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New Carrera specs & stats revealed



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## **964 TURBO 3.6**

Your ultimate guide to the final single turbocharged Porsche Turbo



## GT2 CS V GT3 RS

Forced induction v natural aspiration: Which 997 offers the most sensational on-track thrills?



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# Opening We've co

We've come a long way: showcasing ten years of automotive art dedicated to the world's most iconic sports car, all 130 magazine covers of Total 911 from the last ten years stand side by side. Behind each cover lies 116 pages of stunning Porsche content (that's 15,080 pages in total) celebrating 52 years of the 911 – and counting.





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"Its prominence lies with the fact it is the car that has shaped generations of the open-topped Porsche 911"



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# Update

STAR PRODUCTS & RACE RESULTS FROM THE WORLD OF PORSCHE









# New Porsche 911 bares all

#### Sapphire Blue 992 thrashes around the Nordschleife ahead of official Frankfurt launch

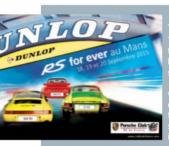
We don't have much longer to wait until the official launch of the next Porsche 911 with the IAA Motor Show in Frankfurt now just a month away. However, Total 911's Nürburgring spies have already spotted the 2016 car testing at the Nordschleife bereft of its normal camouflage, giving us our best look yet at the turbocharged Carrera range that will replace the current 991 generation this September.

There has been intense speculation regarding the designation of the new 911 with initial rumours suggesting that Porsche's newest sports car, considered a facelift by many despite the new

turbocharged engine range, will be known as the 991.2. However, if recent parts labels spotted at the factory are to be believed, the new 911 will be an all-new generation: the 992

At the 'Ring, the de-camouflaged 992 enabled us to get a first glimpse of the next-gen car. Styling-wise, the biggest changes can be found at the front end, where the central vent shape has been revised to match that of the GT3, while the sweeping driving lights of the 991 have been replaced with much thinner, straighter LED items. The plastic chin spoiler is also much more prevalent than the current naturally aspirated car.

Side-on, the 992 is relatively unchanged (apart from new door handles), however, at the rear the exit vents at the bottom of the bumper again confirm that the new generation will be turbocharged - a 3.0-litre engine for both Carrera and Carrera S models. The rear light shape has been snipped at the outer corners, while the recessed decklid grill features more louvres. Although unlike the current 991 Turbo, there are no arch-mounted intakes for any intercooler system, leading us to believe that the 992 will run with a single intercooler above the engine. For more information on the upcoming 911, check out our full exposé on page 34.



#### Rennsport Le Mans meeting announced









#### What's on

## Turbos take centre stage at Silverstone sale

930s of all shapes and sizes outshine a Rennsport 964 in the sales stakes

Silverstone Auctions' most recent sale at the Silverstone Classic race meeting was expected to be dominated by a 964 Carrera RS N/GT, the first such car to roll off the production line in 1991. However, when lot 509 - one of the first to come under the hammer went unsold, Porsche 911 enthusiasts' attention interest recently, especially in the UK. Just 14 turned to Zuffenhausen's Turbo models.

First onto the block was a 1979 Porsche 930 featuring the famous option M42 Martini Stripes, evoking the factory 935 racers of the day. Achieving £74,250 (\$115,600), the early

3.3-litre car surprised considering its less favourable four-speed 915 gearbox, nearly exceeding its £60,000-75,000 estimate. However, just a few lots later, another classic 911 Turbo was to steal the limelight.

The 930 LE has certainly been seeing of the 50 LEs were built in right-hand drive, creating a premium on these select few 330bhp Turbos. With an estimate of £120,000-140,000, Silverstone Auctions' white-on-white RHD example was expected to garner interest.

Yet it continued well above the upper estimate. realising £159,750 (\$248,800).

Finally, an original 3.0-litre Turbo built in 1976 nearly broke the six-figure mark, rounding off the sale on Sunday, achieving £96,750 (\$150,700) after a 1989 Porsche 911 Turbo with G50 gearbox sold for £75,375 (\$117,400) including buyer's premiums, on Saturday.

Of the naturally aspirated 911s, a 1972 Porsche 911S made £132,750 (\$206,750), while a 2.7 RS replica exceeded its estimate on its way to realising £101,250 (\$157,700).

#### 991 GT3 engines recalled (again)

9,000rpm-revving 9A1 flat sixes return to the factory after second recall

The early part of 2014 was dominated by the news that every Porsche 991 GT3 built (at the time 785) were recalled to be fitted with a new engine. The unprecedented action was taken after engine failures - caused by faulty screw joints in the con-rods - led to two fires. Now, a further dozen or so examples of the latest GT3 have been recalled for their second new engine in as many years.

The latest issue (affecting a handful of cars) focuses in on the GT3's valvetrain, with Porsche choosing to replace engines rather than repair the problem in situ. "To repair these engines would have taken longer than we found acceptable for our GT3 customers," explained Thomas Becki, head of product and technical communications at Porsche. The faulty engines will be repaired and used at Weissach for development testing.

Four of the affected cars are used as 'Ring Taxis' at the Nürburgring Nordschleife, suggesting that it was GT3s exposed to heavy track use that were most susceptible to the issue.

### **New Total 911 digital editions**

Special edition digital-only magazine for Porsche-loving iPad readers

Seven digital editions of Total 911 have joined our line-up on iTunes, giving virtual readers a wealth of new, special digital-only magazines to enjoy on their iPads - covering everything from classic 911s to a look at the technology used on each generation.

Launched last year, our digital edition range has been bolstered with the addition of three new 'Porsche Generation' releases, adding Classic 911, Rennsport and Turbo-specific editions to the comprehensive series. The former covers everything pre-impact bumper, from the original 901 right through the 2.4-litre cars of 1973. Meanwhile, the Turbo and Rennsport editions celebrate these iconic range toppers in all their glory with features from all five decades of their respective productions.

Elsewhere, 'Porsche in Motorsport', 'Great Driving Roads', 'The Porsche 911 Directory' and 'Porsche Technology' look to provide Zuffenhausen enthusiasts with something a little bit different. The former pairing are self explanatory, while the third entry gives all the specs and details on every production Porsche 911 ever built. 'Porsche technology' meanwhile provides in-depth technical drawings and analysis

highlighting cutting-edge tech used throughout the 911's history.

Costing £2.29, each digital edition can be downloaded via our iTunes newsstand app.



# Motorsport

THE LATEST NEWS AND RESULTS FROM RACING SERIES AROUND THE GLOBE



# First 2015 victory for Porsche North America Racing

Works drivers Nick Tandy and Patrick Pilet take chequered flag at Canadian Tire Motorsport Park in Porsche 991 RSR

The GTLM class' sixth race of the TUDOR United SportsCar Championship season brought Porsche North America Racing their first win of 2015 as 24 Hours of Le Mans winner, Nick Tandy, and teammate, Patrick Pilet, triumphed emphatically at Canadian Tire Motorsport Park.

Driving the no. 911 Porsche 991 RSR for the US factory squad, the Anglo-French duo set the pace in Friday's first free practice session before Tandy snatched pole position at the fast 2.46-mile track in Bowmanville, Ontario late in Saturday's 15 minute qualifying session.

Starting the 160 minute race, the Briton wasted no time in building an advantage, racing into a 2.5 second lead in the first 15 minutes, an impressive achievement in the competitive GTLM class. The buffer was swiftly eroded after half an hour when the safety car was called into action. A little while later, the no. 911 pitted under green flag running, with French national Pilet taking over in the driver's seat of the 991

After five laps out of the lead, the no. 911 car was quickly back at the head of the GT field as its BMW and Corvette challengers came in for their pit stops. Pilet never looked back and, despite coming under pressure at points, the Frenchman's excellent form (as seen during the opening stint at Watkins Glen) continued, handing the reins back to Tandy for the final 35 minutes having not dropped below P1.

Back at the wheel, Tandy resumed his good work, pulling clear of the chasing pack with blistering lap times, eventually taking the chequered flag over 15 seconds ahead of the no. 24 BMW Z4 to give PNAR their first victory since the 2014 12 Hours of Sebring last March.

The sister no. 912 Porsche 911 RSR of Jörg Bergmeister and Earl Bamber did not fare so well. Without a cure for their performance problems, the duo finished one lap down in seventh, although they did fare better than round five winners, Team Falken, who saw their 991 RSR retire with just over 20 minutes to go thanks to a transmission problem.







# **Eng exultant at Silverstone Supercup triumph**

Ben Barker just misses out on home podium at British Grand Prix

After narrowly missing out at his home race in Austria, Philipp Eng finally took his first Porsche Mobil 1 Supercup victory, leading home Alex Riberas in the British Grand Prix-supporting race at Silverstone.

The Project 1 driver, who made his debut in the premier 911 race series last year, led from pole position in a dominant display that strengthened his grip at the top of the points table. Riberas mounted a charge during the middle part of the race, whittling down Eng's advantage to just 0.3 seconds, but the Austrian responded in the closing laps to become 2015's fourth winner in as many races by 1.5 seconds.

Behind, the battle for third was initially comprised of four cars as Barcelona winner, Michael Ammermüller, fought off Ben Barker, Christian Engelhart and Porsche Junior, Matteo Cairoli. **Total 911** columnist Barker made a good getaway in his MOMO-Megatron 911 GT3 Cup car, demoting Engelhart to fifth into Village before pressuring Ammermüller for a podium during the opening laps. However, as the Briton's tyres faded, he had to fight a rearguard action to secure fourth place while Cairoli ended up a lonely sixth.

#### CARRERA CUP ROUND-UP



Philipp Eng's domination of the Carrera Cup Deutschland continued at Zandvoort, extending his championship lead to 42 points with two wins at the Dutch track. Title rival, Alex Riberas, finished third and second respectively.



At the Townsville Street Circuit, Nick Foster proved unbeatable, taking a trio of victories. Richard Muscat and David Russell finished second in races one and two respectively, before Steven Richards extended his championship lead in the final encounter.



Redline Racing's Dan Cammish left Croft Circuit in Yorkshire with another double victory haul, taking his 2015 tally to six wins from eight races. Josh Webster and Michael Meadows shared second and third in the two races.

#### Total 911's racing columnists

SUPERCUP SUPERSTAR:

## Ben Barker



#### With racers split by fractions of a second, a decent setup is vital in the Supercup, as Ben explains



In the cut-and-thrust world of Porsche 911 GT3 Cup racing, the one-

make nature of the Supercup and Carrera Cup series intends to put the focus on the driver. That's why, when faced with a new track, I focus my efforts on learning the circuit. I'm helped by the fact that the teams generally have previous experience at all the tracks – as does my engineer Frank Funke.

Handling wise, I need a nose. I hate a car that understeers as it's vital to get the mid-corner rotation – the direction change – especially with the way the Porsche is configured with all the weight in the back. Thanks to this, you need to get as much grip onto the front axle as possible to help rotate the rear to the corner exit. It's less vital in the new car though, thanks to the longer wheelbase. This means you can focus on roll speed: the general trend is that you can start feeding in the power earlier than you did in the old 997 generation car.

In terms of car setup, there are small changes to be made between different tracks. Depending on if it's a high-speed or low-speed track will affect how you adjust the camber angles, while some tracks (such as Zandvoort) can see conditions

change across the weekend. At the Dutch circuit the main factor is the sand. If you've predicted a slippy day you can get a load of oversteer, while on another day it can be sandy and you'll get understeer.

One of the main tools we use to make setup changes is the datalogger. The steering trace is the biggest metric we look at to see how the car is behaving, as you can see understeer and oversteer represented on the graph. Generally, we'll use that data (along with how I'm braking) and my personal feedback to my engineer.

Probably the most vital aspect on the Cup cars is tyre pressures – the tyres are the only component that touch the track! Abrasive tracks heat the tyre quicker and if the ambient and track temperatures are higher, you'll need to start with a lower pressure to ensure all four corners come up evenly. This means you often sacrifice the opening few laps to ensure your car is strong at the end of the race.

Conversely, we rarely touch the rear wing as it never makes much difference. At Monza we only found a 4 kilometres per hour difference between the two ends of the scale, so it made sense to keep the downforce and help you in the corners.

#### CARRERA CUP CHAMPION:

# Josh Webster



## Josh was in the lion's den as he made a wildcard appearance in the Porsche Supercup at Silverstone



To be given the chance to race in the Porsche

Mobil 1 Supercup at the

British Grand Prix was awesome. If you looked at my grid position and my finish position, you'd think I'd had a dull race. That is not the case – it was non-stop drama and action!

In Supercup there's only one practice session before qualifying, so you have to be on it from the start. It was a new experience for Team Parker Racing and myself as the weather was hot and the Pirelli rubber on the circuit from the formula cars made the 911 handle very differently.

The established Supercup runners have experience of this but it was new to us, and although we made changes during practice and before qualifying which improved the balance of the car, it wasn't enough and the best we could do was 17th on the grid. We made more setup tweaks overnight after a lot of work by all of us in the team analysing the data from practice and qualifying. As soon as I drove the car round to the grid on Sunday I was really excited for the race as the car felt great.

The atmosphere was unbelievable too. The record crowd of 140,000 fans all around the 3.66 mile track was a wall of colour and Union flags. It

was so cool. I felt very honoured to be racing in front of my home crowd.

I had a good start and after a couple of laps I was up to ninth and in a scrap for eighth. Trying to make up another place at Stowe, I got tapped into a spin and had to start over from the back. I had another good run and a few exciting moments when overtaking and making up places on the way to finishing 17th with some damage to the car. I definitely did my bit in putting on a show for the fans!

Even though the result wasn't what we'd hoped for, overall it was a great success as we got the car balance we wanted, learned a great deal, and had an exciting race. Without the spin, a top-ten finish was in the bag and perhaps we could have made up more positions as the car performance was good throughout the race. A huge thank you must go to Porsche Carrera Cup GB for giving me this opportunity as part of my second scholarship year.

It was great to meet guests being entertained by my primary sponsor Nine Group on Saturday and Sunday. Guests from Zenith, Close Brothers Leasing, Workflow and Whittlebury Hall were also at the Grand Prix and many came over to enjoy the sound of the Supercup exhaust too!

#### Motor racing in 2015

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ADACG I Masters nurburgring

14-16 August

Germany's premier GT

championship moves to the

famous Nürburgring for round five

Carrera Cup GB Knockh 22-23 August A favourite hunting ground of Michael Meadows, the FIA WEC Nürburgring 28-30 August The Nürburgring 1,000km features top class prototyp for the first time since 2006

Porsche Supercup Italy 4-6 September The Italian speedbowl, Mor plays host to the penultima

Ğoodwood Revival 11-13 September The historic racing extravaganza returns to the time warp track at Goodwood Lone Star Le Mans
17-19 September
Both the FIA WEC and TUDOI
USCC will be in action at the
COTA in Austin, Texas



# The Le Mans winner: Nick Tandy gives his views from beyond the pit wall







# Back to the day job in the 991 RSR

It isn't long before Nick's back to winning ways with his Porsche North America Racing gig

fter all the excitement of June, it didn't take long for business to resume as normal with just a two-week break between Le Mans and my return to the TUDOR United SportsCar Championship at Watkins Glen. It also didn't take long to get into the swing of things again, but it did feel a little different to be back in an RSR after my time behind the wheel of the 919. I've raced 911s almost exclusively for the last four years so it felt like going back home, back to something you know very well.

In the end, Watkins Glen was a bit of a let down. It should have been a race for our car because in the full wet conditions we had a strong advantage over the Corvettes, BMWs, Ferraris and even the Falken-tyred Porsche. Also, when it comes to driving, Patrick Pilet and myself have spent most of our careers racing in Northern Europe where changeable conditions are par for the course, so we may have had an advantage over some of our competitors on that front too. Unfortunately, as well as a suspension geometry problem that we had to nurse, the team decided to split the strategy between our two cars with an hour to go. It's one of the beauties of endurance racing (especially in the

US where caution periods are quite common) but the gamble didn't pay off for us and we were the only team that had to pit again for fuel before the end.

It's hard to deal with situations like that from a driver's perspective because it's out of our hands. We were the strongest car for most of the race, leading over half the laps and it's tough when the strategy gets split and it's your car that gets the losing hand. But that's racing. Sometimes you lose and sometimes you win, which is what we did next time out at the Canadian Tire Motorsport Park.

We managed to go testing on the Tuesday before the race after a few teams booked the track, allowing us to arrive at the race weekend in a much better position than normal. Compared to Watkins Glen, 'Mosport' was a polar opposite, with it running under green for most of the race on a completely dry track. This made it a straightforward two-stop event and with everything working out well, we ended up winning quite easily. It may not have been ideal from a spectating point of view but, for us, it was perfect.

Winning Le Mans hasn't magically transformed me into a better driver (we were certainly helped by our car suiting CTMP) but I do enjoy racing at Mosport. There are circuits that suit particular

drivers and Mosport – like Zandvoort – definitely suits me. If I could completely understand why, it would be hugely beneficial but I think it has a lot to do with the fast, sweeping, linked corners where you have to compromise in one place to make big gains somewhere else. It's quite British in its feel too, so it can seem quite familiar. It reminds me a lot of Cadwell Park because of its elevation, the narrowness of the track and the proximity of the trees. It's also the fastest average lap speed of the season (our fastest race lap was 117.35 miles per hour) so it's a real confidence track. Starting off well in practice put us on the right foot and made the whole weekend much more comfortable.

As well as the winning, it has been great to return to America and see the extra fan attention that Le Mans has brought. I was stood on the starting grid at Mosport with my aunt (who lives in Toronto) when a couple of guys came over to introduce themselves. "We're big fans. We watched all the race from Le Mans and just wanted to say 'Hello'", they explained. My aunt thought it was amazing that her nephew gets approached by people on the other side of the world. It's nice to see the word from France has spread to America.

# Porsche lifestyle

**Total 911** brings you five of the finest high-end watches











#### 1 Breitling Chronomat 44 Raven

£4,950

One of the latest additions to Breitling's line-up, the Chronomat 44 Raven is surely the most distinctive timepiece in the Swiss watchmaker's current collection thanks to the bright orange accents on the 44 millimetre black steel casing. Featuring an in-house automatic movement, the Raven comes with a branded black and orange rubber strap and, despite being previously owned, is offered unworn and complete with a full five-year warranty too.

www.swisswatchtrader.co.uk

#### 2 Porsche Design Chronotimer Series 1 Sportive Titanium

£2,950

In 1972, Porsche Design launched the first all black chronograph, followed in 1980 by the world's first titanium watch. Now, the design house is launching its first fully in-house timepiece, built by Porsche Design Timepieces AG in Switzerland. With a natural rubber strap, titanium 42mm case and automatic movement, the Chronotimer Series 1 can be found in Porsche Design's Knightsbridge store and Harrods concession as well.

www.porsche-design.com

#### 3 Christopher Ward C900 Single Pusher Chronograph

£2,325

No strangers to bucking a trend or two, Christopher Ward teamed up with respected German watchmaker, Johannes Jahnke, to develop an in-house single-pusher chronograph with a mechanical movement. With a full crystal case back, the JJ02 movement is undoubtedly the star of the show, however, the genuine alligator leather strap and beautiful Roman Numeraled face make this the perfect evening watch.

www.christopherward.co.uk

#### 4 Raymond Weil Freelancer Special Edition Chronograph

£2,995

Named to celebrate
Raymond Weil's longstanding
independence, the Freelancer
is a mechanical chronograph
with an automatic self-winding
movement. The 46 millimetre
titanium case and black leather
strap combine to provide a
lightweight feel on the wrist, while
the subtle fluting on the face
and sapphire crystal case back
expose the inner workings for
those of you who are lovers
of fine detail.

www.watchshop.com

#### **5** IWC Pilots Chronograph 'Top Gun'

£6,250

This IWC Pilots Chronograph normally retails at £9,750. However, choosing to go through the pre-owned channel can provide you with a large saving. The 'Top Gun' edition watch features a number of aerospace details and the automatic movement has a 68-hour power reserve. Buying through a reputed specialist such as Swiss Watch Trader also ensures you get the original box, manual and polishing cloth, and a timepiece in 'outstanding' condition.

www.swisswatchtrader.co.uk



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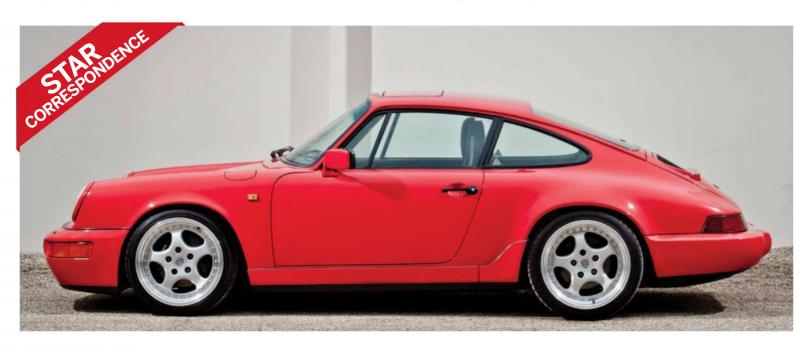








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#### The 964's real success

#### Dear Sir

Is the 964 better than a 993? Absolutely, but not for the fluff reasons included in the online article of Features Editor, Josh, which has it all wrong. The 964 is superior because it's a better design, from the suspension to the engine. You can look at the specs on paper and think the 993 is the better car but if you looked inside the motor, you would find that they are almost identical.

So, why is the 964 superior to the 993? Well, both suffer from the same problem called emissions, and the 993's new cylinder heads do run a bit cooler then the previous generation due to some different oil channels. However, those oil channels are required because of the hydraulic lifters (which

might sound good because they require no valve adjustment yet they require softer ramp rates and cannot cope with sustained high RPM or high lift use like the previous generation). The 964's setup allows for more aggressive camshaft designs and better high RPM valve control. This means that the 964 motor has far more potential than the 993.

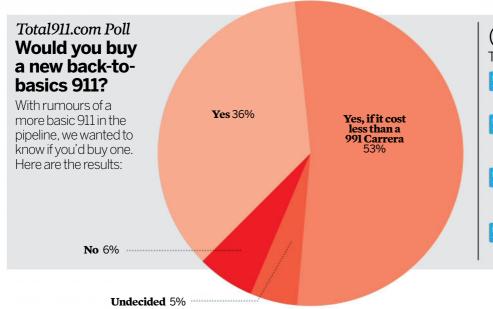
The emissions problem, regardless of car, should go out the window. If you own a 964 or 993 you need to remove the catalyst and add a free flowing exhaust to help. Help what, you say? Help keep your motor alive. The high temperatures and backpressure created by the catalyst cause increased cylinder head temperatures. This is why you see such exotic materials used in the heads but even

with those materials, heat will cause valve guide and valve seal issues to show their head early.

Also, when it comes to suspension the front end is identical but the multi-link rear on the 993 leaves a lot to be desired. While its grip level is higher when adjusted, it fails to communicate with the driver in the way that a 964 does. How many 993's have properly adjusted suspension? I am going to guess less then 25 per cent because most people don't know of the kinematic toe adjustment.

#### Ronald Swift

Some enlightening reasons as to why the 964 may be a better bet than a 993. Maybe we'll have to investigate this with a head-to-head test.



#### @Total911

The tweets that caught our attention this month:



@joshjwebster I have a little something up my sleeve to use down the straight at Croft this weekend!



@AutoInsiderUK Nice article in @ Total911 about the GT2 this month '997 GT2 is still one of the very best 911s ever



@CanfordClassics Customer takes his 1970 911 Targa back after full suspension refurb and leaves us his 3.2 Carrera! #Porsche #busy



@snapperali Had a master class in inspecting a car today from Porsche 911 guru Josh @autofarm. His knowledge for model specific detail is mind-blowing.



Write to or email us with your Porsche opinions and the star correspondence will receive a complimentary copy of







#### 996 C4S love

#### Dear Sir.

It was nice to see the 996 C4S get its moment of glory in issue 124. I've had a 964 C4, a 996 C4 and a classic 1981 SC Targa, but my 996 C4S is simply magnificent. It can drive with stability and purpose when I floor it, or it's equally as capable domestically when in the suburbs. It really is a wolf in sheep's clothing.

I replaced the main bearing as a precaution and never looked back. With under 50,000 kilometres on the clock it's still pretty much new. I'd take a 991 Targa 4S for its design and looks, but my 2003 996 4S remains dear.

#### Tim Brink

There's definitely a growing appreciation for the C4S, especially here in the UK where prices have recently started to climb, no doubt drawn up by the 996 Turbo.

#### OPC advice

#### Dear Sir.

Hopefully Mr Haynes (featured in issue 127) received a full refund on his returned vehicle.

There are good and bad in every industry, in my opinion. Unfortunately, Mr Haynes met the bad – especially bearing in mind that Porsche dealers, as with most automobile dealers, are merely franchises.

For the most part, I believe auto manufacturers should be doing a much better job to continually scrutinise those that represent their products to the consumer.

Over the years, I have owned many marques. Throughout the past 19 years my 'toys' have been a 1996 993 C2 coupe and a 1997 C4 Cab. These



vehicles were first serviced in Toronto by two OPC dealers that I would rate between 'very good' and 'excellent'.

Upon transferring to Montreal nine years ago, I first had my vehicles serviced at an OPC named Porsche Prestige. Simply put, they were atrocious. Following that experience, I then had switched to OPC Porsche Lauzon. As poor as my experience was with Porsche Prestige, the opposite was true of Porsche Lauzon. They were superb. Knowledgeable, accommodating and honest.

The bottom line with regards to Mr Haynes' experience is to do your due diligence prior to trusting anyone with the purchase or servicing of a vehicle.

Report any nefarious activity pertaining to the dealer in question to the manufacturer's head office personnel. And lastly, when dissatisfied, vote with your wallet!

Ken Selyan

#### Join the debate















@BBCRadio2 Here's @MattWilliamsR2 with @NickTandyR and the massive Le Mans trophy



 $@InfluenceComms \ {\bf Before} \ @$ hexagonclassics's #Senna evening starts. we're enjoying the summer sun and these gorgeous Porsches



@PorscheGB @PorscheRaces has an unrivalled tally of 17 @24hoursoflemans wins - but also a record eleven #TargaFlorio race victories



@Kyle\_Fortune Bumped into @harrym\_ evo when I was down at @Autofarm picking up my #993 #Carrera. Always a pleasure, even more so when he's in his Turbo







#### Total911.com hot topic:

#### Would you buy a new back-to-basics 911?

A new Porsche 911 that goes back to basics sounds good, but we wanted your opinion. Here are the best of your responses:



A back to basics 911 with skinnier tyres and a narrow body sounds ideal. A future sought after classic in the making!

**Shaun Lee Collins** 



I would like a new 911 with the old dash and a 3.6 or 4.0-litre engine, preferably air-cooled. No Turbos, I can skip all the new crap, just give me the best suspension and brakes they have, make it very light and keep it well under £100,000. They would sell a bunch of them very quickly. th3848



How about a "Club Sport" package for the coupe? I.e.: delete the back seats & the like - simple & easy. @pumadale



A back to basics version like the original is a good idea. Porsche should make it. The brand loyalty for the brand is strong & the model loyalty for the 911 even stronger. Remember when they tried to kill off the 911 with the introduction of the 924 & 928?

#### Ravi Mahendra



Yes! Enthusiast is crying out for a 1,000 kilogram modern 911. Please @PorscheGB pass the word. Club Sport 991... @NeillWatson



Would you be able to do a basic service in your own garage?

Moritz H. Sandy Hunt



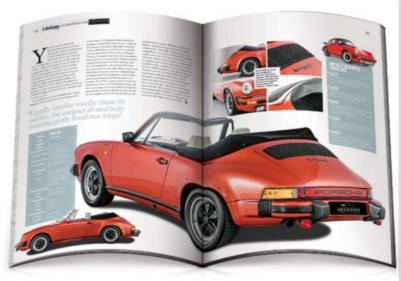
#### Club Coupe

#### Dear Sir.

Greetings from California! What a pleasant surprise to have Tony McGuiness mention my Club Coupe and include a picture in his review of the California Festival of Speed (featured in issue 128).

The Club Coupe was designed by Porsche Exclusive and built to commemorate the 13 initial members of the two Porsche Clubs founded in Germany in 1952. It is a striking example of the best automobile brand in the world! If you have room in an upcoming issue, here is another photo to share with your readers.

Ken Smith



#### Super SC Dear Sir.

As the proud owner of a 1979 ROW 911 SC, I concur with the assessment in the issue 127 buyers' guide that the model is "an underrated, hidden gem". Although lacking in performance compared to modern iterations of the model, I love the visceral feel and fun of driving this Neunelfer.

Also, kudos for your wonderful magazine. Despite the number of 911 owners and enthusiasts that are here in the States, there is not any publication that even begins to compare to Total 911. A very large thank you for a job well done in presenting the 911 experience.

#### Steven Schwartz

The SC is indeed a diamond in the rough. Thank you for the kind words on the magazine, we're really glad you're enjoying us Stateside.



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# Win a set of Falken tyres



For many, tyres are the least interesting part of car ownership. However, in reality, these four black circles are the most crucial component, especially when it comes to providing an enjoyable and dynamic Porsche 911 experience. That's why we've teamed up with Falken Tyres UK to offer one Total 911 reader a set of the firm's performance-bred tyres for their Stuttgart sports car.

Formed in 1983, Falken Tire quickly moved into the Japanese racing scene the following year before expanding into America with a US distribution and motorsport division in 1985. After considerable success in the Nineties with Nissan R32 Skylines, the now-famous teal and blue Falken livery found its way onto a Porsche 997 GT3 RSR in the 2000s courtesy of Walker Racing.

With the support of the factory (including long-time works driver, Wolf Henzler), the Team Falken 911s became a force to be reckoned with in the American Le Mans Series, taking two class victories in 2011 before Henzler, Bryan Sellers and Total 911 columnist, Nick Tandy, helped the team to the top step of the Petit Le Mans podium in 2013 (a feat the squad repeated last season). The team's winning ways have continued in the Tudor United SportsCar Championship, recently winning the Six Hours of Watkins Glen.

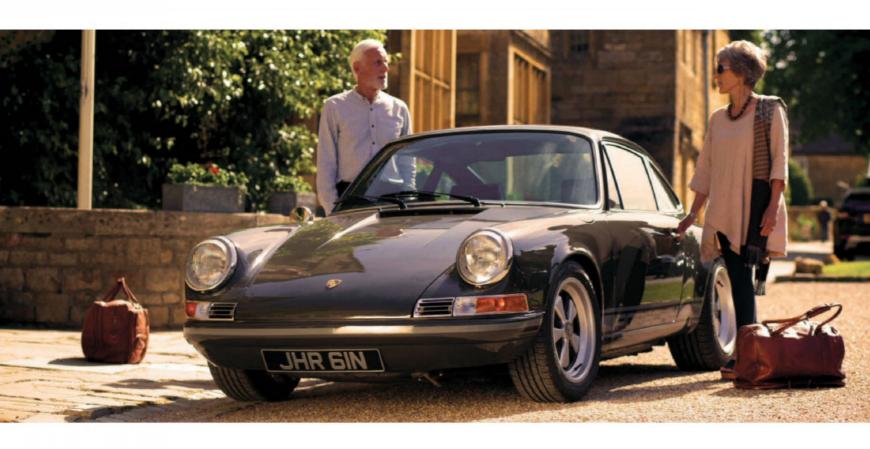
The lessons learned on track are fed back into Falken's road car tyre line-up. For historic Porsche 911 owners, the Japanese firm's Ziex ZE914 tyre provides an ideal blend of speed and economy, while water-cooled neunelfer fans will want to check out the Azenis FK453, a silica-enriched tyre designed for outright performance in all conditions (and available in 17 to 22-inch sizes).

Thanks to Falken Tyres UK, you now have the chance to experience Falken's renowned rubber (excluding fitment). To be in with a chance of winning this excellent prize, all you have to do is answer the following simple question:

In what year did Falken first compete in the famous Nürburgring 24 Hour race with a Porsche 911?

Once you have found the answer at www.falken-europe. com, email it to competitions@total911.com with 'Falken' in the subject line. Open to UK readers only. The Editor's decision is final, full terms and conditions can be found on the Total 911 website. If your required tyre size is not available, a second choice may be made. The closing date is 8 September 2015. Good luck!

#### **EVERY JOURNEY NEEDS A DESTINATION**



THE JOURNEY STARTS WITH US IN THE COTSWOLDS, WHERE WE RESTORE AND RECREATE THE ICONIC PORSCHE 911 RS TO BESPOKE SPECIFICATION.

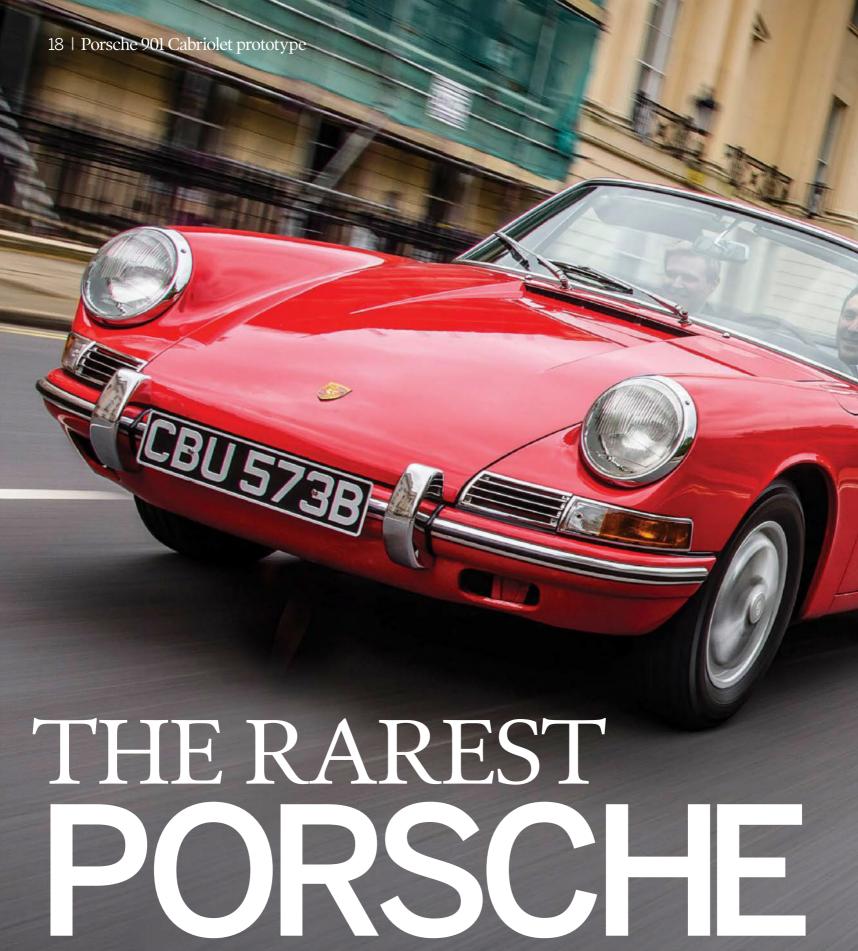
ENGINEERED BY SOME OF THE MOST EXPERIENCED PORSCHE TECHNICIANS IN THE COUNTRY IN A STATE-OF-THE-ART BUILDING NEAR MORETON-IN-MARSH, WE'VE CREATED THE PERFECT WORKING ENVIRONMENT – ONE THAT ENSURES A STUNNING FINAL APPEARANCE AND SUPERB QUALITY FROM START TO FINISH.



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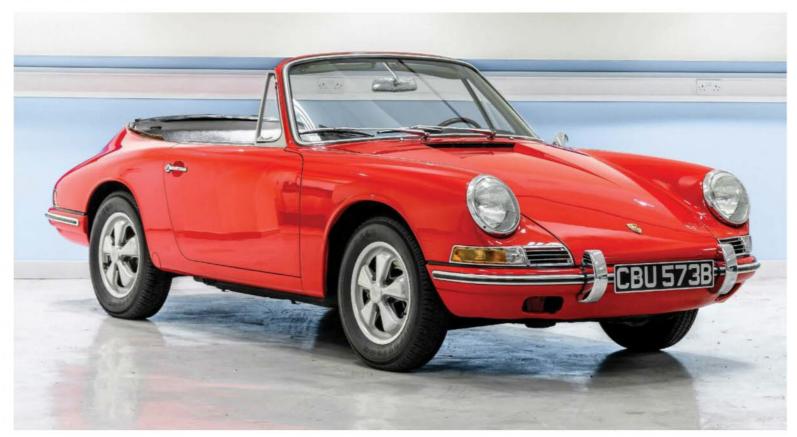
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911RENNSPORT.CO.UK



A true one-of-a-kind, this 901 Cabriolet created a blueprint for the open-topped Porsche 911 over the last half century





suspensions, engines, even body styles. These prototypes were denoted by having the prefix '13' in their chassis number as opposed to the '300' attained to fully-fledged production vehicles and, to all intents and purposes, Porsche usually destroyed the cars once all relevant information had been garnered from them. However, two prototypes were saved. One is chassis 13 327, the seventh and last prototype built in 1963. Acknowledged as the oldest 901 chassis still in existence, this Coupe prototype was rediscovered in 1984 and has since been restored, still boasting a variety of those incremental details that never quite made it to production.

The other is chassis 13 360, built in June 1964, and is the very car sitting right before us in our central London hideaway some 51 years later. Being assembled close to the start of production as a '64 car, there are many striking similarities between it and the 80 early production models that carried the '901' nomenclature. This is because the idea of an open-topped 901 wasn't nurtured until very late in development.

However, in the midst of dwindling sales for the 356 Cabriolet, Butzi Porsche faced pressure from nephew and head of Marketing and Sales, Harald Wagner, to produce another open-topped sports car. Wagner insisted customers were asking after

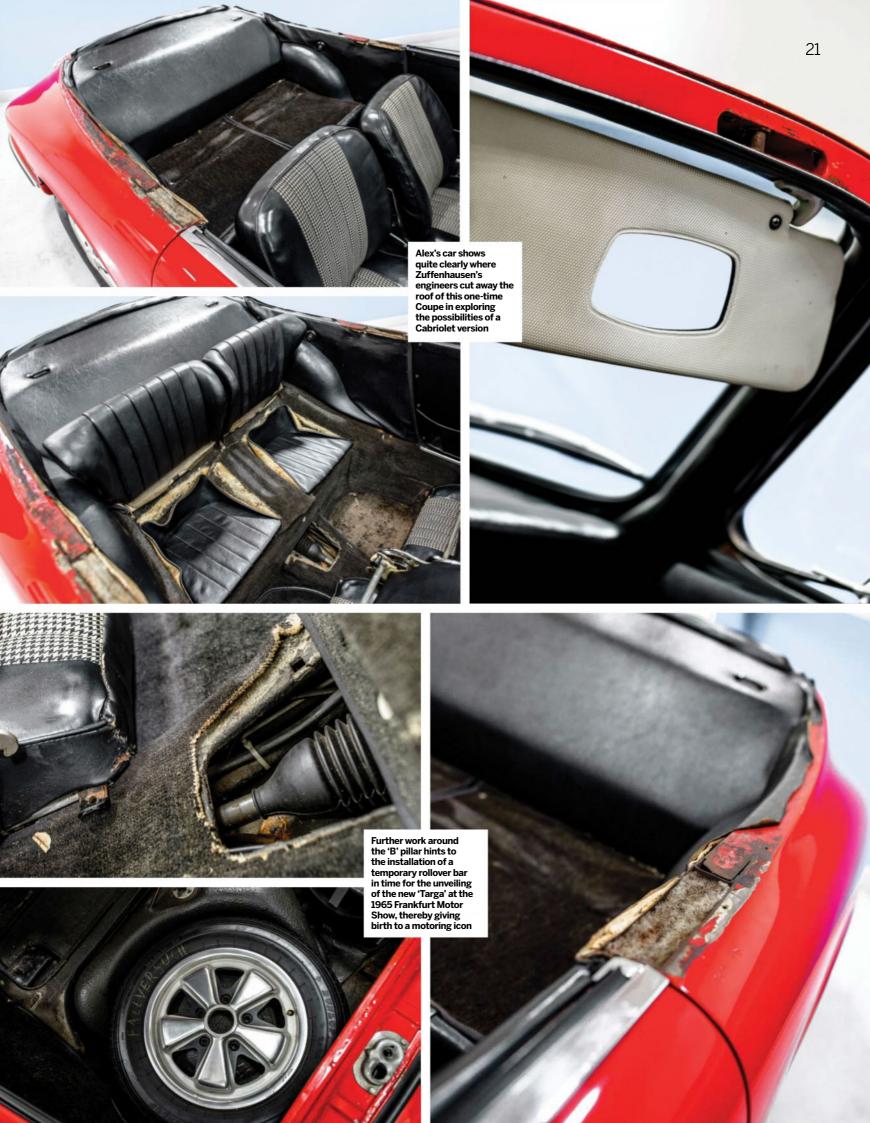
an open-topped version but the reality was, aside from initial drawings and mock-ups, no Cabriolet was planned. Besides, costs were precariously balanced – the 901 itself had become expensive to develop and adding another body style to the lineup would only stretch resources further.

Wagner's efforts paid off, though. Effectively a Coupe with the roof chopped off at the top of its windscreen and along the base of its rear windows, 13 360 was coined internally as the 'Ploch Trenkler car' after the two engineers who created the concept and who, interestingly, were responsible for the reworked 356 Cabriolet models. Within a couple of weeks Ploch, Trenkler, and Gerhard Schröder (head of convertible design) had made a series of mock-up removable roof mechanisms for the car, including one that had a roll bar.

According to Porsche historian Randy Leffingwell, who writes in his book, The Complete Book of Porsche 911, a group including Ferry Porsche, Erwin Komenda (head of technical drawings of the 901/911), Hans Beierbach (head of Prototype design), Hans Tomala, Fritz Plaschka and Harald Wagner met to review the car on June 24th 1964. Komeda and Beierbach successfully argued the costs involved with necessary stiffening of the chassis - as well as the work needed to change the car's rear to accommodate a soft top mechanism - would render the concept an impossible task on a mass scale, and so Ferry approved the roll-bar design. Despite first being sent to Karmann for chassis reinforcements, it was decided that Gerhard Schroeder and Werner Trenkler would further assess and produce a roof mechanism for the car in-house.

# "Its prominence lies with the fact it is the car that has shaped generations of the open-toped Porsche 911 as we know it"





Thanks to the commencement of 901 deliveries (the first production 901 coupe, starting with chassis number 300 007, rolled off the assembly line on September 14th 1964), it was not until January 1965 that one Helmuth Bott (head of road testing at the time) was able to evaluate the stiffness of 13 360 with a thorough test drive. Bott found that after Karmann's work, the car was no worse than previous 356 Cabriolets he had driven, though he did note problems with excess noise and flapping of the soft rear window and top. Trenkler and Schröder duly addressed these issues and on February 1st 1965 chassis 133 60 emerged as the subject of a memo to two-dozen managers, engineers and designers.

It was stated in this memo that the car would have a stainless steel covered roll bar with a Porsche logo, a removable roof panel and a rear soft zipper removable window. And its name? The term 'Targa' was coined by Walter Franz, a Cologne Porsche dealer at a sales conference, to commemorate the Porsche wins at the Targa Florio. Harald Wagner liked the affiliation and realised 'Targa' meant 'shield' in Italian, subsequently promoting the car as 'Porsche's safety car' in response to the ongoing concerns about automobile safety in the United States.

The Targa design was duly registered and patented (no. 1455743) in August 1965, with designers Gerhard Schröder and Werner Trenkler cited as its inventors. Barely a month later, in September 1965, the Targa was revealed to the public at the Frankfurt Motor Show where two Targa prototypes went on display with mock roll bars. It is believed one of these was 13 360. The success of the 911 Targa model is well documented, but the story of 13 360, meanwhile, is one that stayed in relative hibernation until the turn of the millennium.

Acquired from Porsche by Manfred Freisinger between 1966-67, it's not clear if Freisenger bought the 901 directly from Porsche or from an employee as he had many contacts within Porsche due to his racing affiliation. Nevertheless, the Cabriolet then languished in one of his warehouses until 2001, when Myron Vernis in Akron, Ohio acquired it. Freisenger was looking for a 356B Carrera at the time, which Vernis had, and so a trade was done. The Cabriolet then resided Stateside in Vernis' collection until 2014, when the car was finally offered to long-time admirer and enthusiast, Alex Karidis. With a deal done, the 901 took six painstaking weeks to arrive at Alex's base here in central London.

#### Model 901 Cabriolet prototype

Year 1964

Engine

Capacity 1,991cc Compression ratio 9.0:1

Maximum power 130bhp @ 6,100rpm Maximum torque 149Nm @ 5,200rpm

Transmission Dogleg 901 five-speed manual

Suspension

Front Independent: MacPherson

struts; torsion bars; hydraulic double-action shocks

Rear Independent; semi-trailing

arms: torsion bars: hydraulic double-action shocks

Wheels & tyres

**Front** 4.5x15-inch Fuchs; 165/80/15

Rear 4.5x15-inch Fuchs; 165/80/15

**Dimensions** 

Length 4,163mm **Width** 1.610mm Weight Unspecified

Performance

0-62mph Not tested Top speed Not tested

## Other Porsche prototypes

A series of fascinating prototype projects have been commissioned by Porsche over the years, and some are better known than others. Here's three of the best that we saw from our visit to Porsche's secret Zuffenhausen warehouse last year:



# Porsche Panamericana

To celebrate Dr Ferry Porsche's 80th birthday in 1989, Zuffenhausen presented him with this open-topped twoseater concept car called the Panamericana. Shown to the public at Frankfurt's motor show of that year, the concept raised eyebrows for its radical design that was unlike anything the company has ever pinned their prancing horse emblem to. Featuring a removal fastback roof exposed front and rear wheels, and gregarious creases in its body, it's suggested that Ferry wasn't impressed, and the press lacked admiration at the time too. However, Porsche has maintained there were never plans to put the car into production, though elements of the design transcended onto the 993 era of 911 four years later.



#### 2.7-litre Turbo

The first 911 Turbo to leave Zuffenhausen may have sported that iconic whaletail wing and wider rear Fuchs but sitting above those wheels was a narrow body, while under the decklid the single KK turbocharger was mated to a 2,687cc engine rather than the larger 2,994cc capacity for which the 930 is known for. In fact, any allusions to a 930 build type are absent on this first Turbo, which was given the chassis number 9115600042, suggesting Porsche only had plans for a limited production run that didn't need extra chassis enhancements.

Extraordinarily, this 2.7-litre Turbo saw more than a hint of the light of day too, racking up over 30,000 kilometres under the steer of Louise Piech.



#### Bulletproof 996

It may look like a production Carrera but then that's half of the genius behind this particular 996-era prototype. Even the spec of the car reads like any other first generation equivalent at first glance, complete with 3.4-litre water cooled flat six engine and six-speed manual transmission. However, beneath that Ocean jade metallic hue lies a body that Porsche say is bulletproof. Open a door and things start to make sense: if the weight of the panel itself doesn't take you by surprise, the one-inch thickness of the glass pane will. The bulletproof body is made with Kevlar, though a monumental 300-kilogram weight may well hinder any immediate plans for this 996 and its occupants to flee a theoretical circumstance involving gunfire.



It's clear that Alex is still as enamoured by the 901 Cabriolet as we are. Walking around the car and eyeing its idiosyncratic body styling, Alex muses, "I think it's both mind boggling and exciting that all the top people at Porsche from the time were personally involved with little old 13 360 and its development at some point or another, and that it now resides in my garage – rather than in the Porsche Museum!"

Ingesting the brilliantly un-restored Cabriolet up close exposes the many hallmarks of its unique, fascinating history. There's a shimmer in the light from exposed steel where the 'B' pillars used to be, the result of merciless cutting to remove the roof. Rivets are freely evident across the rump of the exterior and a quick 'tap' of each window reveals a plexiglass material rather than bona fide glass. A leatherette material from inside the rear quarters overhangs onto the lip of the exterior, however, much of the glue keeping it there has since worn away, leaving mere remnants still held tightly in position.

There are obvious holes above the windscreen complete with hooks that engineers will have used to attach the front of a roof to when raised, and scrawls on the metalwork in places are where engineers have made rough notes and observations. Though the two rear seats are in place, their discolouring suggests they've spent the majority of their life folded down, and there are, of course, no seatbelts to be found as there's no 'B' pillar to affix them to.

The prototype does come with early, unpainted iterations of the famous Fuchs wheels, and the spare tyre in the front compartment even has 'Fallversuch' scrawled on it, meaning 'research' in German. The mechanicals are standard 901 fare while the interior is unmistakably 901 with houndstooth seat centres. I'm told 80 per cent of the paint is original, and an odometer showing some 32,000 kilometres points to both the strenuous testing it endured at Zuffenhausen in the mid Sixties, as well as the gratuity of its owners in running the car since.

Alex turns the key and the car rumbles into life at the first time of asking, its 2.0-litre flat six engine full of zest as it settles nicely on tick-over. After a quick City drive the engine doesn't stay on for long, but that doesn't dampen my enthusiasm for this precious car. See, usually we're advocates of getting out and driving your Porsche at **Total 911** exactly as Butzi intended, actively deploring the garage queen and her polish-tainted army. On this occasion, however, we'll make a worthy exception. Such is the historical importance of this vehicle as it sews the fabric of the early 911 tapestry, we concede its final place of rest should be a museum – and we recommend that museum be the premises at Porscheplatz.

A stillborn open-topped project it may well be, but this prototype gave birth to the motoring legend that is the Targa, a car that at one time accounted for 40 per cent of all 9ll sales and which celebrates half a century of existence today. This, right here, is preserved Porsche history at its most glorious.



# New Sales Room Opening Soon...

For Sale: 1973 RHD T (as featured)

Plus: 1967 LHD 911 1989 3.2 Coupe 1991 964 Cabriolet

Contact us now to view

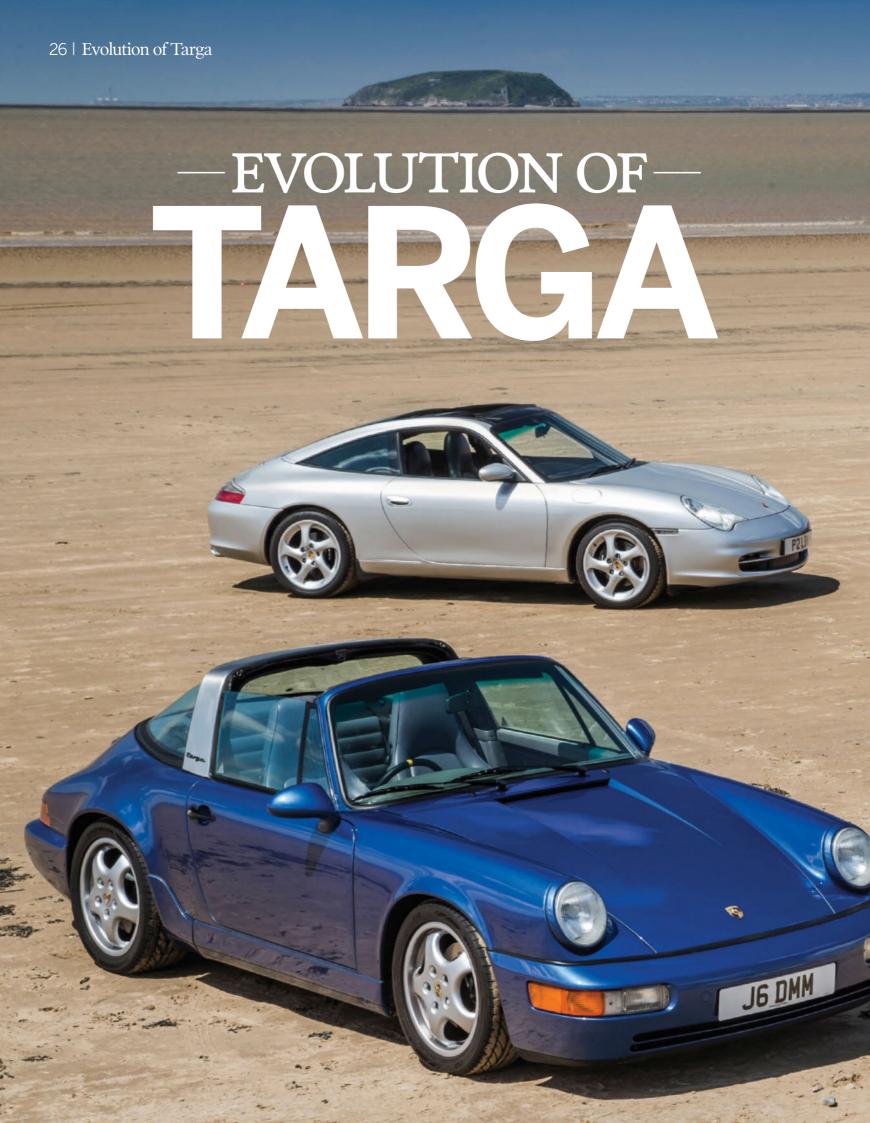


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It has become a Porsche icon, but we now know the Targa was originally conceived as a slightly desperate compromise. Total 911 charts the evolution of an accidental masterpiece





here was always an open-top Porsche: Ferry's first model was an open barchetta and if production realities soon dictated a closed design, it was only a couple of years before a convertible 356 appeared. This was a vital model, especially in the US, for which Porsche's gung-ho distributor Max Hoffman persuaded Zuffenhausen to build the Speedster, as featured in issue 128 of Total 911. By the late 1950s, consideration of the 356's successor was in full swing at Porsche. Between the competing designs of Erwin Komenda (Porsche's long standing body engineer who saw himself as carrying the beacon for the late Professor Porsche), Ferry's son Butzi who represented the first generation of automobile stylists, and Ferry's own preferences, little thought was given to an open car. Moreover, high development costs of the 901 Coupé meant there

was little in the way of budget left to invest in a convertible model.

The other concern at that time was the controversy in America, stirred up by Ralph Nader, about whether car manufacturers were putting users' lives at risk with fundamentally unsafe cars. In particular, the Chevrolet Corvair (a flat six rear engine design) had been singled out, as had the VW Microbus. In the general uncertainty, it was also unclear whether the US authorities were going to ban open cars. It was dissuasive enough: Porsche would develop an alternative to the Cabriolet which would be the birth of the Targa.

Porsche's experiments with open prototypes had already demonstrated that some sort of 'roll hoop' did manage to restore rigidity. Therefore, the 'alternative cabrio' would have this roll hoop and it became a question of what it would look like and how it would be incorporated. Schröder, who had built 356 cabrios at Karmann, said that the most important detail at this stage was "to make this roll bar look right." Having agreed on the aesthetics, they could then strengthen it as much as necessary. Eugen Kolb later told Porsche historian Tobias Aichele they were concerned that this roll bar should not rust and as it morphed in to an altogether wider hoop, the idea of making it in stainless steel came from design chief Butzi Porsche. It was he who influenced the positioning of the hoop and authorised the final design, even though we know Porsche registered the patent citing designer Gerhard Schröder and engineer Werner Trenkler as its inventors.

Porsche didn't disappoint its fans as the 1965 show at Frankfurt did present an open 911: not the classic canvas top affair motoring correspondents had expected, but an original new roof line with a striking hoop and removable top and rear panels that Porsche shamelessly promoted as its 'safety car.' The enthusiastic response at Frankfurt was the green light Porsche needed to press ahead with production. But as with the 911, which first appeared over a year before it became available, there remained much development work to make the Targa production-ready. Head of chassis development was Helmuth Bott and he quickly took a new Targa to Ehra Liessen, the VW proving ground, to learn more about where reinforcement was needed. Subsequent tests at Zuffenhausen also revealed that the



**Left:** 2015 GTS is the most powerful Targa yet, boasting 430hp thanks to a Powerkit as standard

**Right:** That roof may represent a permanent weight penalty but a Targa makes for the perfect tourer











#### Targa Sales

Porsche maintains that 35-40 per cent of its 911 sales have always been open cars and that since 1984, when the 911 Cabriolet joined the range, that percentage has split roughly 2:1 in favour of the Cabriolet. The rarest Targa is the 964, of which fewer than 300 were registered between 1991 and 1994; from the 993 onwards, Targas would regularly account for around 10 per cent of all 911 sales.

Second-hand values vary: the removable top cars have often suffered from the elements and unrestored, they are mostly priced below the Coupes. The 993 sliding roof Targas are usually low mileage, cared for cars and combined with their exclusivity, command a premium over the base C2, though not as much as the C2S. The same applies to the better made (because of its superior roof installation) 996 Targa, which also has the advantage of an opening rear window. The 997 Targas are also mostly low mileage and their four-wheel drive and wide body specification makes them one of the most desirable of the non-Turbo 997s.

**Above:** A glass rear screen quickly replaced the zip-up plastic item, which was the only design change for years **Left:** After nearly two decades with a sliding glass roof, the 911 Targa has returned to classic aesthetics

roll hoop did not support the weight of the car when it overturned. Werner Trekler substantially redesigned the way the hoop was attached to the chassis and strengthened the windscreen frame. After further testing and refinement of hood fittings, Porsche was confident enough to start build in January 1967.

The first significant production change was to replace the zippable plastic rear window with a fixed piece of curved glass. The removable window was something Helmuth Bott had wanted: a visionary and brilliant engineer, he was also a fresh-air fiend and it is no coincidence that he was one of the main advocates for the reintroduced Speedster. The thermo-plastic window was impossible to zip up at low temperatures and was leaky. Fixed glass not only looked classier, but it contributed to overall chassis rigidity. The Targa was retailed at around 10 per cent over the price of the coupé, a differentiation Porsche largely maintained on subsequent generations of Targa models. Under a Vorstand that was still dubious, the Targa started life cautiously; the factory producing seven cars a day against 50 Coupés. But by 1970, Targa production had reached 40 per cent of output, the 912 US variant proving particularly popular. Clearly this novel approach to fresh air motoring was a hit and the design would remain unchanged through the next two decades,

surviving to the introduction of the 911 Cabriolet in 1983. It was only then, with experience from the open 924 and advances in high-strength steel, that the roofless 911 was at last made feasible.

In the late 1980s, Targa sales suffered their only serious decline. A Targa 964 did not appear until 1991 and petered out in 1993 when only 287 were built in right-hand drive. After an honourable 25 year run, the Targa concept might reasonably have been discontinued, but Porsche had other ideas. The svelte new 993 had a far more positive impact than the 964 had five years earlier and its success encouraged Porsche to not just to renew, but also radically update the Targa idea. Reprising the roof line first seen on the Panamericana concept car and using a sliding system originally proposed for the 924, Porsche's Stephen Murkett styled a sleek glass top, close to the line of the 993 coupe, which slid back to offer a much wider aperture than a conventional sunroof. Specialists Webasto then built the units to Porsche's specification, sending them to Zuffenhausen for installation. With its slimmer 'C' pillars and larger glasshouse, the undeniably elegant 993 Targa with its electrically operated panels - no more lifting off and stowing of the roof panel - suddenly made this 911 variant seem extraordinarily modern and sophisticated.

As before, the Targa version arrived a couple of years after the 993 launch and as a 1996 model, it benefitted from the smoother VarioRam engine which had improved mid-range torque. Writing for *Complete Car*, David Vivian said of the new Targa: "What makes it work is the way Porsche

has thought the car through, lavished energy on the details and retuned the package to be harmonious and whole. Comparisons between this Targa and its forebears are plainly ridiculous."

Buyers were similarly impressed as the 993 Targa accounted for almost 11 per cent of 993 sales during its three year production run, and Porsche retained the design for the new 996. The new body and chassis of the water-cooled 911 gave Porsche a clean sheet to incorporate 4WD, air conditioning and crumple zones, all areas of increasingly unsustainable compromise in the original 1960s shell. So designers were able to plan for the Targa modifications in advance rather than graft them on as they had with previous 911s. The result was a far more rigid structure.

The 996 shell was already much stiffer and in the manufacture process, the Targa mechanism was inserted through the windscreen aperture and lifted into place. Because the effect of speed is to create suction above the car, this would have the effect of pulling the Targa panels upward, thereby enhancing the effectiveness of their seals when the car was underway. Grafted on to the roof of the 993, the major criticism of the first sliding glass Targa was wind noise at speed. The 996 Targa was more refined and despite an 80 kilogram weight penalty (steel bars were welded inside the 'A', 'B' and 'C' pillars each side along the door line to compensate for the lack of roof panel), performance was barely affected. The Targa's damping was 10 per cent stiffer than the Coupé's to accommodate for the larger mass and integrity, and the leak-proof nature of the structure

#### 991 Targa 4 GTS

2015-

Engine Capacity

**Compression ratio** 12 5:1

Maximum power

430bhp @ 7,500rpm (with Powerkit)

**Maximum torque** 440Nm @ 5,750rpm

> **Transmission** 7-speed PDK all-wheel drive

#### Suspension

Front

Independent; MacPherson type; coil springs with internal dampers; PASM

Rear Independent; multi-link; PASM

#### Wheels & tyres

Front 8.5x20-inch centrelocks; 245/35/20

#### Dimensions

Length 4 491mm

Width

Weight

**Performance** 

















#### 996 Targa 2002-2005

**Engine** 

Capacity

Compression ratio

**Maximum power** 

320bhp @ 6,800rpm

Maximum torque 370Nm @ 4,250rpm

Transmission

6-speed manual or five speed Tiptronic S; rear wheel drive

#### Suspension

Front

Independent; MacPherson struts with coil springs; anti-roll bar

#### Wheels & tyres

7x17-inch alloys; 205/50/17

9x17-inch alloys; 255/40/17

#### **Dimensions**

**Length** 4.430mm

Width

Performance

Top speed



finally enabled Porsche to introduce a feature that Ferry had always envisioned on the 911, namely an opening rear window. In the modern idiom this proceeded to be actuated electrically. The 996 Targa really did take refined touring to an altogether higher level.

The 997 was effectively a reskin of the 996 and if the Targa mechanism remained the same, the variant was projected upmarket; henceforth it would be available only in four-wheel drive and therefore widebody form. Porsche recognised that the popularity of the Turbo-bodied 996

C4S variant could be exploited profitably by combining those irresistible Turbo wings with its other predominantly 'lifestyle' model, the Targa. The Gen2 997 Targa would also be endowed with another 911 style icon, the distinguishing full-width rear reflector. A chrome surround delineating the side windows helped the Targa stand out laterally from the 997 Coupé. But while these decorative upgrades were being introduced, engineers planned for a completely new Targa.

In 2005 Porsche sold a long-held subsidiary, Car Top Systems (CTS) of Hamburg to the

Canadian auto components and tier one giant, Magna. Porsche usually obtained its hood mechanisms from Valmet, which also assembled the 987 Boxster's, and at the time, transferring CTS to Magna appeared a logical disposal of an underused asset. In retrospect it is clear it was part of a larger plan: the resources of Magna enabled CTS to expand its activities at a time when more and more manufacturers were moving to sophisticated folding roof systems. Within a few years, CTS was building mechanisms for GM, Peugeot, Ferrari and Audi. In 2008 Porsche would

# **993 Targa** 1996-1999

Engine Capacity 3.600cc

Compression ratio 11.3:1

Maximum power 285bhp @ 6,000rpm

Maximum torque 330Nm @ 5.000rpm

#### **Transmission**

6-speed manual or four speed Tiptronic; rear wheel drive

#### Suspension

Front

Independent; MacPherson struts with coil springs; anti-roll bar

Independent; Multi-link; anti-roll bar

#### Wheels & tyres

Front

7x16-inch alloys; 205/55/16

9x16-inch alloys; 245/45/16

#### **Dimensions**

**Length** 4,245mm

Width

Weigh

Performance

5.6 sec **Fop spee** 

















# **964 Targa** 1991-1993

**Engine** 

Capacity

Compression ratio

Maximum power

250 bhp @ 6,100rpm

Maximum torque

310Nm @ 4,800rpm Transmission

5-speed manual or 4-speed Tiptronic; rear wheel drive

#### Suspension

Front

Independent; MacPherson struts with coil springs; anti-roll bar

#### on apri

Independent; semi trailing arms;

#### Wheels & tyres

Front

6x16-inch alloy; 205/50/16

Rear

8x16-inch alloys; 245/40/16

#### **Dimensions**

Length

4 250mm

Width

1.652mn

Weight

#### Performance

0-62mpl

5.6 secs

Top speed



return to its former subsidiary with a proposal to build one mechanism which would power both of its future 991 Cabrio and Targa variants. With the system's principal dimensions agreed, Porsche was able to make provision on the shell of the forthcoming 991, enabling Targa production to begin what is now the usual couple of years after the launch of the Coupé.

Whereas the simpler hood of the Boxster is purely electric, the altogether larger roof of the 991 Cabrio and Targa would have required no fewer than four electric drives to pull the roof tight and maintain sealing up to 315 kilometres per hour. To reduce weight, an electro-hydraulic system using four individual cylinders, two operating the roof and two the rear deck, was devised and is applicable to both of the new, open models. This intelligent duplication reduces manufacture costs and inventories, and is possible because the new Cabriolet has dispensed with the traditional folding hood and instead has three solid panels that lift out, followed by a fourth, which is the glass rear screen. Using the same mechanism, the new 911 Targa has one lifting roof

panel plus the one-piece rear window and deck, which electronically stows the roof in 19 seconds.

As well as reprising the traditional Targa top aesthetics, the 991 Targa, which operates at the click of a switch, weighs a relatively insignificant 120 kilograms more than the base two wheel drive 991 Carrera coupé. Exactly half a century after the original concept was introduced, the third generation Targa is a masterpiece of innovation and it is impossible to imagine what Porsche could do if and when it starts to plan a fourth Targa evolution.





German tourist approaches our parked convoy of all-black sports cars and asks suspiciously: "Why are your Porsches camouflage? What is it you're hiding?" Of course, you do indeed have to look incredibly closely at the Xenon four-point daytime running lights and redesigned decklid (where longitudinal slats replace cross vents) to realise that, just outside Cape Town, the new models of Porsche's iconic 911 are on the move.

So, is the 91l Carrera Coupé, Targa and Cabriolet receiving a so-called facelift? "Well, if they were just optical changes we would not be driving them on such an extensive testing program," August Achleitner replies with a wry smile. The new 91l will be officially presented for the first time at the 2015 IAA in Frankfurt, but right now it is in the last quarter of it's test program, and the man who is in charge of 91l production at Porsche has exclusively invited us to accompany him for a few days of warm weather testing.

These examples in South Africa are part of the third series of pre-production. Following



the warm weather testing, a cold test follows in the icy terrain of northern Canada – only then will it be determined how the new product features will go in the final series of the car. And, because the innovations are mostly under the skin and redefine the driving dynamics of the 911, Porsche's engineers are driving 10,000 kilometres per test series with the highest level of load placed on each car. We sit in the front seat of a test mule while Achleitner summarises the full scope of the technical improvements in just one single sentence: "The jump to this new 991-II corresponds approximately with the air-cooled to water-cooled Elfer in the late nineties."

While driving, Achleitner opens the sunroof of our Coupé and closes it - repeatedly. We listen to the noise from the drive unit. It is a roar that overlays the typical rattling of the six-cylinder boxer engine and is especially evident when the roof is open. "The turbochargers are still too loud," says Achleitner, confirming news that will be sure to shake the 911 world: from Autumn, all Porsche 911 Carreras will be powered by a new, smaller six-cylinder turbocharged boxer unit with a displacement of 3.0-litres, to extend the range between fill-ups to 800 kilometres and to push the average consumption of both the Carrera and Carrera S to less than 7.5-litres per 100 kilometres. This is 1.2-litres less compared to the current Carrera. Achleitner says: "We've managed to achieve even greater fuel consumption than with the current 991 Carrera."

The face of 'Mr. 911' lights up: "Do not worry though! Two small turbochargers, fitted directly to the manifold, kindle a fire that burns brighter than the free-breathing units so far." Achleitner then explains why this conversion of the Carrera series

means increased driving dynamics with turbo engines. We can expect up to 20 more horsepower on the base and S models at 6,500 or 6,600rpm with torque increasing to 450 and 500Nm respectively. This torque will be available from 1,700rpm. With a factory tuning kit the Carrera S will come to 450hp. You can see from the numbers exactly what we are experiencing here in South Africa: the new 911 is evolving in the direction of a fast Grand Touring Coupe. This means more acceleration at low rpms and less gear changes on a car that's more 'versatile' for daily use, with a top speed (for a manual gearbox car) of 304 kilometres per hour. A downshift to sixth gear while sprinting at high speed is now no longer necessary, says Achleitner, commenting on the engine's improved torque spread.

Achleitner then demonstrates the advantages of the complex new technology. The moment his right foot moves towards the floor, the quiet whir in the rear changes to a throaty growl. We are grabbed by a forceful shove which grows in a linear fashion and pulls us along. The rev counter rushes from 1,800 to over 3,000rpm. Now the two sound symposers come into play and pump the noise of the powertrain into the cabin, then the mechanicals begin to speak to us more loudly, asking for more engine revolutions. Up to 5,000rpm the Carrera pushes forward as if being powered by a jet engine; by 7,500rpm we've reached the rev limiter.

August Achleitner then ups the ante as he changes into Sport Plus mode. He does this with a new control knob at the bottom-right of the steering wheel, which replaces the PSM button from the centre console. This is simply called the 'Mode' switch in the new Carrera. It is used

#### The new 911 Carrera: What we know



- Powered by a 3.0-litre turbocharged engine
- Gains of up to *20bhp* over current Carrera and Carrera S
- A *Powerkit* will boost the Carrera S to *450bhp*
- Carrera S 4.0 secs



Seven-speed manual transmission will be offered



'Mode' switch on the steering wheel will be used to select 'Sport' and 'Sport Plus'



 Carrera S to feature rear-axle steering from Turbo

New safety features include lane change assist

"The jump to this new 991-II corresponds to the air-cooled to water-cooled Elfer in the late Nineties"



**Above:** Our spies spotted the next-gen 911 free of camo for the first time at the 'Ring



to access the Sport and Sport Plus programs that sharpens the throttle response and gearshift of the PDK gearbox and stiffens the adaptive dampers, as well as dropping the car up to 20 millimetres. Personal settings can be saved in 'Individual'.

The middle of the Mode wheel contains what is referred to as the 'magic button'. Achleitner presses this after switching to Sport Plus mode, causing the PDK to instantly select the optimum gear and the PSM to allow a greater degree of slip. For the next 120 seconds the maximum power available from the turbocharged engine is accessible. In order to achieve the best possible acceleration times, the turbos spin up electrically and close the lag down in the blink of an eye, sharpening the throttle response. The Carrera hits 62 miles per hour in 4.3 seconds (4.0 in the Carrera S), though manual cars take 0.2 seconds longer.

A twisty mountain pass shows us the correlation between optimum boost and instant throttle response. Drivers of the free-breathing boxer engine must adjust their driving style: those who keep the car on boost with use of the gas pedal can taste the spontaneous response of the new engine and steer the new Carrera with just their right foot.

The Carrera S with Chrono Plus package is aided by the regulated LSD as well as the rear axle steering taken from the 911 Turbo. Here, the wheels countersteer by three degrees up to 30 miles per hour and steer in the same direction above 30 miles per hour. In addition, the steering, which is also taken from the Turbo, is ten per cent more direct and gives more feedback to the driver. This means that the cornering ability of the new Carrera reaches a sensational new level of quality. Indeed, Porsche has a goal for the new Carrera S to lap the Nordschleife in 7 minutes 34 seconds, and Achleitner tells us "We are already close to it!"

Dynamics expert Dr. Manfred Harrer attributes the significant increase in high-speed stability to the wider tyres, which now measure a huge 305/30ZR20 at the rear. The wider rear tyres are necessitated by the 30-kilogram increase in engine weight, while the total weight of the new Carrera is 1,475 kilograms.

Because the smaller engines require less fresh air, the new Carreras come without the characteristic air intakes that the 911 Turbo has in front of the rear wheels, according to testing chief Alex Ernst. Instead, it is sufficient to simply flow air through to the intercoolers behind the rear wheels on either side of the car, and to then let the air escape beneath the 911's bumper. Meanwhile, airflow to the two radiators behind the air dam in the front bumper is controlled by a flap system. These close at 10 miles per hour to improve aerodynamics and reopen north of 100 miles per hour to keep the car balanced.

Additionally, the new Carrera generation gets many safety and comfort functions that one would expect from the modern GT. A hydraulic

lift on the front axle provides 50 millimetres more ground clearance to stop the front lip scraping in car parks. Together with the ceramic brakes from the 911 Turbo, the new Carrera also gets the multicollision brake system, where the car automatically brakes after an impact to minimise more damage.

The fact that there is a lane change assistance next to the 15 millimetre higher armrest hints at the provision for a changing clientbase in the Carrera market. Thankfully the assistance does away with steering wheel vibrations that only gives the driver an optical warning. These evolutions have also occurred in the improvement of the multi-media system which now allows multi-touch input, handwriting recognition and smart search. Multi-media expert Matthias Worch gives us a demonstration and writes 'I really need to go', to which the navigation responds by taking us to the nearest public toilets! It's nice to see that the new Carrera, in spite of its growing complexity, also shows the qualities that have always defined the Porsche 911 in meeting the fundamental requirements that come with travelling fast. 911



Above: Get set for change. The new Porsche 911 will make its public debut at the Frankfurt Motor Show in September 2015



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They don't get much hotter than the 997 GT2 CS and GT3 RS, but which reigns supreme around a circuit? Total 911 takes to Silverstone's National course to give these towering titans a tantalising track test

Written by Johnny Tipler Photography by Antony Fraser





hrough Beckett's tricky left-right-left complex the slicks are well and truly squirming as they fight the chassis - they do not want to relinquish their grip, but staying on the circuit requires three rapid changes of direction. The faster we go the more the arm-wrestle takes hold. We're in the exalted performance domain of a 997 GT2 Clubsport, and this is about as quick as a topline Porsche road car gets on a racetrack. Having said that, there is nothing here apart from a Ferrari 458 race car and a couple of Radicals that can live with its towering performance.

We're at Silverstone with two track-oriented 997 greats: the GT2 CS and GT3 RS. The reality is that they are pretty docile at low revs, but when stirred into action they are savage performers indeed. On the premise that these two 997s represent the zenith of that model line, we reckon there's a viable motive for comparing and contrasting them, which is why we're pitting them head to head. Although the GT2 isn't an RS, the brutal nature of its turbocharged performance places it in parallel with the normally-aspirated 997 GT3 RS, making this encounter a bona fide track test. And although values have escalated sharply, like almost everything with a Porsche badge, they are still relatively affordable for someone with the wherewithal to go serious trackday motoring - so here we are at Silverstone on an RMA Trackday. It's a serious business: there are probably 100 'drivers' signed on and organiser Graham Clarke banishes the half-dozen who show up late for his briefing. Afterwards we return to the pits garage on the old National pits complex between Woodcote and Copse, where the cars have been delivered by JZM's Steve McHale who looks after them for their owner.

This yellow GT2 is a rather special car. The standard GT2 was launched in 2007 and served as

the chariot of fire for speed freaks and optimists running in national GT series; on the international racing front, Porsche had already flipped over onto the GT3 as the weapon of choice. The GT2 is a twin-turbo rear-wheel drive chassis pushing out 523bhp at 6,500rpm, capable of 0-60 miles per hour in 3.3 seconds and a max-out of 204 miles per hour. It's good enough for Walter Röhrl to lap the Nordschleife on a public day in 7 minutes 32 seconds. You want more? What we have at our disposal trackside is a Manthey 600 conversion, and as we know, Manthey Racing and Weissach have an intimate rapport whereby the Nürburgring-based tuner does the legwork and Weissach's competition department brings it to fruition at events like Le Mans 24-Hours. JZM are the UK agents for Manthey tuning equipment and Steve McHale talks me through the setup. The M600 kit consists of an Akrapovic exhaust system including sports silencers, headers and cats; a different pressure sensor on the engine with programming by Manthey, and Manthey intercoolers serving the turbos. The GT2 clutch was replaced with a meatier 890 Newton clutch and 40/60 lock ratio locking diff from GT gears, plus a Cup car diff and Surface Transforms ceramic discs. "That's what we use for track," says Steve; "they're very light, 6.5 kilograms lighter than a standard disc, and they don't burn out like Porsche discs so we run them with Pagid RSCl pads, race fluid and steel flexible hoses." It's currently still got the traction control connected, though they do plan to disconnect it. The car produces 600bhp, 71Nm more torque than a GT2 RS in the mid-range. "To get that sort of power out of a GT2 you have to change the exhaust headers and cats because the standard ones are too restrictive and it would simply melt the cats."

It also features a sequential gearshift. This is an interesting proposition because you still



#### Model 997 GT2 Clubsport

Year 2008

**Engine** 

Capacity 3,600cc

Compression ratio 9.0:1

Maximum power 600bhp@ 5,700rpm

Maximum torque 680Nm@ 2,200rpm

Modifications Manthey M600 kit; Akrapovic exhaust; Manthey intercoolers

Transmission Six-speed, G96/88 (with SQS

sequential shifter)

Suspension

Front KW racing dampers &

3-way Club Sport coilovers: adjustable anti-roll bar

Rear KW racing dampers &

3-way Club Sport coilovers;

adjustable anti-roll bar

Wheels & tyres

Front 9x19-inch alloys;

235/35/ZR19

Rear 12x19-inch alloys;

325/30/ZR19 +5mm spacers

**Dimensions** 

Length 4,469mm

**Width** 1,852mm

Weight 1,438kg

**Performance** 

**0-62mph** 3.7 secs Top speed 204mph











need to operate the clutch with each shift; it just enables you to go straight back and forward into each gear - with reverse at the far end ahead of neutral. Whereas, with a normal manual 'box, if you're coming into a corner and you're in sixth but you know it's a third gear corner, you'd go on the brakes and throw it straight into third. With the sequential lever you have to go through every

**Model 997 GT3 RS** 

Year 2010

**Engine** 

Capacity 3,800cc

Compression ratio 12.2:1

Maximum power 450bhp@ 7,900rpm

Maximum torque 430Nm@ 6,750rpm

Modifications

Transmission Six-speed, G96/88 (with SQS

sequential shifter)

Suspension

Front KW racing dampers & 3-way Club Sport coilovers,

adjustable anti-roll bar

KW racing dampers & 3-way Club Sport coilovers,

adjustable anti-roll bar

Wheels & tyres

Front 8.5x19-inch alloys; 245/35/ZR19

Rear 12x19-inch alloys;

325/30/ZR19

**Dimensions** 

Length 4,460mm

**Width** 1,852mm

Weight 1,370kg

**Performance** 

**0-62mph** 4.0 secs Top speed 192mph

interim notch to get there. At least there's a digital display that tells you which gear you're pulling assuming you have time to glance at it. It's made by SQS and works through a conventional gearbox - the lever itself is like a scale model of Blackpool Tower. It doesn't matter how quick your shift is, it will only shift at its own speed - though that is pretty nifty. It's also a pleasant enough feeling, working through the 'box.

The revised suspension consists of new tie-rods, steering-arms, RSS lower wishbones, KW Clubsport variant 3, which is only two-way adjustable because of the hydraulic lift system that's been installed to elevate the front end over traffic humps, operational up to 50 kilometres per hour. It also boasts a Manthey carbon splitter and Manthey carbon gurney flap, all of which were developed in the wind tunnel by Manthey to obtain more downforce in racing and provide more vacuum at the front end of the wheelarches, as well as better brake cooling. It runs on BBS Cup Car rims and the tyres are Michelin Porsche Cup M1 slicks, 24/64/18 on the front and 27/68/18 on the back. "Road tyres are just as much fun," councils Steve. "You don't have to put slicks on, all they do is make you go faster." Other embellishments? A Cup car steering wheel and carbon detailed interior. Otherwise, the body is standard, with a Clubsport interior featuring sports seats, Nomex and Kevlar detailing and by contrast, air con and carpets, and a half-cage in the rear of the cabin.

"It's got a massive spread of grunt," asserts Steve. "It doesn't matter if you've got 2,000rpm or 5,000rpm, it pulls just the same. Just change gear and use the torque. It will rev to 8,000rpm and it will easily spin its wheels in every gear. You can actually powerslide it because it's got so much torque." This is going to be amazing. I don

my race suit, helmet and gloves, making sure my wristbands are visible to the pit lane exit marshal, squeeze into the bucket seat and buckle up the five-point Schroth harness. It is such a beguiling environment: a combination of GT3 and race car. What a joy - the throttle is smooth, the wheel easy on the wrists. I motor smoothly, leisurely almost, out of the pit lane, keeping inside the white line, before putting my toe down as the soaring roar of the flat-six engulfs the cabin. In an instant I'm flowing through the five curves comprising Maggots, Beckett's and Chapel, taken in third and (gingerly) on the throttle. It's here that the sheer power of the GT2 becomes evident, opening it up on the entry to Hangar Straight. A few seconds in sixth before going down to fourth for Stowe (more technical than you think), then bustling into Vale in third, performing a series of weird apexes at Club before hitting the modern Pit Straight. There's hardly a lift in fifth as the track curves right at Abbey, hugging the left-hand side before massive braking to third for the sharp right at Village, hooking right then arcing round The Loop, the tightest turn on the circuit. Another short shift then a blast in sixth to the Brooklands-Luffield complex, and soon enough I'm back on the old pits straight and going hard for Copse. I'm sometimes turning in too soon and understeering out, and that's a good lesson in track craft. The interesting sensations going through Becketts when the car is trying to get away is down to the slicks as well as the pace, and with gritted teeth I do my best to let it do what it wants, rather than fight it. It's also surprising how delicate it is to control; it's not a brute force job, even though its persona suggests it could be of a take-no-prisoners disposition.

There's another dimension here too: slicks, which are an acquired taste. When they're hot the pressures go up and you can tell



because you start to lose front-end grip. The car starts to understeer, therefore you lose grip and subsequently, as you start getting the power on early in the corners, it loses rear end grip too. I'm running with traction control off all the time, simply because it's better for the rear discs and pads as they're not being asked to grip constantly, and it encourages me to be more progressive with the throttle. I pit briefly to reset the tyre pressures and the car goes back to its sharp self again, with a hint of understeer, but it doesn't take long before they've gone up a bit more again and the understeer is starting to come back. I'm also pumping the brake pedal once or twice because it may have a tiny air bubble in the line, and Steve takes a little squirt out of each calliper. After I've pitted, I feel the slick treads - they're the consistency of hot chewing gum and it smells of very hot brakes. In summary, the GT2's performance is effortless - unless caned - and curiously, that makes it somehow less involving.

Our second contender is the blue GT3 RS, a model launched in 2006 and 44 millimetres wider at the rear and 20 kilograms lighter than the 997 GT3. This one has a similar K-W Clubsport three-way adjustable suspension setup to the GT2, which the top wheelmen prefer because it is more sophisticated than two-way. Steve talks me though the spec again: "It comes with a cage as standard, unless you order it without, and it's got the same RSS lower wishbones and tie-rod arms, four-point linkage at the rear and it has Service Transforms ceramic discs, competition pads, steel flex brake hoses, competition brake fluid and the same lock ratio on the diff - that's the 40/60 Cup car diff pack - plus Cup car steering wheel and SQS sequential gear shift like the GT2. But it is a

standard GT3 RS engine and standard exhaust, giving 450bhp. We could make the engine bigger and we can fit an Akrapovic exhaust which gives you about eight more horsepower for about £9,000; trouble is, you can't get them onto track days as they're too loud. Manthey do a 4.4-litre conversion which is 530bhp, but it's £55,000!"

I bend double to avoid helmet clunk and duck into the left-hand drive GT3 RS. Similar in layout, the cabin's a familiar environment, though not as competition orientated as the Clubsport GT2. It's the same procedure to access the circuit, but the immediate sensation once out there is of a lithe, snarling beast, with a much more aggressive disposition. It's lighter too, and apparently more chuckable than the GT2. I change gear at 5,000rpm and when I want to go really fast it's 5,500rpm, but actually I don't think it makes much difference. I can use all the power because it hasn't got the potentially alarming onslaught of the turbocharged car, but in any case it handles better because it's lighter and it doesn't need as much weight management. I can get the GT3 RS though

the turns by revving it harder, working the gears more, though aiming for turn-ins, apexes and exits is the same challenge in both cars, no harder in one than the other. Powering out of a corner, the GT2 is so quick, violent even, but actually, at the apex, because of its weight, it's slower than the GT3 RS. The normally aspirated car is nicely balanced and I can accelerate smoothly through the turns more easily while carrying more cornering speed, so in that sense it's less effort. It has a more familiar performance delivery and that makes it the more pleasurable experience of the two. It is incredible to see what it's capable of on track and know that it can do that on the road, because essentially it is a road car. Nevertheless, I'm breathless as I steer back into the pitlane at Woodcote after my first set of hot laps.

At the end of the day, these two 997s are astonishing cars by any standards. They are formidable performers on track, yet much to my wonderment, they are actually road cars too. What a pair! But in choosing between the two, it's the GT3 RS that's champion for me.

#### 997 GT2 CS v GT3 RS: the racing driver's verdict

At the behest of its owner, the GT2 CS is liveried in the vivid yellow representing his friend Mike Wilds' crash helmet and numbered with a big 5-0 with distinctive black diamond pattern and black front lid, celebrating Mike's 50 years as a racing driver. We've also enlisted his circuit-driving skills helming the GT3 RS too.

The GT2? "It is sensational," he says, "and that's why I adore Porsches. They are a commitment car, so you give a little to allow the car to work; you don't go into a corner too quickly, you drive it, let it do its job. They talk to you, and if you get it wrong they don't like you and they'll bite you, but if you drive them as they need to be driven, they

love you and they'll give you more grip levels than you could ever imagine a GT car could give you. As a racing driver, it's nice to drive something that talks to you and you can utilise the skills you've learnt over 50 years.

As for the GT3 RS, this is the best one I've ever driven. It's absolutely fantastic, though you miss the pull of the turbocharger on the straight. I love power, but as a racing driver I love the GT3 because it's a challenge to go quickly. I love the GT2, but if I were to buy one over the other, I'd probably buy the GT3 RS; it's just a much nicer, balanced motor car."









# Porsche Club GB at Althorp

Porsche Club GB National Event Saturday 15th and Sunday 16th August 2015

Porsche Club GB's 2015 National Event will take place at Althorp in Northamptonshire over the weekend of 15th and 16th August.

The event will see various activities take place, including: Trade village, live arena, evening entertainment, National Concours, anniversary displays, exclusive tours of Althorp, Region and Register parking and much more!

The Althorp event will be open from 12 noon on Saturday 15th August.

To find out more or to book tickets call Porsche Club GB on 01608 652911.







egular readers of this magazine will need little reminding of just what a step change the 964 generation represented when it came to the evolution of our favourite sports car. It was a model that ushered in a whole new era, one that was smoother and more aerodynamic - the drag coefficient of standard models was a creditable 0.32 - not to mention a great deal more rigid than the 3.2 Carrera it succeeded. There was an electrically-operated rear spoiler for the first time, and even greater changes beneath the skin with 911 buyers getting their first taste of powerassisted steering, anti-lock brakes and a more modern suspension arrangement to replace the torsion bar springs of old.

However, despite the introduction of a new 3.6-litre, 'M64' engine, what the range lacked

was a turbocharged variant. In fact, it would be around a vear before one arrived and when it did, it was equipped with an updated version of the 3.3-litre motor from the 930, albeit one that promised greater performance according to Porsche. Neither the media nor the Porsche faithful were entirely convinced, and it took until the Paris Motor Show in the autumn of 1992 before a blown variant of the larger engine was unveiled. With the 993 waiting in the wings, the 3.6 Turbo was on sale for barely a year with Porsche building just 1,437 examples (the number of right-hand drive variants is harder to pin down, estimates ranging from around 50 to 150 examples depending on who you ask). Valuable and sought after today, just what made it so special? Well, the first thing was the engine dubbed M64/50, it was a unit that had come in for

some major modification compared to that found beneath the engine lid of standard 964s. With a 100 millimetres stroke and 76.4 millimetres bore (an extra three millimetres and two millimetres respectively), the headline numbers for the Bosch K-Jetronic injected and catalyst-cleansed 3.6 were an impressive 360bhp at 5,500rpm and 520Nm of torque at 4,200rpm, increases of 40bhp and 70Nm over the earlier 3.3. The compression ratio was raised slightly to 7.5:1 and while still utilising the single KKK turbocharger and intercooler from the smaller engine, it was deep inside the flat-six where the real changes had been made. The M64 crankcase effectively remained the same, but the pistons, connecting rods and crankshaft were all upgraded to cope with the extra power, the latter also receiving a vibration damper for smoother running. The cylinder bores were Nikasil







## "The upshot of all this work was a 964 Turbo that now boasted some mighty impressive performance figures"

coated and stainless steel rings had been added to improve the sealing of the cylinders, effectively curing the engine's propensity to leak oil from the area. The rocker arms and shafts were carried over from the 3.3, but new camshafts were fitted to operate the two valves per cylinder, a more aggressive profile increasing the valve lift on both intake and exhaust sides, and the cam timing had also been altered. The intake valves themselves were as found on the 3.3 but the exhaust valves that were increased in size to 42.5 millimetres were now made from 'P25' steel and no longer sodium filled. While we are on the subject of

the cylinder heads, they now boasted just one spark plug per cylinder, the twin distributors and dual plugs of the standard engine ditched for the new application. The plugs themselves were long-life items and the distributor drive was modified too. The heads also allowed for the addition of secondary air injection as part of the emissions system, with an air pump driven by a belt from the camshaft. The lubrication system was essentially the same dry sump arrangement found on the standard M64 engine, although it received minor modification in order to provide an additional oil feed to the turbocharger. Alterations

to the throttle body and a re-mapped ignition ECU completed the mechanical changes, while the engine and gearbox themselves now sat on revised hydraulic engine mounts. The upshot of all this work was a 964 Turbo that now boasted some mighty impressive performance figures, with a top speed raised to 174 miles per hour and the 0-62 miles per hour sprint despatched in an internal organ-rearranging 4.8 seconds. Not only that, but Porsche also claimed that the plumper torque curve noticeably reduced turbo lag, while economy was improved by somewhere in the region of five per cent. It's probably fair to say that the former would be more important to owners than the latter.

To cope with the added power now heading for the rear wheels, the clutch came in for some beefing up, as did the driveshafts, and the 3.6 was fitted with the five-speed manual G50/52 transmission and a dual-mass flywheel. Also



standard for the new model was a limited-slip differential that featured carbon plates for greater durability, with a locking ratio of 20 per cent under power and 100 per cent on the over-run. Needless to say, Porsche ensured that the new car would stop as well as it went and that meant the fitment of 322 millimetres discs at the front and 299 millimetres items at the rear, both ventilated and cross-drilled and clamped by aluminium alloy four-piston 'Big Red' callipers with larger brake pads. Bosch ABS was standard. Suspensionwise, the 3.6 Turbo still featured the basic 964 arrangement of struts up front and semi-trailing arms at the rear, and incorporated anti-roll bars at both ends and twin-tube gas dampers. However, with the M030 suspension package as standard, the new car sat 20 millimetres lower than the 3.3 and the spring rates had been stiffened by 12 per cent. Fronting all of this impressive hardware were new wheels. The 17-inch 'Cup' items





#### **BUYING TIPS**

- Bodywork: Expect it to be immaculate be wary of thing that isn't. Look closely for signs of mismatched paintwork signifying previous repairs, and make sure you know what was done.
- gine & Transmission: Strong if looked after, though oken cylinder head studs are worth checking for. ecialists recommend having a cylinder leak-down Specialists recommend having a cylinder leak-down test to ensure the head and cylinders are healthy. Be wary of any modifications, unless you're sure of their provenance. The gearbox is considered bomb-proof in normal use and the LSD shouldn't give trouble.
- Running gear: A steel plate within the alloy brake calliper can lift due to corrosion, so get them checked. At the time of writing, rear axle strut bushes (at the camber and toe adjustment point) were unavailable. They were £650 new. Watch for perished front wishbone bushes too you'll need two of them at £500 each including VAT.

fitted to the 3.3 were replaced by rather more dramatic looking 18-inch Speedline rims of a three-piece design. An inch wider at both the front and rear - measuring eight and ten inches respectively - they wore 225/40 rubber at the front and 265/30 at the rear.

It's perhaps no surprise that the exterior of the new car would receive attention too, buyers keen to ensure that onlookers were aware of the fact that they'd parted with almost £73,000 to get behind the wheel of this final 964 iteration. The first thing to give the game away would have been the more flared wheel arches, the result of a 25 millimetres increase in width to cope with the wider track and fatter wheels, and the particularly keen-eyed might also have spotted the more aerodynamic 'Cup' door mirrors and the rear bumper that featured the same centre section as the 964 RS. Less obvious would have been the reprofiled undertray beneath, and the fact that the drag coefficient had increased from 0.32 to 0.35. Still, with those split-rim wheels, fixed rear spoiler and lowered stance, little more adornment was needed to denote this particular 964 as something very special. Mind you, if a nosey passer-by had peaked through the windows, they would have certainly noticed the opulent interior that Porsche had endowed upon this new Turbo variant. The

basic cabin architecture might have been familiar from the rest of the 964 range - think classic five-dial instrument pack, centre console and electronically controlled heating and ventilation that actually worked - but it was smothered in soft leather. The sports seats were electrically adjustable and were matched by a lavish standard specification that included electric windows and central locking, an alarm and immobiliser, airconditioning, a top-notch hi-fi and a trip computer. As with all 964s, driver and passenger air bags were standard as well - the former still fronted by a slightly ugly steering wheel - but there was still some scope for buyers to add to the kit count, an electric steel sunroof and upgraded sound system being amongst the most popular choices.

Today, this coveted iteration of the Turbo breed commands very high prices, and it takes only the briefest skim of the facts and figures to realise why. Not only is it relatively rare - a fact guaranteed to get 911 enthusiasts like us drooling - but, more importantly, it's immensely capable. That engine packed a sledgehammer punch, but still managed to be civilised and controllable when you weren't in the mood, while the chassis modifications provided the 3.6 with supreme ability at maximum attack. Together with those looks, it's a very potent recipe indeed.



**Hexagon Modern Classics** 







His may be a name unfamiliar to most, but Bernd Kahnau is a man who deserves recognition for his contribution to the 911's evolution from 3.2 Carrera to 991. Total 911 speaks with the man himself about his three decades at Zuffenhausen

Written by Kieron Fenelly Photography by Kieron Fenelly & Porsche AG



They used to call him Der Elfer Macher, 'the man who made the 911', because Bernd Kahnau worked on six successive generations of 911. Indeed from 1989 to 2011, he was project manager and led the teams who developed the 993, 996,

997 and the 991. In his seminal work, Excellence Was Expected, Karl Ludvigsen refers to Kahnau as "a genial engineer of robust good humour with the sharp practical insight that marks all the best Porsche men." We went to meet Bernd Kahnau, now living in retirement, at his home of thirty years in Sachsenheim, near Weissach.

#### Herr Kahnau, what brought you to Porsche?

I come from Illinghen, just a few kilometres from here, and when I was two years old my father, Willi Kahnau, joined Porsche. He was always coming home in a different development model. You could say that those were my first test drives.

#### So you decided to follow him?

No, not quite. He did well at Porsche: he began in the repair department in 1954 before moving to customer support where he worked with Herbert Linge and later he rose to be production manager. I was naturally keen on cars, but I didn't want

## **ESSENTIAL FACTS**

- · Bernd's father was one of Zuffenhausen's first employees and became production manager
- · His first Porsche outing was when his father brought him and his mother home from maternity hospital in a 356 Pre-A
- · He had intended to go to BMW to not seem as though he was following his father to Porsche
- From 1981 to his retirement in 2011, he worked exclusively on the production 911
- Kahnau served under six Porsche CEOs
- · He holds an (unofficial) record for crashing a prototype only ten minutes after leaving the production line!

to work in the same firm as my father. I did my Prädikat (postgraduate engineering diploma) at Zuffenhausen, which included a design for the wheel centres, incidentally, but when I had completed my studies I intended to go to Munich and BMW. But in 1979 my father died suddenly. My mother took it badly and as my future wife was also working in Sachsenheim, I decided it would be better to go to Porsche rather than move away.

#### What was your first job at Porsche?

My engineering speciality was chassis and engines, and I began on the 924 GTS: the bodies came from Neckarsulm and we assembled

them at Zuffenhausen on the 928 production line. I was reporting to Friedrich Bezner and I worked alongside Klaus Bischof who had been reassigned to the 924 GTS after Fuhrmann's Verbot on further 911 development, which had also stopped the racing programme. It was a difficult time at Porsche. Then Peter Schutz took over and everything changed. Schutz had lots of ideas for the 911 like the Speedster and the five-speed 930 Turbo, which (in 1987) was the best 911 to date. When the 911 restarted, Bezner became the 911 project manager and I moved to Weissach where, still under Bezner, my job was to define the specification of the 911 for each model year. We began work on the SC Cabriolet - an important model that was missing from the 911 range. Gerhard Schröder did the roof - it was a real achievement: other manufacturers' cabrios weighed 100 kilograms more than their coupés, but for the 911 the increase was only 30 kilograms. However, even when we moved to the 3.2, there were many significant upgrades we couldn't make: we introduced detail improvements like cabin ventilation, but there was no room to fit air bags or ABS. What we really wanted to do was get rid of the torsion bar suspension.

#### That opportunity would come with the 964...

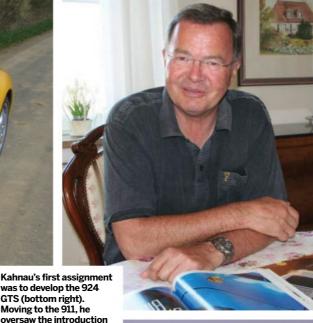
That was the first advanced 911: we took it to Algeria for high speed testing; later we













oversaw the introduction of ABS on the 964 (below), as well as PASM on the 997 (above)

rell as PASM ibove)

were testing the 959 there. Eventually we had to abandon Algeria because there wasn't sufficient distribution of unleaded fuel and we took testing to South Africa. The 964 incorporated huge chassis changes and it was also the first all wheel drive 911, but when it was launched people were disappointed with the lack of refinement and the trailing arm rear suspension didn't resolve the 911's oversteer. Even Paul Frère was critical.

## You mentioned Paul Frère: exactly how significant was he?

He was very close to Porsche in Professor Bott's time. We even built a special 964 for him. When Ulrich Bez took over, he became less influential.

#### Bez is associated above all with the 993...

I was appointed 993 project manager. I think it should have been Friedrich Bezner – he was long Professor Bott's right-hand man and without Friedrich there would have been no 964 Turbo; but he and I worked together on the 993, Ulrich Bez largely left us to get on with it. He was very taken up with Formula One (Porsche's ill-fated attempt to repeat the glory of the McLaren years) and his

(equally doomed) 989 project. For the 993 chassis we needed to do something about the rear axle. We had hoped to have steering rear wheels using the ZF system developed for the 965 (the aborted 964 Turbo) which BMW also used, but it proved too heavy and too expensive. Then Georg Wahl, project manager for the 989, joined our team when that car was abandoned, and he brought the light alloy suspension that had been developed for the stillborn four-door. That was the origin of the light stable axle. We would also have liked a new engine for the latest 911: we built 993 mules with Audi V8 units, but in the end we reworked the flat six, effectively for the last time.

#### Next was the 996, which broke the mould...

Porsche introduced the Boxster first. Both cars were ready, but the idea was to break in the new Elfer design on a new model and attract a younger market. The Boxster was well targeted.

#### The 996's looks were controversial though?

Yes, but it was a fantastic effort. The 996 was for the driver who wanted a sports car without the sports car noise. We reduced the cost of building the 996 by 15 per cent and improved performance: it lapped the Nürburgring six seconds faster. The spring rates were stiffer, the body was torsionally 55 per cent stiffer than the 993, yet the ride was more comfortable, helped by the longer wheelbase. Test driving the Cabriolet in Los Angeles, I belatedly discovered why an open car needs air conditioning – with the roof up you get cooked and roof down you get fried!

#### What advances did the 997 represent?

For the first time we established production of the convertible and Targa 911s with Coupé production – 40 per cent of 997s and 50 per cent of US sales were the open cars, which justified integrating manufacture of all three models from the outset. We also reworked the 997 chassis for PASM: the technology had been around for the 996, but we didn't introduce it because the system, used by Jaguar, was too soft. PASM gave us the adjustable sports suspension we wanted. The facelifted 997 in 2009 then saw the introduction of the PDK semi-automatic gearbox.

#### What do you think of PDK?

It's fantastic! We thought the biggest uptake would be in America, but the US is the biggest market for manual gearboxes.

## Porsche still charges a significant premium for the PDK though...

The PDK is a relatively complex component and development is expensive.

"For the 993 chassis we had hoped to have steering rear wheels using the system developed for the 965"



# "I remember 20 years ago we were worrying about having to go from six to four cylinders with turbos"

## The 991 was your final 911. After four years, how do you view it?

The 991 is 'more 911' than ever. It's even more responsive and it's lighter. We made more use of aluminium and thinner steel to reduce weight, and the engines offer massive performance. I agree the 991 is getting bigger, so Porsche needs to carry on reducing the weight.

## We know that all 911s from 2016 will be turbocharged. What is your view?

It's not a new discussion. I remember 20 years ago we were worrying about having to go from six to four cylinders with turbos for environmental reasons. Porsche will ensure its turbos perform like naturally aspirated engines (Wolfgang Hatz repeated as much at the 2015 Geneva show). Only 10 per cent of drivers care about having a naturally aspirated engine and they will go for the GT3.

## How do you view the other models in the Porsche range?

There is no argument that the Boxster accomplished everything Porsche had hoped; the Cayman likewise. Wiedeking wouldn't let us do a Rennversion of the Cayman so you see the GT4 is

a significant change of strategy. The drive to make the Cayenne came from Wiedeking and its success (and that of the Macan) proves him right. Ultimately his mistake was to challenge Ferdinand Piëch...

## The Panamera was also developed under Wiedeking, is that right?

The Panamera is a great car, but if it has the measure of the BMW, in Germany I think it struggles against the Mercedes S Klasse.

#### You retired in 2011...

Yes, after 32 years. A fantastic time but also very strenuous. We drove thousands of miles testing, everywhere from Alaska to Australia, and the pressure was always there. It's one thing to pull off a successful 911, but then you have to do it again and again and again, and each one has to be better than the last. And this is the Porsche 911, don't forget, not just any car. As development manager you worry a lot. If Walter Röhrl or Paul Frère were beside you in a test outing and had critical things to say, you couldn't get to sleep at night thinking endlessly about them. I had my first heart attack at the 996 Targa launch and I had an operation a couple of years ago. In retrospect it looks easy —

everything seemed to flow, but at the time it could be hard.

#### What lighter moments do you recall?

(Pointing to a picture of a comprehensively wrecked 964 in the photo album of his career, a retirement present) That was a pre-production C4, literally straight out of the factory and I rolled it about ten minutes later! Let's say it was a combination of over-enthusiasm and a not fully finished development model. Friedrich Bezner came up and said 'I need that car back on the road next week!' We were always crashing cars in those days, Roland (Kussmaul) especially. We used to call him 'der Crash Master'! In fact if you look closely at the picture, it is impressive how well the 964 has retained its structural integrity.

## What are your connections with Porsche at present?

I have contacts with the Museum and I've talked to one or two journalists, but otherwise my Porsche time is over. By coincidence though, Porsche recently opened its worldwide parts warehouse on the old air base here in Sachsenheim. That's where my father used to do 356 testing years ago.

#### What is in your garage, Bernd Kahnau?

We have a Cayenne, which is especially useful for towing my daughter's horsebox, and I have (hesitates slightly) a Mazda MX5! In the 70s, I raced an NSU 1200TT and had an Audi 50, but since 1979, I've driven nothing but Porsches. The MX5 is different – just simple fun.

## Choose the right fit for YOUR car.



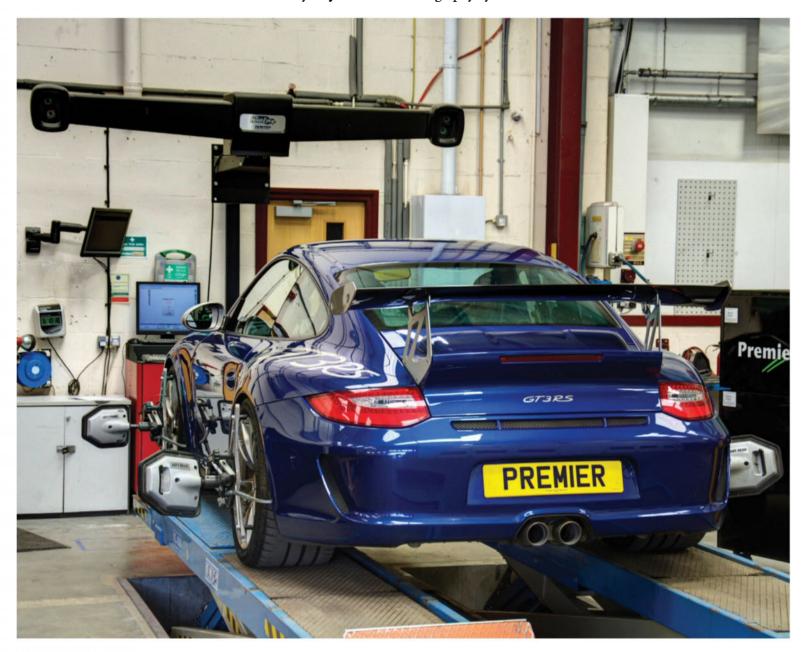


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# UNDERSTANDING GEOMETRY

Setting the right handling dynamics is crucial to the driving experience of your Porsche. Total 911 reveals the science behind six key areas affecting geometry

Written by Ray Chandler Photography by Tim Sneath



he term 'kinematics', which describes the controlled orientation of the road wheels by suspension links, has many technical aspects that are perhaps not as well understood by car owners as engines, tyres and brakes. While the suspension parts themselves are fairly straightforward pieces of fabricated metal, the relationship between the individual parts, the car and the laws of physics, is as complex as the demands that will be placed upon them when a 911 is in motion.

Fittingly, it was a 19th century German carriage manufacturer, Herr Lankensperger, who designed the steering linkage that automatically turned the front inner wheel through a larger angle than the outer wheel, thus avoiding sideways scrubbing on corners. This steering linkage system, later patented the Ackermann effect, is still in use on your Porsche today. With their excellent suspension system, modern Porsches are renowned for their

very good road handling and precise balance, but the caveat here is that the car must have all aspects of its separate yet interrelated suspension geometry settings correctly dialled. This includes all of the following: front and rear toe, front and rear camber angle, front caster angle, steering arm inclination, scrub radius and tyre slip angle.

These can all be set to the factory's 'best all-round' settings or even slightly tweaked to give a performance advantage in one area or another. Remember, getting the geometry correctly set and regularly checked is paramount to maintaining your Porsche's exceptional handling qualities, and it requires specialist knowledge and equipment to do so. Here's how each element can affect your 9ll's overall geometry setup.

Right: Hunter alignment systems use high resolution cameras mounted in front of the car to interact with access targets affixed to each wheel, feeding this live data to a computor screen





#### 1 Front and rear toe

Toe is how much the wheel and tyre are set pointing in or out from the straight-ahead position and when excessive, will quickly and visibly result in tyre wear at both front and rear. Front toe settings, linked to the car's directional stability, are crucial. With a slight toe-in set at the front, greater straight line stability is afforded to the car, though there's a caveat of a sluggishness in turning response as well as increased tyre wear due to the creation of a slight slip angle. But consider the opposite case where toe-out will accentuate the move away from the straight-ahead position into an involuntary 'bump steer' turn.

At the rear of the car the correct toe setting will give you more forward traction and better stability when turning into corners. Set too much toe-in and you will lose straight-line speed as the rear tyres, angled towards the centre line of the car, are driving against each other, increasing tyre wear dramatically. Even worse, if the toe is unequally set, the cars 'drive thrust' – created when you really put your foot down – will attempt to steer the car from the rear end

The GT3 RS in our pictures had a deliberate, temporary and excessive rear toe-in setting applied, which the owner wanted put back to factory set-up.

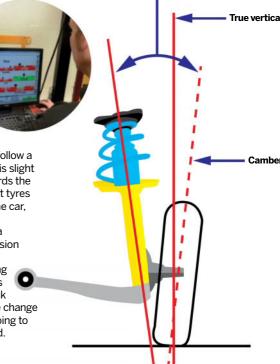


Above: Toe settings are usually set in tandem with camber

### 2 Front and rear camber angle

Competition cars often show a lot of negative camber on their suspension setup. This is easy to detect as the top of the wheel leans inwards and can be achieved by tilting the MacPherson strut itself inwards towards the centre line of the car. Negative camber is useful for several reasons: for example, when cornering, camber allows the edge of the tyre to roll a little on itself and spread out, thus increasing the tyre's contact area with the road. If negative camber is set, the outer edge of the tyre is slightly off the ground which makes it follow a very shallow conical path and not a straight one. This slight tilt of the wheel produces a sideways thrust in towards the centre line of the car on the tyre which, as both front tyres are doing this, improves the straight line ability of the car, making it less susceptible to steering wander.

Additionally, when cornering, the inner wheel on a bend loses some of its camber angle due to suspension movement and body roll, so the outside wheel – because it is the one that takes the load on cornering – increases its sideways camber thrust, which helps tighten the car into the curve. If you're planning track day work, then extra negative camber will offset the change to positive camber that happens when corning, helping to keep more of the tyre's contact patch on the ground.



Included angle



**Above:** Adjusting caster angle can make a car easier to drive, improving directional stability

### 3 Front caster angle

Tilting the MacPherson strut rearwards from the top creates caster angle. By leaning the strut away from a vertical position in a backwards fashion, the theoretical weight of the car is placed behind the wheel path (positive caster). The amount of caster in the suspension directly influences the control and stability of the wheels when travelling in a straight line. Increases in positive caster angle need to be applied with caution as if this change is excessive, it will lead to understeer and bump steer.

## 4 Steering Arm Inclination

SAI is the angle at which the stub axle carrier block (front hub/brake disc) is joined to the bottom of the MacPherson strut. As we know, there are already two angles here to consider - the strut leans in towards the centre line of the car, giving camber, and also backwards, giving caster angle. Now the whole hub carrier assembly creates yet another angle to be considered, which is the SAI. The most immediate effect of the hub carrier assembly sitting at a different angle to the strut is known as 'body-jacking', where the whole vehicle body is lifted upwards when the car is turned into a corner. The reason for this is when viewed from the front, the stub axles are just about horizontal when the steering is in the straight-ahead position. Because the two swivel points of the MacPherson strut are not directly vertically above each other, as steering lock is applied the strut rotates around its own axis, causing the stub axles, on a slightly

different plane, to be forced in a downwards arc. So, unable to push the tyre through the road, the body must lift upwards instead.

This lift creates a camber angle change, immediately reducing the static negative camber set. Body roll will accelerate that geometry change, giving controlled understeer – a fact utilised by some manufacturers who effectively dial in a change to positive camber to progressively lose some front-end grip. With the steering wheel released, it's partly the sheer weight of the vehicle which forces the stub axle carrier block downwards and back to its horizontal position, thereby self-centering the steering and giving driver feedback. As the hub carrier is integral to the strut, the SAI itself cannot be altered. However, any changes made to camber will automatically alter the SAI angle, so both are measured together and referred to as the 'included angle'.







#### 5 Scrub radius

Scrub radius is actually related not to tyres being scrubbed but to the distance between where the car's theoretical weight sits (projected in a downward line straight though the top of the stub axle's pivot centres and on to the ground) and the centre line of the tyre's physical contact point on the road. This projected point can be on the centre line of the tyre's contact point or either side of it, giving zero, positive, or negative scrub. The benefits of positive scrub are that it gives stable straight-running, but in the event of your 911 having either unbalanced or uneven braking, it will require you to actively counter-steer. However, that's not the case when negative scrub radius has been dialled in. Excess scrub, either positive or negative, is to be avoided, as although road feel increases so does the steering effort required, as well as making the car more sensitive to road bumps and shocks.



Above: Scrub radius should be reduced to zero where possible on both road and race cars



Steering Axis Inclination

True vertical

## 6 Tyre slip angle

Slip angle is the angle between a rolling wheel's actual direction of travel and the direction towards which it is pointing. It is caused by tyre wall flex and the slip angle is the measurement of how much the sidewall flexes. Up to a point, some tyre slip is good as it improves the tyre's contact point, improving grip.

The photographs above demonstrate tyre flex. A business card rests against the sidewall of the tyre but it does not move when the steering wheel is moved slightly away from the straight ahead position (when stationary). This is because the road wheel moves before the tyre's contact patch moves.



## TUNING & AUTODESIGN



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# PORSCHE'S LOST LEGEND



The first fully homologated racer to leave the factory has been a footnote in the 911's motorsport legacy. We set the record straight with a scintillating test drive

Written by **Josh Barnett** Photography by **Daniel Pullen** & **Ulrich Trispel Collection** 

uring the Porsche 9ll's formative years, racing efforts from the factory were few and far between as the motorsport department at Zuffenhausen was tasked with developing mid-engined prototypes capable of overall victory in prestigious endurance events around the world. This steadfast focus on outright glory was to pay off spectacularly as first the 907 secured a 1-2-3 at the 1968 24 Hours of Daytona, before the all-conquering 917 triumphed at Le Mans in 1970 and 1971. However, the latter proved too dominant, with the CSI (the competition arm of the FIA) effectively banning the 917s with the introduction of a three litre limit for 1972.

Porsche voted with its feet, turning away from front line sports car racing and leaving its customer teams to take up the charge with the now uncompetitive 908. Meanwhile, back at the factory, the 911 was finally given the wholescale attention it was promised during the R programme in 1967. Only four factory prototype 911 Rs were ever built, leaving the other 20 906 Carrera-engined customer cars unhomologated for GT-class competition, forcing them to officially race among the prototype ranks.

After the R's cameo, Porsche offered the T/R kit in 1968 and 1969, providing competitors with a kit of motorsport parts that turned the 2.0-litre 911T into a track-ready racer before the 2.3-litre ST superseded it in 1970 and 1971. Like the T/R, the ST was not a full production model, instead providing customers a selection of performance parts (such as flared arches and lightweight body panels) from which they could cherry-pick to create their ideal competition car although,

officially, only 33 911 STs were actually ever built in the period.

For 1972 though, with no prototype programme on the cards, Zuffenhausen built this: the 911 S-R, Porsche's first fully homologated Group 4 racer. Based on the newly introduced 2.4-litre 911S, the S-R was a factory built 'Renn' version, with the M491 option bringing an enviable number of upgrades over the normal S road car.

Under the aluminium deck lid sat a specially developed 911/70 flat six. The 2.4S's 70.4 millimetre stroke was retained, but new aluminium alloy barrels saw the cylinder bores increased to 86.7 millimetres, resulting in a healthy 2,492cc. Interestingly, rally S-Rs were given the 911/73 version, which saw a slightly reduced capacity of 2,466cc thanks to its 89 millimetre bores and 66 millimetre stroke (the latter figure the same as the original 901). In race trim, the intake and exhaust ports were polished

and featured larger valves, a twin-plug ignition system was utilised, and the Bosch mechanical injection featured high-butterfly intakes specifically designed for racing. The end result was 270bhp at a heady 8,000rpm and 262Nm of torque on offer.

It is this engine that has me immediately enthralled, bursting into life with a twist of the key and an ample prod of the throttle. As it warms up, just above idle, the flat six rumbles imposingly from the twin tailpipes of its racing exhaust system, but it is once it's fully under way that the real magic happens. Under hard acceleration it is unquestionably the loudest 911 I've had the delight to drive in this job (aided no doubt by Porsche's removal of all the cockpit sound deadening). Yet, rather than simply making a noise for the sake of it, the S-R's tone is truly beautiful, full of nuanced sounds that permeate throughout my skull, ridding me of all other

thoughts. There's a purity to the engine's note that is testament to the air-cooled flat six's organic nature. As the engine races passed 6,000rpm, the timbre goes ever higher before silence suddenly punctuates the moment. I slot the 915 gearbox (fitted with an extra oil cooling pump on the S-R) from second to third, making a deliberate dogleg across the gates then stepping back on the gas.

Watching the red needle of the 10,000rpm rev counter dance around its arc, backed by the idiosyncratic music of a racing 911 motor, is a truly surreal experience, as if I'm starring in a period movie about the Seventies motorsport scene. Briefly I'm up to fourth before braking and blipping my way back down to second as the unburned fuel crackles through the tailpipes on the over-run.

If this car were nothing but that engine, it would still be perfect. But, parked up at Hedingham Castle (home of the famous 'Classics



at the Castle' Porsche show), it's hard not to be drawn in by its undoubted aesthetic beauty too. This is what all 911s should look like. Muscular enough to emasculate standard classic 911s (and stand out from the resplendent 18th Century Georgian mansion behind it), yet retaining the iconic purity of the standard neunelfer silhouette, the S-R is a triumph of form and function. Both the front and rear arches have been widened; the former items would find their way unchanged onto the following year's 2.8 RSR, while the latter are the same as flares fitted to the ST two years previous. At the front, the chin spoiler - designed by Tilman Brodbeck - features two gauzed vents designed to provide cooling air to the larger oil coolers (unique to the S-R).

Inside those imposing arches sit eight and nine-inch-wide Fuchs alloys, complete in that beguiling satin finish. The dual circuit brakes feature ventilated discs at all four corners, with an aluminium version of the 908's quick-release callipers included as standard at the front. However, this particular example features the optional magnesium items at the front, with special aluminium callipers at the rear. Despite the lowered suspension, the S-R still sits surprisingly high by modern standards yet, as a car designed for competition at the Nürburgring Nordschleife, its lofty stance is wholly understandable. If anything, it simply adds to its period charm.

Like all of the racing 91ls that had gone before it, the S-R was put on a crash diet. As well as the aluminium deck lid and rear panel, the doors were a unique lightweight design while the bonnet was made from fibreglass, underneath which sits a plastic 110-litre fuel tank, perfect for endurance racing. Totalled up, the weight saving regime knocks 115 kilograms of the mass of a standard 91lS 2.4, quite remarkable given the road car's

relatively lithe starting point. As expected, on the road, the S-R's low weight provides the car with agility unmatched by any road-going 91lS.

My test route finds me tackling a right-left-right sequence of second and third-gear sweepers. The succession of direction changes would normally be enough to start upsetting the rear-engined dynamics of almost any 911, yet the S-R's resolve to grip the bitumen remains steadfast (no doubt aided by its widened stance and huge Michelin TBI5 tyres). If anything, the S-R's ability to switch its course feels more akin to a mid-engined racer than a standard 911, such is the lithe nature of its beautifully balanced chassis. I push a little harder to see if its colours change and my extra commitment begins to uncover the traditional 911 character, with the front end beginning to wash away through the entry to each turn. However, the S-R is so incredibly user-friendly (not what I was expecting from a thoroughbred racing





911 from the Seventies) that I'm instantly able to overcome the initial understeer.

Normally, a gentle lift would help to tuck the nose towards the hedge, sharpening the line and enabling me to get back on the throttle on the corner exit. Yet, with Richard Attwood's words from issue 118 ringing in my ears, I instead chose to adopt the 'proper' 911 driving style, getting harder on the gas than sense suggests, forcing the S-R to just break traction, gently pushing the rear end round and switching the car's dynamics from slight understeer to the most minute degree of oversteer. With the soprano flat six singing, I'm shooting out the corner with more speed than I could imagine possible, using the extra torque over a standard 2.4S to cover ground at a ludicrous (yet linear) rate.

I've never tried to drive a classic 911 like that before, yet in the S-R, it – and I – feel totally unflustered, both man and machine working well within their limits. Despite having never even set eyes on a real S-R before today's test, it feels like I've known this car for eons.

The experience is no doubt aided by the remarkable simplicity that greets me inside the cockpit. There are just four dials (the clock deleted as standard) while the Scheel bucket seats are as ergonomic as they are stunning. Driving wise, it's just you, three perfectly placed pedals, the wonderful 380 millimetre padded leather sport steering wheel and the best 915 five-speed gearbox

I've had the pleasure to stir. Nothing dilutes the organic driving experience and the S-R is all the better for it.

Unarguably the best classic 9ll driving experience money can buy doesn't come cheap, though. This particular 2.5-litre S-R is currently up for sale at respected specialist Maxted-Page with a healthy seven-figure price tag: "Values have historically sat just above a 2.7 RS Lightweight and below a 2.8 RSR," explains proprietor, Lee. Of course, something that I have so far neglected to mention is that the valuation takes into account this particular S-R's impressive history.

Overall, just 21 S-Rs were built by Porsche (with any other cars from the period built by teams such as Kremer from a kit of bits). This particular car - chassis no. 911 230 1195 - was sold new by Porsche's Munich dealer to Anton Fischhaber, a talented Bavarian racer who on occasion raced for Zuffenhausen in a semi-works capacity. At a cost of DM 49,680 when it was delivered in April 1972, the S-R was hardly cheap in period, costing around \$4,500 more than a 2.7 RS Touring would cost the following year. Yet, Fischhaber ('Toni' to those who knew him) put it to good use, winning the GT class in the 1972 European Hill Climb Championship. Today, while the EHCC still exists as an FIA-sanctioned series, hill climbing is predominantly a niche area of the motorsport world. However, at the time of the S-R's creation, racing up some of Europe's toughest climbs was

a prestigious business. Bear in mind that, just a few years earlier, Porsche designed the 909 Bergspyder solely for European hill climbing. Can you imagine Weissach doing the same today?

Fischhaber was dominant during his three-year tenure with no. 1195, winning nine times (with a further 13 podiums). After taking the '72 hill climb crown, Fischhaber was beaten to the title the following year, although the German still took third place at the challenging Krähberg hill climb (pictured on page 69). He regained his title in 1974, although by this time his S-R had been converted to 3.0 RSR specification to keep up with the fierce competition. Fischhaber also took his yellow S-R to the Nürburgring 1,000km, finishing 14th overall in both 1972 and 1973, driving alongside Leopold van Bayern (a prince of Bavaria).

Like many S-Rs, no. 1195's competitive years may have been short-lived but it certainly crammed them full of silverware. Having had a taste of this 911's abilities, that is no real surprise, especially given that the S-R platform laid the foundations for the 2.8 and 3.0-litre RSRs, two of Porsche's most successful 911 racers. However, as I take one slide back into the classic bucket seat for a final blast back to Maxted-Page's rural HQ, the history doesn't matter to me. Instead, as the flat six once again roars into sonorous life, it is the here and now that I am revelling in, driving Zuffenhausen's finest road-legal yet incredibly race-ready creation. Just perfection.



Legend

Living the

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



1999 996 Carrera 4



Rob Clarke Bristol, UK

**Date acquired:** February 2014

received an invite to an 'Experience Day' hosted by Dick Lovett (OPC Bristol), and since my wife dislikes my 996 yet liked a Macan, an opportunity to drive a couple of cars seemed like a good idea. My wife dislikes three things about my 996: the steering is heavy, as is the brake pedal, and it's too low! So, based on reviews and driving a Cayman recently, I knew that the steering and brakes are now different in the Porsche range and assumed the 911 was no different. I booked us in for the Experience Day and organised two test drives, a Boxster and a 911 GTS Convertible (PDK).

We signed the necessary paperwork and started browsing the display cars. This was an experience in itself with your usual display of all things Porsche, augmented with a Carrera GT, RS's and a rare 993 GT2, which was only one of seven right-hand drive examples in the world. Our OPC rep, Paul, found us and we went out to the car – for insurance purposes the rep went in the passenger seat while my wife drove, so I had to fold myself into the back. I am five feet 10 inches so not that tall so I did manage to get in and even though it

was a squash, it was manageable for the test drive. So my first experience of a 991 GTS was squashed, hunched over in the back!

First impressions always count with cars, so when my wife sat in the driving seat she seemed to find it comfortable. She fired the engine, let it settle into a gentle flat six burble, and we hit the roads. Paul directed us through some country roads and we made brisk progress with little excitement – all very placid and sure-footed. We pressed the Sports Exhaust button and as the exhaust note changed for the better, my wife started giving the car more throttle. The car was easy to drive and smooth over the bumpy roads with plenty of power on tap. This was a car she could drive everyday and find it relaxing.

After driving the 911 she was off in a Boxster, which was a completely different experience. To her, the Boxster didn't feel as smooth and seemed almost uncomfortable at the speed limit – she felt it wanted to go faster and wouldn't just cruise, so the Boxster may be a good car but not after you have driven a 91!! I did have a brief session in the GTS and it was fantastic, though the responsiveness of the

brakes did catch me out. As I approached my first junction I hit the brakes and the car went into a full emergency stop (they're far more servo assisted on the 991).

My wife was driving the car in normal mode, whereas I engaged Sports Plus. I will be honest, I've always been sceptical of magazines saying the latest version of a car is good, but the Total 911 team are right, this is a great car - it's amazing what 15 years can do. I thought my 996 was good having preferred it to a new Boxster and Cayman S, but now it feels like an old, bland car! Everything about the GTS was great: the steering was balanced, the performance was superb, the exhaust note kicked in lower in the rev range - the only thing I disliked was the price tag. Both of us liked the GTS and we think the reason we liked it over the Boxster and the Cayman was because it was the more all-rounded GT. The Boxster and Cayman are great cars but they just seemed to lack the all-round capability, comfort and driver experience of the GTS. This puts us into a dilemma: do we get finance and become a four-car (two 911) household? We cogitated for a few weeks and decided we





did need a second Porsche in our life, but we decided on the family option and have just put a deposit down on a Macan S Diesel. So we are now in the waiting game as the waiting list is around 12 months.

I have also been trying my hand at paint repairs on my 996. I know that my car needs a respray so I decided that I had nothing to lose and equipped myself with a fibre brush, touch up paint, fine paint brushes and wet and dry paper. Stage one was to clean the stone chip with a fibre brush and to treat it with anti-rust treatment; stage two was applying the paint with ultra-fine brushes; stage three was attacking the bodywork with wet and dry paper. This was easier than expected - I managed to smooth off the paint and after some T-cut and polish, I had a smooth finish, except for one small issue - the paint didn't match! I've spoken to the OPC body shop and they said the colour of my car (Zenith blue) has a reputation for fading. They advised me to spray the paint on and not use a brush, as spraying changes the paint molecules, giving a better match. My plan is to get paint made to match the car and a small airbrush.

#### 1978 911 SC



Wilhelm Lutjeharms Čape Town, South Africa

Date acquired: January 2015



his was the first and most expensive (for now) upgrade I've done to the SC. With the suspension bushes that I ordered from the USA having arrived, the SC was booked in at Auto Corner in Somerset West.

As it is a fair drive from where we live, I had to drop the car off on a Saturday and pick it up a week later. Jumping straight from the SC back into a Mercedes-AMG C63 S test car was again a stark reminder of the automotive development over the past three and a half decades, but at the same time a testament to why we appreciate these old cars.

I was looking forward to the improvement new bushes and drop links would make.

After only a few hundred metres, I realised that there was less noise from the bottom of the car. It rides slightly softer and if I'm not mistaken, that iconic nose bobbing is there for the first time since I've owned the car. My appreciation for car has increased by a notch.

As I don't have a car lift or jack stands, I am burning to actually see the new bushes installed, but that will have to wait. For now I'm happy with the upgrade and fortunately it should last a good number of years.

The eBay bug also got hold of me, but I was able to restrict my spending. The two purchases entail the December 1980 issue of Car magazine and an original road test article of a 1978 911 SC. I can't wait to have a read!

## 2011 997.2 GT3 RS & 2015 991 GT3



**Tony McGuiness** an Diego. USA

Dates acquired: February 2011 & December 2014



have been spending far too much time with my 991 GT3 lately. I know what you're thinking... 'How can you spend too much time with a 991 GT3?' One really can't. However, since I was trying to take the new GT3 through its paces, I have been ignoring another special member of my family - My GT3 RS. I'm aware of how fortunate I am to have this problem. So because I haven't been giving the GT3 RS attention, during the weekend of the American Independence Day, July 4, I took it out for a run into the hills of San Diego.

I have missed her. I am in love with her all over again. Although, I must say, I never fell out of love with the GT3 RS, I had just forgotten how very special the GT3 RS is. The car has reinvigorated me. Never again will I wait so long to drive the RS. The car reminds

you how honest it is. It's raw. It made me work as I drove it through the hills and I loved it. The sound, the feel, the smell and the lack of the plush interior are all qualities that puts it a step above the 991 GT3. It is even more clear to me now, it truly is a purist's 911.

Don't get me wrong, I really enjoy my 991 GT3. It wears the 'GT3' title very well and is indeed thrilling. I love revving it to 9,000rpm, it is easy and fun to drive. However, I don't need to be as on top of my game as I feel I need to be in my GT3 RS. That's not necessarily a bad thing. But this weekend, I realised I had spent far too much time in the GT3 and needed to get back to my roots. After a three hour drive in the amazing mountains, hills and stunning roads in San Diego, I came to one conclusion that buying the 997.2 GT3 RS was the best purchase I have ever made.

#### 2007 997.1 GT3



**Ben Przekop** Georgia, USA

**Date acquired:** July 2012

ast weekend, my friend Tim Nagy asked me: "How would you like to take three seconds off your lap times?"
Tim is the chief driving instructor of PCA's Alabama Chapter who was hosting their June DE at Barber Motorsports Park near Birmingham, which is also the home of PCNA's Sport Driving School.

"One secret to faster laps at Barber", he explained, "is to take the three high speed corners at the end of the three main straights (turns one, eight and twelve) by trail braking and carrying maximum speed through those corners. If you do that, Barber becomes scary fast". In PCA we teach beginner students to brake in a straight line and downshift before these corners which are at the end of the three longest straights at Barber, and then gradually get back on the power as you turn through the corner - that is the safest way to introduce novices to high performance driving. "But what we need to start teaching our advanced students", Tim said, "is to get through these corners by braking somewhat later and easier and actually trail braking all the way to the apex, and downshifting before the next turn. Try it out in baby steps, because it can be very dangerous if you don't get it just right." Thus challenged and properly cautioned, I proceeded to try this out during my next two sessions. I did indeed feel I was carrying significantly more speed around these corners, although since I hadn't been timing my laps, I could not prove it by the clock. So I am eagerly looking forward to trying to master this new technique during my upcoming DE weekends at Sebring in July and VIR in November.







Speaking of mastery, I was able to promote my student for the weekend, Mike Veal, to solo status on Saturday. I teased Mike that the reason he was such a good driver was that he was 'cheating' by driving such an incredibly capable car, his gorgeous 2015 GT3, but in truth Mike is a natural who drives very smoothly and will continue to get faster and faster, no matter what he drives. Speaking of

The next thing I know, both of these hot shoes will be in Group 4 and passing me just like the fire-breathing 935s did all weekend! Talk about scary fast!





Maurice van den Tillaard The Netherlands

Date acquired: October 2014 n my last report I wrote that I had several people interested in my 3.2 Carrera. Everything worked out really well and the car sold within a week after I swapped the yellow headlights back to white ones and the BBS back to the stock Fuchs wheels.

Now the hunt for a water-cooled car has started. I missed out on a mint low mile 996TT, which is a real bummer. The car was sold right under my nose... a week later the same thing happened with a mint RS2, yes, that's right, the Audi which is registered as a Porsche on its title. I love those cars but good ones are extremely hard to find. Then I found a very early 996 C2 (#929) with a bunch of rare factory options like M030 lowered suspension, M220 LSD, Turbo seats, sunroof delete, rear wiper delete and hollow spoke wheels. Fairly low mileage too, but I'm having a hard time to make an appointment with the seller and it almost looks like he doesn't want to get rid of the car although it's on his website. I also looked at two 996 C4S's. One was an imported pile of rubbish from the USA



and the other was pretty nice. A low mile car also, but it had about all the options which I would never ever order. I fell in love with its seal grey painted body though. The interior had quite a bit of small damaged spots, but the outside was really good. All maintenance done by Porsche dealerships;

new brakes, new radiators, but those horrible options... heated seats, a phone, park assist and so on.

Maybe I should go on holiday first and make up my mind on what I want to do. There are plenty of 996's, but the prices are already on the rise.

#### 2003 996 Turbo



Ray Chandler Surrey, UK

**Date acquired:** August 2011



aving witnessed a fellow 911 owner struggling to change a tyre on the hard shoulder, I thought it would be a good exercise if I got all the kit out and went through a wheel change. Even better, I decided to get my wife involved.

My idea was met with a long silence when I proposed it, but I thought it best if I took my wife through the drill of getting the 12-volt inflator out, plugging it in, finding the wheel bolt lock tool, getting the jack prepared, locating the space saver wheel and getting that ready. We were almost there, with just the wheel nuts to slacken. I showed which way to slacken and let my wife try. It hurt her hands so she went to get her gardening gloves to try again. While I waited I thought I'd



slacken the bolts for her. I weigh 80 kilograms and despite bouncing on to the wheel brace, I couldn't shift the wheel bolts at all. I went to get a T-bar and socket and bumped into my wife returning with a small plastic card. "This", she said proffering her ADAC car recovery card, "is my wheel change kit". This piece of magic covers not just one car but the person and whatever vehicle he/she is driving, all for €90 (approx. £64) a year for the two of us. Next the holts should be tightened to 130nm but somehow mine were above that Then I. weighed the space saver tyre, jack, handler, locking bolt and pump and found that I was carrying an extra 18.5 kilograms that I was never going to use. The gain in space for a summer trip is significant!





1994 993 Carrera 2 Kyle Fortune

**Date acquired:**December 2014

fter a fairly busy few months WCM's been a bit quiet. It's been on a couple of runs out, but nothing particularly noteworthy – my 205 GTI having been used a bit more frequently this month, as the double buggy fits in it more easily. Practical as 911s are, the front boot's no match for a phil&teds.

It's been out of the garage more to sort the place out than for drives – the back of mine is a mess. Thankfully the 993 is compact, which means even with a garage full of all that stuff you don't want to throw away but needs storing, there's space for everything. Just. I've added the obligatory tennis ball to string to prevent me from reversing it into the bbq, while a pair of wheel chocks means it's never left standing with the handbrake on or in gear. There's space for a far bigger garage and office where our current garage is so, needless to say, this winter I'm going to be pricing up some building works and making sure Mrs Fortune's on board.

July means it's due an MOT and

July means it's due an MOT and service, too, so it'll be down at Autofarm soon. I'm hoping it's not too pricey, as every penny spent is money that could potentially go into that garage project next year. So, thinking ahead, a window in the office so I can see the car or not? I reckon it'd be a nice feature, but it might be counter-productive, as temptation to go driving instead of working might be too great on some days. We'll see how that service goes, of which you'll hear

#### 2005 997.1 Carrera S



Chris Wallbank Leeds, UK

**Date acquired:** November 2012



o, my new tyres haven't arrived yet and don't really want to drive any long distances while my tread is so low, but I did still manage to make it down south to one of the best automotive shows England has to offer, in my opinion – the Goodwood Festival of Speed 2015.

I was particularly looking forward to this year's because Porsche were displaying their two latest GT's, the GT3 RS and Cayman GT4! It was the first time I had seen either of the models in the flesh and I definitely wasn't disappointed. I can't say I've ever been a fan of cars in orange, but with the GT3 RS it just works. The yellow GT4 was looking just as spectacular in it's bright eye-piercing yellow. It was also great to see them both go up the hill during the 'Moving Motor Show'.



Whilst visiting the Porsche display I even tried my luck at entering a competition to win a track day with a GT4 in which you had to draw your own graffiti piece and upload it to Instagram. I did my best, but think I'll just stick to the photography for now!

They also had the latest black editions of the Boxster 981 and Carrera S 991 on display which looked absolutely stunning, but maybe I'm a little biased as I've always gone for black cars with black interiors!

Elsewhere, there were plenty of classic Porsches and marques on display that you rarely get the chance to see, including Le Mans winning cars going up the hill!

All in all, another great year for Goodwood! If you've never been yet, I recommended you put it on the list for next year.





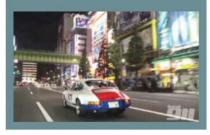
**Magnus Walker** os Angeles USA

Date acquired:

ast month was a crazy one filled with lots of travel. Karen and I ıhad been invited to Tokyo, Japan, for the opening of the independent Porsche garage Crosspoint 25. The owner, Murata, had recently visited me in LA a few months prior and had told me of his vision for Crosspoint 25, a place where Porsche enthusiasts could work on their own cars, store them and visit the club house for the P-car community.

120 hours. I can honestly say we did not time period, it was an adrenalin-filled rollercoaster ride from the moment we landed. The car culture scene is amazing

total of six Porsches ranging from the Crosspoint 25 1980 SC, 277 replica all the way to a 964 RWB – and RUF GT3I, covering at least 500 kilometres between 10-4 am on the opposite side of the road I was used to. During my trip I had the opportunity to shoot my Tokyo Outlaw video in the replica 277 car from Murata. Driving through the city at night was an adrenalin fuelled rush, a lot of the times for sure

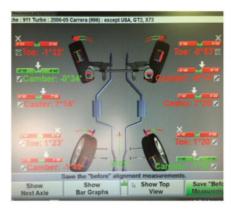


2003 996 Turbo



Joel Newman London, UK

Date acquired: April 2014

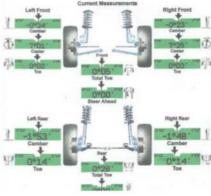


ometimes the smallest modifications can reap the largest rewards, so this month I have a tip for all 911 owners. Last month I attempted to have my car's geometry set up properly. I discovered that the bushes in all of my lower suspension arms were in such bad nick that they needed replacement before I even thought about accurate wheel alignment.

With the parts fitted, the creaks and groans were gone and the steering felt a lot tighter. But it was tramlining over what seemed to be even ground and it felt so fidgety at all speeds that briefly I thought the car was possessed.

When fitting any major new suspension component, alignment suffers, added to the fact that I have not addressed this since I fitted my Bilstein B8 shocks.

"I have never seen a 911 this far out of whack" was the first thing the technician said



to me, and that was before the car even made it onto the laser wheel alignment rig! The subsequent picture I snapped of the screen shows just how bad it was!

Toe was the primary issue, with the front wheels pointing left and the rears right, but my camber was also out, as was the caster! In 45 minutes the car was unbolted and rebolted with all the wheels pointing and angled in the right direction, costing me under £100.

The results are dramatic. The Turbo feels wonderful. It is no featherweight, but the simple step of making sure all four wheels are straight has helped to hide some of the side effects of all those KG's. As bang for buck improvements go this is the best of them!

If you own a 911, then find a local alignment specialist with a laser rig and get your car looked at. It will make you re-evaluate just how competent your 911 is.



1979 930 3.3



Richard Klevenhusen Rio de Janeiro, Brazil

May 2012

live in Rio de Janeiro where in winter, the minimum temperature reaches 18 degrees Celsius and in the summer, temperatures hit 42 degrees Celsius.

When I bought my 1979 930 I had to change two things to adapt it to the climate: the first was the air conditioning. It's not enough to simply lower the temperature of the air; here in Brazil, the air needs Date acquired: to stay cold. The second item was to install a fan behind the front bumper to cool the oil. The Porsche

930 does not like the combination of high temperatures and traffic jams.

I can say that I am pleased, as these adjustments did not affect the engine performance and or change the car's design, but they still provide huge comfort.



1982 SC & 1989 964 Carrera 4



**Gina Purcell** Oxford, UK

Date acquired: April 2014

here are some people who share their 911 addiction while living life on fast

forward. My fast-forward Porsche friend is Jude. This March she gave birth to a daughter, Arya, who will spend many happy hours in the back of Mum's 1970 911E. Finding a rear-facing baby seat isn't easy for classic 911s - it was a Google search that threw up an item on eBay. The seller mentioned that she had another one for when her son was over five and had also owned a seat for inbetween newborn and five years, so Jude found one via eBay again

and bought it from a Boxster owner.

So, nearly all the bases were covered in one fell swoop and all before baby Arya even arrived.

#### 1979 911 SC



**Sean Parr** Harpenden, UK

**Date acquired:** May 2015

he new 911 SC I bought a couple of months ago has now been gone through and decisions as to the way forward have been agreed with Steve at Trade Werx - it is getting the works. Steve had it up on the hoist and says underneath it's the best old Porsche he's ever seen. It's all in very good shape, so we are doing all the bits that aren't. This has started a cascade of new Porsche parts arriving at 'Chez Parr', including new shock absorber inserts from BOGE, a new petrol tank, two NOS 911 wings without indicator holes which I found through the Impact Bumpers website, and two leather seats to replace the very worn ones in the car.

Steve has done all the mechanical stuff already, the struts are fitted, the tank is in and now the real fun begins. It will get new wings the ones that are on are in excellent condition with just one small rust patch, but they are the wrong year wings for a 1979 car and have side repeaters, which I hate. It will also get new sills and kidney bowls on one side and all windows will come out and any corrosion cut out and replaced with fresh new steel. Then it'll have a full respray in the original Guards red. There is not enough T-cut in the world to make this puppy shine properly (or even for the colours to match around the car)! We are getting the warm up regulator and steering rack rebuilt and refreshed with new bushings throughout

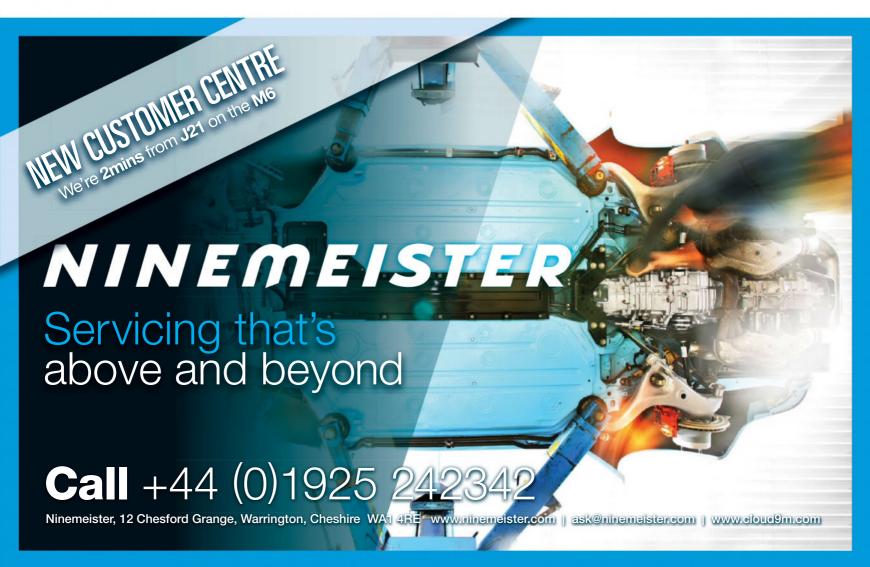


the suspension, it will firm it up nicely and be much more like driving a new car rather than a tired one. There's nothing more dangerous than a tired Porsche in the suspension region in my book! Then when it comes back it will be super cool, very sexy and ready for the remainder of the summer to enjoy.

The 912 continues on its merry way, not to be forgotten. It sits in the garage smiling and ready to go (that can take a while as a small starter, overbored engine with high lift cams, high compression and dual Webers can be tricky) and then the fun starts, when it is a ball to drive. My daughter Freya has just come



home from a year in Australia and has never seen it close up. First words? "It's really pretty, I love it, can we take it for a drive?" It started first time. What a great car.





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Everything you need for your 911

#### **Poole Accident Repair**

Behind the scenes at one of just fifteen UK Porsche recommended body repairers





# Data file

Full specs & data of every 911, including the production 901, can be found beginning on page 86

094

■ Showroom

Looking for your next 911? The classifieds from our independent specialist partners is the first place you should start your search

99

Servicing & tuning
Get the very best from your Porsche 911 with the help of our selected performance and maintenance specialists

110

Insurance & finance

Get the best cover for your Porsche for both road and track use to ensure happy, safe motoring



# ACCIDENT ACCIDENT REPAIR

Dealing with damage to your prized 911 can make for a stressful experience but Porscherecommended repair centres such as Poole Accident Repair will eliminate that anxiety and provide an experience to remember – for all the right reasons

Written by Lee Sibley Photography by Phil Steinhardt













milar to that howroom

t makes for a peculiar trade, the accident and repair industry. With a business based on chance – or misfortune, if you will – nearly all motorists will hope to never have to deal with an accident repair centre for the entirety of their driving lives. However, reality dictates that vehicles do accrue damage through accidents or vandalism, and it's here where an accident repair centre becomes an important – crucial, even – go-to haven for repair and restoration work. So, what can you expect should your Porsche collate damage and need repairing to a first-class standard?

The Porsche-recommended repair industry in the UK has had a sizeable shakeup this year. Previously, some 33 centers nationwide were able to offer Porsche-recommended repair services, but this has been more than halved. Now, just 15 centers carry that prized accolade of being recommended by Porsche Cars Great Britain.

In the wake of the shakeup from Porsche, each recommended repair centre covers a much larger geographical area: Poole Accident Repair cover a huge area in the south of England, reaching east and west as far as Chichester and Honiton

respectively, and as far north as Warminster. Two Official Porsche Centers fall inside this region, at Bournemouth and Portsmouth.

As I pull up to the purpose-built, Porscherecommended Accident Repair premises in Poole (just twenty minutes away from our own **Total 911** headquarters) I'm pleasantly surprised by what I'm greeted with. The building is large in size and completely immaculate in appearance. Resplendent with a healthy array of pristine 911s parked outside, there's a corporate ambiance to the place and I'm excited to step inside and see more.

"We've worked hard to achieve this image," Group Director Leon Coupland says as he greets me in the lavish reception area. "For years when you mentioned an 'accident repair center' people have imagined a greasy under-the-arches workshop where you're given a rough quote for a job on the back of a cigarette box. Of course, this couldn't be more different, especially for a prestige center such as ourselves. You'll find we take as much pride in representing the Porsche brand as an OPC."

Leon's last statement is immediately evident. The reception area and lobby is just as spacious and boasts a similar colour palette to an Official Porsche Centre, and the coffee area to my right gives me OPC déjà vu. The face of a 991 Turbo alloy wheel forms a stunning wall-mounted timepiece behind me and there's plenty of Porsche reading material presented on a coffee table next to a pair of comfy sofas similar to those found in an OPC showroom. The area at large is so similar, in fact, that anyone who's remotely familiar with a modern OPC showroom will immediately feel comfortable in these surroundings.

"We understand that customers don't need us until they have an accident, and we understand that dealing with the consequences of accruing damage to their vehicle makes for a stressful time," Leon adds as we begin our tour of the building. "We work very hard to take as much stress as possible from the situation – that's why our buzzwords are 'trust' and 'transparency'." Perhaps the most apt visual metaphor of this is the assessment room, which is made of glass panels stretching from floor to ceiling (again similar to a sales office at an OPC). Inside is a desk with some seats either side, and a centrally-mounted computer screen on the wall. Its in this room where the process of repairing a damaged Porsche begins. Leon explains:











## "We work very hard to take as much stress as possible from the situation – that's why our buzzwords are 'trust' and 'transparency"

"We'll take pictures of the damage to the customer's vehicle and bring them up on the screen here. Our Customer Service Vehicle Damage Assessor will then use those pictures to clearly illustrate the extent of the damage with the customer, before discussing what's needed to return the vehicle to its original, unblemished guise, and what the cost of this will be." Most business coming through the doors at Poole Accident Repair hails from insurance companies (Leon quotes around 95%) but there are customers who come straight to the Centre and, as we step into the modern workshop area, I can see why. The immaculacy of the large workspace is first to hit home. In front of me, various Porsche body panels with fresh, hardened paint are suspended off the floor, ready to be affixed back on to their respective sports car. A paint booth is in use to my right, while spaciously marked bays each with a car inside line the entire left wall of

the workshop, with a pair of two-poster ramps at the rear providing easy access to even the most difficult of locations on a sports car. A storage room containing marked factory parts can be seen further along to the right, while beyond that is the inspection bay where customers are traditionally reunited with their repaired Porsche.

Of course, a key feature of the 991-generation is the increased use of aluminium for its shell (as we looked at in issue 127), and Poole Accident Repair are a specialist aluminium repair centre with a dedicated aluminium repair booth on site. This is part of the center's cache in providing a service you simply wouldn't find at even the most respected independent restoration specialist. "Each Porsche is put back to factory standard with factory parts from our highly trained staff who are adept at specialising in new Porsche technologies, for example the alloy 991s," Leon enthuses.

#### **Company profile**

- Group Director: Leon Coupland
- First opened: 2004
- Location: Poole, Dorset, UK
- Most common vehicle repaired: Was 997s, now 991s
- Most bizarre repair project: A 356 came in for some minor repairs due to vandalism and left the premises two years later after a full restoration!
- Interesting fact about the business: Poole Accident Repair don't just cater for modern Porsches, they also specialise in both the repairing and restoration of classic 911s too

#### Contact

- Website: www.pooleaccidentrepair.co.uk
- **Telephone:** +44 (0)1202 733866



The case for a Porsche-recommended repair center such as Poole Accident Repair is convincing: offering unrivalled expertise and repair techniques using the very latest in specialist equipment, beset in a relaxed and OPC-like atmosphere, there's little need to look outside the network. If the worst does happen, fear not. With a Porsche-recommended center such as Poole Accident Repair, your coveted Porsche 911 is in nothing but safe hands.



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## 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.

#### General valuations:

This reflects the general market trend for a model's used value compared to the previous financial quarter. The next review will be Sept 2015. The last was for June '15.

#### Ratings: \*\*\*\*

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

#### Sales debate: Five things first-time 911 buyers should do



After buying a house, buying a car is normally the second biggest purchase that you will ever make. Of course, a Porsche 911 is no ordinary car and while that makes buying one even more special, it can also make it a daunting experience. What should first-time buyers look out for? With the help of two independent specialists, Total 911 endeavours to find out.

Both Charlie Abbott from independent specialist, Paul Stephens, and Mikey Wastie, proprietor of Autofarm, agree that the first step is identifying what you want to get out of your 911 ownership experience: "Is it for commuting, track days or just polishing?" asks Wastie. "It's important to choose the right car that matches your  $needs\,most\,closely."\,From\,this, Abbott$ points out that you can then narrow down which generation of 911 you would ideally love, while considering if your choice falls within your budget.

From there, research is key, with both specialists placing it high on the to-do list. Wastie explains that it's vital to "look for weaknesses" in your chosen generation, identify "the versions that are most popular and learn when upgrades or items were changed in the specification." This will enable you to narrow down your options to a specific model and specification,

which you can then start searching for on websites and through dealers. The added benefit of this, Wastie explains, is you can then "see which cars keep popping up for sale and which ones are hanging around".

Abbott explains that even once you've chosen which 911 to buy and researched it, you should still be patient and wait for the right car to come to market. "Don't rush into a car that doesn't fulfil your needs." When you have spotted an example that takes your fancy, both Abbott and Wastie feel that getting the car checked over by a respected inspector is a safe move. Alternatively, the former points out that buying from a specialist negates this need.

For their final step, the two experts differ in their approach. Wastie feels that "joining an owners' club and meeting the owners of the car you want" is a useful endeavour as you can "draw from their experiences." Meanwhile, Abbott explains that, even after following these steps, remaining grounded is important: "Be realistic if you are buying a classic Porsche: even though they are extremely well built, they still have their classic car characteristics.

By heeding their advice, the proposition of buying your first Porsche 911 should be made as simple (and exciting) as possible. all while ensuring you get your hands on a great example of your chosen model.

#### **911 2.0-litre** 1964-67



when the prototype appeared in 1963, this is the car that set the style for all 911s to follow. veloped to replace the 356, a four-pot 912 was also made.

Production numbers: 9.250 Issue featured: 123 Engine capacity: 1,991cc Compression ratio 9.0:1 Maximum power: 130bhp @ 6,100rpm Maximum torque: 149Nm @ 5,200rpm 0-62mph: 8.3sec

Top speed: 131mph Brakes: Front: 282mm discs; Rear: 285mm discs Wheels & tyres: Front: 4.5x15-inch; 165/80/R15 Rear: 4.5x15-inch: 165/80/R15 Length: 4,163mm Width: 1,610mm Weight: 1,075kg

#### \*\*\*\*

#### (0 & A series) 🖮

#### **911S** 1967-68



Porsche soon produced more oowerful variants. The first of these was the 911S – for Super – which had a higher compression engine and twin Weber 40IDS carburettors. Top speed: 137mph

Production numbers: 4.015 Issue featured: 114 Engine capacity: 1,991cc Compression ratio: 9.8:1 Maximum power 160bhp @ 6,600rpm Maximum torque 179Nm @ 5,200rpm

Front: 282mm discs; Rear: 285mm discs Wheels & tyres: Front: 4.5x15-inch; 165/80/R15 Rear: 4.5x15-inch: 165/80/R15 Length: 4,163mm Width: 1,610mm Weight: 1,030kg

#### \*\*\*\*

#### (C & D series)

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



ingine improvements ncluded revised cylinder neads, larger valves and stronger con rods. 1970 'D' series cars had hot-zinc ted undersides.

Production numbers: 4 927 Issue featured: 107 Engine capacity: Compression ratio Maximum power 155bhp @ 6,200rpm 196Nm@4,500rpm 0-62mph: 7.0sec

Top speed: 137mph Front: 282mm discs; Rear: 290mm discs Front: 6x15-inch: 185HR Rear: 6x15-inch: 185HR Length: 4,163mm

#### Width: 1,610mm Weight: 1,020kg $\star\star\star\star\star$

#### (C & D series) =

0-62mph: 8.0sed

#### **911S** 1969-71



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 good power.

Production numbers: 4 691 Issue featured: 120 Engine capacity: Compression ratio: 9.8:1 Maximum power 180bhp @ 6,500rpm Maximum torque 199Nm @ 5,200rpm 0-62mph: 6.6sec

Top speed: 145mph Front: 282mm discs; Rear: 290mm discs Front: 6x15-inch: Rear: 6x15-inch: 185HR Length: 4,163mm Width 1,610mm Weight: 1,020kg



#### (F series) -

#### **Carrera 2.7 RS** 1973



Production numbers:

The RS had a 2,687cc engine that developed 210bhp. The body was lightened and fitted with flared rear arches and an optional ducktail spoiler. Sport nd Touring versions available

1 590 Issue featured: 106 Engine capacity: 2,687cc Compression ratio: 8.5:1 Maximum power 210bhp @ 6,300rpm 255Nm @ 5,100rpm

0-62mph: 5.6sed

Top speed: 152mph Front: 282mm discs; Rear: 290mm discs Wheels & tyres: Front: 6x15-inch: 185/70/R15 Rear: 7x15-inch: 215/60/R15 **Length**: 4,163mm Width: 1,610mm



#### **911E** 1973



Production numbers 4,406 (including Eseries) Issue featured: 117 Engine capacity: 2.341cc Compression ratio: 8.0:1

Maximum power 165bhp @ 6,200rpm Maximum torqu 206Nm @ 4,500rpm 0-62mph: 7.5sec

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 iler of the 911S Top speed: 137mph

Brakes Front: 282mm discs; Rear: 290mm discs Wheels & tyres: Front: 6x15-inch ATS; Rear: 6x15-inch ATS: 185HR Length: 4,163mm Width: 1,610mm



#### (G, H, I, J series) **911S** 1974-77



911S was now a mid-range model comparable to the previous 911E. It had the same body changes as the base

Production numbers: 17124 Issue featured: n/a Engine capacity: 2.687cc Compression ratio: 8.5:1 Maximum power 173bhp @ 5,800rpm Maximum torque: 235Nm@4,000rpm 0-60mph: 7.0sed

nodel, and came as standard ith 'Cookie Cutter' rims

> Top speed: 142mph Brakes: Front: 282mm discs; Rear: 290mm discs Wheels & tyres: Front: 6x15-inch; 185VR Rear: 6x15-inch: 185VR Length: 4,291mm Width: 1,610mm Weight: 1,080kg



#### (G & H series) 🗻

#### **911 Carrera 2.7** 1974-76



From 1974. Carrera name vas given to range-topping 911. Essentially the same engine as previous year's RS for all markets except USA. Whaletail available from '75.

Production numbers: Issue featured: 104 Engine capacity: 2,687cc Compression ratio: 8.5:1 Maximum power 210bhp @ 6,300rpm Maximum torque: 255Nm @ 5,100rpm 0-62mph: 6.3sec

Top speed: 148mph Front: 282mm discs; Rear: 290mm discs Wheels & tyres: Front: 6x15-inch; 185VR Rear: 7x15-inch: 205VR Length: 4,291mm Width: 1,610mm Weight: 1,075kg



#### **911L** 1967-68



and the range expanded: and sat alongside the ntry-level 911T

Production numbers: 1.603 Issue featured: n/a Engine capacity: 1,991cc Compression ratio: 9.0:1 Maximum power 130bhp @ 6,100rpm Maximum torque: 173Nm @ 4,600rpm 0-62mph: 8.4sed

In 1967, the 911 was updated the 911L (Lux) was standard high-performance 911S and

Top speed: 132mph Brakes Front: 282mm discs: Rear: 285mm discs Wheels & tyres: Front: 5.5x15-inch; 185HR Rear: 5.5x15-inch; 185HR Length: 4,163mm Width: 1,610mm Weight: 1,080kg

 $\star\star\star\star\star$ 



(A & B series) =

**911T** 1967-69

6.318 Issue featured: 127 Engine capacity: 1,991cc Compression ratio: 8.6:1 Maximum power 110bhp@5,800rpm Maximum torque: 156Nm @ 4,200rpm 0-62mph: 8.8sec (est)

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

Top speed: 124mph Brakes: Front: 282mm discs Rear: 285mm discs Wheels & tyres Front: 5.5x15-inch: 185HR Rear: 5.5x15-inch; 185HR Length: 4,163mm Width: 1,610mm Weight: 1,020kg

\*\*\*\*

2.826

#### **911E** 1968-69



ne 911 received its first major pdate, evolving into what is nown as the B series. The 911E replaced the 911L as the standard' car. The 'E' stood or 'Einspritz' (injection). **Production numbers** 

Issue featured: n/a Engine capacity: 1,991cc Compression ratio 9.1:1 Maximum power 140bhp@6,500rpm Maximum torque: 175Nm @ 4,500rpm 0-62mph: 7.6sec

Top speed: 130mph Brakes: Front: 282mm discs Rear: 290mm discs Wheels & tyres Front: 5.5x15-inch: 185HR Rear: 5.5x15-inch; 185HR Length: 4,163mm Width 1,610mm Weight: 1,020kg



#### **911S** 1968-69



Production numbers:

2.106

ike the E. the Sgained 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.

Issue featured: n/a Engine capacity: 1,991cc Compression ratio 9.9:1 Maximum power 170bhp @ 6,800rpm Maximum torque: 183Nm @ 5,500rpm 0-62mph: 7.0sec (est) Top speed: 140mph Brakes: Front: 282mm discs: Rear: 290mm discs Wheels & tyres: Front: 6x15-inch: 185/70/R15 Rear: 6x15-inch: 185/70/R15 Length: 4,163mm Width: 1,610mm Weight: 995kg

#### \*\*\*\*

#### (C & D series)

#### **911T** 1969-71



curve was now flatter, making the car more driveable. Ventilated discs from the S vere fitted and a five-speed arbox became standard.

Production numbers: 15 082 Issue featured: 107 Engine capacity: Compression ratio: 8.6:1 Maximum power 125bhp @ 5,800rpm Maximum torque: 169Nm@4,200rpm 0-62mph: 7.0sec (est)

ike the E, the 911T's torque

Top speed: 127mph Brakes Front: 282mm discs; Rear: 290mm discs Front: 5.5x15-inch: 165HR Rear: Front: 5.5x15-inch: 165HR Length: 4.163mm Width: 1,610mm Weight: 1.020kg



#### (E series) =

#### **911E** 1972



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

Brakes

185HR

Top speed: 137mph

Front: 282mm discs:

Rear: 290mm discs

Wheels & tyres:

Front: 6x15-inch:

Rear: 6x15-inch:

Production numbers 4,406 (including F series) Issue featured: 117 Engine capacity: Compression ratio: 8.0:1 Maximum power 165bhp @ 6,200rpm Maximum torque 206Nm@4,500rpm 0-62mph: 7.5sec

185HR Length: 4.163mm Width: 1,610mm Weight: 1.077kg  $\star\star\star\star\star$ 

#### (E series) =

#### **911T** 1972



A lower compression ratio and the inclusion of Zenith 40 TIN triple-choke carburettors led to the relatively lower powe output of 130bhp despite the w 2,341cc engine size

Production numbers: 16.933 (including F series) Issue featured: n/a Engine capacity: Compression ratio 7.5:1 Maximum power 130bhp @ 5,600rpm Maximum torque: 197Nm @ 4,000rpm 0-62mph: 7.6sec

Top speed: 128mph Brakes Front: 282mm discs: Rear: 290mm discs Front: 5.5x15-inch: 165HR Rear: 5.5x15-inch: 165HR Length: 4.163mm Width: 1,610mm

Weight: 1,077kg

\*\*\*\*

#### (E series) =

#### **911S** 1972



2.4-litre engine increased torque. The mostly chrome brightwork had a black decklid grille with a '2.4' badge External oil filler on right rear ing confused some

**Production numbers** 5,054 (including 1973) Issue featured: 120 Engine capacity: Compression ratio 8.5:1 Maximum power 190bhp@6,500rpm Maximum torque 211Nm @ 5,200rpm 0-62mph: 6.6sec

Top speed: 140mph Brakes Front: 282mm discs; Rear: 290mm discs Wheels & tyres: Front: 6x15-inch: 185/70/R15 Rear: 6x15-inch: 185/70/R15 Length: 4.163mm Width: 1,610mm Weight: 1.077kg

#### \*\*\*\*

#### (F series) =

#### **911S** 1973



the 911E, including deletion of the external oil filler. Also ont and rear lights and black nt quarter grilles.

Production numbers: 5.054 Issue featured: 56 Engine capacity: 2.341cc Compression ratio: 8.5:1 Maximum powe 190bhp @ 6,500rpm Maximum torque 211Nm @ 5.200rpm 0-62mph: 6.6sed

he 911S had same upgrades dopted black trim around the Top speed: 140mph

Brakes Front: 282mm discs; Rear: 290mm discs Wheels & tyres: Front: 6x15-inch: 185/70/R15 Rear: 6x15-inch: 185/70/R15 Length: 4.163mm Width: 1,610mm Weight: 1,075kg



#### (F series) =

#### **911T** 1973



US-bound F series 911Ts were the first 911s to have Bosch K-Jetronic fuel injection, improving emissions. This was mainly mechanical, with ome electronic sensors Production numbers

16,933 (including Eseries) Issue featured: 127 Engine capacity: 2.341cc Compression ratio: 7.5:1 Maximum powe 130bhp @ 5,600rpm Maximum torque 197Nm @ 4,000rpm 0-62mph: 7.6sec

Top speed: 128mph Brakes Front: 282mm discs; Rear: 290mm discs Wheels & tyres: Front: 5.5x15-inch: Rear: 5 5x15-inch:

165HR Length: 4,163mm Width: 1,610mm Weight: 1,077kg



#### (G. H. I. J series) =

#### **Carrera 3.0 RS** 1974



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

109 Issue featured: 102 Engine capacity: 2,994cc Compression ratio: 8.5:1 Maximum power 230bhp @ 6,200rpm Maximum torque 275Nm@5,000rpm

0-62mph: 5.3sec

Production numbers:

Top speed: 152mph Brakes Front: 300mm discs; Rear: 300m discs Wheels & tyres: Front: 9x15-inch: 215/60/VR15 Rear: 11x15-inch: 235/60/VR15 Length: 4,135mm Width: 1.680mm Weight: 900kg



#### (G. H. I. J series) 🔺

#### **911** 1974-77



'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.

Production numbers: 9.320 Issue featured: 121 Engine capacity: 2,687cc Compression ratio: 8.0:1 Max power: 148bhp @ 5,700rpm (165bhp from '76) 0-62mph: 8.5sec Top speed: 130mph

Max torque: 235Nm@3.800rpm (4,000 from '76) Brakes Front: 282mm discs; Rear: 290mm discs Wheels & tyres: Front: 6x15-inch: 185VR Rear: 6x15-inch; 185VR Length: 4.291mm Width: 1,610mm Weight: 1,075kg

#### \*\*\*\*

#### (I & J series) 🗻

#### **911 Carrera 3.0** 1976-77



Carrera 3.0 was basically the same model as the previous arrera, only fitted with a new 2.994cc engine, essentially om the 911 Turbo.

Production numbers: 3 687 Issue featured: 125 Engine capacity: 2.994cc Compression ratio: 8.5:1 Maximum power 197bhp @ 6,000rpm Maximum torque: 255Nm@4,200rpm 0-62mph: 6.3sed

Not sold in the U.S. the

Top speed: 145mph Brakes Front: 282mm discs; Rear: 290mm discs Wheels & tyres: Front: 6x15-inch; 185/70/VR15 Rear: 7x15-inch; 215/60/VR15 Length: 4,291mm Width: 1,610mm Weight: 1,093kg



#### **930 3.0** 1975-77



itted with a KKK turbo. nis was the world's first production Porsche to be ırbocharged. Flared arches, whaletail spoiler and four

2.850 Issue featured: 116 Engine capacity: 2,994cc Compression ratio: 6.5:1 Maximum por 260bhp @ 5,500rpm Maximum torque: 343Nm@4,000rpm 0-62mph: 5.5sec

ed gearbox were standard Top speed: 155mph Production numbers

Front: 282mm discs; Rear: 290mm discs Wheels & tyres: Front: 7x15-inch; 185/70/VR15 Rear: 8x15-inch; 215/60/VR15 Length: 4,291mm Width: 1775mm Weight: 1,140kg (1,195kg from '76)

\*\*\*\*

#### **930 3.3** 1978-83



Production numbers:

Larger engine resulted in an extra 40bhp, and an intercooler on top of the engine led to the adoption of a new 'tea trav' spoiler. Brakes were upgraded from 917 racer.

5,807 (plus '78-'79 Cali cars) Issue featured: 116 Engine capacity: 3,299cc Compression ratio 70.1 Maximum power: 300bhp@5,500rpm Maximum torque:

412Nm@4,000rpm

0-62mph: 5.4sec

Top speed: 160mph Brakes: Front: 304mm discs: Rear: 309mm discs Wheels & tyres: Front: 7x16-inch; 205/55/VR16 Rear: 8x16-inch; 225/50/VR16 Length: 4,491mm Width: 1,775mm Weight: 1,300kg



#### **911 SC** 1978-83



From 1978, the SC was the only normally aspirated 911. Developed from the Carrera 3.0, but produced less power to suit all markets. Upgraded Sport options were available.

Production numbers: 60,740 Issue featured: 127 Engine capacity: 2,994cc Compression ratio: 8.5:1/8.6:1/9.8:1 Maximum power: 180/188/204bhp@ 5,500rpm Maximum torque 265/265/267Nm

0-62mph: 6.5sec Top speed: 141/146mph Brakes: Front: 287mm discs: Rear: 295mm discs. Wheels & tyres: Front: 6x15-inch; 185/70/VR15 Rear: 7x15-inch; 215/60 Length: 4,291mm Width: 1,626mm Weight: 1,160kg (1978)





#### 930 3.3 1984-89



Revised engine added more power and torque in 1984, while in 1987 Motronic engine management improved efficiency and emissions upor its return to the US market

11,135 Issue featured: 116 Engine capacity: 3,299cc Compression ratio: 7.0:1 Maximum power: 300bhp@5,500rpm Maximum torque: 432Nm@4,000rpm 0-62mph: 5.4sec Top speed: 161mph Brakes: Front: 304mm discs; Rear: 309mm discs Wheels & tyres: Front: 7x16-inch; 205/55/VR16 Rear: 8x16-inch; 225/50/ VR16 Length: 4,491mm Width: 1,775mm Weight: 1,300kg

#### **Carrera 3.2** 1984-89



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 ignition and fuel systems.

Production numbers: 70,044 Issue featured: 114 Engine capacity: 3,164cc Compression ratio: 10.3:1 Maximum power: 231bhp @ 5,900rpm Maximum torque: 284Nm @ 4,800rpm 0-62mbl: 5.6sec

Top speed: 152mph Brakes: Front: 286mm discs; Rear: 294mm discs Wheels & tyres: Front: 7x15-inch; 195/65/VR15; Rear: 8x15-inch, 215/60/ VR15 (16 inches for '89) Length: 4,291mm Width: 1,652mm Weight: 1,210kg



#### **3.2 Clubsport** 1987-89



Removing 'luxuries' sliced off around 40kg of weight. Revised engine management gave a higher rev limit of 6.840rpm. Suspension uprated and LSD standard.

(1,335kg from '86)

Production numbers: 340
Issue featured: 126
Engine capacity: 3,164cc
Compression ratio: 10.3:1
Maximum power: 23lbhp@5,900rpm
Maximum torque: 284Nm@4,800rpm
0-60mph: 5.1sec

Top speed: 152mph Brakes: Front: 286mm discs; Rear: 294mm discs Wheels & tyres: Front: 6x16-inch, 205/55/VR16; Rear: 7x16-inch, 252/55/VR16 Length: 4,291mm Width: 1.650mm Weight: 1.160kg



#### **964 Carrera 4** 1989-93



Heavily revised bodywork, deformable bumpers over coil-spring suspension and four-wheel-drive marked this radical overhaul of the "87 per cent new" 911.

Production numbers: 13,353 (Coupe)
Issue featured: 111
Engine capacity: 3,600cc
Compression ratio: 11.3:1
Maximum power: 250bhp @ 6,100rpm
Maximum torque: 310Nm @ 4,800rpm
0-62mph: 5,7sec

Top speed: 162mph Brakes: Front: 298mm discs; Rear: 299mm discs Wheels & tyres: Front: 6x16-inch; 205/55/ZR16 Rear: 8x16-inch; 225/50/ZR16 Length: 4,250mm Width: 1,652mm Weight: 1,450kg



#### **964 Turbo S** 1992-93



Production numbers:

180kg lighter than Turbo. Intakes in the rear arches funnelled air to the brakes, while the engine power was boosted by 61bhp. RS-spec uprated suspension.

Issue featured: 108 Engine capacity: 3,299cc Compression ratio: 7.0:1 Maximum power: 381bhp @ 6,000rpm Maximum torque: 490Nm @ 4,800rpm 0-62mph: 4,6sec Top speed: 180mph Brakes: Front: 320mm discs; Rear: 299mm discs Wheels & tyres: Front: 8x18-inch; 225/40/ZR18 Rear: 10x18-inch; 265/35/ZR18 Length: 4,250mm Width: 1,775mm Weight: 1,290kg



#### 964 3.8 RS 1993



Identifiable by a lightweight Turbo bodyshell, large rear spoiler and 18-inch Speedline wheels. Power came from a new 3.8-litre unit with hot-film air sensor and twin exhaust.

55 Issue featured: n/a Engine capacity: 3,746cc Compression ratio: 11.6:1 Maximum power: 300bhp @ 6,500rpm Maximum torque: 359Nm @ 5,250rpm

0-62mph: 4.9sec

Top speed: 169mph Brakes: Front: 322mm discs; Rear: 290mm discs Wheels & tyres: Front: 9x18-inch; 235/40/ZR18 Rear: 11x18-inch; 285/35/ZR18 Length: 4,250mm Width: 1,75mm Weight: 1,210kg



#### **993** Carrera 1993-97



Restyled bodywork had swept-back headlamps, curvaceous wings and blended-in bumpers. Engine revised, with VarioRam

Production numbers: 38,626 Issue featured: 110 Engine capacity: 3,600cc Compression ratio: 11.3:1 Maximum power: 272bhp@6,000rpm Maximum torque: 330Nm@5,000rpm 0-62mph: 5.6sec

revised, with VarioRam available from 1996.

Top speed: 168mph Brakes:
Front: 304mm discs; Rear: 299mm discs Wheels & tyres: Front: 7x16-inch;

Wheels & tyres: Front: 7x16-inch; 205/55/ZR16 Rear: 9x17-inch; 245/45/ZR16 Length: 4,245mm Width: 1,735mm Weight: 1,370kg

\*\*\*\*

#### **993 Carrera 4** 1994-97



As per the 993-model Carrera, but with four-wheeldrive. Transmission was half the weight of the previous Carrera 4, and was designed to give a more rear-drive feel.

Production numbers: 2.884 (Coupe) Issue featured: 111 Engine capacity: 3,600cc Compression ratio: 11.3:1 Maximum power: 272bhp@6,000rpm Maximum torque: 330Nm@5,000rpm 0-62mph: 5.8sec

vTop speed: 166mph Brakes: Front: 304mm discs; Rear: 299mm discs Wheels & tyres: Front: 7x16-inch; 205/55/ZR16 Rear: 9x16-inch; 245/45/ZR16 Length: 4,245mm Width: 1,735mm Weight: 1,420kg



#### **930 SE** 1986-89



on 935 race cars, with pop-up headlamps. Front spoiler made deeper to accommodate extra oil cooler rear intakes fed air to brakes

Production numbers: 50 (UK only) Issue featured: 99 Engine capacity: 3,299cc Compression ratio 7.0:1 Maximum power 330bhp@5,500rpm Maximum torque 432Nm @ 4,000rpm

0-62mph: 4.6sec

Top speed: 173mph

Brakes: Front: 304mm discs; Rear: 309mm discs Wheels & tyres: Front: 7x16-inch: 205/55/VR16 Rear: 9x16-inch 245/45/VR16 Length: 4,491mm Width: 1,775mm Weight: 1,335kg

\*\*\*\*

#### **959** 1986-1988



lad tech later used on 911s including 4WD, ABS and twin turbos. A 959S was also available, featuring lighter loth Sport seats, five-point narnesses and a roll cage

Production numbers: Issue featured: 108 Engine capacity: 2,850cc Compression ratio: 8.3:1 Maximum power: 450bhp@6,500rpm Maximum torque: 500Nm@5,000rpm 0-60mph: 3.9sec Top speed: 196mph

Brakes

Front and rear: Ventilated drilled discs; 4-piston aluminium calipers Wheels & tyres: Front: 8x17-inch; 235/45/ZR17 Rear: 9x17-inch; 255/40/7R17 Length: 4,260mm Width: 1.840mm Weight: 1,450kg

\*\*\*\*

#### Speedster 1989



10.3:1

Maximum torque

0-60mph: 6.0sec

284Nm@4,800rpm

00 per cent watertight. Top speed: 148mph Production numbers 2,274 (for both wide and Brakes: narrow-bodied) Issue featured: 128 Engine capacity: 3,164cc Compression ratio: Maximum power 231bhp@5,900rpm

Front: 286mm discs Rear: 294mm discs Wheels & tyres: Front: 6x16-inch: 205/45/VR16 Rear: 8x16-inch; 245/60/VR16 Length: 4,291mm Width: 1.775mm Weight: 1.220kg

\*\*\*\*

arrera 3.2 with a chopped.

steeply raked windscreen and

nood and stripped-out interior

ood was not designed to be

Porsche insisted the simple

#### **930** LE 1989



**Production numbers:** 

sentially an SE without a antnose front, the LF had ne same engine, front spoiler, sill extensions and rear air ntakes. One made for every OPC of the time.

Issue featured: 110 Engine capacity: 3,299cc Compression ratio 7.0:1 Maximum power 330bhp @ 5,500rpm Maximum torque 432Nm@4,000rpm 0-62mph: 4.6sec

Top speed: 173mph Brakes: Front: 304mm discs; Rear: 309mm discs Wheels & tyres Front: 7x16-inch: 205/55/VR16 Rear: 9x16-inch; 245/45/VR16 Length: 4,491mm Width: 1.775mm Weight: 1,335kg

\*\*\*\*

#### **964 Carrera 2** 1990-93



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

Production numbers: 19 484 Issue featured: 119 Engine capacity: 3.600cc Compression ratio: 11.3:1 Maximum power 250bhp @ 6,100rpm Maximum torque 310Nm@4,800rpm 0-62mph: 5.6sec

new option.

Top speed: 162mph Brakes Front: 298mm discs; Rear: 299mm discs Wheels & tyres: Front: 6x16-inch: 205/55/ZR16; Rear: 8x16-inch 225/50/ZR16 Length: 4.250mm Width: 1,652mm Weight: 1.350kg

 $\star\star\star\star\star$ 



3,660 Engine capacity: 7.0:1 Maximum power Maximum torque

#### **964** Turbo 1991-92



his 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.

Production numbers: Issue featured: 116 Compression ratio: 320bhp @ 5,750rpm 450Nm@4,500rpm 0-62mph: 5.4sec

Top speed: 168mph

Brakes Front: 320mm discs: Rear: 299mm discs Wheels & tyres: Front: 7x17-inch: 205/50/ZR17 Rear: 9x17-inch: 255/40/ZR17 Length: 4.250mm Width: 1,775mm Weight: 1.470kg

#### \*\*\*\*

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



64 Leichtbau made use of surplus parts from 953 Paris-Dakar project. Highlights nclude four-way adjustable differential, short-ratio earbox and stripped interior

**Production numbers** Issue featured: 54 Engine capacity: 3,600cc Compression ratio 11.4:1 Maximum power 265bhp@6,100rpm Maximum torque 332Nm@4,800rpm 0-62mph: unknown

Top speed: unknown Brakes Front: 322mm discs Rear: 299mm discs Wheels & tyres: Front: 7x16-inch: 205/55/ZR16 Rear: 9x16-inch: 245/55/ZR16 Length: 4.275mm Width: 1,652mm

#### Weight: 1.050kg \*\*\*\*

#### 964 RS 1991-92



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

Production numbers: 2 405 Issue featured: 116 Engine capacity: 3,600cc Compression ratio 11.3:1 Maximum power 260bhp @ 6,100rpm Maximum torque 310Nm @ 4,800rpm 0-62mph: 5.4sec

Top speed: 162mph Brakes: Front: 320mm discs; Rear: 299mm discs Front: 7.5x17-inch: 205/50/ZR17 Rear: 9x17-inch: 255/40/ZR17 Length: 4.250mm Width: 1,650mm Weight: 1,230kg (Sport)

\*\*\*\*

#### **964 C2 Speedster** 1993-94



Combined the 964 bodyshell with the hood and windscreen of the Carrera 3.2 Speedster, olus RS interior. It is thought orsche planned to build

Production numbers: 936 Issue featured: 128 Engine capacity: 3,600cc Compression ratio: Maximum power 250bhp @ 6,100rpm Maximum torque 310Nm@4,800rpm 0-62mph: 5.5sec

3.000, but demand fell. Top speed: 161mph

Brakes Front: 320mm discs; Rear: 299mm discs Wheels & tyres: Front: 7x17-inch: Rear: 9x17-inch: 255/40/ZR17 Length: 4.250mm Width: 1,652mm Weight: 1.340kg





#### **964** Turbo **3.6** 1993-94



ingine based on modified 3.6-litre 964 unit. Distinctive 18-inch split-rim Speedline vheels covered the big-red brake callipers. Suspension ered by 20mm.

Issue featured: 120 Engine capacity: 3,600cc Compression ratio: 7.5:1 Maximum power 360bhp @ 5,500rpm Maximum torque 520Nm @ 4,200rpm 0-62mph: 4.8sec

Production numbers:

1 437

Top speed: 174mph Brakes: Front: 320mm discs; Rear: 299mm discs Wheels & tyres: Front: 8x18-inch: 225/40/ZR18 Rear: 10x18-inch: 265/35/ZR18 Length: 4.250mm Width: 1,775mm



#### **964** Anniversary 1993-94



Production numbers:

30 Jahre' anniversary 964 utilised a 'Turbo' wide body melded to the four-wheeldrive Carrera running gear Available in Viola metallic,

911 Issue featured: 112 Engine capacity: 3,600cc Compression ratio: 11.3:1 Maximum power 250bhp @ 6,100rpm Maximum torqu 310Nm@4,800rpm 0-62mph: 5.7sec

olar silver or Amethyst Top speed: 162mph Brakes Front: 298mm discs; Rear:299mm discs Wheels & tyres:

Front: 7x17-inch: 205/50/17 tyres Rear: 9x17-inch: 255/40/17 tyres Length: 4.250mm Width: 1,775mm Weight: 1,470kg

#### \*\*\*\*

#### **964 RS America** 1993-94



Production numbers:

Offered in five colours, fixed vhaletail wing and two cloth ports seats, with just four ptions: air-con, sunroof, . O per cent locking rear

701 Issue featured: 102 Engine capacity: 3,600cc Compression ratio: 11.3:1 Maximum power 250bhp @ 6,100rpm Maximum torque 310Nm@4,800rpm 0-62mph: 5.5sec

erential and stereo. Top speed: 164mph Brakes Front: 298mm discs; Rear: 299mm discs Wheels & tyres: Front: 7x17-inch: 205/50/ZR17 Rear: 8x17-inch: 255/40/ZR17

Length: 4.250mm

Width: 1,650mm

Weight: 1,340kg \*\*\*\*

#### **993 Carrera 4S** 1995-96



ith a Turbo wide bodyshell, albeit lacking a fixed rear wing. Also boasted Turbo uspension, brakes and Turbo

Production numbers: 6 948 Issue featured: 109 Engine capacity: 3.600cc Compression ratio: 11.3:1 Maximum power 285bhp @ 6,100rpm Maximum torque: 340Nm@5,250rpm 0-62mph: 5.3sec

The 4S was effectively a C4

Top speed: 168mph Front: 322mm discs; Rear: 322mm discs Wheels & tyres: Front: 8x18-inch: 225/40/ZR18 Rear: 10x18-inch: 285/30/ZR18 Length: 4.245mm Width: 1,795mm Weight: 1,520kg



#### **993 Carrera RS** 1995-96



ightweight body as per S tradition, teamed with a 3.8-litre engine, VarioRam ECU to create 300bhp, fed to

1 01/ Issue featured: 119 Engine capacity: 3,746cc Compression ratio: 11.5:1 Maximum nower 300bhp@6,000rpm Maximum torque: 355Nm@5,400rpm 0-62mph: 5.0sed

rear wheels only. Production numbers

Top speed: 172mph Front: 322mm discs; Rear: 299mm discs Wheels & tyres:

Front: 18x8J, 225/40ZR18; Rear: 18x10 I 265/35ZR18 Length: 4,245mm Width: 1,735mm Weight: 1,279kg

\*\*\*\*

#### 993 GT2 1995-96



Production numbers:

911 Turbo, but with reduced equipment. Also included rea wheel-drive, making it a better track car. Fitted with huge front and rear wings and bolt-on

Issue featured: 121 Engine capacity: 3,600cc Compression ratio: 8.0:1 Maximum power 430bhp @ 5,750rpm Maximum torque: 540Nm@4,500rpm

0-62mph: 3.9sec

arch extensions Top speed: 189mph

> Front: 322mm discs; Rear: 322mm discs Wheels & tyres: Front: 9x18-inch; 235/40/ZR18 Rear: 11x18-inch: 285/35/ZR18 Length: 4,245mm Width: 1,855mm Weight: 1,290kg



#### **993 Turbo** 1996-98



Production numbers:

itted with two KKK turbochargers in order to reduce lag. Power went to all four wheels using the Carrera 4's transmission system. Brakes were 'Big Reds'.

5 937 Issue featured: 116 Engine capacity: 3,600cc Compression ratio: 8.0:1 Maximum power 408bhp @ 5,750rpm Maximum torque: 540Nm@4,500rpm 0-62mph: 4.3sec

Top speed: 180mph Brakes Front: 322mm discs; Rear: 322mm discs Wheels & tyres: Front: 8x18-inch; 225/40/ZR18 Rear: 10x18-inch: 285/30/ZR18 Length: 4,245mm Width: 1,795mm

Weight: 1,500kg



#### **993 Carrera S** 1997-98



The features that come with the Carrera Sare similar to the Carrera 4S's, only this time in rear-wheel drive. Sought after or its superb handling and

**Production numbers** 3.714 Issue featured: 118 Engine capacity: 3,600cc Compression ratio 11.3:1 Maximum power 285bhp @ 6,100rpm Maximum torque: 340Nm @ 5.250rpm 0-62mph: 5.4sec

ide-body looks. Top speed: 168mph

Brakes Front: 322mm discs; Rear: 322mm discs Wheels & tyres: Front: 8x18-inch; 225/40/ZR18 Rear: 10x18-inch: 285/30/7R18 Length: 4,245mm Width: 1,795mm Weight: 1,450kg

\*\*\*\*

#### **993** Turbo **S** 1998



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 numbers: 345 Issue featured: 115 Engine capacity: 3,600cc Compression ratio 8.0:1 Maximum power 450bhp @ 5,750rpm Maximum torque: 585Nm@4.500rpm 0-62mph: 4.1sec

Top speed: 186mph Brakes: Front: 320mm discs; Rear: 322mm discs Wheels & tyres: Front: 8x18-inch; 225/40/18 Rear: 10x18-inch: 285/30/18 Length: 4,245mm Width: 1,795mm Weight: 1,583kg

\*\*\*\*

#### **996 Carrera** 1998-2001



Production numbers: Top speed: 174mph

56.733 Issue featured: 117 Engine capacity: 3,387cc Compression ratio 11.3:1 Maximum power 300bhp @ 6,800rpm Maximum torque 350Nm @ 4.600rpm 0-62mph: 5.2sec

all-new 911 with large estyled bodywork and a vater-cooled engine. Interior as redesigned in order to able better ergonomic ficiency and more room.

> Brakes Front: 318mm discs; Rear: 299mm discs Wheels & tyres: Front: 7x17-inch; 205/50/R17 Rear: 9x17-inch: 255/40/R17 Length: 4,430mm Width: 1,765mm Weight: 1,320kg \*\*\*\*

#### **996 Carrera 4** 1998-2001



Four-wheel drive transmission fed five per cent of power in normal driving, increasing to 40 per cent when required. SM used for first time, rolled out across the range in 2001

Production numbers: 22.054 Issue featured: 111 Engine capacity: 3,387cc Compression ratio 11.3:1 Maximum power: 300bhp @ 6,800rpm Maximum torque: 350Nm @ 4.600rpm 0-62mph: 5.2sec

Top speed: 174mph Brakes: Front: 318mm discs; Rear: 299mm discs Wheels & tyres: Front: 7x17-inch; 205/50/R17 Rear: 9x17-inch: 255/40/R17 Length: 4,430mm Width: 1,765mm Weight: 1,375kg

\*\*\*\*

#### **996 Carrera 4S** 2001-05



Basically a Carrera 4 featuring a Turbo bodyshell, without rear air intakes, but with a full-width rear reflector panel Suspension and brakes were

Production numbers: 23 055 Issue featured: 124 Engine capacity: 3.596cc Compression ratio 11.3:1 Maximum power 320bhp @ 6,800rpm Maximum torque 370Nm @ 4,250rpm 0-62mph: 5.1sec

milar to the Turbo spec

Top speed: 174mph Brakes Front: 330mm discs; Rear: 330mm discs Wheels & tyres: Front: 8x18-inch: 225/40/R18 Rear: 11x18-inch: 295/30/R18 Length: 4,435mm Width: 1,830mm Weight: 1.495kg



#### **996 GT2** 2001-03



A lightweight, Turbo bodied 996 with uprated turbocharged engine and suspension PCCB was standard. Revised ECU later

**Production numbers** 1 287 Issue featured: 127 Engine capacity: 3.600cc Compression ratio: 9.4:1 Maximum power: 462bhp@5.700rpm 620Nm@3.500-4,500rpm **0-62mph**: 4.1sec

gave an extra 21bhp. Top speed: 196mph

Brakes Front: 350mm discs: Rear: 350mm discs Front: 8x18-inch: 235/40/R18 Rear: 12x18-inch: 315/30/R18 Length: 4,450mm Width: 1,830mm Weight: 1.440kg



#### Gen2 996 C2 2002-04



29 389

11.3:1

acelifted with Turbo-style headlamps and revised front and rear bumpers, fitted with nore powerful 3.6-litre engine and VarioCam Plus. Manual nd Tiptronic 'boxes updated

Production numbers: Top speed: 177mph Brakes Issue featured: n/a Front: 318mm discs; Engine capacity: Rear: 299mm discs 3.596cc Wheels & tyres: Compression ratio Front: 7x17-inch: 205/50/R17 Rear: 9x17-inch: Maximum power 320bhp @ 6,800rpm 255/40/R17 Length: 4,430mm Maximum torque 370Nm @ 4,250rpm Width: 1,770mm Weight: 1.370kg 0-62mph: 5.0sec

\*\*\*\*

#### Gen2 996 C4 2002-04



Carrera, though the all-wheel-drive version drives very much like its rear-driven brethren Cabin received minor updates over Gen1. Production numbers: Top speed: 177mph Brakes

10.386 Issue featured: 107 Engine capacity: 3,596cc Compression ratio 11.3:1 Maximum power: 320bhp@6,800rpm Maximum torque 370Nm @ 4,250rpm 0-62mph: 5.0sec

Front: 318mm discs; Rear: 299mm discs Wheels & tyres: Front: 7x17-inch; 205/50/R17 Rear: 9x17-inch: 255/40/R17 Length: 4,430mm Width: 1,770mm Weight: 1.430kg

\*\*\*\*

acelifted in line with rear-drive

#### **996 GT3 RS** 2004-05



ame 3,600cc engine as in GT3, but with weight saving, offering 280bhp per ton – an mprovement of four per cent ver the 996 GT3 Clubsport. CCB optional

Production numbers: 682 Issue featured: 118 Engine capacity: 3,600cc Compression ratio: 11.7:1 Maximum power 381bhp @ 7,400rpm Maximum torque 385Nm @ 5,000rpm

0-62mph: 4.4sec

Brakes Rear: 330mm discs Wheels & tyres: Front: 8 5x18-inch: 235/40/R18 Rear: 11x18-inch: 295/30/R18 Length: 4,435mm Width: 1,770mm Weight: 1,360kg

Top speed: 190mph Front: 350mm discs;



#### **996 Turbo S** 2004-05



A 911 Turbo with the previously optional 30bhp power upgrade, with larger urbochargers, uprated intercoolers and a revised ECU. PCCB standard.

Production numbers 1563 Issue featured: 62 Engine capacity: 3,600cc Compression ratio: 9.4:1 Maximum power: 450hhn@5700rpm Maximum torque 620Nm@3.500-4,500rpm 0-62mph: 4.2sec

Top speed: 191mph Brakes Front: 350mm discs; Rear: 350mm discs Wheels & tyres: Front: 8x18-inch: Rear: 11x18-inch: 295/30/R18 Length: 4,435mm Width: 1,830mm Weight: 1.590kg \*\*\*\*

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



Production numbers:

ully revised 911 with 993-influenced bodywork and a new interior. Engine was ike 996, but refined for more power. Six-speed Tiptronic ption available

25 788 Issue featured: 112 Engine capacity: 3,596cc Compression ratio: 11.3:1 Maximum power 325bhp @ 6,800rpm Maximum torque 370Nm @ 4,250rpm 0-62mph: 5.0sec

Top speed: 177mph Brakes Front: 318mm discs; Rear: 299mm discs Wheels & tyres: Front: 8x18-inch; 235/40/R18 Rear: 10x18-inch 265/40/R18 Length: 4,427mm

Width: 1.808mm

Weight: 1.395kg

\*\*\*\*

#### **997 Carrera S** 2004-08



As per the 997 Carrera, but with more powerful 3.8-litre engine and PASM. 19-inch wheels as standard, with bigger ventilated brakes. Quad

Production numbers: 41 059 Issue featured: 107 Engine capacity: 3,824cc Compression ratio: 11.8:1 Maximum power 355bhp @ 6,600rpm Maximum torqu 400Nm @ 4,600rpm

0-62mph: 4.8sec

haust tailpipes Top speed: 182mph Brakes: Front: 330mm discs; Rear: 330mm discs

Wheels & tyres: Front: 8x19-inch; 235/35/R19 Rear: 11x19-inch: 295/30/R19 Length: 4,427mm Width: 1,808mm Weight: 1,420kg

#### \*\*\*\*

#### **997 Turbo** 2005-10



but with extra intakes at the front and sides. Essentially the 996 Turbo engine, but with all est of small and large turbos

Production numbers: 19,201 (up to 2008) Issue featured: 117 Engine capacity: 3.600cc Compression ratio: 9.8:1 Maximum power: 480bhp@6,000rpm Maximum torque 620Nm@1950-5,000rpm 0-62mph: 3.9sec

Similar to the 997 C4S body. ew twin turbos. VTG gave the

Top speed: 193mph Brakes: Front: 350mm discs; Rear: 350mm discs Wheels & tyres: Front: 8.5x19-inch; 235/35/R19 Rear: 11x19-inch: 305/30/R19 Length: 4,450mm Width: 1,852mm Weight: 1,585kg



#### 997 GT3 2006-07



Track-focused, but based on narrow-bodied Carrera with eworked 996 GT3 engine. PASM standard, revs to 8.400rpm, 200 higher than

Production numbers: 2,378 Issue featured: 117 Engine capacity: 3.600cc Compression ratio 12.0:1 415bhp @ 7.600rpm Maximum torque: 405Nm@5,500rpm

0-62mph: 4.3sec

e Gen2 996 GT3 Top speed: 192mph

Front: 380mm discs; Rear: 350mm discs Wheels & tyres: Front: 8.5x19-inch: 235/35/R19 Rear: 12x19-inch: 305/30/R19 Length: 4,445mm Width: 1.808mm Weight: 1,395kg

\*\*\*\*

#### **997 GT3 RS** 2006-07



1 106

Similar to GT3, with inclusion of wider rear bodyshell of the Carrera S. 20kg of weight saved from GT3 thanks to carbon engine cover and rear wing, and plastic rear window

Top speed: 194mph Production numbers: Brakes Issue featured: 110 Front: 380mm discs; Engine capacity: 3,600cc Rear: 350mm discs Wheels & tyres: Compression ratio: 12.0:1 Front: 8.5x19-inch: 235/35/R19 Maximum power Rear: 12x19-inch 415bhp @ 7,600rpm 305/30/R19 Length: 4,460mm Maximum torque: 405Nm@5,500rpm Width: 1,808mm 0-62mph: 4.2sec Weight: 1,375kg



#### 997 GT2 2007-09



Essentially the 997 Turbo. but with rear-wheel drive only. Enjoyed a more trackorientated suspension and brake setup, with GT3-style interior and extra power.

Production numbers: 1 2/12 Issue featured: 127 Engine capacity: 3,600cc Compression ratio: 9.0:1 Maximum power: 530bhp@6,500rpm Maximum torque 680Nm@2200-4,500rpm 0-62mph: 3.7sec

Top speed: 204mph Brakes: Front: 380mm discs; Rear: 350mm discs Wheels & tyres: Front: 8.5x19-inch;

235/35/ZR19 Rear: 12x19-inch: 325/30/ZR19 Length: 4,469mm Width: 1,852mm Weight: 1,440kg



#### **996 GT3** 1998-2000



Commonly called the Gen1 GT3, this was a lightweight 996 with power driving the rear wheels. Suspension was lowered by 30mm and brakes ere uprated.

Production numbers: 1.858 Issue featured: 117 Engine capacity: 3,600cc Compression ratio: 11.7:1 Maximum power 360bhp @ 7,200rpm

Maximum torque: 370Nm @ 5,000rpm 0-62mph: 4.8sec Top speed: 188mph Brakes: Front: 330mm discs; Rear: 300mm discs Wheels & tyres: Front: 8x18-inch: 225/40/R18 Rear: 10x18-inch: 285/30/R18



\*\*\*\*

#### **996 Turbo** 2001-05



arches, air intakes and deep front wing, plus part-fixed, part-retractable rear wing Different engine to naturally spirated 3.6-litre 996 unit

Production numbers: 20.499 Issue featured: 114 Engine capacity: 3,600cc Compression ratio: 9.4:1 Maximum power: 420bhp@6,000rpm Maximum torque 560Nm@2,700-4,600rpm 0-62mph: 4.2sec

Top speed: 189mph Front: 330mm discs: Rear: 330mm discs Wheels & tyres: Front: 8x18-inch; 225/40/R18 Rear: 11x18-inch: 295/30R18 Length: 4,435mm Width: 1,830mm Weight: 1,540kg

#### \*\*\*\*

#### **996 Anniversary** 2003-04



included a Turbo front bumper and chrome Carrera wheels Powerkit -10mm sports uspension and mechanical LSD standard

**Production numbers** 1963 Issue featured: 112 Engine capacity: Compression ratio: 11.3:1 Maximum power 345bhp@6,800rpm Maximum torque 370Nm@4,800rpm 0-62mph: 4.9sec

Top speed: 175mph

Brakes Front: 330mm discs Rear: 330mm discs Front: 8x18-inch: 225/40/R18 Rear: 10x18-inch: 285/30/R18 Length: 4,430mm Weight: 1.370kg

\*\*\*\*

11.7:1

#### Gen2 996 GT3 2003-05



ased on facelifted 996 Carrera, but with new wings Suspension lowered and uprated PCCB optional Fullspec interior unless Clubsport . option was ordered.

**Production numbers** 2 313 Issue featured: 107 Engine capacity: Compression ratio Maximum power: 381bhp@7,400rpm Maximum torque: 385Nm @ 5,000rpm 0-62mph: 4.5sec

Top speed: 190mph Brakes Front: 350mm discs; Rear: 330mm discs Front: 8.5x18-inch: 235/40/R18 Rear: 11x18-inch: 295/30/R18 Length: 4.435mm Weight: 1.380kg

#### \*\*\*\*

#### **997 Carrera 4** 2005-08



Like the 997 Carrera, but with drive to all four wheels via a multi-disc viscous coupling. ransferring between five and 40 per cent of traction to the

8 533 Issue featured: 3 Engine capacity: 3.596cc Compression ratio: 11.3:1 Maximum power 325bhp@6,800rpm Maximum torque 370Nm @ 4,250rpm 0-62mph: 5.1sec

front, 44mm wider at rear. Production numbers:

Top speed: 174mph Brakes Front: 318mm discs; Rear: 299mm discs Wheels & tyres: Front: 8x18-inch: Rear: 10x18-inch: 295/35/R18 Length: 4.427mm Width: 1,852mm Weight: 1,450kg



#### **997 Carrera 4S** 2005-08



Production numbers:

he same 3.8-litre, 355bhp ngine as the Carrera S, with our-wheel-drive system on 4.44mm wider than Carrera to accomodate for wider real els and tyres

30 973 Issue featured: 111 Engine capacity: 3,824cc Compression ratio: 11.8:1 Maximum power 355bhp @ 6,600rpm Maximum torque 400Nm@4,600rpm 0-62mph: 4.8sec

Top speed: 179mph Brakes Front: 330mm discs; Rear: 330mm discs Wheels & tyres: Front: 8x19-inch; 235/35/R19 Rear: 11x19-inch: 295/30/R19 Length: 4.427mm Width: 1,808mm Weight: 1,475kg

#### \*\*\*\*

#### Gen2 997 C2 2008-12



ear lights and front driving lights. M97 engine replaced vith a 91 DFI unit, using fewer parts - with no problematic

Production numbers: 10 500 Issue featured: 89 Engine capacity: 3.614cc Compression ratio: 12.5:1

Maximum power: 345hp@6,500rpm Maximum torque: 390Nm@4,400rpm 0-62mph: 4.9sec

Revised with restyled LFD termediate Shaft.

Top speed: 179mph Front: 330mm discs; Rear: 330mm discs Wheels & tyres: Front: 8x18-inch: 235/40/ZR18 Rear: 10 5x18-inch 265/40/ZR18 Length: 4,435mm Width: 1,808mm Weight: 1,415kg



#### **Gen2 997 C2 S** 2008-12



Production numbers:

Altered as per the Carrera, but with larger 3.8-litre engine – again using fewer components and Direct Fuel Injection. Had even-speed PDK optional, like

15,000 Issue featured: 61 Engine capacity: 3,800cc Compression ratio 12 5:1 Maximum power: 385hp @ 6,500rpm Maximum torque: 420Nm@4,400rpm

0-62mph: 4.7sec

Top speed: 187mph Front: 330mm discs; Rear: 330mm discs Wheels & tyres: Front: 8x19-inch; 235/35/ZR19 Rear: 11x19-inch: 295/30/ZR19 Length: 4,435mm Width: 1,808mm Weight: 1,425kg



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#### **Gen2 997 C4** 2008-12



changes as per the Carrera but with a wider rear end plus full-width rear reflector. New rom the 997 Turbo Production numbers:

1.384(Coupe) Issue featured: 41 Engine capacity: 3,614cc Compression ratio: 12.5:1 Maximum power: 345hp @ 6,500rpm Maximum torque 390Nm@4,400rpm **0-62mph**: 5.0sec Top speed: 176mph Brakes: Front: 330mm discs; Rear: 330mm discs Wheels & tyres: Front: 8x18-inch: 235/40/ZR18 Rear: 11x18-inch: 295/35/7P18 Length: 4,435mm



#### **Gen2 997 C4S** 2008-12



PTM. Viscous coupling gives way to electromagnetically controlled multi-plate clutch. Production numbers: 7,910 (Coupe) Brakes: Issue featured: 111 Engine capacity:

3,800cc Compression ratio: 12.5:1 Maximum power: 385hp @ 6,500rpm Maximum torque: 420Nm @ 4,400rpm 0-62mph: 4.7sec

Top speed: 185mph Front: 330mm discs; Rear: 330mm discs Wheels & tyres: Front: 8x19-inch: 235/35/ZR19 Rear: 11x19-inch: 305/30/7R19 Length: 4,435mm Width: 1,852mm Weight: 1,480kg

Bodywork as per C4, but with larger engine. Utilised the 997 Turbo's four-wheel drive and



#### **997 Sport Classic** 2010



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

Production numbers: 250 Issue featured: 57 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 Brakes Front: 350mm discs; Rear: 350mm discs Wheels & tyres: Front: 8.5x19-inch; 235/35/ ZR19 Rear: 11x19-inch: 305/30/ZR19 Length: 4.435mm Width: 1,852mm Weight: 1.425kg

\*\*\*\*



#### 997 GT3 RS 4.0 2010



ne engine was upgraded and aerodynamically tweaked oo, with the angle of rear wing ncreased and dive planes on either side of the front nose. A uture collectors' gem. Top speed: 193mph

Production numbers: Issue featured: 125 Engine capacity: 3,996cc Compression ratio: 12.6:1 Maximum power 500hp @ 8,250rpm Maximum torque: 460Nm @ 5,750rpm 0-62mph: 3.9sec

Brakes Front: 380mm discs; Rear: 380mm discs Front: 9x19-inch: 245/35/ZR19 Rear: 12x19-inch: 325/30/ZR19 Length: 4.460mm Weight: 1.360kg



#### **997** Turbo **S** 2011-13



As standard 997 Turbo but more power and higher level of standard equipment including PCCB, centre-lock wheels crested sports seats and Sport Chrono Plus.

Production numbers: 2000 Issue featured: 123 Engine capacity: 3,800cc Compression ratio: 9.8:1 **Maximum power:** 530hp @ 6,250-6,750rpm Maximum torque 700Nm@2,100 4.250rpm 0-62mph: 3.3sec Top speed: 195mph

Front: 380mm discs: Rear: 350mm discs Wheels & tyres: Front: 8.5x19-inch; 235/35/ 7R19 Rear: 11x19-inch; 305/30/7R19 Length: 4,435mm Width: 1.852mm Weight: 1.585kg



#### **991 Carrera** 2011-



First of the newest and latest Gen7 911, takes styling hues from 993. Redesigned chassis with lengthened wheelbase reduces overhang of engine. Production numbers:

Currently in production Issue featured: 83 Engine capacity: 3.436cc Compression ratio: 12.5:1 Maximum power 350hp @ 7,400rpm Maximum torque 390Nm@5,600rpm 0-62mph: 4.8sec

Top speed: 179.6mph Brakes: Front: 330mm discs; Rear: 330mm discs Wheels & tyres: Front: 8 5x19-inch: Rear: 11x19-inch: 285/35/ZR19 Length: 4.491mm Width: 1,808mm Weight: 1,380kg



#### **991 Turbo** 2013-



The new Turbo marks the introduction of rear axle steering, plus PDK-only induction 991 models. Rear

Production numbers: Currently in production Issue featured: 109 Engine capacity: 3,800cc Compression ratio: 9.8:1 **Maximum power**: 520hp @ 6,000-6,500rpm Maximum torque 660Nm@1950-5,000rpm 0-62mph: 3.4sec

nders 28mm wider than C4. Top speed: 195mph Front: 380mm discs; Rear: 380mm discs Wheels & tyres:

Front: 8.5x20-inch: 245/35/ZR20 Rear: 11x20-inch: 305/30/ZR20 Length: 4,506mm Width: 1,880mm Weight: 1,595kg



#### **991** Turbo **S** 2013-



Production numbers:

Same dimensions as 991 Turbo. but with a tweaked map to provide an extra 40bhp. Usual urbo options as standard, including centre-lock wheels. PCCB, PDCC and Bose sound.

Currently in production Issue featured: 115 Engine capacity: 3,800cc Compression ratio: 9.8:1 Maximum power 560hp@6.500-6,750rpm Maximum torque: 700Nm@2,100-4,250 0-62mph: 3.1sec

Top speed: 197mph Brakes Front: 410mm discs; Rear: 390mm discs Wheels & tyres: Front: 9x20-inch; 245/35/ZR20 Rear: 11x20-inch. 305/30/ZR20 Length: 4,506mm Width: 1,880mm

Weight: 1,605kg



#### **Gen2 997 GT3** 2009-12



Jodated as per the Carrera but with a unique front and rear wing, revised PASM, centre-lock wheels and better brakes. 2010 MY GT3s

Production numbers: 2.200 Issue featured: 117 Engine capacity: 3,800cc Compression ratio: 12.2.:1 Maximum power 435hp@7,900rpm Maximum torque: 430Nm@3250rpm 0-62mph: 4.1sec

called to fix rear hubs Top speed: 194mph Brakes: Front: 380mm discs; Rear: 350mm discs



\*\*\*\*

#### **Gen2 997 Turbo** 2009-13



Turbo, but with new LED ail-lights and driver lights up front, Larger tailpipes and DFI ngine, with fuel consumption cut by 16 per cent.

Production numbers: 3,800 Issue featured: 116 Engine capacity: 3,800cccc Compression ratio: 9.8:1 Maximum power: 500hp@6,000rpm Maximum torqu 650Nm@1,950-5,000rpm **0-62mph**: 3.4sec

Top speed: 194mph Brakes: Front: 350mm discs: Rear: 350mm discs Wheels & tyres: Front: 8.5x19-inch; 235/35/7R19 Rear: 11x19-inch; 305/30/7R19 Length: 4,450mm Width: 1,852mm Weight: 1,570kg

\*\*\*\*

#### **Gen2 997 GT3 RS** 2009-12



1,500

Wider front arches and a larger wing. Dynamic engine mounts and PASM are standard, Air-con is optional vith no door handles, wheel brace or sound proofing. Production numbers:

Issue featured: 125 Engine capacity: 3,800cc Compression ratio: 12.2:1 Maximum power: 450hp @ 7,900rpm Maximum torque 430Nm@6,750rpm 0-62mph: 4.0sec

Top speed: 192mph Brakes: Front: 380mm discs; Rear: 380mm discs Wheels & tyres: Front: 9x19-inch: 245/35/7R19 Rear: 12x19-inch; 325/30/7R19 Length: 4,460mm Width: 1.852mm

#### Weight: 1,370kg \*\*\*\*

#### **997 Speedster** 2010



Built to mark Porsche Exclusiv's 25th anniversary. horter windscreen, but rake angle same as 997 Carrera. Vide body with 19-inch Fuchs neels. Rear-wheel drive

Production numbers: Issue featured: 128 Engine capacity: 3,800cc Compression ratio: 12.5:1 Maximum power: 408hp@7,300rpm Maximum torque 420Nm@4,400-5,600rpm **0-62mph**: 4.4sec

Top speed: 190mph Brakes: Front: 350mm discs: Rear: 350mm discs. Wheels & tyres: Front: 8.5x19-inch; 235/35/7R19 Rear: 11x19-inch; 305/30/7R19 Length: 4,440mm Width: 1.852mm Weight: 1,540kg

#### \*\*\*\*

#### **997 918 Edition 2010**



These exclusive 997 Turbo S-spec 911s were only available to those who had naid a denosit for a 918 Spyder. Acid green badging

Production numbers: 121 Issue featured: 74 Engine capacity: 3,800cc Compression ratio: 9.8:1 Maximum power: 530hp @6,250-6,750rpm Maximum torque 700Nm@2,100 4.250rpm 0-62mph: 3.3sec Top speed: 195mph

and brake calipers.

Brakes Front: 380mm discs: Rear: 350mm discs Wheels & tyres: Front: 8.5x19-inch; 235/35/ZR19 Rear: 11x19-inch; 305/30/ZR19 Length: 4,435mm Width: 1.852mm Weight: 1,585kg



#### **997 GT2 RS** 2010-11



S-spec 911s were only vailable to those who had aid a denosit for a 918 Spyder. Acid green badging nd brake calipers

Production numbers 500 Issue featured: 114 Engine capacity: 3,600cc Compression ratio: 9.0:1 Maximum power: 620hp @6.500rpm 700Nm@2.500-5,500rpm **0-62mph**: 3.5sec

Top speed: 205mph Brakes Front: 380mm discs; Rear: 350mm discs els & tyres: Front: 9x19-inch: 245/35/ZR19 Rear: 12x19-inch: 325/30/ZR19 Length: 4.460mm Width: 1,852mm Weight: 1.370kg

#### \*\*\*\*

#### **997 C2 GTS** 2010-12



Unknown

eatures the C4's wider rear body, and powered by the 3.8-litre Carrera S engine, with a Powerkit producing 25bhp extra. The GTS is laden with orsche options. Production numbers:

Issue featured: 118 Engine capacity: 3,800cc Compression ratio: 1251 Maximum power: 408hp@7,300rpm Maximum torque: 420Nm@4.200-5,600rpm 0-60mph: 4.6sec

Top speed: 190mph Front: 330mm discs; Rear: 330mm discs Front: 8.5x19-inch: 235/35/19 Rear: 11x19-inch: 305/30/19 Length: 4,435mm Width: 1,852mm Weight: 1.420kg

#### \*\*\*\*

#### **997 C4 GTS** 2011-12



Production numbers:

Like the C2997 GTS, but slightly heavier and with four-wheel drive. In either C2 or C4 form, it represented a great saving over optioning up a 997 Carrera counterpart.

Unknown Issue featured: 125 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: 188mph Brakes Front: 330mm discs; Rear 330mm discs Wheels & tyres: Front: 8.5x19-inch: 235/35/ZR19 Rear: 11x19-inch: 305/30/ZR19 Length: 4.435mm Width: 1,852mm Weight: 1.480kg

\*\*\*\*

#### **991** Carrera S 2011-



Same as Carrera, including even-speed manual 'box, but utilising bigger engine. Slightly larger front brakes than the standard Carrera, PASM as

Currently in production Issue featured: 114 Engine capacity: 3.800cc Compression ratio: 12.5:1 Maximum power 400hp@7,400rpm Maximum torque 0-62mph: 4.5sec

standard equipment. Production numbers: Top speed: 188.9mph

Brakes Front: 340mm discs; Rear: 330mm discs Wheels & tyres: Front: 8 5x20-inch: Rear: 11x20-inch: 295/30/ZR20 Length: 4.491mm Width: 1,808mm Weight: 1,395kg



#### **991 Carrera 4** 2012-



2mm wider body than C2 vith 10mm wider tyres and connecting rear tale light as standard. Also features a orque distribution indicator n the digital dash clock.

Currently in production Issue featured: 98 Engine capacity: 3.436cc Compression ratio: 12.5:1 Maximum nower 350hp@7,400rpm Maximum torque 390Nm @ 5,600rpm 0-62mph: 4.9sec

Production numbers

Top speed: 177mph Brakes Front: 330mm discs; Rear: 330mm discs Wheels & tyres: 8 5y19-inch 235/40/ZR19 Rear: 11x19-inch: 305/35/ZR19 Length: 4.491mm Width: 1.852mm Weight: 1.430kg



#### **991 Carrera 4S** 2012-



Production numbers:

Same wider body styling as Carrera 4, coupled to 3.8-litre 400bhp engine. Also features six-piston brake calipers at front, as opposed to four. PTV read torque more evenly.

Currently in production Issue featured: 118 Engine capacity: 3.800cc Compression ratio: 12.5:1 Maximum power 400hp @ 7,400rpm Maximum torque 440Nm @ 5,600rpm 0-62mph: 4.5sec

Top speed: 185mph Brakes: Front: 340mm discs; Rear: 330mm discs Wheels & tyres: Front: 8 5x20-inch: Rear: 11x20-inch: 305/30/ZR20 Length: 4,491mm Width: 1,852mm

#### Weight: 1,445kg \*\*\*\*

#### **991 GT3** 2013-



Production numbers:

Wide body from 991 Carrera 4 was used for the first time Mezger engine from previous GT3s replaced with revamped DFI version of Carrera S gine, PDK only,

Currently in production Issue featured: 124 Engine capacity: 3.800cc Compression ratio: 12.9:1 Maximum power 475hp @ 8,250rpm Maximum torque 440Nm @ 6,250rpm

Top speed: 196mph Brakes Front: 380mm discs; Rear: 380mm discs Wheels & tyres: Front: 9x20-inch: 245/35/ZR20 Rear: 12x20-inch: 305/30/ZR20 Length: 4.545mm Width: 1,852mm Weight: 1,430kg

#### \*\*\*\*

#### **991 Anniversary** 2013-14



Exuberantly styled Carrera S with wide body and generous spec. Many styling cues inside nd out taken from original 901. Powerkit only came as

Production numbers: 1 963 Issue featured: 112 Engine capacity: 3.800cc Compression ratio: 12.5:1 Maximum power 400hp@7,400rpm Maximum torque: 440Nm@5,600rpm 0-62mph: 4.5sec

ndard spec in US.

Top speed: 188mph Front: 340mm discs; Rear: 330mm discs Wheels & tyres: Front: 9x20-inch; 245/35/ZR20 Rear: 11 5x20-inch: 305/30/ZR20 Length: 4,491mm Width: 1,852mm Weight: 1,420kg



#### **991 Carrera GTS** 2014-



Big spec GTS utilises wide oody and a host of good options including Powerkit, ASM, Sport chrono, Sport exhaust to name a few, all for

Unknown Issue featured: 121 Engine capacity: 3.800cc Compression ratio: 12.5:1 Maximum power 430hp@7,500rpm Maximum torque: 440Nm@5,750rpm 0-62mph: 4.0sec

£7,000 more than Carrera S Top speed: 190mph Production numbers

> Front: 340mm discs; Rear: 330mm discs Wheels & tyres: Front: 9x20-inch; 245/35/ZR20 Rear 11 5x20-inch 305/30/ZR20 Length: 4,491mm Width: 1,852mm Weight: 1,425kg

\*\*\*\*

#### 991 C4 GTS 2014-



Almost the same as the C2 GTS, but with additional traction offered by four wheel drive. As a result, performance mes are altered slightly over

Unknown Issue featured: 125 Engine capacity: 3,800cc Compression ratio: 12.5:1 Maximum power 430hp@7,500rpm Maximum torque: 440Nm@5,750rpm

0-62mph: 4.4sec

s rear driven variant. Top speed: 188mph Production numbers:

Brakes: Front: 340mm discs; Rear: 330mm discs Wheels & tyres: Front: 9x20-inch; 245/35/ZR20 Rear: 11 5x20-inch 305/30/ZR20 Length: 4,491mm Width: 1,852mm Weight: 1,470kg

\*\*\*\*

#### 0-62mph: 3.5sec

#### **991 GT3 RS** 2015-



Production numbers:

42(UK)

Uses Turbo's ultra wide body and packs a revised four litre DFI engine over the 991 GT3. ighter than a GT3 thanks in part to a magnesium roof and ont bonnet.

Issue featured: 128 Engine capacity: 3,996cc Compression ratio: 12.9:1 Maximum power 500hp@8,250rpm Maximum torque: 460Nm@6,250rpm 0-62mph: 3.3sec

Top speed: 193mph Brakes Front: 380mm discs; Rear: 380mm discs. Wheels & tyres: Front: 9.5x20-inch 265/35/ZR20 Rear: 12 5x21-inch: 325/30/ZR21 Length: 4,545mm Width: 1,880mm



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Factory black with black interior and black canvas soft top. Highly collectible and has had the same elderly owners for many



Matching numbers in yellow with black interior, though originally champagne yellow. This car has had the same owner for many



White with black interior. This car has had the same owner since 1988. It's an excellent restoration candidate with tons



Light ivory with black interior. Equipped with a manual transmission, Momo steering wheel, steel flares, and deep dish Fuchs. Mechanically sound.



Originally came from the factory sand beige with black interior. Equipped with Fuchs wheels and has excellent investment and restoration potential.



Long wheelbase in polo red with black interior. Equipped with a five-speed manual transmission. This car had the same owner for many years.



Matching numbers black with black interior, this car comes equipped with a five-speed manual transmission and power



Black with black interior. Equipped with a five-speed G50 transmission, power windows, power seats, air conditioning and original window sticker. .



Original light yellow with black interior. Equipped with a manual transmission and Fuchs wheels. Excellent candidate for restoration.



Red with black interior. Solid floor pan and battery box. Could use some minor cosmetics, same owner for many years, mechanically sound.



White with black interior. Equipped with a five-speed manual transmission and power windows. This car is part of the first year of the 911 cabriolets.

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Black. Black vinyl interior. Rare - One of 729 cars. Matching
Numbers. Excellent condition. Only 41,500 (showing).



1983 PORSCHE 911 3.0 SC CABRIOLET - RHD Metallic Bronze. Linen full leather interior. Totally restored. Only 35,150 miles.



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1996 PORSCHE 993 3.6 CARRERA VARIORAM - RHD Arena Red. Grey full leather interior. Hard Back Seats, Roock S/S Exhaust system, 18" 5 spoke alloys. Only 46,800 miles.



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911 GT3 (997)

6-Speed • Speed Yellow • Black Half Leather Sport Seats • Satellite Navigation Sport Chrono Pack Plus 39,046 miles • 2007 (56)

£77,995



911 Carrera 4 S (997 GEN II)

7-Speed PDK • Basalt Black • Black Leather Seats • Touchscreen Satellite Navigation with iPod/USB • 19" Carrera S II Wheels • 31,626 miles • 2011 (61)

£54,995



#### 911 SC Sport Targa

5-Speed • Jet Black • Black Leather Seats • 16" Fuchs Wheels • Stainless Steel Exhaust & Heat Exchangers 37,495 miles • 1982 (X)

£49,995



#### 911 Carrera 4 (993)

6-Speed • Midnight Blue • Dark Blue Leather Sport Seats • Blue Power Hood 18" Turbo Wheels • Air Conditioning 72,490 miles • 1996 (N)

£49,995



#### 911 Carrera 2 S (997 GEN II)

6-Speed • Basalt Black • Black Leather Seats • 19" Carrera Classic Wheels Touchscreen Satellite Navigation 31,449 miles • 2011 (61)

£49,995



#### 911 Carrera 2 S (997)

7-Speed PDK • GT Silver • Cocoa Leather Seats • 19" Carrera Sport Wheels • Touchscreen Satellite Navigation • 32,015 miles • 2010 (10)

£47,995



#### 911 Carrera 2 (997 GEN II)

6-Speed • Jet Black • Black Leather Seats • Touchscreen Satellite Navigation • 19" Carrera S II Wheels 13,332 miles • 2011 (11)

£46,995



#### 911 Carrera 2 (997 GEN II)

7-Speed PDK • Platinum Silver • Dark Blue Leather Seats • Touchscreen Satellite Navigation • 19" Carrera S II Wheels • 39,089 miles • 2011 (61)

£46,995



#### 911 Carrera 2 (997 GEN II)

6-Speed • GT Silver • Cocoa Leather Seats • Touchscreen Satellite Navigation • 19" Carrera Sport Wheels 26,356 miles • 2011(61)

£45,995



#### Boxster S (981)

7-Speed PDK • Basalt Black • Black Leather Seats • Touchscreen Satellite Navigation • 20" Carrera Classic III Wheels • 14,757 miles • 2013 (13)

£44,995



#### 911 SC

5-Speed • Silver Metallic • Black Pinstripe Seats • 16" Turbo Fuchs Wheels • Electric Sunroof 194,705 miles • 1979 (T)

£39,995



#### 911 Carrera 2 (997)

6-Speed • Basalt Black • Flamenco Red Leather Seats • Touchscreen Satellite Navigation • 19" Sport Design Wheels 33,742 miles • 2008 (58)

£39,995



#### Boxster 2.9 (987 GEN II)

6-Speed • Jet Black • Black Leather Seats • 18" Boxster S II Wheels Heated Seats • Bluetooth Phone Preparation • 18,763 miles • 2011 (11)

£26,995



#### Boxster S (987 GEN II)

6-Speed • Aqua Blue • Black Leather Sport Seats • Touchscreen Satellite Navigation • 19" Carrera S II Wheels 70,286 miles • 2009 (09)

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#### PORSCHE 997 - GT3, TURBO, C4S, C2S, C2

2011 - 997 GT3 RS 4.0 GEN II (GRANDPRIX WHITE) 11,000 Miles
Black Interior With Red Sports Bucket Seats, PSM, PASM, PCM 3, Sat
Nav, Chrono Pack, 19" Gen II 997 GT3 Alloy Wheels, Full Service History

2006 - 997 TURBO COUPE TIP (BASALT BLACK) 56,000 Miles Black Leather Interior, PSM, PASM, PCM, Sat Nav, 19" Turbo Alloy Wheels, Xenon Headlights, Full Service History (Just Been Serviced).

2007 - 997 TURBO COUPE MAN (COBALT BLUE) 73,000 Miles
Black Leather Interior, PSM, PASM, PCM, Sat Nav, Alcantara Headlining,
Xenon Headlights, 19" Turbo Alloy Wheels, Full Porsche Service History.

2009 - 997 C4S CAB PDK (GEN II) (BASALT BLACK ) 36,000 Miles Full Black Leather Interior, 7 Speed Double Clutch Transmission, PSM, PCM, Sat Nav, BOSE Sound System, 19" Porsche Sport Design Alloy Wheels, Xenon Headlights, Full Official Porsche Centre Service History.

2008 - 997 C4S COUPE MAN (BASALT BLACK) 46,000 Miles Black Leather Interior, PSM, PASM, PCM, Sat Nav, BOSE, Alcantara Headlining, 19" Turbo Alloy Wheels, Full Porsche Service History.

2007 - 997 C2S COUPE MAN (BASALT BLACK) 20,000 Miles
Black Leather Interior, PSM, PCM, Sat Nav, CD Changer, Porsche VTS,
19" Carrera Sport Wheels, Full Porsche Service History.

2006 - 997 C4S CAB MAN (ARCTIC SILVER) 37,000 Miles
Black Leather Interior, PSM, PASM, PCM, Sat Nav, BOSE-CD Changer,
19" Sport Design Alloy Wheels, Full Main Dealer Service History.

2006 - 997 C4S CAB MAN (BLACK METALLIC) 62,000 Miles
Dark Olive Metallic, Black Leather Interior, PSM, PASM, PCM, Sat Nav,
BOSE-CD Changer, 19" Alloy Wheels, Full Main Dealer Service History.

2005 - 997 C2 COUPE TIP (ARCTIC SILVER) 62,000 Miles
Black Leather Interior, PSM, PCM, Sat Nav, Alcantara Headlining, Climate
Control, 19" Carrera Alloy Wheels, Full Service History.

#### PORSCHE 996 - GT2, TURBO

2002 - 996 GT2 CLUBSPORT (POLAR SILVER) 55,000 Miles White Dials, PCCB Brakes, Radio/CD Player, Central Locking, Porsche Crested Sports Seats, Correct Carbon Fibre Interior, Full Porsche Main Dealer Service History With Recent Service, One Owner Only.

2002 - 996 GT2 CLUBSPORT (ARCTIC SILVER) 37,000 Miles
Black Leather Interior, PSM, Porsche Radio/CD Player, 18" GT2 Turbo
Alloy Wheels, Full Main Dealer And Specialist Service History.

2004 - 996 TURBO COUPE TIP (BLACK METALLIC) 37,000 Miles Black Leather Interior, PSM, PCM, Sat Nav, BOSE/CD Changer, 19" GEN II Turbo Alloy Wheels, Full Main Dealer Service History.

2004 - 996 TURBO CAB TIP (BASALT BLACK) 70,000 Miles Black Leather Interior, PSM, PCM, Sat Nav, BOSE Sound System, 18" Turbo Alloy Wheels, Full Porsche Service History, Detailed Invoices Showing High Level Of Maintenance, Extremely Well-Kept Example.

2002 - 996 TURBO COUPE TIP (LAPIS BLUE) 86,000 Miles
Grey Leather Interior, PSM, PCM, Sat Nav, BOSE Sound System, White
Dials, Alcantara Headlining, 18" Turbo Alloy Wheels, Full Service History.

#### PORSCHE 993 - TURBO, C2S, C2, C4, CARRERA

1998 - 993 TURBO "S" COUPE MAN (SPEED YELLOW) 60,000 Miles Black Leather/Carbon Fibre Interior, Litronic Lights, Yellow Dials, Yellow Seat Belts And Callipers, 18" Turbo S Alloy Wheels, Full Service History.

1997 - 993 TURBO COUPE MAN (ZENITH BLUE MET) 79,000 Miles Beige Leather Interior, Fully Electric Sports Seats, Alpine Radio Player, Rear Wiper, Climate Control, 18" Turbo Alloy Wheels, Full Service History.

1995 - 993 TURBO COUPE MAN (ARENA RED) 31,000 Miles Grey Leather Interior, Wood Package, Uprated Becker CD Player, Sat Nav, 18" Turbo Alloy Wheels, Official Porsche Centre Service History.

1997 - 993 C2S COUPE MAN (ARCTIC SILVER) 71,000 Miles Varioram, Metropole Blue Leather Interior, White Dials, Factory Fitted Alarm System, 18" Turbo Alloy Wheels, Fully Documented Service History.

1995 - 993 C4 CAB MAN (IRIS BLUE) 108,000 Miles
Marble Grey Leather Interior, Semi-Electric Sports Seats, Electric Windows
And Mirrors, 18" Turbo Alloy Wheels, Full Porsche Service History.

1994 - 993 C2 COUPE TIP (BLACK METALLIC) 84,000 Miles
Grey Leather Interior, Alpine Radio/CD Changer, Climate Control, 17" Alloy
Wheels, Fully Documented Service History.

1994 - 993 C2 COUPE MAN (FOREST GREEN) 104,000 Miles Marble Grey Leather Interior, Right Hand Drive, Alpine Radio Player, 17" Alloy Wheels, Full Service History.

1994 - 993 C2 CAB (CARRERA WHITE) 103,000 Miles
Metropole Blue Leather Interior, Manual, Climate Control, Blue Hood,
17" Alloy Wheels, One Lady Owner Only, Full Service History.

1987 - 993 CARRERA 3.2 CAB 1989 (G50 GEARBOX) 126,000 Miles Immaculate Blue Metallic, Full Marble Grey Interior, Period Correct Fuchs Alloy Wheels, Comprehensive Service History, Very Original Condition, 10 Years With One Owner.

1990 - 964 C2 CAB MAN (MIDNIGHT BLUE) 108,000 Miles
Marble Grey Leather Interior, Sports Seats, Fully Electric Seats, Sony CD
Player, 17" Alloy Wheels, Full Service History.

1992 - 964 C4 CAB MAN (BLACK) 94,000 Miles
Marble Grey Leather Interior, Semi Electric Seats, Kenwood CD Player/
Radio, Electric Windows And Mirror, 17" Alloy Wheels, Full Service History,

1987 - 911 CARRERA SUPERSPORT (CARRERA WHITE) 76,000 Miles
Dark Blue Leather Interior, Climate Control, Blue Dials, Semi Electric
Seats, SONY Radio/MP3 Player, 16" Fuchs Alloy Wheels, Fully
Documented Service History, Original Service Book And Manuals Available.

1987 - 911 SUPERSPORT TARGA (G50 GEARBOX) 86,000 Miles Carrera White Coachwork, Black Leather Interior With White Piping, Genuine M491 SuperSport, One Of Only 37 RHD Targas, G50 Gearbox, Dansk Twin Exhausts, Butterfly Valves Replaced, Engine Rebuilt 10,000 Miles Ago (2007), Recent MOT, Full Service History (Just Been Serviced).

1994 - 993 C2 COUPE TIP (BLACK) 94,000 Miles
Black Leather Interior, Becker Radio, Electric Seats, 17" Alloy Wheels, Full
Porsche & Specialist Service History (Just Been Serviced).

1992 - 964 CARRERA COUPE TIP (POLAR SILVER) 138,000 Miles Black Leather Interior, SONY CD/Radio Player, 17" Alloy Wheels, Full Service History.

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2008 - FERRARI 612 SCAGLIETTI COUPE (NERO BLACK) 11,000 Miles Full Nero Black Leather Interior, Nero Daytona Seats, Xenon Headlights, 19" Modular Alloy Wheels (HGTC Special), Full Ferrari Service History.

1973 - DAYTONA 365 GTB/4 RHD (ROSSO RED) 38,000 Miles
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#### 330 GTC COUPE (GRIGIO SILVER) 86,000 Miles

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1997 - AC COBRA MK IV (ROLLS ROYCE EBONY BLACK) 11,000 Miles Hand Crafted Grey Leather Seats With Matching Head Rests, Leather Trimmed Aluminium Dash, Performance 65mm Throttle Body.

1972 - PORSCHE 911 2.7 RS TOURING 72,000 Miles
7,000 Miles Since Total Restoration By RUF, Canary Yellow, Black Interior,
Left Hand Drive, Complete History Of Restoration.

1979 - PORSCHE 3.0 LTR CARRERA (ICE GREEN MET) 120,000 Miles Very Rare UK RHD, Fundamentally Every Invoice On Every Expenditure Over The Past Years. Porsche Authenticity Certificate Confirming Matching Numbers Engine/Chassis/Interior And Colour. Bodywork In Excellent Condition, Extensive Service History.

1973 - JAGUAR E-TYPE ROADSTER SERIES III AUTO 25,000 Miles Finished In Carmen Red With Black Hide Interior And Crema Soft Top, Automatic Transmission, Chrome Exhaust System, Chrome Wire Wheels, Totally Restored. Drives Like New.

1962 - JAGUAR 3.8 MARK II AUTO (BLACK) 16,478 Miles
Black Coachwork, Red Leather Interior, Left Hand Drive, Power Assisted
Steering, Wire Wheels, Recent Restoration To Virtually Concours Standard.

1962 - JAGUAR 'E' TYPE ROADSTER 3.8

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1936 - BENTLEY 4 1/4 PILLARLESS COUPE (MIDNIGHT BLUE)
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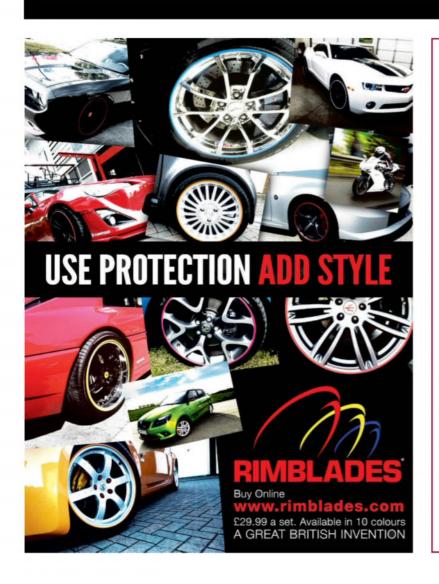
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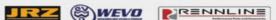




















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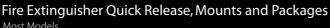
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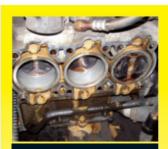


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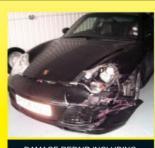
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#### 993 GT2 ULTIMATE GUIDE

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#### Essential info

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#### LENGTH OF DRIVE: 15.7 kilometres

POINTS OF INTEREST:

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## This short route in the south of Austria proves that a great driving road can be unearthed from the most unlikely of places

itting by the enchanting Lake Wörthersee in southern Austria, the relatively small city of Klagenfurt may well be far removed from the country's more famous great routes such as the Grossglockner Pass. However, pleasingly there's still a driving treat to be had from its roads.

Beginning on the ring road that encapsulates the 97,000 inhabitants of Klagenfurt, turn off at Sankt Veiter Straße, located to the north. Minutes after you leave the centre of Klagenfurt am Wörthersee, the road rids itself of its urban flavour, revealing a backdrop of mountains across the fields that bless this pretty Austrian landscape.

The two roads making up our route – officially called the L71a and L72 – test

a plethora of your car's characteristics including handling, braking, grip, performance, and steering response, as well as your own attentiveness at the wheel. This countryside jaunt of flowing, open road is broken up nicely with a hairpin left corner as you enter the hamlet of Hörzendorf. This hairpin is good for second gear while carrying good speed around the bend, but look back and beyond the barrier (if you dare) and you will be treated to a glorious view overlooking the entire, sweeping valley.

From here you can quickly change up to third and on passing the last of the large, traditionally-styled houses, you'll witness the road becoming enthralled in the open landscape, with just a barn on your left to distract you from the

vista of the road ahead. A delicious halfmile straight awaits you, so plant your right foot and enjoy the sound of that flat six reverberating through the valley, mildly lifting for the 60 miles-per-hour right-hander only.

Pass the Jacques Lemans Arena on your right as you bring your Porsche to a calm pace once more, before approaching the junction with the 94 running through Kraindorf to complete the route. Sure, it may only account for some 20 minutes of driving, but it shows that no matter where you are, an exhilarating driving route can be had. From Kraindorf you can either make your way north-east in search of the Grossglockner or, if time is of the essence, you can simply turn around and do the route all again.





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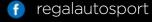
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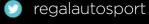
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