds a front lip and a rear diffuser, effectively making this Boxster look quite distinctive. Other modifications included auxiliary front lighting, headlamp washers and suspension lowered by 10mm, as well as 17in wheels.

On this example - for sale at Surrey-based Eporsch - metallic silver paintwork contrasts with a beige leather interior, a shade which, after overcoming one's instinctive prejudice, works surprisingly well. Of course, the problem with light colours is that dirt and wear are far more apparent and the absence of both anywhere in the cabin is further proof that its three previous owners used the Boxster sparingly. Perhaps the driver's seat exhibits minor grubbiness, but a concerned owner could clean it easily enough.

Externally, the paintwork harbours the odd stone chip at the front but is otherwise unblemished, and if every other 987 seems to be a shade of metallic grey, this silver example is distinguished, particularly at the rear, by its factory bodykit and, like all the best 'aerodynamic' appendages, this is nicely understated. The five-spoke alloys are shod by Bridgestone Potenzas, which appear to have about 60% of their tread left at the front and 50% at the rear.

The Boxster was delivered to its first owner on July 18, 2008 by Hatfield PC which also carried out the initial servicing. Three subsequent services were carried out by JZM, the last at 33,366 miles on November 14, 2016 included brake fluid. The MOT certificates reveal that the 987 has covered only 7000 miles in the last four years.

Once fired up the Boxster is keen to go. The ride is firm and there are no rattles from either the cabin or the suspension. The steering is light and direct without any hint of shimmy and the whole car simply feels nicely run in. So well resolved is the Boxster's chassis that it is easy to forget this is an open car, snug and quiet properly engineered hood notwithstanding. The 2.7 might be the smallest of the engine range, but all 245



horses are raring to go, especially once the rev counter has passed 4000rpm. The five-speed Tiptronic gearbox in no way impedes, delivering responsive and smooth changes whatever the demands made on it. Eporsch's Roly Baldwin observes that Tiptronic cars generally tend to have easier lives and certainly this 2.7 looks and feels like a much younger example. Slushmatic or not it is a real pleasure to drive. PW



### CHECKLIST

### BACKGROUND

Today, platform sharing is the name of the manufacturing game, but when Porsche decided in late 1991 that to survive it would have to go this route, it was a momentous have to go this route, it was a momentous decision, arguably greater even than abandoning air cooling. The upshot was the 986/996 model range which at once renewed the eternal 911 and also endowed Porsche with a vital and competitive entry level model. Zuffenhausen brought out the Poystor first to test the water before Boxster first to test the water before launching the 996 a year later. In a twenty year career, the Boxster, acclaimed from the outset and reaching parts of the market other Porsches couldn't, has simply got better and better.

WHERE IS IT?

Eporsch is just off the A322 at Bisley, north of Guildford. Proprietor and Porsche enthusiast Roly Baldwin left an IT career in 2003 to run his own sales and service operation. Initially he was based in Chertsey with the service side carried out by well known specialist GT1, he then established himself at Bisley where he has two sites – his workshop and separate sales premises. Eporsch turns over 70–80 cars per year and usually stocks about 15. These are Porsches Roly has bought from service customers or sourced in the trade. "When I started, 964s were the staple and a nice one cost £17–£18,000. Of course, that's all changed and you rarely see them now, but I've stayed and you rarely see them now, but I've stayed at what you might call the entry level."

eporsch.co.uk 01483 487738

Unmarked body and interior, zestful 2.7, tastefully restrained factory bodykit

### AGAINST

Tiptronic gearbox will not suit all tastes; dash reflections in screen

YERDIC1
You can pay less and there is no shortage of choice, but this Tiptronic is a little gem and just different enough from standard issue to make it feel special.

### VALUE AT A GLANCE

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P0617/045

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P0617/046



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### REGISTRATIONS



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P0617/039 £2000

Porsche cherished number

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P0617/041 £3850

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Cherished registration

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P0617/026 £9950

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P0617/044 £700

### **PARTS**



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# TRIED&TESTED

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### PORSCHE 928 GTS 1992 72,500KM £46,995

uring its 18 year life, the 928 went through four cubic capacity increases and, in 1986, a significant facelift. 'Our' test car is the final model, the GTS, one of a mere 955 928s made in 1992. Under the bonnet lurks the ultimate, 350bhp version of Porsche's first V8, now stroked to 5.4-litres. This car is a Japanese import which arrived in Britain in late 2015. It has all the correct import documents but, as it has been living in a collection, it has remained unregistered. The handbook is in Japanese, as is a sheaf of what appear to be service invoices, the record of 25 years' maintenance, though unless you read Japanese some intelligent guesswork is required. The apparently most recent invoice does mention 63,000km which would correspond with the GTS's current reading of 72,500km.

Finished in slate grey, the paintwork is excellent with the lustrous sheen of a car that has had only limited exposure to the elements. Two bonnet scratches that have been painted over are the only significant flaws, while the lacquer is beginning to peel from the rear light bar. The wheel arches are very clean as is, says the vendor, the entire underside with no leaks or weeps, adding that the dampers have just been replaced. Largely unmarked 17-inch Cup wheels cover brake discs which show little wear and the Bridgestone tyres appear a relatively recent addition. The opulent cabin is upholstered in grey leather with accompanying lighter grey carpeting, all impressively clean, and the state of the driver's seat and general lack of wear anywhere support the low mileage. Only plastics which have dried out and split in one or two places show any signs of age.

If not quite concours, the engine bay appears spotless, rather as if it has always been clean rather than subject to a recent scrubbing up. On a cold day, the hydraulic struts won't quite hold the long bonnet, though after a 30 minute run, underbonnet temperatures are high enough to make them function properly. The boot is carpeted and the emergency wheel and compressor clearly unused. The 5.4 runs from cold with turbine-like smoothness and pulls lustily. The GTS has a rev limit of 7000rpm, but such is the torque it asks to be driven in the mid range. Overriding presets of the four-speed auto with the gear selector achieves greater urge, but the 928 starts to feel less relaxed when driven like this. The car Ludvigsen called the 'Boulevardier' is clearly a GT and, while it rides



smoothly and steers and grips well, its response is not that of the 911 and it is easy to see why the 928 was such a controversial Porsche. This example feels as if it has always been cosseted and response from the longtravel throttle will undoubtedly improve with more regular solicitation.

Mechanically fit and bodily excellent, this end-of-line model is a rare beast and in many eyes the best looking of the 928s. PW



### CHECKLIST

### **BACKGROUND**

BACKGROUND

The 928 was conceived when pending US emissions controls and crash regulations made the outlook for the 911 uncertain. Porsche persuaded itself it needed to build a sports car like the Americans themselves built so the 928 was conceived to be a kind of much improved Chevrolet Corvette. It was also an opportunity for Ernst Fuhrmann, the 928's great advocate, to introduce the transaxle, which by transferring the gearbox to the rear axle created 50:50 weight distribution. However, developmental delays partly caused by transmission vibration and handling difficulties – which led to the famous 'Weissach axle' – meant that by the time the 928 was ready, the threat to the 911 had disappeared. As fine a piece of engineering and design as the 928 was it was deemed too far from the Porsche tradition, and although almost equalling 911 sales once, in 1982, never emerged from the air-cooled car's shadow.

### WHERE IS IT?

Eporsch is just off the A322 at Bisley, north of Guildford. Proprietor and Porsche enthusiast Roly Baldwin left a career in IT to run his own sales and service operation in 2003. He has two sites – his workshop and separate sales premises. Eporsch turns over 70–80 cars per year and usually stocks about 15. These are Porsches Roly has bought from service customers or sourced in the trade. "When I started, 964s were the staple and a nice one cost £17-£18,000. Of course that's all changed and you rarely see them now, but I've stayed at what you might call the entry level." eporsch.co.uk 01483 487738.

apparently very low mileage.

### AGAINST

### VERDICT

A remarkably preserved 928 which is both eminently usable and will surely retain

### VALUE AT A GLANCE

Condition

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### **PARTS**



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P0617/027

### 1977 Porsche 911 parts for sale

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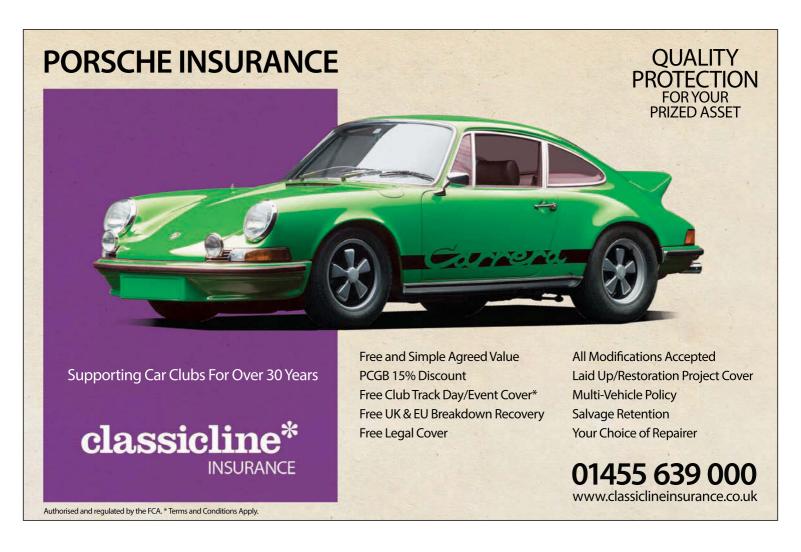
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# THE WAY WE WERE

# TIME MACHINE

Editor Bennett peruses the archives of *911 & Porsche World* from days gone by. What's changed? That will be everything and nothing...

### JUNE 2008 (ISSUE 171)

unny how leafing through a back issue can transport you instantly through time, but then my memories do tend to come in paper and print form. I know, very old school. And where to this time and in what? Well, it's Easter 2008 and I've got myself a 997 GT2 for a week. Hardcore Porsches don't get much hardcore than this. And the defining memory? Not the towering power of the thing, or the constant nagging feeling that it was going to bite at any moment. No, much worse and much more like being stuck in a snow drift high up on the Northumberland moors.

Snapper Fraser said everything would be fine and to meet him up there for some pretty pics. "It's clear," he said. And it was, but not for long. The road was clear, but there was plenty of snow off it and a weather front was moving in rapidly and caught us out, as is often the way in such remote parts. A blizzard soon whipped up and the snow was drifting across the road. The all white GT2 started to blend in, and mindful that it was running on Michelin Cup tyres, I suggested we get the hell out.

It was one of the more frightening driving experiences of my life: 500bhp, rear drive, track day tyres and a white out. I'd love to say that I blitzed off the moor, kicking up a rooster tail of snow, but the bloody thing just fell off the road. Quite rightly a couple of Northumberland farmers drove right round the stricken Porsche. A kindly family in a Discovery stopped and pulled me out, kids squealing at dad's heroics. Half way down the hill I realised that I was just going to hit the Disco up the chuff as soon as he stopped, so when the time came, I had no choice but to drive off the road and park in a soft, snowy ditch. Strangely this incident didn't make it into the story.



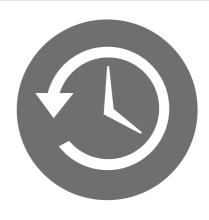
Equally strangely the whole test barely made it onto the front cover, as you can see. That glory went to the Carrera 3.2 and the buyers' guide within. After digesting the pearls of wisdom, readers could then turn to the back of the issue and take their pick from the classifieds, where Carrera 3.2s started at £9000. Or they may have become diverted by the 996 GT3 Supercup racer, with fresh Parr engine rebuild, twelve wheels, telemetry, extras etc for a mere £49,995.

### **JUNE 2005 (ISSUE 135)**

hat goes around comes around. It must be something to do with spring, but just as we have in this issue, we devoted a chunk of the magazine to Cabriolets, well, 20-pages to be precise. It's easy to be a bit snobby about rag top Porsches, particularly 911s, but Porsche wouldn't build 'em if they didn't sell and sell they do in big numbers.

Elsewhere in the issue, Brett Fraser (before he was 911&PW Dep Ed), took the then very new 997 Carrera S for a spin to Exmoor and Steve Bennett (before he was 911&PW Editor) makes an appearance in the 'Your cars' pages, with his 234,000-mile 944 Lux and a 968 Club Sport of all things. Editor, Chris Horton, fitted a ProMAX chip to his 944, the very same car that he recently revived. The results? Well, as Chris rightly pointed out, without a rolling road before and after, any observations were purely subjective, but, subjectively, he did report better throttle response and improved mid-range. Interestingly Bennett repeated the process with his 944 a year later, with a rolling road before and after test. The Result? Nothing to get excited about!





### **JUNE 1994 (ISSUE 21)**

ssue no 21! A coming of age then for 911&PW, or just old enough to know better? Whatever, we celebrated with a new logo design, which we stuck with until the present logo arrived in 2006. There was also an opportunity to win a 993 for the weekend, courtesy of Porsche Cars GB. In those dark and distant times, this involved answering and filling in an entry form and sticking in the post.

And as for the issue itself? Well, the front cover featured a DP Motorsport street legal Group C 962. Now, there seemed to be a glut of these in the early '90s, largely thanks to the demise of GpC and the sheer number of 956s and 962s and so tuning outfits like Koenig, Schuppan and DP Motorsport filled their boots. Not all were pukka racers, but this one was, having left the factory in 1983 bound for Kremer Racing and finishing fifth in its first race - the Silverstone 1000kms with Vern Schuppan and Alan Jones. In Kenwood livery it finished third at Le Mans in '84 with father and son duo, Mario and Michael Andretti, plus Philippe Alliot. It was upgraded to 962 spec in 1985 and raced in Japan until 1989, when DP got hold of it.

Unlike many, it retained its pukka race engine, but with capacity enlarged to 3.3-litres for more torque, but with milder cams. Power was 600bhp, or not much more than a 991 Turbo these days. Still, weighing just 1040kg, performance was potentially shattering. We know that because author, lan Kuah, took it for a drive. He reported a heavy, but progressive clutch, some turbo lag and it being quite easy to drive in traffic, thanks to the extra torque. Incisive stuff!



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