PORSCHE 992 TURBO S ● TIM HARVEY ● EV CHARGING EXPLAINED ● RENNWORKS

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MAKING TRACKS WITH ROCK STAR'S CARS 991 GT3 **991** GT3RS **EXCLUSIVE** EPPARD GUITARIST EXPLORING DECADES OF PORSCHE OWNERSHIP **PLUS** 918 SPYDER DESIGN REVISITED **NEW 992 GTS CABRIOLET DRIVEN 996** GT3 RS



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DRASTIC FANTASTIC

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Ordinarily, when we gather a collection of cars together for a 911 & Porsche World photo shoot, the vehicles we're pointing our cameras at are in the possession of multiple owners. Not so with this issue of the world's best-selling monthly Porsche magazine - the quartet of mouth-watering 911s gracing our front page is the property of just one discerning marque enthusiast.

The Porschephile in question is none other than Vivian Campbell, formerly guitarist with Dio, Whitesnake and Thin Lizzy, but best-known as a member of rock band, Def Leppard, which he joined in 1992. Viv's Porsche journey began when bought himself a Grand Prix White 964 Carrera 2 not long after he started working with the group. He hasn't looked

back, leading to his carefully considered collection of Stuttgart-crested cars, which leans heavy on GT3- and RS-badged 911s, but also includes a choice selection of early air-cooled Porsches, which we'll be showcasing in our next issue.

On the eve of Def Leppard's new album release, Drastic Symphonies, I spent a few days chatting cars, guitars and all things Porsche with Viv at his Stateside residence. Not even an airline losing my luggage could ruin my fun. Enjoy the magazine.



911&Porsche



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TOPOF THECLASS

911 HUL

Offering supercar performance for sports car money, the 992 Turbo S stands head and shoulders above its rivals. We get schooled behind the wheel of this hugely entertaining 911...

Words James Fossdyke Photography Barry Hayden





Ithough it has plenty of heritage, the 911's Turbo badge doesn't sit especially comfortably in the current Porsche product range. Even the decidedly non-turbocharged Taycan EV is offered as a Turbo, relegating this once hugely symbolic moniker to the basic role of trim identifier. Considering every new 911 Carrera produces big power by way of twin turbochargers, and with the aforementioned Porsche EV proudly sporting a Turbo badge, is the 911 Turbo relevant in this day and age? Purists flocking to GT3 models would suggest not.

Porsche, however, says the 911 Turbo is just as important now as it ever was. Well, providing you add an S to the model name. To prove as much, the 992 Turbo S is treated to myriad upgrades to cement its place as the ultimate all-round 911. For kick-off, it comes with four-wheel drive as standard equipment, plus there's an electronically controlled locking differential on the rear axle. Porsche Active Suspension Management (PASM) is included and, of course, there's Porsche's Dynamic Chassis Control (PDCC), dynamic engine mounts and massive Porsche Ceramic Composite Brakes (PCCB) lurking behind twenty-inch (front) and twenty-one-inch (rear) wheels. This is before we get talking about the width of the tyres,

which measure more than twenty-five centimetres across. And that's just at the front. The enormous rear tyres are a mind-blowing thirty-one and a half centimetres wide.

Perhaps fearing such enormous rear tyres might effectively turn the Turbo S into a steamroller, Porsche also widened the track by ten millimetres at the front and an eye-opening forty-five millimetres at the rear. Incredibly, the wheels still cover thirty-three percent of the car's width. Even so, Zuffenhausen's designers and aerodynamicists felt the need to do more with the 911's rear wing, which is why there's a massive ducktail-style

appendage split in two (with a rising upper surface) at the rear of the Turbo S. This serious add-on is matched by a similar arrangement at the front, which helps to reduce lift at high speed.

More evidence of optimised air management comes from the two massive intakes ahead of the rear wheels, sucking in air to feed the powerful twin-turbocharged flat-six.

Speaking of which, Porsche spent a long time configuring the Turbo S's powertrain. In essence, the company has taken the boggo Carrera's threelitre engine and bored it out to 3.7 litres. Specifically, displacement is Above The Turbo S's outstanding performance is matched with easeof-use driving, but does this present the potential for reduced driver engagement?









Above Interior is typically first-rate and is available in a range of finishes, including twin-tone leather with quilted centres and contrasting stitching 3,745cc, although Porsche has rather generously decided to round that figure up to 3.8. We know better. Anyway, with two massive variable-geometry turbochargers, the six-cylinder boxer pumps out 641bhp and 590lb-ft of torque, which is

distributed between those ginormous wheels by an eight-speed PDK semi-automatic gearbox, the Porsche

Traction Management (PTM) multiplate-clutch system and Porsche Torque Vectoring Plus (PTV Plus), assisting with fully variable torque distribution. The result is a zero to 62mph time of 2.7 seconds and top speed of 205mph, which means this beefed-up 992 accelerates almost a second quicker than a 992 Carrera 4S and more than half a second less than a 992 GT3. In fact, it's faster from standstill to 62mph than a Ferrari 296 GTB. It's worth noting, we're quoting Porsche's officially published figures, which over the years, have

ARGUABLY BETTER THAN THE
NECK-SNAPPING ACCELERATION IS THE
NOISE FROM THE TAILPIPES WHEN GIVING
THE FLAT-SIX A PROPER WORKOUT

proved to be somewhat conservative. With favourable conditions, the Turbo S might be even quicker than buyers are led to believe.

Truth be told, the Turbo S is bordering on being too quick and too fast. This sort of acceleration is just too physically demanding to be considered properly

enjoyable anywhere other than a race circuit. You can feel it rearranging your internal organs and thudding the back of your bonce into the head restraints. Make no mistake, the 992 Turbo S is savagely quick, but this trick gets

surprisingly tiresome surprisingly quickly. In the real world, and certainly on the public road, you're unlikely to use anywhere near this pace of acceleration very often, although we concede it's nice to

have at your disposal, just in case. Your mates will certainly be impressed.

Arguably better than the Turbo S's neck-snapping acceleration is the noise from its substantial tailpipes when giving the flat-six a proper workout. Our test car came with the optional gloss black sports exhaust (commanding a £2,180 premium), which snarls and barks like a wounded jackal as you wring out the engine. On overrun, the system pops and crackles like a firework display in a bowl of Rice Krispies, managing to startle pedestrians, other drivers and eliciting a wide grin from the infantile idiot (me) behind the wheel.

The soundtrack isn't as visceral as that of the new GT3, not least because Porsche retained all the soundproofing found in the standard 992 Carrera coupe, but the Turbo S still makes a deeply satisfying din. It's somewhere between the aristocracy of a big GT car and the untamed lunacy of a supercar. That's quite the middle ground.





When it comes to handling, you could argue the Turbo S continues to occupy the middle ground to great effect, but to do so would be to damn this masterpiece with faint praise. With previous generations of 911, the Turbo S had a tendency to feel heavy and unrefined, a kind of sledgehammer to the corresponding GT3's scalpel, but times have changed and so has the Turbo S.

SELECTION PACK

Despite the blood and thunder of its straight-line performance, the 992 Turbo S retains some of the 911's classic characteristics, including an astonishing sense of balance, which somehow surfaces despite the engine being mounted at the rear. There's no sense of understeer and general steering feel is sublime, just as it is in a 992 Carrera GTS. All this is before you start fiddling with the Sport Chrono Package's various driving modes and the suspension settings. In Normal mode, the car strikes a balance between comfort and handling, but when you firm up the suspension and spin the steering wheelmounted mode selector to Sport Plus, any question of balance goes out the window. Driver assistance is dialled back and the car instantly feels tauter and less forgiving. It feels like a ballerina on points. It handles that way, too.

Admittedly, any Turbo S feels a smidge heavier than your average supercar, but then this 992 version tips scales at 1,640kg. The sense of carrying weight is therefore understandable. To put this into context, a new PDK-equipped GT3 is more than two hundred kilograms lighter. And yet, despite the extra bulk, the Turbo S feels smooth and unhurried, no matter how fast you're going. You can feel the weight shifting around, unloading the inside tyre in fast corners, but the car

remains completely controllable, as though it's quite happy to step back from the brink at any moment.

Combine this with the pretty much imperceptible activity of the all-wheel drive system and mountainous grip on even the greasiest of roads, and the Turbo S is an absolute peach of a Porsche. While it may not have lightness on its side, it's still incredibly poised and fantastically intuitive to drive, offering a ballistic turn of pace and seemingly endless traction. We don't wish to keep labouring the point, but though the Turbo S may not be as sharp as the current GT3, it's no longer a brash, unsubtle sports car.

If there's a criticism of the Turbo S driving experience, it can only be concerning engagement. Put it this way, this big-power 911 has such copious capability, it feels stable and composed at any speed, which makes it feel

Above Centre-locks measure twenty inches at the front. twenty-one at the rear, hugging Porsche Ceramic Composite Brakes (PCCB)

Below Porsche Active Aerodynamics (PAA) provide an automatically deploying front spoiler, active cooling flaps and a doubleshelf rear wing raising

TECH SPEC

911 (992) Turbo S Model

Coupe range from £87,330, Turbo S Coupe from £168,900 Price

3.7-litre twin-turbocharged flat-six petrol, eight-speed PDK **Powertrain** dual-clutch semi-auto with PTM, all-wheel drive and PTV Plus

with electronically controlled rear limited-slip differential

23.0-23.5mpg **Economy** 271-278g/km CO₂ emissions

Top speed 2.7 seconds 0-62mph

641bhp at 6,750rpm Power 590lb-ft at 2,500-4,000rpm **Torque**

205mph





Above Due to the presence of a dedicated Wet driving mode and tyres specially developed for damp conditions, Porsche claims the Turbo S performs better away from dry surfaces, citing quicker Nürburgring lap times when the car was tested in inclement weather

entirely approachable, almost too easy to drive. It lacks the fickle, highly strung tetchiness characterising so many highperformance cars.

Surprisingly, considering the Turbo S's awe-inspiring pace and range-topping credentials, the cabin doesn't feel vastly different from that of a standard 992

Carrera. You get the same layout and the same superb attention to detail, including folding cup holders on the passengerside dash and a 'hybrid' instrument

cluster seamlessly combining digital and analogue readouts. As is so often the way with Porsche products, the design and quality of materials used here is first-rate.

As is the latest-generation Porsche Communication Management (PCM) infotainment system, complete with near eleven-inch touchscreen display and now offered across the 911 range. Cleaner-looking and more modern than ever before, this version of PCM is a real step forward, not least because it's now offered with Android Auto smartphone connectivity, as well as linking to Apple CarPlay. Even if you use only PCM's proprietary features, you'll enjoy sharper responses and less fiddly menus, making the system much easier to use on the move. And of course it's linked to the

the system much easier to use on the move. And, of course, it's linked to the makes the Turbe WAY THIS PORSCHE STACKS UP SO WELL ALONGSIDE SUPERCARS, GTs AND OTHER SPORTS COUPES IS TESTAMENT

Sport Chrono clock (with integrated lap timer) and the main instrument cluster, which combines an analogue rev counter with configurable seven-inch thin-film-transistor (TFT) displays on either side.

TO ITS WIDE RANGE OF CAPABILITIES

While the Turbo S's cabin might be beautifully appointed and fabulously constructed, it doesn't provide many clues to the model's lofty position in the 911 range. Granted, you can see those massive rear haunches in the door mirrors, which is a bit of a giveaway,

but otherwise, you simply get a Turbo S motif on the rev counter. That's about it.

There is welcome additional equipment, though, including Adaptive Sports seats Plus, offering memory functionality and eighteen-way electric adjustment (including bolsters), which makes the Turbo S's cabin a very

comfortable place to be. It's also practical, providing you only compare measurements with supercars and other 911 models — the luggage lid at the front hides

much the same cargo tub as any other 992, amounting to 128 litres of space, which means it isn't especially roomy, but it is at least a sensible shape. A couple of soft holdalls should go in there without too much trouble. More useful is the carpeted rear cargo space behind the back seats. If you're still struggling, you could always store bags on the back seats themselves.

While we appreciate this might sound naff to Cayenne owners, it's



just another example of the Turbo S's inherent usability. For all its dynamic prowess, this special 911 is remarkably supple, with much the same ride quality as a Carrera. Yes, the Turbo S is a little unforgiving at low speeds, and the occasional bump will send a jolt through the stiff body structure, but considering the performance on offer, this is a remarkably smooth ride. Of course, it gets quite firm - possibly too firm for many UK roads - when the suspension is running its stiffest setting, but it's important to realise this mode is primarily offered to satisfy trackday enthusiasts. Leave it alone, and you'll find few other premium-marque sports cars can match the motorway comfort of the Turbo S, which is more akin to that of a GT car. Certainly, it's more comfortable than a 992 GT3 or even the latest Carrera GTS, which we review later in this issue of 911 & Porsche World.

SIBLING RIVALRY

All of which lends plenty of credence to the idea of the Turbo S staking its claim as the ultimate 911 all-rounder. If nothing else, the way this Porsche stacks up so well alongside supercars, grand tourers and other sports coupes is testament to its wide range of capabilities. There is a caveat here, though. Yep, we reckon there's another new 911 just as good. We're talking Carrera 4S. Admittedly, the 4S is slower in a straight line and

in corners. It's also true to say it isn't significantly more comfortable than the Turbo S. And, we'll admit, although the differences are perceptible, they're hardly enormous.

The Carrera 4S is, however, considerably cheaper. In fact, Porsche pitches the 4S at a significant sixty thousand pounds less than the cost of entry to 992 Turbo S ownership, which starts at £168,900. The Carrera GTS is around £45,000 cheaper, the GT3 is about £35,000 less to buy. That's a lot of money. In fact, the money you'd save if you picked a Carrera 4S — great to drive, beautifully built and, by the standards

of most other sports cars currently available, enormously quick - ahead of the Turbo S would be enough to pay for a whole new Macan. For some (or even most) owners, two Porsches is better than one. But for those who want an everyday supercar, rather than an everyday sports car, the 992 Turbo S undoubtedly holds huge appeal. In supercar company, Porsche's 911 rangetopper is far cheaper than most of its rivals and marginally faster in a straight line, as well as being more practical. As a result, it's one of the most complete sports cars on sale today. More than this, it's a work of genius.

Above Despite being marketed as a 3.8, the Turbo S flat-six is a 3,745cc boxer based on the three-litre power unit from the 992 Carrera models







Carrera GT

GT Silver • Ascot Brown/Black GT Bucket Seats • 19/20" Carrera GT Centre Lock Wheels • Sports Exhaust System KW Hydraulic Lift Kit • No. 0063 of 1,250 Cars Built • 12,018 miles • 2004 (04)

£1,199,995



911 GT2 (996)

Polar Silver • Black Leather Sports Seats 18" GT2 Wheels • Porsche Ceramic Composite Brakes • Carbon Interior Package • Previously Sold & Serviced by Paragon • 21,836 miles • 2003 (03)

£134,995



911 Carrera 2 S (992)

Guards Red • Black Leather Sports Seats PDK Gearbox • 20/21" Carrera S Wheels Touchscreen Satellite Navigation Switchable Sports Exhaust • Sport Chrono 7,605 miles • 2019 (69)

£95,995



911 Carrera 2 GTS (991)

Guards Red • Black Half-Leather Bucket Seats • Manual Gearbox • 20" Centre Lock Wheels • Sport Chrono Previously Sold & Serviced by Paragon 6,939 miles • 2015 (65)

£92,995



911 Carrera Sport Coupe

Guards Red • Black Leather Sports Seats G-50 Gearbox with Hydraulic Clutch 16" Fuchs Wheels • Electric Sunroof Electric Windows & Mirrors • Rear Wiper 59,060 miles • 1987 (D)

£84,995



911 Carrera 2 GTS (991)

Carmine Red • Black Half-Leather Sports Seats • PDK Gearbox • 20" GTS Centre Lock Wheels • Touchscreen Satellite Navigation • Switchable Sports Exhaust Sport Chrono • 37,438 miles • 2015 (15)

£79,995



911 Carrera 4 GTS (997)

Guards Red • Black Half-Leather Sports Seats • 19" GTS Centre Lock Wheels PDK Gearbox • Switchable Sports Exhaust Sport Chrono • Previously Sold & Serviced by Paragon • 49,132 miles • 2011 (61)

£68,995



911 Turbo X50 (996)

Seal Grey • Black Leather Seats Manual Gearbox • 18" Turbo II Wheels Satellite Navigation • Electric Sunroof Extended Leather Pack • 59,872 miles 2002 (52)

£54,995



911 Carrera 4 S Targa (997)

Atlas Grey • Black Leather Seats Tiptronic S Gearbox • 19" Carrera S Wheels • Satellite Navigation • Sport Chrono • Previously Sold & Serviced by Paragon • 49,219 miles • 2008 (08)

£39,995



Macan S

Volcano Grey • Black Leather Seats • PDK Gearbox • 19" Macan Design Wheels Touchscreen Satellite Navigation • Front & Rear Parking Sensors • Full Leather Interior • 51,832 miles • 2016 (66)

£34,995



Boxster S (981)

Dark Blue Metallic • Sand Beige Leather Sports Seats • PDK Gearbox • 19" Boxster S III Wheels • Full Leather Interior Brushed Aluminium Interior Pack Heated Seats • 48,930 miles • 2012 (12)

£33,995



Boxster (981)

Agate Grey • Natural Red Leather Sports Seats • PDK Gearbox • 20" Sport Techno Wheels • Full Leather Interior Roll Over Bar in Aluminium Look Heated Seats • 58,634 miles • 2012 (62)

£29,995

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THE BULLETIN

News from the world of Porsche

TECHART ANNOUNCES STRICTLY LIMITED 790BHP GTSTREET R FLYWEIGHT

Since 1987, TechArt has provided its customers with a wide range of customisation options for Porsche sports cars. With the brand's new GTstreet R Flyweight, limited to just nineteen units and based on the 992 Turbo S (reviewed earlier in this issue of 911 & Porsche World), the German brand takes lightweighting to a new level.

"Through consistent weight reduction and advanced racing technology, combined with a refined Flyweight Clubsport interior, we have created a unique package. We can't wait for our customers to experience it for themselves, both on the world's most demanding race tracks and, of course, on the road," says Tobias Beyer, Managing Director, TechArt Automobildesign GmbH, before revealing the order book for this new Porsche-based TechArt product is now open.

The GTstreet R Flyweight's calling card is its focus on improved aerodynamics, lightweight construction and chassis enhancement. As far as the former is concerned, highlights include a distinctive, fixed carbon-fibre front splitter with side air fins, integrated canards and a moulded carbon underbody. With the aid of digital airflow simulations, it was possible for TechArt's engineers to significantly increase downforce and optimise aero balance. To protect the front splitter during use at a track, it is equipped with integrated skid plates.

STRAP YOURSELF IN

Every GTstreet R Flyweight is equipped with TechArt's individualised Recaro Podium CF performance buckets, which form part of the car's Clubsport interior. Weighing just 4.9 kilograms per shell, the seats are not only ultralight, but are also refined by way of hand-painted elements, Flyweight-specific embroidery and custom embossing. The wider TechArt Flyweight





Clubsport package consists of a colour-coded roll bar, six-point racing harnesses (with FIA homologation) and a hand-held fire extinguisher. The elimination of the rear seats, an optimised rear shelf (with carbon insert) and lightweight carpets contribute to further weight loss, more noise and therefore intensification of the driving experience. On this point, it's important to note, the GTstreet R Flyweight is designed for use with head and neck support (HANS) device.

The standard engine lid and 'frunk' locks are replaced by quick-release fasteners integrated in a bespoke carbon-fibre bonnet and a giant carbon-fibre deck lid with triple-layer adjustable wing, ahead of which is a specially developed lightweight polycarbonate rear window.

The base 992 Turbo S engine is given a power upgrade thanks to TechArt's TA092/T2.1 powerkit, consisting of bigger turbochargers, higher-flowing air filters, reinforced overrun air valves and ECU calibration for both the engine and transmission. This takes power to a spectacular 790bhp and 700lb-ft torque. The sprint to 62mph takes just 2.5 seconds. 124mph is reached in an impressive 7.5 seconds. Top speed is 217mph. TechArt-specified Öhlins coilovers, modified front wishbones and sticky Michelin Pilot Sport Cup 2 R tyres keep the car planted to the asphalt at all times.

Weight discipline also applies to the wheels

— TechArt's newly developed Formula VI Race
Flyweight forged rims feature super-slim spokes.
For more information, visit techart.com/flyweight.







NEWS & VIEWS





PORSCHE CARRERA CUP GB ENTERS EXCITING TWENTY-FIRST SEASON

Porsche Carrera Cup GB, the fastest single-marque GT racing championship in the UK, enters its twenty-first season with an exciting mix of returnees and talented newcomers. The championship continues with the 503bhp 992 GT3 Cup. This season also marks the second year Carrera Cup GB 2022/2023 Junior, Adam Smalley, competes with support from Porsche. Needless to say, he's gunning for glory.

The championship will enjoy a full calendar of sixteen races spread across eight race weekends. Occupying its traditional position as part of the TOCA package (Carrera Cup GB's home since its inception in 2003), the competition will run in support of the British Touring Car Championship at six UK venues. Drivers in three categories (Pro, Pro-Am and Am) will compete under largely unchanged regulations, with racing getting underway at the championship's opening weekend at Donington Park on 22nd and 23rd April. All races will be broadcast live on ITV Motorsport.

Following the first two rounds, races will take place at Brands Hatch Indy Circuit (6th and 7th May), Thruxton (3rd and 4th June), Oulton Park (17th and 18th June), Knockhill (12th and 13th





August), Donington Park Grand Prix Circuit (26th and 27th August), Silverstone National Circuit (23rd and 24th September) and Brands Hatch Grand Prix Circuit (7th and 8th October).

As Porsche continues to celebrate seventyfive years of sports car manufacturing, sixty years of the iconic 911, and a return to the top category at the 24 Hours of Le Mans (on

the hundredth anniversary of the endurance classic), Porsche Motorsport GB will enjoy its biggest weekends to date — for the

ON FOUR OCCASIONS THIS YEAR, THE TWO ONE-MAKE SERIES WILL UNITE TO RACE ON THE SAME ROSTER

first time since its successful introduction in 2020, Porsche Sprint Challenge GB will appear alongside Carrera Cup GB. Indeed, on four occasions this year, the two one-make series will unite to race on the same roster.

Carrera Cup GB's Pro category battle will be led by the already mentioned Adam Smalley, driving for Team Parker Racing. Smalley took a victory in 2022 and finished the season an impressive second overall, but aims to mark his final year as part of the Porsche GB Junior

programme with overall title glory. Hoping to stop him in his tracks comes a line-up of proven talents making their return to the championship. Gus Burton drove to two wins in 2022, demonstrating the speed and experience to challenge Smalley, while Theo Edgerton is a proven race winner equally capable of mounting a title bid. Meanwhile, reigning Pro-Am category

champion, Charles Rainford, makes the step up to the Pro category for 2023. The racer from East Sussex took a maiden overall win at the 2022 season

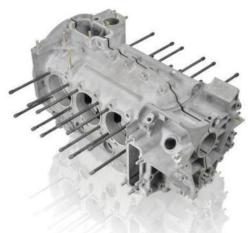
finale at Brands Hatch and will hope to carry this momentum forward into the new season.

Hugo Ellis also moves up from the Pro-Am category to a full Pro campaign in 2023, while Micah Stanley marks his return, the Monegasque making the same move in 2021.

In 2018, the championship introduced reverse grids for the second race of each weekend, a feature remaining for 2023. Follow the latest Carrera Cup GB news on Instagram and Twitter by following @PorscheRaces_GB.

NEWS & VIEWS





NEW OEM MAGNESIUM CRANKCASES FOR 911 2.0/2.2/2.4/2.7 FLAT-SIXES

Not long before this issue of 911 & Porsche World went to print, our editor, Dan Furr, was given a sneak peek of the UK's first new magnesium crankcases released by Porsche Classic for air-cooled 911s built between 1968 and 1976. The reissue is for models of the F- and G-series powered by 2.0, 2.2, 2.4 and 2.7-litre engines. This includes the legendary Carrera RS 2.7.

With this exciting new release, it is possible for owners, workshop managers and historic motorsport engineers to order magnesium crankcases as original parts from their nearest Porsche Classic Partner Centre or preferred Porsche Centre, anywhere in the world. The cases come with head studs already attached and the shuffle pins in. The only studs not supplied are those for the gearbox to be mounted to.

Until now, repairs for the 911's original magnesium crankcases have involved re-using second-hand parts from old engines or by trying to weld minor cracks. "This reissue closes another gap in our range of spare parts, making it possible to build completely new engines for most classic 911 models," says Ulrike Lutz, Director of Porsche Classic. "There's huge demand from our customers for true-to-original engine components like this." He goes on to





reveal Porsche Classic is already working on reissues of crankcases for additional generations of air-cooled 911, though it's worth noting, for the past two years, new aluminium crankcases have been available for larger-engined 911s, including those from the 1990s.

For the magnesium crankcases, Porsche Classic based its work on the most recent and

mature iteration of the series production part. All new 911 crankcases bear a blank number indicating the adopted design version, as well as

a new part number. For two-litre and 2.2-litre flatsixes, this is 90110100146. Customers wanting magnesium crankcases for 2.4-litre engines should use part number 90110100147, while 91110100145 is for owners of 2.7-litre units. In the UK, the price is £8,827.38 including VAT, irrespective of part number ordered.

Based on gathered computer-aided design (CAD) data, an OEM supplier casts the crankcase using the sand-casting method. First, the appropriate moulds are produced in a plant and the cores are made from sand bonded with resin. After casting, these cores are destroyed to free up the cast part. The blanks are then machined

on a five-axis CNC machine. More than fifty different cutting, drilling and milling tools are used. Very little material is removed. For the milled surfaces, for example, between three and four millimetres is despatched.

For component approval, an RS 2.7 engine was used as a test mule. Equipped with new magnesium crankcases and multiple measuring

sensors, the
engine was
subjected
to taxing
endurance
runs with
precisely
defined load

conditions and

THE TEST ENGINE WAS DISASSEMBLED DOWN TO THE LAST BOLT AT THE PORSCHE R&D CENTRE IN WEISSACH

carefully monitored engine speeds. Additionally, Porsche Classic technicians took oil samples and analysed them for suspended particles and foreign substances. When satisfied with their findings, and after all test runs were complete, the engine was disassembled down to the last bolt at the Porsche research and development centre in Weissach, where every component was thoroughly inspected and stress-tested.

Porsche Classic's new magnesium crankcases for early 911 engines are the latest additions to a portfolio of factory components for legacy models, totalling some eighty thousand original parts. Reproduction manuals are also available.



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NEWS & VIEWS





PETERSEN AUTO MUSEUM HOSTS ITS BIGGEST PORSCHE EXHIBITION YET

In collaboration with Porsche Cars North America, We are Porsche will celebrate the storied marque's seventy-fifth anniversary by featuring key models and personalities behind the brand's success. Hosted at the Petersen Automotive Museum in Los Angeles, the exhibition is now open to the public and focuses on how influential figures in the USA helped transform Porsche from a builder of niche sports cars to a cultural phenomenon.

This highly anticipated exhibition will feature in excess of forty exceptional Porsches across the museum's first and second floors. Key inclusions are the 1953 550 Spyder raced by Betty Shutes and Ken Miles, the 1958 356 A 1500 GS Carrera GT Speedster campaigned by Bruce Jennings, and the Porsche many enthusiasts recognise as the first true Outlaw: Dean Jeffries' custom 1957 356 Carrera.

Perhaps unsurprisingly, motorsport machines make up a significant number of the cars included in *We Are Porsche*. The Type 804 Formula One car driven by Dan Gurney (and responsible for Porsche's only wins in F1 as a constructor) ranks high among the Porsches set to excite exhibition visitors. Designed by





THE 1973 911 RSR 2.8

DRIVEN BY PETER GREGG

AND HURLEY HAYWOOD

TAKES ON A STARRING ROLE

Ferdinand Alexander 'Butzi' Porsche under the watch of Porsche PR and motorsport director, Fritz Huschke von Hanstein, and featuring a chassis overseen by factory engineer, Helmuth Bott, the 804 features a tubular steel frame paired with an aluminium body and was the first Porsche to make use of body panels made from composite materials. Propelled by an aircooled flat-eight

developed by
Hans Hönick and
Hans Mezger,
the 804 took
top honours at
the 1962 French
Grand Prix, as
well as the non-

championship Solituderennen race, held at Castle Solitude in Stuttgart. Gurney was driver on both occasions.

None of our readers will be surprised to learn *We Are Porsche* pays tribute to BRUMOS, the iconic Jacksonville race team famous for fielding high-output Porsches in a variety of endurance racing competitions. The 1973 911 RSR 2.8 driven by Peter Gregg and Hurley Haywood takes on a starring role in the exhibition, chiefly on account of the car winning

both the IMSA and Trans-Am championships. Of course, the Sunoco-liveried 917/30 Can-Am Spyder famous for being the most powerful sports race car ever assembled will also be available to see in the metal. Forever associated with American driver, Mark Donohue, this extraordinary Porsche was capable of producing a shade under 1,600bhp and dominated Can-Am

racing to such a large degree the series was effectively wound up — no other manufacturer could compete with the 917/30, as demonstrated

by McLaren exiting the competition in frustration.

No celebration of Porsche in the USA is complete without a sprinkling of Hollywood glamour. To this end, Steve McQueen's 1976 911 Turbo (930) will be included in proceedings, as will the Porsches making recent appearances on the silver screen, namely the classic 911s featured in *Top Gun: Maverick* and *Glass Onion: Knives Out*. Running until April 2024, *We Are Porsche* will also feature a rotating cast of supporting vehicles. Visit petersen.org/porsche.



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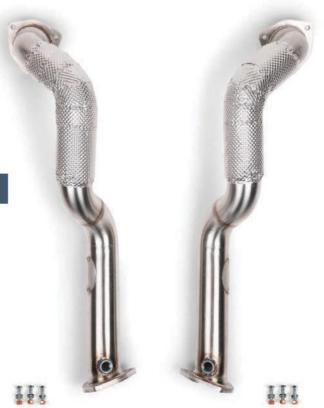
ESSENTIALS

Hot products for you and your precious Porsche...

NEW FABSPEED 718 GT4 RS OVER-AXLE LINK PIPES

Fabspeed's new over-axle link pipes for the 718 GT4 RS increase power, save weight and add a more aggressive exhaust tone. With an otherwise stock exhaust and no ECU tune, gains of 30whp and 34lb-ft torque are experienced at 4,750pm. That's a hike of 33hp at the crank! Peak output is also increased, from a baseline of 456whp to 474whp and from 330lb-ft to 341lb-ft. Available either resonated or non-resonated and constructed from T304L mandrel-bent stainless steel, these pipes are much less restrictive than the factory parts they replace and are lighter, saving a significant 5.4kg over the standard pipes. Designed using 3D scans of the OEM headers (thereby ensuring a perfect fit and simple, bolt-on installation), making use of German-made HJS HD tri-metallic 200-cell EURO 6 homologated catalysts and supplied with a lifetime warranty, the pipes also feature a stainless heatshield with a ceramic-fibre core.

Price: \$2,195.95 non-resonated, \$2,495.95 resonated fabspeed.com or call +1 215 646 4945



TECHART ONLINE CONFIGURATOR FOR PORSCHES

TechArt has expanded its 3D online car configurator with new refinement programs for the 992 GT3, 992 GTS and the latest Panamera models. With these updates, a variety of TechArt styling and performance upgrades are now available to enthusiasts for sixteen different Porsches across seven model series. Another highlight of the configurator is the inclusion of the 992 Turbo S-based TechArt GTstreet R. Through your browser, each production model can be equipped with TechArt updates and viewed from any angle. For the purposes of instant comparison, it is possible to switch between the base vehicle and the TechArt model at any time when viewing the presented 3D model.

Price: The sky's the limit! techart.com/buildyourown



NEW 9M MAPPING TOOL FOR 718 GT4/SPYDER/GTS

9M, the performance tuning arm of Warrington-based independent Porsche maintenance and restoration outfit, Ninemeister, has revealed details of its new remapping tool for GT4, Spyder and GTS models in the 718 Cayman/Boxster line-up. Best of all, the cost of purchase includes a pre-loaded 9M Stage 1/Stage 2 software update. What does this mean for owners? Well, you now have the capability of flashing and re-flashing your 718's ECU from the comfort of your own home. And, of course, you get to keep the unit for future use. Based on the MyGenius hand-held OBDII ECU programming tool, the unit uses all recent automotive communication protocols (K-Line, CAN and J1850) and can store your car's original/stock ECU map to its internal memory card, allowing you to return the vehicle to a standard state of tune at any time. Easy to use, this 9M-optimised version of the MyGenius unit means not having to travel long distance to the Ninemeister workshop or sending in your car's ECU for a flash before visiting your preferred Porsche Centre for a routine service.

Price: £995.00

ninemeistershop.com or call 01925 242342





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NEW CLARKE BOLTLESS WORKSHOP SHELVING

Tool manufacturer, Clarke, has launched a new range of shelving solutions for workshops and garages. Combining tough steel construction with quick and easy boltless assembly (only a hammer is required), a wide selection of options is available. For starters, you can choose between silver, grey, red, blue or even orange-and-blue powdercoated finishes, select different frame widths and depths, shelf load rating and, of course, the number of shelves you require. High-quality chipboard is used for the shelving, which is capable of holding huge weight (evenly distributed) and is height adjustable — simply position the shelves to accommodate the height of your tools and other workshop equipment. Superstrong and free of the hassle of fiddly nuts and bolts, this easy-to-assemble collection of shelving solutions can be ordered direct from the website of Clarke product retailer, Machine Mart. You can also order the shelving of your choosing in any one of Machine Mart's sixty-five nationwide superstores.

Price: From £52.79

machinemart.co.uk or call 0115 956 5555



WEBCON POWER KIT FOR CLASSIC 911 FLAT-SIXES

Fuel system and carburettor specialist, Webcon, has released new genuine 40 and 46 Weber IDA3C power kits for air-cooled Porsche flat-six engines, as fitted to the 911 and 914/6. These superb new carburettors have been produced in Weber's factory in Spain, with all-new tooling created from original 1960s drawings. The new kits also feature Webcon's own UK-manufactured inlet manifolds and throttle linkage set, as well as a pair of top quality re-usable air filters. To develop the kit, which includes everything you need for the conversion, such as manifolds, linkages, fittings and air filters, as well as the carburettors themselves, Webcon UK consulted various respected Porsche specialists. This crucial feedback ensured the kits could be tailored to offer the best fit, performance and longevity possible.

Price: 40IDA3C £4,914, 46IDA3C £5,154 webcon.co.uk or call 01932 787100

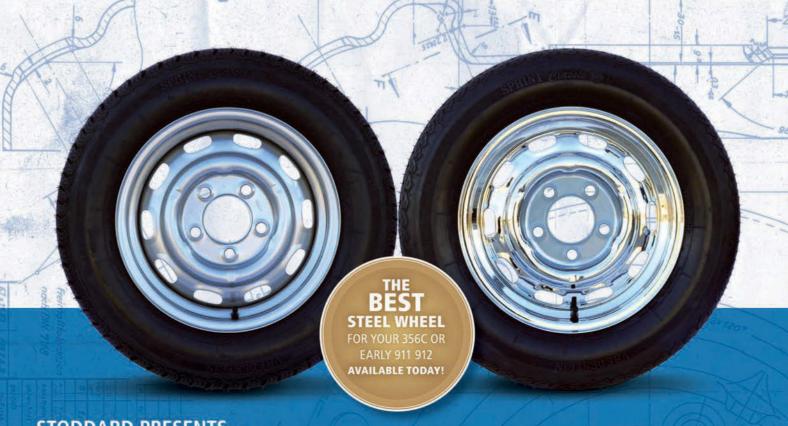


NEW KW V5 COILOVER KIT FOR CARRERA GT (980)

With its high-revving mid-mounted V10 engine, 5.7 litres of displacement, more than 600bhp, a manual six-speed transmission and a carbon-fibre monocogue, the Carrera GT was way ahead of its time. Bringing the model up to date is a choice of KW V5 coilover kits. There are two available: one with a KW hydraulic lift system (elevating the car's body by forty-five millimetres), one without. Lift kits without rubber spring bellows offer the advantage of the system becoming more compact. Also, there are no drawbacks relating to spring rate and driving dynamics, unlike like systems making use of airsprings. Additionally, no retro-fitting of compressors or air tanks is required. In its installed condition, it is noticeable how compact the KW lift system is - the necessary hydraulic pump unit and hydraulic tank are the size of a car battery. The dampers are adjustable, though pre-configured with high- and low-speed compression and rebound rates to suit the Carrera GT. Even so, owners can take advantage of fourteen different settings, with position zero representing maximum damper performance, and position thirteen indicating minimal damper performance. Instead of a standard mono- or twin-tube damper, V5 dampers use solid piston technology, which separates the valves from the working piston and is used in current GT3 and GT4 motorsport. Due to the compact design, the hydraulic working area enlarges immensely, with no wheel-guiding forces occurring with the damper.

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RENNLINE 997 TURBO CARBON INTAKE DUCTS

Rennline's new carbon-fibre intake ducts for the 997 Turbo are a great way to give your force-fed 911's engine bay a modern facelift. These parts are compatible with Rennline's M59 997 Turbo intake (sold separately), which increases airflow and performance to the tune of 28whp and 30lb-ft torque. Made from high quality carbon-fibre using the latest construction techniques, each duct follows the dimensions of the OEM plastic intake ducts to ensure a perfect fit. Installation takes minutes, with no drilling or alteration to the host 997's standard hardware required.

Price: \$375

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Price: £119

richbrook.co.uk or call 01328 862387



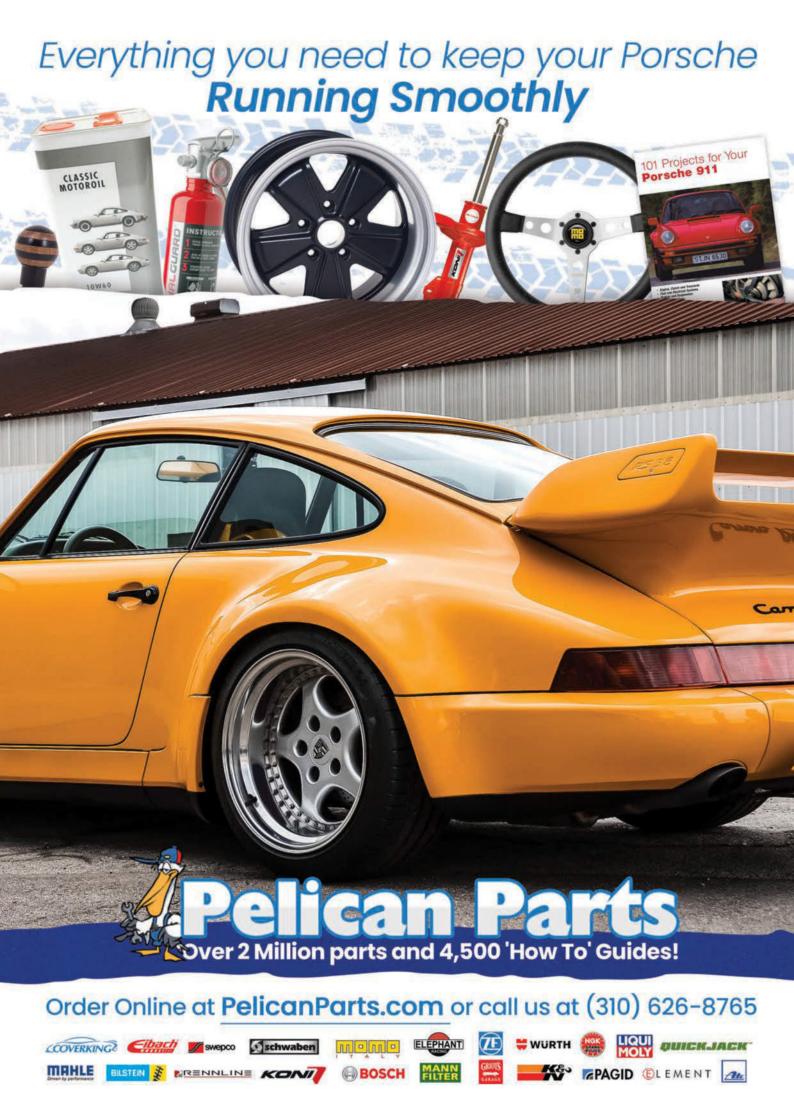
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Price: £220

ctek.com or call 0333 880 4170



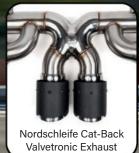


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TIM HARVEY

For more than five decades, from introduction of the Carrera RS 2.7, Porsche has stayed true to its original Rennsport philosophy, even if the platform each successive generation is based on has altered significantly. Will the latest addition to the line-up prove to be the defining jewel in the 911's crown? I intend to find out...

Tim Harvey is best-known for being 1992 British
Touring Car Champion and for being crowned Carrera
Cup GB victor in 2008 and 2010. He's contested the 24 Hours of Le Mans four times, competed in British GT and currently serves as a presenter for ITV4's extensive BTCC coverage.
Find him at @timbo_harvey



o begin with, all I wanted was
a 911, my boyhood bedroom
poster car. I ended up buying a
Carrera 3.2, but then I wanted
a Carrera S, then a GT3 and
ultimately, of course, an RS.
There were many cars in-between, but an RS was
the goal — those two letters represent the finest
iteration of any track-focused, road-going 911.

As was the case for so many 911 enthusiasts, the Carrera RS 2.7 ignited my passion for Porsche. Here was a lightweight, performance-focused 911 aimed at competition use, or at least to be driven at a race track. Reduced equipment levels (yes, there was a Touring version, but that held no interest for me) coupled with the best flat-six, as well as gearbox and chassis technology gleaned from many victories garnered by Porsche's racing department, resulted in an extraordinary sports car. Reassuringly, this same blueprint has continued to inform RS lineage for more than fifty years, despite significant changes to each successive generation of 911.

I've only ever had the briefest of drives in a genuine RS 2.7. Most are locked away in collections, such is their value. They're certainly not loaned to former racing drivers like me, a Porsche enthusiast keen to explore

the machine's limits. What a car it was for it's day, though. Light, but full of steering feel, an extra twenty ponies over the 2.4-litre 911, and immediate response to control inputs.

The first RS I drove on a track was a pink (sorry, Rubystone Red) 964 variant. Apart from its colour, which I regarded as utterly hideous, but with the passage of time is now considered cool, the car presented me with a seminal moment. Having driven loads of fast road cars on trackdays, this was the first that actually felt like a true racer. Granted, it had a roll cage fitted and was in Clubsport trim, but the chassis stiffness, lack of soundproofing and sheer explosiveness of the engine had me hooked. I could have stayed in that 911 all day — I genuinely consider that session at Silverstone one of my favourite motoring memories.

It led to me seek out any opportunity to drive an RS. 996, 997 and 991 versions didn't disappoint. For sheer driving pleasure, I would say the 997 Gen II GT3 RS was my all-round favourite 911 Rennsport, presenting the perfect balance of size, response and speed. Of course, my current 991 Gen II GT3 RS is faster around a track and has a few more mod-cons, but if I could pick just one RS to keep forever, it would definitely be the 997.

Please don't hate me after you've finished

reading this sentence, but by the time you this magazine hits newsstands, providing all goes to plan, I will be the proud owner of a brand-new 992 GT3 RS. Yes, I am fortunate enough to have been given a buyer allocation, and whilst I have known about my impending delivery for some time, I wasn't sure quite when it would take place. I'm pleased to be able to share the news with you now.

To say I'm excited would be the biggest understatement of the year. It would appear Porsche has thrown the proverbial kitchen sink at this latest RS (possibly because it looks set to be the last fully normally aspirated version). Indeed, it carries more technology than most race cars, including Carrera Cup racers. To be honest, it's more akin to a full-blooded World Endurance Championship RSR.

Like so many buyers, I spent an age playing with the Porsche configuration app before settling on my preferred final specification, which is locked in − no going back! In tribute to the Carrera RS 2.7 responsible for starting my love for the 911, I've opted for solid black paintwork with red wheels and matching side script. If the new RS is half as good as my car's outrageous looks suggest, who's to say, given time, it won't achieve the same legendary status as the 2.7? I'll be sure to give you my verdict. ●



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TIM NEELY

In terms of performance, the 2.5-litre version of the M96 water-cooled flat-six was never going to set the world alight, but to be only concerned with the host 986 Boxster's engine output is to be ignorant of how accomplished this open-top, two-seater roadster really is...

Tim Neely is an automotive journalist and car collector currently producing videos for his YouTube channel, Tim's Enthusiast Garage. With his retro-themed car show, MotorVice, he hosts live events in major US cities, including Dallas, Columbus and Tampa. Find him on Instagram at @timsenthusiastgarage



hen the original Boxster concept was shown, I remember thinking Porsche wouldn't built it. At the very least, so I thought, if a series production car was to emerge from what I was looking at, it would be radically different. Either way, I didn't think I'd be interested. To my surprise, however, the final product looked nearly as pleasing as the concept. As I read through the published specification sheet and scanned descriptions of this new, mid-engined Porsche's appointments, I loved everything I saw, until I glanced my eye over performance figures.

Most discouraging was the quarter-mile time, quoted as being the wrong side of sixteen seconds. How could they?! I immediately dismissed the Boxster, but depreciation was such that I didn't have to wait long for the 986 to enter into 'I can't say no' territory.

The early 2.5-litre Boxster is the model I'm talking about. The first example I owned was fresh from a three-year dealer lease and was offered for sale through auction. Still reeling from the underwhelming performance figures, I had yet to drive a 986. Nevertheless, I took a punt. The car passed over the block and my bid won.

Upon receiving ownership documents, I made the long trek through the auction house car park to the spot where the Arctic Silver drop-top was waiting. I clambered into the cabin (resplendent in red leather), adjusted the driver's seat, got comfortable, dropped the roof and twisted the key. The silky smooth M96 whirred to life. The sound was pleasant, at once recalling G-series 911s, which had brought me so much joy in the past. Off to a good start, then?!

It took so long to pass through the auctioneer's gatehouse exit, that by the time I found myself out on the street (this particular auction house opened onto a lovely country backroad, with several dips and switchbacks spread across two miles), the engine was already up to temperature.

"Let's go!" I thought to myself. "Let's see how slow this thing really is." The first time the flat-six swung past 4,500rpm, I promise you the hair on the back of my neck stood to attention. It was as though the engine intake was positioned directly over my left shoulder, creating negative pressure right next to my ear. This was quite a thing. I approached the first dip into a tight left-hand bend, which gained elevation as it rolled out to the right, perfect for winding out second gear.

The chassis was sublime. The mid-engine dynamics were instantly palpable. Straight to the

redline in second, third, up to fourth, then a pause to assess what I'd just experienced. I actually slowed to about 25mph, just to repeat the up-shift sequence. Wow! There was real magic here. Best of all, the 986 Boxster, even in this early 2.5-litre guise, didn't feel slow. Quite the contrary — it had just enough power to feel urgent, but was relaxed enough for me to bask in the glorious sound of the sweet flat-six.

I think about it now, juxtaposed with the noise of a 991 GT3 RS. Honestly, sometimes, I wish the RS was a bit slower in lower gears, just so I could live with its noise a little longer. I may be alone in this, or it could be that entering my forties has made me soft. Either way, to my mind, the noises cars make are a big part of their appeal, and the sound produced by the first-generation Boxster is supremely characterful.

After those initial moments of surprise in my sonorous, shining silver Boxster, I spent the next hour or so draining the fuel tank and marvelling at the fact a car with on-paper numbers leaving me so disappointed had actually slapped an uncontrollable smile across my face. I had avoided the 986 for nigh-on three years. I don't mind admitting, I had egg on my face.

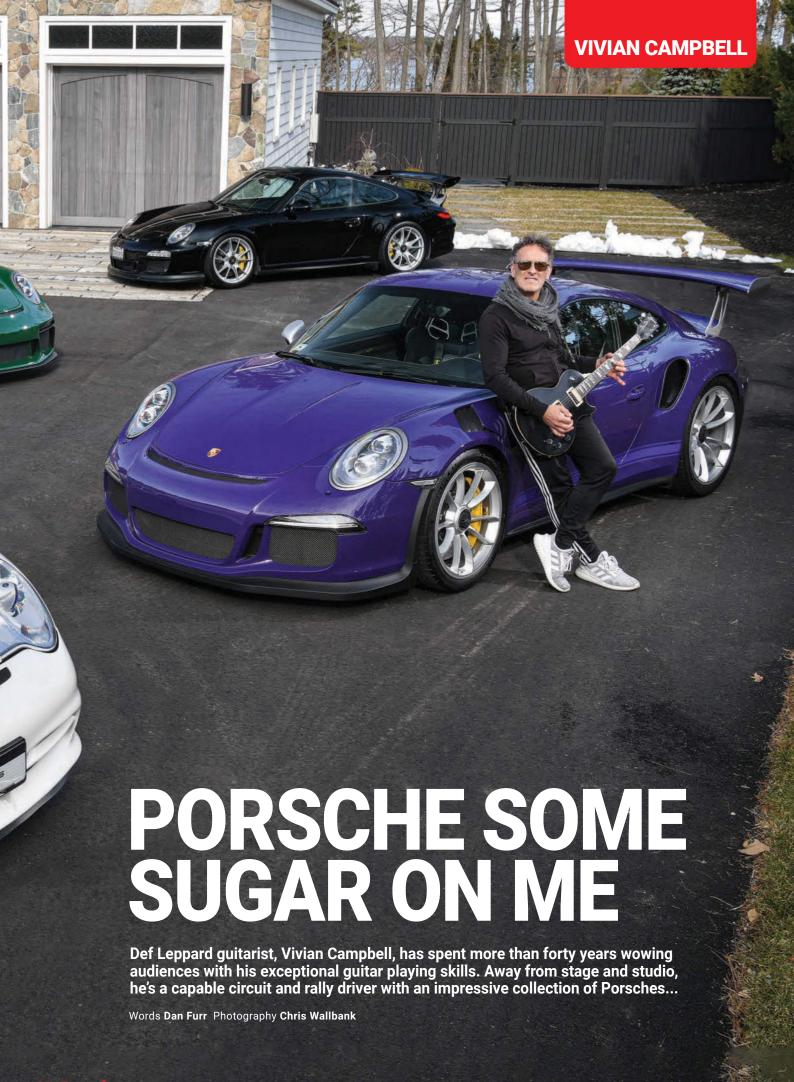
The Boxster brought to mind my sixteen-valve Scirocco, now my youngest son's favourite car. This old VW has a third of the performance of his daily driver, mustering a meagre 120-something bhp, but the noises and power-on-the-top way the Scirocco develops its modest output makes for a truly sweet driving experience.

Ever since that sunny afternoon in my first Boxster, I've learned not to read too much into a car's performance statistics. They rarely tell the story I want to hear. I'm behind the wheel for driver engagement, the noise, the mechanical feel, the magic. When it comes to the latter, Porsche clearly knows the recipe — from the moment I stepped out of my 986, immediately after that hugely impressive first drive, the doubter in me died.

Today, early Boxsters are quite the steal. Prices have remained low, though how long this will remain the case is a different story. Perhaps there's a 2.5-litre 986 out there waiting for you to take ownership? Listen to it's siren song, but whatever you do, ignore the numbers. Take it from someone who knows. ●









ast your mind back to the mid-1990s and, though it may seem difficult to believe for anyone new to the Porsche scene, our favourite manufacturer was in a perilous position. Earlier, the boom and bust of the 1980s saw the 944 become the biggest-selling Porsche product of all time, before speed machines from the Land of the Rising Sun swallowed a significant percentage of market share enjoyed by European sports car makers, which were facing accusations of poor build quality, poor performance and poor fuel consumption from showroom visitors equally disturbed by high price tags. Demand for Porsche products beyond marque die-hards was drying up, a trend exacerbated by severe global economic downturn as the new decade got underway.

The company's antiquated manufacturing processes didn't help—each Porsche model was being produced on a separate assembly line and shared few components with its stablemates. A slow in sales saw idle workers in the Zuffenhausen plant moved to Porsche consultancy projects for other brands. Hand-building of the Mercedes-Benz W124 500 E and joint development of the Audi RS 2 Avant are two of the better-known projects to emerge from this

period, but Porsche was even assisting Volvo with cabin furniture trim design.

When it came to developing new cars for its own range, Porsche simply didn't have the money to present anything fresh. For example, despite being introduced as a new model in 1991, the 968 was to all intents and purposes an evolution of the 944. Sure, chief designer, Harm Lagaaij, had worked hard to introduce a common design language across the Porsche range, reasoning 959 styling cues would make the company's cars more desirable, but even with the 964 (and, later, the 993), 968 and late 928 looking more like a family of vehicles than previous generations of Porsche products, there was no mistaking the 968 for anything other than a derivative of the 944.

In truth, technological developments were occurring — VarioCam variable valve timing, for instance — but showroom visitors weren't convinced. The Porsche product line was stale. Something had to change.

Change came in dramatic fashion and set the company on a course leading to its current status as the world's most profitable car maker (on a per unit basis). Quite the turnaround. Two key contributing factors saved the day. First was adoption of Toyota's Just in Time (JIT) lean manufacturing system, which revolutionised the way Porsches

are made. Essentially, JIT focuses on efficiency, introducing workflow methodology aimed at both reducing the unnecessary cost-carrying of parts and radically contracting the amount of required warehousing space. It does so by ensuring assembly line technicians are only provided with components precisely when they need them. This brings the benefit of heightened attention to detail when it comes to the manufacturing of items — if a part

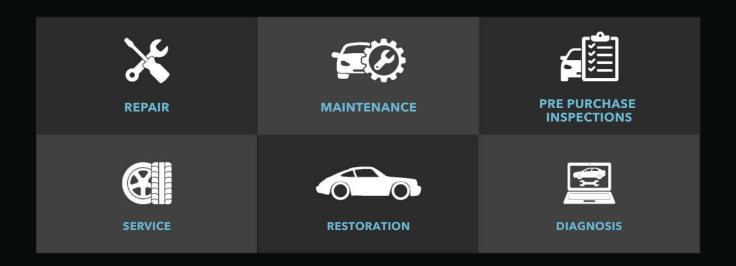
Above 996 GT3 RS wasn't offered by Porsche to its US customers, making Viv's immaculate example a rare sight

Below Optional carbon brakes help the car stop just as effectively as it accelerates





INDEPENDENT PORSCHE SPECIALISTS





PORSCHES BOUGHT AND SOLD



doesn't fit, there is no available spare to try in its place.

STARTING OVER

Coupled with JIT was the decision to dismiss the entire Porsche product range in favour of a slimmer portfolio of water-cooled cars sharing many of the same components. With ever stricter emissions legislation making it increasingly difficult to extract high horsepower from air-cooled engines, this encouraged the most radical redesign of the 911 since its inception more than three decades earlier - where previous generations of 911 had been a clear evolution of what came before, the 996 would share very little in common with its immediate predecessor, other than layout. Simultaneously, a new, midengined, open-topped two-seater would take up the role of entry-level Porsche.

The Boxster — its nameplate a portmanteau of *boxer* and *roadster* — would be identical to the new 911 from its nose to the rear quarters. Here, changes occurred, largely due to engine placement. Nonetheless, the Boxster (codenamed 986) would be blessed with the same basic flat-six as the 911, albeit with smaller displacement.

These seismic shifts in Porsche

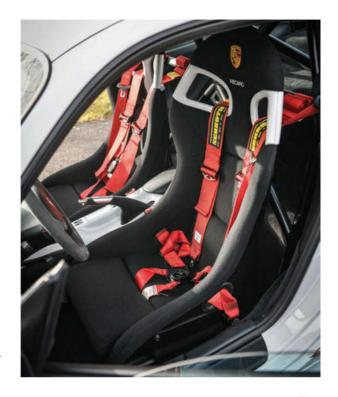
thinking transformed the way company operated and saw good fortune return to Zuffenhausen — the Boxster swiftly took the 944's crown, becoming the biggest-selling Porsche product. The company's future was assured.

Naturally, there were those who didn't like change. Self-proclaimed Porsche purists were horrified by the 996. Where was the air-cooled powerplant? Where were the round headlights? Why were 'fried eggs' slapped across the front of these new so-called Porsches? These grumblings are now largely forgotten, not only due to new generations of 911 owner appreciating the 996 for its brilliance, but also because of wider acknowledgement of the 996 and 986's role in pulling Porsche back from the brink and ensuring the manufacturer's "continued independence" (as a recent press release from the Volkswagenowned company put it).

The pinnacle of those early water-cooled cars is the 996 GT3 RS, manufactured between 2003 and 2005. With this amazing 911, Porsche confirmed it was well and truly back with a bang. Granted, the top-of-the-line GT2 delivered a Turbo-on-steroids driving experience, but in terms of driver engagement, the GT3 RS remains the

enthusiast's favourite of all 996s, not least because it sticks with the ethos behind development of the original RS-badged 911 some three decades earlier. There's also the not insignificant achievement of the 996 GT3 RS despatching a lap of the Nürburgring four seconds quicker than the 996 GT2.

Above The newest addition to Viv's fleet of water-cooled 911s is also the oldest of the bunch



VIVIAN CAMPBELL











Viv's work schedule has prevented him from taking to the track in this 2004 RS, but jobs are currently being carried out to ready the car for action when he

returns from touring

Above and below

A more aggressive version of the already track-focused 996 GT3, the RS announced its presence by way of Carrera RS 2.7-

style body graphics and colour-coded wheels. Keeping weight to a minimum was a stripped interior, a substantial carbon-fibre rear

wing (producing thirty-five kilograms of downforce at 125mph), carbon door mirror casings, a polycarbonate rear screen and a 'frunk' made from lightweight weave. Porting of the cylinder heads contributed to an increase in power knocking on the door of 400bhp, though Porsche's official figures were far more conservative. The RS's suspension was predictably stiffer than that of the

GT3 and featured adjustable top mounts, as well as an even lower ride height. The chassis was further stiffened with the

A HOMOLOGATION MODEL PRODUCED

TO ALLOW PORSCHE TO COMPETE IN INTERNATIONAL GT RACING, THE 996 GT3 RS IS A RARE SIGHT

introduction of a roll cage, while a singlemass flywheel ensured the Mezgerdesigned 3.6-litre boxer could rev like crazy. Optional carbon brakes brought the car to a super-swift halt. Traction control was out of the question. This was, in every sense, a road-legal race car.

Essentially a homologation model produced to allow Porsche to compete in international GT racing, the 996

GT3 RS is a rare sight in the UK. Specifically, of less than seven hundred examples built, only 140 were configured

> with right-hand drive. 113 of these cars were imported into Britain. If you're feeling hard done by, spare a thought for our cousins in America — the 996 GT3 RS wasn't

offered to Porsche customers across The Pond, meaning the car I'm eyeballing in this coastal corner of New England is an incredibly rare thing indeed.

Looking at the company it keeps (you'll have noted the 997 GT3 RS 3.8, 991 GT3 and 991 GT3 RS in our pictures), you'd be forgiven for thinking this red-striped Rennsport was the starting point for an exploration of GT3 ownership. This special 911 is, in fact, the last of the quartet to find its way onto its proud owner's driveway.

The Porschephile in question is Vivian Campbell, best known for his role as axeman in rock band, Def Leppard, but also recognised for time served in some of the world's most influential rock and metal groups, including Dio, Whitesnake and Thin Lizzy. This job affords me amazing opportunities to indulge my passion for Porsche, but even so, it's not every day a globally renowned rock star invites me to spend time at his home checking out his collection of Stuttgart-crested cars. Needless to say, I didn't waste time in booking flights for myself and photographer, Chris Wallbank, to





coincide with a break in Viv's punishing touring schedule.

Viv's first Porsche was a Grand Prix White 964 Carrera 2, bought not long after he joined Def Leppard. "Its original owner was a lawyer working out of Los Angeles," he reveals. "Previously, as the owner of a Ferrari 308 GTB, I mistakenly considered Porsches a little boring, especially when compared to the output of Italian sports car manufacturers. To my mind, the 911 looked dull, lacking the design flair exhibited by cars rolling out of Maranello, but the makeover Porsche gave the 964 blended the 911's traditional styling with a contemporary look, which appealed to me. The 911 finally looked modern."

NEW HORIZONS

Aesthetics are one thing, but as Viv soon discovered, the real difference between a 911 and its contemporaries is the driving experience. "It was nothing short of amazing," he admits. "Here was a sports car I could actually use in anger, unlike the Ferrari, which looked great and was a lot of fun, but didn't really drive too well. I was immediately hooked on the 964 and quickly began to appreciate the simplicity of design Porsche had adopted throughout its history." We'll explore his love of air-cooled cars in next month's issue of 911 & Porsche World, when we'll showcase his modified 1956 356 A Type 1 coupe, 1958 Type 2 Speedster and 1967 911 S. In the here and now, I'm keen to find out more his obsession with GT3s.

"When I'm not on the road touring, and when I'm not in the studio recording, I'm honing my skill behind the wheel, primarily by driving these cars at my local racetrack." Yep, the four 911s you see here are used almost exclusively for circuit action, just as Porsche intended. His 2004 996 GT3 RS, complete with carbon brakes, was bought in June 2021. "It was advertised on the Bring a Trailer auction website, which I'm constantly scanning," Viv tells me. "The previous owner federalised the car for use in the US after importing it from Germany. I placed a bid, but the auction ended without reaching the reserve price." With the car unsold, an opportunity to strike a deal presented itself - after reaching out to the vendor, Viv negotiated a purchase price "between my bid and what the seller wanted"

The deal was done, but this didn't mean the RS's excited new owner was able to hop in and stretch the legs of his new toy. Indeed, Def Leppard's work schedule has been super-intense since the height of the pandemic. Not only did the band record its critically acclaimed 2022 release, *Diamond Star Halos*, but a mammoth stadium tour with co-headliners, Mötley Crüe, has seen Viv away from home, playing all over the USA and Latin America in support of the album. And, by the time this magazine hits newsstands, not only will the European leg of the

Above and below 2011 997 GT3 RS 3.8 has been heavily modified by the team at BBi Autosport





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VIVIAN CAMPBELL





Above Ultraviolet 991 GT3 RS was treated to a variety of personalisation options before delivery to the Porsche Experience Centre in Atlanta

Facing page In addition to this spectacular 997 GT3 RS 3.8, Viv owns a 997 GT3 RS 4.0 tour be kicking off, but Def Leppard will have yet another new album to promote — *Drastic Symphonies* is a highly anticipated collection of the group's biggest hits reimagined with symphonic arrangements and performed in collaboration with the Royal Philharmonic

Orchestra.

Throw in a new album and live shows from Viv's other current musical enterprise, Last in Line (formed

in Line (formed with his former Dio bandmates), as well as Def Leppard's appearance in the hit Netflix movie, *Bank of Dave*, and it becomes abundantly clear why he has yet to find time to drive his 996 GT3 RS in anger. "Truth be told, the car needs a bit of work," he reveals. "The tyres are very old and the coolant lines need to be

pinned before I'm happy to take it out."

He'll be relying on trusted marque indie, Seacoast Specialist Cars, for the work. We'll be taking a peek behind the scenes at this family-run business in a forthcoming issue of 911 & Porsche World, suffice to say it's a firm trusted by Porschephiles far and wide on account of its founder, Thomas Vagi, previously working as service manager at one of the region's biggest Porsche Centres.

His chief technician, Christopher Kustos, hails from the same dealership, which is where Viv first encountered the dynamic duo. "Tom has already replaced the alternator on this 911, but sorting its coolant lines in readiness for track action is the next big job on the agenda."

As a big fan of the 997-generation 911, I'm excited by the jet black 2011 GT3 RS 3.8 in Viv's possession. Any RS 3.8 is a sight to behold, but this particular example, as its license plate carrier it reacts to my control inputs is almost telepathic. It's a truly exhilarating 911, delivering a true race car feel in a road car. I quickly came to appreciate how an RS is best suited for track work, though, which is why I tend only to use these cars at my local circuit."

THE 991 GT3 RS MAKES USE OF A NORMALLY ASPIRATED FOUR-LITRE FLAT-SIX DEVELOPING CLOSE TO 500BHP AND 346LB-FT TORQUE

suggests, has been enhanced by the team at BBi Autosport in Huntington Beach, California.

"This was my first GT Porsche," Viv smiles. "I bought it in 2014 from a dealer in Columbus, Ohio. Earlier, in 2006, I bought a brand-new 997 Carrera S. Not long after, Porsche released the 997 GT3 and GT3 RS. I should have held out a little longer!"

He toyed with the idea of modifying the Carrera S in order to optimise it for the track, but prominent voices on the Rennlist forum dissuaded him from doing so. "They kept telling me to leave the Carrera S well alone, suggesting my money would be better invested in a GT3." Eventually, the time came to bite the bullet. "The first time I drove my RS 3.8 was Easter 2014," he continues. "I was pedalling along California's Highway 74 at the crack of dawn. Working my way through the mountains, I was struck by how responsive this car is. The way

Believe it or
not, this GT3 RS
3.8's original buyer
paid extra to take
advantage of
Porsche's Paint to
Sample programme.

Of all the colours

he could have

picked, he opted for black. Not the most imaginative choice, but then again, it wasn't available as a standard finish at the time of production, and it certainly suits the car.

The work at BBi Autosport (all of it commissioned by Viv and carried out as 2021 rolled into view) included installation of the company's rear toe steer kit, Street Cup harness bar, uprated clutch and flywheel, coolant pipes (with billet fasteners), lightweight pulley, short drive belt, bump steer kit and valve side muffler delete. Additionally, the car benefits from a top-end engine rebuild, all new seals and sensors, Cup heat exchangers, a Wavetrac limitedslip differential, rebuilt injectors, Tarett Engineering drop links, Schroth Profi safety harnesses, Brey Krause subbelt mounts, Rennscot RS Pro harness collars, an updated GT3 RS lip spoiler and revised geometry with aggressive camber. Make no mistake, this car has



been carefully configured for an aweinspiring attack of the asphalt.

"Rev matching is far more difficult in this 911 than it is in my newer RS," Viv muses. "It requires so much more skill to drive a 997 GT3 RS competently. I also own a 997 GT3 RS 4.0, which I currently keep in Los Angeles. The bigger-engined RS is easier to drive because it offers more torque, even though, overall, the car is largely the same as a GT3 RS 3.8." I suggest, more than any other generation of water-cooled 911, the 997 requires you to be engaged at all times. You're an integral part of the machine - lose concentration and the car will bite back, unlike the 991, which will correct errors without you realising they've been made. "It's true," Viv concurs. "I've tracked my 991 GT3 RS extensively. It's so easy to drive. It's totally planted. There's a huge amount of rubber in contact with the surface below. In either of my 997s, I'm far more mindful of how I'm driving, and not just because they're equipped with manual transmission, unlike my 991 GT3 RS, which is loaded with PDK."

TAKE YOUR PICK

As is the case with all Viv's water-cooled Porsches (all of them normally aspirated), since this black beauty's relocation to New England, Seacoast Specialist Cars takes care of all servicing and maintenance requirements. "Looking at the Porsches I'm lucky enough to own, picking a favourite is nigh-on impossible. I love them all for different reasons, but as far as this particular selection of 911s

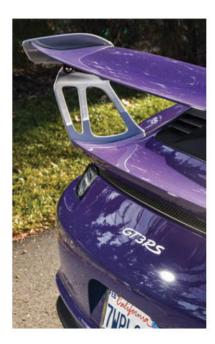
is concerned, if push came to shove, I'd probably keep the 997 above the others," he says, in recognition of the car's extraordinary abilities. I wonder if he'll change his mind when he experiences seat time in his 996 GT3 RS? "The 996 will have to work hard to sway my opinion. I feel so alive when driving the 997. There's nothing else like it."

Perhaps the most eye-catching of all Viv's 911s is his 2016 Ultraviolet 991 GT3 RS, ordered through the same dealer in Ohio responsible for supplying his 997 GT3 RS 3.8. "After acquiring the 997, I bought a first-generation 991 GT3, but traded it in to secure the build slot for this purple RS. I had the car delivered direct to Porsche Experience Centre

Atlanta. I'm not a huge fan of PDK, but this was all the car was offered with."

Treading a path laid down by the 997 GT3 RS 4.0, the 991 GT3 RS revealed at the 2015 Geneva Motor Show — makes use of a normally aspirated four-litre flat-six developing close to 500bhp and 346lb-ft torque. The benchmark dash to 62mph from rest is despatched in 3.4 seconds (more than half a second quicker than the 997 GT3 RS 4.0). The race to 124mph from a standing start takes just 10.9 seconds. Rear-axle steering and Porsche Torque Vectoring Plus (incorporating a fully variable electronically controlled rear differential lock and fully variable torque distribution) are standard

Above and below GT Silver can be seen on the wing end plates and door mirror casings of this stunning 991, while the interior has been treated to silver detailing and Pepita fabric seat inserts

















// MANTHEY









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features, as are Clubsport-style interior door handles, 918 Spyder-derived carbon bucket seats, a bolt-in roll cage and a lightweight magnesium roof.

With this being a brand-new GT3 RS, Viv took the opportunity to personalise the car with a few subtle updates. Consequently, the door mirrors and rear wing end plates are finished in GT Silver,

the Porsche logo appears in Royal Purple down each flank, and the rear model designation is finished in Silver Metallic. Inside the car, the seat

belts are silver, the belt passages are painted GT Silver, and the dashboard, steering column casing and inner door sill guards are finished in black hide with silver stitching. The carbon-fibre buckets (wearing Schroth harnesses) are kitted out with Pepita inserts, while the centre console lid is finished in GT Silver fabric with a black Alcantara top proudly exhibiting an embossed Porsche crest.

"I've driven this car extensively at the track," Viv confirms, "but after being behind the wheel of my 997, I can't help but think this newer GT3 RS is just too easy to drive. Don't get me wrong, I push it hard and it's a huge amount of fun, but it's not as challenging as the 997.

Ultimately, at the time I placed my order, this was the latest and greatest RS, which is the reason I bought it," he grins, before telling me he absolutely adores the Porsche's Ultraviolet paint job.

Not as much as he loves the Irish Green finish of the only non-RS watercooled 911 at Chez Campbell during my visit. Ordered through Porsche's Special Silver stitching features throughout. Body-coloured air vent surrounds, brushed aluminium sill kick plates (with model designation illuminated in green) and exterior silver stripes with a yellow Porsche logo further identify this GT3 as one of a kind. "It took a long time for this 911 to arrive after I placed my order," Viv tells me. Representing the

closest thing to a street car in the cool quartet of watercooled Neunelfers I'm examining, it was delivered to Porsche Experience Centre Los Angeles for collection, before

being shipped out to the east coast following Viv's move to New England.

Thomas and the team at Seacoast Specialist Cars take care of all servicing and maintenance, though special mention has to go to Viv's friends, Michael Venn and Michael Couch, for getting his cars clean in readiness for our photo shoot. "I don't wash them. I never have," Viv shrugs. "This is the cleanest my Porsches have ever been."

Venn, the owner of a just-delivered 718 Cayman GT4 finished in Shark Blue, and Couch, the proud pilot of a 992 Carrera GTS rolling on HRE wheels, KW coilovers and making itself known through the bark of a Quicksilver exhaust, have been

THE OBVIOUS QUESTION YOU'LL BE ASKING IS WHETHER HE INTENDS TO ADD A 992 GT3 RS TO HIS COLLECTION

Wishes programme, this 2018 991 GT3 is totally standard, save for the cosmetic updates Viv requested at the time of placing his order.

"I bought it as a birthday present to myself," he smiles. The green wide monster's individual equipment includes Mahogany leather for the lower dashboard, arm rests, centre console, door handles, seat bolsters and head rests (the latter embossed with the Porsche crest). Black leather is used for the upper dashboard, upper door card panels, sill guards, sides of the centre console and upper window triangles. A mix of Mahogany and black leather covers the interior rear quarter panels.

Above Irish Green paintwork and Mahogany leather interior work perfectly together on this Special Wishes 911

Facing page Viv gives editor Dan a tour of the green wide monster, which was delivered to the Porsche Experience Centre in Los Angeles for collection

VIVIAN CAMPBELL























busying themselves with microfibre cloths and an Audi loaded with detailing products since my arrival. "Viv really does drive these Porsches hard," Venn confirms. "They're never usually this clean. They get a proper workout at the track, and then they're put away until the next session. Viv prefers his air-cooled cars for the road."

SCORING POSITION

Ah, yes. The trio of classic Porsches mentioned earlier. As intimated, we'll be familiarising ourselves with these cars next month, coinciding with when Def Leppard takes to the road for the European leg of the band's stadium tour, kicking off with a gig at Bramall Lane (home to Sheffield United football club), before zig-zagging across the continent in the lead-up to what promises to be a triumphant show at Wembley Stadium, where Viv was formally introduced as a member of Def Leppard back in 1992.

The obvious question you'll be asking is whether he intends to add a 992 GT3 RS to his collection. Perhaps, but at the time of writing, he's eagerly awaiting progress reports on two spectacular in-build custom Porsches: one from Singer Vehicle Design, one from Emory Motorsports, both of which I'll touch on next month. He's also commissioned preparation of an R4 rally car, allowing him to further refine his driving capabilities on loose surfaces, something he takes very seriously. To this end, he's preparing a rally-focused driving simulator for home use and

hopes to secure real-world tuition from one of the world's most successful rally stars. Dedication is, so it seems, Viv's middle name.

For all their evolutionary advantages, I note how the 997 and duo of 991s pictured on these pages fail to command the same level of attention as Viv's 996 GT3 RS when his friends — many of them Porsche fanatics — introduce themselves during my visit. Admittedly, this is a seldom seen 911 in the USA, but fascination with this white and red Porsche extends beyond its 'unicorn' status in this part of the world. You see, not only is the 996 GT3 RS the first (and purest) product of a now hugely

influential model line, it represents a return to rude health for Porsche as a company. Combined 996 and 986 sales, as well as the unprecedented success of the Cayenne SUV, would give the business an opportunity to afford its products their own identity as time passed, gradually eliminating complaints from 911 buyers upset at the fact their neighbour's much cheaper Boxster shared a high number of components with the Porsche flagship. Even the Cayman, first introduced in 2005, is now allowed to give the 911 a run for its money, as evidenced with the arrival of the 718 GT4 RS. Such is Porsche's confidence in its future. Long may it continue.

Above and below
Man and machine(s)
in perfect harmony
— Viv is pictured with
his first Gibson Les
Paul, with which he
recorded the debut
Dio album, Holy Diver,
back in 1983



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PODIUM POSITION

What should you do if there is no local meet to attend in your Porsche? You could take a leaf out of John McDonald's book and start your own series of events. We made the trip to Newbury-based Podium Place to find out more...

Words and photography Dan Sherwood

ike most of us, fiftyone-year-old petrolhead,
John McDonald, was
first excited by cars at
a young age. "I thought
shows and meets were
great fun, offering the opportunity to
meet cool and interesting people. As is
often the case, however, by the time I
had kids and a career, I lost touch with
much of the car scene." Originally a
Volkswagen quy — like

Volkswagen guy — like
many Porsche owners,
John's first car was a
Beetle — he migrated to
Stuttgart-crested sports
cars later in life, when
his tastes changed and
funds allowed. Now the
proud owner of a restored
and sympathetically modified 912 (a
car featured in a recent issue of our
sister title, Classic Porsche), John cites
a burning desire to get out and use his
'baby 911' as the catalyst for his plan to
establish a meet near to where he lives
in Berkshire.

"The 912 encouraged me to attend car shows once again. I enjoyed the welcoming vibe, which reminded me of why I loved car culture so much in my youth," he reminisces. "Moreover, it immediately became apparent there were other local Porsche owners just as keen to get out and use their cars as I was. With this in mind, I reasoned the relatively high number of large, Porschespecific events popping up in the UK during recent years indicated a likely desire for smaller-scale meets."

The pandemic took the wind out of his sail. Indeed, COVID-19 plunged the world into the depths of enforced periods of lockdown, stopping social gatherings in their tracks and forcing Porsche enthusiasts to only indulge in their hobbies whilst hermetically sealed in their home garages. For some, this was a hugely welcome opportunity to

spend time working on uncompleted project cars, but there were others who sat counting down the days until they could return their Porsche to the public highway and shoot the breeze with fellow owners.

"As we all know, when restrictions lifted, people were eager to resume their old lives and socialise as quickly and as safely as possible," John says. "I was ruminating on the idea of starting

THE VENUE OPENED ITS DOORS
TO GIVE INQUISITIVE ATTENDEES
A SNEAK PEEK INSIDE
THE UNIQUE FACILITY

a local cars and coffee meet, simply because there wasn't an event of this nature around Reading." Serendipitously, he soon found himself indulging in the sumptuous velvety aroma of freshly roasted coffee at Podium Place, based in Newbury.

Podium Place is a unique destination combining boutique coffee, iconic sports cars, Formula One race memorabilia and a private members club for those with a passion for all things automotive. It was an obvious venue for a cars and coffee meet, prompting John to pose an equally obvious question. "I decided to ask Podium Place's proprietors if they would be up for hosting a Porsche event," he remembers. "I suggested I'd promote the event and supply the cars, on the condition Podium Place could provide attendees with an early morning caffeine fix. To my mind, it was a match made in heaven."

Having first opened their doors only a few months before the pandemic, and then suffering obligatory temporary closure, Podium Place's owners were understandably keen to embrace a venture promising to not only drive customers to the coffee house, but also potentially presenting clients for their supercar sales enterprise and exclusive members club. John's pitch was promptly given the green light.

"We held our first event in April 2022," John reveals. "I commissioned bespoke poster artwork and stickers, which were given away free to attendees as a souvenir of the occasion. In my

experience, little touches like this go a long way with Porschephiles." Since then, he has hosted a series of meets at various destinations, including an invite-only show at independent classic Porsche restoration and

sales specialist, Rindt Vehicle Design, a breakfast meet at Renegade Brewery in Yattendon, and a second cars and coffee morning at Podium Place, all of which have been a huge success. Needless to say, we didn't hesitate to accept an invitation to his third event at the latter location.

IN GOOD SEASON

February weather can be unpredictable, but the vibrant paint jobs of the perfectly polished Porsches in attendance glistened in the welcome sunshine, making the gathered sports cars look like a bowl of Skittles. As a dedicated fan of air-cooled cars, it would have been easy for John to try and pigeonhole his meets to fuel his own Porsche predilections, but early on, he decided this approach would only serve to limit and divide his audience. In fact, as a consequence of his commitment to non-exclusivity, a wide array of cars differing in age and specification was on display during our visit. From rat-rod 356s and immaculate 914s, to Boxsters, Caymans and every generation of 911, all Porsches were welcome.

Facing page Podium Place is one of John's regular event venues, attracting like-minded Porsche owners from all over Reading and the surrounding area



"I'm pleased with how my events have been supported," John beams. "They really are going from strength to strength. My hope is that I'll end up with a core group of enthusiasts at all meets, not just the gatherings on their doorstep, but also those hosted at interesting locations far and wide, especially when my intention is to keep these events free to attend, whenever and wherever possible." This is no commercial venture. "I organise these get-togethers purely to promote a shared love of Porsche," he continues. "To my mind, this is the most important aspect of ownership. I'm continually looking for venues suitable for pop-up shows. Continually changing location keeps things interesting and ensures these meets don't get stale or boring."

As well as the dazzling rainbow of Porsche paintwork to admire in the Podium Place car park, the venue opened its doors to give inquisitive attendees a sneak peek inside the unique facility. Of course, the coffee house is open to all, where one can enjoy a cup of hot brown stuff while ogling exotic vehicles of both the two- and four-wheeled variety, some rotating slowly on Lazy Susans. The clubhouse, detailing studio and workshop, however, are usually off-limits to non-members. It was therefore a real treat to see what goes on behind closed doors.

"Podium Place is petrolhead

paradise," John smiles. "I'm keen to bring to this kind of added interest to all my meets, be it a workshop wander, brewery tour or even a visit to a jewellery or watchmaking facility." To this end, he has just announced *Time Machines*, a morning of cars, coffee and chronographs, scheduled for Saturday 20th May at the Henley-on-Thames headquarters of award-winning British luxury watch company, Bremont. Information about the event, as well as its exclusive poster art, can be viewed by visiting John's Instagram profile, which can be found at @myblue912.

His third Porsche bash at Podium Place was sponsored by Rindt Vehicle Design, a company which took the opportunity to showcase its latest 911 restomod, a stunning RSR-inspired widebody coupe built from a donor 1990 964 Carrera 4 Cabriolet.

"It's great when specialists share your vision and support what you're trying to achieve," John muses. "None of this is exclusive to me, though. I'd encourage anyone harbouring thoughts of establishing their own Porsche coffee mornings to just get out there and do it. Begin by looking at suitable venues in your area. Don't be afraid to ask for use of the facility. Most venue managers will be only too happy to host an event with a guaranteed stream of potential customers. You never know what the relationship might grow into."

Above and below Cars and coffee on an early sunny morning is a difficult combination to beat











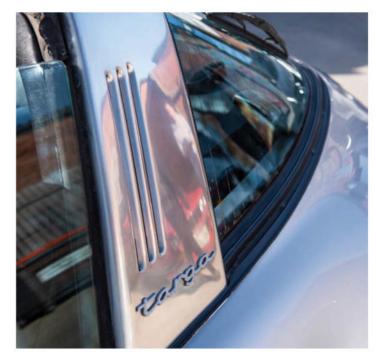




















Above This 964 Carrera 4 restomod is finished in the unusual OEM shade of Stone Grey

Right The poster John has prepared in advance of his next meet, scheduled to take place 20th May at the base of luxury watch brand, Bremont

Facing page A wide variety of air-cooled and water-cooled Porsches attend each of John's events Newbury local, David Harrold, couldn't resist a blast out to Podium Place in his sweetly modified 964 Carrera 4. After drinking in the details, were only too glad he did. He bought the car back in 2012, when prices for 964s were a little easier to swallow.

"Despite being relatively low mileage, the engine had been treated to a topend rebuild by Paul Sage at JOTA Engineering. Pleasingly, the bodywork was totally free of corrosion. I always had a plan to backdate the car's looks, but was keen not to go down the route of making a Singer clone."

In order to realise his vision, he commissioned Riviera Autobody to carry out the exterior modifications, including a colour change to Stone Grey with contrasting orange accents. The bespoke front bumper is a nod to the early 911 RSR, while the wheel arches are flared to accommodate genuine seventeen-inch Fuchs wheels, which David tells us are first set of their kind to be fitted to a 964 in the UK.

A twin-centre-exit Infinity exhaust peeks out from beneath a custom rear bumper with stretched overriders. "All maintenance and servicing is carried out by the team at Northway Porsche in Reading," confirms David, owner of a

second backdated 964 assembled with inspiration from the classic 911 S/T. Running SSI headers, a custom back box, a Classic Retrofit twin-spark ignition kit, bucket seats, a MOMO steering wheel, a leather-trimmed rollover hoop, backdated instrument cluster, S/T

bumpers and split-rim Minilite lookalikes, the car is sure to be in attendance at one of John's future meets.

As we've proved elsewhere in this issue of 911 & Porsche World, few Porsches are as eyecatching as an Ultraviolet 991 GT3 RS. Kan Chana's stunning example wears its bruise-coloured hue with menace. He bought the car from Maidstonebased luxury car dealer, VVS, in December 2022 after previously owning a 997 Turbo and a 991 GT3. "I just had to tick the RS box," he laughs. "I've owned Porsches for many years, but had never been in possession of an RS model. When the

opportunity to bag this one came along, I just had to go for it." How much of a difference does the RS present over the standard 991 GT3? "It's much more than an iconic badge," he reasons. "There's superior handling and performance, but also a soundtrack simply a level above





my non-RS GT3. The extra cost is more than justified for a Rennsport 911." The noise is in no small part down to the presence of a Soul exhaust system. "It was installed during my ownership. The noise is nothing short of spine-tingling." Kan has no plans to track the car, but is planning a road trip to Italy, following a route he drove last year in his 991 GT3. Can we come too?!

NEXT BEST THING

"I'm not lucky enough to have the funds for a real 993 GT2, which is why I modified my Carrera 4 to look like one," explains composite specialist, Noel Newton. His business, NUR Motorsport, is well-versed in the art of working with carbon-fibre and can create all manner of bodywork and interior addenda for just about any car you care to mention. His love for Porsche, however, has seen his desire to own a big-arched, powerful air-cooled 911 come to fruition.

"The base car is a 1996 Carrera 4, which has been converted to rear-wheel drive and fitted with a 993 Turbo X50 flat-six," he grins. "The wide arches, bumpers, rear deck lid and spoiler have all been made in-house at NUR

Motorsport, while the front splitter is an OEM Porsche item."

He's also worked his magic inside the car, with the pair of deeply bucketed seats manufactured from fibreglass at the NUR workshop. "As much as I'd like the genuine article, I'd be too scared to drive at GT2 hard, whereas this thing gets used aggressively at various tracks, including the Nürburgring Nordschleife. It's an absolute monster. I love it!" And so do we, Noel. ●

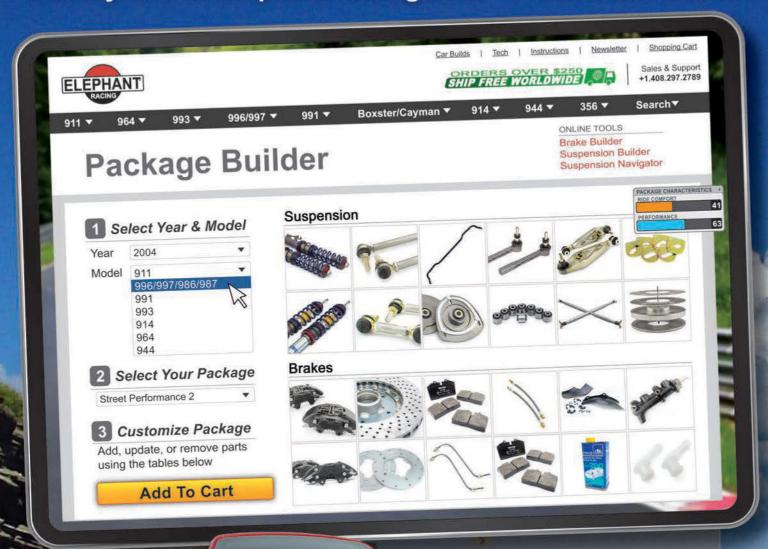
Above and below 991 GT2 evocation and Ultraviolet 991 GT3 RS drew plenty of attention on the day



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national snowboard racer. His car of choice is a Tiptronic-kitted 964 Carrera 2. We check out its many modifications...

Words Johnny Tipler and Dan Furr Photography Adrian Brannan





raternising with a fellow
964 enthusiast is always a
heart-warming experience,
especially when there are
numerous modifications
to chew over, some of
which I applied to my own 964 back
in the day. Jon-Allan Butterworth
and I swap photos and jaw about
our respective mutually experienced
and overlapping preferences of 964
aftermarket kit and upgrades. Double
respect, considering he's a star of the
2012 and 2016 Paralympics Games.
Let's deal with this bit first.

After serving with the Royal Air Force in Afghanistan, Jon-Allan lost the lower part of his left arm in 2007, when an insurgent rocket attack struck the Basra airbase in Iraq, where he was stationed as a senior aircraftman weapons technician. His beautiful blue 964, then, has obviously been adapted to suit his particular requirements. We'll find out how in a minute.

Amazingly, just a year after sustaining life-changing injuries, the irrepressible Butterworth was taking part in the first Help for Heroes cycle ride, after which he was rightly spotted as a talented rider at a Paralympics GB Talent Identity day. At the 2012 Summer Paralympics (branded as the London Paralympic Games), he won silver medals in both the men's single-kilometre C4-5 time trial

and men's four-kilometre C5 individual pursuit (and mixed team sprint), even holding the world record for a short time. Later, at the 2016 Summer Paralympics, he finished fourth in the C4-5 time trial and won a gold medal with Jody Cundy and Louis Rolfe in the C1-5 750-metre team sprint. In recognition of these achievements, Jon-Allan was awarded an MBE (Member of the Order of the British Empire) for services to cycling in the 2017 New Year's Honours list.

He has always been a sports car enthusiast. More recently, he bought a brand-new 718 Cayman and an Alfa Romeo 4C, also new. Disgruntled with the depreciation new cars suffer from, however, he found the attractions of an older vehicle began to prevail. "I've always liked Porsches, the 964 in particular," he admits. "It's the generation of 911 offering the model's classic silhouette married with the most modern tech prior to the arrival of the 993, which deviated significantly from what came before, certainly in terms of looks. You can use a 964 as a daily driver. It's a reliable sports car and isn't anywhere near as big as later 911s. This appeals to me, as did the availability of semiautomatic transmission, which I require on account of my disability."

The 964 he settled on is a Tiptronicequipped Horizon Blue 1990 Carrera 2 originally specified for the Japanese domestic market (and therefore originally supplied by Japan's former Porsche concessionaire, Mizwa Motors), but this isn't his only experience of aircooled 911s, even if it has proved to be his most successful.

"I also own a 1989 911 Turbo. My 930 was built just a year before my 964, but the turbocharged Porsche was always breaking down. It had a complete overhaul, new parts, and it's now a different car, but by comparison, 964s seem modern, complete with technology promoting reliability."

Those of you with a keen eye will note Jon-Allan's Carrera 2 has had its front driving lamps replaced with RS- Above and below Jon-Allan trusts Middlewich-based Porsche indie, Weissach UK, to take care of his 964's servicing and maintenance needs







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style ducts for additional cooling. "I also removed the rear window wiper in order to streamline the back end," he reveals. "I like the overall shape of the 964, but felt the wiper arm interrupted the silhouette." Talk quickly turns to wheel preferences. He notices my Peppermint Pig rolled on powdercoated D90s, as does his 911. "With all the upgrades I was planning, the car was threatening to become quite expensive. I considered big wheels and skinny tyres, but I didn't want to compromise the ride by losing the standard tall tyre sidewall, which I feel very much suits the 964." I'm not about to disagree, but it's worth noting the team at Augment Wheels in Canada has recently put a seventeen-inch version of the D90 into production. Food for thought.

GAME PLAN

Jon's 964 is a non-sunroof model, relatively unusual, more so with the Tiptronic gearbox. "It's a rare combination, but it's the specification I wanted," he explains. "I should tell you, I didn't drive this 911 before committing to buying it. Instead, I did the deal and then sent the car to various specialists for a variety of upgrades."

The bulk of the work was carried out at Workshop Seventy7, now known as Oshe Automotive and based between Northampton and Stratford-upon-Avon. Chief among the changes was an upgrade to TracTive semi-active suspension, which is available for G-series, 993 and 964 applications, plus later water-cooled Porsches. Indeed, regular readers will know we've sampled TracTive suspension on other 911 builds, including Everrati's 500bhp 964 EV, the Paul Stephens Autoart 993 R, Theon Design's 400bhp supercharged 964 backdate and, of course, the Guards Red 964 Carrera 2 formerly owned by TracTive UK boss, Steve Bennett. As is the case with Jon-Allan's 911, each car represents a positive leap forward in chassis technology.

The company's DNA can be traced back to celebrated Dutch motorcycle damping specialist, WP Suspension, a major player in top-flight two-wheel motorsport. In 2010, TracTive was established as a standalone brand, promptly becoming an OEM development partner. Thanks to the tireless work of the firm's UK outpost, in conjunction with many independent Porsche specialists and professional chassis tuners concerned with Stuttgart-crested road and race cars, TracTive boasts a thorough understanding of the unique damping requirements for Porsches driven on challenging British roads.

TracTive's standalone Active Controlled Electronics (ACE) system monitors real-time driving parameters, using lateral and longitudinal acceleration to observe behaviour on vertical, lateral and longitudinal axes. Inside each ACE damper is a patented Dynamic Damping Adjustment (DDA) valve. This valve is controlled by a sensitive multi-axis g-sensor and advanced algorithms developed from decades of racing and road testing. A dynamic proportional valve operating as a bypass has capacity for a large range of damping adjustment and is capable of responding between an astonishing six and ten milliseconds.

Above Carrera 2 is joined by a late 911 Turbo (930) in the Butterworth stable

Below Coloured wheel centres with silver lips look great against the Horizon Blue paintwork



YOU & YOURS











Above Interior has been modified to Jon-Allan's requirements, as has the suspension, which is configured around advanced TracTive semi-active dampers

You can adjust roll and pitch interference for stable braking, controlled corner entry and, after hitting the apex precisely, better acceleration out of the corner.

Unsurprisingly, a classic 911 chassis can suddenly feel very modern, particularly in terms of body roll and stability. To put all this

into perspective, the TracTive system fitted to Jon-Allan's 964 offers more comprehensive control than the muchapplauded OEM suspension system shipped with the brand-spanking-new 992 GT3 RS.

As declared, five different suspension maps can be created using TracTive's

system software. Each setting can be selected by way of a rotary knob or a nifty full-colour touchscreen display.

The advantages are obvious: comfort

A CLASSIC 911 CHASSIS CAN SUDDENLY FEEL VERY MODERN. PARTICULARLY IN TERMS OF **BODY ROLL AND STABILITY**

for cruising or driving to the track, and within five clicks, an aggressive circuit or fast-road option. A game changer? We certainly think so.

While we're on the subject, R-ACE combines all the benefits of ACE technology with the addition of secondary low- and high-speed

compression adjustments, which are tuned for the given application or motorsport discipline. The low- and high-speed compression adjusters can

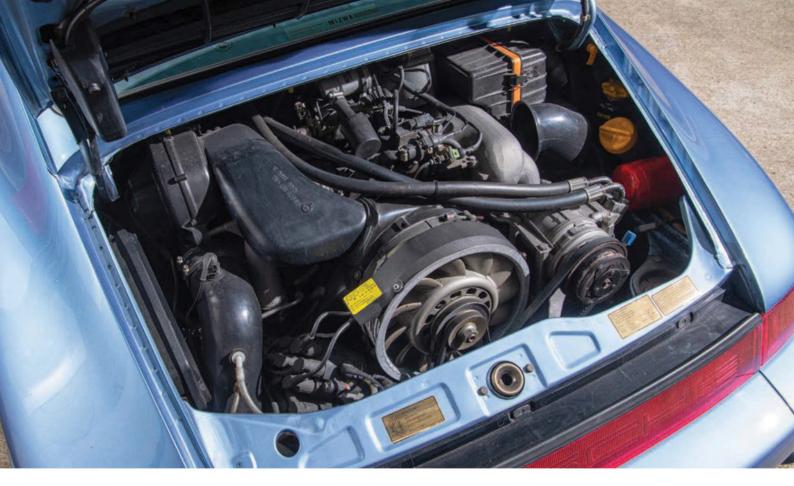
> fine-tune damper characteristics to find the perfect halance for individual track setup, driver preferences and race pace improvements. The

compression adjusters can be located remotely, piggy-backed or mounted in-line with the dampers. As the name suggests, R-ACE is best suited for extreme race and endurance applications. It's the very pinnacle of what is currently possible using suspension knowledge gained from decades of racing at the highest level.

"After the installation, the car was sent to Chris Franklin, founder of chassis tuning specialist, Center Gravity," Jon-Allan continues. "He did a great job of configuring the TracTive system. I also invited Suspension Secrets in Knutsford to offer input." The car now handles like it's on rails, helped by a lowered ride height (close to ten millimetres), Elephant Racing tie rods and 964 Turbo top mounts, allowing for negative camber. "It's not as extreme as I wanted, but a 964's front end can feel light at high speed, such as when pushing 120bhp on the Autobahn, hence no more than three millimetres or so dialled in. On the plus side, this is a very sharp, brilliantly responsive 911."

The car is serviced and maintained by





gallantly-named independent Porsche specialist, Weissach UK, located in Middlewich, Cheshire. "Jon-Allan had special adaptions fitted to his 911," confirms company founder, Thomas Atherton. "For example, you'll spot a Shiftec carbon-fibre paddle shift enabling him to operate the Tiptronic transmission with his right hand, on account of him losing his left arm to just above the elbow. He pushes the shifter forward to drop a gear and pulls it toward him to shift up." Straightforward enough, and we're delighted to learn Jon-Allan drives the car in manual mode more often than not. "It gives me more control and results in greater driving pleasure," he reasons.

CLEAN SCENE

It's easy to see why owners of premium Porsches are so enthusiastic about what Thomas has to offer. For starters, the Weissach UK workshop is absolutely spotless - always believe what you see, not what you hear when choosing a Porsche specialist to take care of your pride and joy. In other words, regardless of what a workshop manager might be telling you about the quality of their company's work, premises amounting to disorganised mess will be showcasing the real story. In this regard, Weissach UK customers have absolutely nothing to worry about. And then there's exploration of the building itself, revealing four stateof-the-art ramps, a Hunter Engineering

four-wheel laser alignment system, a professional laser-pneumatic wheel balancing and tyre fitting machine and, as we observe, no shortage of customer cars. Indeed, during our visit not long before this magazine went to print, all of the company's ramps were occupied, with a further twenty Porsches patiently waiting their turn. Little wonder Mobil saw fit to approve Weissach UK as one of its accredited service centres.

Similarly, Manthey-Racing — the famous Nürburgring-based Porsche tuning and motorsport company now majority owned by Porsche itself — has approved Weissach UK as one of its fitting centres, while Maryland-based Porsche tuning equipment manufacturer, Fabspeed (showcased in last month's issue of 911 & Porsche World), has appointed the Weissach UK team as its only approved installer in the northeast of England. The company is also part of the Porsche Partner Network (PPN), signalling factory support at Porsche Centre level.

Back to Jon-Allan's 964. Inside the cabin, I'm met with Cobra Nogaro bucket seats, incorporating the surprise of heat pad modules. Internal trimming includes RS-style door cards, a parcel shelf delete and new rear seat covers. The ensemble is joined by a MOMO Mod.07 steering wheel. In-car entertainment, meanwhile, is provided via a discrete Blaupunkt Bremen SQR 46 DAB radio. "I try to keep

the cabin quite retro-looking," he assures me. "I didn't want to upgrade the head unit to a large, whizzy touchscreen display or anything not in keeping with the general aesthetic."

This commitment extends to control of the TracTive suspension. Jon-Allan opted for the standard old-school rotary knob control (as opposed to the modern full**Above** The car's aircooled flat-six is in excellent health

Below Tiptronic is controlled by a twoway carbon paddle shift on the MOMO steering wheel



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colour touchscreen display). It's mounted on the underside of the steering column, providing quick and easy access to preconfigured damper settings. Incidentally, he invested in TracTive's Touring Line system, designed and engineered to offer better performance and more comfort for road-biased cars. The shocks are specifically engineered to utilise OEM top mounts — you don't need to shell out for motorsport-style adjustable monoball top mounts — and come complete with damper-matched Eibach springs.

TREAD THE BOARDS

Having switched his attention from cycling to snowboarding, both intensely hardcore sports, I wonder if Jon-Allan has driven his 964 to the locations he competes at? "I have done," he informs me. "It's definitely not a garage queen, that's for sure. Ordinarily, however, I fly out with GB Snowsport, the team I'm competing with. I like the idea of driving this old Porsche up mountain roads in snow, but I have to remind myself it's not a Carrera 4, meaning it might struggle in the Alps on a bad day." I put it to him how, with decent snow tyres, you can push a car through surprisingly deep white stuff. Indeed, when testing both two- and four-wheel drive versions of the R8 in challenging wintry conditions, Audi installed snow tyres and the twowheel drive model did better than the

four-wheel drive Quattro. Snow tyres are awesome, aren't they? Generally, of course, we don't get snow bad enough to warrant them in the UK, although it certainly gets cold enough.

As Jon-Allan and I bid farewell to one another, he heads off for a few days of road-tripping in Wales, citing the country's rural mountain roads as an idyllic Porsche playground. This is a 964 enthusiast who really knows his stuff, who has the guts to use his car to

the full and is prepared to put it through its paces whenever circumstances allow. Whether this will include taking bicycles or snowboards on a roof rack to a sporting venue remains to be seen, but one thing's for sure: despite his disability, he isn't fazed by anything. And with four cycling world titles to his name, plus a burning desire for snowboarding World Cup podiums and more medals, this isn't the last you'll hear of Jon-Allan Butterworth or, I suspect, his 964. ●

Below Jon-Allan was appointed Member of the Order of the British Empire (MBE) in the 2017 New Year Honours list in recognition of his services to cycling



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BELIEVE THE HYPE

More than just a hypercar, the 918 Spyder PHEV — a major contributor to its maker's Intelligent Performance programme — boldly demonstrated Porsche was still Porsche, despite being a member of the enlarged Volkswagen Group. With the inclusion of a 918 Spyder in the Petersen Automotive Museum's new We Are Porsche Exhibition, we revisit the design and development of an icon...

Words Karl Ludvigsen Photography Petersen Automotive Museum

ack in September 2009, when newly installed Porsche chief, Michael Macht, was asked about the company's future as a part of the Volkswagen Group, his response was direct. "Porsche hasn't been thrown under the bus," he said.

"Certainly, much of what was said about the brand in recent months wasn't good. A lot of it was painful, but this will soon be forgotten when focus returns to our cars." He was referring to family

feuds, corporate clashes, legal disputes and disruption of the markets — the saga of Porsche's fascinating failed attempt to take control of Volkswagen left an indelible impact on the car industry.

To describe Porsche's situation during the summer of 2009 as turbulent would be putting it mildly. Most of the firm's employees, as well as marque enthusiasts, simply wanted things to calm down. Something needed to happen to return attention to the brand's output. This is what mattered most, especially considering it was uncertain whether Porsche would be able to continue setting its own course within the Volkswagen Group, given ownership changes in Zuffenhausen.

"We knew we had to send a strong signal to shore up belief in the uniqueness of Porsche," says Hans-Gerd Bode, then Head of Communications.

A new flagship sports car, he suggests, "had to send out two convincing messages. First, Porsche's competence as a sports car manufacturer remains unparalleled. Second, the company is still uncompromising in its commitment to environmentally compatible technology."

When Macht was interviewed in

September of 2009, he was well aware his men were already taking their first steps toward the creation of a new flag bearer for the famous Stuttgart crest. First to sign up was Wolfgang Dürheimer, then Vice President of Research and Development at Porsche. "We want to create a new product capable of

ENGINEERS TOOK THE FRONT SUSPENSION FROM THE 997 GT3 R HYBRID, USING THE SAME ELECTRIC MODULE AND TWIN MOTORS

> fascinating people, a drum roll reminding people Porsche is a powerhouse for new ideas and can point the way to the future, spearheading technological development," he stressed.

> To lead the team formulating the car given factory code XG10, Dürheimer picked former Volkswagen engineer, Gernot Döllner. At the time, Döllner headed Weissach's project group for vehicle concepts. He posed one condition for taking on the assignment. "Permission to circumvent the usual procurement channels for this project was essential. It wouldn't have been possible to stick to the schedule otherwise," he says, looking back on the project. The schedule he refers to called for the XG10 to be exhibited at Geneva in 2010, granting a scant five months for creation of a concept embodying Porsche's past, whilst communicating its potential for the future.

Frank-Steffen Walliser, who was in charge of Porsche's project group for hybrid drives, began receiving requests for equipment from Döllner. "We were and still are really good friends," says Walliser, who was nevertheless puzzled by Döllner's furtive demands. "It was

all so extremely secret. People knew there was a small group working on a mysterious concept car, but I didn't know more than that. In retrospect, I have to say, it was exactly the right way to handle the project."

On 9th September 2009, Döllner received his assignment to create the

technical concept for Porsche's next-generation supercar. Thanks in no small measure to the work being conducted in parallel on the 997 GT3 R Hybrid, which was also to break cover at Geneva, he was soon able to present

a concept to Porsche's management board. Blessing for the build was given on the 21st September.

TRAVEL PLANS

The XG10 would be a powerful plug-in hybrid with a V8 engine and electric motor support for both front and rear axles. Targets set included a Nürburgring lap time of seven and a half minutes, as well as ultra-low emissions and fuel consumption on the official cycle of three litres per hundred kilometres, equal to 78.2 miles per US gallon. On battery power alone, the company postulated, the XG10 should be able to drive more than fifteen miles. Top speed would be no less than 199mph. By the time of concept reveal, these parameters had been verified by computer simulations, which indicated a Nordschleife lap of seven minutes and twenty seconds.

Also at the heart of the XG10 project was Porsche design chief, Michael Mauer. His team winnowed down ideas to three separate proposals. "One was rather conservative," he tells us. "The formal successor to the Carrera GT, so to speak. The second model was extremely progressive, so much so several people

Facing page Witness this very 918 Spyder (build number 134) on display at the Petersen Automotive Museum's We Are Porsche exhibition, open now and running until April 2024 in celebration of Porsche's seventy-fifth birthday. Visit petersen.org for tickets and event info



asked whether it was still a Porsche. Then there was the third design, which struck just the right balance: a car brimming with character, but still unmistakably Porsche. This is what ended up making the cut." Macht, Dürheimer and Mauer were the adjudicators, while Johannes Doll managed the design process.

DRAWING ROOM

The winning design was the work of Hakan Saracoglu. Born in Turkey, Saracoglu honed his skills at California's Art Centre College of Design. After almost four years with Ford in Cologne, he moved to Porsche in 1998. He had a major hand in development of the 987-generation Cayman and Boxster, working with exterior designer (now Porsche's Director of Special Projects), Grant Larson, on the latter. Though credited to department boss, Mauer, Saracoglu's was the design of the 918 Spyder, down to and including its coruscating wheels.

Porsche's engineers drew from their parts bins to construct the Geneva show car. The 3.4-litre V8 from the RS Spyder was installed for the XG10's combustion engine requirements.

The transmission came from the Carrera GT, clustered with a motor/ generator, while the Panamera S Hybrid supplied its power electronics. Engineers, Martin Füchtner and Joerg Meyer-Ebeling, configured the system to share space (behind the seats) for both fuel tank and battery pack, thereby positioning them close to the car's centre of gravity.

Döllner's two dozen engineers took the front suspension from the 997 GT3 R Hybrid, using the same electric module and its twin motors. Carbon-fibre elements borrowed from the Carrera GT served as the car's tub and chassis, albeit with a wheelbase reduced by 4.6 inches in response to the shorter engine. On 22nd December 2009, the rolling chassis was unloaded at the premises of Vercarmodel Saro in Orbassano on the outskirts of Turin, hotbed of Italy's coachbuilders. There, compressed data packages describing the body's surfaces were transformed into three-dimensional panels for both exterior and interior. Half a dozen designers and modellers from Porsche were on site for the two months remaining until the car was to be unveiled to the world in Geneva.

Attending to the rolling chassis during the build process were engineers from Weissach, arriving with laptops crammed with the data allowing the car's systems to spark into operation. When Mauer arrived in Italy on the Wednesday before the premiere, "it was impossible to see the car at times, purely because so many people were bent over it, all working on it at the same time."

The XG10 would be more than a pretty face. Although not truly roadable, it would

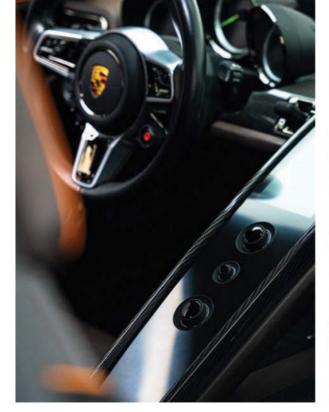
be runnable enough to strut its stuff on the Geneva stage. Thus, the engineers needed every spare moment to feed their data into the car's electronic systems. A final issue was a name for this new Porsche creation. "Available to the car are the genetics of the legendary 917, which was an exceptional sports car," said Macht. "The design recalls that of the 917 in its front end and shrouded wheels, which are not unknown in motorsport. This car, which we have named 918 Spyder, can therefore be considered a worthy successor to the 917."

Plans were to transport the 918 Spyder to Geneva during the morning of Sunday

Above The 918 Spyder was first shown as a concept at the eightieth Geneva Motor Show, held in March 2010, while the series production version was unveiled at the Frankfurt Motor Show in September 2013



918 SPYDER











Above Pricing for the 918 Spyder started at €781,000 in Europe and \$845,000 in the United States, with the number of statements of interest far outweighing the 918 units scheduled for production

28th February. At noon, however, workers were still crowded around the unfinished machine. They kept at it all day. The scene changed little after dark. "It was past midnight when

the car was finally loaded for Geneva," Mauer recalls.

Porsche's preview presentation for journalists took place at dawn on

2nd March, the Geneva show's first press day. Macht's dark suit was highlighted by his tie and pocket square, both in bright neon green.

Officially Acid Green, the almost fluorescent shade was found in several details of the new Porsche concept, such as its badge lettering, brake calipers,

seams of the leather seats and a thin ornamental stripe encircling the interior. This was the keynote hue of Porsche's new electrification product thrust.

THE 918 SPYDER'S SUSPENSION HAD GEOMETRIC AFFINITIES WITH THE UNDERPINNINGS OF THE CARRERA GT

"Porsche pulled off the biggest surprise at the Geneva auto show," wrote The New York Times in its reporting on the Salon. "The business isn't saying whether the 918 Spyder concept will go into production, but don't bet against it. The technology is just too promising, the styling too delectable." Of the many questions thrown at the Porsche men at Geneva, none was more consistent or persistent than "are you going to build it?" At the end of his brief remarks, Macht noted Porsche had yet to make a concept car not ending up in production later down the line.

In fact, Porsche made up its mind quickly. During July, factory managers marshalled facts and figures supporting the idea of series manufacturing. After passing muster with the management board, the proposition was put to the supervisory board at its meeting on 27th July 2010. A worldwide news release presented by Bode the next day was headed *Green Light for Series Development of the 918 Spyder*.

Dürheimer assembled a team to

make the 918 Spyder a reality. Several key members volunteered for what promised to be a demanding assignment. Vehicle architecture guru, Walliser, requested

> a meeting with Dürheimer to discuss the project. Specifically, he was concerned organisational aspects of the 918 programme were not well resolved

following the Geneva reveal. "We are missing someone holding the reins. If you need a lead project manager for the 918, I will do it," he told Dürheimer, who looked at Walliser and grinned. A few weeks later, the latter was officially named as the 918 Spyder's overall project director.

Walliser had a core team of 170 professionals and could draw on up to five hundred personnel to create the realworld 918. Serving under him were project heads for research and development, production, sales, purchasing, quality and aftersales support. In the crucial research post was Michael Hölscher, who brought to the job not only his experience in heading the creation of the Carrera GT, but also eleven years managing Porsche customer projects, including the Mercedes-Benz W124 500 E and the Audi RS2. Vehicle testing was the responsibility of motorsport chassis dynamics expert, Holger Bartels.

"His task was straightforward enough," smiles Walliser. "We wanted to keep the design of the show car intact, get fuel consumption down to three litres



per hundred kilometres and return a Nürburgring lap time equalling that of the Carrera GT." What could be simpler?! Hölscher, meanwhile, had a mixed team comprised of members borrowed from Porsche's motorsport and passenger car development departments. "It was similar to what I had with the Carrera GT project — specialists from Weissach worked on the areas of drivetrain and carbon-fibre componentry, while members of the crew ordinarily focused on series production dealt with surfaces, panel gaps and general quality control."

SAME BUT DIFFERENT

Areas in which the team could short-cut the design and test process were the new car's suspension and structure, primarily because the 918 Spyder's suspension had geometric affinities with the underpinnings of the Carrera GT. To save vital space, however, the earlier Porsche's inboard strut-controlled springs were replaced by conventional spring and damper units, sloped inward to their frame mounts. Front and rear suspensions had conventional triangulated wishbones, again like the Carrera GT, although two links (instead of a single V-shaped part) comprised the upper wishbones.

Attached by way of centre-locks, the

forged aluminium wheels looked even bolder than those of the concept car. No longer flaunting covers, their stylized design of ten paired spokes — each joined by a peripheral loop — discharged a sensation of frenzied activity deemed perfect for this high-voltage hybrid.

The 918 Spyder's wheel brakes were only the ultimate stage of retardation in a system as spectacular at slowing as it was at accelerating. When the driver depressed the brake pedal, the initial deceleration was controlled by electric motors acting as generators to the extent possible. The braking torque delivered by the motors in this mode could decelerate the car by up to 0.5 g. "At a speed of 62mph," exclaimed Porsche, "this equates to a stopping distance of 171 feet. Only twelve years ago, this was the braking performance of a medium-sized sedan."

Converting far more kinetic energy to electrical energy than other hybrid vehicles, the 918's recuperation could be as great as the 230-kilowatt capacity of the traction battery. Equal to 313 horsepower, this energy was delivered directly to the battery, allowing the exciting new Porsche to come to a complete halt from 186mph in just 811 feet. This, said Porsche, was "a peerless record, one comparable series sports cars cannot come close to touching. The

previous record-holder, the 997 GT3 RS, needed 886 feet to achieve the same."

When it came to designing and specifying resin with carbon-fibre reinforcement for the structure of the 918 Spyder (from the footwell to the rear of the chassis), Walliser took full advantage of Hölscher's experience with the Carrera GT, which provided the blueprint of a supercar divided into two key elements. For the 918, the monocoque carried the occupants, battery, fuel supply, front suspension, drive motor and what Porsche called the 'unit carrier', which bolted to the monocoque at six points in order to house the engine and

Above The 4.6-litre V8 was rated at 599bhp at 8,700rpm, with twin electric motors providing an additional 282bhp for a combined 875bhp

Below Acid Green was adopted as an accent colour for all of Porsche's hybrid electric vehicles



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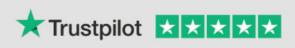


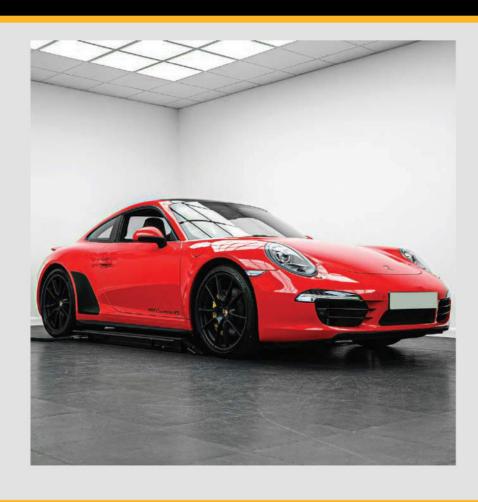














transmission, while also carrying the rear suspension. Protruding fore and aft from the structures were aluminium pylons designed to absorb crash energy.

FROM RACE TO ROAD

Just as the Carrera GT was powered by a derivative of a racing engine, albeit one which never actually raced, the 918 Spyder took a trick from the same book. This time, it was an engine with true racing pedigree: that of the RS Spyder. "Above all," says Hölscher, "we had to civilize this engine. Of course, racing people do not care about emissions, noise and so on, but we needed to be concerned with exactly these things." With such demands stepping to the fore, it was obvious power and torque would be lost in the road-going version of the engine, dubbed the Type HIS, an acronym for Heisse Seite Innen (Hot Side Inside) in recognition of its central exhaust outlets.

The answer was the same as it was with the Carrera GT: more swept volume. With the cylinder bore of 95mm constrained by bore spacing of 105mm, a stroke increase was indicated. There was ample scope to add to the original dimension of 59.9mm. Raising the block's deck height accommodated a stroke of 81.0mm, bringing capacity to 4,593cc. In any case, a longer stroke was the right direction for emissions reduction.

"The whole engine is definitely a complete redesign," said Hölscher at the

time. "We don't have an alternator. This engine does not have a starter. It also doesn't have a belt drive — all these things are taken care of by the electric motor at the rear. There, we can save thirty millimetres in length. We do not have a direct-drive air-conditioning compressor because, for this car, the system is electrically driven. As is the case with the RS Spyder's racing engine, the water pump is combined with the oil pump and mechanically driven."

"The biggest change," Hölscher continued, "came from the fact we are using a battery which doesn't like heat. The unit is very low in the centre of the 918, hence our decision to move hot parts away from this location. The hottest part of any car is usually its exhaust system, which is obviously low down. With the 918 Spyder, we decided to change things by putting the exhaust system in the inner side of the vee, whilst positioning the cooler intake system on the outer side."

With the exhaust in the vee, he wondered if the exit pipework could be located on the back of the car, rather than sticking out of its side or rear. "Some of my colleagues thought the design would make the car look like a truck, but our design team set to work and developed the 918's overhead exhaust." It was a spectacular choice for the HIS and even more striking than the XG10's original side exhausts, which would never have received type approval.

At 298lb, the HSI was a paragon of lightness, considering its 4.6 litres of displacement. Indeed, this reworked V8 was significantly lighter than the 310lb MR6 donor engine. For the 918 Spyder, the unit's rev limit was set at 9,150rpm and its compression ratio at 13.5:1. "At the start of development, we were aiming for 550bhp," says former Porsche

Above The 918 Spyder's styling would filter down to less exotic Porsche products, including the 981 Cayman/ Boxster, which took inspiration from the 918's front end





Combining the disciplines of Hill and Sprinting, drivers compete against the clock in road going or modified cars. Running over 12 rounds, Porsche Club Motorsport offers the best in what can be described as Porsche's oldest form of motorsport.





ROUNDS

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10th & 11th June - Loton Park - Hillclimb
1st & 2nd July - Harewood - Hillclimb
8th July - Prescott - Hillclimb
22nd July - Castle Combe - Sprint
26 & 27th August - Snetterton - Sprint
3rd September - Brands Hatch - Sprint
16th September - Shelsley Walsh - Hillclimb



engineering chief, Wolfgang Hatz, "but it became clear to me we needed the highest possible output this engine was capable of. I wanted to see a power figure beginning with the number six." Reached at 8,700rpm, the engine's peak power was eventually rated at 599bhp. Torque peaked at 398lb-ft at 6,700rpm, low enough to be able to pick up smartly when electrical torque faded.

"For the transmission," says Hölscher, "we took the seven-gear PDK gearbox from the contemporary 911 Turbo. We had to turn it around, of course, because otherwise, we would have had seven reverse gears!" In fact, the transmission was turned upside-down to ensure the power input was on its lower shaft (instead of the upper shaft, as in the Turbo). This required major changes to the gearbox housing and oil system, which had an external oil/water heat exchanger. The inversion allowed the engine to be as low as possible in the chassis, aiding the fight for a low centre of gravity.

POWER SURGE

Although close kin to its concept car predecessor, the production 918's electrical system changed significantly in its final configuration. The combustion engine's power output, for example, passed through the centre of the Type SMG 180/120 electric motor (developed by Bosch) in a layout akin to that in the Panamera and Cayenne hybrids. Clutching arrangements therefore allowed either the V8 engine, the electric motor or both in harness to drive the 918. Virtually from launch, the motor could develop its full 277lb-ft torque, building to 156bhp.

Another electric motor powered the front wheels as required. Porsche turned

to GKN Driveline International GmbH for a version of its eAxle drive, using a single motor to power both wheels. Relinquished thereby was the possibility of delivering different torques to the front wheels to gain steering effects.

By marrying its energy sources, the 918 Spyder achieved maximum system performance of 875bhp and crankshaft-equivalent maximum torque of 944lb-ft in seventh gear. The term 'crankshaft-equivalent' expresses the level of torque an engine of a conventional vehicle would have to produce in order to build up and deliver the same tractive force to its drive wheels. Within the broad speed range of 800-5,000rpm, torque remained above 590lb-ft at all times.

"Initial weight calculations revealed the car would be way too heavy," says Walliser. "We sat down and played the part of detectives, searching for each and every gram we thought we could do away with." The result was judged satisfactory. Also, the 918 Spyder's centre of gravity was only fractionally higher than its wheel hubs, and weight distribution was fifty-seven percent, biased toward the rear, ideal for the car's traction and handling balance. Empty weight was 3,690lb. Although this was 405lb more than had been suggested at Geneva in 2010, it was not wildly over the 3,540lb of a 911 Turbo S.

Hatz took a bullish attitude when he was asked if Porsche would create a successor to the 918 Spyder, of which 918 units were made. "Yes, of course," he replied. "Not immediately, but not in twenty years, either. When you develop cars such as the 918 Spyder plug-in hybrid, you also develop a generation of engineers. I'm confident the lessons our engineers have learned will feed back into the company for many years to come. We want to keep this momentum." It was a great philosophy - one previously proving successful with the 959 and the Carrera GT. Porsche rolled on to a hypercar future.

Above The 918 Spyder takes all the glory, but Porsche's first plug-in hybrid to be released was the Panamera S E-Hybrid





CERAMIC MADE EASY



STIFF COMPETITION

With a wide range of models and trim options in the 992 Carrera stable, where does the GTS Cabriolet fit in? Is it a model even needed in today's 911 showroom line-up? We get behind the wheel and find out...

Words James Fossdyke Photography Stuart Price



992 GTS CABRIOLET

issue will know, chiefly as a result of the magazine's cover story announcing the 991 Carrera GTS as a future 911 icon, there was a time when the Carrera GTS offered Porsche customers the perfect sports car. Built as a halfway house between the hardcore GT3 and the more touring-oriented Carrera S and Turbo models, the GTS made the most of the 911's dynamic potential, while providing everyday usability. The 992-generation GTS coupes, however,

have failed to convince, with overly

s readers of our April

unacceptably uncomfortable on anything other than a perfectly smooth surface.
They're wonderful on track, but as roadrunners, they're less than ideal.

This leaves the 992 GTS Cabriolet (particularly this rear-drive, PDK-equipped version) in something of an odd position. Old-school Porsche lore suggests an al fresco 911 ought to be compromised by its body style, which is hardly the first choice of circuit dwellers, but with driving dynamics much closer to the equivalent coupe than its predecessors could ever claim, is this mongrel a better proposition for the road than the tin-top with which it shares so much? It's time to find out.

At first glance - quite literally - it's a bit of a mixed bag. 992 Cabriolets have always looked slightly awkward, not least due to the model's over-sized rear end being accentuated by large plastic grilles. Of course, this is largely down to the (non-negotiable) positioning of the engine, and it would be overly harsh to describe the car as ugly, but it's far from the best-looking model in the 911 range. By contrast, the 992 Targa manages to integrate a convertible roof much more neatly. Happily, the GTS claws back styling points with a host of motorsportinspired, model-specific upgrades fitted as standard. Chief among these is a ten-millimetre reduction in ride height





and the inclusion of the more aggressive Sport Design bumpers, complete with the standard sports exhaust.

Other noticeable upgrades include a black front spoiler, black alloy wheels and black GTS badge lettering, as well as tinted lights and black chrome tailpipe finishers. Buyers can swap standard black trim for gloss black, but expect to be asked for more than two thousand pounds for the privilege.

FIGHTING TRIM

Porsche has also made changes in the cabin, where the main upgrade seems to be extensive use of Race-Tex upholstery. You can have full leather if you want, but a stock-specification GTS Cabriolet comes with suede-like Race-Tex covering the lower dashboard, door card handles and seat centres. Additionally, there's a GT sports steering wheel and contrasting stitching in either Carmine Red or Crayon, depending on your preference.

The Sport Chrono package is included as standard, which means you get a driving mode selector on the steering and a central clock (including lap timer functionality) with an outer ring finished in the same colour as the stitching. The rev counter is also colour-coded, as are the seat belts. Carbon trim decorates the centre console and middle dash.

Naturally, the GTS Cabriolet's standard equipment is just the starting point — Porsche will sell you countless optional

extras designed to help personalise your new 911, whilst successfully relieving you of more cash. More comfort? How about *less* comfort?! Choose the lightweighting package, for example, and you can have a rear seat delete, while the front pews are swapped with carbonbacked buckets. This arrangement saves twenty-five kilograms, which is about the weight of a medium-sized dog. Frankly, I'd rather leave the pooch at home.

Other cost options make much more sense. The standard four-way electrically adjustable seats are best swapped for more upmarket versions, complete with seemingly infinite configuration and far

more support. We'd also opt for the frontaxle lift system, which makes traversing sleeping policemen just that little bit less fraught. Adaptive cruise control is likely high on the wish lists of Porsche showroom visitors, but this feature commands a price tag of more than £1,200, which we think a tad steep.

Speaking of spend, there's a premium to pay for the GTS Cabriolet. Where the 'basic' GTS coupe comes in at £114,800, the price of acquiring the convertible commands an extra ten grand. This makes it £12,000 more expensive than a Carrera S Cabriolet. That's quite a jump when you consider there's just thirty

Above More than any other current 911, the Cabriolet body style demonstrates just how big the Porsche flagship has become





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horsepower between the two models. Plus, three of the main upgrades namely the lower suspension, the sports exhaust and the Sport Chrono package - can be added to a 992 Carrera S for less than £4,000.

SHIFT KEY

These features aside, the GTS doesn't offer much in the way of extra kit for your money, but this being a Porsche means buyers are given plenty of opportunity to peruse the manufacturer's individual equipment list and shell out more than they'd perhaps anticipated. Thankfully, the gearbox isn't something you'll need to pay extra for. As with almost every other iteration of Carrera GTS, the Cabriolet comes with a choice of two transmissions: the PDK twin-clutch semi-automatic unit is fitted as standard, while the seven-speed manual is a no-cost option. Purists will tell you the

manual cog swapper is the one to go for, especially considering Carrera GTS models get a stubbier lever for snappier shifts, but both transmissions are brilliant in their own way.

Our test car came with PDK, which is one of the best transmissions of its type, somehow always finding the right gear at the right time in a way automatic gearboxes from rival manufacturers simply can't match. And, for drivers wanting to exercise more control over their GTS, cold-metal shift paddles are conveniently located behind the steering wheel. They feel great to the touch and elicit lightning-fast shifts up and down the eight-speed gearbox, usually accompanied by a fantastic crackle from the exhaust system.

Most of the time, though, you'll leave PDK to its own devices, with a large amount of control coming from the Sport Chrono package. In Normal or

Wet driving modes, the gearbox is less aggressive, shifting smoothly and at low engine speeds for maximum refinement and serenity, but when you move the driving mode rotary knob to Sport or Sport Plus, gears are held for longer, with ferocious snaps between ratios.

As you'd expect, the real advantage of PDK is its performance when you put your foot down. Officially, this GTS Cabriolet despatches the sprint from rest to 62mph in 3.6 seconds (just a tenth slower than the equivalent coupe), while the manual GTS Cabriolet takes 4.3 seconds to manage the same feat. In terms of top speed, however, there's no difference, with both cars reaching an impressive 192mph.

While the gearbox has a part to play, most of the credit must go to the stonking twin-turbocharged three-litre flat-six, which is essentially the same as the engine fitted to every other 992 Above Electric roof retraction process is a fascinating watch

Below Interior is a fantastic mix of leather and Alcantarastyle Race-Tex fabric

TECH SPEC

911 (992) Carrera GTS Cabriolet Model

Carrera GTS Cabriolet from £124,800, car as tested £131,994 Price

3.0-litre twin-turbocharged flat-six petrol, eight-speed PDK **Powertrain**

dual-clutch auto with Porsche Torque Vectoring Plus (PTV

Plus) electronically controlled rear limited-slip differential

25.0-25.9mpg **Economy** 248-256g/km CO₂ emissions 192mph Top speed 3.6 seconds 0-62mph

473bhp at 6,500rpm Power

420lb-ft at 2,300-5,000rpm **Torque**





Above Body control is sublime, but on anything other than roads as smooth as a billiard table, the ride is unduly harsh

Carrera. Even so, where the entry-level Carrera offers 380bhp and 332lb-ft torque to play with, the GTS ups the ante to 473bhp and 420lb-ft. It's a big difference, instantly noticeable when you push the throttle pedal deep into the carpet. Even without the aid of all-wheel

drive, which allows the Carrera 4 GTS to shave another tenth from the dash to 62mph, the wide rear tyres find copious traction and hurtle the droptop GTS toward the

horizon alarmingly quickly. Staggeringly, this convertible is only two tenths of a second slower to 62mph than a PDKequipped GT3. It doesn't hang about.

Nor does it keep quiet about its performance. Sure, if you choose the quiet exhaust setting and only gently prod the accelerator, the GTS stays sporty-but-refined without too much noise troubling the cabin, despite the reduction in soundproofing material promoted as part of the GTS package. Get a bit bolshie with the throttle and

select a more aggressive driving mode, however, and all hell will break loose. The engine snarls away behind your left ear, while the exhaust barks in excitement as the needle shoots around the face of the tachometer. And when you've had enough of accelerating, easing off the

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THE SCREAM OF THE FLAT-SIX

throttle will see excess fuel sprayed into the exhaust to explode in a cacophony of crackles and pops. It's enough to make bystanders jump in alarm.

Key to any 911, and the GTS models in particular, is the way it moves around corners. Put simply, the GTS is built to be the best-handling of the Carrera line-up. To this end, the car's underpinnings have been inspired by the more expensive Turbo S (to be featured in next month's issue of 911 & Porsche World). This means you get the aforementioned

lowered suspension and Porsche Active Suspension Management (PASM) as standard, but there are now helper springs at the rear. The GTS also benefits from upgraded brakes, matching those of the 911 Turbo.

All of which should make the GTS

pretty formidable when it comes to cornering, even in Cabriolet form. Unsurprisingly, it delivers with ease. Gone are the days when droptop Porsches felt

flaccid when compared to their hard-top siblings. The GTS Cabriolet feels every bit as poised as the equivalent coupe. Therein lies a fundamental problem with GTS trim: the ride. As with the GTS coupe, the GTS Cabriolet, though softer, remains too stiff for UK road use. Those who dare venture over a potholed road — is there any way of avoiding them?! — will feel as though they've been thumped in the back repeatedly. Things improve as speed builds, and while it would be churlish to suggest motorway miles are



wildly uncomfortable, the low-speed ride is borderline unacceptable. Admittedly, this is as much the fault of British road maintenance as it is of Porsche chassis tuning, and we're not saying the GTS is as harsh as a GT3, but the fact remains you'll have a much smoother ride in a Carrera S (or even a Turbo S), despite the shared suspension components.

THEM'S THE BRAKES

On the plus side, this stiffness translates to fantastic body control. Indeed, on this front, 992 GTS models are second only to the Turbo S and GT3. The steering feel is magical, and although the brake pedal feels a tad sloppy through the first few millimetres of travel, the brakes themselves are hugely powerful.

This, combined with the copious amounts of grip provided by those broad tyres, gives the GTS an uncanny ability to corner flat and true at pretty much any speed. There's no sense the car is keen to misbehave, and when you finally provoke it into doing so, corrections are made intuitive by the perfectly judged control weights common to so many Porsche products.

Our test car came with the optional four-wheel-steering system, which only helped to increase the sense of agility and poise. At low speeds, the rear wheels turn in the opposite direction to those at the front, giving you additional manoeuvrability, while at higher speeds,

the back wheels turn in the same direction as the fronts, increasing stability. It's a very subtle system — the back wheels only turn by a few degrees — but it helps reduce the turning circle and allows the 911 to dart into corners even more rapidly.

All of which makes the 992 GTS
Cabriolet the unquestionable king of the mountain road, delivering flea-like agility and bringing you closer to sunshine and the scream of the flat-six engine. This 911 still feels like a bit of a contradiction in terms, though, particularly with rearwheel drive and the automatic gearbox. You see, as already outlined, the ride is

simply too stiff, unless you're really into track days, in which case the GTS coupe is undoubtedly going to have more appeal than the Cabriolet. Besides, those who want an involving, driver-oriented, rear-drive convertible will probably want a manual gearbox, leaving this particular iteration of the 911 in something of an automotive no-man's land.

For those seeking an open-top 911 feeling luxurious and relaxing (but still enjoyable to drive hard), a Carrera 4S Cabriolet with a few choice options is the way to go, while for those who want a track-day toy, a manual GTS coupe or a GT3 will be much more exciting.

Above and below

Three-litre twin-turbo makes light work of propelling the GTS Cabriolet forward at rapid pace, to the extent this 911 is only two tenths of a second slower to 62mph from rest than a PDK-kitted 992 GT3



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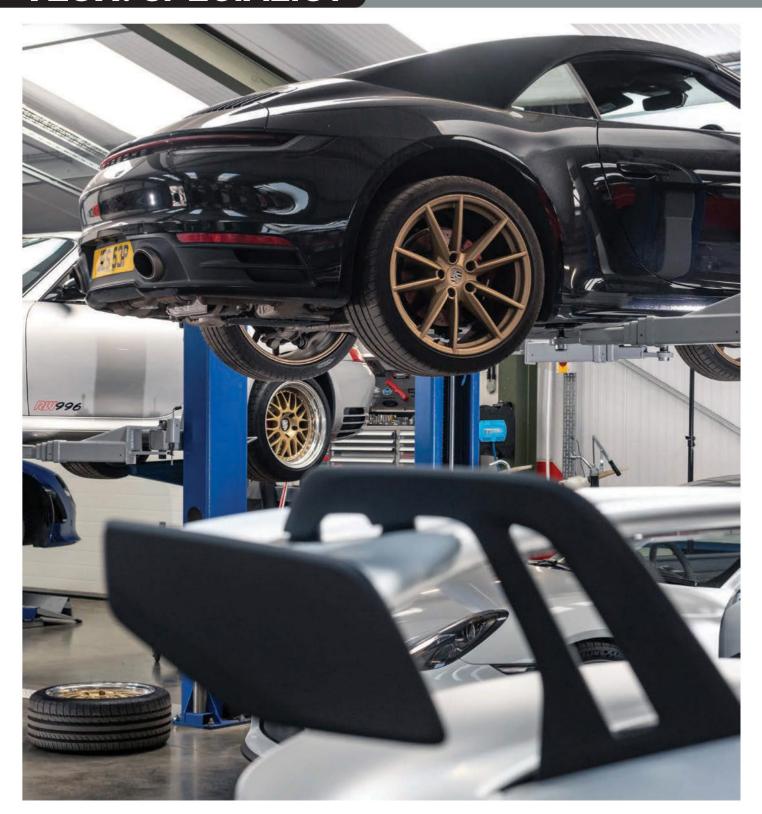




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Words and photography Dan Sherwood

calpel. Swab. Forceps.
Adson cerebellar
retractor. The world of
surgical procedures is
one we all know is best
left to professionals.

Even so, the mind-boggling array of bizarre-sounding instruments, not to mention the years of experience and intense training

required to perform such intricate work, can be enough to make any wannabe surgeon think twice. While obviously not quite on the same level,

a similar comparison can be made when it comes to cars — modern vehicles have grown to become increasingly complex. What's more, top-level performance machines, such as our beloved Porsches, are often at the cutting edge of the latest automotive technology. With this in mind, it makes perfect sense to entrust your pride and joy to technicians who really know their onions — the potential catastrophe waiting to happen in the hands of a novice mechanic simply isn't a risk many of us are prepared to take.

One such squad of expert spannermen can be found plying their surgical skills in Shangri La. Not the fictional mystical valley in the Kunlan mountains — as

described by author, James Hilton, in his novel Lost Horizon — but an industrial estate on the outskirts of the slightly less mystical Stevenage, a major town in North Hertfordshire. Named Renn Works, which alludes to the firm's marque speciality of choice, the team is led by experienced Porsche technician, Matt Barnett, a man whose devotion to the

"From then on, I was completely Porsche-mad," he continues. "The feeling only intensified when my father bought his next Porsche. It was a 911 SC raceprepared by Pickup Motorsport in order for the car to participate in the Porsche Club Championship."

Each weekend, Matt and his elder brother, Dan, would excitedly accompany

their mother to various tracks and watch their dad put the pedal to the metal in the fiery crucible of door-to-door racing. Through the repeated fixing,

preparing, tuning and setup of the car, Matt began to learn the skills he would turn into his trade later in life.

A Saturday job servicing old lorries and vans at a local garage was hardly the glamorous life he'd envisaged when working on the 911, but during his formative years, the work provided realworld experience of being a mechanic. Things would change when, not long after his seventeenth birthday, he landed his dream job as an apprentice with Jonas Zamabakides, founder of renowned Porsche sales specialist, JZM. "I worked practically one-to-one with Jonas for close to six years," Matt recalls. "He was a genius with Porsches.

INVESTING IN CUTTING-EDGE EQUIPMENT IS KEY TO KEEPING UP WITH THE LATEST AUTOMOTIVE TECHNOLOGIES

Stuttgart brand stretches as far back as his pre-school days.

"My dad was a keen petrolhead," Matt reveals. "He owned various tuned cars, but I only started taking an interest in what was parked on our driveway when he came home with a Porsche." Just four years old at the time, he vividly remembers his father's 1974 911 S 2.7 Targa. From the sparkle of the Glacier Blue body contrasting with the brilliant chrome brightwork, to the damp feel of the tiny back seats, which would get wet as a consequence of the Targa lid leaking every time it rained, this semi-open-top air-cooled 911 shaped the trajectory of Matt's life and career.









Facing page and

below Whether your

Porsche is old or new, configured for race or

road, the Renn Works

team has you covered







TECH: SPECIALIST



I learned a huge amount about these cars from him — everything from building engines to the intricacies of how they're put together. It was a great experience."

In 2001, together with fellow JZM technician, Ollie Preston (who would go on to establish RPM Technik), Matt left the firm in favour of a job at Porschons Classic in Kimpton, Hertfordshire, where he was under the guidance of Porsche guru, Tony Outridge. "He was an air-cooled engine expert," Matt explains. "Ollie and I were soon working together building and restoring old 911s. Eventually, Ollie left, but I remained working with Tony for around five years, carrying out complete nut and bolt restorations of various old Porsches, including the iconic Carrera RS 2.7."

KNOWLEDGE IS POWER

A move to London-based Porsche sales outfit, Portiacraft, followed. Matt's new job saw him taking up sales car preparation duties, as well as servicing, maintenance and full engine rebuilds. "I stayed at Portiacraft for twelve years," he confirms. "The role saw me move away from working predominantly on air-cooled cars. Instead, I was busying myself with the various models of 996 and 997. I've got a soft spot for these early generations of water-cooled 911s. They are amazing machines and

represent huge value for money."

All things must pass. In 2014, Matt decided it was time to branch out and started a Porsche business of his own, founding PorschaCare from a small unit on a farm in Codicote, near Hitchin, with a just a single ramp and his growing collection tools. A loyal base of customers was quickly formed. Even Portiacraft enlisted his services, providing a steady stream of work helping him grow his fledgling company.

"I was at the farm for around a year

before I moved to much bigger premises on the Shangri La industrial estate in Todds Green," he tells us. "I quickly bought an extra ramp and added another pair of hands by employing technician, Billy Reed, in 2018." Billy is a graduate of the Bosch Automotive Apprenticeship Programme and, just as Matt benefited from the knowledge passed down by an older generation of Porsche mechanics, Billy has worked closely with Matt to achieve the same. Commissions came flooding in, encouraging a move to an

Above and below Renn Works can take care of all your Porsche or McLaren servicing, maintenance and modification requirements from the company's base near Stevenage















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Steel wheel

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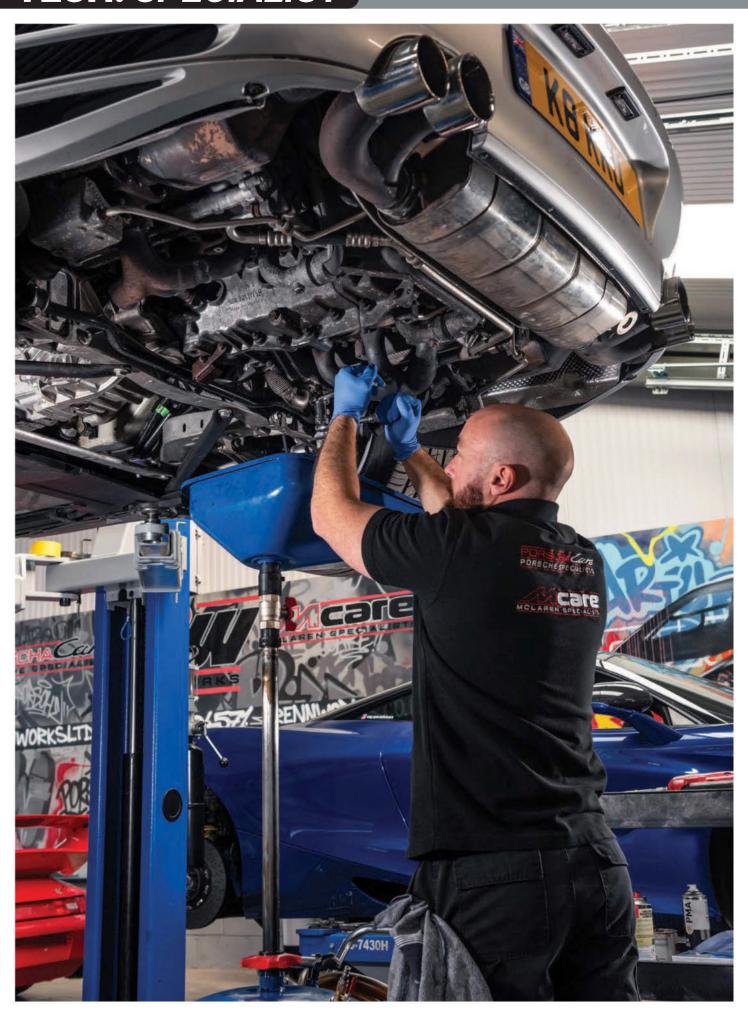
16"- Steel rim

5,5 x 16 | ET 15 | 259,00 €

all steel wheels with ECE number



TECH: SPECIALIST

















Above and right Workshop includes a quartet of four-post ramps and a separate ramp for Hunter fourwheel alignment

even larger workshop at Shangri La in 2019. It's where we've come to meet Matt and his team today.

"We now have four two-post ramps, plus a dedicated alignment ramp, complete with Hunter Elite geometry equipment," he states, proudly. "I've been carrying out suspension tuning and corner weighting

ever since I was a kid working on my dad's 911 SC. I know very well this is an aspect of tuning capable of completely transforming the way a car drives. I

love seeing a customer's reaction after they experience just how much of an improvement we can make to their time behind the wheel."

Investing in cutting-edge equipment is key to keeping up with the latest automotive technologies and, of course, to allow the business to continue welcoming owners of the newest Porsches. "As well as a host of professional-grade Snap-on tools, we also have the latest Porsche PIWIS software, allowing us to diagnose faults and program the electrics of thoroughly modern Porsches, including the 992 GT3 and 718 Cayman GT4 RS," Matt states. "This is very important to us — we pride ourselves on being able to offer our services to owners of all models and all

ages of Porsche, from earliest air-cooled cars to the latest hypercars."

The McLaren side of the business came when Sam Pope joined the team in 2020. "Sam started his career as an apprentice at a Porsche main dealer and was one of Porsche Centre Hatfield's top technicians for more than fourteen

which M-Care and PorschaCare operate, serving McLaren and Porsche customers respectively.

McLarens aside, although the skills and knowledge at Renn Works mirror what's available at a Porsche main dealer, Matt, Billy and Sam are keen to stress the services they offer are more

> competitively priced than if taking your car to a Porsche Centre. Additionally, they treat all Renn Works customers the

TAKE A WALK INTO THE RENN WORKS DEN AND YOU'LL BE GREETED WITH A STRIKING GRAFFITI WALL PAINTED BY STREET ARTIST, MARK MEANA

years. After a brief stint at Hexagon Classics, however, he worked as a mechanic at a McLaren sales centre, where he stayed for four years and learned the workings of the brand's relatively limited model line like the back of his hand." As a result, when Sam joined Renn Works, Matt introduced the McLaren-specific M-Care branch of the business, which Sam now takes care of, alongside his duties working with Billy on Porsches. "We make a great team and have heaps of experience maintaining cars from the brands we love. Between us, there isn't much we can't tackle."

At this point in the story, it's worth us explaining the nomenclature at play. With M-Care in the planning, Matt established Renn Works as a parent company, under

same, whether they own an early 924 or a brand-new 911 GT3.

"We take the time to explain what the car needs and how we are going to fix it," Matt says. "A Renn Works client is more than welcome to come into the workshop and view their Porsche on one of our ramps. We'll happily explain what we're doing in the hope of furthering the knowledge of our customers."

Take a walk into the Renn Works den and you'll be greeted with a striking graffiti wall painted by street artist, Mark Meana. Matt gave him free reign to paint whatever he thought would look cool, resulting in a mural customers are keen to use as a backdrop for photographs of their cars

The fourth member of the Renn Works

TECH: SPECIALIST



team is Matt's wife, office manager and company co-director, Sam Johnson. You won't necessarily see her walking the workshop floor, but you will have spoken

to her if you've ever contacted the company with an enquiry. "Sam looks after all client bookings, our accounts and is the first point of contact for Renn

Works," Matt confirms. "When I first started the business, I was trying to run the back office and answer calls, as well as taking care of customer cars, but it soon got to the point where I was spending too much time away from my tools. Subsequently, Sam joined the company, which was a massive step in the right direction. She's just as important to the success of this business as the three of us fixing and modifying cars." He goes on to say everyone at Renn Works thinks of the team as more of a tight-knit family than a group of work colleagues, "primarily because we share the same values, work ethic and are determined to maintain customer loyalty."

After a quick chat with any of the Renn Works team, it becomes apparent they're just as passionate about Porsches as their most die-hard of customers. Matt's fleet alone is more than noteworthy. He's the owner of a 3.4-litre 996 Carrera, a

996 Cup, a recently acquired 996 GT3 Clubsport and a 1985 Carrera 3.2 running a turbocharged 3.4-litre flat-six mated to a G50 gearbox and producing 550bhp.

legendary Nürburgring Nordschleife. "All of us at Renn Works has a passion for modifying cars to extract even more performance than they came with from

> the factory," Matt grins. "Through this activity, I've managed to build excellent relationships with many top tuning brands, including TracTive UK,

Surface Transforms and Kline, ensuring we can deliver the very best tuning upgrades, whether working on a Porsche or a McLaren." Clearly, the Renn Works team has the skill and surgical precision to make your vision of the perfect Porsche a reality.

SEAT TIME IN HIS PORSCHES IS SPLIT BETWEEN B-ROAD BLASTS AND LAPPING HIS FAVOURITE CIRCUITS, INCLUDING THE NÜRBURGRING NORDSCHLEIFE

This wild ride features 993 Turbo brakes and a stripped interior with a roll cage. To say it is a bit of an animal would be something of an understatement.

Seat time in his Porsches is split between B-road blasts and lapping his favourite circuits, including the

issue of 911 & Porsche World

Above Regular

this 520bhp 996

Turbo from its star turn in last month's

readers will recognise





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- Steven Monk

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- Mark Slater

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TECH: TOPICS



RETURN TO THE CHARGE

Continuing our series looking at the technology behind electrification of current and future Porsche products, we take a look at the battery recharging process, how it works, and what the next developments might be...

Words Shane O'Donoghue Photography Porsche

he phrase 'range anxiety' has long been associated with electric cars, describing the worry of not having enough battery charge to allow the driver to reach their destination. The Taycan's optional Performance Battery Plus allows an official range of more than three hundred miles, which is

more than many petrol-powered Porsches would manage on a tank of fossil fuel. Even so, there are EVs from other manufacturers

capable of travelling even further on a single charge.

So, then. What's the difference? Why is range one of the first things buyers want to know about when it comes to the prospective purchase of an EV, but it's something rarely discussed when choosing a car with an internal combustion engine? The answer is obvious: refuelling.

It takes only a couple minutes to fill your Porsche's petrol tank, but charging electric cars — even the highly advanced Taycan — takes much longer. Consequently, it's likely you'll arrive at a public EV charging point to find it in use, resulting in you waiting even longer than you'd anticipated, so much so we think recharging anxiety is now as high on the agenda as range anxiety. Let's take a look at why charging an EV takes so long.

In last month's issue of 911 & Porsche World, we took an in-depth look at EV batteries, referred to as secondary

batteries on account of them being recharged time and again. Recharging a battery is a reversal of the chemical process within the battery responsible for electricity being produced in the first place. This is true regardless of the chemical makeup of the battery in question, but for the purposes of this discussion, we'll be focusing on lithiumion batteries, which are the dominant

batteries use a liquid or gel electrolyte, although solid-state electrolyte is in development for deployment in the not-too-distant future.

Regardless of a battery's make-up, during normal use (referred to as

Regardless of a battery's make-up, during normal use (referred to as discharge), the electrolyte facilitates the transfer of positively charged lithium ions from the anode to the cathode, producing a flow of electrons (electricity)

around the electric circuit to power, for example, an EV's electric motor. Eventually, there's a build-up of other chemical reaction products within the battery — in the

the battery — in the electrolyte and at the electrodes — where the cathode is effectively 'full' of lithium ions. This slows down the process until it comes to a halt completely. This is what you'll recognise as the battery going 'flat', requiring it to be recharged.

THE POSITIVE ELECTRODE IS TYPICALLY MADE FROM A LITHIUM METAL OXIDE, WHILE THE NEGATIVE ELECTRODE IS USUALLY GRAPHITE

type used in electric vehicles today.

As the name suggests, lithium-ion batteries use lithium ions as the primary charge carrier. These are positively charged ions. An ion, incidentally, is an atom or molecule which has lost or gained an electrical charge, also known as an electron. This is a negatively charged subatomic particle and is found in all atoms. Electricity is the flow of these particles from one place to another, such as around an electrical circuit powered by a battery.

In a lithium-ion battery, the positive electrode (the cathode) is typically made from a lithium metal oxide (though the type of metal varies), while the negative electrode (the anode) is usually made from graphite. Between them is the electrolyte solution allowing the movement of charged ions from one electrode to another. Not between electrons, though, which have to travel around an external circuit to create electricity. Presently, electric car

BACK AND FORTH

During recharging, an external power source sends the lithium ions in the opposite direction, from the positive electrode to the negative electrode. This is achieved by applying a higher voltage to the battery than the battery's current voltage, which drives the lithium ions back into the anode material.

The chemical reactions occurring during the recharging process are reversible, which allows lithium-ion batteries to be recharged multiple times. Over time, however, the battery's ability to hold a charge may decrease due to degradation of the electrode materials, the electrolyte or other components of the battery. This depends not only

Facing page BMW Group, Daimler AG, Ford Motor Company and the Volkswagen Group (including Audi and Porsche) launched the joint IONITY venture, implementing a High-Power Charging (HPC) network for electric vehicles across Europe

TECH: TOPICS



on how the battery is discharged (how the car uses the battery), but also on how it is charged. Saying this, despite the fact you will find online forums full of contributors proclaiming DC fast-charging to be avoided at all costs, the few academic studies carried out into its effect on a battery's service life have concluded there is a weak link, suggesting unless near all of an EV's charging is done at the fastest rate possible, it will have a negligible effect on the battery and, crucially, how much of its capacity will remain usable.

For the most part, car makers have incorporated battery management systems into the software applicable to their EVs. This means an electric car can only be charged at its peak charging speed for specific lengths of time. The intention is to preserve the battery, thereby ensuring warranty claims are kept to a minimum.

DO THE MATH

The Taycan was the world's first EV to use an 800-volt electrical system, which, among other things, allows for a DC recharging rate of up to 270kW. It's easy to understand why we'd want a fast-recharging rate, but why did Porsche opt for electrical architecture using double the voltage of most EVs on the market at the time of model launch? $E = P \times t$ is an equation explaining the relationship between the required energy to recharge a battery (E), the time (t) and the electrical power applied (P). As an example, this means a 100kWh battery would, theoretically, take an hour to charge from flat to full at a power rate

of 100kW, if it were possible to do such a thing in linear fashion. The important thing to take from this explanation is how, in order to reduce time taken to transfer a given amount of energy, power must be increased.

In this case, power is calculated by multiplying the voltage (V) and current (I), giving us an equation of $P = V \times I$. Logically, if you can increase either the voltage or the current (or both, obviously), without reducing the other, then the power also increases and, as in the previous paragraph, the time to charge reduces. It sounds so simple. Unfortunately, there are limitations on the current side, which effectively boils down to the thickness of cables and

even the pins in the charging plug.

As the electrons (subatomic particles, remember) flow through a wire, they bump into the atoms of material the wire is made from, transferring some of their kinetic energy to the wire, which results in an increase in temperature. This ups the resistance of the wire. Resistance measures the 'opposition' to current flow. For a fixed voltage and temperature, more resistance means less current. In other words, the current sent through a wire is limited. Obviously, a thinner cable will increase in temperature (and hence resistance) sooner than a thicker one.

Heavier charging cables would allow for higher currents, but the pins in the charging plugs will end up being the **Above** Performance Battery Plus-kitted Taycan Turbo S

Below The Porsche Home Energy Manager monitors energy and power consumption, protecting the house connection from overload (blackout protection) and enables the use of EV smart charging







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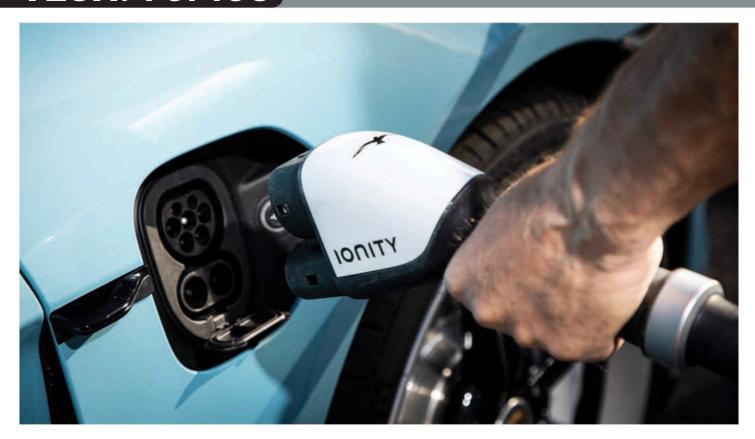








TECH: TOPICS



bottleneck. Cooling of the wiring and connections is used by many chargers, but Porsche felt it needed a different approach to achieve its aim of faster charging. Instead of looking to increase current, the Taycan's engineering team went back to the $P = V \times I$ equation and focused on voltage. The result was an 800-volt system with a maximum DC charging rate of 270kW.

RUSH FOR COVER

It isn't possible, however, to charge the Taycan's battery pack from completely flat to full at this rate. Data shows that when the Taycan is plugged into a suitable charger at around five percent state of charge (SoC), the charging rate hits maximum pretty quickly, but only stays at this level until about twenty-five percent SoC, at which point it begins to step down to lower levels as charging continues, though still manages a useful 150kW from about thirty-five percent to nearly seventy percent SoC, before tailing off. In case you were wondering, Porsche claims charge time for its 93.4kWh battery pack as taking twentytwo minutes and thirty seconds from a five-to-eighty percent charge.

Most EV manufacturers quote a tento-eighty percent charge time on DC fast chargers, rather than a zero-to-hundred percent charge, predominantly because few owners are likely to drive their cars until the battery stops working. Also, the extra time it takes to bring a battery from eighty-to-hundred percent charge doesn't sound very impressive in sales literature. Nonetheless, by any current measure, the Taycan's charging ability is remarkable.

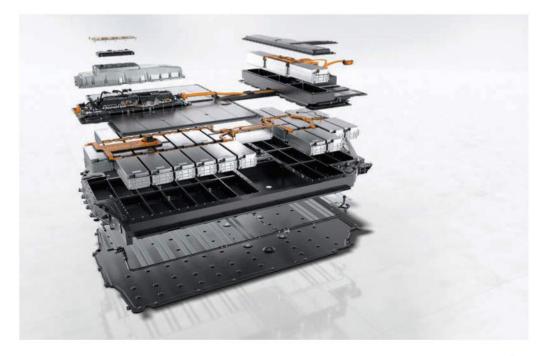
While fast-recharging technology is very much in keeping with the Porsche image, it can be incredibly expensive to owners relying on a public network of fast chargers — electric cars make more financial sense if they can be charged at home. Due to the expense and the

local infrastructure required, installing your own DC fast charger isn't usually possible, meaning most owners have to make do with slower charge rates on AC power. This isn't usually an issue because most EV recharging takes place overnight, when cars aren't generally in use and their owners are in bed.

The main difference between AC (Alternating Current) and DC (Direct Current) charging is the location of the conversion from mains AC supply to a battery's DC format. The conversion is

Above In addition to the network of the IONITY venture, Porsche intends to establish its own fast-charging stations along Europe's most important routes

Below Performance Battery Plus, offering owners 93.4 kWh





Below The Taycan's wing-mounted vehicle charge port can be connected to a standard house socket with the correct cables, but expect the charge rate to be very slow

taken care of in DC chargers to ensure energy can be supplied at a much higher rate, directly to the battery. When mains AC power is connected, however, the

host EV has to use its on-board converter (often mistakenly referred to as an on-board charger) to convert electricity to DC, which cannot be done at the same speed.

With the right cables, it's usually possible to plug an EV into a standard

domestic socket, but this will result in an excruciatingly slow recharge at no more than 3kW and isn't advisable unless your home electrics are in very good order.

IT MIGHT BE POSSIBLE TO DEVISE
A WIRELESS CHARGING SYSTEM
CAPABLE OF RECHARGING THE TAYCAN
AT A RATE OF UP TO 300KW

Most owners opt for the installation of a dedicated electric vehicle charging point (known as a wallbox) at home. supply, these usually allow a recharging rate of just over 7kW. If you have threephase supply at your disposal, then it's possible to get an

On a domestic single-phase electricity

possible to get an 11kW output, or even 22kW, but this isn't common. The Taycan can be fitted with 22kW AC compatibility, incidentally, but it's mostly to make use

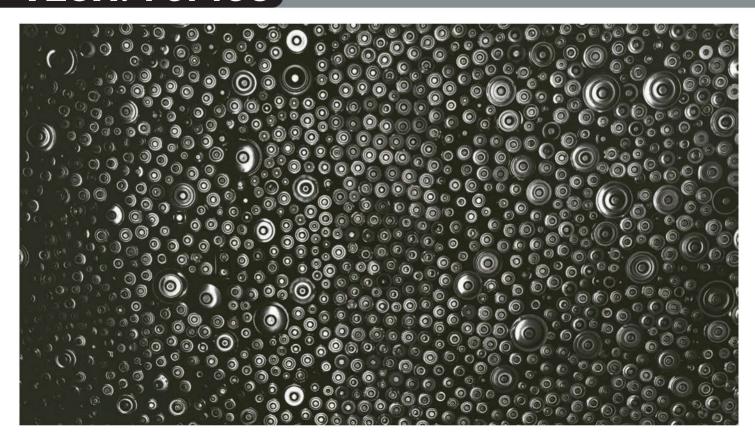
of public chargers of this rating.

Porsche offers Taycan buyers a very stylish branded charging dock with a choice of three different outputs (7.2kW, 11kW or 22kW), but the issue will be getting the higher ratings from a home electricity supply.

Even with the availability of such a good-looking charger, Porsche showroom visitors thinking about switching to electrification will undoubtedly be dissuaded by the need to physically plug their car into a charging point every night, or whenever a charge is required. For this reason, many manufacturers are investing heavily in wireless charging technology. This follows the same basic concept as the wireless smartphone charging pad you'll find in many of today's new Porsches. The system is referred to as 'inductive charging', so-called because a primary coil in the charger induces a current in a secondary coil in the device being charged. It's possible to mount the



TECH: TOPICS



primary coil within a flat surface (under a parking space, for example), but it can also be held in a portable system.

Either way, for EV battery charging, this technology would only work on cars equipped with a matching secondary coil, likely on the underside of the vehicle. Moreover, alignment with the secondary coil is critical to charging success. As it stands, wireless chargers are much more expensive than wired, partly why no electric car is currently offered with the option.

It's not a new idea by any means, as demonstrated by numerous studies including it when evaluating future EV battery charging efficiency, safety and speed. In other words, don't rule it out for future electric cars.

A Taycan was used in one such academic study, authored in the United States in 2021. The results were positive, indicating it might be possible to devise a wireless charging system capable of recharging the Taycan at a rate of up to 300kW. Ongoing academic work is attempting to establish whether the technology can be brought to fruition.

An ideal scenario is a wireless charging pad in every parking space and garage, affording drivers a seamless, hassle-free EV charging experience.

Better still, how about including inductive charging loops within the road surface itself, meaning less need for big and

heavy batteries as we drive along, Scalextric style?! Believe it or not, this work is under development, although we suspect it'll be buses and taxis benefiting from it, rather than Porsches.

This article's final point regarding battery charging is one we'll describe it in greater detail in a future article: it's worth remembering EVs have the ability to send charge back into their batteries through regenerative braking. We're not suggesting Porsche or any other car maker has cracked perpetual

motion, but when slowing down or braking, electric motors can operate as electricity generators, putting charge back into a battery. This is energy which might otherwise be lost to heat in a conventional braking system.

As we've said, regenerative braking is a topic for another day. Suffice to say, after reading these pages, we hope it is now clear why there's currently such huge obsession with EV charging capabilities, and why Porsche is, as ever, leading the field.

Above An Al app from Porsche Engineering evaluates the condition of the lithium-ion battery and can thus predict the host EV's remaining range



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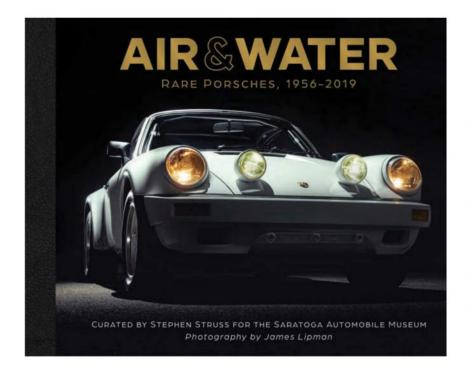
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he Saratoga Automobile Museum, one of the leading car museums in the north-eastern USA, has collaborated with architect, Steven Harris, to display twenty-two of the rarest air-cooled Porsches, along with several of the most extreme water-cooled RS-badged 911s. This amazing Porsche collection includes Carreras, Speedsters and more, covering Porsche models from the last seven-plus decades. All of the exhibition's cars have been captured in amazing visual detail by photographer, James Lipman. His stunning images are presented in the fantastic 288-page hardback, Air & Water, accompanied by each vehicle's specification and history, as well as driving impressions from leading motoring journalists, including Top Gear America host, Jethro Bovingdon. Not only can you therefore drool over full-colour images of these cars and learn about their histories, you will also experience the feeling of sitting behind the wheel through the words of these top automotive writers.

Released through Schiffer Publishing, this twelve-by-eight-inch coffee table tome features precisely 244 of Lipman's photographs, detailing Porsches from 1956 through to discontinuation of the 991-generation 911. It's difficult to single-out highlights in a collection featuring exclusively historically significant sports cars, but of those immediately commanding our attention are the included 1959 356 A Carrera GS Cabriolet, 1974 Carrera RS 3.0, 1984 911 SC/RS (the book's cover star), 1992 964 Carrera RS N/GT, 1995 993 GT2 and 2011 997 GT3 RS 4.0. Each car is afforded more than a dozen pages, allowing enough breathing space to showcase

the finer details. There's also a selection of pages dedicated to the Type 547 'Fuhrmann' four-cam, one of the most significant engines in Porsche's seventy-five-year sports car production history, which began in 1948 with the mid-engined 356 known as 'number one'.

Air & Water has clearly been lovingly compiled, with exhibits carefully curated by Stephen Struss for the museum. The book retails at £50/\$60 and is available to order direct from the Schiffer Publishing website (schifferbooks.com) or by shopping Amazon. We've teamed up with the Schiffer team, however, to bring you the chance to bag one of three copies of the book. To be in with a chance of winning, all you need to do is answer the following simple question:

Which city is named on the Porsche crest?

- a) Boston
- b) Amsterdam
- c) Stuttgart

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Entries close at 23:59 on Friday 26th May 2023 and the winners will be drawn Monday 29th May 2023. The winners will be notified within twenty-eight days of the close of entries. The editor's decision is final and no correspondence will be entered into. Entry is free. Employees of Kelsey Media and their family members are not eligible to win. Asterisk denotes approximate value of prize. Only one entry permitted per person. Bulk entries will not be accepted. There is no cash alternative and the prize is not transferable. If any prize or product is lost or damaged during the course of delivery to the recipient, Schiffer Publishing will provide reasonable assistance in seeking to resolve the problem. It will not always be possible to obtain a replacement for lost or damaged goods and, in this event, no financial compensation will be paid by Kelsey Media or its affiliates. We reserve the right to cancel the competition if circumstances change beyond our control. Classic Porsche and 911 & Porsche World are Kelsey Media brands. Kelsey Media takes no responsibility beyond promoting this competition. Kelsey Media will only ever use your information in accordance with its strict multi-algority privacy notice. For full details, visit kelsey.co.uk/privacy-policy. If you have queries regarding Kelsey's data policy, you can email our Data Protection Officer at dpo@kelsey.co.uk. Submitting data indicates your consent to the rules outlined here.





















TECH: THE FLEET

We don't just write about and work on Porsches — we drive and live with them, too!

DAN FURR

944 TURBO, 997 C4S, 968 SPORT



Installation of PCCM Plus to my 997 Carrera 4S (as documented in last month's issue) has transformed the



time I spend in the car. If only I could stop scanning classifieds for a 997 GT3 Clubsport.

SEÁN MATTHEWS



I have been told by Pennings, my chosen body shop, that my 996 is about to head into the company's



paint booth. In the meantime, I am considering buying a 957 Cayenne for overlanding duties.

JOHNNY TIPLER 987 BOXSTER S



A new set of summer tyres to replace the Boxster's superb winter rubber precedes a visit to Phoenix Exhausts



in Cullompton for installation of new Cargraphic manifolds and a matching silencer.

DAN SHERWOOD 996 GEN II GT3



Getting rid of the tired old PPF from my 996 GT3 seemed like such a good idea until the film took paint and



lacquer with it. The damage has given me a good excuse to address various cosmetic issues.

CHRIS WALLBANK 981 GT4, 981 BOXSTER S



After returning from a trip to the USA with editor Dan for this issue's cover story, I was back overseas, this time



hitting Ireland with Peron Automotive to photograph a series of Porsche technical seminars.

ONE STEP FORWARD...

Two steps back. Application of new PPF to Sherwood's 996 GT3 has been delayed following removal of the old film throwing a spanner in the works...



ew things in life are as straightforward as they first appear. This is never more apparent than when working on cars. Whether it's a basic oil change or the hair-pulling frustration of an intermittent electrical issue, you can bet your bottom dollar both will throw up their own blend of gremlins to make completing the task as arduous as possible. It's just how it is. And it's not a phenomenon solely affecting the novice mechanic - the law of sod can apply to even the most knowledgeable of spanner men. If you've never experienced this prickly predicament, then count yourself lucky to be within the minority.

An example of this kind of motoring misfortune befell me recently, when I made the first tentative steps toward refreshing my GT3's ageing aesthetics. As I explained in my last update, paint protection film (PPF) was previously applied to the most at-risk areas of the car's bodywork. In essence, PPF is a transparent vinyl film applied to a car's exterior surface, thereby providing heightened defence against scuffs,

scratches, stone chips and other impacts or abrasions. PPF is an effective way of ensuring your car remains in the best possible cosmetic condition and is therefore a wise investment for anyone wanting to maintain the appearance of their Porsche. It's also useful for circuit-dwelling cars, not least due to the fast-paced nature of track driving meaning the impact speed of even the smallest stone is high enough to cause considerable damage to susceptible paint and panels.

The PPF game, however, has moved on considerably since its inception in the early 1990s. The product continues to advance with ever-greater attributes, such as improved resistance to impact, self-healing surfaces and simpler installation techniques. All of these features were key in my decision to replace the yellow peril's protective vinyl coverings with more modern film, although the biggest contributing factor was to improve upon how it is fitted.

As you can see from some of my photographs, the previous installation didn't wrap around the edges of the panels. It also only covered the front

Above Don't worry, Dan — you can't see the damage when you're driving the car











Above Old-school PPF didn't stretch around panel edges

Right Despite considerate use of steam to remove the old PPF, clearcoat came away from the offside carbon-fibre door mirror casing

end of the car and halfway up the wings, leaving visible film edges not only failing to protect the whole of the panel underneath, but also attracting dirt, further detracting from the car's clean lines. On close inspection, I could also see rogue stone chips, which, of course, is something I wanted to put an end to with immediate effect.

During a telephone conversation with

Janis Krigens, founder of detailing and paint protection specialist, Max

Protect, it was decided the best way to preserve my

GT3's looks is to install new Suntek PPF, covering all of the car's bodywork, from bumper to bumper.

This would endow the paintwork with a virtually invisible self-healing protective film capable of defending against the worst weather and road fallout.

EXPERT OPINION

With this advice in mind, I drove to Max Protect's workshops in Kings Langley for Janis to inspect the GT3 in order to ensure it was a suitable candidate for a fresh application of PPF. Upon my arrival, he cast his discerning detailer's eye over the Porsche's Speed Yellow paintwork and noted any areas he felt could be cause for concern when removing the old PPF, or would need attention before the new Suntek film could be applied.

"The bodywork is in remarkably good condition for a 911 used extensively on track. The old PPF obviously did a good job of preventing impact damage," Janis observed. "That said, I'm concerned about the repainted front bumper, and there are a few stone chips beyond the edges of the old film. I've also noted

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defects in the lacquer of the carbon-fibre rear spoiler. This will need addressing prior to the application of new PPF."

COLLATERAL DAMAGE

Not great, not terrible. Well, until Janis eyeballed the rear wheel arches. At some point in the distant past, it looks as though someone has tried to roll each arch in a bid to gain extra clearance for wider rubber. Now, while this is a common technique for gaining a few extra millimetres of clearance, whoever tried to accomplish this on my 996 seemingly didn't do it with the necessary skill and precision required, resulting in deformed arch lips. Worse, where the paint has cracked, oxidisation is beginning to creep in.

Obviously, this isn't good news, not only because it means Max Protect can't

apply the new Suntek PPF to these areas, but also because I really need to nip the onset of car cancer in the bud and have the wheel arches restored to their original shape.

This threw a big ol' spanner in the works, certainly as far as the timeline for the completion of the PPF work is

concerned. Ultimately, all paint defects need to be fixed before the new film can lock in and do its job effectively. Then again, I hoped to address cosmetic imperfections at some point in the near future. Feedback from

Janis has simply served to escalate the importance of the work being done.

While application of the new PPF has been delayed, we reasoned it was worth removing the old PPF, if for nothing more than to ensure I didn't have a largely unproductive trip. This is when spanner number two was thrown into the mix.

Even with their years of experience removing vinyl of all types from vehicle paintwork, the top techs at Max Protect were unable to remove all of my GT3's old PPF without collateral damage. As predicted, the areas of original factory paintwork were unaffected, but the RS front bumper, which was added by a previous owner and painted to match the rest of the car, wasn't as lucky — a large section of paint came away with the film,

TECH: THE FLEET



despite careful use of steam. "When applied to a car's factory paintwork, as long as there is no underlying damage, you shouldn't see any issues when removing good-quality paint protection film," Janis explained.

"This is largely due to
the manufacturer's paint
process, which results
in extremely durable
coatings and allows ample
time for the paint to cure
fully. This is evident in
your GT3's factory painted
panels being unaffected by application
and removal of the old PPF."

This is obviously something a good bodyshop can do just as well (or possibly even better), but with time constraints, corners are often cut and inconsistencies can be introduced to the work.

"In an ideal world, paint needs to be fully cured to ensure the de-gassing process is complete, and all traces of solvent evaporated before any kind of PPF is installed," Janis continued. "I recommend waiting at least a month in warm weather and up to two months if working during winter, thereby ensuring paint is fully hardened and doesn't fuse together with the PPF's adhesive backing, which can compromise removal."

"The likelihood is either your GT3's bumper was poorly prepared for paint, or the PPF was installed before the paint had cured fully and all traces of solvent had been released. Possibly, it was a

THE OFFSIDE DOOR MIRROR CASING WAS ALSO AFFECTED BY REMOVAL OF THE OLD PAINT PROTECTION FILM

combination of both complaints — either can lead to PPF making a stronger bond with the paintwork than the paintwork has with the panel, resulting in the damage seen here."

The offside door mirror casing was also affected by removal of the old PPF. The part is manufactured from carbon-fibre. Unfortunately, removing the PPF has lifted areas of the casing's clearcoat. This will obviously need sorting before new Suntek film can be applied.

Clearly, none of this was music to my ears, but they do say you can't make an omelette without breaking eggs. While this setback may not be the smooth sailing I was hoping for when addressing my GT3's looks, once the work is

complete, the car should be in perfect cosmetic condition, which will not only sooth my OCD, but should prove positive for any future resale value, too. All that's left for me to do is select a bodyshop

to carry out the repairs. I think I know just the place.

We've been seeing a huge amount of incredible work coming out of the Rindt Vehicle Design stable of late. The company's turnkey restomods and flawless

restorations are regularly gracing the pages of our sister title, *Classic Porsche*. Rindt Vehicle Design is also the firm I bought my GT3 from a few months ago. As well as the company continuously demonstrating the skills required to achieve paintwork perfection, there is also a neat 'completing of the circle' if the car returns to Rindt's Windsor workshops and company boss, Brian Richardson, for the work to be done.

While this tale may well be a case of 'one step forward, two steps back', the final result should far outweigh this relatively minor (although not altogether cheap) inconvenience. I'm now more excited than ever about making my perfect Porsche a reality.

Above The car's wheel arches have been butchered to accommodate bigger tyres, but Dan is determined to right this wrong with the assistance of Rindt Vehicle Design



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TECH: THE FLEET

EXHAUSTING WORK

Fresh from his trip to the USA, Chris Wallbank heads to the Emerald Isle and witnesses a series of technical presentations at Des Golden Specialist Cars...

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FOR DETAILS



ot on the heels of accompanying editor Dan to the United States for photographing the amazing collection of modern and classic Porsches owned by Def Leppard guitarist, Vivian Campbell, I had a forty-eight-hour turnaround at home in North Yorkshire before I was back out the door. My destination was Cork, the second largest city in Ireland.

The assignment was given to me by Peron Automotive, the exclusive B2B distributor for Akrapovič exhaust systems in the United Kingdom. A pioneer in its field, Akrapovič is widely recognised as a highly innovative materials technology company. The brand is synonymous with the highest level of design, performance enhancement and the creation of an unmistakable exhaust sound. The company's products are designed and manufactured by a passionate and highly skilled workforce of more than a thousand employees, each using state-of-the-art technologies, the latest production

processes and the finest materials available for exhaust construction.

I was heading to Des Golden Specialist Cars. This independent Porsche shop has been operating for a quarter century and was playing host to in excess of seventy Porsche Club Ireland members for a series of technical presentations from company founder, Des Golden, members of the Akrapovič team, and representatives of Bolton-based M96/ M97 engine specialist, Hartech. The latter drove to Cork in the company's EcoPower 996 (featured in the April 2022 issue of 911 & Porsche World). Finished in a vibrant shade of lime green, there was no way I was going to miss it when boarding the ferry to Dublin!

With little time between returning from my trip to the USA and setting off for the Republic of Ireland, I was reeling from the effect of jet-lag. Keeping me going was the promise of meeting the Des Golden Specialist Cars team, as well as the opportunity to get a feel for the Irish Porsche scene. I wasn't disappointed, that's for sure — despite the event not

kicking off until 10am on the day in question, the workshop car park was busy with an impressive turnout of Porsches. Air-cooled cars, including a classic 911 Turbo (930), were in attendance, as was a brand-new 992 Carrera GTS Targa, serving as something of an advertisement for Akrapovič, what with it making use of the company's new slip-on titanium exhaust, the system, installed on-site in Cork.

Some of the Porschephiles gathered had travelled from Northern Ireland for the

Above A wide variety of Porsches pass through the Des Golden Specialist Cars workshop

Below New Akrapovič exhaust systems and production processes were discussed throughout the day







Above The Des Golden Specialist Cars team welcomed Hartech and Akrapovič's UK B2B retailer, Peron Automotive, to Cork

Top right You do realise you've got to pay for that, mate?!

Right 992 Carrera GTS Targa was treated to a titanium Akrapovič exhaust system at the Des Golden workshop occasion. It seems obvious, but I'll say it anyway – the Porsche community in this part of the world is thriving.

The first technical presentation of the day was given by James Golden (son of Des) and covered Porsche maintenance and best practice concerning mechanical upgrades. Des Golden Specialist Cars is an approved retailer and installer of products for some of the aftermarket's biggest brands, including KW Suspension and, of course, Akrapovič.

James's talk was followed by a presentation from Hartech director, Lee Jenkins, who covered technical aspects of the company's M96/M97 rebuilds, including the reasons for engine failure, preventative measures, the benefits of over-sized flat-sixes and (as hinted at by the presence of the bright green 996 in the room) ongoing research and development concerning the Hartech EcoPower project.

MAKING NOISE

Last but by no means least, Akrapovič's presentation showcased the design, development and production processes invested in the brand's superb titanium exhausts. The quality and sound of these systems is industry leading, a claim I make knowing Akrapovič is the first-choice exhaust system manufacturer for an increasing number of OEM sports car manufacturers around the globe.

On this topic, it's worth me mentioning how Akrapovič's signature hexagonal muffler took the world by storm when it was introduced to market in 2005. A new conical muffler represented a new level of evolution — it provides a sharper racing sound and faster acceleration. In recent years, new designs of Akrapovič exhaust systems and composite parts have been

developed with new innovative shapes and effects. They've proved popular on the Porsche scene, but there's more to follow in coming months. Stay tuned!

One of my favourite attendee Porsches was a Speedline-riding 964 Turbo 3.6, aping the iconic 911 from the Will Smith movie, *Bad Boys*. This is one of my bucket list cars, though not a model seen very often. The brilliant black Porsche is maintained by Des Golden himself, a man with more than four decades of experience working on air-cooled classics. James takes care of the many water-cooled cars rolling through the workshop's doors.

After the technical talks were done, everyone jumped in their cars and followed one another in convoy to a local eatery Des had generously booked to provide everyone with lunch.

One thing that stood out to me about Des Golden Specialist Cars is the fact it's a completely family-run business. You sense as much the moment you step foot in the company's workshop. Of course, there's founder, Des, and his son, James, the latter serving as Senior Technician, but there's also Des's daughter, Joanna, working as Service Manager. She's passionate about delivering first-class customer service, as indicated by the warm welcome everyone received on the day. Nothing was too much trouble.

A big thank you goes out from me to the Des Golden Specialist Cars team for the fantastic hospitality I enjoyed across a brilliant weekend.

I also have to say thanks to Peron Automotive's Operations Manager, Ant Pearson, for putting up with a jet-lagged photographer during a ten-hour road trip! More from me next month. ●











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TECH: THE FLEET

LATE REGISTRATION

When Dan Furr's 997 Carrera 4S was taken to Porsche GB for installation of PCCM Plus, he was loaned a 992 Turbo S with a very special license plate...

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he good folk at Porsche Cars Great Britain contacted me to say they'd never seen a 911 as magnificent as L31CHT, my 2006 997 Carrera 4S. With the Basalt Black beauty considered the greatest individual Porsche ever assembled ("the missing piece of our Porsche Museum puzzle," as a representative from Zuffenhausen once described it), I was asked whether I'd be happy to loan the car for study at the new Porsche Technical Training Centre in Reading. Feeling sorry for the company's technicians, who are forever surrounded by inferior sports cars, such as the brandnew 992 Turbo S you see on these pages, I could do nothing but agree to help. The suitcase full of gold bars hand-delivered to my door by Wolfgang Porsche in no way swayed my decision.

Okay, I'm writing this update on April Fool's Day and the tale told in the

previous paragraph might not be entirely accurate. Truth is, Porsche Cars Great Britain very kindly loaned me a 992 Turbo S as a courtesy car while my 911 was in the care of the aforementioned training centre technicians, who were installing the new Porsche Classic Communication Management Plus (PCCM Plus) recently released for the 997-generation 911 and 987 Boxster/Cayman. I delivered a seven-page review of the upgrade in last month's issue of 911 & Porsche World. Suffice to say, Bluetooth connectivity, as well as DAB+ and Apple CarPlay (and the option of Android Auto), has had a hugely positive impact on the driving experience.

As the delivery truck arrived at my house to offload the 992 and collect my 997, I was obviously excited, but not just because of the bespoke specification of the near 650bhp Porsche I was being presented with. Granted, it's difficult not to get excited about a Stuttgart-crested rocketship dressed in a shimmering coat

of GT Silver Metallic over a gorgeous red leather interior, but this particular Turbo S boasts an extra-special feature afforded to only a select few 911s. I'm referring to its registration plate: 911 HUL.

Having been attached to Porsche Cars Great Britain's top-of-the-line 911 Turbo press cars for many decades, this is one of the most famous Porsche license plates in existence. Indeed, long-time Above A brand-new 992 Turbo S might just be the best courtesy car anyone has ever been given

Below Dan's 997 is loaded onto the covered trailer for the journey to Porsche Cars Great Britain







Above 911 HUL is usually applied to Porsche GB's topspecification 911 Turbo press cars

Below Dan's allpawed 997 sitting happily alongside a Macan T in the new Porsche Cars Great Britain Technical Training Centre subscribers to this magazine will have seen 911 HUL many times over the years, ordinarily when we've been reviewing

a new 911 Turbo or Turbo S. It's an iconic plate, a fact highlighted by the number of times I was tagged on Twitter (find me @DanFurr) after being spotted out and about in the car.

Talking of registration plates, I've been asked about L31CHT a number of times since it appeared at both ends of my 997. In case you hadn't already worked it out, L31CHT (I'm closing the gap between numbers and letters for illustration purposes in print) is a play on the German word *leicht*, which Porsche and other German manufacturers have used

when naming many of their high-end performance models. Now, I appreciate there's something perverse about

A STUTTGART-CRESTED ROCKETSHIP DRESSED IN A SHIMMERING COAT OF

GT SILVER METALLIC OVER A GORGEOUS RED LEATHER INTERIOR

labelling a bulk-carrying Carrera 4S with a word meaning *light*, but here's the thing: I didn't intend to put the plate on this car.

I first encountered L31CHT when I was working with 911 & Porsche World photographer, Chris Wallbank, on the cover shoot for the July 2021 issue of the magazine. Those of you with a long memory will recall this as our celebration of the 968's thirtieth anniversary. Our

cover stars were two stunning 968 Sports

– one Guards Red, one Speed Yellow. The
red example was carrying the L31CHT

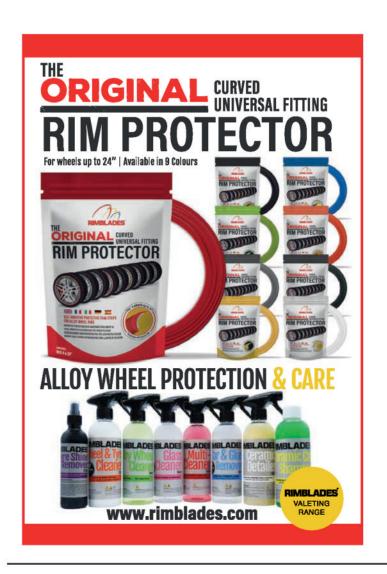
registration plate. I remember thinking how cool it was, but I didn't for second think it would end up being mine. Long story short, when the magazine was

on newsstands, the car's owner, Matt Rowley, decided the time had come to sell up. Having fallen in love with the cool coupe on the photo shoot, my friend, Sam Grange-Bailey, wasted no time in securing ownership, but she didn't want the registration plate. Matt knew how much I liked it and offered me the opportunity to take it off his hands. L31CHT was mine.

What car to put it on, though? I was yet to buy my Slate Grey 1994 968 Sport, which I feel is the most deserving of cars currently on Furr's Fleet. It seemed a waste to leave the plate on retention. By luck (rather than design), most of the cars I own already have cool two-digit license plates (original DVLA issues, such as my 944 Turbo's non-transferable C96 EYE identifier). For no other reason than wanting to make use of L31CHT, I assigned it to my 997. So long, CN56 OHK. For the time being, at least.

I've since had numerous offers from BMW, Mercedes and Porsche owners keen to see L31CHT on their own cars. They'll have to prize it out of my cold, dead hands. There's more chance of Porsche Cars Great Britain selling 911 HUL, and that's unlikely to happen. If it does, though, I'll be fighting you to the front of the queue. ●







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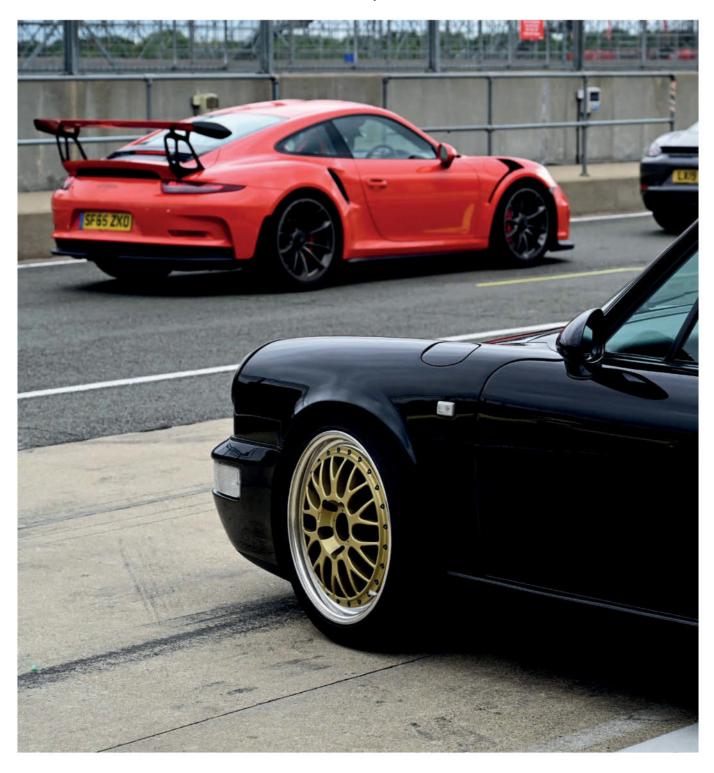
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TECH: MARKET WATCH

AUCTION NEWS

Interest continues to grow in The Carrera Collection, an impending RM Sotheby's auction of rare Porsches from a single-owner fleet. Here are the latest lots for your consideration...

ast month, we brought you news about The Carrera Collection, an exciting auction of hugely collectible Porsches scheduled to go under the hammer in Switzerland on the 7th July. The sale is being managed by international auction house, RM Sotheby's. When we announced the news, details of the available lots were limited, but not long before this issue of 911 & Porsche World went to print, we were treated to a long list of the star cars set to spark bidding wars at the Meilenstein in Langenthal, a hotel complex and business centre chosen to host the auction on account of it having an integrated vehicle museum (recognised for its Formula One exhibits).

In addition to the astonishing selection of

(pictured right and pairing chassis 122866 with engine 97432). Dressed in vibrant blue, the car is a rare 'sunroof coupe' and, like the other 356s mentioned, will be offered for sale without reserve.

On to the 911s, the earliest of which is a gorgeous red 1966 coupe (chassis 304371, powered by flat-six number 907615). One of only two Porsches in the sale built during the 1960s, the two-litre stunner is joined by a fully restored 1969 911 S (chassis 119301274, engine 6391824) finished in a pristine coat of brilliant white.

The Carrera Collection offers just three 911s assembled in the 1970s, but it's quality, not quantity, that matters, right?! Proving the saying true is the 1973 Carrera RS 2.7 Touring (chassis 9113600172, engine 6630185) pictured right. This



THE THIRD GUARDS RED G-SERIES ON OFFER IS A 1989 911 TURBO CABRIOLET TRIMMED IN LINEN LEATHER

Porsches on offer, a variety of fascinating models from other premium marques will cross the block. A trio of BMW Z8s, two Alpina Roadster V8s, an Alfa Romeo 8C Spider, two W121 Mercedes-Benz 190 SLs and an R107 500 SL rank high among the European sports cars making an appearance, while a two early Chevrolet Corvettes and a 1969 Camaro SS convertible will be flying the flag for American muscle.

To the Porsches, then. There's much to get through. In fact, other than the vehicles already mentioned, The Carrera Collection's run of more than ninety cars is exclusively Porsche. They're all super-desirable models in exceptional condition, too.

What's catching our eye? The earliest car on offer is a 1955 1500 Speedster in white. Corvettes and drop-top Mercs aside, the stripped-back 356, which carries chassis number 80288 and engine 34322, is followed by a 1963 356 B Carrera 2 2000 GS coupe (chassis 123002, engine 97195).

Next up is another 1963 356 B Carrera 2

ducktailed delight is united with another RS 2.7 Touring (chassis 9113601062, engine 6631032, gearbox 7830982) in eye-popping yellow, as well as a 1978 911 Turbo (chassis 9308700081, engine 6780083).

Five G-series 911s from the 1980s look set to excite bidders. All but one of these cars is finished in Guards Red. First up is a 1988 Carrera 3.2 Club Sport (chassis WP0ZZZ91ZJS105113, engine 63J02542, gearbox J11119). Then, not one, but two red 1989 Carrera 3.2 Speedsters join the party. The first (chassis WP0EB0917KS173596, engine 64K06212) features a tan interior with black piping, while the second (chassis WP0EB0919KS173678, engine 64K06292) sticks with oh-so-classic black leather, perfectly complementing the red paintwork. The third Guards Red G-series on offer is a 1989 911 Turbo Cabriolet (chassis WP0EB0935KS070338, engine 68K00637) trimmed in Linen leather.

Rounding out this quartet of eighties smashers is a third 1989 Carrera 3.2

















TECH: MARKET WATCH

Speedster (chassis WP0ZZZ91ZKS152128, engine 63K04132) forging its own path with black paintwork over red leather, which features black piping.

The nucleus of the cars presently announced for inclusion in The Carrera Collection comprises air-cooled cars produced in the 1990s. There's a black 1992 964 Carrera RS (chassis WP0ZZZ96ZNS491921, engine 62N82784), a white version of the same Rennsport (chassis WP0ZZZ96ZNS490323, engine 62N80760, also from 1992), a Guards Red 1993 964 Speedster (chassis WP0CB2968RS465377, engine 62P06132) and a second example of the same rare model, built in 1994 (chassis

constructed in 2011 join the mid-engined marvel. The first is a rare 997 GT2 RS (chassis WP0ZZZ99ZBS776201), the other a 997 GT3 RS 3.8 (chassis WP0ZZZ99ZBS780433). Is it wrong of us to want them both?!

Five years of Porsche production is skipped, heralding the auction's sublime 2016 991 R (chassis WP0ZZZ99ZGS194561), number 709 of 991 units built. Though an instant collector classic, this R-badged belter will struggle to draw eyes away from the auction's available 2016 991 GT3 RS (chassis WP0ZZZ99ZGS188569), decorated as it is in a replica of the livery worn by Martini Racing 917-043 at the 1970 24 Hours of





WHAT MAKES THIS SALE ALL THE MORE IMPRESSIVE IS THE FACT EACH OF THE VEHICLES ON OFFER IS FROM THE SAME SINGLE-OWNER COLLECTION

WP0CB2960RS465440, engine 62R00588) and finished in Grand Prix White.

993 fans will rejoice at the inclusion of four examples of the last air-cooled 911, all of them hugely alluring. The first is a black 1995 Carrera RS Clubsport (chassis WP0ZZZ99ZSS390116, engine 63S85561), a yellow non-Clubsport RS (chassis WP0ZZZ99ZTS390628, engine 63S86204) manufactured during the same year, an extraordinary silver GT2 Evolution motorsport machine (chassis WP0ZZZ99ZTS393074) and the rather more sedate — but by no means less enticing — black 1996 Turbo coupe.

As you can see from the various photographs we've published on these pages, water-cooled Porsches are well represented in The Carrera Collection. Two 996s lead the charge — we were bowled over by the included silver GT3 (chassis WPOZZZ99ZYS691147) and black GT2 (WPOZZZ99Z1S695146) and had to keep reminding ourselves all cars being offered are available without reserve. There's every chance winning bidders might score themselves a bargain. Or two.

We nearly forgot to mention the bluestriped 2004 996 GT3 RS (pictured top, chassis WP0ZZZ99Z4S697104) joining its GT3 and GT2 brethren in Switzerland.

At the time of writing, the lone Boxster on offer is a white 2011 987 Spyder (chassis WP0ZZZ98ZBS740231) with black accents. Two more Porsches

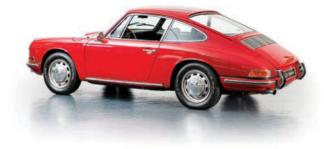
Le Mans. Driven by Gerard Larrousse and Willi Kauhsen, the car became known as the 'hippie' 917 due to its bright green psychedelic stripes and violet-painted body.

Every one of the Porsches featured in The Carrera Collection is a 'bucket list' car, but what makes this sale all the more impressive is the fact each of the vehicles on offer is from the same privately-held single-owner collection. And we've barely touched on the full scope of what's available. Indeed, there are so many Porsches up for grabs, RM Sotheby's will be hosting a second auction in Italy in order to accommodate more of the vendor's fantastic fleet. We'll be sure to bring you the details when we have them.

"We are delighted RM Sotheby's has been entrusted to sell this astonishing single-owner collection," reiterated the auction house's classic car specialist, Felix Archer, when we were compiling this article. "The breadth of Porsche models on offer presents a huge opportunity for fans of the marque, while the entire sale contains a selection of truly desirable models."

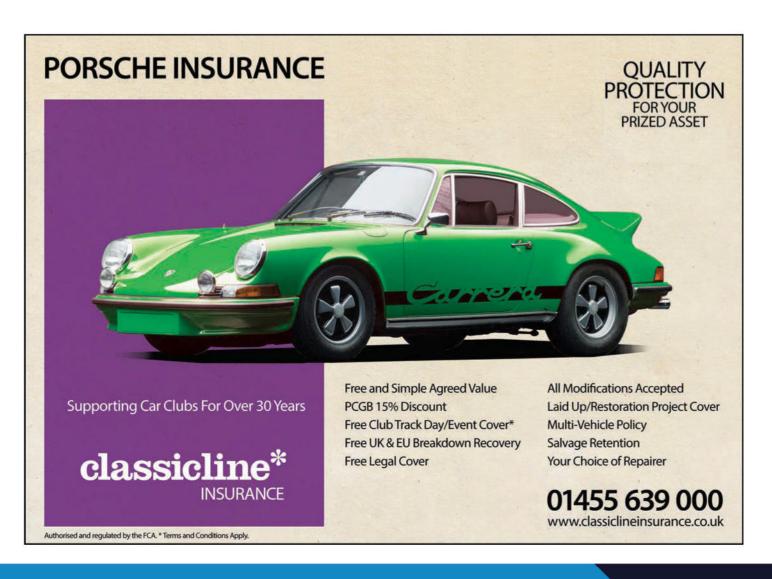
If you're looking to secure ownership of an immaculately presented rare Porsche, be it classic, modern-classic or nearly new, then get head over to the RM Sotheby's website (rmsothebys.com) and register your interest. Admission to the auction is for registered bidders, catalogue holders, consignors, invited guests and qualified media only. Good luck and happy bidding!











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PORSCHE 3400



2012, 66000 miles, £66,000. Registered in 2012 this Porsche Boxster S 981 series is fitted with the desirable PDK 7 speed gearbox. Powered by the 3.4 litre flat 6 cylinder 'Boxer' engine, it is one of the last models available with this 6 cylinder engine, producing 315 bhp. Finished in Platinum Silver metallic paintwork with a contrasting black leather interior. Please call 07577 575770, South East. (T)

113397

PORSCHE 356



1960, 103000 miles, £69,995. 356B T-5 1600 Super. Manual, ivory with black interior, left hand drive, original condition. Please call 01765 609798, Yorkshire and the Humber. (T)

PORSCHE 911



2012, £54,995. 2012 PORSCHE 911 CARRERA 991. Finished in unmarked Carrara White with Black Hide PDK 7 speed transmission with steering wheel paddles. Specifications include Sat Nat, Cruise Control and Launch Control, Climate Control, Heated Seats and Rear Park Assist. 66,000 miles with Porsche Dealer Stamps at 6231 miles, 22951 miles, 50,139 miles and 58,716 miles. Comes with all the original Porsche Book Pack in the leather wallet, invoices for all the services etc. Exceptionally well looked after example with a very good Specification. Free delivery to England, Wales or to any UK port. International transportation can be arranged. Part exchanges of both classic and modern cars welcome. Please call 01485 541526, South East. (T)

113651

PORSCHE 911



1984, £89,995. From 1984 this 911 RS tribute utilised a C16, right-hand drive 3.2 Carrera Coupé as its starting point. Specifically, this was a healthy well-serviced example with a good history file. This tribute car presented here pays homage to the legendary 1973 2.7 RS, echoing that famous silhouette very well, and was professionally built. Please call 01798 874477, South East. (T)

116683

PORSCHE 911



£99,840. Previously supplied by ourselves in 2019 to the current keeper, this is a GT3 we know well and adore. The comfort spec cars are just so easy to live with and are just as happy on the dual carriageway as they are on track. This example was specified with Axle Lifting system making for a GT3 you really could drive round a city centre as easily as with a Ford focus. Please call 01229 486315, North West.

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PORSCHE 911



2003, £69,950. The vehicle has a service record full of stamps from both Porsche Main Agents and independents. The vehicle will be reserviced and inspected at Jasmine Porsche prior to delivery to the lucky new keeper. The car has just sailed through an MOT with no problems at all. Please call 01229 486315. North West. (T)

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2006, 86000 miles, £31,995. 997.1. Carrera S 3.8. First registered in 2006 this Dark Grey C2S 6 speed manual comes in a great condition with high spec including sports seats, immaculate 19inch Sports Design wheels with plenty of tread on the Michelins Cup 2. Chrono, Bose, factory short shift, PASM and Sports exhaust system along with many other options. Certificate of authenticity supplied. The car comes with a new MOT, has a full service history which has been stringently kept to its annual schedule. Last service carried out in May. Please call 07801 525231, Greater London.

PORSCHE 911



1988, 66900 miles, £48,995. 1988, 66,900 miles Porsche 911 3.2 Carrera Coupe Sport. Grand Prix white, white Fuchs forged alloys, white leather interior (linen), original Blaupunkt London SQM 37 radio cassette, electric seats, electric sunroof, rear wiper, G50 gearbox, rear spoiler. Fantastic specification. . Please call 07949105338, Greater London.

118101

PORSCHE 911



2003, 53000 miles, £24,000. Lovely 996 soft top c/w hardtop as well, only 53,000 miles, had the ims and rms replaced, history with all its books etc, extended leather and aluminium interior option, never failed an mot or had a single advisory, a lovely 996 C2 Tiptronic very hard to find one as nice as mine. Please call 07972756423, North West.

116307

PORSCHE 911



18700 miles, £125,000. Porsche 911 Carrera (993) 1996 road/ race car, N reg., 3.6 It twin turbo, 6 speed gearbox, turbos recently rebuilt and fuel lines replaced. Engine 500 bhp (approx.) Brembo race brakes (road units also supplied). Please call 07860379440, East of England.

112858

PORSCHE 928



1990, 165000 miles, £299,928. Porsche 928 S4 auto 1990. Restored by Porsche Portsmouth and Porsche approved Poole body shop for Porsche UK 40 YEARS AT THE FRONT DEALER COMPETITION IN 2016. Very rare in special order Tahoe blue, even more rare is having in excess of £55000 spent in restoring it bodily and mechanically. Far too much to list that has been replaced on the car. , Scotland.

113608

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PORSCHE 928



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117274

PORSCHE 944



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116025

PORSCHE 944



1991, 96000 miles, £25,995. Porsche 944 Turbo Cabriolet (first reg August 1991) 95. 6K mileage. One of only 100 RHD made. Full documented history. In the last three years, has a full belts overhaul, full fluids replacement (engine, gearbox, diff etc), new RMS and Clutch , brake overhaul etc. Cam tower gasket replaced. The care has a uncracked dashboard and working clock. Please call 07855794548, East of England.

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PORSCHE 944



1989, 130000 miles, £7,750. Porsche 944 Lux Auto c/w private plate for sale, I have owned this car for approximately 5-6 years. A very reliable daily classic, easy to own and a great cruiser! In vgc with full service history - refurbished wheels and good bodywork, the underside is solid and has been undersealed for max protection. Please call 07841757124, South West.

111011

PORSCHE 996



2003, 58776 miles, £16,500. 2003 PORSCHE 911 edition with low mileage of 58k. Full Porsche owner manuals and literature folder. No receipts with the car so cannot say what preventative maintenance work may have been done (ims and rms etc) Up to date service book (Eleven Porsche dealership stamps and 1 specialist stamp) Two keys. Please call 01443 206597, Wales.

PORSCHE 997 911



2010, 66000 miles, £64,999. Gen 2 997 turbo with FPSH. Basalt black with black leather interior. PDK and sports chrono. Other extras include an LSD, heated seats, sunroof and parkassist. Plenty of tread on Bridgestone tyres. Comes with a fitted Porsche cover and has an active Porsche tracker. Had the car for three years and had a major service last year at Porsche Perth. Please call 07942357932, Scotland 114651

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2006, 67000 miles, £11,250. My car is in Arctic Silver with Sand Beige leather interior, registered in November 2006. It's a Tiptronic with Sport Chrono which is a "must have" option with the auto as it makes it more lively and responsive than without. It's in great condition. There's a few stone chips on the front but no rust and she benefits from many optional extras some of which are rarely optioned on a Boxster. Sport Chrono. Extended leather (includes dash and doors). Fully electrically heated and adjustable seats with memory. Bose sound system. Fully specced PCM (telephone module, sat nav. multi-CD player). Boxster S white instrument dials. Boxster S exhaust tips Boxster S 18" wheels (included in sale -see photo-if required but currently not fitted). Standard Boxster 17" wheels currently fitted with recent tyres. Multi-function steering wheel, Wind deflector, Parking sensors, Just serviced, MOT (with no advisories) until December, work undertaken during my ownership: front suspension. . Please call 07909923202, South East. 113703

PORSCHE BOXSTER



1998, 121000 miles, £5,495. Possible Swap? 07957186048, orsche boxster 986 convertible, £5495 px swap?rare red in colour and triptronic with steering wheel shift, as can be seen in photos the car is in very nice condition for its age, been in family for yrs ,Please call 07957186048, East Midlands.

116146

PORSCHE BOXSTER



2003, £9,750. 2003(03) Porsche Boxster 3.2 S. Metallic Basalt Black with Black leather and Black power soft top. Facelift model with the glass heated rear window and clear indicator lenses. 6-speed manual, power steering, ABS, Porsche stability management, automatic airconditioning.Please call 01277365415, East of England. (T)

PORSCHE BOXSTER

113353



2003, 66000 miles, £57,000. Registered new in May 2003 as a Porsche Boxster 986 2.7, this particular car was transformed into this homage of the original 356 Speedster by Iconic Autobody. With its retro bespoke coachwork there is still the modern drivetrain and chassis of the original Boxster, therefore the same driving characteristics have been maintained. Please call 07577 575770, South East. (T)

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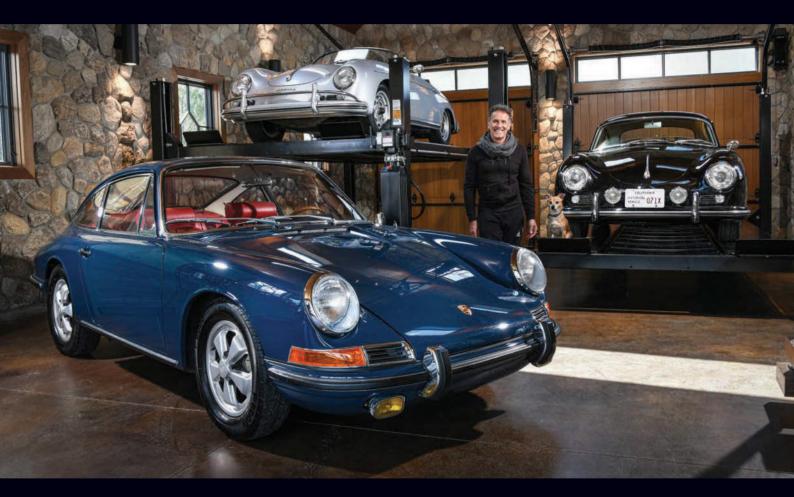
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