991 R ROADTRIP 1,000 MILES IN PORSCHE'S PRODIGY

### **CARRERA EVOLUTION**

A celebration of Porsche's staple 911 model through the decades



### THE PORSCHE MAGAZINE

www.total911.com

New 991.2 manual & PDK cars driven back to back on road and track







### 912 UPRISING

912

Why early 911 enthusiasts are now turning to its four-cylinder brethren

### **ROAD RALLY!**

Introducing the perfect motorsport for your road-going classic 911

PLUS

• 991 GT2 RS spied

- Varioram explained
- Great roads: NC500





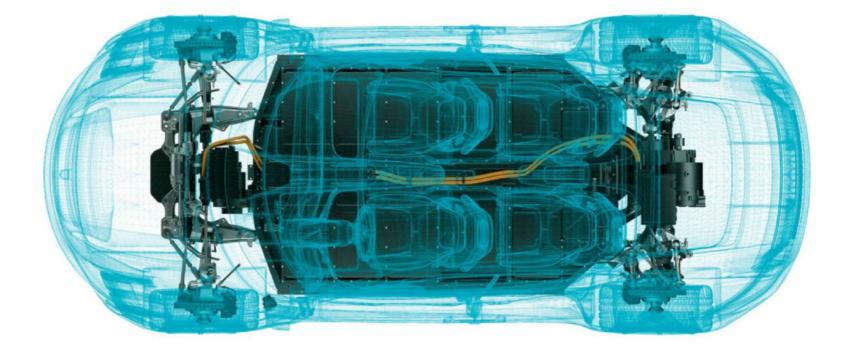
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Porsche Service delivers the best for you and your car. Just as for a race car and its driver, we are your pit crew. Covering all aspects of service and maintenance, Porsche Service offers Porsche-trained Technicians, Porsche Genuine Parts and the most advanced equipment and techniques. A range of fixed price servicing is now available at our Porsche Centres, starting from £295.00 for a 911 (996) model\*. For more information visit www.porsche.co.uk/service.



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# Welcome



t makes for a painful practice, mentioning the words '911' and 'electric' in the same sentence. However, the subject of alternative power in Zuffenhausen's iconic sports car cannot henceforth be ignored.

Porsche must tow the VW Group's company line in its push towards electric-powered vehicles, which the wider industry sees as a long-term answer to cutting harmful emissions. The Group is said to have accelerated its plans for electric power so that it isn't left behind by rivals.

Zuffenhausen certainly isn't hanging about, either: the company has been investing heavily in a joint venture with BMW Group, Daimler, Ford and the rest of the Volkswagen Group to create a network of fast, high-power charging along highways across Europe. Meanwhile, Porsche is rumoured to be ahead of schedule for its 2020 Mission E target.

"Porsche is rumoured to be ahead of schedule for its 2020 Mission E target" Alas, the 911 cannot be blindly overlooked in this regard. And, while most have accepted a hybrid Neunelfer may be around the corner, a full-blown electric example could likely be closer than you think, too.

I recently had a very interesting conversation with someone who works in the specialist accident repair industry, who let slip he's having to invest millions in new equipment and tooling for electric cars soon to hail from one of his clients based in southwest Germany. The remark is not insignificant: don't forget, all Porsche-approved body shops have to be prepared with the capacity to comprehensively repair any of the company's vehicles from the very minute they are released. If they don't know what Porsche is building, how can they be ready for it? Either way, it just makes you appreciate a naturally aspirated, manual 991.2 GT3 even more...



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azine Visit us for up-to-date news and debate

### 4 | Llanberis Pass, Wales



Preuninger's prodigious Porsche was made for this: while some of the 991 worldwide R's remain still and silent in private collections, one such example is being driven – hard – as it was intended, its banshee titanium exhaust resonance reverberating around the rugged Llanberis mountain pass.

Photography by Rich Pearce

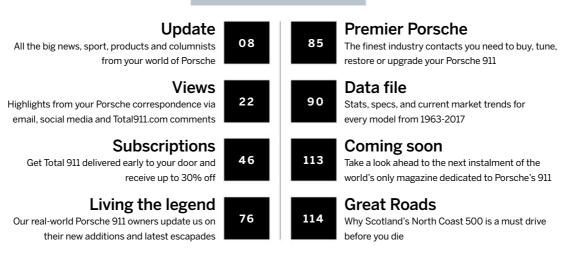


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A Total 911 subscriber shuns the garage queens and drives his R right through Wales



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iced to 993s from 1995. but ow did it benefit the 911?

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world of classic regulation 11 is the perfect companion

cel on the limit of car and driver? with the car control experts

















## 991 GT2 RS takes to the track

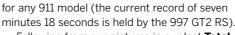
Late prototype spotted on the Nürburgring; official unveiling of production car imminent

Just weeks before it is due to be officially unveiled, Porsche's 991 GT2 RS has been spotted attacking the Nürburgring Nordschleife motorsport complex in Germany, largely devoid of any significant effort to disguise it.

**Total 911**'s spies have photographed the car, in full black racewear, on a hot lap of the 'Ring ahead of its launch later this summer. The car is being piloted publicly for the first time by a crash helmet clad driver in a Cup car-spec bucket seat, hinting at a warm up to Porsche setting what will likely be a record lap time of the Nordschleife

### Porsche AG acquires full

Porsche Design Group is now a whollyowned subsidiary of Porsche AG after the car manufacturer acquired a final 35 per cent stake. "The acquisition underlines the relevance of Porsche Design Group. We will ensure there is a closer link between lifestyle activities and the automotive business," says Lutz Meschke, Deputy Chairman of the Executive Board.



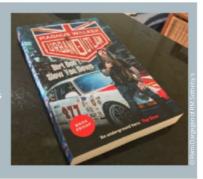
Following from our pictures in our last **Total 911** issue, these latest shots give the clearest indication yet as to the 991 GT2 RS's visual features, some of which are carried over from the naturally aspirated 991 GT3 RS including a magnesium roof and bonnet and airflow exit vents above each of the wheels. Air inlets for the engine, mounted on top of the mule's rear decklid, appear to mimic those now found on the 991.2 GT3. However, the GT2 RS features further aerodynamic tweaks, note the presence of dive planes increasing downforce at each front corner, while air ducts on the front bonnet are said to aid cooling and generate yet more downforce. The side intakes feeding air to the GT2 RS's intercoolers remains largely hidden from view, hinting at an all-new design.

Porsche's 991 GT2 RS is tipped to be the fastest ever Porsche 911, usurping the 205mph top speed of its 997 predecessor of 2010. For all the breaking Porsche 911 news visit Total911.com.



### Magnus Walker autobiography release

Self-styled Urban Outlaw and former Total 911 columnist, Magnus Walker, has unveiled his first autobiography. Titled 'Dirt don't slow you down', Walker recount his Sheffield upbringing and Stateside move to Los Angeles before he became known as a prominent Porsche collector and modifier. The book is available via Penguin.co.uk from June 1.





### Never-driven 964 RSR comes to market

Timewarped, 1 of 2 race car offered via Bill of Sale at RM Villa Erba auction

Auction house RM Sotheby's has recently announced that it is to offer a unique, 1993 model year 964 Carrera RSR 3.8 at its forthcoming Villa Erba sale on May 27 of this year.

Boasting a mere ten kilometres on its odometer, this special order RSR is said to have never been driven or raced its factory-applied Cosmoline still visible over the car's surface. The car is being offered on a Bill of Sale basis only.

Records show just 51 examples of the 3.8-litre Carrera RSR were produced, though RM's Polar silver example is one of two built to a peculiar, specialorder specification that includes a full, leather clad interior in striking Can Can red. Deviating drastically from its bare

metal-lined RSR counterparts, the 964's Can Can red leather extends to its door bars, competition seats (their rears body colour painted), headliner, dashboard, door cards, steering column and wheel, with carpeting and Schroth six-point harnesses also colour matched. Note chassis number WP0ZZZ96ZPS496107 is not available via internet bidding.

### What's on in 2017



### Best first quarter in its history for Porsche Seven per cent increase in vehicle deliveries yields impressive Q1 2017 results

Zuffenhausen is celebrating the best first quarter of business in its history after announcing nearly 60,000 new vehicles had been sold since the turn of the year. 2017 has seen a seven per cent rise in deliveries compared to 2016.

Particularly strong returns were recorded in China and Porsche's home market of Germany, the

former seeing a total of 18,126 vehicles delivered, while Germany's 7,160 deliveries represents a rise of 19%. "Porsche has made a successful start - this trend now needs to continue throughout the rest of the year", said Detlev von Platen, Member of the Executive Board responsible for Sales and Marketing at Porsche AG.



### Porsche announces Microsoft partnership Six-year deal means bigger Porsche presence on 'Forza' computer games

Porsche has entered into an exciting

six-vear partnership with US technology giant Microsoft in order to 'deliver virtual driving pleasure' to all gamers worldwide.

Announced at the New York Auto Show, a strategic partnering of the two brands will result in a greater collaboration across the growing Esports community.

This means games fans can expect to see a greater prominence of Porsche sports cars across the Forza Motorsport and Forza Horizon series, while a special 'motorsport championship for all sports fans' will be made available on Forza Racing Championship, for those wishing to pit their virtual driving talents against others.

Update Latest news, key dates, star products & race results from the world of Porsche



# 991 Sport Classic breaks cover

Wingless 991.2 GT3 mule sparks rumours of new special edition model first uncovered by Total 911 in 2016

We told you it was coming ... Total 911's spies at the Nürburgring have spotted what at first sight looks like a 991.2 GT3 mule without a rear wing, strongly suggesting Porsche is developing a new, special-edition 911 before the end of the secondgeneration 991 era.

However, this is unlikely to be a facelifted 911 R, our sources telling us it's more likely to be the first sightings of a 991 Sport Classic. Total 911 revealed Porsche bosses were considering a Sport Classic build back in September 2016. If the previous 997 Sport Classic is anything to go

by, the new car will be very limited in numbers, boasting a lavish specification. Rumours continue to persist that Porsche is also to announce a lightweight Speedster model later this year for the 991.2 generation. For all the breaking Porsche news visit Total911.com.



### MAXTED-PAGE

### HISTORIC RACING PORSCHE



### 1991 Porsche 911 (964) Carrera RS Coupe / 45,000 kms

Delivered new in Italy, this beautiful numbers-matching Type 964 Carrera RS was purchased in 1999 by Porsche racer Luca Aiazzi, who successfully raced the car in the Italian Porsche Super Sprint Series - finishing 2nd in 2003.

Now retired from racing and with 45,000 kms recorded, the car came to us in early 2016 for a comprehensive restoration back to original delivery specification. The suspension and brake systems have been fully overhauled and returned to factory spec. with new dampers and discs fitted. The car has also been repainted in its original colour scheme of Grand Prix White and re-trimmed with new RS carpets and its original Grey-Black Tri-coloured leather Recaro bucket seats re-installed. The original (Type M64/03) 3.6-litre engine was rebuilt in 2013 and still retains slightly uprated camshafts and a Bosch-Motronic chip upgrade from its racing days, now tuned and fitted with a new de-resonated non-catalytic pipe and bypass loop. (Original camshafts have been retained).

One of just 1,992 Type 964 Carrera RS Coupés produced • Delivered new in Italy; 45,000 kilometers recorded Numbers-matching - restored example • Porsche Certificate of Authenticity; history file, handbooks and tools • UK registered



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# NEUNELFER II CARS & COFFEE HIGHLIGHTS

Second instalment of 911-only event attracts 100 Neunelfers to Porsche Centre Portsmouth

Photography by **Rich Pearce** 

ollowing the success of **the** inaugural 'Neunelfer' event last autumn, Sunday 4 April witnessed the return of the popular cars & coffee format exclusively for derivatives of the Porsche 911 sports car. One hundred 911s filled the luxurious premises of Porsche Centre Portsmouth for Neunelfer II, with all manner of flat six finery from G-series Targas to the 991 R basking in the south coast sunshine.

Aside from chatting with like-minded owners and admiring the cars in attendance, there was much to do at Neunelfer II. Porsche Portsmouth's technicians were on hand to offer complementary health checks for those interested in taking a closer inspection of their cars, and the Centre ensured its showroom provided further eye candy for flat six aficionados with an eclectic mix of Porsche for sale. Goodie bags were offered to every attendee, with further prizes in the form of an Autoglym detailer kit, Carbone products vouchers and a car for a weekend from Porsche Portsmouth all given out by the event's end. One hundred pounds was also raised for the children's cancer charity, Teddy Rocks, with donations made by attendees in exchange for an AutoGlym wax kit.

Afterwards, Porsche Centre Portsmouth's aftersales manager, Leigh Rye, praised the success of the Neunelfer event: "It was great to engage once again with Porsche 911 owners at our Centre and have so many stunning cars at our grounds. Neunelfer is a special event in honour of a special car and it has been our pleasure to host both instalments so far."

SUM 911W

Lee Sibley, **Total 911** Editor, was similarly delighted to accomplish another successful occasion with readers of the magazine: "This Neunelfer series is quickly gaining a reputation as a must-attend cars & coffee event, guaranteeing a high calibre of Porsche 911s driven by an enthusiastic band of people happy to share their 911 passion. I am thrilled Porsche Centre Portsmouth wanted to host Neunelfer II again this year in their idyllic grounds and we look forward to many more such mornings with our loyal and passionate readers in the near future."

For information on further Neunelfer events, add **Total911.com** to your web browser bookmarks.



# Motorsport The latest news and results from racing series around the globe



### **Two LMP1 podiums for Porsche**

New 919 hybrids finish second and third in Silverstone WEC opener

Porsche had to settle for second and third place in the opening round of the 2017 WEC after Toyota clawed their way to victory at Silverstone, UK. A Toyota one-two in gualifying relegated the no. 1 and no. 2 Porsches to third and fourth places on the starting grid. However, after six hours of intense racing, a solid second and third place was the reward for the two e-hybrid LMP1 cars: the no. 2 car of Earl Bamber, Timo Bernhard and Brendon Hartley crossed the finish line just 6.173 seconds behind the winning Toyota, which had taken the lead in a dramatic finale with seven laps to go.

The Porsche team decided to run a low downforce aero package, a decision that seemed to fly in the face of logic as Silverstone demands

a high downforce aero package due to the fast, sweeping curves, placing the Porsches at an immediate disadvantage.

By lap 149, the no. 2 Porsche had built up an impressive lead of almost a minute, pitting for fuel and getting out again still with a lead of eight seconds. However, this is where the aero package difference was most notable, as the then second-placed Toyota was able to reel in the Porsche, overtaking it with just seven laps left in the race. The no. 1 Porsche finished third.

Andreas Seidl, LMP1 Team Principal said, "Today's second and third place feels like a race win... Despite the decision to come here with little aerodynamic downforce, both our cars were 100 per cent reliable and very competitive."



### **Mid-engined 991 RSR** takes third at Silverstone

An encouraging start as the new 911 RSR celebrates two podiums in three races

Occupying the last two places on the starting grid of the opening round of the 2017 WEC season is perhaps not where Porsche envisaged placing their two new 911 RSRs. However, Weissach had a plan, and it paid off: new regulations for GTEPro this vear stipulate cars must only use four sets of tyres for both qualifying and a six-hour race, down from six the previous year. Porsche elected to save on tyre wear in qualifying, Frederic Makowiecki in the no. 91 car promptly charging up the grid from the race's start. After one lap he'd made up three positions, after three he'd clawed nine places back and after half an hour, he was second, with Michael Christensen in the no. 92 car behind him in third. The no. 92 Porsche RSR retired rather alarmingly just past half distance, but Makowiecki and Richard Lietz battled on, taking the lead on occasion through the changeable weather conditions despite remaining on slicks. The no. 91 RSR battled back to take an impressive thirdplace finish in its maiden race outside the USA.



### Mayhem in WeatherTech Long Beach GP

Vanthoor takes advantage of first lap chaos to secure third place in no. 912 RSR

Porsche works drivers Laurens Vanthoor and Kévin Estre finished in third place at the IMSA Weathertech SportsCar Championship Grand Prix of Long Beach in the no. 912 RSR. The sister no. 911 RSR driven by last year's winners, Patrick Pilet and Dirk Werner, came sixth.

After one lap, the leading trio in the GTLM class clashed, opening the door for Vanthoor in fourth.

He moved into the lead, which he held for almost 45 minutes until the first pit stop where Estre rejoined in fifth. In the final laps, Estre moved up to fourth, grabbing third in the last seconds.

In the no. 911 car, Pilet and Werner were looking good for a podium spot after starting at the very back of the 35-strong field, but a drive-through penalty put paid to Werner's final charge.







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## This month in history A look back through the archives to important June milestones from the 911's past

### 1969

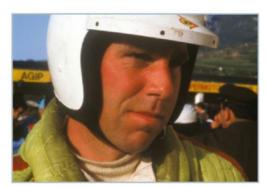
### Iconic Werk 2 Building opens

As Porsche expanded, more manufacturing space was needed in Zuffenhausen. Opposite Werk 1 in Schwieberdinger Strasse was a stretch of greenery about 200 yards long. It was the obvious place to build and would have the advantage of hiding the drab old Reutter plant.

Porsche was now a go-ahead concern with an international reputation: its factory architecture would henceforth reflect this. Designed by R Waldmann, a Swiss former native of Stuttgart, the new Werk 2 was a striking piece of 60s styling still impressive today. A long, four-storey construction, it provided an additional 160,000 sq ft and included an advanced new paint shop. The ground floor was used for goods-inwards and the upper two floors were taken up with assembly and trimming with marrying up of finished bodies with powertrains on the second floor.

Costing DM52m (£5 million), Werk 2 enabled Porsche to double body production. Nevertheless, it still used subcontractors – Karmann would continue to supply 20-25 Targa bodies per day. The new plant consolidated more of Porsche's manufacturing in-house, enabling Ferry to claim that he now had the capacity to build the 15,000 cars per annum for which the firm had orders.





**1970** Porsche wins Le Mans

It had to happen and it finally did. On their 20th consecutive appearance at the Circuit de la Sarthe, a Porsche finally won the 24-hour race.

The Zuffenhausen team had come desperately close the previous year, the incredible Porsche 917s proving breathtakingly fast, but fragile. As history tells us, the Attwood-Elford 917 expired with 90 minutes to go.

Richard Attwood (above) recalled the build up to the 1970 Le Mans: "In December, Porsche asked me what I wanted. I told them the 4.5-litre because I reckoned it would be more reliable than the 4.9. I also asked for Hans Herrmann. Let's go for a finish, I said, then we've got half a chance. When we got to Le Mans, I realised the 4.5 had only a four speed gearbox. As first was only used for starting, we effectively had only three gears, which cost three or four seconds every lap because the engine didn't pull at low revs. We had a slow practice and I really thought I'd miscalculated.

"It was the first 24 hours without the Le Mans Start, but people still ran as if it was a grand prix. I watched Siffert over-rev fatally, then it started raining and a series of crashes and retirements played into our hands. We were both careful and by hanging on, inherited the lead. I was so tired afterwards, it was only later that it hit me that we'd won."

### 1998

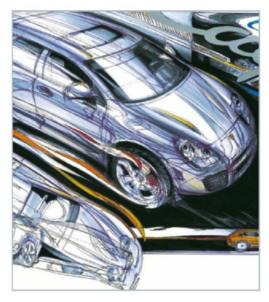
### The Vorstand signs off a Porsche SUV

Ever since the appearance of the Range Rover, Ferry, who was involved in Porsche's first 4x4s during the war, had wanted to build a similar vehicle which he felt his firm had the knowhow.

In 1993, he told *Auto Motor & Sport* that if he had remained CEO later than 1972, (instead of becoming chairman of the Vorstand) he would have pushed the project through. Ferry died in March 1998, but Wiedeking could already see the possibilities: the SUV market was then ten times the sports car market. Porsche could take 10 per cent of that. It was an opportunity in waiting.

Porsche fans, still reeling from the end of air-cooling, were appalled that Porsche was now turning to SUVs. But the reality in a manufacturing world where critical mass is everything, is that the Cayenne's profits enabled it to keep its sports car in production and build the low volume GT2s and GT3s.

Today the SUV models account for two thirds of Porsche sales and rather more in profitability.



### 1953

### . 1953

Birth in Chemnitz of Matthias Müller; acclaim as CEO of Porsche from 2010-15 earned the former Audi man promotion to head of VW.

### . 1956

Porsche scores first of 11 Targa Florio victories as Umberto Maglioli and Huschke von Hanstein's 550 wins at an average of 90.8kph.

### 977

50,000th Porsche, a 911 arga, comes off the line a auffenhausen.

### 2005

The world's first and only magazine dedicated to :he Porsche 911 is born. ts title? Need we say...

### . 2013

Porsche and Piëch families buy back a 10 per cent stake in the company owned by the Qataris since the 2009 takeover of Porsche by VW.



# TUNING & AUTODESIGN



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PORSCHE 991 CARRERA STINGER

### 18 | Ben Barker



• 2012: Porsche Carrera Cup GB Runner Up

The FIA WEC driver shares all about his world championship campaign



## **RSR v GT3 R: a Gulf in performance?**

Ben reflects on the opening WEC round before driving two very different iterations of 991 race car

pril is traditionally the point where most motorsport seasons kick into top gear, with the change from testing to racing, and it's nice to say that I'm at that point, with the opening round of the FIA World Endurance Championship now in the rear view mirror and a decent programme of events mapped out over the coming months.

Round one of the WEC at Silverstone didn't go to plan, as the Gulf Racing team were forced to go home without the podium we craved, but there were lots of positive points - literal and metaphorical - to take away, including topping the times in practice and being in the thick of the fight for class honours early in the race.

The weekend after Silverstone, I was in Portugal for the official pre-season test for the Le Mans GT3 Cup, where I'll be sharing another Gulf Racing entry with friend and client Andrew Baker at selected rounds. As well as giving me the chance to try a new circuit - and Oulton Park-like Portimao goes straight into my top five by the way - doing the test also gave me the unique chance to drive two different race versions of the venerable 911 back-to-back, allowing me to draw comparisons between the RSR I drive in WEC and the GT3R entered in the LMGT3C.

To the untrained eye, the iconic 911 shape and Gulf livery might make it hard to tell the cars

apart, but there are subtle differences between them brought about by the different regulations under which they race. The contrasting nature of high-speed Silverstone and more technical Portimao meant that I wasn't able to do an exact like-for-like comparison, but the cars' individual characters remained evident.

The most obvious difference is the rubber they run on, with the GT3R mandated to use specific 'customer' Michelin tyres while the RSR has made the switch to Dunlops for the open-choice WEC. The latter also benefits from tyre warmers, which are prohibited in the LMGT3C.

With the engine in the back of both cars, it is essential to use trail braking to make the nose work into corners, but the GT3R has some tools to play with, starting with ABS, which allows the driver to exert greater pedal pressure for longer into the braking zone. We're talking around 80bar+ of pressure being held long enough to get the right deceleration to make the turn! It's a big one for muscle memory, and a big difference to the ABS-less RSR, which is hard work on the leg and back. The RSR, however, counters with launch control, which means that the engine fires as soon as it is dropped off the jacks at pit-stops, so there are nice little gizmos on both sides!

Both cars have similar traction control systems and, even though the GT3R has a larger restrictor



on the engine, it only yields a little more torque. The gear ratios are different, being set in stone for the GT3, while the WEC allows for a choice of ratios that tailor the RSR for specific tracks. The most noticeable difference I found there was that, interestingly, I was using first gear more in the GT3R...

The GT3 is more road machine/Cup car oriented, less refined but as physical to drive, with both racers having similar aero performance. Having said that, the GT3R was really enjoyable on track and it will be interesting to jump back into the RSR with experience of both machines.

The final difference between the cars is the price, with the GT3 being a little less expensive than it's big brother. At the end of the day, though, they both allow me to satisfy my competitive cravings and, having been quickest of all over two days of testing in Portugal, that bodes well for the rest of the year.



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# Products Total 911 brings you a selection of premium car care products for your Porsche

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### ValetPRO Bug Remover

BUG REMOVE

£4.99 for 500ml D Summer brings splattered bugs which can be a pain to remove, while bird droppings can quickly damage precious paintwork, which is where this handy and effective product comes in. A great addition to your car-care kit, the ph-neutral formula dissolves and softens them for easy washing off, and it's suitable for windscreens, paintwork, and bumpers.

### ValetPRO Advanced Poseidon Wash

£5.99-27.00 Proper car cleaning starts with effective washing, and ValetPRO's special blend of anionic surfactants and polymers promises effective dirt removal. It also leaves the paintwork with a protective gloss film, helping to prevent damage from grit, UV rays, and other contaminants. It's available in 500ml, 1-litre, and 5-litre sizes.

### Cöde Clean Hydrophobic Glass Cleaner

CÖDE

£10.08 for 500ml Marks on windows look messy and impede vision, so here's a great answer. Using a special formula that bonds to the surface of the glass, repelling dirt and water, it's quick and easy to apply using the spray bottle and just needs any excess removing with a cloth.

### Britemax Leather Max

£12.95 for 473ml Your 911's cabin needs as much care as the outside, so this is the ideal way to keep those leather and vinyl surfaces nourished and looking good. Both cleaning and protecting the materials at the same time, the cream formula means it's easy to apply and more importantly it results in a long-lasting, non-greasy finish.

### Autoglym Instant Tyre Dressing 2715

E DRESSING

Autoglym's product can be applied to wet or dry tyres, and uses polymer silicone for a durable, long-lasting result. Simply spray on and wipe off the excess with a soft cloth for a matte look, or spray on and leave to dry naturally for a glossier shine. Simple as that.

# My 911 story

Bart Kuykens is a photographer, author and creator of the stunning book series 'A Flat 6 Love Affair'. In his guest column for Total 911, Bart explains the beginnings of his own affinity with Porsche, and how his passion lead to production of his worldrenowned book series



rowing up in Belgium, I was never really into cars. Of course, I liked Porsches and Ferraris, just because they were noisy and fast and represented some kind of status, but really I was into football. I wanted to become the new Maradona but, alas, my ambition far exceeded my talent. Aspirations on the football field eventually gave way to the

persuasion of cars and, in particular, Porsche. There's so much I love about the Porsche 911: the shape, the sound, the look, the status that goes with it. I love the way Porsche as a company keeps developing a car that still has the lines and curves of the very first model. Pretty soon after realising this, I knew I had to have a 911 for myself.

Then, in 1994 at the age of 24, I bought my first 'oldie': a red Porsche 911 SC. I say red... the car was imported from the USA and heavily discoloured

from the sun, so it was nearly pink! I couldn't drive a pink Porsche in Antwerp, so I had a dilemma on my hands. Thankfully the guy who sold me the SC also had an Olive green Karmann Ghia and so for the same money I drove away with that instead. The disenchantment came not a week later when it turned out the car was all rusted and in need of a total restoration. I realised I knew absolutely shit-all about cars and sold it for €1,800 to a dealer a few months later.

Fast forward to 2011, I wanted to give Porsche 911 ownership another try and bought a 3.2 Carrera. It was a 1986 model year car, flat back in Weinrott. I was in love and never looked back. Within a year I bought a 2.7 and a 2.2T from 1970. The latter is still my loveable outlaw, which has featured in several magazines worldwide. Beside my passion for Porsche I also had a love affair with Leica and analogue black and white photography and there we are: suddenly 'A Flat 6 Love Affair' was born. I decided to combine both my passion for Porsche and photography into one and the result is a series of unique Porsche books in black and white, all numbered and signed.

My books contain all kinds of people in abstract, black and white photography, as long as they have a passion for Porsche. Volumes one and two are already out in the public domain; at this very moment I am working on volume three, which will be released in October 2017. I suppose I am living my own Porsche passion through each volume as I meet different people and their cars. Porsche means so much to so many, and it is my privilege to capture this essence in my work. A Flat 6 Love Affair is available now via bartkuvkens.com.



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### Best of the 997 Turbo

### Dear Sir,

I very pleased to have issue 152 land with me and discover your cover dedicated to the 997 Turbo. As per the editorial of said issue, the 997 has slipped under the Turbo radar of late as the media and forums heap praise on the 996 Turbo.

However, missing from the glare of your spotlight was any real mention of the end-ofproduction 997 Turbo S. I must say now that although I don't currently own the car, I used to have one in GT Silver and deeply regret the day I sold it. The Turbo S had everything that was good about the 997 Turbo, as highlighted in your excellent 997.2 buyer's guide, with added extras including 30hp, a two-tone leather interior and RS Spyder-styled centre locking wheels. I noted the Turbo S is also louder and more coarse in tone than the 997.2 Turbo, somewhat alleviating the Turbo's big criticism of not being vocal enough.

Moreover, the 997 Turbo S was the last such model created as a bona fide, end-of-run special; these days the 991 Turbo S was punted out at the same time as the Turbo, Stuttgart favouring additional income to the protecting of truly special, niche models (as a self-employed accountant, I can't exactly blame them).

It's not really been reported but 997 Turbo S values have held solid for a while now, the gap to depreciating 991 Turbos narrowing. Given the added provenance of the 997 Turbo S, this surely

must make for the better buy. So, kudos for highlighting the brilliance of the 997 Turbo lineup, but don't forget the Turbo S! **Tim Long** 

Who can forget the brilliant 997 Turbo S? Executively specced, it wasn't a limitednumbers run, though just 2,000 examples were made. As our 997 v 991 Turbo S head to head test from issue 124 showed, retrospectively the only aspect of the 997's drive that lets it down is the early PDK system – that's not to detract from what is a super sports car in every sense of the word, and a model that we think history will look very kindly on indeed. Write to or email us with your Porsche opinions and the star correspondence will receive a complimentary copy of the **Porsche 911 Buyer's Guide 2nd Edition** bookazine worth £9.99!

### Wave of snobbery?

### Dear Sir,

I write to you regarding Greg James' article on greetings among Porsche drivers. I have noticed, at least here in Germany, that 911 drivers do not wave to the poor sods in transaxle Porsches, 996s or, God forbid, people having to drive those mid-engined Boxster thingies. I can't really fathom the reasons for that but strongly suspect a good deal of arrogance has something to with it. I have been snubbed so many times waving to other Porsche drivers that I have altogether stopped doing so myself.

In France however, the situation is totally different. Porsche drivers seem to be a lot more enthusiastic on the whole, and you receive elated waves in whatever car carrying the Porsche badge you're driving. Christian Mohr

Sadly, the story of Porsche owners not acknowledging one another is nothing new. However, let's change that: we're all part of the same community and share a passion for Porsche's 911. We would all stand and chat with one another at cars & coffee, so why not also greet each other on the road?

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orth £9.90





### Ask the expert

Got a question for our Porsche Technician? Email us **editorial@total911.com** 



### Scott Gardner Job Title Gold Diagnostic Technician Place of work Porsche Centre Bournemouth, UK Time at Porsche 11 years

Q: "I've owned a 964 Carrera for two years now and note that other owners tell me to always carry spare DME relays to avoid me potentially becoming stranded when out with the car, which I do. However, what I'd like to know is, why are the 964 and 993-era DME relays so prone to failure? WHY do they fail?" Bill Turnbull, Chippenham

Scott's answer: "I think the main reason for DME relays failing is the fact it controls current supply for the 964's ignition system and the fuel system so the relay has to cope with a high current demand. This demand also generates a lot of heat which, over time, puts a lot of strain on the relay until it eventually fails. We've heard of a similar scenario for 993 generation cars to, and that isn't limited to Carreras – the RS is built in the same way here so it too could be susceptible. Swapping a DME is a relatively easy task, though."

### Jacky Ickx faux pas

### Dear Sir,

Writing as a Frenchman, my beloved country can lay claim to producing many great racing drivers, alas Jacky is not one of them. In your interview from issue 152, the magazine wrongly stated Monsieur Ickx is from France, when in actual fact he is from Belgium. **Oliver Boulet** 

Oliver, many thanks for pointing the error out. I've had a few such emails pointing out what is a heinous error on our behalf, and so we offer our sincere apologies that the mistake was not spotted before we went to print. Likewise on page 56, where we wrongly labelled a picture of Hans Stuck as Jochen Mass (left). I hope you enjoyed the magazine otherwise and as ever, if you've any more feedback to give, please feel free to get in touch.

### Data file dilemma

### Dear Sir.

Your perfectly excellent Data File is a great guide and crutch for us 911 buyers to lean upon, but as of issue number 151, some of us can't understand it any more.

The reason? Statistically 10% of your readers will be colour blind, in varying degrees. Red and green differentials are the biggest problem, but some of us have a problem with all colours. I can't even see the colour

changes of the stars in the Data File – but I do believe that I am an exception.

Might it be possible for you to revert to the old system of up / down arrows and horizontal bar, or perhaps also combine a numbering system?

If the Data File stays as is in issue 151, then 10% of us will have to skip the pages as they now can't be deciphered. **Nick Bartman** 

A very good point well made. Our Data File section is a priceless resource for looking up key details of different models, which can often prove pivotal when it comes to making that next Porsche purchase. We will look to have this amended in the future issues so you - and others - can continue to glean as much intricate information from it as possible.



### Back copy birthday help!



### Dear Sir.

I hope you are able to help me... it is my other half's birthday soon and he loves Total 911 magazine. I asked him what he wanted for his birthday, and being 40+ he is not that fussed for things, but mentioned he was missing an issue of Total 911 magazine. He has all other issues since 2014, apart from one: issue 133. I know in this day and age it's all about digital and online, but he is old fashioned and likes the actual hard copy, so is there any way of tracking down a hard copy of Total 911 issue 133 at all? He would be over the moon. I've tried googling and looking on sites/eBay too to no avail. Hope you can help.

### **Emma Turton**

We have a back catalogue available via myfavouritemagazines.co.uk, however issue 133 is currently sold out. We do, however, receive surplus stock from distributors but a digital edition, available to download to any advice, may be your best bet.



Future Publishing Ltd Richmond House, 33 Richmond Bournemouth, Dorset, BH2 6EZ T +44 (0) 1202 586200 ond Hill Web: www.total911.com www.greatdigitalmags.com www.futureplc.com

### **Editorial**

Editor Lee Sibley ee.sibley@futurenet.com 2 01202 586291 Senior Art Editor Stephen Williams In-house Photographer James Sheppard

Contributors Rob Clarke, Richard Klevenhusen, Tony McGuiness, Joel Newman, Saen Parr, Gina Purcelli, Chris Randall, Chris Wallbank, Kyle Fortune, Joe Croser, Greg James, David Grover, Kieron Fennelly, Daniel Pullen, Dana Pawlicki, Wilhelm Lutjeharms, Craig Lewellyn, Andreas Mau, Neill Watson, Duwyne Aspeling, Glen Smale, Rich Pearce, Elly Rewcastle, Amy Best, Callie Green

### Cover image Porsche AG

Digital or printed media packs are available on request. Account Manager Alex Choma alex.choma@futurenet.com

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### Subscriptions For all subscription enquiries:

911subs@servicehelpline.co.uk 1 0844 249 0463 Overseas +44 (0) 1795 414 886
 www.imaginesubs.co.uk
 Head of subscriptions Sharon Todd

Circulation Director Darren Pearce TO 01202 586200

Production Director Jane Hawkins TO 01202 586200

inance & Operations Director Marco Peroni Creative Director Aaron Asadi Editorial Director Ross Andrews

### a & Distribu

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# THE SECOND COULT OF THE

Porsche's new GT3 feels more than a mere Gen2 update – it is the GT department's most complete car yet. Total 911 samples the PDK car on UK roads before putting the manual through its paces in Spain

Written by Kyle Fortune Photography by Porsche AG

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ales. That was the original destination, but a call from Porsche would change that. Sure, we could still have a right-hand-drive 991.2 GT3

for the day in the UK, but then we could also do the formal international launch the following week. Two bites at Porsche's newest, most anticipated 91l? Well, we weren't about to say no. It changed things: the trip to Wales was cancelled, the GT3 instead being brought to Porsche's Experience Centre at Silverstone, usefully about 45 minutes from my place, and roads I know very well.

The A422, specifically. I drive it pretty much every day, the stream of disguised cars from Jaguar, Land Rover and Aston Martin highlighting its status as a favoured test road for those firms' chassis engineers. Yes, it's that good: the tarmac challenging in its topography, while it can offer up every type of corner from long, fast sweepers to second-gear, steep gradient Alpine-aping hairpins. A tough test for any car, let alone one as clear in its intent as the GT3. Usefully, I've driven just about every recent 911 down it for reference, too, from the 991 GT3 RS to the Turbo S, GTS and bog standard Carreras.

Since its Geneva reveal I've been counting down the days to some seat time in this new GT3. Calling it merely Gen2 seems to do it something of a disservice. Yes, it's been finessed, but in typically GT department fashion, they've gone to town. Chatting to Andreas Preuninger at both Geneva and at the launch is revealing; there really is no element of its make up that's not changed.

The fastidious, obsessive pursuit of efficiency as a means to generating more speed is incredible. As it's a 911, we'd best start from the back: let's talk about that engine. It's not, as you could be forgiven for thinking, merely lifted from the GT3 RS and 991 R. No, the GT3's now 4.0-litre unit (a 200cc increase over the 991.1 GT3, in case you'd forgotten) is lifted from Porsche's Carrera Cup racing cars.

A genuine homologation unit then, Preuninger discussing various elements of its specification as key to those efficiency gains. Among the most significant is the new valvetrain, which is rigidly mounted rather than having hydraulic adjustment. It's set at the factory, with Preuninger saying it's good for the life of the engine, the friction savings in the valvetrain alone accounting for about 9hp of the engine's overall output. There's new low-friction coatings in the

cylinder walls and the stiffer crankshaft is now hollow, with oil being fed directly through it to the bearings, which removes the need for 12 spray nozzles, lessening the demands on the oil pump and reducing

PDK GT3

A422, UK

both the oil pressure and the amount of oil that needs to be pumped around the engine from 120 litres to just 70 litres.

The result of all that is a 25hp bump in power to 500hp, produced at a heady 8,250rpm. Those ram air scoops, at top speeds, see the engine gaining as much as 20hp, too. That is more usually seen in an RS signature than a mere GT3. Peak torque of 460Nm (a 20Nm increase) is delivered at 6,000rpm. The redline grows, higher at 9,000rpm than even the GT3 RS's maximum; the way the 4.0-litre chases that paint has to be experienced to be believed. It's got a ferocious appetite for revs, though despite the hedonistic, racer-like howl and savage acceleration that comes with it, the bigger unit's flexibility at lower speeds is welcome, and a big step on from its 3.8-litre predecessor. Preuninger points to the dual intake flaps as helping here; the way the engine will haul, even if you're lazy with your gear selection, is little short of incredible. Indeed, I can't think of another engine that's got such breadth of ability, without resorting to turbocharging to compensate for inadequacies somewhere in delivery.

If the force that's on offer beguiles, so too is how it's delivered. The merest touch of the accelerator has the engine reacting, its pent-up enthusiasm evident in its ridiculous response, the flat-six's lack of internal inertia very clear indeed. It is so quick









### Model 991.2 GT3

Year 2017

Engine

Capacity 3,996cc Compression 13.3:1 ratio

Maximum power 500hp @ 8,250rpm Maximum torque 460Nm @ 6,000rpm Transmission Six-speed manual / seven-speed PDK

### Suspension

Front Lightweight spring strut axle (McPherson type); some chassis bearings with ball joints; PASM

Rear Lightweight multi-link suspension with wheels independently suspended on five links; some chassis bearing with ball joints; integrated helper springs; PASM

Wheels & tyres Front 9x20-inch; 245/35/ZR20 tyres

Rear 12x20-inch; 305/30/ZR20 tyres

Dimensions

Length 4,562mm Width 1,852mm Weight 1,413kg

Performance

**0-62mph** 3.9 secs (man); 3.3 secs (PDK) **Top speed** 199mph (man); 197mph (PDK)

**Left** PDK car is sublime, impressing even on the confines of UK roads. Gearbox shifts quicker than ever before, proving a useful ally to voracious 4.0-litre engine



to react you'd swear the accelerator was anticipatory; this is true too of the paddles for the PDK automatic transmission. Yes, this 991.2 GT3 might be the car that re-introduces its hardcore buyer to the manual transmission, but our early UK drive is in a PDK.

Initial disappointment at the UK car's transmission specification dissipates after the first few tugs on the revised seven-speeder's paddles. There's a place for PDK, and it's difficult to argue against the validity of its fitment here. With the engine devouring revs, its appetite for gears too is voracious, and the PDK rifles out ratios as quickly as you can think them. It, like the rest of the GT3, has been tweaked: the gearshifts are quicker, there's no interruption in the engine's delivery, bringing those efficiencies Preuninger talked about and hence increased speed. For the record that's 3.4 seconds to 62mph, 0.5 seconds quicker than the manual car.

It's more forceful in PDK Sport mode, which brings a more prominent blip from the throttle

on downshifts, the engine and transmission so beautifully matched even Preuninger and Walter Rohrl are conflicted when asked which they'd pick if they had to choose just one. Damn, it's good, so, so good. The six-speed manual is going to have a serious job convincing me it's the one to have. Really.

If there's an area where the engine's slightly lacking, it's its voice below 4,000rpm. It's a bit muted here, at least it was in the car we sampled in the UK; some time with a few more PDK cars in Granada, Spain, revealed that might just be a quirk of that early car. Certainly above 4,000rpm it's intensity increases, above 6,000rpm even more so – the sound it makes as it reaches its redline is a howling, racecar scream that, once you've heard it, will have you dropping gears just to experience its intoxicating, all-encompassing, exotic sound all over again. The Sports exhaust button can be pressed, but you'll rarely feel the need – doing so merely adds a deeper, bassy layer to underpin the visceral sounds

"The engine is an absolute masterpiece, better than even the RS and R before it, intrinsically, ferociously linked to its racer relation and mated here to a chassis that's perfectly matched to exploit it" entering the interior. If anything, that Sports exhaust detracts from the engine's most appealing, tuneful notes, muting their richness like an overbearing bass drummer, being a dominant player rather than a percussive accompaniment.

Inside, it's all familiar GT3. There's the usual choice of seats. We'd have the optional Sports buckets and the Clubsport pack, the steering wheel now smaller in diameter, while the centre dash gets the new infotainment system lifted from gen II Carreras, the GT3 coming as standard. With that comes the Porsche Track Precision App, if you want to download laptimes to show your friends. See how long they remain friends if you do that, though.

I really couldn't give a damn how fast it's going – the GT3's speed is a by-product of its purity, the sensations it delivers being the key driver in its appeal. The engine is an absolute masterpiece, better than even the RS and R before it, intrinsically, ferociously linked to its racer relation and mated here to a chassis that's perfectly matched to exploit it. Like that unit, every element of the GT3's dynamic make-up has been explored and refined in the pursuit of efficiency as a means to improve the performance. The steering controls have been re-configured, both for the electrically assisted rack up front and the rear-wheel steering system. There are subtle geometry changes, as well as revisions to the spring and damper ratios – the dampers themselves feature less internal friction, while the rear axle gets helper springs for greater control.

The net result of those changes is little short of incredible. Like the engine, the GT3's dynamics feel like they've moved on more than a mere generation. The steering is R-like in its turn-in response, the smaller diameter wheel not just perfectly weighted, but imbued with detail that's fine without being busy, filtering out unnecessary chatter and keeping on point with refined, clear information. The suspension is key, the ride remarkable, it's taut and controlled, yet able to cope with even the poor tarmac that the A422 sometimes dishes out. The level of body control is exceptional – a series of severe compressions that test any car, let alone one as focussed as the GT3, sees it shrug them off, its direction resolute, the body control equally impressive.

All that could result in a clinical car, precise without engagement – an aloof, unrewarding drive. That would be unusual given its lineage, and so it proves. Its control is exceptional, but so too is the involvement. It's a car that demands you to drive it – the brakes are mighty, and its limits so easily read that you really can drive beyond them with little fear. The GT3 is not as difficult as an RS, then, and the way it'll move around underneath you is so benign it feels entirely natural: a cliché to say so, but it feels entirely at one with you. Nothing, certainly nothing with 500hp, or any 91l before it, has felt quite so complete. Quite what they'll do to create an RS is beyond me, but first the manual...







**Above** Fixed rear wing of 991.2 GT3 sits marginally higher up and further back than that of its predecessor. The result is 997 GT3 RS-matching levels of downforce









33

# THE MANUAL

ith a day in the PDK GT3 behind us in the UK, today is about the manual. We're in Granada, Spain, at the GT3 launch officially, and the Racing Yellow car is a manual. We were originally told we'd not get a go in the six-speed three-pedal car

we'd not get a go in the six-speed, three-pedal car until later in the year. Andreas Preuninger said over dinner last night that they had a few ready, so why not? Why not indeed, this perhaps the most eagerly anticipated car since the 911 R: a car that, somewhat unsurprisingly, it's being compared with.

You know the stats: it's got a 500hp, 4.0-litre engine, the R's diffuser underneath the back and a raised rear wing positioned a bit further back. For reference, that's 997 GT3 RS levels of downforce, 155kg, or 20 per cent more than the old car, without any increase in drag, from a body that, save for that big rear wing with its ram air intakes, is largely and beautifully unadorned.

If there's purity in the design, then so too is there in its specification. Let's face it, a manual transmission is an anachronism, particularly in a world where PDK is so evolved and the outputs of engines so high. Thing is, it worked in the R, the clamour for that (and the manual-only Cayman GT4) underlining that there's still an audience for three pedals and a stick - even if that demand is sadly muddied a touch by investors and speculators.

I've never denied my preference for a manual, even if our UK drive in the PDK leaves me in awe of it. Hell, incredible as the PDK is, the manual is the car I'd have. It's slower, at least to 62mph, where it trails the PDK by 0.5 seconds, but who's counting? If you are, tell them it is faster top end – the manual's top speed is 2km/h (1.2mph) more at 199mph. The six-speeder adds a layer of complexity to the driving experience that's to be relished and enjoyed, the shift itself recognisable from the 911 R, even if Preuninger admits they've made a few changes.

The clutch weighting is perfect, pedal spacing similarly so, Porsche's brilliantly resilient brake pedal with its fine weight the perfect platform for rolling your foot over and blipping down the 'box, easing the already fine-shifting six-speeder down its ratios. Push the Sport button and it'll do that for you but, really, do it yourself – it's worth the effort. Not that it's a chore. The fear that the manual might feel clumsy or slow given the ferocity of the engine's delivery just doesn't materialise; it's easy to keep up, and underlines that even an engine as rich in its response and sizeable in its output can be convincingly mated to an 'oldfashioned' transmission. There's a dual-mass flywheel, Preuninger admitting they looked at a single one, but the frequencies it sent down the stiffer crankshaft didn't work, asking tough questions of the bearings. With the engine's significantly increased lack of inertia, the dual mass flywheel is just fine.

Manual GT3 Guadix circuit, Spain

The six-speed GT3 is also denied Porsche Torque Vectoring Plus and an electronically controlled locking differential, coming instead with just Porsche Torque Vectoring and a mechanically controlled differential. It's lighter as a result, by about 17kg. I'll admit, it'd take a better driver than me to really notice the difference, both in weight and the differing specification of the differential. The GT3 manual remains as amazing on road or track, only it demands that little bit more from you. It's been worth the wait. The GT3 is a new watermark in GT division cars, including that R, whatever transmission you pick with it. Though I know which one I'd be having. Welcome back history, you've been missed.

### The Total 911 verdict

- Epic engine, superlative chassis and transmission whichever you choose
- Engine sounds a little flat pre-4,000rpm. Also, just try getting hold of one.

# CARRERA EVOLUTION

9II HB

No other word is more synonymous with Porsche than Carrera. We chart its evolution from lightweight, reardrive Rennsport to today's turbocharged stablemates

Written by by Kieron Fennelly Photography by Daniel Pullen

G5 SXO





Spanish word, Carrera means, among other definitions, road, race or race track, and it entered the Porsche lexicon at a crucial time in the company's early history. In 1954, Heinrich Nordhoff, boss of Volkswagen, tried once more to lure Ferry Porsche to Wolfsburg. On offer was the senior engineering position in Germany's biggest and most successful car maker, and possibly Nordhoff's own job in the longer term. But the sacrifice was too great: in exchange for a huge salary and absolute financial security, Ferry would have to give up his own car manufacturing and engineering consultancy. If in those early years Ferry had ever doubted that his bold sports car business was viable,



the enthusiastic reception of Porsches by amateur racers and sports car fans in the US strengthened his resolve – in particular the remarkable results achieved by privately entered Porsches in the 1953 Carrera Panamericana. Prince Metternich's standard 1300cc Cabriolet finished eighth overall at an average speed of 83 miles per hour over 24 hours in this wild Central American version of the Monte Carlo Rally, which substituted snow and hairpins with 35 degrees Celsius heat and 150-mile-per-hour straights on gravel roads. If, three years into this car-making venture, his standard cars could not only win the 1300cc class in European events such as the Targa Florio but also compete in these gruelling carreras, what might Porsche achieve building dedicated race versions?

The 911 of 1984 marked a return to the fold for the Carrera moniker not previously seen since the glorious 2.7-litre engines of 1973-76



There appeared to be no shortage of potential buyers. Ferry would turn Nordhoff down and a Porsche wearing Carrera script would henceforth be a very special model.

It would, however, be another two decades before the name Carrera appeared on a 911, then almost a ten-year-old model, and it came about almost by accident. In 1972, the FIA introduced the 3.0-litre limit in sports car racing, largely to exclude the dominant Porsche 917s. Although the CanAm series would allow them to flourish for two more seasons in North America, the company's new CEO Ernst Fuhrmann was concerned that Porsche had lost its shop window in Europe. However, the new European GT championship scheduled for 1973 presented





fresh opportunities, and Fuhrmann instructed manufacturing to build the necessary 500 special 911s so that a Porsche could be homologated.

The capacity was increased to 2,681cc to extract more performance, and Porsche had already learned from the 'R' and subsequent rally versions of the 911 how to reduce weight – the new competitionoriented 911 was homologated at 975 kilograms. Faced with the problem of naming a car they had never planned, the marketing department looked into the archives and came up with 'Porsche Carrera RS 2.7'. If the model had sold as badly as Porsche's conservative sales boss had predicted, the resurrected names – 'RS' recalled the very successful 1500 RS of 1955 – would have made little impact. As it was, the Carrera





Lightweight 3.2 Carrera Clubsport was an RS in all but name



#### "The new Porsche Carrera was recognisably a 911, but more refined"

RS 2.7 proved a sensation and Porsche scrambled to build another thousand to meet unprecedented demand. With the change to impact bumpers, a Carrera RS 3.0 followed, and if only 100 were built (and half of those turned into fierce 300bhp RSRs for competition work), their high-profile successes simply reinforced the image: 'Carrera' and '911' were now inextricably linked.

The mid-1970s were a difficult time for the motor industry: the need to reduce fuel consumption and meet US safety and emissions standards emasculated the American 'muscle cars' and would eventually be the death of most British sports cars. For its part, Porsche grappled with the change from mechanical to electronic fuel injection, resulting in engines that revved less freely if producing more torque. From May 1974, the range comprised the base 911, the 911S and, significantly, the Carrera, which was now the top-of-the-range offering. The Carrera was henceforth a mainstream (if high-end) model – its place remaining as such within the Porsche 911 hierarchy to this day.

All G-series 91ls initially used the 2.7 unit, but when, in 1976, the Carrera received the 3.0-litre engine of the RS, but detuned to 200bhp when the previous 2.7 Carrera had offered 210, there was general disappointment. Dismay increased when the range was simplified in 1978, reduced to a single model, the SC, which produced only 180bhp. The Carrera name had briefly disappeared. Conventional wisdom



was that as Porsche broadened its model offering – besides the 911 Turbo, the transaxle 924 and 928 were now also in production – logically there would be fewer variations of the 911. The reduction in the naturally aspirated 911's power output was to ensure that it did not outperform the 928, which under Dr Fuhrmann was then Porsche's priority. Significantly, even before his departure from Zuffenhausen in 1980, SC's output was announced as being 188bhp, and by 1981, this had reached a more respectable 204bhp.

This was related more to politics than engineering: Fuhrmann's intention, and it was to prove deeply controversial within Porsche, was to phase out the 911 in place of the 928. The course changed abruptly with the arrival of Peter Schutz and, as if to re-emphasise the importance of the 911, the Carrera name was reintroduced with the next 911 iteration: the 3.2 of 1983. From then on, the naturally aspirated 911 would always be enobled by the title Porsche Carrera, which would also help to distinguish it from the Porsche 911 Turbo, a model in its own right. The 1984 Carrera range now included not just the Targa, but a Cabriolet, a variant not seen since the days of the 356. Two more options reached the catalogue in 1986 – the widebody M491 Super Sport Equipment Carrera, effectively a 911 Turbo specification in all but engine, and the Carrera Clubsport. This was a mildly lightened 911 that Porsche brought to market, it said, in response to customer demand: "We know there is a significant group of interested parties who would like to do without certain comfort elements – and their associated weight – in favour of greater sportiness."

Minus sound deadening and rear seats, and with a slightly tweaked 3.2 (though still officially rated at the standard 23lbhp) the Carrera Clubsport, which saved around 40 kilograms mostly thanks to deletions of electrical equipment, was clearly a nod to the celebrated Carrera 2.7 RS and, with stiffer damping and sounding just as raucous, it certainly drove like one. Though it performed slightly better, thanks largely to more usable torque, sales were poor and failed completely in the US. Porsche was confirmed in its view that it needed to bring a new, updated Carrera to market as soon as possible.







#### **Carrera before the 911**

The first was the 1500 GS Carrera, a 356A launched at the 1955 Frankfurt show. This had the jewellike four-cam flat-four engine designed by Ernst Fuhrmann and was aimed at amateur racers; its successor was the 356B, the 1600 GS Carrera that again used the intricate four-cam head and appeared in 1959; the final 356 Carrera, known as the Carrera 2, had Porsche's largest flat four yet, the 1,966cc used by its competition cars and derated in roadgoing versions to 130bhp. GT competition Carrera 2s, as well as having 155bhp engines, used aluminium doors and Perspex side and rear windows. Carlo Abarth made a special low-drag competition body for the 356, known as the Porsche Abarth Carrera GTL.

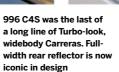
The Carrera name surfaced once more in 1964, for Porsche's Type 904, the GTS. A little over the homologation minimum of 100 were built: Porsche initially intended to use its new flat six, but spares were not widely available and, as customers were familiar with the now 185bhp two-litre flat four, the four-cam unit was fitted. The Type 904 became known as the Carrera GTS, though later works versions subsequently employed not only the new flat six, but also a flat eight.

Often described as the first 'modern' 911, the 964 at last did away with the torsion bar suspension ("We had wanted to get rid of that for years," said Peter Falk), and its completely new chassis, which had been designed by aerodynamicist Norbert Singer, allowed four-wheel drive – indeed the Carrera 4 was introduced a year before the rear-drive Carrera 2 version. Standard ABS and power steering, as well as optional four-speed automatic transmission, showed that Porsche was concerned to move the Carrera on in terms of technology. The company's Nnwly arrived Engineering director, Ulrich Bez, was famously critical, though, not just of the C4's excessive understeer, but also the ride quality, adding damningly, "The 930 was better to drive."

Bez did, however, have a keen sense of marketing and replaced the Porsche one make 944 Cup with the much more logical 'Carrera Cup', showcasing Porsche's best known creation, the 911, rather than a time-expired transaxle model. Moreover, in creating the Cup competition 964, Roland Kussmaul devised one of the most celebrated 911s: the 2000 road-going versions built for homologation purposes redefined the Carrera as one of the most focused driver's sports cars ever built.

During his three-year tenure in office at engineering, Bez was a controversial operator, but there is no doubt he rescued the 911: in terms of refinement, with the Type 964 the Carrera failed to make the necessary leap forward, but Bez lobbied hard to get the 993 its multi-link rear suspension, which improved handling and especially ride. The 993 C4 also felt far more like the C2 thanks to a much better variable torque 4x4 system than the 964's rigid, understeer-inducing 70:30 split; Tony Hatter's redrawing of the 911 constrained by cost limitations to the front wings and rear haunches was still enough to give the 993 Carrera a fresh look, which would

















04 R M



profitably hold the fort until the revolution that was the 996 was ready.

And that 996 truly was a revolution: a new watercooled flat six and not a panel, nut or bolt shared with its predecessor: the new Porsche Carrera was recognisably a 911, but smoother, quieter and more refined. From the front it looked the same as the new (and 30 per cent cheaper) Boxster. The purists were appalled, but Porsche had wisely followed the advice of its engineering director, Horst Marchart, who justified the strategy saying, "I'm not sure how many Porsche drivers are really sports car drivers. A lot of them are image drivers." Heretical to fans perhaps, but anchored in commercial reality: in seven years, Porsche sold 160,000 996s against 120,000 964s and 993s over the previous decade. To those who scorned the "fried egg lights" (the remarkable five-function headlight units that took under 20 seconds to fit on the production line), Harm Lagaaij riposted, "Well the canteen certainly cooked a lot of eggs."

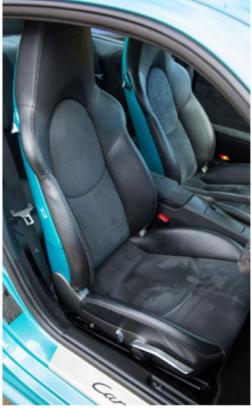
The 996 Carrera repeated the success of the widebody S models that had begun with the 993, but now this came with four-wheel drive only, and this 911 generation introduced electronic controls governing suspension and traction, which would become progressively more complex. The water-cooled engines were, of necessity, more economical and their 24-valve architecture allowed higher revs and greater reserves of performance than the air-cooled design. By common consent, the M96 family of engines was (for reasons of time and cost) insufficiently developed and consequently unreliable. Author Adrian Streather is right to claim (*Porsche 997 Essential Companion*) that Porsche should have introduced the 9AI range far earlier than 2008. ●

#### 42 | Carrera evolution















911 Carrera goes turbocharged for 991.2. All-wheel-drive of C4S now quicker to 62mph than rear-drive C2S. Targas return to conventional roll-bar





Porsche's much-improved finances showed in the comprehensive reskin that was the 997 of 2005: revisions to the suspension allowed for differing degrees of stiffness depending on whether the Carrera was the coupé (likely to be driven the hardest), the Targa or the Cabriolet. The new model also addressed questions of style – in particular the return of 993-esque oval headlights, and tackled criticisms of the 996's interior with significant upgrades of cabin materials.

By now the pattern was well established. The 911 range comprised the specialist versions – the GT2 and 3, the Turbo and the naturally aspirated Carreras comprising Targa and Cabriolet variants, and two or four-wheel drive options. S no longer designated widebody but a larger-engined, more powerful Carrera. From then on. the 'S' would account for the majority of sales. The facelift in 2008 saw the Carreras all receive an entirely new engine, the 9Al, though their 3.6 and 3.8 capacities remained virtually the same.

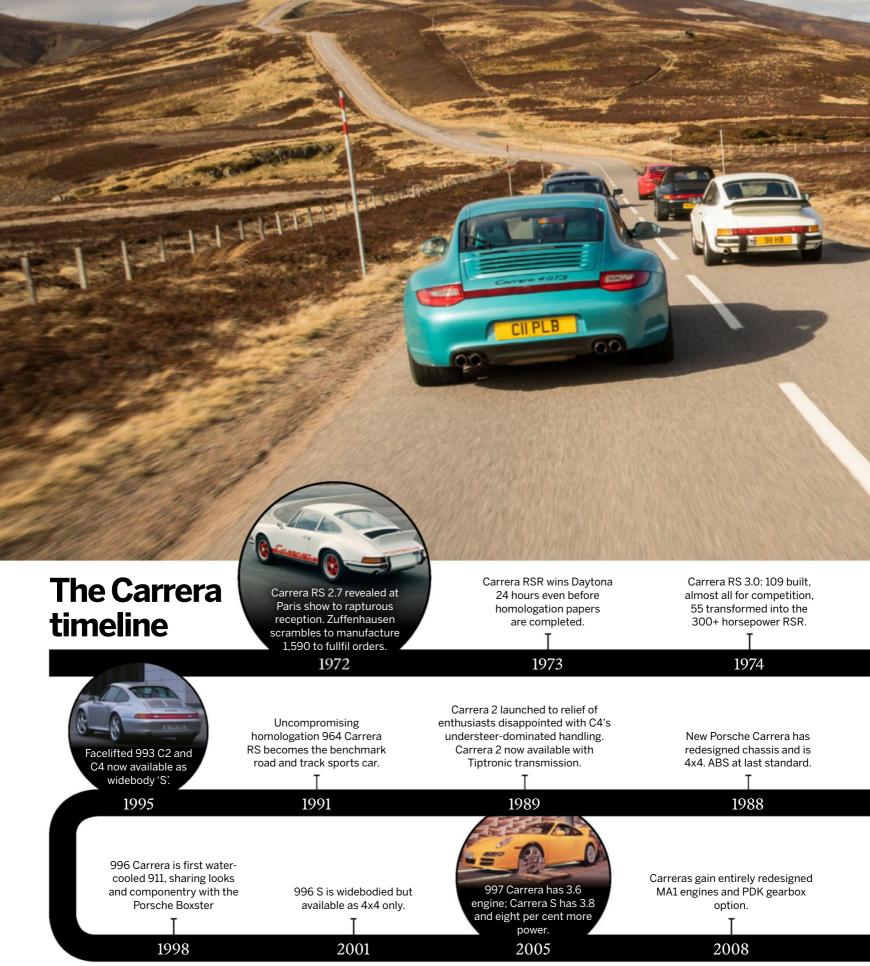
The following year, the limited-edition Sport Classic featured a 3.8 S engine with a powerkit, distinctive 'double bubble' roof and ducktail. Shorn

#### "An interesting marketing innovation, the Carrera GTS sub-brand was extended to all Porsche models"

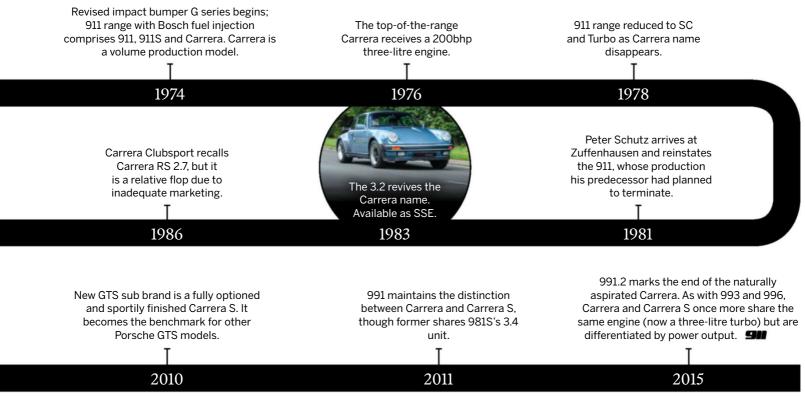
of the latter two signature details, the Sport Classic was the genesis for a Carrera flagship: the GTS, a fully equipped Carrera S. An interesting marketing innovation, the Carrera GTS sub-brand was extended subsequently to all Porsche models. The 991, introduced in 2011, represented another turning point: while the Carrera range continued to represent the non-specialist, naturally aspirated 911s, the base Carrera shared a more highly tuned version of the Boxster/Cayman 3.4-litre engine while the S

stayed with the larger 3.8-litre unit. An entirely new chassis – wider front track and longer wheelbase – and only the third in the 911's 50 year career meant that the 911 was suddenly rather larger. Extraordinarily dynamic and secure handling qualities not withstanding, the Carrera was now more of a GT than a sports car. Then occurred a shift almost as great as the change to water-cooling at the end of the last century: the 2015

Carrera 991.2 was turbocharged, the base model and S sharing differently tuned versions of the same three litre twin-turbo engine. A 40-year career as a high-revving atmospheric sports car was over: the 911 Carrera was now a turbo.









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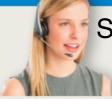


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The four cylinder 912 is a long unloved stepchild of the 911 family, but with pre-impact bumper Neunelfer prices rocketing, should enthusiasts consider this a strong alternative?

Written by Wilhelm Lutjeharms Photography by Duwyne Aspeling



he shape of early, pre-impact bumper Porsches appeals to most 911 fans. The design – devoid of skirts, extended sills, beefier wings, pronounced inlets or, for that matter, outlets – is eminently classy and elegant. Today you need relatively deep pockets to purchase such a car from the 911's earliest conception, but there is another option if you seek an enjoyable driver's car with the same silhouette. It comes in the shape of the 912 – though, until a few years ago, this was the '911', so to speak, that nobody was particularly interested in.

This specific car for our feature resides in South Africa's Free State – the central province of the country, where agriculture makes a significant contribution to the GDP. It is a flat part of the country where you can usually see for miles into the distance. It's also the place that one of the country's most enthusiastic Porsche collectors calls his home.

With only the 912 in sight and this vast open landscape as a backdrop, you can quickly be transported back to May 1965 when the 912 was launched. The original price was DM16,250 (compared with the DM21,900 a 911 demanded), but then again, this lower price was partly justified since the 912 used a modified version of the flat-four cylinder engine from the 356 Super 90 (updates resulted in peak torque being developed lower in the rev range). It featured a new four-speed gearbox (a five-speed unit was optional) but, apart from that, the body, suspension, steering and braking system were taken from the 911. Being fitted with a smaller



engine, the 912 also tipped the scales at 59 kilograms less than the 911.

In the UK the car was introduced at £2,466, a significant £972 less than the 911. Here, the five-speed gearbox was standard, with the four-speed being optional. Fog lights were also optional, while the 'Porsche' and number lettering on the engine cover was silver in colour, unlike the 911's, which was gold. Inside, the wood-rimmed steering wheel was replaced by a black plastic unit of the same size. The vanity mirror in the sun visor was optional, the

gear lever was trimmed in rubber (as opposed to leather) and there were rubber floor mats in LHD models. Even so, at a quick glance, it was difficult to spot the differences compared to a 911.

Today values start at about £40,000 in the UK. As is the case with all classics, the cost depends mainly on the condition and history of the car. On

the other side of the scale, a restored Bahama Yellow 912 sold during this year's Gooding & Company Scottsdale auction in the United States of America for a very healthy \$114,000 (approximately £90,000). Impact-bumper 912s are by far the most affordable derivatives in the USA.

The current owner purchased this car after it had been fully restored. He was offered the car before the restoration began, but as he didn't know how much it would cost, he decided not to buy it. However, when he saw the car being restored over the coming months, his interest in it started to grow. Sadly, the previous owner had plans of exporting the 912 overseas to a market where he could potentially get a higher price for the car than in South Africa. Fortunately, the current owner was able to make him an acceptable offer. "I only bought the car in mid-2015, but I was chasing it for a long time," he recalled. "I watched as it was restored by the previous owner and appreciated the level of restoration that was done to it – top to bottom. I had seen what a dilapidated state the car was in. The bare metal restoration also included a full engine rebuild. I wasn't really a huge 912 fan, but because I surveyed the entire restoration process from start to finish, I decided to put an offer on the table and finally

acquired the car. I have to admit, now I have a soft spot for the car."

I'm shown the thick folder that contains all the details of the restoration process. All the bills add up to a significant sum of money. But you would expect that; parts had to be bought and imported and the car was totally stripped. A document by Porsche confirms that the car's

original colour code was 6603, Golf Blue, and that the interior featured brown leatherette trim. However, during the restoration, the previous owner decided on this beige exterior colour with beautiful red leather seats – a contrast indeed, but a very suitable match. It might not be the original combination, but it looks the part and is very luxurious.

All 912s featured a flat four based on the motor in the last of the Porsche 356s. The 1.6-litre engine was based on the 616/16 powerplant, but was called 616/36 as it featured cast-iron cylinder liners inside a finned alloy jacket as well as light alloy heads and crankcase. The compression ratio was reduced from 9.5 to 9.3:1. The result was a reduction by 5bhp compared with the older engine, but whereas it



"All 912s featured

a flat four based

on the motor in

the last of the

Porsche 356s"



A Porsche 912 retains the beauty of the early 911's silhouette, with some minor changes to equipment specification visually separating the two models. Pre- 67 cars only had three instrument dials, later cars such as this had five like the 911







Model 912 Year 1967 Engine

Capacity 1,582cc Compression 9.3:1 ratio Maximum power 90bhp @ 5,800rpm Maximum torque 122Nm @ 3,500rpm

Transmission Five-speed manual Modifications None

Suspension

- Front Independent with transverse control arms, telescopic hydraulic dampers, torsion bar Rear Independent with longitudinal
  - control arms, transverse torsion bars and double-acting telescopic dampers, torsion bar

Wheels & tyres Front 195/65 R15 Rear 195/65 R15

Dimensions Length 4,163mm Width 1,610mm Weight 970kg

Performance 0-62mph 11.6 seconds Top speed 115mph







#### 912 through the years

1965	
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The 912 is launched and, by the end of the year, more than 6,000 have been produced. This means that the 912 actually outsells the faster 911 by nearly two to one – clearly a clever decision by Porsche to bring the 912 to market. The price increases to DM17,600. Early cars' dashboards were painted to match the cars' exterior colours. Now, the instrument binnacle ecomes matte black and the lower trim section is covered with brushed aluminium. 196

The interior is improved with additional instruments, carpets and improved soundproofing. In the USA, the price climbs \$4,790. The five-speed gearbox is an additiona \$80. 7,249 are manufactured.







offered a similar torque peak, it was produced lower in the rev range. The addition of a new camshaft, valves and valvegear resulted in a freer-revving engine – such a traditional characteristic of 911s.

Climb inside and you'll find the seats are so soft that they cushion your posterior and back like no modern Porsche can. Before I set off I need to adjust the seatback's tilt slightly aft, otherwise my scalp would brush the roof lining.

Again, overall there is little that separates the 9l2 from a 9l1 in terms of the cabin configuration. This specific car's interior is spotless and it is easy to see money has been spent on every part – the interior is in top-notch condition. As with 9lls, there are five dials behind that thin-rimmed steering wheel, being a 1967 model (the invoice date is August 1966, meaning this is one of first '67 model-year 9l2s to be produced). As a matter of fact, earlier 9l2s featured

only three dials in their instrument clusters. The speedometer is marked to 120mph and the rev counter's red line is from 6,000rpm. The former is not that optimistic: period road tests recount impressive, true speeds of around 118mph.

The black steering wheel is large by modern standards but affords enough leverage to manoeuvre the car at low speeds. In its centre is the soft Porsche crest. The metal strip below the dashboard gives a brighter tint to the otherwise dark dashboard, while the period-correct Becker Europe looks perfectly in place. I turn the key and with some help of the throttle pedal, the 1,582cc engine comes alive. As expected, the sound doesn't remind you of a flat six but, then again, it shouldn't. However, when I start to accelerate through the gears, the motor has a distinctly rawer voice than what I recollect of 356 engine notes – perhaps I'm mistaken and just haven't driven enough late-manufactured 356s!

I expected a rather lazy and slow car, but I am pleasantly surprised. The gear lever has a slow and rather vague way of slotting through the gate. But, it only takes a few shifts and a minute or two to figure it out. The dog-leg first is left and down, while fourth and fifth are very close to second and third in the H-pattern. Make no mistake, this five-speed 902/1 gearbox doesn't want to be rushed... although the redline is just after 6,000rpm (peak power arrives at 5,800rpm), I decide to change before this mark. During the first 3,000rpm, the car does feel slow (as most 91Is of this era do), but then it starts picking up speed and the rev needle easily passes through the next 2,000rpm. Sure, it is not as rev happy as comparable 91Is of the time, but it gets the job done and I often see 70mph on the speedo with the car still being able to comfortably increase its speed.

It is slower than even the (relaxing) 911 T to drive, but that is rarely a negative feature. The important thing is that even at slow speeds you feel like you are going a lot faster – exactly the opposite of modern machinery. Other than that, the experience from the cabin is pure 911. You have that lovely clear view over the bonnet with the pronounced fenders on each side. It offers a comfortable ride and feels light on its wheels. Sadly this part of the world offers long open roads, but no challenging mountain passes. I would have loved to experience the 912 threading through

a few twisties, as I expect it would deliver a copious number of low-speed thrills right on demand. If you are accustomed to modern 911s, let's say water-cooled examples, the size of the 912 will either come as a welcome surprise or a

shock, depending on what type of cars you like. It is narrow and compact and you sit quite close to your passenger.

"The experience

from the cabin is

pure 911"

It is times like these I wish I could pilot this car through some narrow and sinewy Alpine mountain passes – the proving grounds of these early cars. The fact that this car is equipped with Fuchs wheels, instead of the standard hub caps with Porsche crests, lends it a further nod towards a 911. Needless to say, if you can't quite make the financial stretch to an early 911, don't discount a 912. Apart from the outright performance, which might be less than a 911, the 912 ticks all the boxes of an early 911 – while it is also lighter. I certainly would not mind one in my garage.

As automotive writer Jerry Sloniger pointed out at the time: "Acceleration is not the be-all and end-all of motoring. It is a decent index, but road behaviour between 40mph and 100mph is far more useful. There, the 912 shines." That is a very accurate description and rings true to this day. Though it used to be viewed that 912 owners were missing out on the 911 experience, with early 911 prices rocketing, now it is those who readily dismiss the 912's credentials that are sure to be missing out on an authentic, classic Porsche moment.

#### 196

The 911 T (Touring), featuring trim and equipment very similar to the 912, is introduced. The T features a slightly more powerful 110bhp 2.0-litre flat-six engine. A total of 7,242 912s are manufactured

The B-Series 911/912 is launched in September 1968 for the '69 model year. It features a 57mm longer wheelbase and flared wheelarches in order to accommodate wider wheels and tyres 4,679 are manufactured. 197

Introduced for only a year to fill the void until the 924 arrived, the 912E offers a 2.0-litre flatfour engine developing only 86bhp (SAE net). *Road & Track* magazine records a top speed of 115mph and a 0-60mph time of 11.5 seconds. FOR THE LOVE OF Not every 991 R is scurried away in a private collection. Subscriber James Hutchings digs out his fuel card and driving shoes for a road trip right through Wales for the Total 911 cameras

Photography by Rich Pearce



will start by saying I absolutely adore cars and believe they are made to be driven. I've been lucky enough to drive and own sports cars from various prestigious manufacturers over the years but, it has to be said, time after time I come back to Porsche and its 911, as the car is just so superior to its rivals in terms of driving performance and build quality.

As we know, the 991 R sits pretty close to the top of the 911 tree and, after missing out on a 997 GT3 RS 4.0 in 2010, I was delighted to find out that I'd be getting an R this time around. Before I was told this, though, I was asked by Porsche what I intended to do with the car, to which I replied, "Drive it hard, of course!" Road trips such as this provide a playground for the R to have fun on, after all.

I took delivery of my R in September last year and spent the winter running the engine in prior to being invited on a Total 911 Easter tour of Wales. I'd long had the dates in mind and therefore had a good run-up to get the engine properly in order, knowing full well that while short-shifting at 3,000rpm was dispiriting at first, it'd be well worth it by the time the Wales trip had come around. Only then would I be able to unleash that banshee flat six resonance upon the Land of My Fathers (more on that later).

By way of spec, I went for a flat black hue accented by silver stripes and silver centre-locking wheels, complemented by clear rear lights. Inside, I opted for brown seats with houndstooth centres (a glorious throwback that works so well with the R's stock green dials) and, of course, a lightweight flywheel. To my mind, the car looks gorgeous.

And so to the present: the Total 911 tour is here at last. The rendezvous is actually at Dick Lovett Porsche, Swindon. I arrive early to take a look around its Classic showroom, as I love the history of Porsche's reverential cars. The Centre has everything from a 1971 2.2T right through to a Carrera GT – God knows that is my dream car.

I find that there are going to be seven other cars on the tour and, after the meet and greets are done with, we waste little time in climbing into our Porsches and inputting the location of our first great driving road, which is 55 miles north east, near Rosson-Wye. Slotting my 911-silhouetted key fob into the dashboard and twisting it forward awakens the R's flat six, which seems to spring to life and settle at idle in the same breath. With minimal sound deadening (less so than the RS), it is loud in the cockpit, the course note of that DFI flat six reverberating right through me, the lightweight flywheel's fast chatter providing a gruff mechanical undertone. Even just going by the sound alone, the R leaves you in little doubt it means business.

We pull away and I begin by wondering how long I can contain my excitement and stay within the group convoy. As it turns out, the answer is 'not very long at all': within minutes I'm off, burying my right foot into the bulkhead as the R's impressive throttle response sees the car catapulted forwards at a venomous rate. This is the first time I watch that green needle climb all the way round on the tacho: the site is glorious!

We soon reach Ross-on-Wye and the first of Total 911's great driving roads for the weekend. The B4521 is largely flat (the flattest road we would drive on all weekend, in fact), with some adverse camber changes to keep the driving contingent on its toes. The road is easily dispatched of, its succession of sweeping left-right turns a good warm-up for what lay ahead as we crossed the border into Wales.





#### Model 991 R Year 2016 Engine Capacity 3,996cc Compression 13.2:1 ratio Maximum power 500hp @ 8,250rpm Maximum torque 460Nm @ 6,250rpm

Transmission Six-speed manual

Suspension

Front Independent; MacPherson strut; PASM

Rear Independent; Multi-link; PASM; rear axle steering

Wheels & tyres Front 9x20-inch centrelocks; 245/35/ZR20 PS Cup 2s Rear 12x20-inch centrelocks; 305/30/ZR20 PS Cup 2s

Dimensions Length 4,532mm Width 1,852mm Weight 1,370kg

Performance 0-62mph 3.8 secs Top speed 201mph



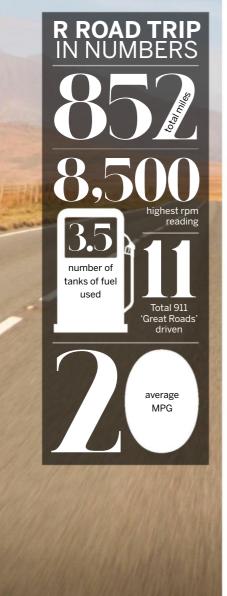
**Clockwise from left** Twisty Welsh roads are a playground for the 991 R; Green dials are a throwback to very early 911s; Only disappointment of masterly 500hp 9A1 engine is that you cannot see it underneath the R's decklid





Below There's far more to the R's magic than its manual gearbox: everything about the car's setup from pedal to steering weight fulfils the R's mandate of being featherlight and purposeful for fast road driving





Traversing the edge of the Brecon Beacons National Park, eventually we reach the sleepy village of upper Brynamman, the single cattle grid at its most northerly point signalling the start of 12 miles of magic along the A4069. The first sector of this road is very fast and flowing and, with little else but the peaks of the Black Mountains for company, I am afforded the space to really push the R. It certainly doesn't disappoint.

The first thing to notice is just how strong that 9Al engine's performance is. The R can cover ground at a simply frenetic rate - the engine is just pulling all the time, its power hanging on right to 8,500rpm. Acceleration itself is utterly ferocious: there's a

modified 997 Turbo among our group (you can see its feature against a factory 991.2 Turbo S in issue 152) and, though it is boosted to the tune of 550hp, the naturally aspirated R has no problem in keeping it honest. As the revs rise, so too does the volume of sound: it's utterly raucous inside the R's cabin past

5,000rpm, which really adds to the intensity of the driving experience.

pedals"

The second half of the A4069 is far slower and more technical, so I elect to sit behind the editor, getting on the power as early as possible after hitting each apex. It proves great fun: I like to drive with traction and stability control off, as this way you get more feel from the car, so throttle inputs have to be precise if I want to be fast and maintain grip. Again, this appears to pose little trouble for the R, and I'm pleasantly surprised by how early I can get the power down from bends. If only the editor in front would drive a bit faster...

We find favour with the Black Mountains' route, retracing our tyre treads for an extra couple of shots at the road. Time seems to stand still in moments like this: the sky is blue and the asphalt is bereft of



other vehicles, while a mere mortal like me is having obscene fun piloting a car like the R on the roads that it was simply made for. This is motoring nirvana at its optimum.

However, the harsh reality is that time certainly does not stand still, and the caveat to our Brecons antics means we are late for dinner at our overnight accommodation. There's extra anguish in store, too, as the quickest route is a potentially treacherous drive along the single-track Abergwesyn Pass. We can't help but take our time as a group: the road is slow, which, much to the detriment of our waiting chef, is no bad thing really; the views are stunning as we negotiate the edge of a succession of sweeping

valleys reaching high above and stretching far below. "The R oozes Quality of road surface is variable here too, and I'm feeling through wincing on approach to a couple of extremely tight each of its three uphill turns that could call the R's reduced ground clearance into question. Luckily, car and driver negotiate the pass just fine.

> It is on a road like this where steering feel - or lack of it - can be advantageous. While much is made of the electrically assisted systems gracing all 991 models, as a driver you cannot but conclude that, in isolation, the steering is fantastic. Sure, drive an R back to back with a 997 GT3 RS and you will realise it is totally lifeless, but at the same time I'm safe in the knowledge I'm not going to be spending a weekend wrestling the wheel as we drive through Wales. For a road car - which is what the R is meant to be, don't forget - I have no problem accepting this.

Just as the sun disappears behind the mid-Wales mountain tops, we reach our overnight stop. I kill the engine and remove the key fob but, as the interior light fades up, I stay rooted to my seat for a minute and take stock, my ears ringing with that same banshee howl that's been emanating from those titanium tailpipes all afternoon. With every mile covered I can feel the engine bedding in, its mechanicals loosening up, adding more character to the R's DNA. Already, I can't wait for more.

I awake early the next day, the sun's bright spring rays illuminating the bedroom around me. There was never any chance of me dwelling in my early morning slumber: I spring out of bed, excited by the prospect of the day's driving ahead. The cars sit silently outside and, judging by the reign of peaceful tranquillity surrounding our lodges, I realise the others must still be in bed. More fool them!

The R still has just under half a tank of fuel but I reason to be proactive in keeping its reserves rich: we are in Wales, where petrol stations are rare and 98-ron fuel even rarer. A local informs me of a Shell garage stocked with the good stuff approximately 20 minutes away and my excitement stirs when the PCM shows a tantalisingly squiggly route to it. We best get going.

After a patient wait for oil temperatures to reach their required levels, I push on. Abetted by this 9









"That its front is now decorated with splattered bugs, its rear sporting a telling veneer of road dirt, just makes me treasure the R even more"

slalom-like carriageway cutting through the quiet countryside, I'm having no end of fun pointing the wheel and squirting with the accelerator pedal, astounded once more by the car's grip on turn-in and ability to get the power down early afterwards. I barely touch the brake pedal the entire way, which of course in R specification is Porsche Ceramic Composite Brakes as standard. The stoppers, six piston on the front and four piston on the rear, are mighty: while the full braking ability of PCCBs isn't really necessary outside of a track, what is useful for road use is their significantly reduced rotating mass, which is much lighter than Porsche's steels. This is keenly felt with a greater sharpness to the R on turn-in.

I find the fuel stop, fill up and race back to base before the others have congregated for breakfast (I love driving but there's no way I'm missing out on a bacon sandwich). Once again we're treated to clear blue skies and dry roads and, with food consumed, it doesn't take too much prompting from me for us to get out onto those patiently awaiting twisties.

We head east along a Total 9ll favourite, the Elan Valley thoroughfare, before heading north to Snowdonia. The route throws up a good variety of roads over fast hills and tighter, more technical passes through stunning mountainous landscapes. By mid-afternoon we reach the triumvirate of black top colloquially known as the Evo Triangle. A wonderful stretch of road that's fast and technical, here is where I can make the most of the piece de résistance in the R's specification: that beautiful, manual gearbox.

That this Sport transmission has only six gears with revised ratios has been well documented already. However, that's only telling half the story. The R's gearbox is a raving delight: it's slick but firm to use with rifle-bolt precision. There is not a trace of sloppiness to it, the lever's short, direct throw a cornerstone of the car's overall intensity. It's so sweet to use. The clutch, too, is pure mastery: it's very light and perfectly balanced, making the RS clutches by comparison seem unnecessarily heavy. The R oozes feeling through each of its three pedals.

With a glorious stretch of sprawling, well-sighted road ahead, I break out and steal a lead on the group (it is only later I am told that in doing so I collect and then redistribute a melee of road debris in the direction of other cars behind, no doubt the work of the R's prominent diffuser, sorry guys). The car just feels so light and sprightly: it's clear this was Preuninger's mantra when he and his team built the 991 R. There is not one characteristic of its spec that elucidates this; instead, it is the sum of the R's parts, from its lighter brakes, magnesium panels and pared back cabin to deftly weighted clutch pedal that does so. What a marvellous machine.

The Triangle is completed anti-clockwise first before a few people elected to go again in the other direction (you can guess which group I was in!) before a fuel stop in Betys-Y-Coed en route to the stunning Llanberis Pass, where our weekend tour comes to an end.

It's here, under the fading spring sunshine and with two days' hard driving through this beautiful country under my belt, where I can say I fully appreciate the fact the R is made for sweeping A-roads and country lanes. It lacks the aerodynamic accomplishment of its RS stablemate but that is missing the point: the R is so fun and agile that each drive, on any road, becomes an event in its own right. Pulling into the hotel car park for our final stop of this tour in the heart of Snowdonia, it takes but a moment to conclude this is the best road car I've ever owned. That its front is now decorated with splattered bugs, its rear sporting a telling veneer of road dirt, just makes me treasure it even more.

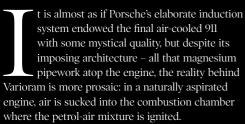
Compelled by the weekend's achievements of car and driver, I take my luggage from the front boot and head for the welcoming lights of the hotel. And that's where I'll leave you. Tomorrow I must journey nearly five hours back to base, and while the PCM just wants to get me onto a nearest motorway, the temptation to ignore it and simply drive back the way I came is tantalisingly strong. It may be the detour of all detours but, when in a 911 as exquisite as the 991 R, there can only be pleasure ahead.

If you'd like to register your interest to take part in an upcoming Neunelfer road tour, email lee.sibley@ futurenet.com.

# TECHNOLOGY EXPLAINED VARIORAM

Total 911 looks at how Varioram works and whether it makes any material difference to how the Porsche 993 performs

Written by Kieron Fennelly



However, if the fuel injection mechanism meters the flow of fuel, other means are required to monitor air flow into the cylinders and the goal of engineers is always to obtain optimal cylinder filling. Vaporised fuel is squirted into the chamber in measured doses, but air is admitted through inlet valves and their continuous opening and closing fills the air with shockwaves. For this reason, modern engine designs feature plenum chambers which have the effect of damping and marshalling these shockwaves or oscillations. The physics of air velocity is a complex subject and intake systems have evolved as understanding has grown. The M64/01 3.6 engine of the 964 illustrated Porsche's increasing sophistication by using variable geometry to exploit intake manifold resonance, thereby optimising the engine's volumetric efficiency at medium and high revs. Each bank of cylinders had its own plenum and was fed from a common plenum chamber through separate pipes. The plenums were connected by two tubes of

different diameters. The larger drew air from the air filter through a throttle valve and fed both plenums; the smaller tube contained a secondary throttle valve controlled by the Motronic engine management as a function of engine speed. The firing order was such that the cylinders from the two banks ingested air alternately from each chamber creating shock waves between them. As engine speed increases, it demands more air and at 5500rpm the secondary throttle valve opened, effectively boosting the pressure and therefore available air.

S-PR

This mechanism became the basis for later versions of the M64 engine on the 993 and later the 996 and 997. The 993 improved the design by replacing the 964's simple open or shut intake flap with a Motronic controlled air mass meter. Otherwise the first 993s had effectively the same induction configuration as their predecessors. However, the M64/05 engine fitted to the first 993 was in other respects significantly different from the earlier version of the 964. As well as a later Motronic unit, the cylinder head was re-engineered with hydraulically actuated rockers, lighter pistons, gudgeon pins and connecting







rods and a strengthened and marginally heavier crankshaft. Valve sizes remained the same as the 964's, but the intake ports were enlarged from 41.5mm to 43mm. Porsche was able to claim increases of 22bhp and 20Nm, though in terms of acceleration, the 993 was barely any quicker, according to contemporary road tests. However the attractive restyling of the 911 and quieter, more comfortable ride offered by the new multi-link rear suspension helped to ensure that the first 911 to feature fared headlights was well received.

For the 1996 model year, Porsche introduced two main technical changes. The M64/21 engine sported larger intake valves and a revised camshaft,

which helped to push power output to 285bhp. It was also equipped with Porsche's Varioram induction system first seen on the 993 RS in 1995, and the principal talking point. Essentially Varioram added a third stage to the existing two-stage induction programme. Technical explanations of Varioram, combined with the official schematic diagrams which Porsche published, tend to be rather difficult to follow because the process is not easy to visualise. The objective as ever is optimal cylinder filling to achieve the engineer's holy grail of maximum volumetric efficiency, in other words the best mixture for combustion. A relatively long inlet pipe provides air vibrating at lower frequency better suited to moderate engine speeds. As revolutions increase, a higher rate of pulsation is required and Varioram achieves this by shortening the intake pipe. Looking vaguely like a miniature church organ, the six inlet tubes that give the Varioram system its visual identity contain sliding sleeves which effectively lengthen or shorten the inlet tube. Below 5,000rpm only the throttle valve is open and the air reaches the cylinders through the full length of the pipes; from 5,000rpm to 5,800rpm, a second throttle valve opens, feeding the cylinders from both left and right plenums, the inlet pipes remaining at full length. Then, above 5,800rpm and as long as the throttle valve is open wider than

50 degrees, the second resonance tube opens to enhance the vibration frequency of the intake air. At the risk of oversimplifying, stage one of the induction is delivering air at lower frequency, stage two opens a second source and hence greater mass; the third stage ups the tempo further by shortening the delivery tubes as the engine approaches peak power and air demand is at its greatest. The sequence is coordinated by the Motronic management and the physical actuation of the sliding sleeves by a vacuum diaphragm rather like the old ignition advance and retard on pre-electronic distributors.

In terms of outright performance, there is little if anything to choose between Varioram and non Varioram cars. When these cars were current, Auto Motor und Sport carried out its usual assiduous acceleration runs and recorded identical 0-100kph times (5.2-seconds), with the Varioram car quicker to 160kph by one tenth (12.3-seconds). The only anomaly was the higher top speed: the Varioram car reached 276kph, some 9kph (5mph) faster than the non-Varioram 993, a bigger difference than a 13bhp increase would normally suggest.

Porsche's intentions with Varioram were to make the 911 more tractable. The torque figures bear study: the non-Varioram develops its maximum torque of 330Nm at 5,000rpm. The Varioram version



# Varioram were not to make the 911 faster, but more tractable"

produces slightly more, with 340Nm at 5,250rpm, but tellingly whereas the non VR car offers 270Nm from 4,000rpm, for the VR car, this figure is 330Nm. On the road it is in this rev range that the difference between the two engines can be felt. The non-VR requires more use of the gearbox and its responsiveness to revs reminds the driver strongly of the 3.2. For some owners it is a more traditional 911 in this respect.

Once it is understood that Varioram is resonance tuning offering little performance advantage, it could be argued it is an unnecessary refinement. However, aware of increasingly difficult drive-by noise regulations, Porsche deliberately set out to flatten the torque curve. The Varioram car pulls noticeably better at 3,000rpm and changing up at 4,500rpm, with the relatively close ratios of the "short" G50/21 gearbox, results in a drop of only around 750rpm, keeping the engine firmly on the torque curve. Consequently, satisfying progress is possible without having to use the entire rev range. The character of the non-Varioram car encourages the enthusiastic driver to push just that much harder, not always practical in all traffic conditions.

If the later car provides superior torque, both engines run out of breath before the 6,800rpm red line and ignition cut out. Dynamometer graphs show that after passing peak output at 6,100rpm, power falls away abruptly from 6,500rpm. This is a design characteristic which Colin Belton of Ninemeister in the UK believes Porsche did not necessarily intend. Few people understand the M64 family of engines better than Belton, a successful club racer whose 993 RS showed a clean pair of heels to competitors in the early 2000s. He carried out substantial re-engineering of the M64 cylinder head and demonstrated how attention to draughting and port size could yield significant power gains. Using an aluminium billet head, increases of 20-25%, 70bhp, were achieved. Belton's view is that the distinct character of the 964 was to some extent lost with the 993 as Porsche attempted to make the new 911 slightly easier, or at any rate less demanding to drive. The inlet ports were enlarged and induction made more responsive to the engine requirements and this resulted certainly in a smoother revving engine, but with a higher torque curve than planned. Porsche then addressed this with Varioram induction.

The advent of the 996 in 1997 took the refinement of the 911 several stages further, the new M96 engine exhibiting a distinctly flatter torque curve and an altogether more tractable temperament. This was achieved without Varioram, which was replaced by variable valve geometry that Porsche calls Variocam. Besides being water-cooled, the new engine also had twin camshaft heads, allowing Porsche to adjust inlet valve through cam timing. This was not feasible on the old air-cooled design which had several limiting factors, one of which was a camshaft to operate both inlet and exhaust valves.

So Varioram was really only an interim solution and, like the Sportomatic gearbox, it has passed into Porsche history. As the tuning fraternity demonstrated, Varioram does not affect the "tunability" of the 993 and little goes wrong with what is a non service component. The vacuum diaphragm may, comparatively rarely, leak and the sliding sleeves have been known to stick, but this is even more unusual. Production records show that there were almost equal numbers of non and Varioram 993s produced, 32,932 of the former and 37,557 of the latter.

Today all 993s are 20-25 years old and condition and service history are immeasurably more important than whether the car is a Varioram or not. Obviously the Varioram cars are slightly younger and the much admired S has Varioram induction as it did not arrive until the 1996 model year. In the end a 993 is a 993, less raucous and more refined than its predecessors, but as hard wearing as any of them and the ultimate expression of the air-cooled 911.



Want to rally a classic 911 without risking your investment?





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crisp, Sunday springtime morning. Stepping outside, there's a light frost on the car from the night that's easily removed with a single flick of the wipers. The previous evening, I had reluctantly set my alarm for an ungodly hour with the thought that Sundays really shouldn't start at that time. But this morning, the brightness of the blue sky and the low angle of the morning sun warming my face provides inspiration for the day we have ahead as we drive across the Yorkshire countryside to learn more about the dark art of Historic Road Rallying and how it is actually possible to enjoy a day's motorsport without the need for helmets, Nomex fire suits and the risk of catastrophic damage to your classic Porsche 911.

Arriving at the start of the Ilkley Jubilee Historic Rally HQ near Harrogate, there's that unique atmosphere of early morning motorsport. That whiff of Castrol R mineral oil, steam from hot mugs of tea and the mouthwatering aroma of bacon sandwiches. There's a unique induction sound of numerous Pinto powered Ford Escorts being blipped gently to warm through, then the unmistakable bark of a 911 on sports exhausts as Howard Warren and navigator Paul Bosdet arrive in the vivid orange Porsche 911 you see in our pictures.

I'd heard of classic rallying, historic rallying and regulation style events before, but I had to admit, it's a subject I knew little about. Additionally, it's a sport that seems to receive little coverage in motorsport press. Despite this, the Ilkley Jubilee rally has an entry of more than 80 cars, with the car park rapidly filling and the gentle banter about who was going to out-do who, all proving that Historic Road Rallying is a booming sector of motorsport.

If the idea of a little competitive motorsport in your classic 911 appeals, but you're worried about the ultimate risk of circuit racing or stage rallying, then road rallying is the perfect place for you. The sport is designed to provide as level a playing field as is possible in any motorsport, with the performance of driver and navigator alike being tested rather than the car and the budget of the owner. The route on public roads is secret until less than 60 minutes before the start, when navigators are given that all important and mysterious road book filled with detailed instructions known as Tulip diagrams. To the untrained eye, they look like they're from Ancient Egypt, but to a rally navigator, they're the gold of their existence. From this, they must plot the route using the road book, an accurate timing method and the beautifully detailed Ordnance Survey Landranger maps. No Tom Tom, no Google Maps. No GPS at all.

Accurate arrival at time controls and the maintenance of an accurate average speed, generally between 25 and 30 mph, are combined with a series of tests against the clock. A little like a series of all-forwards auto tests, they range from simple tarmac areas with cones to be navigated to loose surface gravel tests, something that the 911 is more at home on. Howard comments "Some of the hard surface tests are quite grippy and tight, so the 911 isn't as nimble as, say, a Mini, but on the loose surface areas, we really can take time out of the others due to the rear-engined traction.









#### Model Porsche 911 S **Year 1965**

#### Engine

Capacity 1,991cc **Compression** 9.8:1 ratio Maximum power 160bhp @ 6,600rpm Maximum torque 179Nm @ 5,200rpm Transmission Five-speed manual **Modifications** None

- Suspension Front Telescopic dampers and torsion bar springs
- **Rear** Training wishbones; telescopic dampers; torsion bar
- Wheels & tyres Front 15x4.5-inch; 165HR tyres Rear 15x4.5-inch; 165HR tyres

Dimensions Length 4,163mm Width 1,610mm Weight 1,075kg

Performance 0-62mph not tested Top speed 131mph



Howard's navigator, Paul, is in deep concentration as he prepares himself to plot the route from the passenger seat of the 911. Given to him just a few minutes earlier, nobody knows in advance the route the event will take. In fact, competitors don't even know the entire schedule as, just to keep things interesting, they are only given part of the route. The second half is dropped onto their laps at a time control at some point in the day, to be figured out from the moving passenger seat of a 911 as they weave their way around the tight, twisty Yorkshire country lanes. All the while ensuring that they remain on the correct route and also on time and speed. Ah yes. Time and speed. This is where it starts to become really challenging.

"We arrive on the second", says Paul. I'm used to the far more relaxed idea of stage rallying where you have an entire minute to arrive at a time control. Indeed, when I was competing, it was quite acceptable to stop 50 or so metres short and sit and wait for your 'minute' before rolling forward. The concept of arriving on the very second, like the Red Arrows at an airshow, is something that I initially struggle to understand. "Surely, that can't be done?"

"Actually, we do manage it quite a lot, certainly within a few seconds. For every second we are over or under the target, we gain penalty points. Additionally, we must maintain an average speed throughout the event, which is monitored en-route." So zero is the ultimate target. But it's not unusual for crews to round a corner between dry stone walls to suddenly find a time monitor sprung upon them.

Combined with penalties against the clock on the tests and additional penalties for hitting or 'wrong slotting' through cones, you begin to realise that the navigator isn't just along for the ride. The good ones are a unique combination of time manager, psychologist, mathematician and international diplomat, able to perform mental arithmetic, control the exuberance of their driver and also deal with the stream of fresh information constantly arriving through the open door at each time control. Make a small mistake and you drop down the order at an astonishing rate. The driver alternates between religiously complying with the navigator's directions and pace instructions, then sudden bursts of competitive driving on the special tests. If the two are operating as a cohesive team, victory goes to the crew with the lowest penalty score.

If all of this appeals and you own a suitable classic Porsche 911, could Historic Road Rallying be for you? Certainly, mention Porsche 911 rally cars in conversation and the vision that comes to mind is one of endless gravel battering the sides of a classic Porsche, or the howl of those modern 997 GT3 RS rally cars through the Eiffel forests of Germany. As a classic 911 owner, you could well be thinking that submitting your car to the punishment of rallying is something to veer well away from.

For the concours car polishers out there, Historic Rally is certainly not for you. But for those who enjoy actually driving an air-cooled 911, who accept a few stone chips along the way are inevitable part of ownership and are perhaps prepared to make a few small, easily reversible modifications,



# The costs of getting a 911 rallying

Starting out in Historic Road Rallying can be remarkably low, financially speaking. If you already own a suitable Porsche 911, you simply need to join an organisation such as the Historic Rally Car Register. Eligibility ranges from pre-1968 to December 1985. Crews compete in classes from novice to expert, giving everyone a chance at achieving milestones as they progress.

Like all other forms of historic motorsport, the core principle of historic rallying is to compete in a way that is sympathetic to the experience of driving period cars when they were originally rallied. To support this aim, modifications to modernise historic cars are strictly controlled by the RAC MSA.

Vehicle safety and performance modifications vary depending on the type of car you have and the type of competition you choose to do, but in principle (with the exception of safety items) cars can only be fitted with period modifications – i.e. recognised modifications that were available for your car and used in rallying at its time. Later and more modern modifications are not permitted.

The car and driver must be road legal, with registration documents, MOT certificate and full driver's licence, but no competition licence is required. Your insurer may or may not cover you for this, so it's worth talking to a specialist such as Hagerty Insurance for event cover. There are no expensive service crews and any repairs must be done by the driver and navigator, though most events have a 'sweeper' team following along to help with any breakdowns



Above halds tripmaster dominates the navigator's side of this 911 Below "You only need to get stuck behind a tractor and you're way out of position" Howard says



"If you enjoy actually driving an air-cooled 911, accepting a few stone chips as an inevitable part of ownership, then this sport might just be the one you're looking for"





"The navigator isn't just along for the ride. The good ones are a unique combination of time manager, psychologist, mathematician and international diplomat"

then this sport might just be the one you're looking for. Howard's 1965 2.0 911 S is a standard car. The regulations of The Historic Rally Car Register dictate that the car must produce standard power. "Last time we had in on the dyno, it was putting out l61bhp," says Howard.

So what modifications are allowed? "Principally, the car must have standard performance, as it came from the factory. It's actually possible to enter a Historic Road Rally with a totally standard car, but most people change a few things."

A stroll around the start area shows that nearly all the cars have at least a half roll cage, many have a four point harness and the popular Vredestein Classic tyre is the almost universal choice for traction. The navigator position is probably the area that deviates the most from standard, with an adjustable reading lamp; a Brantz or Halda navigation computer measuring not tenths of a mile but hundreds of a mile is dominating the glovebox area; plus a myriad of small detail changes that each navigator seems to make to customise their workspace. They do like to be organised, these people.

The slim-bodied orange 911 we are following today has a standard engine, with 2.0 S cams, plus lots of detail changes to optimise the car for this type of competition. Howard and his business partner Chas



have competed on events across Europe in classic 911s, often spending days competing on longer regularity events, so they know what it takes to build a car for Historic Rallying. "The most important thing is preparation. It's nothing arduous, but simple common sense does go a long way. Start with any good classic car, then make sure it's mechanically in good, working order. People are sometimes surprised at how quickly you can go through brake pads on downhill sections, especially if you've lost time and need to get back on schedule."

We decide the best way to gain more of an insight is try to tag along. We have no road book, but a few notes from navigator Paul point us towards the first test. The small, compact 911 form lends itself perfectly to the tight, twisty lanes typical of this event and as the lanes grow tighter and narrower, ever more remote, I begin to realise that actually average speed could be rather tricky. I recall Howard's comment "You only need to be stuck behind a tractor for a few miles and suddenly you're way out of position. It can be hard to get time back again when you lose it."

Stopping at a time control, photographer Chris hops out to grab some images. The 911 is into first, the flat six barks and they're gone as he sprints back to our photography car. Suddenly, they're out of sight as a series of square junctions appear. I catch a glimpse of the orange roof of the 911 across the hedgerows and reverse back just in time to see the dust settling in their wake. This is actually hard work. Two hours of trying to keep the 911 in sight for images, then jumping ahead from a rest halt and I realise that, while I have a pretty good sense of direction, I actually have no idea of our precise location. I console myself with the thought that, if we do lose sight of them, another car will be along in just about 60 seconds.

Howard and Paul won this event outright last year, but this year it was not to be. A few small errors by both parties rolled them down the finishing order and they had to accept they were well beaten in this year's rally.

There will, of course, be some that sniff at Historic Road Rallying as not being a 'proper motorsport'. For some, however, the McQueen mantra of 'racing is life' will always hold true, and it's something we at **Total 911** agree with. However very often, it's the second part of his phrase, that entire weekend of 'waiting around' for the 20 minutes of track time, that we begin to struggle with. If you share that feeling and you don't mind collecting the odd stone chip on your 911, then Historic Road Rallying could be just the type of Porsche motorsport you're looking for.

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### 76 | Living the Legend - 911 owner reports

# Living<sub>the</sub> Legend

Our band of contributors from around the world share their real-life experiences with their Porsche 911s





David Grover Harpenden, UK

@propertypetrolheads

Model 991 Carrera S Year 2014 Acquired March 2016

Model 997 Cup Year 2014 Acquired December 2016 With racing now imminent, we are heading back to Donnington for our second practice day, hoping for good weather and with

more confidence in both the car and circuit from which to build smoother lines and more consistent lap times.

There is no doubt it's going to be a daunting yet exciting first weekend getting to grips with the car in competition, and with other cars so much faster than even a Cup car. Caution, focus on enjoyment and gaining seat time remain the primary objectives for the first weekend, as there are plenty more to follow.

Meanwhile, we have been investigating the gear change point I mentioned last month and this seems possibly down to a set up adjustment or is perhaps software related, so hopefully that can be fixed prior to, or during, our next day out. Certainly being able to downshift exactly when I want to will have a big, positive impact on my lap times and on my overall confidence.

This week the car has had its base graphic design package completed and now applied and I am delighted with the results and look of it. I hope you agree that it actually looks awesome. My sponsors to date are already named so a big thank you to them. It now looks the part for sure and the bright orange flashes should help it get spotted both while going around the track for my crew at GT Marques and on the various media forms that GT Cup has links to.

I am still working hard on a couple of more backers and if they feel willing to get involved in club level motorsport, then these can get added quite easily to the base design over the weeks ahead. There are clearly a few cracking spaces to go for as you can see.

I am then back at iZone at Silverstone in ten days to get back into a Cupcar and learn the brand's GP circuit in the same set up in both wet and dry conditions. Getting real time live access is very hard at that circuit and those few days available tend to be quiet, which the Cup car can't pass without a specially designed slip-on silencer that simply just adds extra cost to the track day, so I am going the simulation route for this one. I have driven a Cupcar around the same circuit though in the past so its not as if it's a complete new experience. Pre the Silverstone weekend, we plan to be on track for real to get some practice on the full GP circuit.

I continue to angst over the new GT models due out in 2018 crossing everything I can, and having turned down the opportunity to get a new Gen2 991 GT3 via my local dealer, I hope in hindsight that this is a good decision. Only time will tell.













Lee Sibley Bournemouth, UK

🞯 @lee\_sibs

Model 996 Carrera 4S Year 2002 Acquired April 2017



There has been a change in the Sibley household: after 14 months of happy ownership, I sold my 996.2 C4. I felt I'd come

to a crossroads – its new paint meant the car was too nice to be spoiled on track and with 88k on the clock, I was conscious I'd introduce a sixth digit within the next 12 months. My good friend Alex at Apsley Cars agreed to sell it and five days later it was gone.

I was sad to see the C4 go, yet delighted to know it's to remain in the **Total 911** family: Andrew, a subscriber, had read about the car's escapades and wanted to write its next chapter.

My replacement 911 came about quickly. It was a road test of a 996 C4S in January 2015 that alerted me to the car's incredible value. I really fell for it and had to own one. I'd kept an eye on the market for months and found a Seal grey example with 66,000 miles and a gorgeous spec. The drawback? No less than ten previous owners.



I'd spoken with Porsche friends and dealers who all had differing opinions but a common theme came to fruition: condition is key. With that in mind, I went for a viewing. Its condition was indeed exquisite inside and out, and was one of the best C4Ss I've ever driven. I should have bought it there and then, but I didn't.

Perturbed by its high owners, I delved into its history, intent on finding clues to an unscrupulous past. I took photos of the service book (a perfect history) and called up every Porsche Centre to verify it. Everything checked out, however.

The car has had several private plates in its time too, though a little digging revealed these now resided on a GT3 and Macan among others, showing previous owners were all dyed-in-the-wool Porsche guys. A Peter Morgan 2015 assessment meant there wouldn't be another car with as much information as this.

Yet still I waited. Remaining undecided for days, I couldn't shake the number of owners from my mind, my main concern being a difficulty to sell the car myself in the future.

In the end, it was none other than **Total 911** magazine that prompted me to buy. Reading Kyle Fortune's 996 C4S v Turbo article in issue 152, I began to sigh as Kyle waxed lyrical about the merits of the C4S. What was I doing?! If somebody else bought that car, I reasoned, I'd be distraught.

I am the 11th owner of A911 HCM, and am absolutely delighted about it; I'm ecstatic to have acquired a 911 I've coveted for almost three years.



Greg James Mercer Island, Washington

Model 3.2 Carrera Year 1985 Acquired 2008 Model 993 Turbo Year 1997 Acquired 2016



Like old girlfriends, old cars all have their personalities. I've owned nine Porsche 911s over the years and enjoyed them all. It started with a

1976 911S in Chocolate brown (pictured) that I bought lightly used in about 1982, and progressed from there to a 1978 Ice green 911SC (also pictured), 1980 black SC Targa, 1988 White Carrera Cab, 1995 Guards red 993, 1998 black Cab, 1997 Speed yellow 993C2S, 1985 black Carrera Cab (currently owned), and a 1996 Arena Red 993 Turbo (also



currently owned). I recently decided to see if I could find photos of all of them.

After looking through old boxes, I found some great pics but alas, several are just not there. Of all the cars I owned in the 1980s and 90s, the one that gave me the most thrills was the Metallic Ice Green 911SC in the photo (please disregard the outfit. It was the 80s, we all wore weird clothes). While the 1976 911S was my first Porsche, and represented a huge jump up from the Datsun 240Z, for some reason the SC was the early car that stands out. I was in my late 20s and I still remember finding it in a classified ad in the Seattle Times. The seller wanted \$19.999. It had about 20.000 miles on the odometer and was roughly six years old. I fell in love. To this day metallic ice green is one of my favourite colours from that era. I didn't do a buyer inspection (I was still not totally clued in to buying cars), and trusted the seller, who told me the car, "went like a guided missile" (I still remember his words 30 years later).

True to form, it did and felt like a big step up from the fairly anemic US spec 2.7 911S that I'd sold to buy the SC. As far as reliability goes, it was off the charts. I drove it for close to a decade and ran up about 120,000 miles. I replaced the clutch at 80,000 miles, and that was



about it other than oil, tune ups and brakes. It was simply an unbelievably reliable car.

My next car was a 1980 SC Targa, which I sold fairly quickly, and then the white 1988 Carrera Cab, which I also only owned for a few years before buying the Guards red 1995 993. The 993 was definitely a big jump compared to the 3.2 Carrera, and it also provided many trouble-free miles.

My final air-cooled Porsche in those early days was the Yellow 993 C2S. Like all the others, it was reliable, handled well and went like a 'scalded Cougar'. All in all, my years of driving 911s have been extremely rewarding. They have provided over 30 years of motoring enjoyment, and when asked, I always tell people that, in my opinion, they're the greatest overall sports car ever made.



**Chris Wallbank** Leeds, UK Chris\_wallbank

💟 @chrisjwallbank

Model 997.1 Carrera S Year 2005 Acquired November 2012



With spring already here and the summer months approaching fast, I thought it was about time to start thinking about giving the Porsche

a detailing refresh to get rid of all the grime that had built up over the winter months and also look at getting the hubs repainted as I hate it when the grey finish starts rusting!

After chatting to a local friend and 991 GT3 RS owner, he pointed me in the direction of Reep Detailing (**reepdetailing.co.uk**), who are based not far from me in Knaresborough, North Yorkshire and also home to Swissvax UK.

So I arranged to go meet Miles and James from the team there and have a chat about what they would recommend for my car. They washed it off so that they could give it an inspection in their extremely well lit detailing bay. With the car having had a full paint correction just two years ago and sealed with G Techniq hard wearing Exo coating, Miles pointed out the paint was still looking great with no swirls visible, which was good to hear, so he recommend we just give



it a general freshen up and re-seal the Cabriolet's roof.

When I spoke to them about the disc hubs, he pointed out that they offer a hub refurbishment service that will stop the hubs from rusting, right up until the discs need replacing.

While visiting I couldn't help but notice a Lava orange 991 RS in the workshop. Miles explained to me it was in for the clear Paint Protection Film (PPF), which is becoming ever more popular on new cars these days. The PPF protects the car from stone chips and scratches and is almost invisible to the eye. Something I should have had fitted when I had my front bumper repainted before it got chipped again! Oh well, maybe next time!

Photos of the refurbished hubs to follow when I revisit Reep next month.



Tony McGuiness San Diego, USA

@tonygt3rs
@tonymcguinessgt3rs

Model 997.2 GT3 RS Year 2011 Acquired February 2011 Model 991 GT3 Year 2015 Acquired December 2014



Two years of 991 GT3 ownership has flown by. The media raved about the 991 GT3 upon its release and was justified in doing so.

This car is phenomenal and has hit the highest marks for me, far surpassing my expectations, which is why I completely understand the hysteria and desire for the new 991.2 generation GT3. The more I drive it, the more I am smitten with this extraordinary 911.

I have clocked just over 6,000 miles in the 24 months since purchase. Indeed, it isn't a lot a lot of miles by any stretch of the imagination, but I do plan on driving it more this year. I am of the firm belief that GT cars get better as they get more miles with my GT3 RS a prime example!

Recently the car required an intermediate maintenance service at Hoen Porsche dealership. As Porsche states in the maintenance booklet: "If the mileage for scheduled maintenance is not reached, intermediate maintenance must be performed after two, six and ten years at the latest." For the GT3 this included not only changing the oil, brake fluid replacement and other minor required servicing, but also replacing



spark plugs. This is required even though the car has only 6,000 miles on it. To give some context to this, the 991 Turbo requires replacing spark plugs every 30,000 miles or four years. Yes, as you can imagine, this intermediate service came with a hefty price tag!

I always follow Porsche guidelines regarding maintenance. It is critical for ownership of a new 911 and especially such a highly technical car like the 991 GT3, which is why I would advise new 911 owners, and even people who have bought a used 911 still under warranty, to read the maintenance booklet.

In the booklet it clearly states: "Proper care and maintenance will preserve the value of your Porsche and safeguard its functional capability. This will also protect your right to make warranty claims." That last sentence of the booklet is, of course, of particular importance.



Kyle Fortune Warwickshire, UK



Model 993 Carrera 2 Year 1994 Acquired December 2014



I've been looking forward to this. Spring sprung and I hauled the 993 out of the garage for a run and a good wash. I'll admit, I took it

somewhere for a scrub as frankly, as rewarding as some people find washing their cars, I'm not one of them.

Anyway, after too many months in the garage, it was looking a bit dusty and unloved. Even so, I'm always surprised just how much I love the 993's shape. If it looked good with a few month's worth of dust covering it, then seeing it in the sun post wash was a revelation. As is always the case, I took it for a decent run, the Carrera instantly reminding me that it's not just its looks I love.

Even after a long-ish, ahem, brisk drive, I left it out to make sure it was all dry before putting it away for the night. Moments after taking this photo it chucked it down, undoing all the effort I'd put (well, paid) into making it look so good. Ah well, another excuse to get it out again. It's off to meet its newest relation for next issue – I can't say what just yet but you'll read about it soon!





Joe Croser Northamptonshire, UK

oj @jcx911 @

Model 997.2 Turbo Year 2010 Acquired March 2016



What a month! I am living the legend and I am loving it! How lucky am I? So, I taxed my car

on 1 March and drove it out of the garage

minutes later just to remind myself why these cars are so fine. After warming up all the various bits and pieces, I planted the throttle and rediscovered the relentless and brutal gravity-defying power that feels as close to time travel as I am ever likely to experience.

As you know from the previous issue of Total 911, I stopped for a few minutes to snap some choice pics for this column and duly published a preview or three to Instagram. One of the first to comment on them was our Editor, Lee 'C4S' Sibley (his new name, I've decided!) who fell in love with my Meteor grey Turbo last summer in Wales. Grey certainly is a colour he appreciates, right Lee? Anyway, I digress... in very short order, Lee messaged me privately to ask if I would be happy to drive to Bath for a studio photoshoot to accompany an eight-page 997.2 Turbo feature. Hell yeah I would be happy to!

Fast forward a couple of weeks to 5.30am on a sunny March morning



and I was pedalling my car at speed through the Oxfordshire countryside. Bath traffic can be a beast so I'd planned lots of 'traffic delay' time into my schedule. I also beat Lee by more than ten minutes - that may be the only occasion I beat him on the road! We met Neil, our professional photographer for the day, who quickly proved his value as he positioned and illuminated lights around the car, which turned the metallic paintwork into glossy liquid with a lustre so deep that my car was transformed into an artist's impression with exaggerated curves set off by bright highlights and moody shadows.

It was a long day in the studio but by 5pm we were done and Neil the photographer was left with the tricky task of post processing the many photos taken. It must surely have been the longest time I have spent, just sitting, staring at my car. It is art after all.

Unlike the drive down, which was sunny and dry – thankfully or else I would have been forced to wash the car upon arrival – the drive home was wet and for some of the journey at least, dark. Still there was much fun to be had with many opportunities to play with the grip and the go – neither of which was hampered by the soggy roads.



Gina Purcell Oxford, UK

Model 911 SC Year 1982 Acquired April 2014 Model 964 Carrera 4 Year 1989 Acquired September 2004



With a heavy heart, I've had to postpone Steffi the SC's restoration work until the end of the year. The original plan was to have her back by

mid-April so I could get the maximum use over the summer to de-bug and prepare her for another trip into Europe.

I've recently bought another component from Classic Retrofit: their own replacement coil that compliments their CDI+ box and both fuse boards. Externally, it's identical to an original Bosch 'black' coil but made to work with the same efficiency as the twin-sparking CDI+ unit. This makes a clean-sweep of the entire ignition system since the breakdown. I plan to put many miles on the SC before the next driving holiday to ensure her total fitness for purpose. She'll go to restoration in October so the new paint will be spared the gravel-rash of Euro driving. I don't mind patina, but I'd like Steffi to retain what will be her asnew lustre for a little while at least.

Recently, it was my husband's birthday, so what better way to celebrate than a cross-country raid in Sabine, his



3.2 Carrera. It also served as a practice run to test some mapping software for the Garmin satnav for upcoming trips, with the route taking us from Oxford, through the Cotswolds and deep into Gloucestershire too. Fabulous 911 fun!

I've mentioned my parallel interest in aviation before, centred on the Allied and Axis military aircraft of both world wars, and in particular, the history and exploits of the Air Transport Auxiliary and its brave female contingent known as the 'ATA-girls'. The ATA was a civilian organisation tasked with delivery of new aircraft to squadrons and maintenance units and its pilots had to fly every aircraft type, unarmed and without radio. The ATA has a small museum in Maidenhead, where you can 'fly' their Spitfire simulator (it's great fun), and there are, at long last, memorials to the ATA across the land.



Sean Parr Harpenden, UK

🔘 @inveloveritas

Model 912 Year 1967 Acquired November 2014



The nicest thing about owning these lovely cars (aside from the sound) is the friends you make through Porsches. I was incredibly

lucky to meet a fantastic friend through the DDK forum, when Jonno asked if anyone wanted a stack of magazines and as he lived in Harpenden near me, it was churlish not to. We found we had more than magazines and Porsches in common – we have become best mates!

So, it was with absolute delight and pleasure that I opened my front door one Friday to Jonno in his beautifully restored 1966 SWB 911 after receiving it back from Fenn Lane that very morning after a more than two-year restoration. When he first got it, not long before we met, it was a very tired rally car, lovely to look at from 30 feet, but a bit iffy close up and very much so when sitting inside it, having it trying to kill you when it pulled manically from one side to the other! It was originally black, covered in stickers and pretty rough, but it was clearly a great basis for a 'proper' car, in fact so much so that I had tried to buy it originally only to be told that it had just been sold and collected an hour before. It's a small world.

Anyway, you may remember from my earlier articles on the 911 SC restoration, that Jonno recommended Fenn Lane to me for the fuel injection work that I had done and you may also remember that I



was incredibly impressed with their work. Well, I was impressed before but I was absolutely blown away by the work that they have done on Jonno's '66, it is a truly superb job.

It's a combination of terrific workmanship and Jonno's incredible eye for detail and great design capability that this car has turned out so incredibly well. He has taken it back to a quite original style, with a Sports Purpose twist, wooden dashboard, yet with a half roll cage, 100 litre petrol tank, shoulder harnesses and a few lovely lightweight touches. Fenn Lane have done a ton of work on it: engine rebuild, glass out respray and basically a magnificent full restoration, respray in Light ivory, it is utterly stunning. It's really nice to see the car, hear it in its full magnificence and see the beaming smile on my best mate after what has been, as is usually the case with restorations, a trying and



testing couple of years. Chris Flavell and his team, Jeff and Vince, have done an amazing job and after a terrific Sunday morning blast in the Chiltern Hills, it has some serious poke.

In short, a job well done by the Fenn Lane gang and Jonno for his incredible eye for detail and determination to get the job absolutely right. Outstanding; truly a brilliant car. I'm so incredibly pleased for Jonno.



Rob Clarke Bristol, UK

© @rob911\_ltl ∑ @Rob996LTL

Model 996.1 Carrera 4 Year 1999 Acquired February 2014 So at the end of last month I had dropped my car off at AVM for them to check it over after the main dealer giving me a list of things to check. I

of things to check. I gave them the brief 'would you drive this round a track fast as it is?' The answer: 'yeah when are we going?', so I took that to mean it was fine and all I needed to worry about was getting new plugs fitted. Fortunately, the guys at GSF parts were doing a 50 per cent discount weekend so I took the opportunity to buy some top spec plugs and coil packs. I figured if I am paying somebody to take the coil packs to fit the plugs, they might as well put new coil packs in. Since there was a choice of parts, I took advice and was told the best plugs that GSF sold were the Denso iridium core, so put six of those in my shopping basket along with some Beru coil packs.



The only surprise was that I thought plugs were a major service item? From looking at my service book they are, but according to Porsche, only every four years, and plugs are not included in the fixed price servicing that they offer for older cars. Either way the Denso plugs installed apparently are good for 120,000 miles, so they shouldn't need touching for a few years! While I was in the shopping mood, I also purchased an Air mass sensor from GSF at half price. This has not been fitted yet as I have a slight misfire when the car starts up when cold so the only suggestion the dealer had was that it could be the air mass sensor beginning to fail, so I have one ready in case it does. Time for a drive I think!



Richard Klevenhusen Rio de Janeiro, Brazil

Model 930 3.3 Vear 1979 Acquired May 2012

💟 @richardkle



We are experiencing a very strong economy crisis in Brazil, however Porsche is growing above 40 per cent in the local market.

Porsche Brazil has revealed that the goal is to raise the Brazilian market in the global ranking of the company. The first image that probably comes to the mind of the Brazilian when talking about Porsche is a super sports car, with a roaring engine and flashy colours.

However, the numbers show a slightly different reality. The biggest sales volume of the label is SUVs, the fastest growing category in the country, which is gaining new competitors every day, including in the luxury segment. In the case of Porsche, Cayenne is the brand's sales champion in the Brazilian market and does not leave for less than around US \$100,000 (tax included).

Sales volume in the country comes from the significant participation of Cayenne and Macan in the SUV segment. But the new launches of the different sports models are also contributing to



the good results of Porsche Brazil. In 2015, Porsche ended the year with stable sales in comparison to the previous period. Already in the accumulated period of January to September of 2016, the automaker obtained a growth of about 44 per cent.

Porsche started to have a subsidiary in Brazil in 2015. Until then, the brand's sales were made by the importer

Stuttgart Sportcar, which became a partner of the automaker. In the joint venture, Porsche has 75 per cent of the business and Stuttgart 25 per cent. Currently, Porsche has nine dealerships in the country. From 2017 on, the supply of genuine parts will be the responsibility of Porsche Brazil. There are exciting times ahead for the Porsche enthusiast in South America



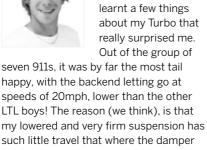
Joel Newman London, UK

Model 996 Turbo Year 2003 Acquired April 2014 This month's Car Limits day was an absolute riot, and I learnt a few things about my Turbo that really surprised me. Out of the group of

deal, but maybe there is something in that; I'd love to hear from any reader who knows if buying counterfeit premium tyres off sites like eBay is something one needs to be aware of?

Now while I appreciate I conducted myself like a raving lunatic throughout the day, I was also the only person who managed to destroy both rear tyres, which now have comical lumps of compound missing. Again is that down to 500+bhp or is it the physical make-up of each tyre? It pains me to say, but I'm pretty sure it was my driving, but its put the cat among the pigeons!

There is no good reason why I have not replaced my rears as of yet, bar the £600 bill I know is coming. Paying that means I've accepted my behaviour and moved on, but I haven't quite, because anyone who wilfully ruins but can't really afford to pay for two extremely expensive new tyres for the sake of some smokey skids, deserves everything he gets!



would normally absorb and compress during high-speed corner, mine remains pretty much flat and thus the momentum is carried more directly with a lower centre of gravity, translating into massive tail slides. It makes my car a lot of fun to drive, but there is cause for concern!

After the event, I also discussed with my buddy - who came along in my old LTL C4 (he let me have a go and even at 90mph, the back end was as stable was a rock) - why my car was slipping so much earlier than everyone else's and he suggested that perhaps my two rear tyres may be counterfeit?! Hmmm...

Now they look good to me and have all the right markings, but I did find them part-worn on eBay for £90 (they had 6mm of tread and the N rating). I laughed at the time because it was such a great



Michael Meldrum Houston Texas



Model 911T Targa Year 1972 Acquired 2013 Model 911E Year 1972 Acquired 2014 Model 930 Turbo 3.0 Year 1977 Acquired 2014 Model 930 Turbo 3.0 Year 1977 Acquired 2015

Model Carrera 3.0 Year 1977 Acquired 2016

Model 911 SC Year 1981 Acquired 2015

Model 3.2 Carrera Year 1986 Acquired 2015

Model Carrera M491 Year 1988 Acquired 2015

Model 993 C4S

Year 1996 Acquired 2016

Model 964 Carrera 4 Year 1994 Acquired 2016

Model 997.1 GT3 Year 2007 Acquired 2017



For us here in Texas, the opening event of the new driving season is the Hill Country Rallye. This year was the 16th event and my third

time attending. It is held in Kerrville, TX and is for vintage air-cooled Porsches through to 1989. This year there were 130 attendees, with people coming from Mexico, California, Florida and Seattle.

Folks start arriving on Thursday, with the driving events taking place on Friday and Saturday. It's is organised into different groups depending on whether you want 'spirited' driving or something a little more sedate.

I had taken two cars that were both just back from overhauls at Delaware based RS-Werks. It probably wasn't ideal, (some would say insane) to give them such rigorous shake downs for their first time out but both performed well.

On the Friday I opted for the 'long as hell' event. A 382-mile route around the county, taking in as many different styles of road surface as possible. It started at 7.30am in heavy rain, which took its toll for the first few hours. Fortunately, it cleared up and we could increase the pace. Lunch was an awesome Texas BBQ at Ziggy's, a roadside hole in the wall.



The afternoon was a bit of a disaster when one of the cars lost an alternator pulley. A few of us waited with the unfortunate car and driver for three hours for a tow truck. However, this was a good opportunity to meet new faces and spend time looking over cars.

Friday evening was spent at the car show at Comfort, TX. It's not your normal type of awards and polishing car show but more an opportunity to get everyone together, drink beer and talk all things Porsche – it's as good as the driving!

On Saturday, I opted for the 'are we lost' drive. A day spent navigating at speed through tight technical roads with everything from cattle grids to farm

animals. Our good deed for the day was rescuing a sheep stuck in a cattle grid.

My 1978 3.2 Gulf blue back-date was sporting new Michelin TB15 tyres that were incredibly grippy in the dry but threw up a lot of stones earning it the nickname 'Pebbles'. Sadly, a 1973 911 Targa was damaged when it went off the road and hit a tree. Fortunately, while shaken, the driver was fine.

Saturday night is a banquet to recognise the organisers and volunteers who make this event so special. It's one of my favourites of the year, and the organisers work hard to keep it special and not too big, so I may get in trouble for telling y'all about it!



Dana Pawlicki Maplewood, New Jersey

Model 993 Carrera Year 1995 Acquired May 2007 Model 991 Carrera S

Year 2013 Acquired March 2013

Model 930 3.3 Year 1986 Acquired April 2014

Model 964 Carrera Year 1994 Acquired June 2014

Model 930 Targa Year 1988 Acquired April 2015



snowstorm in the tri-state area kept my Porsches off the road a bit longer than I had hoped. That said. I did have

the opportunity to take out the 1986 930 for a spring shake-out on a local highway, which truly reminded me what an amazing machine it is.

A bit of background on my '86 930. I acquired the car three years ago from the owner of several motorcycle dealerships in Jacksonville, Florida. He was getting up in his years and cutting back on his 80-vehicle collection of cars and motorbikes. I had bought the car on eBay unseen with approximately 54,000 miles, subject to an inspection at the legendary Brumos Porsche Dealership. which happened to be right near one of his motorcycle dealerships. The car passed inspection with 'flying colours' (with the exception of a slight weep in the rear main seal), and someone at the dealership that day even offered to buy it from me for \$20,000 over what I had just paid for it, but I was not having it.

The history of the car is quite interesting. Before the owner I bought it from, it had been owned by a female doctor in California since new. Very unusual to hear about a female owning a 930, particularly in the 1980s. Here's where the story gets interesting. She was not happy with the turbo lag and handling, so spent a handsome sum of money at a renowned Porsche tuning shop, S-Car-Go Racing in San Rafael, California. to address these issues. To address the power issues, they ported the cylinder heads, knife-edged the crank and lightened the rods, balanced the crankshaft, modified the case and put in an SSI exhaust system. To address the handling new shocks, spacers and X-braces where installed along with lowering the car.

The result is purely shocking. particularly in comparison to my stock 1988 930 Targa. It is one of the fastest cars I have ever driven (except my modified 2008 996 GT2 of course!) A friend who was driving behind me exclaimed when the boost hits, the car sounds like "Hell's Vacuum!" Until Llet him drive it and heard it myself from the



other car, I had no idea just how violent it was! As for the ride, it's not the most 'compliant', but handles extremely well.

The only change I have made to the car was having a set of 15-inch BBS RS racing wheels refinished in black and mounted them with Lamborghini Countach Pirelli's, which they continue to do a run of each year. No loss of traction!

I'm going to take it in to a local specialist shop (Protosport) in a few weeks to have it serviced and finally address the rear main seal leak. which I have just monitored for the last three years. I've had people tell me to do it, and others tell me it's not that bad and it could leak like that one winter after doing it but after three years, it's time.

## New EBS website means...





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# **PREMIER** PORSCHE Everything you need for your 911

## **Data file** ratings and market values of every 911

Full specs, ratings and market values of every 911 GT3 generation can be found beginning on page 90



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# FINDING YOUR LIMIT

Want to learn how to drive your Porsche properly? Total 911's Living The Legend UK fraternity descended on Car Limits to take part in an Advanced Driver Airfield Training Day. God help them...

Written by Joel Newman Photography by Chris Wallbank

ar Limits is a business that should be on your radar, offering driver training for all skill sets in a bid to help you improve technique and subsequently get more performance and enjoyment from any vehicle, safely. Based at North Weald Airfield in Essex, it's really easy to get to (being just off the bottom of the MII) and offers wide open tarmac and lots of run-offs to play with. It's a good thing as you can be sure you won't run into danger, even if you do run out of talent – which you will!

The company was formed in 1998 by ex-Benetton Fl test driver, Formula Renault and Formula Ford Champion, Andrew Walsh. Andy realised there were a lot of people out there who had very fast cars and no idea what to do with them. He decided his mission should be to change all that. His ethos is simple. Take you and your car to the boundaries of what you think you are capable of, and then charge right through them. The purpose behind it is even simpler – there are too many people out having to hang their heads and quietly weep as their beloved (and usually quite new) motor is dragged out of a lamppost, hedge or ditch because they lost control through a corner and didn't know what to do. Andy just didn't feel that was right and knew his 25-plus years of racing experience could be used to help educate drivers and improve the safety and gratification for owners of all vehicles.

Today then, we've brought along pretty much the entire UK-based Living The Legend squadron to a Car Limits Airfield Driver Training Day to take part in the structured course aimed at improving our on-thelimit driving abilities. The plan was simple: to push our cars and our skillset beyond our comfort zone and experience how Car Limits can improve us.

Mark Robins was our instructor for the day, a man who's been with the firm for over seven years, helping thousands of drivers perfect their approach to performance driving. With coffees brewed, our briefing explained what the day would entail and we discussed the areas of driving that we wanted to concentrate and improve upon as a group. Then it was time to buckle up!

It's fair to say that most Porsche owners rarely touch the true performance potential of their special vehicles. After all, a unique car such as the 9ll is one that takes a great deal of time, skill and an understanding to get the best from, and one that's admittedly more capable than 99 per cent of the drivers that take its helm.

TGC 336E





Top A Car Limits tuition day is usually limited to a maximum of four cars to ensure lengthy driving time for all **Clockwise from above right** There are numerous car control techniques you're likely to pick up on a driving day, making you and your 911 faster but also safer











Above Expect to put your tyres through their paces on a Car Limits driving day, ever a sign that fun was had at the wheel

## **Company profile**

Founder: Andrew Walsh First opened: 1998 Location: Various locations including North Weald, Essex; Llandow, Glamorgan; Blyton, Lincolnshire

## "If you love your 911 and have a thirst for improving your driving skill there's no better investment"

Unlike many driver courses, we spent the entire day in our respective 9lls as Car Limits firmly believes in seat time over theory in the classroom. As such, we went through six different driving techniques including applying varying levels of braking power, keeping off the clutch and 'bleeding' the brakes. We got to grips with steering and steering feel, learned to balance the car and trail the throttle, got the hang of left foot braking, weight transfer and the logistics involved with setting oneself up for a corner, from when and how to change gear to steering input and when to introduce the power.

As a group, however, we all seemed to get very attached to the High Speed Bend, a literal 90 degree turn onto an open expanse of concrete with a 'virtual wall', which is actually a metal gutter that runs perpendicular to the run up – something you can't actually hit in other words!

We began at 65mph with instructor Mark in the passenger seat, but try as we might, we either careered right through it or span spectacularly. It sounds easy, it wasn't. As I pirouetted in a cloud of smoke, Mark explained I was gripping the wheel too hard and fighting the car. "Let it do the work," he explained, "loosen your grip, and get off the throttle!" In the end, one finger was enough to not only guide the car, but to 'feel' and react to the way it moved.

Fundamentally, one must remain calm and in control, which is not something you would ever do if this happened on the road. After an hour or so of practice, during which our 911s were streaming smoke from the rear tyres and we were looking out the side window half the time, we all got the hang of it, or at least managed to control the madness a little better! As we began to understand what the chassis wanted to do before it did it, we were able to get ever closer to the 'right' side of the wall, even as speeds crept up to 90mph for some!

Small changes started to add up quickly and after lunch we drove around a tight coned course to get to grips with understeer and put into practice the techniques we'd learnt to reduce it; the less is more approach resulted in a tighter turn and more traction when you got back on the throttle.

One thing that's worth mentioning is that Car Limits days is usually run with a maximum of four cars and four drivers; two cars and two drivers; or two drivers in one car! Today, however, we made life difficult and brought seven Porsches and seven drivers (I didn't mention that to them beforehand and accept responsibility for that – sorry Mark!).

If you love your 911 and have a thirst for improving your driving skill knowledge, there's no better investment that you can make in our book. One thing we can attest to is that not only will you experience what your car is capable of, but you'll understand the invaluable clues your car gives that hint you're getting closer to its limits, and that may just save your life. I am not sure why this sort of training isn't compulsory for all drivers, because being able to make mistakes in safety are essential ingredients for improvement.

As a group, we spent pretty much the entire day in fits of laughter, watching 9lls spin, drift and grip but this laughter did nothing to hide the fact we were all learning and the fact we all had far more to learn than we first thought. More than speed or technique, Car Limits helps you and your machine work together. You'll be faster, you'll be more confident and you'll have a cracking time. Forget tuning your Porsche, nothing but nothing will make you a faster and more proficient driver than a day with Andy, Mark and the team. T9ll LTL certified.



# RSJ Sports Cars Specialising in Porsche Cars

(997) "45" 3.8 "Gen 2" PDK (60 - 2010)

(997) "25" 3.8 "Gen 2" PDK (08 - 2008)

(997) \*45" 3.8 Tip Cab (07 - 2007)

er with Black Leath

(997) "25" 3.8 Tip (07 · 2007)

(997) "25" 3.8 Tip (57 - 2007)

Red with Black Leather

Meteor Grey with Grey Leather,

with Black Leather

£47,000

£40,000

£36,000

£33,000

£33,000

£30,000

Black with Black Leather,

57k miles..

Body

GT S

40k miles....

49k miles.

50k miles





te with Black Leather, 35k miles.. £36,000



Silver with Black Leather. £34,000



with Grey Leather, £33,000



Cobalt Blue with Grey Leather, 55k miles £33,000



Porsche Boxster "S" 3.4 PDK (12 - 2012) Platinum Silver with Black Leather 33k miles.. 



(997) "25" 3.8 "Gen 2" PDK (10 - 2010) White with Black Leather, 37k miles. £49,000



54k miles. £44.000

(997) Turbo 3.6 Tip (08 - 2008)

(997) "45" 3.8 Tip Cab (06 - 2006)

Atlas Grey with Grey Leather,

(997) \*25" 3.8 (08 - 2008)

Meteor Grey with Grey Leather

(997) "25" 3.8 (06 - 2006)

Seal Grey with Black Leather 45k miles.....

(997) "25" 3.8 Tip (56 - 2006)

Midnight Blue with Grey Leather, 62k miles.

(996) Turbo 3.6 Tip (53 - 200

Silver with Black Leat

49kmiles.

£55,000

£34.000

£33,000

£31,000

£28,000

£45,000

GT Silver with Grey Leather,

35k miles.

38k miles



(997) "25" 3.8 "Gen 2" PDK (10 - 2010) alt Black with Black Leather, 31k miles. £49,000



Basalt Black with Black Leather 51k miles... £43,000



(997) Turbo 3.6 Tip (07 - 2007) GT Silver with Black Leather, ook miles. £48,000



Basalt Black with Black Leather, 54k miles £33,000



(997) "25" 3.8 Tip (07 - 2007) Silver with Black Leather 43k miles £33,000



(997) "25" 3.8 (05 - 2005) Silver with Terracotta Leather 52k miles. £30,000



Agate Grey with Black Leather, 31k miles. £43,000





(997) "45" 3.8 Tip (56 - 2006)

62k miles.

alt Black with Black Leather



58k miles. £23,000



(997) "45" 3.8 "Gen 2" PDK (58 - 2008) or Grey with Black Leather, 40k miles. £46,000



(997) "25" 3.8 (07 - 2007) ith Black Leathe 34k miles.... £35,000



GT Silver with Black Leather, 55k miles. £33,000



(997) "2S" 3.8 Tip (08 - 2008) Silver with Black Leather £33,000



53k miles. £28,000



Red with Black Leather, 24k miles £36,000



STS House, Bristol Way Slough, Berkshire, SL1 3QE T: 01753 553 969 www.rsjsportscars.com

PORSCHES WANTED (2003 TO 2014)

# Jata Definitive facts and figures for every 911 model from 1964 to the present day



911s in the data file are organised in rows according to release date, beginning with the very first model in 1964. Many models were available in Coupe, Targa and Cabriolet forms, with the option of automatic transmission. Here, data has been provided from the Coupe variants unless stated. All data here has been compiled, where possible, from Porsche's own figures.



model's used value compared to the previous financial guarter. The review for O3 will be July 2017. The review for 2017 Q1 was April.



Ratings Each model is rated out of five in our half-star system according to their performance, handling, appearance and desirability.







911S 1969-71 di

An upgrade in engine size gave the 911S 180bhp. Unlike the 911E, the S didn't gain improved low-down power and torque, so you had to keep the revs up for grand power ood po

Production numbe	rs 4,691
Issue featured	120
Engine capacity	2,195cc
Compression ratio	9.8:1
Maximum power	183hp @ 6,500rpm
Maximum torque	199Nm @ 5,200rpm
0-62mph	6.6sec
Top speed	145mph
Length	4,163mm
Width	1,610mm
Weight	1,020kg
Wheels & tyres	
F 6x15-inch; 185HR	
P 6v15-inch: 185HP	

(C & D series) +++ Production num 911T gine capacit 1969-71 Compression ration Like the E, the 911T's Maximum power

torque curve was flatter,

drivable. Ventilated discs

and a five-speed gearbox became standard

making the car more

from the S were fitted

15.082 8.6:1 127hp @ 5,800rpm Maximum torque 169Nm @ 4,200rpm 7.0sec (est) 127mph 1,610r Weight Wheels & tyres F 5.5x15-inch; 165HR R 5.5x15-inch; 165HR 1,020kg

Updated version of the 1973 2.7 RS, complete with impact bumpers and Turbo-spec bumpers and Turbo-spec whaletail rear wing. Steel arch added by hand at the factory, with 917 brakes.

Maximum power 233hp @ 6,200rpm

Maximum torque 275Nm @ 5,000rpm

109

8.5:1

5.3sec

152mph 4,135mm

1,680mm

ould go Group

109

2,994cc

259hp @ 7,000rpm

torque 250Nm @ 6,500rpm

10.3:1

4.9sec

153mph

4,235mm

1,775mm

940kg

so that Porsche could go Grou B rallying. Six Rothmans cars

basis in 930's crankcase.

sion rati

Production numbers

Issue featured

Engine capacity

used fibre glass front wings and lid. Tuned 3.0-litre engine had its

900kg

2,994cc

Production number

Compression ratio

Weight Wheels & tyres F 8x15-inch; 215/60/VR15 R 9x15-inch; 235/60/VR15

SC RS 1984

Issue featured Engine capacity

0-62mph

Top speed Length

G. H. I. J s Carrera 3.0 RS 1974



\*\*\*\*\* 911T 1973 US-bound Fseries 911Ts were the first 911s to have Bosch K-Jetronic fuel injection, improving emissions. This was mainly mechanical, with

Production n 16 933 2.341cc Engine capacity Compression ratio 7.5:1 132hp @ 5,600rpm Maximum power Maximum torque 197Nm @ 4,000rpm 0-62mph 76se Top speed Length 128mph 4,163mm Width 1,610mm Weight Wheels & tyres F 5.5x15-inch; 165HR R 5.5x15-inch; 165HF 1.077kg



some electronic sensors.

arger engine resulted in extra )bhp, and an intercooler on top of the engine led to the adoption of a 'teatray'. Brakes were upgraded from 917 racer Production numbers 5,807 (plus '78-'79 Issue f Engine Compr Maxim Maxim 0-62m Top sp Length Width

	Cali cars)
Issue featured	116
Engine capacity	3.299cc
<b>Compression ratio</b>	7.0:1
Maximum power	304hp @ 5,500rpm
Maximum torque	412Nm @ 4,000rpm
0-62mph	5.4sec
Top speed	160mph
Length	4,291mm
Width	1,775mm
Weight	1,300kg
Wheels & tyres	
F 7x16-inch; 205/55	5/VR16
R 8x16-inch; 225/50	)/VR16



From 1978, the SC was t only normally aspira veloped from the Carrera 3.0, but produced less power Upgraded Sport options. Production numbers 60,740 127



141/146mph Top speed Length 4,291mm Width 1,626mm Weight 1,160kg (1978) Wheels & tyres F 6x15-inch; 185/70/VR15 R 7x15-inch; 215/60/VR15



Top speed

Width



and the range expanded: the 911L (Lux) was standard and sat alongside the high-performance 911S and entry-level 911T

entry level 5111.	
Production number	rs 1,603
Issue featured	138
Engine capacity	1,991cc
<b>Compression ratio</b>	9.0:1
Maximum power	132hp @ 6,100rpm
Maximum torque	173Nm @ 4,600rpm
0-62mph	8.4sec
Top speed	132mph
Length	4,163mm
Width	1,610mm
Weight	1,080kg
Wheels & tyres	
F 5.5x15-inch; 185HF	2
R 5.5x15-inch; 185HF	2



To save money, the 911T's engine used cast-iron cylinder heads, unlike the Biral aluminium/iron items, which gave more efficient cooling, and carbs instead of fuel injection.





Engine capacity

Maximum power

Maximum torque

Weight Weels & tyres

F 5.5x15-inch; 185HR R 5.5x15-inch; 185HR

0-62mph

Top sp

Length

compression ratio

### **911E**

1968-69 The 911 received its first major update, evolving into what is known as the B series. The 911E replaced the 911L as the 'standard' car. The 'E' stood for 'Einspritz' (injection)





Like the E, the S gained a fuel injection, boosting power to 170bhp. To help cope with the extra demands on the engine, an additional oil cooler was fitted in the front right wing. 2,106

	Production number	rs 2,106
	Issue featured	n/a
	Engine capacity	1,991cc
	Compression ratio	9.1:1
	Maximum power	172hp @ 6,800rpm
	Maximum torque	183Nm @ 5,500rpm
	0-62mph	7.0sec (est)
	Top speed	140mph
	Length	4,163mm
	Width	1,610mm
	Weight	995kg
	Wheels & tyres	
	F 6x15-inch; 185/70.	/R15
1	R 6x15-inch; 185/70	/R15



### **911E** 1969-71

**Engine improvements** included revised cylinder heads, larger valves and stronger con rods. The 1970 'D' series cars had hot-zinc coated undersides.

Production numbers	4,927
Issue featured	107
Engine capacity	2,195cc
Compression ratio	9.1:1
Maximum power	157hp @ 6,200rpm
Maximum torque	196Nm @ 4,500rpm
0-62mph	7.0sec
Top speed	137mph
Length	4,163mm
Width	1,610mm
Weight	1,020kg
Wheels & tyres	
F 6x15-inch; 185HR	
R 6x15-inch; 185HR	



2.341cc was achieved by increasing the stroke from 66mm to 70.4mm while at the same time leaving the bore unchanged. The new 915 transmission was stronger.

a anormooren ao oa ongor.		
Production numbe	rs 4,406	
Issue featured	117	
Engine capacity	2,341cc	
<b>Compression ratio</b>	8.0:1	
Maximum power	167hp @ 6,200rpm	
Maximum torque	206Nm @ 4,500rpm	
0-62mph	7.5sec	
Top speed	137mph	
Length	4,163mm	
Width	1,610mm	
Weight	1,077kg	
Wheels & tyres		
F 6x15-inch; 185HR		
R 6x15-inch; 185HR		



2,341cc 7.5:1 Maximum power 132hp @ 5,600rpm Maximum torque 197Nm @ 4,000rpm 0-62mph 7.6sec Top speed 128mph 4.163mm 1,610mm 1,077kg Weight Wheels & tyres F 5.5x15-inch; 165HR R 5 5x15-inch: 165HR



A 2.4-litre engine increased torque. The mostly chrome brightwork had a black decklid grille with a '2.4' badge. Externa oil filler on right rear wing confused some. Production numbers 5.054 ue featu

2.341cc 8.5:1 gine capacity Compression ratio cimum power 193hp @ 6,500rpm mum torque 211Nm @ 5,200rpm 0-62mph 6.6sec Top speed 140mph 4.163mm 1.610mm 1.077kg Weight Wheels & tyres F 6x15-inch; 185/70/R15 R 6x15-inch: 185/70/R15



flared rear arches and an Weight Wheels & tyres F 6x15-inch; 185/70/R15 R 7x15-inch; 215/60/R15 optional ducktail. Sport



After incidents of people filling E series 911s with petrol via the external oil-filler, the filler returned to under the engine decklid. Fitted with the front



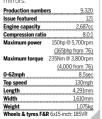


upgrades as the 911E, including deletion of the external oil filler. It also adopted black trim around the front and rear lights and black front quarter grilles.

Production number	rs 5.054
Issue featured	120
Engine capacity	2,341cc
<b>Compression ratio</b>	8.5:1
Maximum power	193hp @ 6,500rpm
Maximum torque	211Nm @ 5,200rpm
0-62mph	6.6sec
Top speed	140mph
Length	4,163mm
Width	1,610mm
Weight	1,075kg
Wheels & tyres	
F 6x15-inch; 185/70/	/R15
R 6x15-inch; 185/70.	/R15



911' was now the entry level. Bumpers were added to conform to US regs. From 1976, all 911s were hot-dip coated and fitted with 'elephant ear mirrors.





E9II SBU

11,135

3,299c

5.4sec 161mph

4,291mm

1,775mm

304hp @ 5,500rpm

432Nm @ 4,000rpn

1,300kg (1,335kg from '86)

144

7.0:1

Production numbers

Issue featured

Engine capacity

Maximum power

Top speed

Length

Width

Weight

**Compression ratio** 

ximum torque

Wheels & tyres F 7x16-inch; 205/55/VR16 R 8x16-inch; 225/50/VR16

(G, H, I, J series) \*\*\*

**911S** 1974-77

Width

\*\*\*\*\*

930 3.3

1984-89

Revised engine added

while in 1987 Motronic

improved efficiency and

emissions upon its return

engine management

to the US market.

power and torque in 1984,





(G & H series) + Pro Engi Con Max Max 911 Carrera 2.7 1974-76

0-6

## From 1974, Carrera name was given to range-

topping 911. Essentially the Top Leng same engine as previous Wid Weiş Whe year's RS for all markets except USA. Whaletail F6x R7x available from 1975.

	1.1
duction numbers	1,667
ue featured	134
ine capacity 2	.687cc
npression ratio	8.5:1
kimum power 213hp @ 6,3	00rpm
kimum torque 255Nm @ 5,1	00rpm
2mph	6.3sec
speed 1	48mph
gth 4,2	291mm
lth 1,6	610mm
ght 1	.075kg
eels & tyres	
15-inch; 185VR	
d5-inch; 205VR	1

Slantnosed and based on 935 race cars, with pop-up headlamps. Front spoiler made

deeper to accommodate extra oil cooler, rear intakes fed air

to brakes.

Issue featured

Engine capacity

Top speed

Length

Width

Weight

Production numbers

sion ratio

Wheels & tyres F 7x16-inch; 205/55/VR16

R 9x16-inch; 245/45/VR16

\*\*\*\*

50 (UK only)

335hp @ 5.500rpn

m torque 432Nm @ 4,000rpm

3,299c

4.6sec

173mph

4,291mm

1,775mm

1,335kg

146

7.0:1

and Touring available.



3.0 was basically the same model as the previous Carrera only fitted with a new 2,994cc engine, essentially from the 911 Turbo.

Production number	rs 3,687
Issue featured	148
Engine capacity	2,994cc
Compression ratio	8.5:1
Maximum power	200hp @ 6,000rpm
Maximum torque	255Nm @ 4,200rpm
0-62mph	6.3sec
Top speed	145mph
Length	4,291mm
Width	1,610mm
Weight	1,093kg
Wheels & tyres	

F 6x15-inch; 185/70/VR15 R 7x15-inch; 215/60/VR15



and four-speed gearbox

were standard.

050	Issue featured
959	Engine capacity
1986-1988	Compression ratio
10001000	Maximum power 45
Had tech later used on	Maximum torque 50
911s including 4WD,	0-60mph
ABS and twin turbos. A	Top speed
	Length
959S was also available,	Width
featuring lighter cloth	Weight
Sport seats, five-point harnesses and a roll cage.	Wheels & tyres F 8x17-inch; 235/45/ZR17 R 9x17-inch; 255/40/ZR17

	TINP 300R	
*****	Production numbers	2,850
930 3.0	Issue featured	144
	Engine capacity	2,994cc
1975-77	Compression ratio	6.5:1
Fitted with a KKK turbo.	Maximum power	264hp @ 5,500rpm
	Maximum torque	343Nm @ 4,000rpm
this was the world's first	0-62mph	5.5sec
production Porsche to	Top speed	155mph
	Length	4,291mm
be turbocharged. Flared	Width	1 775mm



Carrera 3.2 with a steeply rak windscreen and hood and stripped interior. Porsche clai the hood was not designed to be 100 per cent watertight.

Production numbers 2.274 (for both wide and narrow-bodied) Issue featured 128

Engine capacity	3,10400
Compression ratio	<b>)</b> 10.3:1
Maximum power	235hp @ 5,900rpm
Maximum torque	284Nm @ 4,800rpm
0-60mph	6.0sec
Top speed	148mph
Length	4,291mm
Width	1,775mm
Weight	1,220kg
Wheels & tyres	
F 6x16-inch; 205/4	5/VR16
R 8x16-inch; 245/6	0/VR16

4,260mm

1,840mm

1,450kg

Almost the same galvanised body as the SC. Engine was claimed to be 80 per cent new, and the first production 911 to feature an ECU to control ionition each cal a seture. 70,044 148

Compression ratio 10.3:1 234hp @ 5,900rpm num torque 284Nm @ 4,800rpm 5.6sec Top speed 152mph Length 4,291mm Width 1,652mm 1.210kg Weight Wheels & tyres F 7x15-inch; 195/65/VR15 R 8x15-inch; 215/60/VR15 (16" for '89)



ignition and fuel systems. Production numbers **Issue** featured Engine capacity 3,164cc



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coll-spring suspension and four-wheel-drive marked this radical overhaul of the "87 per cent new" 911.

Production numbe	rs 13,353 (Coupe)
Issue featured	111
Engine capacity	3.600cc
<b>Compression ratio</b>	11.3:1
Maximum power	254hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.7sec
Top speed	162mph
Length	4,250mm
Width	1,652mm
Weight	1,450kg
Wheels & tyres	
F 6x16-inch; 205/55	/ZR16
<b>D</b> 8v16-inch: 225/50	V7P16

Rear-drive Carrera 2 offered an Rear-drive Carrera 2 offered an emphatically more traditional 911 experience, and was 100kg lighter, but looked identical to the Carrera 4. Tiptronic was a new option. Production numbers 19,484 119 3.600cc Engine capacity **Compression ratio** 11.3:1 254hp @ 6,100rpm Maximum power Maximum torque 310Nm @ 4,800rpm 0-62mph 5.6se 162mph 4,250mm Top speed Length 1,652mm Weight Wheels & tyres 1,350kg F 6x16-inch; 205/55/ZR16 R 8x16-inch; 225/50/ZR16

964 Carrera 2 1990-93



Compression ratio

Maximum power

0-62m

Length

Weight

Aaximum torque

## 1991-92

This used the revised 964 bodyshell, extended arches and 'teatray' wing. The engine was essentially the 3.3-litre unit from the previous model, but updated.

\*\*\*\*

	0	964 Leichtba of surplus pa Paris-Dakar include four- differential, s and stripped
luction number	<b>s</b> 3.66	0 Production nur
e featured	11	6 Issue featured
ne capacity	3,2990	Engine capacit
pression ratio	7.0	1 Compression r
imum power	324hp @ 5,750rpr	m Maximum powe
imum torque	450Nm @ 4,500rpr	m Maximum torq
2mph	5.4se	c 0-62mph
speed	168mp	h Top speed
gth	4,250mr	n Length
th	1,775mr	m Width
ght	1,470k	g Weight
els & tyres 17-inch; 205/50/	/ZR17	Wheels & tyres F 7x16-inch; 205
17-inch; 255/40/		R 9x16-inch; 245

## \*\*\*\* 964 C4 Lightweight 1991

arts from 953 arts from 953 project. Highlights -way adjustable short-ratio gearbox dinterior

	Production numbe	rs 22
	Issue featured	131
	Engine capacity	3,600cc
	Compression ratio	11.3:1
	Maximum power	269hp @ 6,720rpm
	Maximum torque	304Nm @ 6,720rpm
	0-62mph	4.5sec
	Top speed	125mph
	Length	4,275mm
	Width	1,652mm
	Weight	1,100kg
	Wheels & tyres	
	F 7x16-inch; 205/55	
4	R 9x16-inch; 245/55	5/ZR16



### 964 RS 1991-92

120kg saved by deleting 'luxuries' and fitting magnesium Cup wheels. Power was boosted by 10bhp, suspension lowered by 40mm and uprated, as were brakes.

993 Carrera 1993-97

Restyled bodywork had swept-

back headlamps, curvaceous wings and blended-in bumpers.

The 3,600cc engine was revised, with VarioRam available

Maximum power 276hp @ 6,000rpm

Maximum torque 330Nm @ 5,000rpm

from 1996

0-62mph

Top speed

Production number

ue featured

Issue featured Engine capacity Compression ratio

701

\*\*\*\*\*

38.626

11.3:1

5.6sec

168mph

4,245mm 1,735mm

1,370kg

3.60



993 Carrera 4 1994-97

As per the 993-model Carrera.

weight of the previous Carrera 4 and was designed to give a more rear-drive feel.

Maximum power 276hp @ 6,000rpm

Maximum torque 330Nm @ 5,000rpm

but with four-wheel-drive

Transmission was half the

Production numbers

ue featu

0-62mph

Top spe

Engine capacity Compression ratio

++++

2.884 (Coupe)

3,600cc

11.3:1

5.8sec

166mph

4,245mm 1,735mm 1,420kg



Combined the 964 bodyshell with the hood and windscreen of the Carrera 3.2 Speedster, plus RS interior. It is thought Porsche planned to build 3,000, but demand fell.

Issue featured	128
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	254hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.5sec
Top speed	161mph
Length	4,250mm
Width	1,652mm
Weight	1,340kg
Wheels & tyres	
F 7x17-inch; 205/50	)/ZR17
R 9x17-inch: 255/40	)/ZR17

993 GT2 1995-96

911 Turbo, but with reduced

equipment. Also included rear

wheel-drive, making it a better

extensions Production numbers

lssue featured Engine capacity

0-62mph

Length

Width

Top speed

Weight Wheels & tyres

F 9x18-inch; 235/40/ZR18 R 11x18-inch; 285/35/ZR18

996 Carrera 4S

Basically a C4 featuring a

Turbo bodyshell, without

rear air intakes but with

a full-width rear reflector

brakes were similar to the

panel. Suspension and

2001-05

Turbo spec.

Compression ratio

\*\*\*\*\*



Width

Production numbers Issue featured Engine capacity 3.600cc 7.5:1 Compression ratio Maximum power 365hp @ 5,500rpm Maximum torque 520Nm @ 4,200rpm 0-62mph 4.8sec Top speed 174mph 4.250mm 1,470kg Weight Wheels & tyres F 8x18-inch; 225/40/ZR18 R 10x18-inch; 265/35/ZR18

\*\*\*\*\*



964 Anniversary 1993-94

112 3.600cc gine capa 11.3:1 Compression ratio cimum power 254hp @ 6,100rpm mum torque 310Nm @ 4,800rpm 0-62mph 5.7sec Top speed 162mph 4,250mm 1,75mm 1,470kg Weight Wheels & tyres F 7x17-inch; 205/50/17 R 9x17-inch; 255/40/17





The final hurrah for the last air-cooled 911. With 450bhp for UK models, it was the fastest and most luxurious road-going model Stuttgart had ever produced. Manual only.

Production number	ers 345
Issue featured	115
Engine capacity	3,600cc
Compression ratio	8.0:1
Maximum power	456hp @ 5,750rpm
Maximum torque	585Nm @ 4,500rpm
0-62mph	4.1sec
Top speed	186mph
Length	4,245mm
Width	1,795mm
Weight	1,583kg
Wheels & tyres	

F 8x18-inch; 225/40/18 R 10x18-inch; 285/30/18



10,386

3,596c

107

11.3:1

177mph

4,430mm

1,770mm

1,430kg

### \*\*\* 996 Carrera 1998-2001 An all-new 911 with larger,

restyled bodywork and a water-cooled engine. Interior was redesigned in order to enable better ergonomic efficiency and more room.





and chrome Carrera wheels. Powerkit, -10mm sports suspension and mechanical

LSD standard.	
Production number	rs 1,963
Issue featured	112
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	350hp @ 6,800rpm
Maximum torque	370Nm @ 4,800rpm
0-62mph	4.9sec
Top speed	175mph
Length	4,430mm
Width	1,770mm
Weight	1,370kg
Wheels & tyres	
F 8x18-inch; 225/40	)/R18
R 10x18-inch: 285/3	30/R18



F 8x18-inch; 225/40/ZR18 R 10x18-inch; 285/30/ZR18

Production numbers

Issue featured

Engine capacity

Maximum po

Top speed

Length

Width

Weight Wheels

**Compression** ratio

aximum tor

els & tyres

/40/R18 F 8x18-inch; 225/40/R18 R 11x18-inch; 295/30/R18 23,055

3,596c

324hp @ 6,800rpm

370Nm @ 4 250rnn

124

11.3:1

174mph

4,435mm

1,830mm

1,495kg

993 Turbo 1996-98



### 993 Carrera S 1997-98 The features that come

with the Carrera S are similar to the Carrera 4S's. only this time in rear-wheel drive. Sought after for its superb handling and widebody looks.

roduction numbers	3,714
sue featured	118
ngine capacity	3,600cc
ompression ratio	11.3:1
laximum power	289hp @ 6,100rpm
laximum torque	340Nm @ 5,250rpm
-62mph	5.4sec
op speed	168mph
ength	4,245mm
/idth	1,795mm
/eight	1,450kg
/heels & tyres	
8x18-inch; 225/40/Z	
10x18-inch; 285/30/	ZR18



A lightweight, Turbo-bodied 996 with uprated turbocharged engine and suspension. PCCB was standard. Revised ECU later gave an extra 21bhp. Production numbers Issue featured 3,600cc Engine capacity Compression ratio

196m
4.450n
1.830n
1.440



1,287 127 468hp @ 5,700rpm 620Nm @ 3,500-9.4:1 4,500rpm 4.1sec nph mm Okg



Facelifted with Turbo-style headlamps and revised front and rear bumpers, fitted with more powerful 3.6-litre engine and VarioCam Plus. Manual and Turbersite heaven under the d Tiptronic 'boxes updated. Production numbers 29,389 Issue featured 136 Engine capacity 3.596c 11.3:1 sion ratio 324hp @ 6.800rpm



R 9x17-inch; 255/40/R1



the all-wheel-drive version Length drives very much like Width its rear-driven brethren. Weight Wheels & tyres F 7x17-inch; 205/50/R17 R 9x17-inch; 255/40/R17 Cabin received minor updates over Gen1.

## **Sales debate** Will the normally-aspirated 991.1 appreciate in value?



Make no mistake, the second generation 991 is a devastatingly capable sports car, but the switch to turbocharged engines hasn't been met with universal approval. In fact, there are plenty of neunelfer enthusiasts that mourn the loss of normal aspiration, which begs a couple of questions. Will the lack of turbochargers benefit values of those first-gen models in the longer term, and what will happen in the meantime?

Sales expert at Paragon Porsche, Jason Shepherd, is first to give his views by sounding a note of caution. "Obviously there's a lot happening both politically and economically at the moment, so the first thing I'd say is that the UK market is increasingly hard to predict. But despite that, I think the outlook for the first generation 991 is reasonably clear at present in that I'd expect values to continue a gentle downward trend for the next couple of years." It's a view echoed by Porsche Bournemouth's Karl Meyer who expects slow depreciation over the next 18 months to two years, although there is a caveat to that as he explained: "What we've seen with models like the first-gen 991 GTS is a strengthening in values and a notable increase in demand, and it's reasonable to expect that will filter down to the Carrera and Carrera Sover time. However, the rate of depreciation is going to be influenced by the presence of a high specification and low mileage, so it's examples meeting that criteria that will perform best in my view."

Jason was also quick to mention the appeal of the GTS, while noting that the Targa is likely to do well in future. However, he adds that, "the impressive abilities of the second generation 991 may act to limit the effect on values, in that there's not a huge gulf between the turbocharged and normally-aspirated cars. And certainly not the difference you see between the four- and six-cylinder Boxster, which has proved more divisive for buyers."

Both of our experts agree on some further depreciation, then, which leaves us to tackle the question of where things are heading longer term. The 991.1 is always going to find favour reckons Meyer: "While the current generation is undoubtedly proving popular, there's certainly a view out there that it's the earlier generation that is preferred by the purist, and in the long term that's something that's going to matter when it comes to values. As I said earlier, specification and mileage will be important factors but, yes, I think we'll see prices for Carrera and S models remaining strong a few years from now." It's over to Jason Shepherd for the last word, and he can see a similarly positive outlook: "Although the turbocharged cars are terrific, I think Karl makes a good point about the purist appeal of normal aspiration, and that alone should keep prices buoyant a few years down the line. By how much is almost impossible to say at this stage, but I'd say that owners of the best 991.1 examples won't be disappointed."





### \*\*\*\*\* 997 Carrera 2004-08

Fully revised Porsche 911 with 993-influenced bodywork and a new interior. Engine was like 996, but refined for more power. Six-speed Tiptronic option available.

roduction numbers	25,788
ssue featured	112
ngine capacity	3,596cc
ompression ratio	11.3:1
laximum power	330hp @ 6,800rpm
laximum torque	370Nm @ 4,250rpm
-62mph	5.0sec
op speed	177mph
ength	4,427mm
Vidth	1,808mm
Veight	1,395kg
Vheels & tyres	
8x18-inch; 235/40/R	18
10x18-inch; 265/40/F	218

7 Carrera S 2004-08
per the 997 Carrera, but with

99

- , ule 99/ Carrera, but with more powerful 3.8-litre engine and PASM. 19-inch wheels as standard, with bigger ventilated brakes. Featured quad exhaust tailpipes.

Production number	rs 41,059
Issue featured	107
Engine capacity	3,824cc
Compression ratio	11.8:1
Maximum power	360hp @ 6,600rpm
Maximum torque	400Nm @ 4,600rpm
0-62mph	4.8sec
Top speed	182mph
Length	4,427mm
Width	1,808mm
Weight	1,420kg
Wheels & tyres	
F 8x19-inch; 235/35	5/R19
R11x19-inch; 295/3	0/R19



roduction numbers	2,378
ssue featured	117
ingine capacity	3,600cc
compression ratio	12.0:1
Aaximum power	421hp @ 7,600rpm
Aaximum torque 4	05Nm @ 5,500rpm
)-62mph	4.3sec
op speed	192mph
ength	4,445mm
Vidth	1,808mm
Veight	1,395kg
Vheels & tyres	
8.5x19-inch; 235/35	/R19
12x19-inch; 305/30/	/R19



+++

997 GT3 RS 2006-07 Similar to GT3, with wider rear bodyshell of the Carrera Ś. 20kg of weight saved from GT3 thanks to carbon engine cover and rear wing, and plastic rear window

duction numb

Issue featured Engine capacity

Compression ratio

Maximum torque 420Nm @ 4,400rpm

Maximum power

0-62mph

Top speed Length

3,600cc 12.0:1
12.0:1
421hp @ 7,600rpm
405Nm @ 5,500rpm
4.2sec
194mph
4,460mm
1,808mm
1,375kg
R19
R19

Gen2 997 GT3 2009-12



ear hubs.	
Production number	s 2,200
ssue featured	117
ingine capacity	3,797cc
compression ratio	12.2.:1
Maximum power	435hp @ 7,900rpm
Maximum torque	430Nm @6, 250rpm
)-62mph	4.1sec
op speed	194mph
ength	4,460mm
Vidth	1,808mm
Veight	1,395kg
Vheels & tyres	
8.5x19-inch; 235/3	5/ZR19



Gen2 997 C4S

Body as per C4 but with

Turbo's 4WD and PTM.

Viscous coupling gives

controlled multi-plate

larger engine. Utilised 997

way to electromagnetically

2008-12

clutch.

Based on 3.8-litre Powerkit, rear-wheel-drive Carrera S, but with 44mm wider rear arches. Retro styling including iconic ducktail and large Fuchs wheels

Production numbers	
Issue featured	146
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	408hp @ 7,300rpm
Maximum torque	420Nm@4,200-
	5.600rpm
0-62mph:	4.6sec
Top speed:	187mph
Length:	4,435mm
Width:	1,852mm
Weight:	1,425kg
Wheels & tyres	
F 8.5x19-inch; 235/35	/ZR19
R 11x19-inch; 305/30.	/ZR19



7910 (Coune)

385hp @ 6,500rpm

3,800cc

12.5:1

4.7sec

18<u>5mph</u> 4,435mm

**997 GT3 RS 4.0** 2010 Engine was upgraded and aerodynamically tweaked, <u>Gemph</u> with the angle of the rear wing increased and dive planes on either side of the front nose. A future collectors' gem.







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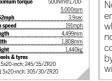


\*Porsche Classic 'red' oil filter not applicable to 993 generation models. \*\*Participating Centres only. Fixed price Classic Oil Service tariffs may be withdrawn or varied at any time. Oil Service includes Classic Motoroil and oil filter and associated parts. Excludes any additional items and checks.











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R 11 5x20-inch: 305/30/7R20

Production numbers In production Issue featured 137 Engine capacity 2,981c 420hp @ 6,500rpm 500Nm @ 1,700-5,000rpm 0-62mph 3.8sec Top speed Length Width 189mph 4,499mn 1,852mr Weight Wheels & tyres - ^0-inch; 245/35/ZR20 - ^^(30/ZR20 1,490kg

0-62mph Top speed Length Width

Weight Wheels & tyres ^^.inch; 245/35/ZR20 ~^5/30/ZR R 11.5x20-inch; 305/30/ZR20

ue featured

on ratio

 Maximum power
 540hp @ 6.400rpm

 Maximum torque
 710Nm @ 2,250

135

9.8:1

3,800c

4,000rpm

3.1sec

199mph

4.5<u>07mm</u>

1,880mm 1,595kg





145

9.8:1

## **Coming soon:** 991 GT2 RS

turbochargers with larger

compressors. Fastest

ever Porsche 911 from

0-62mph.



<b>991.2 Carrera 4</b> GTS 2017-
As 991.2 Carrera GTS but

with PTM four-wheel drive electrically controlling drive between both axles (rear is always driven). Identifiable from outside by red strip across rump.

ssue featured	151
Engine capacity	4.000cc
Compression ratio	unknown
Maximum power	500hp @ 6,500rpm
Maximum torque	unknown
)-62mph	3.4sec
fop speed	198mph
.ength	4,545mm
Vidth	1,852mm
Veight	1,430kg
Wheels & tyres 9x20-inch; 245/35/ZF 12x20-inch; 305/30/2	



## 991.2 GT3 2017-

New 4.0-litre engine from 991.2 Cup car. Retains 9.000rpm redline: six-speed manual Sport transmission now a no-cost option. Revised airflow to front and rear.

222 (UK, est) 150 3,996cc **Compression ratio** 13.3:1 500hp @ 8,250rpm Maximum po 460Nm @ 6,000rpm ONn e c. 3.9sec (manual) 199mph Top speed Length 4,562mm Width 1,852mm 
 Weight
 1,413kg (manual)

 Wheels & tyres F 9x20-inch; 245/35/ZR20
 R 12x20-inch; 305/30/ZR20





PORSCHE 911 2.7 RS TOURING, 1973 LHD 25,680 km since 2010 restoration. Light lvory, matching numbers



PORSCHE 911 (993) CARRERA 2 COUPE RHD, 1994 46,500 miles, Polar Silver, Sports seats, LSD



PORSCHE 911 3.2 SUPER SPORT CABRIOLET, 1989, RHD Guards Red, 27,500 miles, G50 gearbox



PORSCHE 997 TURBO S PDK, 2012 19,900 miles, Basalt Black, PCCB, Centre lock alloys



PORSCHE 911 (930) 3.3 TURBO CABRIOLET, RHD, 1989 30,250 miles, Jet Black, G50 gearbox

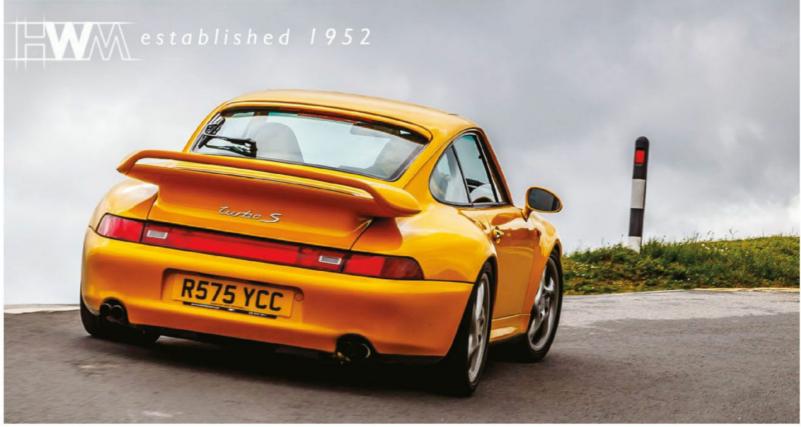


PORSCHE 997 GTS MANUAL 2011 26,400 miles, Carrara White, Centre lock alloys

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PORSCHE 991 C2S CABRIOLET - 15K MILES



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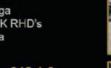


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£71,995



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911 Carrera Sport Targa

Grand Prix White . Black Leather Sport Seats · Manual Gearbox · 16" Fuchs Wheels · Porsche Certifcate Of Authenticity · 89,689 miles · 1988 (F)

£64,995



Boxster (981)

Rhodium Silver • Black Leather Sport Seats · PDK Gearbox · 19" Boxster 'S' III Wheels · Sport Design Steering Wheel 16,514 miles · 2014 (63) £33,995



911 Carrera 2 S (997 GEN II)

Meteor Grey · Black Leather Seats · PDK Gearbox · Touchscreen Satellite Navigation · Sport Chrono Pack With Sport Plus • 18,021 miles • 2010 (59) £47.995



Boxster 2.9 (987 GEN II)

Basalt Black · Black Leather Seats Manual Gearbox • 18" Boxster S II Wheels · BOSE Sound System · 29,732 miles · 2009 (09) £22,995

Lapis Blue · Dark Blue Leather Seats Manual Gearbox · BOSE Sound System Electric Sunroof • 73,413 miles • 2002 (02)

£42,995

911 Turbo (996)



Cayman 2.7

Arctic Silver · Ocean Blue Leather Seats Manual Gearbox • 18" Cayman 'S' Wheels · Sports Steering Wheel · 32,489 miles · 2007 (07) £19,995

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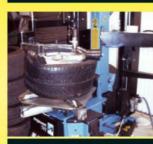
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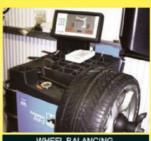


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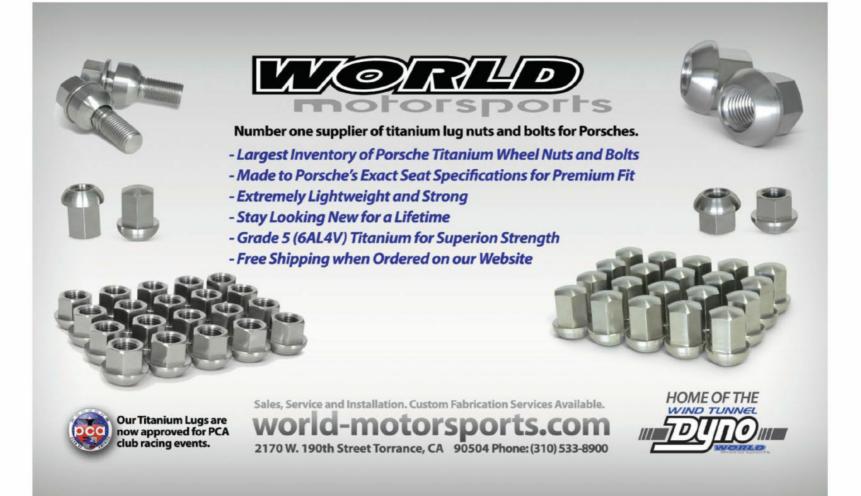


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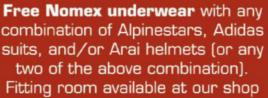
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**C4S TO SCOTLAND** Touring the North Coast 500 in Porsche's latest Carrera 4S



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## North Coast 500, Scotland

Written by Lee Sibley Photography by Daniel Pullen



LOCATION: Scottish Highlands COORDINATES: 57.4763° N, 4.2255° W



TOTAL LENGTH OF DRIVE: 516 miles POINTS OF INTEREST: Bealach Na Ba, Girnigoe Castle, Kylesku bridge, John O' Groats FOOD AND ACCOMMODATION: Aultbea Hotel, Loch Ewe, +44 (0)1445 731201 Eddrachilles Hotel, Scourie, +44 (0)1971502080 Ackergill Tower, Wick, +44 (0)330 333 7222





## Dubbed Scotland's answer to Route 66, this 516-mile tour of the Highlands serves up a double dose of spectacular roads and scenery

hen it comes to a route you must drive before you die, Scotland's North Coast 500 is up there with the best of them. Styled on the United States' Route 66, the North Highland Initiative has come up with the North Coast 500 – so named in homage to a 516-mile route traversing the most far-flung points of the Scottish Highlands.

Its route gives you the best of what Scotland has to offer: vast, unspoiled scenery dominated by rugged mountains and sweeping lochs, punctuated by the occasional castle or beach, with beautifully winding roads through the middle of it all. In short, it's motoring bliss on par with anything offered up by the busier mainland European routes. Beginning and ending at

Inverness Castle, you can tackle the NC500 in either clockwise or anticlockwise fashion. The better roads lay on the west side, so it's up to you whether you'd like to drive them first or save them until last. We believe there's no time like the present, heading west first for Applecross, via Bealach Na Ba (Pass of the Cattle). Ironically not passable in winter, this is itself a previous Total 911 Great Road, its single track winding 2,053ft above sea level and offering views over the Isle of Skye and much of Wester Ross. As with much of the west coast leg of the NC500, views are vast, as you'll

never stray too far from the Atlantic Ocean to your left, with spectacular mountains rising high into the clouds above on your right.

You'll only come across a hamlet or two before reaching Ullapool, the largest settlement in Scotland's north-west. Further north, Kylesku bridge offers what is now a famous vista, and viewpoints over sandy beaches can be found along the route past Durness, Bettyhill and Dounreay on the north coast. John O' Groats is worth stopping for that obligatory picture before the road becomes faster down the A9.

Speed shouldn't be a priority here, as you'll be skipping past some of the most glorious scenery you're ever likely to see.



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## 1970 Porsche 911S Targa-stock-07647

1970 Porsche 911S Targa shown here in red with black interior. Originally very desirable color code#2310 tangerine. Comes equipped with a manual transmission, fuchs wheels, aluminium deck lid and includes the spare tire. Extremely desirable and sought after. Same owner for many years. Mechanically sound.

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