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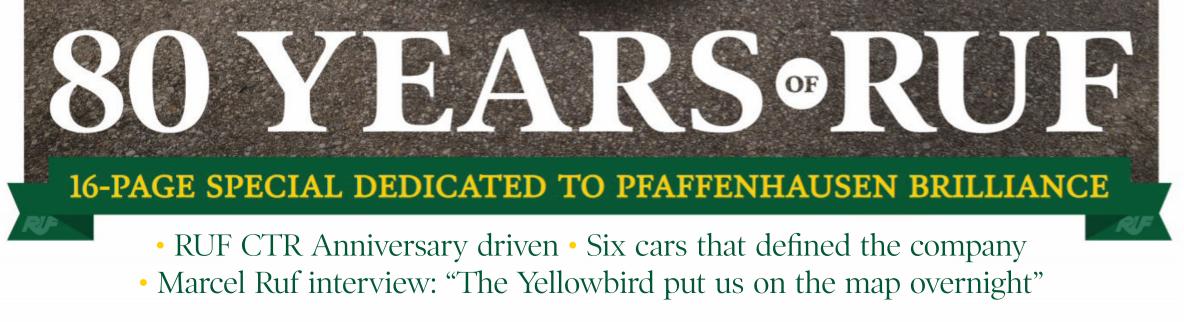
FUTURE

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STORY OF ROB MACKIE'S 'MUGELLO' 911T/R COMPLETE MODEL STATS 1963-2019

911 ICON: HENRI TOIVONEN

VIC ELFORD GUEST COLUMN



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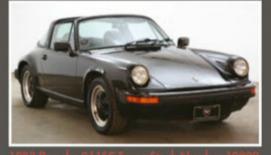
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1968 Porsche 911L Soft Window Targa Stock Number 10296

This very rare and collectible 1968 Porsche 911L Soft Window Targa comes in this gorgeous color combination of brown with a black interior with pepita inserts. It comes equipped with a 1968 period correct 2.0 liter with a manual transmission and Fuchs wheels. An extremely clean and presentable vehicle which had the same owner for many years and is a limited production and mechanically sound.



This 1983 Porsche 91 ISC Targa with matching numbers is available in its original and highly sought-after color code#700 black with a black interior. It comes with a clean CarFax and is equipped with a 5-speed manual transmission, power windows, Fuchs wheels and includes the jack, spare tire and original owner's manual. An excellent original car which had the same owner for many years and is mechanically sound.



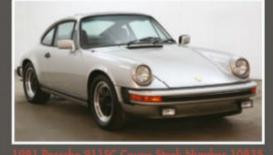
The 1974 Porsche 911 Targa with matching numbers is available in black with a tan interior. It was originally a color code#249 emerald green metallic example and comes equipped with a Sportomatic transmission, air conditioning, Fuchs wheels and includes the spare tire. It had the same owner since 1984 and is mechanically sound



This very presentable 1976 Porsche 911S Coupe is available in its original color code#908 Grand Prix white with a tan interior. It is equipped with a 2.7 liter with a manual transmission, Fuchs wheels and includes the spare tire, tool kit and jack. A very clean and presentable vehicle which is mechanically sound.



This 1978 Porsche 911SC Targa with matching numbers is available in its original color code#936 silver metallic with a black interior. It comes equipped with a 5-speed manual transmission, air conditioning, power windows, Fuchs wheels and includes the spare tire and jack. A very clean and presentable vehicle which is mechanically sound.



This 1981 Porsche 911SC Coupe with matching numbers is available in its original color cod##956 Pewter metallic with a black interior. It comes equipped with a 5-speed manual transmission, air conditioning, power sunroof, power windows, Fuchs wheels and includes the spare tire and the original owner's manual. A very presentable example which is mechanically cound





This 1986 Porsche Carrera Targa with matching numbers is available in blue metallic with a black interior. It comes with a clean Carfax and is equipped with a 5-speed manual transmission, power windows, Fuchs wheels and includes the spare tire. A very clean and presentable vehicle which was with same owner for many years and is mechanically sound.

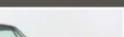


This 1982 Porsche 91 ISC Coupe with 64,035 miles on the odometer is available in a light blue with a blue interior. It comes with a clean Carfax and is equipped with a 5-speed manual transmission with a 3.0-liter engine, air conditioning, power windows, Fuchs wheels and includes the spare tire, jack, and tool kit. The original owner's manual is also included. This is an extremely clean and presentable vehicle which is mechanically sound.





This 1973.5 Porsche 911 CIS Targa with matching numbers and includes the Certificate of Authenticity, is available in its original color code#936 silver with a black interior. It comes equipped with a manual transmission, NARDI steering wheel, Fuchs wheels and includes the spare tire. It was previously owned by a Porsche Club of America owner and is mechanically Sound





This 1996 Porsche 993 is available in its original color code#92M polar silver metallic with a black interior. It comes with a 6-speed manual transmission, air conditioning. OEM Porsche stereo, dual airbags, power mirrors, power windows, power steering, power seats, power sunroof, solid wheels, drilled rotors and includes the spare tire and jack. It is also mechanically sound.

This 1997 Porsche 993 Cabriolet comes in this excellent color combination of Grand Prix white with a navy blue interior. It comes equipped with a manual transmission, air conditioning, power windows and it includes the original window sticker and owner's manual. It has a lot of potential and was with the same owner for many years of potential and was with the same owner for many years and is mechanically sound.

The 1997 Porsche 993 Cabriolet featured here with 90,827 miles on the odometer is available in dark blue metallic with a tan interior. It comes equipped with a Tiptronic transmission, air conditioning, cruise control, dual air bags, power windows, power steering, power seats, solid wheels, drilled rotors, power soft-top and includes the spare tire. It is also mechanically sound.

The 1996 Porsche 911 Carrera 4S (993) is available in its original color code#94S arena red with a tan interior. It comes equipped with a 6-speed manual transmission, air conditioning, cruise control, dual airbags, power windows, power steering, power seats, power sunroof, OEM Porsche stereo, drilled rotors, Porsche twist wheels and spare tire. The original owner's manual and service documentation is includer and the Carrera is also mechanically sound.

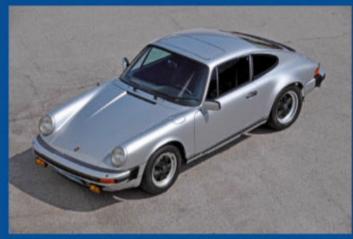
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Welcome

umours continue to gather pace that Porsche could soon roll out an innovative lease system for its sports cars, whereby the company retains ownership of the vehicle while customers enjoy fuss-free performance driving of different models via a medium-term loan, for a set monthly fee.

We don't know if these rumours are true or not but, if so, it will play nicely into the hands of the enthusiast. We're now a long way from the crazy days of 2015 when GT cars ballooned in value overnight, a phenomenon which trickled right through the market. Brilliant for owners from a financial point of view, yes, but by-and-large it stopped people using their Porsche.

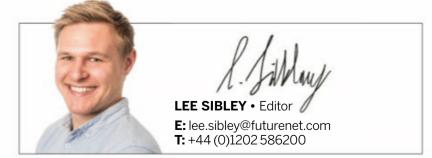
I've said for a long time that day-to-day we see less 911s on

more and more people are reverting back to using these fine sports cars exactly as Porsche intended. For me the seminal moment came at Porsche Club Francorchamps Days at Spa in April. If you were there, you will have never seen so many modern Porsche GT cars in one place and being driven, hard.

The trend continued at Porsche Club GB's Goodwood track day. Of the 40 or so cars in attendance, a comfortable 50 per cent were made up of 991-generation GT cars. Owners appear happy to seek enjoyment from chasing redlines rather than resale values, which could form the core potential benefit of this rumoured lease system. We'll see if whispers develop, but if true we believe this could be a positive step towards ensuring more people get to climb behind the wheel of the best cars Porsche

the road than we used to. While that's still the case, I believe

"Owners appear happy to seek enjoyment from chasing redlines" offers. What do you think? Get in touch and let us know!





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Opening Technicians at RUF Automobile put the finishing touches to the right of a production CTR Anniversary, scheduled for delivery la stment, the new CTR seeks to emula poster of w wiring of a production CTR Anniversary, scheduled for delivery later this year. A €12 million investment, the new CTR seeks to emulate the illustrious original of some 30 years ago, a large poster of which hangs proudly on the wall overlooking the factory floor.

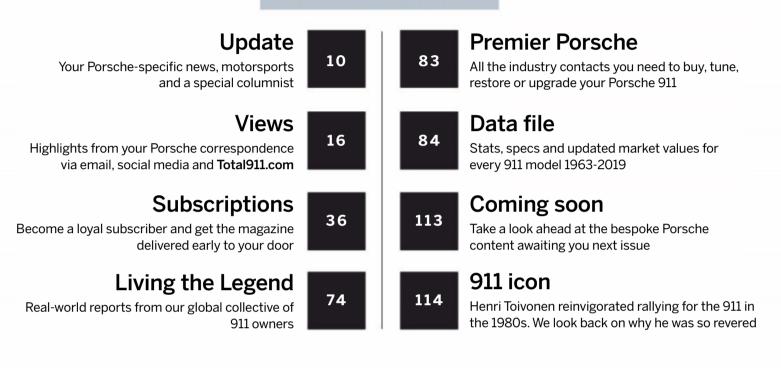
Photograph by Daniel Pullen



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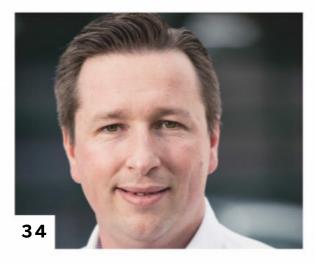


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|9



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



992 GT3 will feature naturally aspirated flat six

Speedster announcement underlines Porsche's commitment to atmospheric engines for GT cars

Nobody is prepared to officially circulate it, but the 991 Speedster's arrival confirms the rumours that the 992 GT3 will use a version of Porsche's 4.0-litre naturally aspirated flat six. Like the exclusive 911 R the Speedster borrows its manual six-speed gearbox from, the limited-edition Speedster has some technical developments that are too significant to have just been created for a special lowvolume model.

The fact that the GT department has managed to enable the Speedster to pass the Euro 6d TEMP EVAP-ISC emissions standards by fitting a pair of exhaust particulate filters also signals that Porsche GT's commitment to naturally aspirated engines won't die with the end of the 991-series 911. Speaking at the launch of the 911 Speedster, Thomas Mader, project manager of GT road car engines, said: "We got the chance from the board at the start of the (991) GT3 generation to redesign the complete engine. So we decided to do an engine family. And I think, when I'm sitting here, it was absolutely the correct decision to do that."

Mader admits it's not been easy to get the engine through the latest emissions standards, but using experience gained from the race engines has helped. The road car gains a development of the RSR's individual throttle bodies, improving the mix of air and fuel with the benefit of more power, allied to lower emissions. As Mader admits: "We have, I think you say, with one stone, caught two birds." Power for the Speedster's engine swells to 510hp at 8,400rpm and 470Nm at 6,250rpm, the engine's maximum rpm still at 9,000rpm. The fuel pressure in the injection system is increased too, from 200 bar to 250 bar, that improving the spray pattern and aiding combustion.

In another example of engineering alchemy, the GT engineers have managed to add a pair of gasoline particulate filters to the exhaust while actually reducing its overall weight. Using a thinner-walled construction and a new welding process sees the exhaust weigh 10kg less than that of the GT3, despite the addition of those usually weight-increasing filters. Nobody's saying anything, but the engineering certainly speaks volumes as to future GT car specs.

RPM releases its CSR 'Snakebite' The UK Porsche specialist F

has revealed its second evolution of CSR upgrades for the 997.1 with the revelation of the 28th build under its bespoke build programme. Based on a Carrera S, RPM says the Snakebite best combines day-today use with performance handling and dynamics. More information can be found at **rpmtechnik.co.uk**.



New Sport Classic touted for 2021 Rumours are circulating that Porsche will release a new Sport Classic in 2021. Possibly to coincide with the last of the non-hybrid 911 line – as well as the ten-year anniversary of the original Sport Classic – the car looks set to be based on the 992.1 and will be the product of the Exclusive department once again. Porsche was unavailable for comment.



991 Turbo helps topple four speed records at Pendine Sands

Road-legal Turbo with 1,200hp sends Zef Eisenberg into the history books

Speed freak Zef Eisenberg broke no less than four world records at the wheel of a specially modified 991 Turbo at Pendine Sands, South Wales, on 19 May.

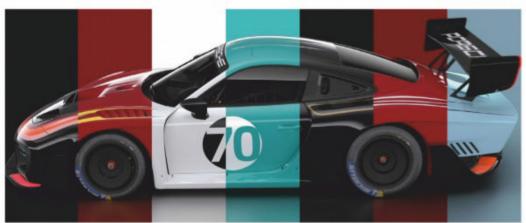
The 1,200hp 991.2 Turbo, which is road legal, was modified by UK tuning specialists ES Motors especially for the record run, helping Eisenberg claim the fastest sand speed ever recorded by a wheel-powered vehicle at 210.332mph and the fastest flying quarter mile for a wheel-powered vehicle at 206.492mph. He also achieved the fastest flying mile

(one way) for a wheel-powered vehicle at 196.970mph, plus the latest flight mile (two-way) of 187.962mph, the same measurement as Sir Malcolm Campbell in his famous Blue Bird.

The results, achieved on Eisenberg's very first pair of runs, means he is the only person in history to achieve over 200mph on both car and bike at the illustrious sands of Pendine, and the only person in history to have achieved a flying mile record on both car and bike in Britain.

Eisenberg said: "A huge thank you to ES Motors and my own MADMAX race team for working tirelessly on the extensive Porsche preparation, engine build and tune to ensure we had the engineering and power to achieve this very challenging record. The Porsche behaves very differently on sand than tarmac. The sand creates a lot of resistance and tyre slip. We could only use 850hp – 1,000hp at the engine – to avoid too much wheel spin, compared to just 550hp from a factory car."







What's on in 2019

- 15-16 June 2019 2018/19 WEC
- 27-30 June
- 4-7 July
- 21 July
- 10 August

Porsche reveals liveries for 935

Choice of seven iconic designs pay homage to past racing greats

The 935 was revealed at 2018's Rennsport Reunion sporting the iconic Martini livery. However, Porsche has now announced further liveries are available, including the Le Mans-winning Salzburg decoration seen on the Attwood/Hermann 917, the Gulf blue of John Wyer's team, the Interscope design by Kremer

Racing, the distinctive black and gold of John Player Special, the bright-red MOMO hue, the Sachs design used by Kremer and Dick Barbour or, our favourite, the bright colours of heating manufacturer Vaillant. The liveries were designed by Porsche legend Grant Larson to 'present a new interpretation of a bygone motorsport era'.

50 years of the 917 exhibition

'Colours of Speed' display hails Porsche's most prominent racing car

The Porsche Museum has released a new 917 exhibition, which runs until 15 September and features ten specially curated 917s with a combined 7,490hp.

Exhibits on display include the original 917-001, restored to its original 1969 condition; the Le Mans-winning 917 KH (short tail) of 1970 and 1971, plus a 1:1 clay

model concept '917: Living Legend', created by designers in 2013 and put on public display by Porsche for the first time. The first Porsche 911 Turbo will also return to public display: a prototype in 2.7-litre form given to Louise Piëch underlines how technologies developed on the 917 were transferred into production road cars.

Motorsport Prominent news and results from racing series around the globe



2.0L Cup continues to light up Peter Auto calendar

38-strong field of early 911 racers compete in second race of season at Spa Classic

Belgium's Spa Francorchamps provided the venue for round two of the 2019 2.0L Cup, which saw Andrew Kirkcaldy claim victory from a 38-strong lineup of 1965 Porsche 911 race cars.

Kirkcaldy's #99 race car took the chequered flag after 28 laps and more than 90 minutes of racing in Belgium. Kirkcaldy finished 46 seconds ahead of Paragon's Mark Sumpter and driving partner Mike Jordan in the #77 car, in front of 20,000 spectators over the three days of the revered Spa Classic festival. Champion of the inaugural 2018 campaign, which forms part of

the Peter Auto series, Oliver Bryant, who also claimed victory at the 2019 season opener in Barcelona, retired at Spa after 16 laps. The result means Sumpter and Jordan lead the campaign going into round three of the six-round European championship.

Meanwhile, the #72 car of Richard Cook and Harvey Stanley claimed victory in the highly competitive Gentleman's class, a new development to the competition for this season. The next round of the 2.0L Cup takes place at Peter Auto's Dijon Grand Prix on 7 to 9 June.





Andlauer gets off to dream 2019 Supercup start Fastest practice, pole position and first win for the Frenchman in Barcelona

The Porsche Junior, BWT Lechner Racing's Julien Andlauer, opened his account for the 2019 Supercup with an impressive performance at the opening round of the season at Circuit de Barcelona-Catalunya. The Frenchman, enrolled onto the Porsche Junior scheme at the end of last year, took the fastest time in free practice before securing pole position at the wheel of his 485hp 991.2 GT3 Cup.

Andlauer held off the challenge from Turkey's Ayhancan Güven in the opening stages of the race to remain in 1st, taking advantage of a

safety car halfway through the race to take the chequered flag with a healthy 3.2-second advantage. "That was a perfect weekend for me. I managed to assert myself in the critical phases of the race - which were in the first laps and at the restart after the safety car phase," Andlauer said after the race.

ALMÉRAS' Güven finished in 2nd, with Michael Ammermüller of BWT Lechber Racing completing the podium places. Porsche's Supercup, the world's fastest one-make race series, headed to Monaco for round two as Total 911 went to print.







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It's now 51 years since Vic Elford's 1968 Monte Carlo Rally victory in a 911, a seminal moment in the history of Porsche. **Total 911**'s Tony McGuiness continues our series of sit-down interviews with the legendary Porsche Driver, nicknamed 'Quick Vic'

his year marks the 50th anniversary of the legendary Porsche 917. I didn't realise it until a few weeks ago while at an event celebrating the 50th anniversary of Porsche's iconic race car, but it also marks the 50th anniversary of the Concorde Supersonic airliner.

I have often thought about what an engineering marvel the Concorde was. Yet the Porsche 917 I raced can also be considered an engineering marvel. Both these masterpieces were designed with slide rules, not computers! Just think about that for a minute... The Concorde and the phenomenal 917 were created by mathematical geniuses. Both the 917 and Concorde were ahead of their time. Because 2019 is a special year for the 917, over the next few months I will share more details about the car I absolutely loved, including what made it so special, what it took to drive it and why it was unbeatable.

After giving Porsche its first major victory in a 911 at the Monte Carlo Rally in 1968, within two days I was on a plane to the US to compete for Porsche in the 24 Hours of Daytona. I didn't even know where Daytona was until I got there! At the airport I was met by the famous Bill France Sr. In America he is best known for founding and managing NASCAR. 'Big Bill', as he was also known, was excited to have me there. He felt that having the Monte Carlo Rally winner from Porsche



and enter that 907 too! Porsche had incredible belief in their amazing cars. None of us Porsche drivers had ever driven at Daytona, and hadn't driven on banking before, so that was one reason they took a practice car. They wanted to ensure we felt comfortable with it on the track.

During the race, around midnight, a Ferrari lost its gearbox oil on the tri-oval in front of the pits, and one of the 907s was the first to arrive on the scene. It slid on the oil, hit the wall and skidded upside down for the entire front stretch.

I arrived within seconds at a speed of over 200mph to find pure darkness: dust, oil, smoke and parts were strewn across the track. I couldn't see a thing and drove straight through it. Miraculously I came through that without hitting anything. As Hurley Haywood mentioned in his **Total 911** column last year, there were no lights at Daytona until the 1990s, so that made the track particularly challenging.

Through the night Jo Siffert and Hans

3 finish. There is even a sensational photo (above) apturing this epic event.

We had defeated our main rivals, the five-litre Ford GT4Os run by John Wyer's Gulf-sponsored team, which was no small feat as they were driven by legends Jacky Ickx, Brian Redman, David Hobbs and Paul Hawkins. The Daytona Motor Speedway actually provided a winners's garland big enough for all five of us to fit in together.

My second race on American soil took place later in March at the 12 Hours of Sebring and was also a success as my co-driver Jochen Neerpasch and I finished 2nd behind Jo Siffert and Hans Herrmann, all of us driving the short-tail 2.2-litre 907 coupes.

This season really did mark a turning point for Porsche Motorsport in many ways. Some drivers now had a fixed yearly salary and a car on loan from the factory as our personal transport. This was amazing stuff considering just over a year earlier I had been begging Huschke von Hanstein

take part in the race would sell more tickets.

At Daytona, Porsche entered three Langheck (long tail), eight-cylinder 907s. This was the first time I had driven a 907 and the first time I had ever driven a long tail car designed for high speeds and banking. Porsche also brought a fourth 907 as a test car to Daytona. By the end of testing and practice, all the drivers had driven the fourth 907 over 2,500 miles with no problems. That was about the distance we expected to cover in the 24 Hours of Daytona, so with the

engineers being typical Porsche engineers, they

decided they would just change the oil, wash it

Herrmann led the race, but they suffered a gearbox problem and Rolf Stommelen and I inherited the lead. Towards the end of the race Huschke von Hanstein came to me with a request. He said: "This is going to be Porsche's first major win in a 24-hour race, and since Jo and Hans had led for so long would I let them each drive a few laps in my car so they could officially be part of the winning team?" Of course I agreed. The 24 Hours of Daytona in 1968 was officially won by five drivers. That type of thing couldn't happen today. Incredibly, I led the 907s across the finish line in my #54 car for a historic Porsche 1-2to lend me a 911 to compete at Corsica!

1968 wasn't over by a long shot. Next issue I will share what happened when trying to win the Targa Florio for Porsche in a factory 2.2-litre 907 short tail coupe.

In the Targa Florio I roared through the town of Cerda. As I started to climb into the mountains, only ten kilometres from the start, I suddenly had no drive to the wheels. I climbed out of the cockpit to check the car... what followed was the most amazing scene I have ever experienced. Next time I will share this amazing moment in motorsport history with you.

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The very best of your Porsche opinions



Missing Supersport

Dear Sir,

Reading your fabulous magazine, I get to page 86, Data File, but can't see an entry for the 911 Supersport. Any reason it's not listed? It looks like a 930, but without the Turbo engine. I always wanted a Turbo, but the insurance was so expensive when I was young I bought the next best thing, the Supersport. That was back in 1988 when it was just three years old – I've had it ever since. It's been in storage for 21 years, but I just got it out and had it recommissioned to start using it again. **Martyn Clatworthy**

The Supersport isn't included in our Data File as we consider it an option for the base 3.2

Carrera rather than a model in its own right though we now expect a degree of backlash from passionate readers telling us otherwise!

We're huge admirers of the wide-hipped Supersport or 'SSE' here at Total 911. As per your own story, the SSE served a brilliant purpose in being able to offer customers the opportunity to own Turbo looks at a significantly reduced cost compared to the real thing. It's fabulous to hear your SSE will once again grace the public roads for which it was built for - you've certainly got some driving to catch up on! Keep in touch and we'll look forward to seeing your story with the SSE develop.

Total 911 hard copy needed





Dear Sir,

Is there any way I can obtain a hard copy of **Total** 911 issue 145 please? I have a 996 Millennium and loved the article, but have only read it online. **Ed Snow**

Great to hear you've got a Millennium 996, a quirky 911 indeed! I'm afraid we don't have any copies of issue 145 left in our library of back issues. It should be possible to download a digital copy via our newsstand app for Apple or Android, or perhaps another reader of this fine magazine may be able to come to your aid?



TURBO S ROADTRIP

| 17

Email us with your Porsche opinions and the star correspondence will receive a complimentary pair of high-performance driving socks from Striipe Design. Inspired by motorsport, get yours at striipedesign. com - enter 'T911' for a 20% discount



Porsche

Worth \$20.00

991.2 GT3 RS: a new engine?

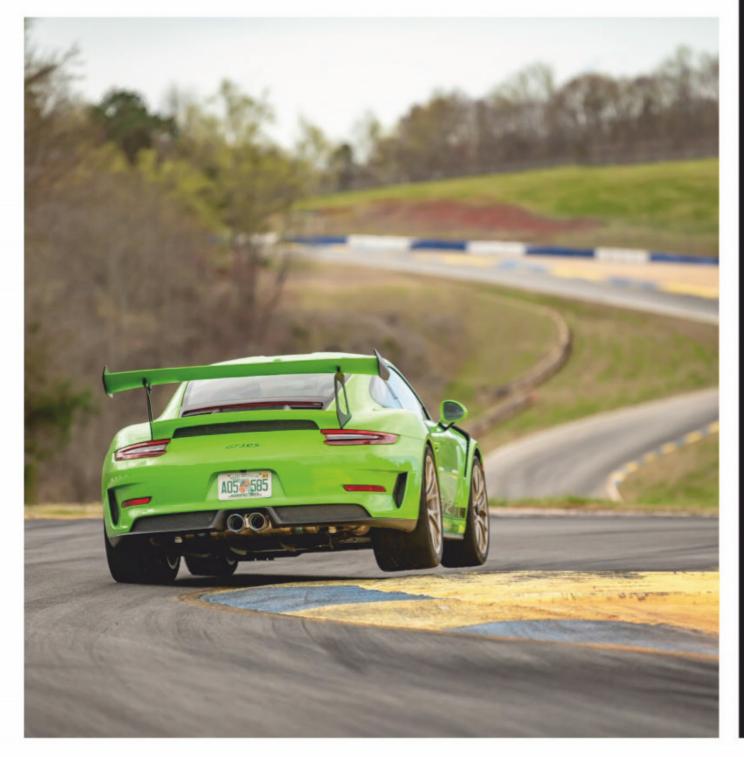
Dear Sir,

In a news article within issue 178 I read that a Porsche insider told **Total 911** the second build run of 991.2 GT3 RSs will feature what was described as "a Gen3 engine". I'm curious to know more about this as I've been told I'm getting the car and have submitted my spec, but when asked about the finer details of the powerplant my dealer was none the wiser.

Of course I'm expecting the car to feature these gasoline particulate filters (GPF), but given the 991 Speedster has been announced with independent throttle bodies and 510hp, could this be the engine carried into the GT3 RS? Anonymous

When pressed, our source wouldn't be drawn on the finer details of the 991.2 batch two GT3 RS engine. He did however say it has been completely reworked to accommodate the GPFs and is thus internally referred to as a Gen3 engine, producing "round about" the 520hp of the GT3 RSs produced in 2018.

From what we know so far it seems reasonable to marry this up to the latest information released on the 991 Speedster's independent throttle bodies, though we should also expect the GT3 RS to be slightly more hardcore than any Speedster or any other GT3based model. We'll be able to confirm the GT3 RS with GPF in the coming months, our main Update story this issue might also help.



Ask the expert

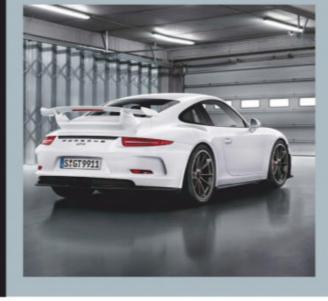
Got a question for our Porsche technician? Email us editorial@total911.com



Scott Gardner Job title Place of work Time at Porsche

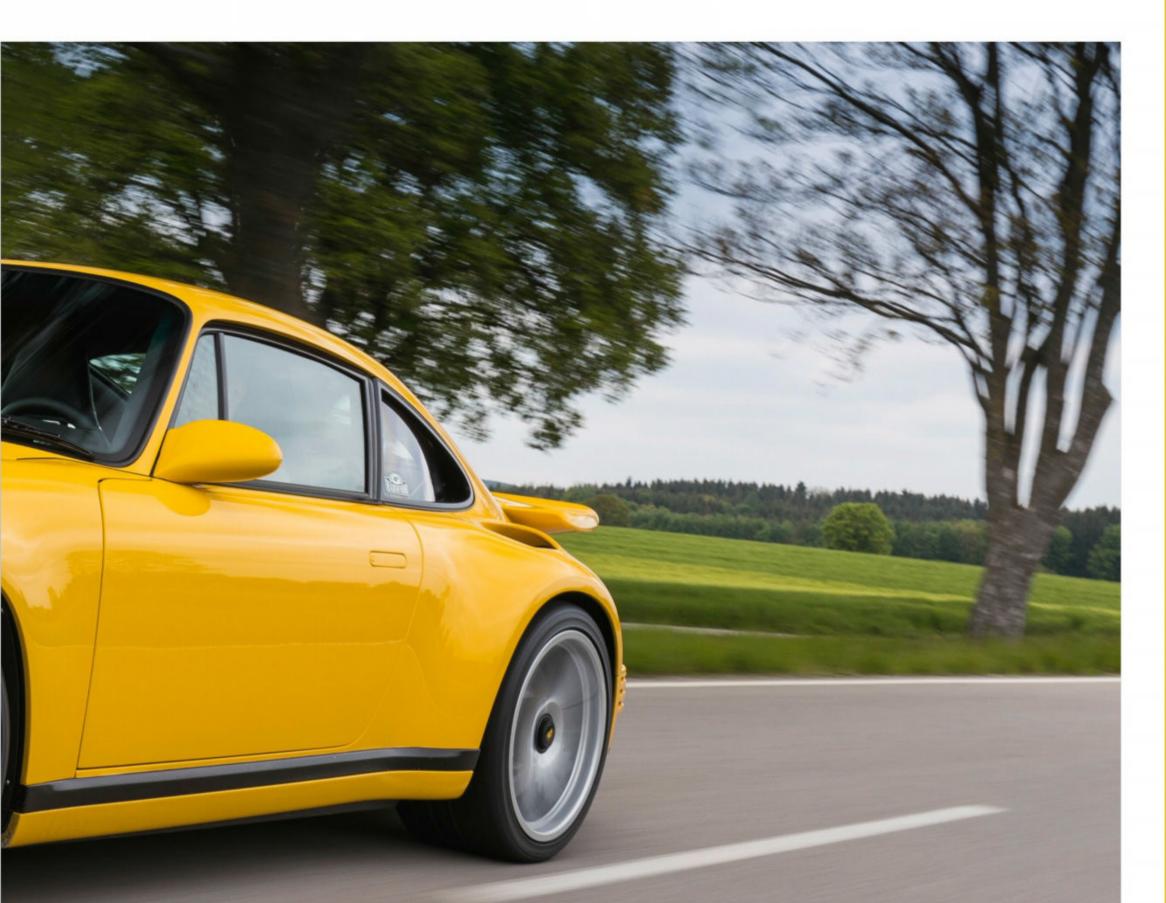
Dear Sir.

Do you have any idea if certain parts of the 991.1 were recalled for replacement? The issue surrounding early GT3s is well documented, but were there any other recalls which didn't become so public? For example, I've heard about the front and rear windshield because of an apparent weather-strip problem. I have a 991.1 and would be keen to see the full list – are you able to show me?



| 80 years of RUF: CTR Anniversary first drive





RUF's CTR Anniversary might be a nod to the past but it also offers a glimpse into the future of engineering at Pfaffenhausen. Total 911 is one of the first to test the 21st-century Yellowbird



20 | 80 years of RUF: CTR Anniversary first drive



The Yellowbird is a car that made us internationally renowned from one day to another. We were the world's fastest car – all the big companies were slower. No matter if it was 20 years ago, ten years ago or just yesterday, everybody talks about this car." These are the words of Marcel Ruf, who talks with passion and pride when I ask him to describe what the RUF CTR

It was that 3.2 Carrera-based 'Yellowbird' which put RUF Automobile on the map. A real-life David versus Goliath moment, it was faster than Ferrari's F40 and Porsche's 959, inspiring an entire generation of automotive fanatic. Those three letters responsible for building it became an alluring brand synonymous

of 1987 did for his father's company.

Revealed in 2017 – 30 years since the original – the latest CTR has undergone further testing, tweaks and even a name change. The CTR Anniversary, as it is now known, is at last approaching the finished article, and is a fitting way for this family-run business to celebrate its 80th birthday.

Putting the festivities to one side, this new CTR is arguably the most important RUF creation in years. Times have changed, and now there's much stiffer competition for ultra high-end, Porsche-inspired craftwork, most notably from a well-known company some 5,000-miles away in north Hollywood. Looking more inwardly too, the fact this is the first RUF to be built completely from scratch carries a significant cost. Company sources tell me it could be between €12 to 15 million to develop the CTR, all of the investment coming directly from RUF itself. It's a statement of confidence to say the least, the carbon fibre monocoque at its centre forming, we are told, the basis of RUF cars of the future as well as now. On paper the CTR Anniversary's credentials (we'll come to those later) have well and truly resonated with the uber wealthy, so much so that all 30 cars of the initial build run were sold within a week. I say initial build run, as off-the-bat demand for the CTR Anniversary caught out not only RUF itself, but owners of the first CTR, too, who simply didn't react quick enough to bag the latest example. "We felt it

was important that those owners of the original CTR were given the opportunity to have an Anniversary, so we spoke with the 30 buyers of the new car and asked how they felt about us increasing production to 50 cars to solve the problem. Thankfully they gave their blessing, so we were able to offer the extra 20 spaces only to those who had a CTRI," Marcel Ruf explains. A potential sticking point dealt with efficiently and calmly – how typically German.

Production of the CTR Anniversary is set to run until 2022 (by which time the company will also have started building its new, naturally aspirated SCR) with deliveries beginning later this year. A handful are very near to completion, these being assembled by hand on the factory floor during our visit. However, sitting outside and resplendent in the house colour of yellow, there's an example ready for the road – and we're going to be driving it. The new CTR is mesmerising to look at. Its carbon fibre body, housing that lightweight monocoque and front/rear space frame, is an art form. It's modelled on the original CTR, of that there is no doubt, yet "it's as if the Anniversary has been to the gym", so Marcel himself says. He's right, the CTR possessing the perfect blend of modern muscularity and timeless, delicate swathes of a classic 911-inspired silhouette. I could honestly stand and absorb its lines for days.

with engineering precision and purity henceforth. We're here on Rufplatz to celebrate 80 years of a company which has been integral to the culture surrounding the 911, a sports car we all – RUF included – admire greatly. RUF has always found a way to improve on Porsche's recipe, consistently evolving the 911 years ahead of Zuffenhausen. It led to RUF becoming a certified manufacturer in its own right by the German authorities in 1981, and since then we've been on the road to this very moment, a dream Alois Ruf Jr has harvested for decades: to build a complete sports car from scratch. That car is the new RUF CTR.





ABOVE Cabin is completely bespoke but has a familiar classic 911 feel to it. Production seats and dash have been tweaked slightly

LEFT Whale tail assumes a familiar appearance to CTR1, its vents reversed to offer better heat dissipation



CARBON FIBRE SKIN

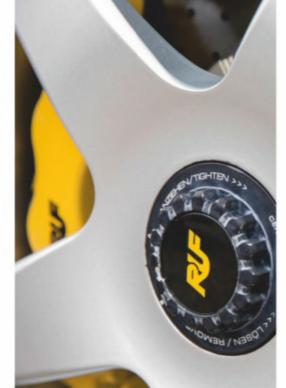
TRACK FRONT 1,445mm

CARBON FIBRE MONOCOQUE TUB

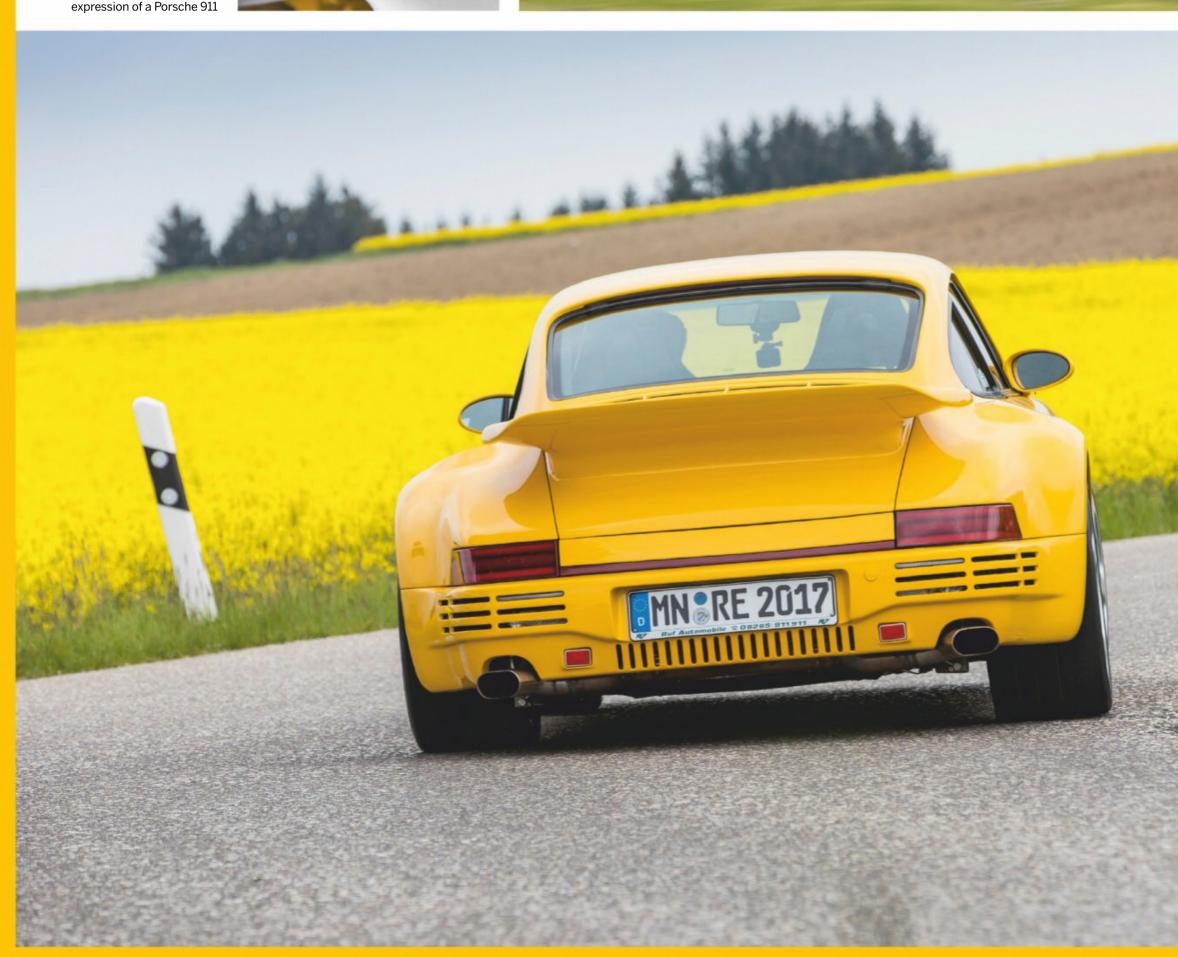
WHEELBASE 2,342mm BRAKES FRONT 380mm, REAR 350mm

TRACK REAR 1,500mm

22 | 80 years of RUF: CTR Anniversary first drive



FAR RIGHT RUF has concentrated on the details to ensure its CTR is as light as possible. Titanium con rods, for example, are 30% lighter, and one fifth of the CTR's parts are 3D printed BELOW Its kinetic dynamism and supreme cornering ability make it the ultimate expression of a Porsche 911



NEE

This example is a prototype, and nearby assembly of an early production car offers opportunity for comparison. The production car has lost the superfluous but admittedly entertaining rear torsion bar caps, and its front bumper has clearly been reprofiled to incorporate larger and neater side air vents. The front turn signals are thinner, and the wheels now have a cut-out down the middle of each spoke, too. Inside, the dashboard is different, the one in the prototype lifted directly from an air-cooled 911 – the production version is 3D printed, along with up to 20 per cent of overall parts. The production car will also get customary lollipop seats. An external oil filler remains, as does an off-center fuel filler through the frunk – RUF says it's more practical.

Interestingly, the only visible components of the CTR Anniversary taken directly from a Porsche are the front and rear screens, side windows and frames. They're from a 993, but even the rear windows have been modified, the frames sloping inwards at the



back to allow for subtle intakes feeding air directly into the CTR's dry-sumped and highly modified Mezger engine. Gaping holes in the bodywork aft of the rear arch, their profile taken directly from the original CTR, ply two intercoolers with cold air, one used for each turbocharger. Because it's a watercooled unit – the type used on a 997 Turbo – there's no need for any other air inlets, the new CTR's ventilation instead used to dissipate heat. This is done via slits in the rear bumper and backwards-facing vents on top of the whaletail, reversed from those on the first (and air-cooled) Yellowbird.

Its chassis is cutting-edge in the realms of the 911, boasting double-wishbone suspension arms and horizontally mounted dampers in pushrod configuration. It is the ideal set-up. The CTR is, of course, rear-wheel drive with a limited-slip differential, braked by ceramic discs and six-pot calipers with up front, four-pot at the rear. ABS and traction control are the only help from a computer.

Because this is a prototype, I won't be testing for an official 0-62mph time or top speed, which is a shame as the Autobahn is just minutes away, but it will give a very strong indication as to what the 50 lucky owners have signed themselves up for. It's probably a good thing: I'm handed the keys, and as I lower myself into the car I'm served a pat on the back and a jovial note of caution. "Have fun, and remember you've got one million Euros under your ass," a voice says before the driver's door is slammed shut behind me with the familiar 'clink' of a classic 911 latch. And with that, the 21st-century Yellowbird is all mine for the afternoon.

This might be a completely new and original sports car, yet it still feels like home. Looking out of the upright front screen, familiar front fenders protrude forwards; it's small and cosy, the pillars still thin despite housing RUF's customary integrated roll cage. All-round vision remains excellent. However I'm sitting much lower and, in a further positive move, the awkward offset of a classic 911's pedals are long gone.

Firing up the car, its noise is pure Mezger, its tone more fierce, its sound turned up a couple of notches. Otherwise the clutch is the only real sign of the CTR's crazy power figure: it's heavy to depress, on par with a 996 GT2, but I like its mechanical feel.

Surprisingly for a lightweight car with 710hp, it's fairly docile at slow speeds. The steering is light, assisted by an electric pump, and forms the biggest giveaway as to the era this Yellowbird is really from. I slip out of town and, with the engine warmed, decide to let rip. Oh. My. God.

There's a split-second delay before the car surges forward like an early Turbo on full boost. Only the CTR itself hasn't hit boost yet. By two-and-a-half grand, to a cacophony of whooshing and whistling, there's an almighty wallop from behind as those KKK turbochargers kick in and the CTR engages what feels like a velocity reserved for fighter jets. Just shy of 8,000rpm arrives in an instant; the needle of the boost gauge, which has replaced the dash clock, flings hilariously from 0 to 1.4-bar like the hammer of a triggered mouse trap – it's that fast.

I've never experienced such torque in a car before, yet it's not as kamikaze as Porsche's all-or-nothing GT2 RS, the CTR more sophisticated in the way it delivers its power. It's brutal, for sure, but it builds nicely if you're brave enough to keep your foot in. Do so and you'll be rewarded, for the CTR is comfortable at big speeds, this being a car RUF says was, like its predecessors, built with the Autobahn in mind.

Most impressive though is the CTR's ability to carry speed so effortlessly, directly manifested by its featherlight mass and brilliant chassis. At just 1,200kg it weighs less than a Renault Clio, its extremely



24 | 80 years of RUF: CTR Anniversary first drive



RUF CTR Model Anniversary Year 2019

Engine Capacity 3,600cc **Compression** 9.0:1 ratio Maximum power 710hp @ 6,750rpm

Maximum torque 880Nm @ 2,750-4,000rpm Transmission Seven-speed manual

Suspension

- Front Double-wishbone suspension with horizontal dampers in pushrod configuration (dampers mounted longitudinally)
- Rear Double-wishbone suspension with horizontal dampers in pushrod configuration (dampers mounted transversely)

Wheels & tyres

Front 8.5x19-inch forged alloy centrelocking wheels; 245/35/ZR19 Michelin Cup 2 tyres

locking wheels; 305/30/ZR19 Michelin Cup 2 tyres



TOP RIGHT RUF has



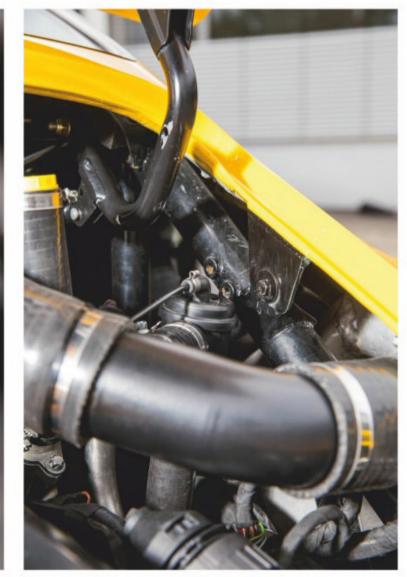




25









"If, as an avid 911 enthusiast, you were to start with a blank sheet of paper and then create your ultimate sports car, this would be the outcome"

low centre of gravity keeping it agile when the road begins to bend. Its chassis, unfazed by these remarkably smooth surfaces, means the car does an excellent job of ensuring directional changes do little to deter pace. Transitions are smooth, with little in the way of observable pitch and roll, the CTR staying impressively taut in its effort to maintain grip across the entirety of its footprint. A tight right-hander demonstrates this so wonderfully: with only a dab of the carbon ceramic brakes before corner entry, the CTR's nose stays flat as it dives for the apex, and I'm then completely astonished at how ridiculously early I can get back on the gas. Pulling away fast from the corner, I can't help but laugh my head off – the whole thing just feels downright naughty, probably because I'm in a car which looks and, to a certain degree, feels like a classic 911, and yet it accomplishes things that you'd never dream of in the real thing.

The CTR's gearbox, too, is an engineering marvel. Created in partnership with ZF, who also make Porsche transmissions, it's a seven-speed unit, though unlike those found inside a Porsche 911, seventh isn't a mere overdrive gear, the CTR's top speed "in excess of 223mph" achieved by using it. Thanks to the profile of the carbon monocoque's transmission tunnel, the skinny shifter, akin to that of a 993 RS in appearance, is mounted higher than in any 911 it might take its design cues from. Most importantly its shift is pure harmony, possessing a fluidity and rifle-bolt preciseness not seen outside of a 991 R. It needs to be, too, because when you've got a flat six feeding 710hp to the rear wheels you can't afford to be worrying about getting a gear change wrong.

absolutely not easy; the CTR will kick if you take the mickey too much. Really, it all adds to the remarkable character of this wonderfully crafted sports car, which helps set it apart from its contemporaries.

Today's sports cars are more powerful and laden with science-bending tech than ever before. There's a caveat to this numbing assault of big power and groundbreaking gadgetry, and that's a wavering in connection between car and driver. Somehow though, RUF has managed to buck that trend, building a car as quick and dynamically capable as anything you'll ever likely drive, which not only upholds that connection, but extends it. If, as an avid 911 enthusiast, you were to start with a blank sheet of paper and then create your ultimate sports car, this would be the outcome. It is quite remarkable. Few cars have ever, or will ever, offer an experience so positively engrossing.

Conscious of my role as a journalist to offer a balanced critique, I spend the entire journey back to Rufplatz trying to find fault with the new CTR, but the task is near impossible. All I can muster is that I'd like the steering to carry a little more weight to it, but really the system is on par with the best 991 GT cars. Exasperated, I return the car and give its keys back to Marcel. Remember his resounding appraisal of the first Yellowbird earlier in the day? Part of that quote has deliberately been left out until now. "It's our philosophy to have the classical features of that 1987 CTR in a modern car, reinterpreted," he continued, before turning serious for the only time during our stay. "We feel very, very responsible to fulfil those 50 orders and come up with the perfect car." He need not have worried. It can't claim to be the world's fastest sports car today, but the CTR Anniversary, by our reckoning, could certainly be the greatest.

RUF says there are limited driver aids on this car, "so the driver is challenged to be the boss". That certainly is the case: it's an accomplished steer, but it's

26 | 80 years of RUF: six of the best



WI-PSM

6

They're the cars that defined the company: Total 911 presents six creations considered most important in Pfaffenhausen's history, as chosen by the Ruf family









RUF TURBO 3.3

The RUF Turbo started a rich tradition of the Pfaffenhausen company beating Porsche to the development and release of pioneering technologies on its own cars. Debuting in 1977, the RUF Turbo arrived only three short years after Alois Jr inherited the company from his late father,

where he vowed to continue the RUF philosophy of innovation and quality. "It was the first ever turbocharged RUF that carries the RUF chassis number, which makes it a milestone in our history. It was also the first RUF car which was featured by the German press," Alois says today.

Based on Porsche's 930 Turbo, RUF's version featured an increase in capacity to 3.3-litres thanks to the use of larger pistons, usurping Porsche to the feat by a whole year. It also had a five-speed manual gearbox when Porsche still used four – it'd be another nine years before Zuffenhausen finally released its own version of the upgrade. In typically understated style, RUF simply said at the time its first car "had a distinct performance increase compared to the standard Turbo model". That came in the form of 303bhp, up from the 930's already heady 260bhp, with 412Nm torque.

Total 911 drove the RUF Turbo 3.3 in 2012, Johnny



Tipler commenting: "It's fast, accelerating hard from 2,500rpm, and I'm unable to discern any of the turbo lag that bedevilled early 930s. Everything starts to happen quickly at full throttle, so I moderate my speed because the brakes are adequate rather than confidence inspiring." The Turbo 3.3 gives its driver a real workout behind the wheel as only the best RUF cars do, this car providing the blueprint for RUF's unique ability to offer scintillating turbocharged sports cars ever since. It's clearly one of the builds Alois himself is most proud of, beginning a new dawn for the company as it set itself on a path to becoming a manufacturer in its own right.



RUF RCT EVO



"If it's still popular, don't stop making it," Alois says as we speak about the RCT Evo's enduring legacy. There are two in the RUF workshops during our visit, one example from Japan undergoing a light restoration, the other in the later stages of a conversion.

The RUF Carrera Turbo melds the narrow body of a 964 Carrera to a single-turbo engine fettled by Pfaffenhausen. Remarkably for a sports car with just one turbo there's relatively little lag, and delivery of its power assumes the linearity more akin to an atmospheric flat six. It's a recipe that's proved popular with enthusiasts for years, and it's another clear favourite for Alois too – the green example in our pictures is his daily driver. "It's a sports car that has so much charm to it. It was built in the '90s and is still popular among our customers today. That's what makes it special. It's fast, but it remains a usable driver's car."

The RCT Evo is a very fast car indeed. By taking a naturally aspirated flat six and then turbocharging it, 425hp is achieved at 5,800rpm, its hugely respectable 570Nm peak torque more than Porsche's 992 Carrera S of today. Top speed is greater than Porsche's latest offering, too, at 199mph – and all this in a car first built in 1991.



30 | 80 years of RUF: six of the best

RUF SCR



Alongside the RUF Turbo 3.3, the original RUF SCR of 1978 completed Pfaffenhausen's line-up of improved models over those built down the road at Zuffenhausen. The SCR was based, need we guess, on Porsche's own SC, which itself was released in 1978. The SC underwhelmed a lot of die-hard enthusiasts at the time as its 3.0-litre flat six only produced 180hp. This meant the SC was down on power compared to the 197bhp Carrera 3.0 it replaced, and even the 210bhp of the 2.7 Carrera

before that. Porsche was always viewed as a company which took forward steps and, though the SC was torquier and better equipped than its predecessors, customers couldn't hack paying out on a new model with inferior power – allowing RUF to capitalise. The company's revisions brought about a 3.2-litre flat six with a healthy output of 217bhp, more than even the last factory SCs of 1981 to 1983, which boasted an improved output of 204bhp. RUF also improved brake cooling for the car by fitting a revised front spoiler, which housed an integrated oil cooler.

The conversion resonated: German magazine *Auto Motor Und Sport*'s elation at the time of "power at every step!" meant that plenty of Porsche customers were soon taking their SCs to Rufplatz for a full conversion. This enabled RUF to cement trust and respect in the minds of Porsche's wider customer base, something that's arguably never been lost since. Estonia is keen to underline its importance in shaping the company we see today: "The first SCRs showed people just what's possible from a RUF-tuned Porsche. The changes, performed by RUF, enabled the SCR to have identical performance as the 930 Turbo despite having a naturally aspirated engine."

MN-SC 32





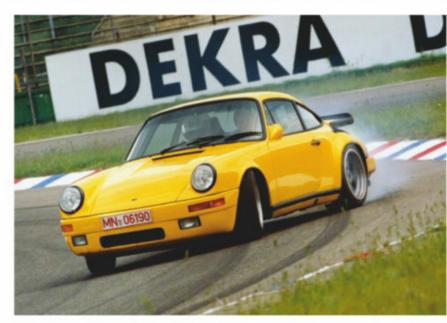
RUF CTR 1

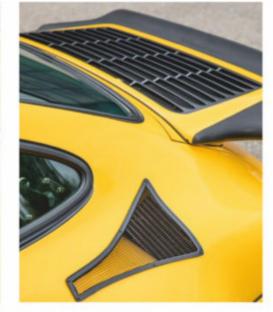


The most important of them all? Quite possibly. The CTR put RUF firmly on the international stage after a *Road & Track* magazine test showed it to have a greater top speed – precisely 211mph – than both

the halo 959 and F40 efforts from giants Porsche and Ferrari respectively. Crowned the fastest car of 1987 as a result, the CTR was soon nicknamed 'Yellowbird' by journalists, a name that's stuck ever since.

The CTR used the narrow body of Porsche's 3.2 Carrera, albeit with the rain gutters deleted and slim-profiled wing mirrors making it as slippery as possible through the air. The 469bhp engine was twin-turbocharged and bored to 3.4-litre spec, with a DME taken directly from Porsche's 962 racer programme. Its gearbox was a RUF six-speed affair – also available as a retrofit on older models – and the CTR also ran on lightweight 17-inch alloy wheels with Denloc technology.







If the CTR's 'fastest car of 1987' tag didn't grab your attention, then a grainy video entitled 'Faszination on the Nürburgring' certainly did. It featured RUF test driver Stefan Roser in an incomprehensible act of skill and bravado, sliding the Yellowbird around the Nordschleife obliterating everything in its path. "The CTR1 is the most important car in our history," says Marcel Ruf. "It inspired the other CTRs which followed it and, 30 years on, we're still standing here talking about it." Only 29 were made, but its legacy has reached every last pocket of the motoring world, inspiring the subsequent CTR2, CTR3 and CTR Anniversary.



RUF CTR2



Pfaffenhausen's second offering of 'Group C Turbo RUF' always had a tough act to follow, but the CTR2 nevertheless stole headlines at its launch some ten years after that mesmerising original. RUF says it's based on the 993 Carrera,

but visually it departs from Porsche's last air-cooled offering rather substantially. Like its predecessor it was once again one of the fastest cars in the world, this time only usurped by McLaren's Fl. Its twinturbocharged engine – based on the 993 Turbo – produced up to 580hp, the body was made of kevlar, and the CTR2 was the first street car with carbonceramic brakes, taken from Porsche's own GT1. A bi-planed rear wing provided the standout design feature, serving to provide downforce and supply air to two side-mounted intercoolers. Two cars even raced at the 1997 Pikes Peak, brothers Steve and David Beddor finishing second and fourth in class respectively.

Already a bold project, for the CTR2 RUF took things even further: for the first time RUF offered the car in either rear- or all-wheel drive, the company also splitting production of the 31 cars built between CTR2 and CTR2 'Sports'. The latter featured a super-





wide body, though today the more slim-hipped but still widebodied non-Sports are considered more desirable among collectors.

Regardless, the CTR2 is thought of highly at RUF. "It's been the underrated CTR until very recently. It just sat under the radar, but more people are starting to appreciate it," Marcel Ruf says, running his hand over the curvaceous bodywork of an example at Rufplatz. He's right, though it shouldn't be ignored. Performance is still remarkable more than two decades after the car was first sold: top speed is 217mph depending on gearing, with a 0-69mph (that's 0-111kph) time of under 3.5 seconds.





RUF CTR3



Even to look at, you can see the CTR3 is built with speed in mind. "There are elements of GT1 inspiration behind its design, for sure," says Marcel, lifting up a large, hinged section of carbon bodywork which cloaks the entire rear of the car.

Arguably the company's wildest design ever, this was Alois Ruf's first project which didn't rely entirely on Porsche underpinnings, paving the way for the dream realised in RUF's CTR Anniversary in being produced completely from scratch. So what exactly is it?

"It's a 997 from the front of the car to the A-pillar; from there it's a bespoke design with tubular chassis and push-rod suspension," Alois explains, looking back over the car with fondness. Its unique chassis, developed in partnership with Canadian outfit Multimatic, meant the CTR3's Porsche-based engine was rear-mid mounted, the wheelbase now some II-inches longer than a standard 997. Its transmission is a seven-speed double clutch, and the unique body is again made from carbon fibre.

Until the arrival of the Anniversary, the CTR3 was considered RUF's top model. 30 was again the magic figure in terms of production, though seven got the utterly bonkers upgrade to Clubsport spec. This upped power from 691 to 777hp, produced a barely comprehensible 980Nm of torque, and served up a top speed of 236mph. It's Marcel's turn to interject. "Really it was too cheap. It was €500,000." The CTR3 has clearly matured in value in the ten years since its release, a Clubsport example selling for €1,107,500 at RM Sotheby's Monaco sale in May last year. "We were so proud of that result," Marcel admits, and it's not hard to see why. RUF cars usually trade hands privately, with the help of RUF itself, so the auction was a very public test of enthusiasts' resolve for the company's work outside of its new CTR and SCR projects. "It's such a fast car, but the Anniversary feels faster. And we are not known for making slow cars," Alois chuckles.

Ruf, as well as Anja Bäurle, Marc Pfeifer and Rafael Riethmüller at RUF Automobile for their kindness and assistance during our visit.

Estonia and Marcel

MARCEL RUF

He's the third generation of the Ruf family dynasty and the man responsible for taking RUF Automobile forward. Marcel, son of Alois Jr, discusses Pfaffenhausen's past, present and future

Interview by Lee Sibley Photography by Daniel Pullen

RUF has come a long way in 80 years. Where did the Porsche connection come from?

RUF was just a little gas station my grandfather founded in 1939. He also had his own bus built, where he was offering rides, and one day he was driving the bus when he was passed by a Porsche 356. The Porsche immediately had an accident and was flipped over on the side of the road. My grandfather stopped and took the guy out of the car. He towed the car away and just waited for the gentlemen to call him and say he was back to full health, but the guy called and said he wanted to sell the car and was willing to take a very low price as he didn't want to keep it.

That was in autumn of 1963. In the winter of 1964 he repaired and resprayed it so it was a 'good-to-go' Porsche once more. He and my father were out one day enjoying some father and son time in the car when they were stopped at a red traffic light – somebody knocked on the window and said 'please pull over; I'm interested in buying this car'. The car was sold on the spot! The funny thing was even to get home to pick up the papers, my father and grandfather were given another Porsche from the buyer. On the way back they were dreaming! They had done a deal where there was no negotiation on the price, the buyer paid cash right away, and they were given another Porsche to collect the paperwork. This ignited my father's passion for the Porsche: he convinced my grandfather this was a cool market to be in.

radiators and air intakes on the front bumper so the cooling would work for the car. Then we found out we can improve the power, improve the sound, so in the 1970s we named ourselves 'RUF Tuning and Styling'. In the late 1970s this became so sophisticated, so highly individualised, that we came to the conclusion this must be under our own name, with our own VIN number. So in 1981 we became accepted as a car manufacturer outright by the German government.

It's an incredible feat for a company which is still family owned with just 60 employees...

We call ourselves a manufactory because people come to us with very specific definitions of what they want, and in general we never say no. There are three criteria to follow: the road regulations – so if it is legal to do it, the budget, and also the taste. If all of this comes together then we can realise something for the customer.

There are those who are 'in the know' and really appreciate the car when they see a RUF. Others simply do not. Does this bother you? When it comes to a RUF car, you must be in 'very

We've always been a big admirer of the 911. For us it's the greatest sports car ever born. We try to compliment the car, make it a bit more individualised for every customer, and with technology make it a bit stronger. With our Porsche service centre here in Pfaffenhausen we want to maintain the service for everybody who's a Porsche owner, no matter if they have a RUF or not.

We've seen the merits of the CTR Anniversary, but RUF is also reviving another icon with the SCR. Why?

With the SCR we wanted to get the information out to the people who could not get a CTR Anniversary that there is a normally aspirated car on the way, and this car is not limited. It's the perfect solution: a modern, new RUF chassis with a 4.0-lire, normally aspirated engine. The central, structural element of the new chassis is a carbonfibre monocoque. It saves a lot of weight and keeps us flexible because the front and the rear end are a welded assembly that can be changed, so we can stay with the central piece and then play around with the variation of the chassis. It's

So from there RUF became a company servicing and repairing Porsche?

It was a natural growth, but then in the 1970s we realised we could improve the cars. It started with the radiators – in summertime the 911's cooling was a bit difficult, so we just made bigger deep'. You must know so much about these cars compared to other cars. So when you own a RUF car, the situation is you stop at a red light, some people might just say it's a nice sports car, it's a nice 911, but then this one guy out of ten will be completely freaking out, pulling out his phone and saying he must take a picture as it's the first time he's seen a RUF car in reality. We believe that's the beauty of our cars.

You've had a Porsche service center onsite for ten years. You have a very special relationship with Porsche, don't you? a big investment for our company and will play a vital role with RUF cars of the future.

What can we expect to see rolling out of Pfaffenhausen over the next couple of years?

We've a wide variety of projects in action. Even with our CTR and SCR cars, they will get constant development: we're working on double-clutch transmissions and four-wheel drive, for example. There is plenty to get excited about, but I can't say what just yet. We'd like to go back to the 'Ring with our new Yellowbird, too... **GIM**





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SPEEDSTER







The new 991 has revived Porsche's rich Speedster heritage. Total 911 drives it alongside its predecessors to find out if tradition has indeed been upheld | 39

Written by Kyle Fortune Photography by Porsche



GO 5108

911 Speedster generations

Historical context – that's what we've got here. Parked outside the 991 Speedster launch hotel are four older Speedster generations, brought from the Porsche Museum and usually left parked. Only we've time to kill, so it'd be rude not to borrow them all and take them for a drive to fully indulge ourselves in the Speedster story before we're let loose in the latest 991...

ATTTTTT

356 SPEEDSTER

It's unusual for a non-911 model to grace these pages, but for accuracy please forgive us this significant 356 Speedster interloper. As pretty as cars can be, this is Speedster genesis; the 911's forbearer, powered here by a 1,600cc engine. Power is a modest 75hp or so, but it weights nearly half that of the 991 Speedster, and feels quick enough.

The idea behind it was conceived by American car importer Max Hoffman, who wanted a lowcost, high-performance model to sell in America. Hoffman proposed stripping out equipment, the loss of the rear seats and simple buckets up front behind a removable raked windscreen. The hood was rudimentary and the sales were incredible, Hoffman's vision helping Porsche cement its reputation as a sports car firm in the huge US market, the Speedster becoming a hugely significant model as a result.

For a car that's in its sixth decade of being, it's





ABOVE The 356 is where it all began for Porsche and its Speedster model line

BELOW Achieving elegance through simplicity, the 356 Speedster is credited with kick-starting Porsche's popularity in the US market



incredibly easy to drive. If vintage Porsche underline one thing, it's that engineering has been at the firm's absolute core since the beginning. The gearshift is unusually sweet for such an elderly vehicle, operating with the precision that's a company hallmark. The brakes, too, are strong for this period of car, while the steering, though relatively slow-witted by modern standards, is incisive against its period competition, allowing the 356 Speedster to be hustled with real verve. It must have felt like it'd come from a different planet to US drivers in the 1950s, and its legacy can be felt in every car that follows it – and not just those wearing the Speedster badge.



3.2 SPEEDSTER

Shown at the 1987 Frankfurt Motor Show, the Speedster Clubsport prototype was based on a 911 SC. The production car arrived in 1988, though the concept's closed cockpit and lack of screen didn't reach production, even if like the 356 Speedster before it that shorter, five-degree-steeper raked screen could be removed, with bolts above the door hinges allowing you to do so. The hood was, in Speedster tradition, a somewhat rudimentary affair, a rain cover if absolutely necessary rather than proper protection from the elements.

Even with the compromised weather protection, – dealers had owners sign disclaimers saying they understood it was for 'emergency' use – some 2,103 Speedsters were built, with all but 161 of those coming with Turbo body styling. That makes this Speedster all the rarer, being a narrow, plain Carrerabodied example. The G-series Speedster introduced the double-bubble back hump, a visual nod to the 356 Speedster, covering the area where the rear seats would be. The weight loss was claimed to be in the region of 70kg over its Coupe relation.

All of that and the greater openness that comes as a result of that shorter screen makes the 23lhp the 3.2-litre engine produces feel a bit more prodigious than it actually is. At least one Speedster is said to have left the factory with the same engine enhancements as the Clubsport's, which would enhance it further, but even this stock car feels quick and compact. It's agile, too, the Speedster benefitting from its reduced mass, more so in lighter narrowbodied form here. The lineage from its 356 relation is obvious, from the slickness of the gearshift to the fine weighting and response from all the other controls. My drive is all too brief, but with the promise of a 964 Speedster to jump into next, there's not time to dwell too much on it.

ABOVE Porsche's first 911 Speedster shared the Carrera's 3.2-litre flat six with G50 gearbox, benefitting from reduced mass and a lower centre of gravity

BELOW Most 3.2 Speedsters were widebodied; the narrow body, as here, is very rare



964 SPEEDSTER



The car that Andreas Preuninger points to as being most representative of a proper 911 Speedster, the 964 mixed elements of the Carrera Cabriolet, the 3.2 Speedster before it and the 964 RS. With the paredback, lightweight interior of the RS – including the sports bucket seats, a stock 250hp from its 3.6-litre engine and the same removable, raked and shorter windscreen of the 3.2 – Porsche had hoped to build 3,000, but in the end only 936 were built. All were narrow-bodied, with the exception of 15 examples ordered with Turbo wide bodies.

If Preuninger points to it as being most representative in its technical make-up, so too is its appearance. With the 964's fared bumpers, this Speedster is most visually relatable to its 356 relations, at least those that lost their bumpers and were campaigned around California's race circuits. It's a pretty, beautifully proportioned car that revels in its compromises in the pursuit of purity. Here on the short loop of the Sardinian country roads it feels special, alert and agile, it feeling stiffer yet more composed than the G-series model before it. Of the Speedster line-up here, after the 356 it's the car I'd like to spend more time in, and indeed it's the one I'd like to own.

ABOVE The 964 stuck more rigidly to the original Speedster's design ethos as a pared-back cruiser BELOW In a reversal of the 3.2 before it, most 964 Speedsters were narrowbodied. Just 15 were produced with a Turbo body







ABOVE A product of Porsche Exclusiv, the 997 Speedster was released alongside the revered Sport Classic



Palm Springs, the launch of the 997 GTS, a car I'll always covet. Porsche brought its then-new 997 Speedster, and the reception for it was less full of praise than it was for its other end-of-line 997 model. A product of the Porsche Exclusiv manufacturer department, this is the Speedster that's most distanced from the ethos of the original idea than any car here.

Heavier and significantly more expensive, all came with PDK transmission and plenty of equipment, it more of a demonstration of the Exclusiv department's talents than any real attempt at a Speedster in its truest form. It felt cumbersome then, and that's not changed in the seven years since it was launched. What's surprising is the scuttle shake, perhaps exacerbated by the combination of the wider track and sport suspension. Porsche built just 356 of them, most being immediately squirrelled away as collectables as a result. That's probably the best place for them, the 997 the most uncomfortable footnote in the Speedster's long story, but one that the GT department has unquestionably rectified with the 991 Speedster, as we're about to find out... 🥥



RIGHT Just 356 were made on a numbered production run, each car's ID printed on its kick plates and a plaque on the dashboard

44 | 991 Speedster first drive



"I took a 911 Cabriolet off the line and drove it to my hot-rod shop," admits Preuninger. That car became a mix-up of Genl GT3 and that Cabriolet. The result of the GT boss' work was first shown to a select group of customers as far back as 2014 alongside the 911 R concept, which the Speedster shares a lot of DNA with. This new Speedster is a GT department model, a car which, if you take Speedsters at their most elemental, it always should have been.

Even so, Preuninger admits: "We didn't focus on every last gram and we're not concerned about lap times." While that might be true, a kerbweight of 1,465kg is just 52kg more than a manual GT3. The Speedster, like the R, is exclusively manual, with no

windscreen and unclips the buttresses which then spring up from the large clamshell. The clamshell lock is released too, and the huge carbon-fibre panel the largest Porsche has ever made, and weighing just 10kg - lifts out and back on struts, the hood simply pushed into its stowage area underneath. Pop down the cover and the Speedster is open, as it should be, the slightly steeper rake and lowering of the screen, as well as that rear, fundamentally changing the look of the 911. It's very reminiscent of original 356 Speedsters, losing the sometimes-uncomfortable, heavy-looking rear of later 911 Speedster models. There's also a hint of Carrera GT in its proportions, particularly that rear three-quarter view. The black stone guards on the flanks fore of the rear wheels were a late – and necessary – addition, admits Preuninger, breaking the visual length while harking back to the G-series models. You don't have to have them, and if you're after an even more retro style then there's the Heritage Pack plus a numbered, customised Porsche Design timepiece, as is the norm these days. Forget those, though. Preuninger leans in, says to press Auto Blip and the exhaust button and go and drive it. I argue I'll do the footwork myself and leave the Auto Blip off, Preuninger laughing and saying: "It's better than you," before adding, "and me..."





PDK being offered, saving 17kg in weight and pleasing the driving purists among us. There are the same 911 R carbon-fibre front wings, the underbody at the rear being R-derived, while PCCB is standard too.

Those early customers who saw it liked the idea of a properly raw Speedster, doing without any roof, but Preuninger and his team denied them that, fitting a hood, in part to ensure that owners actually use them rather than park them away with delivery miles in collections. And the 1,948 Porsche will build? That's the year when the first Speedster was built.

Opening the low, neat roof is simple enough – a button unlatches the hood at the top of the lower







Humbled, I'll see if he's right as I head quickly out in search of some of the best mountain roads Sardinia has to offer.

Now familiar with the surrounds of a 992, getting back into a 991 is a bit of a shock. It's a welcome one, however, the five actual roundels in front of me; the simpler, less dominant screen mid-dash – if optioned it's a no-cost choice to remove it, as well as the climate control. It looks and feels wonderfully analogue in comparison, shockingly so, though uncomplicated and easy at the same time. The sixspeed manual transmission has, unsurprisingly, had a little bit of work done to it, the shift tweaked to gain even greater precision and speed, making this anachronism even more appealing.

It's attached to a development of the naturally aspirated 4.0-litre engine in the GT3 and GT3 RS. Here it's got 510hp, a 10hp gain over the GT3 thanks to a number of revisions. They include new individual throttle valves and higher pressure fuel injection, all that allowing it to pass those strict emissions regulations that see every powertrain engineer I've met in the past couple of years look utterly broken. There are a pair of particulate filters on the pipework, as is now necessary, though in true GT department style they've been added with no compromises. Every other application of such a filter sees the addition of weight, but here the GT department have actually removed 10kg from the system by adopting thinner gauge materials and applying a new welding technique. There are electric motors in there, too, these opening the exhaust flaps by degrees rather than the fully open or closed of conventional systems and allowing it to pass ever more stringent noise regulations.

Those flaps are instrumental in perhaps the most obvious change to the engine's character. It generates a more cultured sound, more Italian operatic than chaotic German oompah in its tones. That is a result of a combination of the differing resonances from the thinner materials used in the structure of the exhaust, as well as the slight dampening effect you get with the hood situated over the engine. There's no difference in the way it chases up to its 9,000rpm redline, though, the unbridled enthusiasm for revs and keenness of response completely undamaged by its requirement to pass ever more stringent emissions tests. And what an engine.

The cabin is draughty, deliberately so. If you want an open 911 without any buffeting then buy a 992 Cabriolet. In the Speedster that openness is part of the experience, adding even more to the visceral engagement and creating a more immersive, exciting



BELOW 991's windscreen is shorter and more steeply raked, in true Porsche Speedster fashion





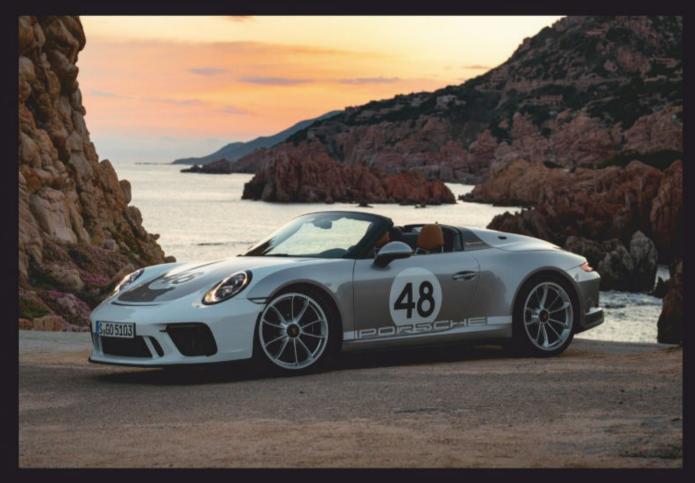
Model 911 Speedster Year 2019

Engine

Capacity 3,996cc Compression 13.3:1 ratio Maximum power 510hp @ 8,400rpm Maximum torque 470Nm @ 6,250rpm Transmission Six-speed manual

Suspension

- Front Spring strut suspension (MacPherson type, Porscheoptimised); some chassis mounts with ball joints; steel springs with 25mm lowering; PASM electroniccontrolled dampers with two manually selectable programmes
- **Rear** Lightweight multi-link suspension with wheels independently suspended on five suspension arms; steel springs with 25mm lowering; PASM electroniccontrolled dampers with two manually selectable programmes



991 Speedster: Heritage Pack

There's no Weissach Pack for this GT department special; instead the Heritage Design Package harks back to the original 356 Speedsters so loved by racers in the 1950s. It costs £15,302 for UK buyers and adds white 'spears' rising from the white front bumper, white Porsche scripting on the flanks, and a number circle which can be optioned with any two-number combo of your choosing via Tequipment. It also adds gold Speedster badges, a historical Porsche crest badge on the bonnet, as well as the wheel centre caps. Black-painted calipers, rather than the usual yellow, for the PCCB complete the look. It is exclusively offered with GT silver paintwork, and an indoor car cover in 'Heritage Design', is also included.

The interior is less overt, using a mix of Cognac leather on the seats and steering wheel top marking, the wheel centre getting a historic Porsche crest. The bucket seats have their backs painted in GT silver, as are some interior trim strips, with other highlights including black anodised stainless steel sill guards, classic Porsche embossed crests on the seat headrests, and gold Speedster badges in the cabin.

If you like the sound of the interior but aren't sold on the outward looks you can, at no discount, delete the more flamboyant exterior elements of the package, those white-painted elements and spears, as well as the number circles and Porsche scripting on the flanks, while still retaining the gold badges and black-painted calipers. If you're sold on GT silver that Heritage Design Pack interior compliments it beautifully, while the subtler look outside also works particularly well.



 Wheels & tyres

 Front
 9x20-inch; 245/35/ZR20

 Rear
 12x20-inch; 305/30/ZR20

 Dimensions

 Length
 4,562mm

 Width
 1,852mm

 Weight
 1,465kg

 Performance
 0-62mph

 0.9 speed
 192mph

48 | 991 Speedster first drive





driving experience that far from compromises it, but instead enhances and beguiles. There's more of a sense of focus. It would be wrong to describe it as rawness; here it's more of a single-mindedness that's elevated even over its GT3, R and RS relations. With the engine howling behind, that oh-so-precise gearbox working so crisply, the Speedster is utterly

open status by the rush of the wind and the greater and richer sensations that come with it.

Driving it into any of the villages that punctuate the sensational, testing mountain roads leaves you tingling with adrenaline after being wowed by its unerring agility, sensation, feel and performance on the roads leading to it. With it open you can better

Total 911 verdict

There were some who thought the Speedster would be a nice money-making opportunity for a limited-build model, but to call it that is to do it an enormous disservice. It's a properly developed GT car which transcends current ever-stricter emissions and noise regulations to provide as exciting and involving a 911 driving experience as you could possibly ask for. Sensational in every sense, the Speedster is an incredible car.

bewitching to drive, and shockingly capable.

That's perhaps not surprising given it's essentially a GT3/R mash-up, with rear-wheel steering, active engine mounts, a mechanical limited-slip differential with torque vectoring and GT3 suspension adapted to the differing character of an open car. It rides with a taut authority and incredible control, it shocking just how composed and capable it all is. There's no trace of shake, no obvious loss of ability thanks to the loss of a stiffening roof above. The steering is just as well-weighted, quick and faithful in turn-in, the rear as playful or as planted as you'd like and expect from a GT department car. The Speedster only betrays its

hear, and even smell how hard it's been working. The Speedster is a more elemental drive, and relays a heightened driving experience because of what should otherwise be considered compromises. As such it's as fitting a send off as the 991 could have. Inevitably, though, and tainting its magnificence is the real end-of-era feel it brings. Even if we know the eventual 992 GT3 will use this wonderful engine and gearbox, the creeping certainty of modernity elsewhere will undoubtedly change the character of the GT cars that follow. It's been well worth waiting for, this Speedster. It's just a crying shame that Porsche is only building 1,948 of them.

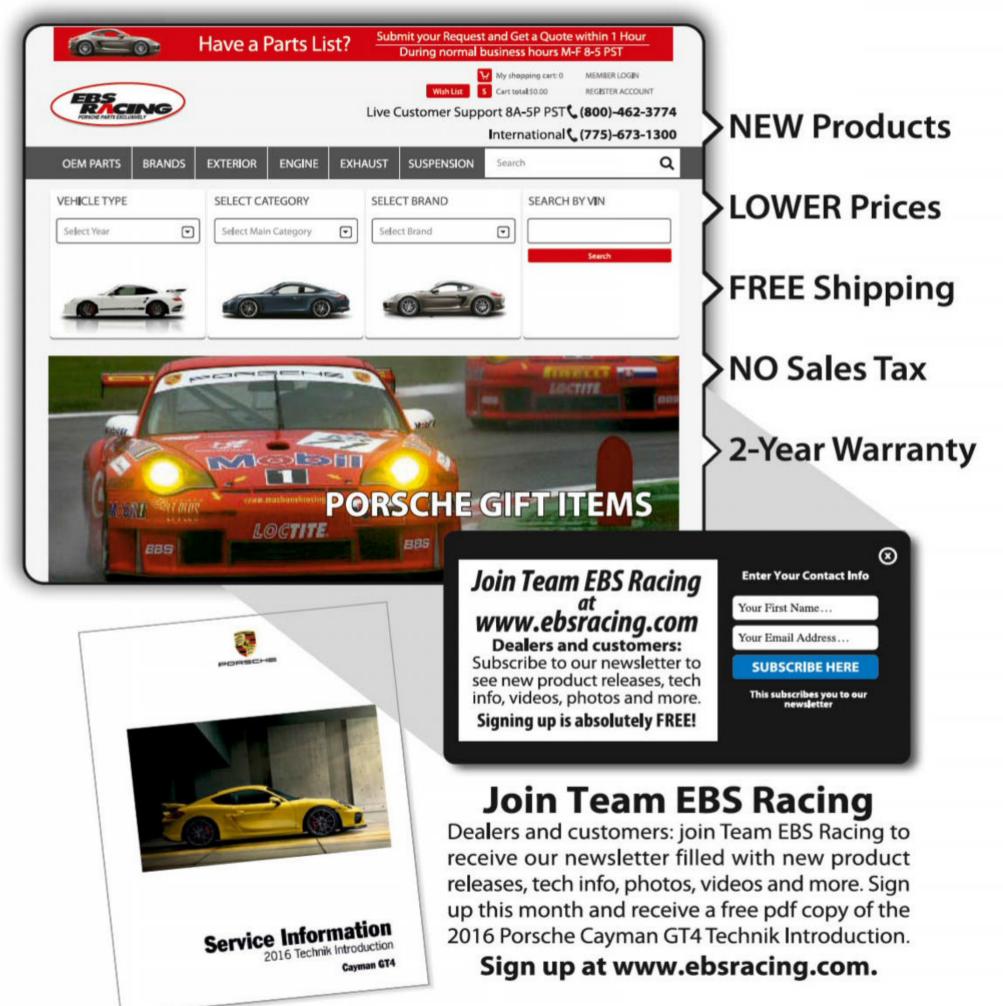
LIKES

 Pretty much everything: astonishing engine, gearbox, chassis and looks

DISLIKES

 Limited-number build, price, slight muting of the flat six's aural character

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PORSCHE INDEX 997 TURBOS

The Turbo S was a fitting sign-off for the hugely accomplished 997 generation, and it was also relatively rare. Here's what it's like to buy today

Written by Chris Randall Photography by Daniel Pullen



| 51

HISTORY AND SPEC

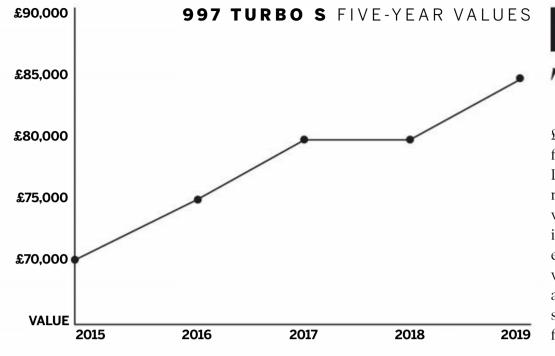
he Gen2 997 Turbo was an exceptionally accomplished sports car, and we've sung its praises many times within these pages. Improving upon such a special recipe was a tall order for the engineers at Zuffenhausen, yet they did exactly that, creating an instant classic and one of our favourite models here at **Total 911**. With just 2,000 made, production amounted to virtually half that of the regular 997.2 Turbo, and those few lucky buyers would have been very impressed with their new purchase.

There was still the same 3.8-litre motor beneath the engine cover, but it had been fettled to produce 530hp and 700Nm of torque – an increase of 30hp and 50Nm respectively. Most of that increase came from turning up the wick on the pair of variablegeometry turbochargers, maximum boost now raised from 1.0 bar to 1.2 bar. Still directly injected and equipped with VarioCam Plus variable valve timing, the latter had been revised on the intake side and the air intake was fashioned from a carbon weave. Drive was sent to all four wheels via the seven-speed PDK transmission – Sport Chrono Plus was standard, which meant the addition of launch control – and there was the usual blizzard of driver assistance acronyms in the form of PASM, PTM (Porsche Traction Management) and PTV (Porsche Torque Vectoring).

Despite all of the enticing technology, outright performance wasn't markedly different from its non-S stablemate, mere fractions of a second shaved from the major benchmarks meaning just modest gains were on offer. Not that it wasn't explosively fast as it stood, 0-62mph reeled off in 3.3 seconds and 195mph beckoning if you had the space and nerve. So it had the pace, but reasonably there was a question – one asked in some contemporary road tests – over what buyers were really getting for their additional £17k.

Well, had the buyer ticked the box marked 'S' when it came to ordering their 997 Turbo they would have discovered it also came with PCCB brakes as standard, fronted by 'RS Spyder' centrelock wheels. And on top of the already lavish Turbo specification their new purchase boasted the likes of adaptive Sports seats, a six-disc CD/DVD system and a choice of exclusive interior trim colours. Whether all of that could be viewed as money well spent is open to question, but with the 991 all set to take centre stage this ultimate expression of the 997 Turbo would have been very hard to resist.





THE VALUES STORY

The Gen2 Turbo certainly didn't begin life with a price tag quite like this one, the S requiring potential owners to part with an additional £17,000 or so. That meant spending £120,598 for a Coupe and a further £10k on top of that for the pleasure of open-top motoring. Fast-forward six years from the end of production and according to the experts we consulted – Greig Daly from RPM Technik and Hexagon's Jonathan Franklin – you'll need in the region of £80,000 to bag a good example of the Coupe, Jonathan suggesting that values could actually be closer to £90,000. You'd have paid up to £10,000 less in 2015, but a gentle rise in values over the last couple of years was to be expected when considered in the wider context of the 911 market. So while the values now are firmly in 991 territory, the dynamic appeal of the generation that preceded it holds plenty of sway for buyers, says Jonathan, and that bodes well for the future.

MARKET RIVALS

Our enthusiasm for the Gen2 997 is well-documented,

991 .1 Turbo S

It could have a slightly higher mileage for its age, but if that doesn't bother you then it's likely to prove a satisfying purchase. Okay, so perhaps it lacks the final sharpness of edge that makes the 997 so enjoyable, but its tech-laden approach and performance are very hard to ignore.

964 3.3 Turbo

The mileage will likely be on the higher side, but this old-school approach has a charm all of its own. 'Just' 320hp from the revised 930 motor looks a bit anaemic in this company but make no mistake, this car still offers plenty of punch and a level of driver involvement that few supercars can match.

997.1 GT3

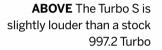
Extensive revisions to the aerodynamics, an engine that revved to 8,400rpm and trackfocused adjustable suspension. If that isn't enough to tempt you, we don't know what is. It's as thrilling to drive as you'd expect, and the sort of special experience that you'll never tire of savouring.

993 C2S/C4S

An obvious choice? Perhaps, but that doesn't make the 993 any less deserving of consideration. Blending entertaining handling and performance with the reliability to act as a characterful daily driver, this could just be the aircooled all-rounder you need. It's Turbo-bodied in S form, too.

and we are equally enamoured with the Turbo S, but those having the best part of £80,000 to spend might be tempted into an alternative – especially as the choice in this price bracket is more than a little enticing, as the possibilities here amply demonstrate.





BELOW Sport Design wheel was standard on the 997 Turbo S and featured illuminating 'Sport', 'Sport Plus' and 'Launch Control' graphics on its left and right arms

WHAT'S IT LIKE TO DRIVE?

iven the unique specification of the car, it goes without saying that the Turbo S feels more special to drive over a regular 997.2



Turbo. It's slightly louder too, and its huge power and torque figures mean it still feels incredibly fast by today's standards. The compulsory PDK gearbox does give the 997 Turbo S's age away somewhat as it's just not as sharp or as intelligent as later, 991-based iterations of the technology, but it's still easy to use and doesn't overly prohibit the drive.

As Franklin points out, many have realised that this car outscores the current 911 when it comes to precise dynamics and the exploitable nature of the driving experience due to more compact dimensions. Add in superb levels of comfort and luxury and it's a beguiling Neunelfer indeed.



BEFORE YOU BUY

ith even the earliest examples having barely celebrated their eighth birthday, it's not unreasonable to expect any cars you find today to be in exceptional condition. Externally there could be the odd blemish in the form of a stone chip or two, and it would be wise to check the history for any evidence of previous accident repair, but that's really about it. Much the same applies to the cabin, where the richness of its appointments should be matched by equally fine condition. By all means check that everything operates as it should, especially the functions of the PCM system, but it would take particular carelessness on the part of a previous owner to leave a car with obvious damage or wear.

The story is much the same mechanically; the twin-turbo 3.8-litre motor proves incredibly robust, so satisfying yourself that the service record is in order is really all that's required. The only areas that are worth a closer look are the cooling and air-conditioning systems as the radiators and condensers are prone to damage and corrosion, while the crossover coolant pipes that link the radiators are pricey to replace. You can buy the pipework and associated bits for around £450 were you tempted to tackle the job yourself, but budget £1,000 to have a specialist do the work.

Suspension-wise the PASM dampers are predictably expensive, and we'd consider spending £250 to 300 on a geometry check and set up. As for the brakes, there's the stomach-churning expense of replacing those PCCB discs – a full set costs almost \pounds 18,000 – so ensuring they are in perfect condition has to be a priority. You could always explore a conversion to steel discs should that potential expense prove too alarming. And while we're in the area, it's equally worth checking that the centre-lock wheels haven't been damaged by careless handling or maintenance; for the record, a new front rim will set you back just over £1,600. Such expenses aside, the reassuring news is that the majority of these cars are to be found within the OPC or specialist network - numerous examples still boast the balance of extended Porsche warranties, too - so there is little excuse for lumbering yourself with an S that hasn't been carefully maintained throughout its life.







CLOCKWISE FROM ABOVE The last visible Turbo flat six featured a carbon fibre airbox housing; its body was the same as the regular 997.2 Turbo however, with identical side-air intakes split by a horizontal slat in the centre; PCM sat-nav, PASM, and Sport Chrono Pack with Launch Control were all standard specification on the top-of-the-range S. Launch Control was activated by holding the brake pedal down with your left foot before flooring the acclerator with your right. Lifting off the brake then propelled you to 62mph in 3.3-seconds; two-tone Sport seats with contrast stitching were standard-spec, though not all buyers went for it

DESIRABLE OPTIONS

With such a comprehensive specification out of the box, this particular section of our 'Porsche Index' is somewhat superfluous. What's important securing an example that shows every sign of having been cherished by its previous owner and religiously maintained, and we certainly wouldn't suggest settling for anything less. Despite the already lavish specification the first owner may still have dipped into the extensive options list, but you may just have to live with their choices. Greig Daly points out that a car wearing its original centre-lock wheels will certainly prove easier to sell - some owners reverted to standard wheel styles instead - and some feature Paint to Sample exterior hues that may or may not appeal. But aside from that it's unlikely you'll be disappointed with a Turbo S, whatever its specification.











INVESTMENT POTENTIAL & OWNERSHIP EXPERIENCE

turbo S

The S has been somewhat of a steady performer over the last few years, Franklin and Greig agreeing that there's no reason to expect any major change going forward. Lingering uncertainty in the market may be partly responsible – likely to be with us for a while yet – but the good news is that an example valued correctly will always garner interest. And representing the last of the 997 breed is another reason why the S will continue to be sought after in the years to come. But if that steadiness in values dents its credentials as an investment opportunity, well that's fine by us. It means you can simply buy one and enjoy it for what it represents: a hugely capable, very quick and immensely well-engineered 911 that, with the right care, should prove painless to own. With the 997 being thoroughly well-understood by specialists, there's little reason to be concerned, providing yet another plus point in this impressive car's favour.

"A hugely capable, very quick and immensely well-engineered 911"

TOTAL 911 VERDICT

Whether the S represents good value compared to a regular Turbo was a question asked when this car was new, and it remains a valid one. It all depends on what value you place on the relative exclusivity and additional kit as, bragging rights apart, the performance gains are really too marginal to sway the decision one way or the other. There's no arguing with the fact that the S is a fitting end to the 997 generation, and one that boasts the towering dynamic abilities, all-weather traction and interior that makes a blown 997 such a compelling choice. That our Data File rates it just half a star ahead of the regular Turbo indicates just how fine the margins are between the two models, but it's a margin nonetheless. It would certainly be hard to resist one once you'd experienced its appeal.



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Written by Kieron Fennelly

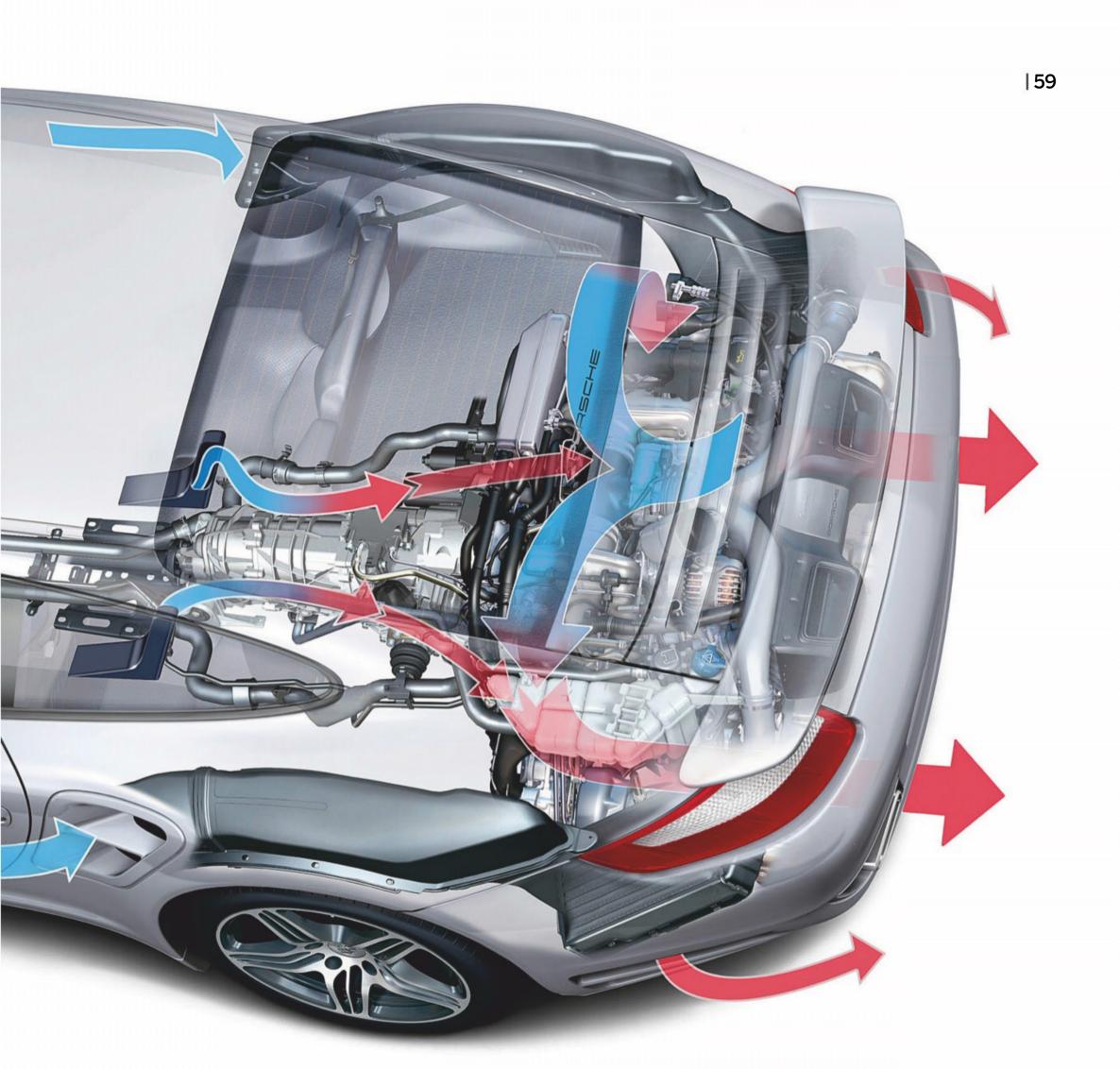
COOLINIC CVCTEM

ТНЕ

OF THE

MODERN 911

Porsche's water-cooled flat six dates from 1996 – we take a look at its evolution in the 911



y the time Porsche built the final 993, its flat six had long been the last car engine using air-cooling. There were built for endurance, not two-hour grand prix. The problem with a four-valve head was cooling; although better breathing delivered substantially more power, The 996 was, of course, a radically different 911. The flat six rear-engined architecture remained the same, but not a nut or bolt was shared with its

many cogent, even urgent reasons to switch to water-cooling: cost of production, refinement, drive-by noise regulations and above all ever more demanding emissions regulations. But there was another element, and that was power. Hans Mezger says that as long ago as 1968 Porsche realised that its air-cooled design with two valves per cylinder would never match the power output of a four-valve head. The water-cooled Cosworth three-litre F1 engine produced over 320bhp when Porsche's three-litre flat eight managed only 280bhp. But at that time it didn't matter because Porsche race engines were airflow and oil circulation alone were insufficient to cool cylinder heads, which became significantly hotter. Zuffenhausen did build air-cooled engines with water-cooled heads for racing, for example on the 935 and later the 956/962, and indeed for the production 959, but this was expensive and an entirely impractical route for large-scale production. It was only a profound sense of tradition which made Porsche persist as long as it did with the air-cooled flat six, especially when it already built water-cooled fours and eights for its transaxle cars and had designed and tested numerous other water-cooled engines for Weissach customers. predecessor. With water-cooling henceforth part of the design brief, its construction allowed for coolant radiators in the front corners of the car, the airconditioning radiators sitting in front of them. For the GT3 and Turbo models a third radiator was fitted centrally at the front. The coolant pipes met under the front bulkhead to run in parallel to the gearbox where they fanned out to each side of the engine block, and this layout remains largely the same for the latest 911. The cooling system on 911s, and the Boxster and Cayman, too, is conventional: a water pump driven off the crankshaft sends coolant along a network of channels around the block and through the cylinder head. Cooled fluid is propelled into the engine while hot fluid flows away towards the frontmounted radiators. In passing, it is worth noting that modern engine 'coolant', commonly called anti-freeze, does far more than prevent the block freezing at sub-zero temperatures. It is a precise formulation containing anti-corrosion/anti-electrolysis additives to protect aluminium parts as well as lubricants to help prolong the life of the water pump bearing, anti-foaming agents and preservatives, to stop accumulation of organic deposits. For this reason it is added neat if topping up is required, not diluted.

One of the drawbacks of the air-cooled engine was its long warm-up phase, despite the valiant efforts of the oil thermostat. A modern engine warms up much quicker: a thermostat stops ingress of cooled fluid until the software of the DME decides the engine has reached its optimum temperature. The water jacket has the effect of insulating the oil, helping the engine to warm up more quickly and retain heat. This is always desirable in terms of minimising the wear which occurs because the oil has not reached its optimal temperature. Consistently hard revving of cold or insufficiently warm engines will eventually have expensive consequences. Despite the latest electronics, it is interesting that although a current 991 will reach its optimal coolant temperature quite quickly, around eight minutes at ambient

temperatures of 12°C (53.6°F), the oil still takes twice as long, especially if engine speeds are low because of traffic density. As with other cars, Porsche cooling systems are pressured to about 15psi, raising the boiling point of the coolant to about 120°C (248°F). This enables the engine to run hotter and more efficiently, and it also means functions such as cabin heating and demisting become effective more rapidly. These use a separate heater matrix behind the facia, effectively a small radiator with a fan blowing air from the cabin ventilation system through it.

This is all fairly generic, and the underlying principles date from the 1960s when heating was generalised in production cars. However, since around 2000 the march of emissions norms means that cooling systems now have a greater role than simply maintaining the coolant within a given temperature range. Engine-management software now controls coolant temperature with far greater precision to assist combustion and minimise fuel consumption. When onboard computers first appeared in cars, it was shocking to see how high fuel consumption could be during the warm-up phase. Even now, two decades later, one weakness of a combustion engine compared with an electric motor is that it cannot be fully efficient from startup. Manufacturers such as BMW have long used a DME-controlled coolant thermostat which allows more rapid warm up and the possibility to intervene more quickly than simply relying on the sensitivity of a mechanical thermostat alone. Porsche introduced a DME-managed thermostatic system on the 981/991 generation. This uses a series of vacuum-controlled valves to govern coolant flow through the engine, cabin and ancillaries such as transmission coolers. When the engine is cold, both thermostat and DME-controlled valves remain closed, although above 3,000rpm the DME valve will open to stop the coolant system being over-pressurised. Valve and thermostat gradually open as the temperature rises, and once an optimal level has been reached the DME valve will intervene to maintain it in a narrower range than the classic thermostat acting alone could.

Up to the 997, the flat six engines operated at around 90°C (194°F); the 991 generation runs at a rather higher 110°C (230°F), all in the name of better combustion efficiency and lower CO_2 output. However, when the engine is driven hard, or Sport/

ABOVE Turbocharged 911s added intercoolers to the water-cooled mix, these now housed either side of the flat six rather than on top

Sport Plus modes are selected, the DME intervenes to lower operating temperature to a more timehonoured 90°C (194°F). Once higher demands are no longer being made on the engine it reverts to its higher temperature/less CO₂ operation. 991 Porsche acquired the switchable multi-function dial, which when in engine-function mode showed this higher operating temperature. However, Porsche was apparently so overwhelmed with calls from worried owners that their 911 was running with a coolant temperature of over 100°C (212°F), as indeed it was intended to, that on post-2012 models the coolant reading was fixed not to exceed 90°C (194°F), even if the actual temperature was higher. This reveals a slightly demeaning view of its customers by Zuffenhausen, you might think. Interestingly, the oil temperature reading, which often reaches 110°C (230°F) in normal running, has not been censored. For comparison, BMW and other margues have long dispensed with any kind of coolant temperature gauge in all their lesser models. Today's driver is

The advent of the turbocharged 991.2 generation brought a further development. Unlike BMW, which uses an electronic, 'on-demand' water pump – the same principle as the oil pump on the 911 from the 997.2 – Porsche retained a mechanical pump driven off the crankshaft, but the pump itself has been modified: it now has a DME-managed sleeve which controls the volume of fluid impelled through its vanes.

Problems in service

expected to rely on engine checklights.

Early in the life of the 996 3.4, some engines exhibited cylinder-head cracking, something of a disaster if outside Porsche's two-year warranty as it meant replacing the engine. This was attributed to shortcomings in coolant flow in the head – the damage was the same cylinder in almost all failed heads – a fault which was rectified on the 3.6 of 2001. If the 997.2 generation with the entirely new 9A1 engine exhibited none of the intermediate complete shaft failures of the previous generation, their coolant systems could still let them down, and are seen as the main point of weakness in the long-term of this engine. There were two main problems: one concerned the radiator pipework at the front of the car, which could begin to leak from its joints. These were criticised for being of indifferent quality, their clamps corroding invisibly from the inside. If a joint burst under pressure, which is possible on rare occasions, the driver would need to react very quickly by cutting the ignition to have any chance of saving the engine from fatal overheating.

the pump bearings can wear. Slop causes the plastic impeller to rub on its surroundings, and sometimes a blade can even break off and be carried around to lodge somewhere in the coolant circuit, impeding flow and having a consequent effect on cooling efficiency and even a hot spot which could result in a cracked head. Drops of coolant under the car should be followed up: a pump will often exhibit signs of failing by weeping around its housing, but unless the coolant level is monitored regularly it is easily missed.

Perversely, coolant is not a service item. The Porsche handbook offers no advice, yet coolant deteriorates. Its anti-corrosive and lubricating properties diminish and the level of impurities builds up. Once draining the cooling system, then straightforward enough on a front-engined car, was a standard DIY job every couple of years, but today's much more sophisticated - and far less accessible systems tend to be neglected. My own experience is that draining and refilling a modern 911 is not a job that many independents or OPCs willingly volunteer to carry out. Evacuating the entire circuit because of its numerous twists and turns and refilling it while ensuring no air is trapped in the system is time-consuming and fiddly and requires a vacuum pump. Plastic parts become brittle with age, their deterioration accelerated by the brutal regime of being alternately hot or cold. The stock question of most buyers of 996s or first-generation 997s is whether the IMS has been replaced. For these models and the 997 Gen2, it should also be asked whether the coolant and the water pump have been replaced:

LEFT The 996.1 GT3 was the first water-cooled 911 to make use of a third, centrally-mounted radiator for additional cooling

this is an age-related problem – even the youngest 997s are past their eighth birthday.

In terms of coolant worries, the 991-generation cars are seemingly better behaved, although the earliest cars are only six to seven years old. Nevertheless, the greater complexities and reliance on sensors can and do result in 'engine check light episodes'. A vacuum-control valve in the cylinder head can stick momentarily, affecting the warm up of the engine, which the DME then logs as a fault code. This happened to my own 981: a 'check coolant level' light flashed on, but the level was normal. A friendly Porsche independent plugged in his laptop, but no fault was revealed. The warning was extinguished and did not reappear, and the incident was dismissed as benign, typical of sensors which react to a temporary fault, but do not self-clear. However, such an event does nothing for the owner's confidence in his or her Porsche! Some specialists believe the growing complexity of thermal management systems is likely to result in more rather than fewer 'check light' incidents. As well as making owners more aware of their cooling systems, it might also encourage Porsche to make them part of the service schedule.

The other problem concerns the water pump: on M96/7 engines and the 9Al engines of the 997.2,

OUT OF THE SHADOWS

The hybrid 911 has arrived, but it's not out of Stuttgart. Total 911 heads to California to test the Shadow Drive from Vonnen

Written by Kyle Fortune





The internal combustion engine doesn't realise it's there," says Chuck Moreland, owner of Elephant Racing. You might know the company – it's a specialist in Porsche suspension – but here Moreland's talking about the flat six in an early 991.1 3.4-litre Carrera.
 Specifically, he's talking about the Vonnen Shadow Drive, Vonnen an Elephant Racing offshoot that's developed a hybrid 911 before Porsche itself.

If it was going to be done anywhere outside Weissach, then it's hardly surprising it was here. Vonnen is in California, specifically Silicon Valley, the absolute global heart of innovation and technology. Moreland explains how it happened: "It was a case of us sitting around talking among ourselves and thinking, 'hey, wouldn't it be great if...'. And then we started exploring different ideas of how you might hybridise an existing 911 platform."

That was three years ago. Today we're standing around an engine and gearbox, looking at the axial flux electric motor that Vonnen has developed with a European supplier, sandwiching it between the two. If that sounds familiar, it's exactly what Porsche will do with the 992 to hybridise it, only it's left space inside the gearbox to do so. With the 991 there's no such luxury, so Vonnen had to get clever with the space it had.

It's been a quick development cycle, especially considering this wasn't Vonnen's first solution. Initially Vonnen tried pushing electrically generated drive back into the gearbox via the front-axle output shaft on a 996 Carrera 4. Moreland says: "That was more a proof of concept, but we learned a lot from it, and we recognised that there was real opportunity for improving. The biggest issue was that the torque was being added on the output shaft of the transaxle, so we weren't taking advantage of the gear-reduction capabilities from the gearbox."

Buoyed by the potential, Moreland went all in, saying: "Okay, cost be damned, what if we wanted to make this thing rip? What would we do?" And so we went back to the drawing board and this is what we dreamed up, and it basically addressed all the issues that existed with this car. And that's how we got where we are."

Squeezing an electric motor between the engine and transmission adds 26mm in length. That's required some modification of the structure fore of the gearbox to allow clearance, the electric motor replacing the flywheel, as well as the starter motor, and taking over all the functionality of it, including stop-start, if fitted. The batteries powering it are situated in the luggage area, robbing it of some space. The batteries are of a chemistry and output that Vonnen isn't currently prepared to reveal, though they've been picked specifically for their ability to both quickly provide power as well as accept charge. It's a self-charging hybrid, too, scavenging power from the internal combustion engine when possible, as well as featuring a regenerative effect when braking. You can plug it in, but it's not a means of charging it, rather a maintenance possibility in the same vein as leaving the 12-volt battery on your conventional 911 on a conditioner during periods of inactivity.

There's a cooling circuit for the hybrid inverter and electric motor, the only visible element of the Vonnen Shadow Drive being that inverter situated under the rear window. It doesn't have to be, though, admits Vonnen's VP of engineering and ex-Tesla engineer Bill Davis, saying if owners so desire it can be hidden from view. Do that and the system really will live up to its Shadow name, with no obvious clues as to its fitment. It inevitably adds some weight, however, the Shadow Drive adding 77kg to the kerb weight, that gain not so much as it's aided by the loss of the heavy flywheel and starter motor.

The motor generator unit – or e-motor – pushes an additional 150hp and a maximum of 200Nm through the transmission depending on which mode you're in. Here it's hybrid tech not for parsimony, but instead performance, though fitment does nothing to change the smog rating, that crucial in its Californian home market. This isn't a hybrid you can smugly glide under electric power alone into a low-emissions zone, the electric motor not able to be driven independently of the internal combustion engine. It's an assist that supplements, rather than replaces.

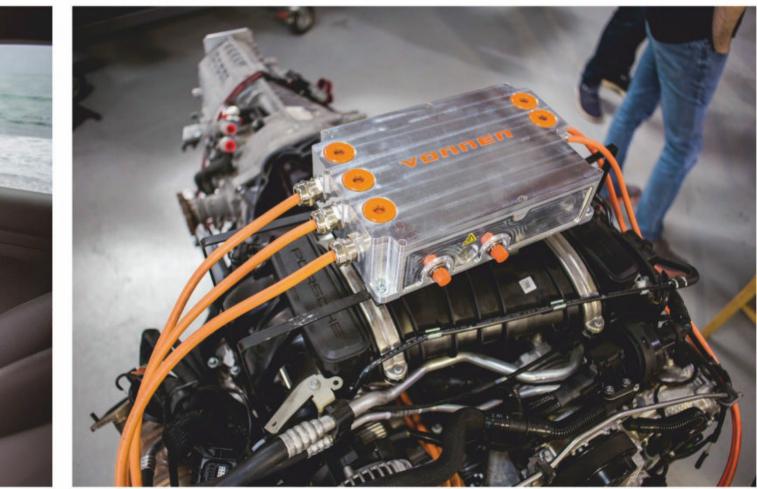
Tantalisingly Moreland says it can, in theory, be fitted to any 911, whether it's manual, automatic, rearor four-wheel drive, turbocharged, naturally aspirated, water- or air-cooled, or stock or tuned. Proving that, Vonnen is currently running a development Shadow Drive on a GT3.

On older cars Moreland admits there would need to be some additional micro switches and sensors for the system to know things like the accelerator position and suchlike, that information in more modern cars having the Shadow Drive's brain simply reading the CAN Bus data. Otherwise the engine management isn't in any way altered, the Shadow Drive exactly that, working along in support. That explains Vonnen's name for it, which Moreland initially describes as "made up" before mentioning







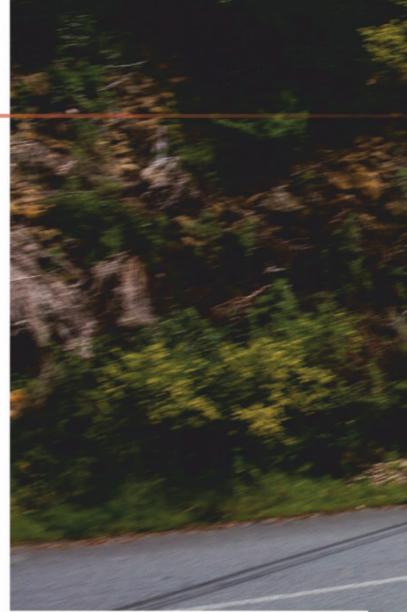


"There's a slight electrical whine from the motor when it's giving its assistance... think of it as akin to the whistle of a turbocharger or the whine of a supercharger"

LEFT Vonnen's Shadow Drive adds a healthy 150hp and 200Nm torque to any 911 model, though there's no fully electric mode available – yet

66 | 991 hybrid test







BELOW Vonnen's cutaway daigram shows its inverter, electric motor and battery packs (front) in place





that it also relates to Viking boats that used both oars and sails for the best speed.

That's an apt description of how the Shadow Drive operates: its additional power quietly assisting, giving the flat six a near-silent boost. The support it delivers is selectable through differing driving modes via a Bluetooth-tethered smartphone app, the three available driving modes being Street, Sport and Overboost. Street adds 125Nm of torque from 40 to 60 per cent throttle, Sport 0 to 110Nm from 65 to 95 per cent throttle and Overboost adds the full 200Nm with the same accelerator application as Sport.

The full torque load isn't used in anything but the Overboost mode, as Moreland admits doing so quickly overloads the thermal capacity of the e-motor, lessening the opportunity to use it. He admits it's a compromise, but one that's balanced. Meanwhile Vonnen is working on an improved cooling system for the motor.

In the 3.4-litre 991 Carrera the Shadow Drive adds drive through a PDK automatic, the gearbox

energy into the system. Its linearity is such that it does so without any spike or noticeable boost, the Carrera merely gaining speed with more authority. It's unusual because the gain isn't accompanied with a more menacing engine note, or at least one that you'd expect with the gain in performance that comes with it. It's perhaps best described as if the flat six finds itself having to shift less mass, or there's a surging tailwind – one significant enough to surprise you when you glance at the accelerator. In Street mode I'd like a little bit of additional assistance earlier, just so you know more often where you've spent your \$75,000. It's not cheap, but it is new tech, and since when was gaining power in 911s ever inexpensive?

There's a slight electrical whine from the motor when it's giving its assistance, but it's not an unwelcome sound. Think of it as akin to the whistle of a turbocharger or the whine of a supercharger.

You can watch your smartphone's screen if you want to see what the hybrid system is doing, whether it's regenerating, the status of the battery, the heat in the motor or when it's giving all its assistance. In Sport mode on a more interesting Californian mountain road is where it really comes into its own. You learn to lean a bit more on the elasticity of the electric assistance when exiting bends, getting on the throttle early and enjoying the punch out of corners. In the bends there's no perceptible difference thanks to the increased mass the system brings, the Carrera not feeling unbalanced or changing dynamically over its stock alternatives. Overboost allows full use of the additional torque, allowing the Vonnen 3.4 Carrera a standing start that feels Turbo-like in its off-the-line urge. Vonnen's yet

to figure it, but with a combined circa 500hp and near-600Nm of torque it's not difficult to imagine it matching its forced-induction alternative.

It's a neat trick, a stealth tuning that gives you the potential for increased performance while not removing the character and appeal of the standard car you fit it to. It's impressive in the 991, though arguably the greatest opportunity exists in the older cars where the electric motor's boost would add contemporary performance when you want it, yet still allow the car to retain all its originality and be driven so when you want to. An electric-only mode would be a useful gain, too, particularly as more and more cities demand zero emissions. One thing is certain, a hybrid 911 presents an opportunity, and Vonnen's proved it works, Silicon Valley beating Stuttgart in the race to produce it.

Total 911 verdict

Proving that we shouldn't be scared of a

software having had a reflash to stop it from slipping with the additional torque loads. Starting up the Vonnen-equipped 991.1 3.4 Carrera is no different from any other Carrera. The internal combustion engine is started by the e-motor, even if the system is otherwise off.

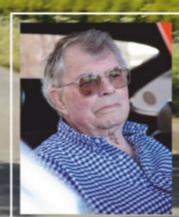
Its effect in Street is initially so subtle as to not realise it's working. There's none of the incredible step-off acceleration that some hybrids and all electric cars offer, the Carrera feeling very much like a regular combustion-engined car. That's because it essentially is until you find yourself deeper in the throttle, where the e-motor starts to provide its hybrid 911, Vonnen's Shadow Drive adds performance without any real compromises, except price.

LIKES

• Clever application of modern technology; neatness of the installation; usable additional performance.

DISLIKES

 Needs to be more obvious, more of the time in day-to-day driving; an 'eco' or electric-motor-only mode would significantly enhance its appeal. 100



MEMORIES OFMUGELLO

Rob Mackie raced this 911T/R at Mugello in 1968. 51 years on, we reunite car and driver

Written by Ben Barry Photography by Steve Hall

hances are you've never heard of Rob Mackie. I hadn't until I interviewed the 79-year-old about racing a 911 S in the Targa Florio in 1967. He described driving the new 911 to Sicily aged just 26, giving a factory Porsche a scare and finishing second in class before driving home again. It was an amazing tale, all told with Rob's typical understatement and modesty.

When I asked where else he'd raced back then, Rob recounted the Mugello road race in Italy 1968 in a 911T/R. That same car, he revealed, was restored and in the UK. Reuniting car and driver at Sports Purpose in Bicester Heritage seemed an opportunity not to be missed. Kensington. First came a race in a Ferrari 250 GTO at Silverstone – in at the deep end, to say the least – and soon after the 1967 Targa. Margulies then bought the 911 S and shared the driving, Mackie the hired hand and the quicker of the two.

When that car sold, the pair knew they could count on Porsche team manager Huschke von Hanstein's promise of a chunky discount on the next car. "Hanstein put his arm around Dan while I was on the Targa, promising a good deal next time if I didn't go quite so quickly – they didn't want the works cars embarrassed!" Mackie recounts.

For 1968 Rob and Dan settled on a new 911T. It was Porsche's least powerful, least well-equipped 911, but also its lightest at a homologated 923kg. An S was 975kg. Crucially, the FIA regulations allowed the T numerous upgrades, including the more powerful S motor, rated at 160bhp – 50bhp up on a T. There's a handwritten note in TMD 7F's history file from Rob, noting down the spec while chatting on the phone with Dr Severi in the competition department. Ultimately their 911 was equipped with the Sportskit 2, featuring uprated carb jets, a twin-outlet exhaust helping the engine run cooler, and uprated spark plugs. It also got hotter cams, a 200rpm-

New owner Philip Basil is already on site when we arrive, the T/R timewarp pristine. Rob opens the door, settling into the driver's seat. "It's just like turning back the clock to 1968," he says, and the memories start to flow out of him.

Engineer Rob's motorsport career began in the early 1960s as rally co-driver for Alan Allard – son of Allard Motor Company boss Sydney – before he was approached by Dan Margulies in 1966, a wealthy privateer racer with an upscale car dealership in



higher rev cut-out, a close-ratio gearbox and limitedslip differential. The factory quoted 186bhp. Only latterly have these factory-prepped racers become known as 911T/R, numbers thought to be in the 30s.

When the car was ready for collection, Rob shook it down at the Nürburgring and returned it to Stuttgart for a first 500km inspection before driving back to the UK. It was then ready for Mugello, thought to be its only race outing.

These days Mugello is synonymous with the 3.3-mile-long circuit built a short distance east of Scarperia in 1973. But until 1970 it was a road course over which racers competed for seven or eight laps of 41 miles each.

Starting from Scarperia in Tuscany, the route runs along flood plains, tangles through knots of hairpins and climbs beyond 900 metres. It was an even faster, more mountainous kind of Targa Florio. Rob set off for the race in late July 1968.

"I drove from Stuttgart in convoy with [race driver] Mike Franey, who was in a Jaguar E-type," recalls Rob. "It was going well until I rolled into a van in traffic in Munich and broke the headlamp glass – we got a new one, which dipped the wrong way, and fitted it on the dealer forecourt."

Getting out of the city allowed the 911 to stretch its legs. "We were going up the Brenner Pass flat out, the two of us, using my maximum of 6,000rpm in fifth – probably 120mph or so with no speed limit – and I looked over to a café and saw everyone on their feet... they must have heard us coming!"

Rob had raced at Mugello the previous year in the Bahama yellow Targa Florio 911 S, gaining a class win and 30th overall, so he was already familiar with the place. He stayed at the same hotel on the Futa Pass. Co-driver Dan Margulies flew in, collecting a hire car for the rendezvous.

"We'd go through corners, then turn round and run them again," remembers Rob. "But it wasn't safe to go flat out – you'd have traffic coming the other way, a man with a donkey!"

Qualifying took place in perfect conditions, the sun beating down, with Alfa GTAs, Fiat 124s, Morgan Plus 4s, Abarths, Lotus Elans and Ferraris all scorching around the road circuit. "Because I'd driven TMD all the way down there, I was immediately comfortable – it handled beautifully. If you went into a corner too fast you'd just back off, the rear would swing round, point you at the apex and you'd squeeze the throttle and away you'd go – wonderful."

Rob's time put the pair towards the front of the 911s on the start grid. "There was one fast left-hander through a bridge. I was braking at first, then I learnt you could barely brake at all – that saved ten seconds alone. But I remember telling Vic Elford I could make up time lost elsewhere on the course, and Vic said, 'no you can't, that time's gone.' That stayed with me."

The weather was equally perfect on race day, with the racers released in pairs at intervals. Thousands of spectators lined the route, their cars parked haphazardly at the side of the road.

For the first six miles north to Ponzalla the SP503 is relatively straight, and it's easy to forget these comparatively unremarkable and uninvolving stretches once demanded huge commitment from a racer.

After Ponzalla the road climbs quickly, with an incline of up to 10 per cent, zig-zagging through the hillsides on the Passo del Giogo. "The Giogo just never stops," remembers Rob, "but the T was so nimble compared to the S the year before – it felt every bit of 50kg lighter."

The road opens up beyond Firenzuola before descending the legendary Futa Pass. "That was the toughest section," says Rob. "The year before the brakes went squishy in the S, but not in the T – perhaps because it was lighter, maybe because I knew the place better – but there was no front oil cooler, so the needle would go right to the danger mark." Rob, too, was overheating, doing four 41-mile **그**





The '67 Targa Florio "I thought I'd be out of my depth when Dan

"I thought I'd be out of my depth when Dan Margulies suggested we enter the 1967 Targa Florio," says Rob Mackie. "I was 26, and knew from other drivers that the circuit could bite if you were gung-ho. Nonetheless, Dan bought a new 911 S and I ran it in on the drive from the factory to Sicily. I immediately felt at home.

"During practice the circuit seemed non-stop and incredibly difficult to learn at 46 miles long. Qualifying was the first time the roads were closed, which really upped the pace.

"The weather was superb for race day, but the roads were slippery from a dust storm and in a poor state of repair. I kept a little in reserve, although I remember the car moving around in crosswinds on the long straight at 140mph or so, and by the end of my stint we were only 30 seconds behind a works 911.

"We refuelled, Dan took over and we lost some time. When he came back in, I pushed harder trying to catch the works car. The brakes were at their limit coming down from the hills on the last lap, but finishing second in class and 11th overall was a fairytale.

"Afterwards we were invited for a celebratory meal with the Porsche team, then I drove the 911 home. What an adventure!"







2111110

"von Hanstein promised a good deal on the next car if I didn't go quite so quickly – they didn't want the works cars embarrassed!"

Model Porsche 911 T/R Year 1968

EngineCapacity2,000ccCompressionOriginally 9.8:1; now 10.5:1ratioMaximum powerOriginally 186bhp; now 196bhpMaximum torque182NmTransmissionFive-speed manual with
Nürburgring close-ratio gear set
and ZF LSD

Suspension Front Longitudinal torsion bars; telescopic dampers Rear Semi-trailing arms with transverse torsion bars; telescopic dampers

Wheels & tyres



Front Originally 5.5-inch with Dunlop M 5.00; now 6-inch with Avon CR6ZZ 185/70/VR15 Rear Originally 5.5-inch with Dunlop M 5.00; now 7-inch with Avon CR6ZZ 185/70/VR15

Dimensions

Length 4,163mm Width 1,610mm Weight 923kg

Performance 0-62mph Not tested **Top speed** Limited by gearing to 142mph





laps flat out in summer heat – rivals had put water bottles in their cars, but Rob wouldn't get a drink for over two hours of flat-out driving.

An old picture captures the 911 barrelling down the Futa Pass, lifting a wheel, and it triggers Rob's recollection of how he'd upshift to fifth with the car fully airborne rather than waiting for the landing, the better to prevent revs flicking right up to the limiter.

He'd catch and pass rivals, but also get caught and be passed too. "I'd just lift or pull over when I could. I'd lose time at best looking in the mirror at them." There were numerous accidents and retirements, including a 911 crashed into trees by a US driver, perhaps in 1968, though Rob can't be entirely sure. "The engine and gearbox were ripped out by the impact and they just shovelled it up, a brand-new car. The triple carbs had even hit the driver on the head, but he survived!"

Times improved with each lap: first 38:59, then 38:02 and two final rounds at 37:57 before it was time for the driver change. "Re-fuelling the 100-litre tank seemed to take an eternity. It was just a pump, like a filling station," remembers Rob. Dan buckled in and headed out for his stint as soon as the tank was topped.

His best lap was over six minutes down on his quicker co-driver's, but he brought it home. The pair later discovered they'd placed third in class and 22nd overall at the prize-giving. Rob is generous many years after his friend's death, acknowledging that without Dan's funding he'd have never raced at the Targa or Mugello at all.

Again Rob drove the 911 home, and by early 1969 TMD 7F was advertised as 'a 911 T to S spec, plus £1k of further modifications'. Collector John Melville Smith bought it as a road car before it passed through several owners, was resprayed black, then white, and slowly deteriorated.

In 1998 Josh Sadler at Autofarm spotted an advert for a 911T listed at £10,000 to be broken for parts. He spotted the hollow Nadella driveshafts, the 100-litre fuel tank and S-spec engine. He wrote to Porsche archive, it confirming the wreck was a highly prized ex-competition car.

A wealthy city worker funded the 18-month restoration – we pore over the extensive photographic documentation – before quitting and selling the car to current owner Philip Basil in 2001. "I was really looking for a 2.7RS, and Josh couldn't sell this car. Nobody understood what it was," remembers Philip. "But he said 'your money is safe; trust me', and he was right. I paid £62k, which seemed a lot at the time."

Rob is instantly transported back to collecting the 911 in Stuttgart when he looks over the as-new condition today. He remembers choosing Blood orange because it was a new colour and looked so stunning, that the original wheels were smaller – five-and-a-half-inches wide all-round, not the six-inch fronts, seven-inch rears now fitted – and that he wished they'd gone for the fuel filler in the centre of the bonnet, a new option for that year. There never was a rollcage, just the factory sports seats, "but rightly or wrongly I always thought a 911 would look after me in a shunt. I'd seen others walk away," reflects Rob.

Having last raced in 2007 and driving infrequently these days, Rob rules out any heroics, but he grins as he turns the key and the flat six bursts to life. The clutch bites abruptly, Rob saving it with a load of revs before disappearing off into the distance, lapping the Bicester track with increasing confidence before returning to the pits looking a little exhausted, if exhilarated, by the emotional reunion.

"I just cannot believe I drove this car flat out," chuckles Rob, easing himself out of the driver's seat. "But it's so nice to drive it again after all these years, and so much of it is still familiar – the chatter from the drop gears at idle, the unforgettable noise of that 2.0-litre flat six with the rally exhaust. It feels great today, but you have to remember that we were racing Cortina GTs, Triumph TR5s, MGBs, even E-types, and the 911's road-holding, the quality of the engineering, was simply on another level back then – it was such a privilege to drive. I was so lucky."

Rob and Dan returned to Mugello one last time for 1969 and finished 3rd in class and "19th or 20th overall" in a blue 911 T/R. That car now lives somewhere in the US, making a reunion tricky; the Bahama yellow 911 – reg OLL 4E – has never been found. TMD 7F, though, is never too far away, and Rob and new owner Philip have become good friends. Reliving those memories of Mugello is just a phone call away.



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Living the Living the

Our contributing enthusiasts from around the world share their real-life experiences with their Porsche 911s







Joe Croser Northamptonshire, UK







secretly through the Cairngorms to the infinite beauty of Skye, where mountains rise out of the sea, Scotland delivers.

You have to drive

around Scotland.

earth. From the Old

Military Road carving

It's heaven on

In May the roads are quiet, the temperature cool. It rained, snowed,

Jedburgh. It was such a thrill after all of the motorway cruising to set our 911s free on fast-flowing moor roads. Thereafter we crawled around the Edinburgh ring road and crossed the Forth on the gigantic road bridge heading for Blairgowrie – our first stop.

Day two was epic. The roads were superb. Known today as the Snow Roads, we followed the Old Military Road north through Spittal of Glenshee to Balmoral and onto Tomintoul. Never have I enjoyed a road for so long with so many overtaking opportunities to safely pass the few cars sharing the roads with us. Emerging from the Cairngorms we passed through Inverness in search of the A832 for more well-sighted, fastflowing tarmac as we headed to the west-coast village of Shieldaig. Day three saw us driving over more snow-capped mountains as we headed south past Loch Alsh and Eilean Donan Castle on our way towards the Isle of

Skye. The roads here were staggeringly good, the mountains formidable and the views to die for. Towards the north of the island we parked and headed off on foot to climb the Quiraing – the only part of the trip where either of us felt a little down on horsepower! With our exercise done we pedalled back to the mainland and Plockton – our third stop.

Day four dawned and we pointed our cars towards Inveraray and the banks of Loch Fyne. The A87 from Kyle of Lochalsh to Invergarry was superb! The A82 through Fort William was a bit less exciting, but a quick detour around Loch Leven put wide smiles back on our faces as we traced the contours of the road up and down, this way and that, before having our breath taken from us once more in Glencoe. If you've been to Montana or the Canadian Rockies, you'll know what I mean. For many miles you climb high, snaking through sharp-edged mountains before the horizon takes over

hailed and the sun shone, often within the same hour – truly four seasons in one day. During our five-day trip we, Ben in his RS and me in my Turbo, each covered 1,370 miles in 32 hours and consumed 65 gallons of Super Unleaded. Remarkably the naturally aspirated 4.0-litre RS burned fuel at exactly the same rate as my 3.8-litre Turbo, which also didn't burn a drop of oil. Day one we took the A1 north to

Newcastle and crossed Northumberland National Park on the A68 heading for





Gina Purcell Oxford, UK

og @ginapurcell1 Model 911 SC Year 1982 Acquired APRIL 2014 Who knew how hard it could be to get a set of tyres for an air-cooled 911? Almost a month has passed since my other

half ordered a set of Yokohamas for his Carrera 3.2 and only three corners' worth have been mustered by the UK's finest tyre wranglers.

In an age where more and more parts are being made available for these fantastic old cars, either from Porsche themselves under the Porsche Classic moniker or other enterprising manufacturers joining the throng to help prolong and improve the lives of our justified and ancient air-bangers, it astonishes me that one of the most important bits – that which connects you and your car to the road – can be so poorly supported!

I know that Pirelli P7 Cinturato tyres made with the original fitment tread pattern but modern rubber compounds are available, as well as 'boutique' tyres from small, specialist manufacturers that feature old tread designs, but Hubby and I are as one about this. We both want the most modern and well-designed tyres on our cars, no matter how old the vehicle, and to hell with the originality. It is, after all, the advances in tyre technology that were foremost in helping to tame our wayward little beasties back in the day, so why not continually benefit from that? Come on, tyre makers! It's not like there's a dwindling number of air-cooled 911s on the road? They must be the most evergreen classic in the world!

Tyre woes haven't stopped us getting out and about in the cars. We often both go out as a brace of 911s to give them some exercise at the weekend, and as more time passes the sight of two old 911s in convoy seems to cause more of a frisson of excitement from other road users. It's a public service! Steffi has also been pressed into our regular Porsche Enthusiasts Club nights and another Bicester Heritage Sunday Scramble passed under her wheels in late April. Happy days!







with a landscape so vast you feel like you've changed countries again!

We detoured towards Loch Etive to the James Bond *Skyfall* location and filled our boots and cameras with more treasured memories before returning to the A82, the A85 and finally the white-knuckle A819 into Inveraray.

Our fifth and final day was also our longest: 412 miles which started brilliantly on the A83 before we joined the A82

heading for Glasgow and the motorway south to Carlisle. We detoured via Kirkby Stephen and Hawes so that we could again enjoy one last blast on the B6255 to Settle, passing the Ribblehead Viaduct. Fish and chips were consumed in Settle in true petrol-head fashion.

We headed home via Harrogate and the A1 south. What a trip. Big up to Ben for pedalling his GT3 RS through all weathers and for his fine company. For me, road trips are about the driving, the scenery and the memories – this one was as good as it gets.

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Ron Lang Ashland, Oregon

@ronlangsport

	liangsport
Model	2.4-LITRE 911S
Year	1972
Acquired	2018
Model	964 CARRERA 4
Year	1989
Acquired	2015
Model	964 CARRERA 2 REIMAGINED BY
Year Acquired	SINGER 1991 2018
Model	964 C4 SAFARI
Year	1993
Acquired	Jul 2018
Model	993 C4S
Year	1996
Acquired	2016
Model	993 TURBO
Year	1997
Acquired	2015
Model	997.2 GT3 RS
Year	2011
Acquired	2016
Model	991.2 CARRERA 4S
Year Acquired	2017 2017 2017
Model	991.2 TURBO S
Year	2018
Acquired	2017

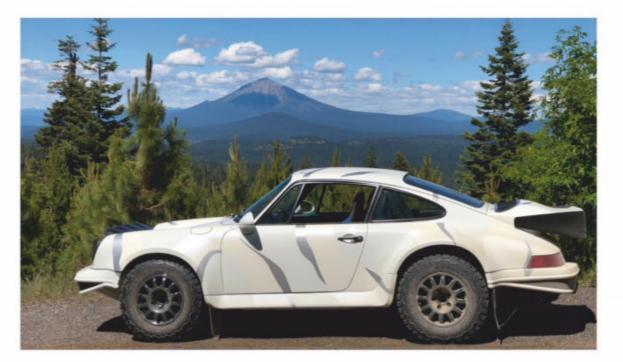


Surely the best 911s are the original ones, cars that receive a bit of ongoing fettling, mostly as pride of ownership dictates,

but otherwise remain as they left the factory. On the other hand it can be a lot of fun to explore making the car 'your own', an expressive and mostly enjoyable process. There are degrees of fettling, of course, and today's subject, a 1991 964 Carrera 4 that arrived highly modified and named 'Safari 4' by the builder, is a fettle-fest if not also a folly.

There is no space here for a full recounting of the modifications on this car when it arrived over a year ago. 14 vertical inches were removed from the front tub, providing substantial ground clearance at full suspension compression. The Reiger three-way adjustable shocks allow ten inches of travel, providing well-damped flotation over most obstacles one would find on a rough forest road. Steering lock is reduced to clear the piggyback reservoirs on the coilovers, which takes some getting used to. The first time I tried to negotiate a simple right-hand turn in town I had to back up and try again, swinging wide left prior to the right turn, rather like driving a lorry.

The first fettle was to place a quick release hose fitting for the onboard air compressor, simplifying tyre pressure changes in the back country. Second was addressing the intake whine of the supercharger. The AEM air filter was



originally placed in the rear of the cabin, but the intake noise was painfully loud. The intake was relocated back to the engine compartment with a custom mounting bracket and rain shield.

Third was smoke from the exhaust, initially at start-up, but it was clear it was time to open up the engine. A couple of broken piston rings were found as initial faults, and the heads were a bit of a mess. Prudence dictated a full top-end rebuild, which is currently underway.

Fourth was the antisocial full race exhaust. My darling wife was shopping in town with a friend a while back and heard an obnoxious car noise approaching. She turned to her friend to comment on the bad behaviour and then turned to look at the noisemaker, where she could only say: "Of course, should have known it's my husband." Equipped with Fabspeed headers and a GT3 'centre can', mods were made to baffle the muffler to little avail. Next will be the install of a Fabspeed centre muffler in hopes the sound becomes more streetable.

So what do we have here? A supercharged 964 C4 riding high in the air with custom wings – 13-inch wider than stock at the rear – on Braid blackchromed rally wheels and BFGoodrich All Terrain KO2 rubber. 450 horsepower and 570Nm of torque on this 3,000-pound car provides brutish acceleration. Fresh Alpine white paint with custom 'urban zebra' graphics. Enough LEDs front and rear to light up the village. Recaro race seats and RS door cards covered in custom blue, black and grey tartan. On board fire suppression, bolt-in DAS halfcage... the list goes on.

The driving experience is exhilarating, requiring full attention. With the long travel suspension the front end points skyward under hard acceleration and starts to feel floaty above 80mph. The car handles twisty tarmac surprisingly well given the soft suspension and offroad tyres. I've yet to master the rear brake 'drift stick' on the dirt, but have located a roomy gravel pit as a suitable practice site. Pounding around the many miles of local forest and mountain roads is a blast, though being alone with no phone signal means the satellite phone is a comfort to have along. The sand dunes at the coast two hours away beckon, the installed shovel and snatch straps at the ready for when this thing inevitably gets stuck in the soft stuff. Safari 4 is no homage to the Paris-Dakar-winning 911s of the 1980s, and arguably attempts to answer questions no one asked other than perhaps: "Can I have fun on the dirt in a 911?" As the fettle-fest continues, so far the answer to that question is a resounding yes!





Nick Jeffery Surrey, UK

0 @npjeffery 💟 @npjeffery Model 996 CARRERA 4S 2002 Year **JUNE 2014** Acquired 996 TURBO 2002 Model Year MAY 2017 Acquired Model 997 CARRERA 4 GTS Year 2012 Acquired **OCT 2018**

First off, I'm really proud to announce my appointment to the Porsche Club GB board as 'experiences director'. My fellow

directors and I are absolutely committed to taking the Club from strength to strength over the next two years. If you want to share any ideas on how to further improve Porsche Club GB or the events and experiences on offer, feel free to contact me using **experiences@ porscheclubgb.com**.

In terms of car updates this month, I opened the boot lid on the GTS for the first time since I acquired the car from Paragon back in October 2018, but then



it refused to close properly! I spoke to Jamie at Paragon who suggested I release the boot lid switch a few times, but it still failed to cooperate. I then used a small flat-head screwdriver to 'fool' the mechanism into thinking it was locked, released it via the switch in the car and all is well again. Apparently the boot lock can stick if not used regularly and is a common problem on 997.2 GTSs.

The Turbo has been into Paragon for a major service, brake fluid change and MOT this month. I also asked them to perform a drain test on the battery as I have no idea how old it is – it went flat again after a week without use recently. It transpires the battery was weak and in need of replacement. The driver's heated seat problem has also returned with a will of its own, despite changing both the control switch in the centre console and the relay under the seat. I'm now left wondering if this recurring issue was linked to the battery performance.

Paragon have also replaced the cup holder cartridge as it was sticking, the front splitter and bonnet badge, cleared the bulkhead drainage holes and cross-drilled the ventilated brake discs all around the car. They also found the gearbox mount was damaged and needed replacement, changed the wheel



bolts and fixed the headlight level link, which was seized and therefore not adjusting as it should.

I've also been trying to source a 997 Carrera S/4S for a pal of mine, Roy. I've been amazed to see such different standards of car preparation across OPCs and well established independent dealers. It absolutely pays to shop around and take your time to find the right car, especially when so many are available with a myriad of colours, wheel options and different specifications. We eventually located a lovely, well specified and cared for '09 Meteor Grey 997.2 Carrera 4S with 42k recorded miles at Cridfords in Surrey, which drove as well as it looked! Roy is absolutely delighted and we're both looking forward to collecting the car in a couple of weeks.



Harold Gan Perth and Sydney, Australia





things about Porsche ownership is the friendships that emerge. When I first began to refocus on my Porsche

One of the best

passion by starting up my Instagram account, little did I realise the number of friendships that would be forged with people from around the world.

Tim Vo's (@t_v_o_911) Instagram caught my eye because of his gorgeous Minerva blue 911 SC. It was clearly a hot-rod build with a focus on go over show. The car is also one that truly holds to the ethos of being period correct, premiere workshops. It was a mismatch oddity – a wide-body steel conversion with fibreglass 964 forward-date bumpers covered in a slightly faded shade of lilac and topped with some dents on the front and rear left-hand fenders. In other words, the perfect base for a hot-rod.

What started off as a simple restoration ended up becoming Tim's idea of what a 1979 SC could be as his idea of an ultimate G-series track machine. While the car initially had its 3.0, Tim had the engine fully rebuilt to spec, only to find a 3.6 engine for sale out of the US that he just knew had his name written on it. The 3.6 made the



with stripped interior and colour-coded roll cage, an insane GT3-style exhaust with an actual GT3 muffler used and a healthy dose of Rennline inside the car.

Tim and the beast are regulars at

TURBO-LOOK CABRIOLET Year 1993 Acquired JUL 2018

something that has got a bit lost with the backdate movement.

Having come from some lovely watercooled machines, Tim had begun to get comfortable with the idea of Porsche being a way of life, and the urge to finally get into an older car could no longer be controlled, even at the giddy prices they were fetching when he began the hunt. But patience always pays off, and after many missed opportunities Tim discovered a mildly damaged G-series sitting in the back of one of Sydney's trip down to Australia, was immediately pulled apart and refreshed as necessary. The engine was immediately put into the car, with the freshly rebuilt 3.0 being thrown into storage.

Since then the car has had a full coilover conversion done with KW Clubsport, together with 17-inch Braid wheels clothed in Yokohama 235 and 255 rubbers. The car has a healthy nod to the 993 with brakes both front and rear pulled from that generation of car, a Wevo-blessed 915 box, Recaro seats Queensland track days, blessed with three tracks in close proximity. While I was kindly offered to drive the blue one, I had recently torn my left calf muscle on a bike ride; I figured having beers and talking cars was the next best thing. While the SC is still a work in progress, Tim has since bought a 914 chassis and has already started a new game plan with that machine. After all, that 3.0 engine can't just sit around – and the 914 would make a perfect home mated to a Subi gearbox.



Ben Przekop Mercer Island, WA

Model 996 40TH ANNIVERSARY Year 2004 **MAR 2018** Acquired

"Simplify, then add lightness." That was the automotive design mantra of Colin Chapman, legendary founder of Lotus Cars.

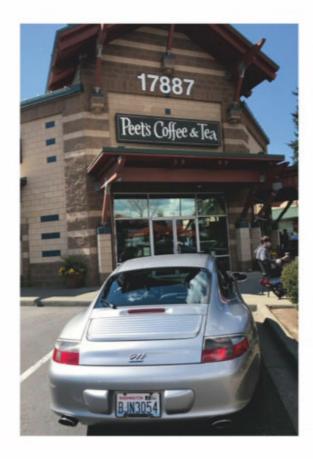
That phrase popped into my brain as I was relaxing at Peet's Coffee after a spirited drive through the wonderfully twisty roads of the Cascade Mountain foothills, thoroughly smitten once again with how delightful this 40 AE 911 is to drive: powerful, agile, composed, a total delight, and a lot of that is due to its light weight. While Chapman was famous for that catchy phrase, we know that the folks at Porsche are equally as obsessive about every ounce, and as a result are one of the few automakers who still



produce sports cars that weigh between 2,950 and 3,300 pounds.

If you don't believe me, compare the published weights of current-generation 911s against other cars with similar sporting pretensions - you will be shocked. For example, my daily driver and occasional track car is a 2017 M4. It has a great engine, but it also weighs over 3,700 pounds! That is a huge difference, especially on track. It means that the tyres and brakes degrade much more quickly, and although the chassis and electronics struggle to disguise all that weight, it is much harder to drive quickly. As a result it is more work than play. But it is not only light weight that makes a fantastic sports car, it is balance, and I don't mean 50/50 weight distribution.

A good example is how I find that Porsche never feel 'overpowered', which means you can put down all of the power all of the time. Or how the GT cars have a wonderful symmetry to the way all the controls work: the steering is firm and razor sharp, the clutch is heavy but surprisingly easy to use, the engine has incredible power but delivers it smoothly and predictably, the 'hand of God' brakes are progressive and consistent, and the suspension provides a firm ride in which you can

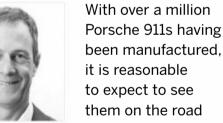


feel everything happening beneath you. This all urges you to push the car harder and harder through every corner. All of these characteristics inspire enormous confidence, and therefore exhilaration rather than terror, but they don't just happen by accident. They are the results of conscious planning and an incredibly well thought-out design brief to ensure that the total package feels exactly like a Porsche should feel.



Peter Wilson Adelaide, Australia

930 3.3 Year 1980 Acquired 2011



them on the road from time to time. However, a recent set of coincidences brought home to me just how much of

a 'sports car for the people' the 911 has become over the past 50-plus years.

About a month ago I started a new job, and was soon talking to work colleague Carlo about his 993 C4S that has been in his family since new. A couple of weeks later I spy a 996 in the car park and get talking to its owner, Mike. It turns out that he is a real 911 fan, also having a 997 Turbo. I hatched a plan that we should drive all of our cars to work one day and take some pictures, which we finally achieved a couple of weeks ago. The roll call covered a good variety of air- and water-cooled 911s: A 2008 997.1 Turbo manual in black, a 2000 996.1 Carrera Tiptronic in Lapis blue, a 1997 993 C4S manual in Guards red and my 1980 930 3.3 in Cyclamen red. Mike's Turbo and Carlo's C4S are both immaculate, low-mileage examples that look like they have just rolled out of the showroom. The other two have been well driven and enjoyed! In terms of recent 930 usage, I have just returned from a weekend trip with my wife Alison to celebrate our

were the dirt road and driveway to get to our accommodation, and avoiding the kangaroos on our way back from dinner.

Again the 930 did a great job of swallowing our luggage, but it had also developed a nasty habit of swallowing its occupants. I replaced the front luggage compartment struts with OEM units shortly after I purchased the car. However, after only seven years they were sagging badly again and resulting in the infamous 911 man-trap, as my wife found out when packing the car for our trip. The hood invariably hits me in the back of the neck with the safely latch, which is no fun!

Model



This time around I have tried some US engineering in the form of Strongarm struts - part number 4454 if anyone is interested. While not as well-finished as the OEM items, they fitted perfectly and certainly have enough strength to support the hood with confidence. It's not a difficult job to replace the struts, but it is quite fiddly, especially refitting the clevis pins and retaining clips at the bottom end. Hopefully I won't be doing it again in another seven years - I'll let you know!



Rob Clarke Bristol, UK

@rob911_Itl
 @Rob996LTL
 Model
 996.1 CARRERA 4

Year 1999 Acquired FEBRUARY 2014



Disappointingly I have been so busy this month the car has sat idle. All of those great plans of taking the car out at weekends have

failed as various weekend commitments, DIY jobs and my son's 18th birthday

have taken precedence! One of the few opportunities not missed was the 992 launch at the end of last month, but I admit I took the opportunity for my son to drive – though not in my car. That's not going to happen! This meant I could sample the refreshments being provided by Dick Lovetts, a Bristol OPC.

It was good to see the new 911, but it didn't feel like such a special event as



previous launches. I think a lot of this is attributed to seeing much more of the new car on social media. By the time it got to the event I had already seen many videos and read articles and the only thing on the night was to see it in the flesh, but it is a great-looking car.

The size difference to my narrowbody 996 is very evident; it is bigger in every dimension, yet still has that iconic shape. I haven't had the chance to experience it from behind the wheel yet, but I am sure I will at some point. In my head sports cars are often smaller, more nimble machines. I know the advance of suspension technology and computer wizardry makes these cars more agile than my 996, but I am thinking it is more of an intercontinental cruiser as opposed to a track-day weapon.

One area I am still not convinced about is the dash. Having a flat computer screen just left me cold. The current five dials have a three dimensional depth to them, but the computer screen is just flat. I am sure it has great functionality and as soon as I drive one I will have forgotten about this, but it did leave me a bit disappointed.

Back to my 996, this month I had actually forgotten that I got my hands dirty. It wasn't until I was looking through my photos that I spotted some of my handiwork. I normally have good intentions to work on my car, but often time eludes me so I get my mechanic to do it. After my last service the health check flagged up blown bulbs in the spoiler brake light and quoted £300 to fix it! Ouch! The dealer did tell me that the part in question is fragile and it's easier to put a new unit in then try and replace a single bulb.

First stop was checking how easy it is to remove – simple, less than ten minutes. Next was to take it apart and have a look. These rear-light units are the same as the third brake light on the 996, but the one in the spoiler will get hotter as it's closer to the engine. As I took it apart it was shedding bits of plastic. I connected a power supply to see which bulbs had failed. Three had failed, so I started swapping them around. Whatever I did the same three still didn't work, so it wasn't the bulbs. I popped the unit back in the car as I had run out of time. I had a second crack at this a few days later and the unit left more bits of plastic behind, but I stripped all the connectors out, tested all the bulbs, cleaned all the connections with a fibreglass pen, put it all back together and bingo – all bulbs worked. It took me about two hours but saved me at least £120 in buying a new unit!



Lee Sibley Poole, UK

0 @lee_sibs

Model 996.1 CARRERA Year 1998 Acquired JAN 2019

month of new EBC brake pads and discs all-round, plus new N-rated Continental ContactSport tyres, this month has really

After the fitting last

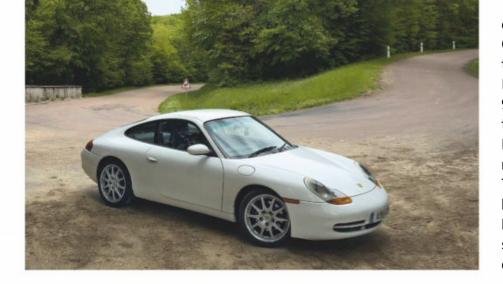
been about bedding everything in. The EBC brakes in particular have a strict bedding-in process which you need to adhere to if you intend on getting the most of them: it involves light braking for the first 100 miles, increasing the pressure for the next 100 miles then doing five stints of rapidly reducing from 60mph down to 10mph, which puts the brakes through a heat cycle.

I've now done this twice, and after 1,000 miles of driving they're properly bedded in. As I mentioned last issue, for the first time under my ownership the 996.1 has real bite to every application of the brake pedal. It's given me some additional confidence with the car on the road, and I've booked up a couple of track days with Porsche Club GB to get to grips with the car on track, too. Previously the car just wasn't safe enough for the rigours of track work.

Likewise, the tyres are simply

as they're not particularly a track tyre, and they can be noisy for rolling tyre drone, but it's not overbearing. I remain impressed by them and am happy they are connecting my 996 to the ground.

I've not done any particularly exciting drives with the 996 of late. I'm just struggling to fall in love with it. I think it was the bad start I had with the car in uncovering the problems I simply wasn't told about and had to fix right away. It tainted my perception of it from the start and that negative feeling is simply difficult to shrug off. If you've had a bad experience with a car, be it wallet-wrenching mechanical problems, a shunt, or even had it stolen – as has happened to me before, though not with a 911! - I'm sure you can relate to how I'm feeling presently. I do however have a big European road trip coming up – you'll read much more about it next issue - which I'm hoping will provide the celestial moment for me in terms of connecting with this 996. With 1,700 miles to complete in less than a week, it's going to be a test not only of the car's credentials, but of my bond with it.



excellent. As mentioned before, the ContactSport 2s are an old tyre now, but they remain N-rated for my 996.1. What I've always liked about Continentals on 996s is how communicative they are: they are infinitely better than the Pirelli P-Zero Rossos which I fitted once to my first 996 and will never do so again. These Continentals are excellent in both the wet and dry, and don't need a lot of heat in them to really stick. Their shortcoming lies in the fact they wear quickly on track, which is fair enough

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Chris Wallbank Leeds, UK



997.1 CARRERA S 2005 NOV 2012 Acquired

Year

While I patiently wait for delivery of my 997.1 C2S back with fresh front-end paintwork and paintprotection spray, my work took me back

to the island of Malta where I had the chance to meet up with Porsche Club Malta and its founder Andrew Spiteri! He kindly invited me along to one of their Sunday meets on a picture-perfect coast road.

The club was officially recognised by Porsche Clubs Worldwide in 2008 and currently has 170 members, which is quite amazing considering the island is only 17 miles long by 9 miles wide!

The mixture of old and new 911s was a stunning sight against the backdrop of the Mediterranean Sea and clear, blue skies! The club has everything from immaculate 930 Turbos to brand-new



991 Turbo Ss, GT2 RSs and everything in between.

The very limited amount of used Porsche on the island meant club founder Andrew bought his own 997 GT3 from Towcester in the UK and drove it all the way back to Malta... I can think of worse ways to drive through France and Italy!

There were some amazing stories. Aldo Laferla, who is now 85, has a Porsche 356 that he has owned from new and used to race in local hill climbs. I'm looking forward to attending one of their organised events later this year, I might even take my 997 for a road trip! Check them out at facebook.com/ PorscheClubMalta.



Joe Williams Weymouth, UK





for the 991 GTS vs 992 feature last issue. Spending some time in the cabin and getting behind the wheel was really interesting, especially going back-to-back with the 991 C4 GTS.

For a long time I've held the 991 GTS as the perfect all-rounder in the range, and I think if the right Targa GTS variant came up I could be tempted. They have an air of something special about them which you just don't get from a regular Carrera. The all-round combination of spec, detailing and the specific feature list just works so perfectly. It's a great daily driver car that does it all.

As you can probably tell I'm quite partial to a 991 GTS, so the 992 had big



boots to fill. On paper it does more: has more features, more tech, more power, revised steering, new finishes, new interior, new styling... the list goes on! First impression of the 992 for me was just how big it looks, and then how big it feels. It's more mini-Panamera than nimble 911.

Being thrown the keys to work it out for myself, first to navigate were the new door handles. Whoever thought there could be so much controversy about door handles? They are terrible. When they do pop out they are hard to use, and you have to sort of wedge the tips of your fingers in the gap and hope not to snap them off in the process. The chances of any manicured ladies being able to get into the new 992 are zero.

The cabin is very nice. I think Porsche has really upped its game with some really nice new finishes that feel very German engineered. It actually dates the 991 interior somewhat. The amount of screens is quite overwhelming, with a choice of large split centre command screen and the four screens around the wheel. So many things have been pushed into the touchscreen that you need to learn your way around. I think a few more essential buttons to bash wouldn't go amiss. That said there are two programmable toggle switches which you can assign your favourite items to. The centre screen even has a built-in sensor which offers you extra menus as your finger approaches; it's a nice detail. The cup holder is now a real part of the centre console, which



although on first glance seems overkill, it does actually work very well.

After managing to get in the car, navigate around the screens and finally start the engine, we were off. There's so much power for what is the base model engine, probably more power than most will ever need, and it delivers it really well. You don't really know it's turbocharged, with no real noise or lag giveaway. The steering is the real standout jump forward; it's amazingly precise and directional with exact feedback you don't get in the 991. Super balanced on sweeping bends with undulating camber to deal with, the 992

really wasn't phased at all. All in all it's a very impressive package.

The question I was asking myself on the drive home was which I would be in the market for. The newness of the 992 and all the bits that go with it are always going to be attractive, but the GTS still has that special something over it. That smaller, more nimble, twitchy experience for me is just more 911. Nobody is going to be disappointed with a 992, but personally I'd seriously consider a Gen2 or even Gen1 991 GTS.



Michael Meldrum Houston, Texas

@p911r		
Model	911T TARGA	
Year 1972	Acquired 2013	
Model	911E	
Year 1972	Acquired 2014	
Model	930 TURBO 3.0	
Year 1977	Acquired 2014	
Model	930 TURBO 3.0	
Year 1977	Acquired 2015	
Model	CARRERA 3.0	
Year 1977	Acquired 2016	
Model	911 SC	
Year 1981	Acquired 2015	
Model	3.2 CARRERA	
Year 1986	Acquired 2015	
Model	993 C4S	
Year 1996	Acquired 2016	
Model	964 CARRERA 4	
Year 1994	Acquired 2016	
Model	997.1 GT3	
Year 2007	Acquired 2017	
Model	991.1 GT3 RS	
Year 2016	Acquired 2018	

4



Use it or lose it. It's an often-repeated cliché in the aircooled Porsche world... in other words, if you don't drive them regularly

enough you will have issues. I am in full agreement and this morning had a reminder of why a regular drive is important. I jumped into my 1977 Turbo, turned the key and... nothing. It had been over a month since its last workout and the battery was flat – or was it?

I hooked up my trusty jump starter and the Turbo came to life, but it would die immediately after I removed the jumpers. I tried connecting it to my battery tender, but it displayed an error code and was unable to charge the battery. In an abundance of caution I called AAA (US version of the AA) and sent it off to Eurocar-Werk.

This got me thinking about the drawbacks of not driving your cars. I took the phone-a-friend approach and called Will Pyle, operations director at RS-Werks, a walking air-cooled Porsche encyclopaedia. Will advised some of the key issues of ignoring your 911.

Did you know that vinyl, especially the high-quality version used in German car interiors, 'sweats' a gas, especially when stored in a warm climate or in the sun? The vapour has a nasty habit of coating



electric wiring and switches. When you find the headlight or window switch non-responsive you need to actuate the switch multiple times to remove the coating and restore the circuit.

Air-conditioning is another problem area. If it's not used, the O-rings and tubing will dry out, and the oil that would normally be fed by the Freon is unable to lubricate the components.

Tyres will flat spot unless correctly stored, but this can be resolved with a few heat cycles once back on the road. Sunlight will degrade the tyres, and do bear in mind most tyres have an expiry date. In humid conditions rust will form on calipers and brake disks, reducing performance or at worst total seizure of the brakes. Also, fluids typically don't like being left for long durations.

Oil will fall to the bottom of the case over time, leaving components undefended from the elements. Over time humidity will form into droplets pitting precision components and



contaminating the oil system with water. Modern fuel will break down after sitting. Hydrocarbons begin to evaporate and react with the air, creating 'gum'. Also, in the US, fuel with ethanol is particularly problematic as the ethanol sucks water vapour from the air which could lead to moisture in your engine system, leading to corrosion. Brake fluid is hygroscopic, like ethanol, and will absorb moisture from the atmosphere. You don't want moisture in your break fluid – at high temperatures it will be converted to steam, reducing the effectiveness of your brake system.

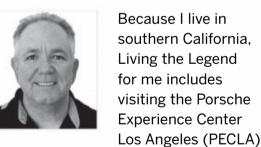
Last and most obvious, your battery will go dead if left unattended. Pyle recommends keeping your battery on a tender to keep it healthy and avoid overstraining your alternator charging a dead battery after a jump start.

I am now highly motivated to drive as many of my cars as possible to prevent all this, and hopefully this will inspire you to do the same!



Tony McGuiness San Diego, USA

@tonymcguinessgt3rs	
Model	997.2 GT3 RS
Year	2011
Acquired	FEB 2011
Model	991.1 GT3
Year	2015
Acquired	DEC 2014



as often as possible. I'm fortunate enough to be able to pop by the centre quite frequently. The Experience Center is one of two Porsche centres built in the United States, with the other centre located on the East Coast of the country in Atlanta, Georgia, which also happens to be the headquarters for Porsche Cars North America.

It made perfect sense for Porsche to pick California as a location for its second Experience Center. It particularly made sense to choose the Los Angeles area, as there are more than ten official Porsche dealerships in southern California. The area is an extremely important market for Porsche.

For years 911s have been a part of the landscape in the Golden State as much as palm trees and beautiful beaches,



aspects of the centre. The building is also home to Porsche Motorsport North America. While viewing the everchanging displays of cars there are also great views into the Motorsport workshop where one can see work being performed on current and historic race cars. If you ever visit southern California, I highly recommend you put PECLA on your 'bucket list'. Besides the many driving offerings available on the track there is a '356 Cafe' and the amazing '917 restaurant'. Have drinks, lunch or dinner at the 917 while enjoying stunning views of the Experience Center track below.



although I will say Macans, Cayennes and Panameras have overtaken the 911 in sheer numbers and are seen more often than the Neunelfer.

If you are flying over to Los Angeles to visit the PECLA it is conveniently located less than 15 miles from Los Angeles International Airport (LAX). Ironically it is alongside one of the busiest freeways in the world.

Porsche cars on display inside the Experience Center are constantly changing, which is one of the fantastic

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WHAT DO YOU KNOW **ABOUT IMS BEARINGS?**

The M96 and M97 Engine is wet sump – the IMS is submerged in oil.

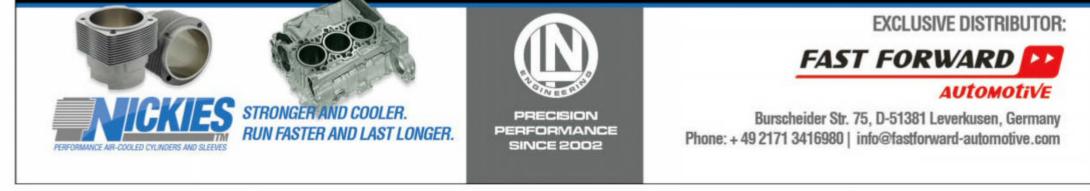
Ceramic hybrid bearings only need 1cc of oil per minute.

The dual row bearings used in the Single Row Pro and Classic Dual IMS Retrofit have load ratings equal to similarly sized roller bearings.

The IMS Solution, US PATENT 8,992,089 B2, is the only permanent solution

that backdates your IMS to work like in an aircooled flat 6 engine.

With over 20,000 installations since 2008, the IMS Retrofit and Solution are trusted worldwide as the first and best.



PREMERVERYTHING YOUL CED FOR YOUR 911

Data File

83

Full specs, ratings and market values of every 911, including

Plus

Showroom

Looking for a new 911? The classifieds from our independent specialist partners are the first place you should start your search

Servicing & tuning

5-UV 333

5-PR 191

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

Porsche lifestyle

Helping you make the right lifestyle choices to complement you and your 911. Don't just drive Porsche, live the brand

Insurance & finance

Get your Porsche covered with the best insurance deals for road and track to ensure happy, safe motoring

those enlisted on the Porsche Classic scheme, can be found beginning on page 84

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.



911 2.0-litre 1964-67 The 911 that started it all when the prototype appeared in 1963, this car set the style for all 911s to follow. Developed 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	130hp @ 6,100rpm
Maximum torque	149Nm @ 5,200rpm
0-62mph	8.3 sec
Top speed	131mph
Length	4,163mm
Width	1,610mm
Weight	1,075kg
Wheels & tyres	
F 4.5x15 inch; 165/80/	'R15
R 4.5x15 inch; 165/80/	′R15

911S 1967-6	8
6	8
Porsche soon p powerful varian of these was the	ts. The first
Super – which h compression er Weber 40IDS ca	nad a higher ngine and twin
Super – which h compression er	nad a higher ngine and twin arburettors.
Super – which h	nad a higher
compression er	ngine and twin
Weber 40IDS ca	arburettors.
Super – which h	nad a higher
compression er	ngine and twin
Weber 40IDS ca	arburettors.
Production numbe	rs 4,015
Super – which h compression er Weber 40IDS ca Production numbe Issue featured	nad a higher ngine and twin arburettors. rs 4,015 <u>148</u> 1,991cc
Super – which h	nad a higher
compression er	ngine and twin
Weber 40IDS ca	arburettors.
Production numbe	rs 4,015
Issue featured	<u>148</u>
Engine capacity	1,991cc
Super – which h	had a higher
compression er	ngine and twin
Weber 40IDS ca	arburettors.
Production numbe	rs 4,015
Issue featured	148
Engine capacity	1,991cc
Compression ratio	9.8:1
Super – which h	nad a higher
compression er	ngine and twin
Weber 40IDS ca	arburettors.
Production numbe	rs 4,015
Issue featured	148
Engine capacity	1,991cc
Compression ratio	9.8:1
Maximum power	160hp @ 6,600rpm
Super – which I	aad a higher
compression er	ngine and twin
Weber 40IDS c	arburettors.
Production numbe	rs 4.015
Issue featured	148
Engine capacity	1,991cc
Compression ratio	9.8:1
Maximum power	160hp @ 6,600rpm
Maximum torque	179Nm @ 5,200rpm
Super – which I	nad a higher
compression er	ngine and twin
Weber 40IDS ca	arburettors.
Production numbe	rs 4.015
Issue featured	148
Engine capacity	1.991cc
Compression ratio	9.8:1
Maximum power	160hp @ 6,600rpm
Maximum torque	179Nm @ 5,200rpm
0-62mph	8.0 sec

1,030kg

Weight Wheels & tyres

F 4.5x15 inch; 165/80/R15 **R** 4.5x15 inch; 165/80/R15

🔍 (0 & A series) \star \star \star 🖈



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 numbe	ers 4,691
Issue featured	120
Engine capacity	2,195cc
Compression ratio	9.8:1
Maximum power	180hp @ 6,500rpm
Maximum torque	199Nm @ 5,200rpm
0-62mph	6.6 sec
Top speed	145mph
Length	4,163mm
Width	1,610mm
Weight	1,020kg
Wheels & tyres	

F 6x15 inch; 185HR

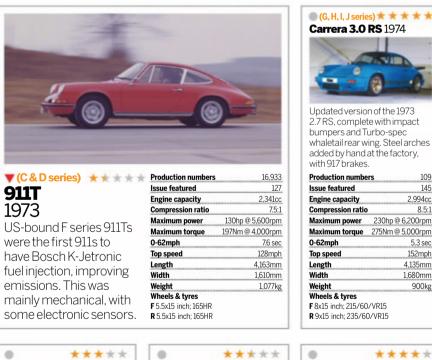
R 6x15 inch; 185HF



911T 1969-71 Like the E, the 911T's torque curve was flatter, making the car more

drivable. Ventilated discs from the S were fitted, and a five-speed gearbox became standard.

107 **Engine capacity** 2,195cc Compression ratio 8.6:1 Maximum nowe 125hp @ 5,800rpm 169Nm @ 4.200rpm Maximum to 0-62mph 7.0 sec (est) 127mph Top speed .ength 4,163mm Width 1,610mm 1,020kg Veight Wheels & tyres F 5.5x15 inch; 165HR R 5.5x15 inch; 165HF









🔺 🗡 🔍

General valuations

This reflects the general market trend for a model's used value compared to the previous financial quarter. The review for 2019 Q3 will be July. The review for 2019 Q2 was April.

Ratings

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

Larger engine resulted in extra 40bhp, and an intercooler on top of the engine led to the adoption of a 'teatray'. Brakes were upgraded from 917 racer. Production numbers 5,807 (plus '78 to '79 Cali cars) Issue featured Engine capacity 3,299cc **Compression ratio** 7.0:1 Maximum power 300hp @ 5,500rpm Maximum torque 412Nm @ 4,000rpm 0-62mph 5.4 sec 160mph Top speed 4,291mm Length Width 1,775mm Weight 1,300kg Wheels & tyres F 7x16 inch; 205/55/VR16 R 8x16 inch; 225/50/VR16



From 1978, the SC was the only normally aspirated 911. eveloped from the Carrera 3.0 but produced less power Upgraded Sport options. Production num 60,740 **Issue featured** 156 2,994cc **Engine capacity Compression ratio** 8.5:1/8.6:1/9.8:1 180/188/204hp@ Maximum power 5,500rpm Maximum torque 265/265/267Nm 0-62mph 6.5 sec 141/146mph Top speed 4,291mm Length Width 1,652mn

1,160kg (1978)

Weight

neels & tyres

F 6x15 inch: 185/70/VR15

R 7x15 inch; 215/60/VR15



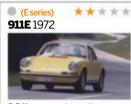
True homologation special built so that Porsche could go Group B rallying. Six Rothmans cars used fibre glass front wings and lid. Tuned 3.0-litre engine had its basis in 930's crankcase.

Production numbe	ers 21
Issue featured	158
Engine capacity	2,994cc
Compression ratio	10.3:1
Maximum power	255hp @ 7,000rpm
Maximum torque	250Nm @ 6,500rpm
0-62mph	4.9 sec
Top speed	153mph
Length	4,235mm
Width	1,775mm
Weight	940kg
Wheels & tyres	
F 7x16 inch; 205/55	5/VR16
R 8x16 inch; 225/50	0/VR16



In 1967, the 911 was updated and the range expanded: the 911L (Lux) was standard and sat alongside the high-performance 911S and entry-level 911T. Production num 1603

riouuction number	1,000
Issue featured	138
Engine capacity	1,991cc
Compression ratio	9.0:1
Maximum power	130hp @ 6,100rpm
Maximum torque	173Nm @ 4,600rpm
0-62mph	8.4 sec
Top speed	132mph
Length	4,163mm
Width	1,610mm
Weight	1,080kg
Wheels & tyres	
F 5.5x15 inch; 185HF	2
R 5.5x15 inch; 185HF	2



2,341cc was achieved by increasing the stroke from 66mm to 70.4mm while at the same time leaving the bore unchanged. The new 915 transmission was stronger

Production number	ers 4,406
Issue featured	117
Engine capacity	2,341cc
Compression ratio	8.0:1
Maximum power	165hp @ 6,200rpm
Maximum torque	206Nm @ 4,500rpm
0-62mph	7.5 sec
Top speed	137mph
Length	4,163mm
Width	1,610mm
Weight	1,077kg
Wheels & tyres	
F 6x15 inch; 185HR	
R 6x15 inch; 185HR	

🕘 (G, H, I, J series) 🕇 🛧 🛧 🛧

'911' was now the entry level

Bumpers were added to

conform to US regs. From

1976, all 911s were hot-dip

ear' mirrors

Production nur

Issue featured

Engine capacity

Maximum

0-62mph

Top speed

Length

Width

Compression ratio

coated and fitted with 'elephant

 Weight
 1,075kg

 Wheels & tyres F&R 6x15 inch; 185VR

9,320

121

2,687cc

150hp @ 5,700rpm

(165bhp from '76)

(4,000 from '76)

235Nm @ 3,800rpm

8.0:1

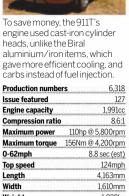
8.5 sec

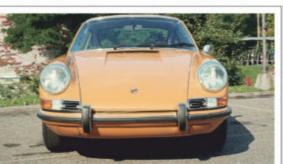
130mph

4,291mm

1,610mm

911 1974-77





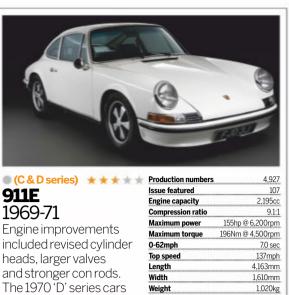
(B series) **** **911E** 1968-69 The 911 received its first major update, evolving into what is known as the B series. The 911E replaced the 911L as the 'standard' car. The 'E' stood for 'Einspritz' (injection).

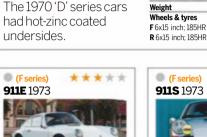
Production numbers	2,826
ssue featured	n/a
Engine capacity	1,991cc
Compression ratio	9.1:1
Maximum power	140hp @ 6,500rpm
Maximum torque	175Nm @ 4,500rpm
D-62mph	7.6 sec
Top speed	130mph
Length	4,163mm
Width	1,610mm
Weight	1,020kg
Wheels & tyres	
5.5x15 inch; 185HR	
R 5.5x15 inch; 185HR	



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

Production numbe	rs 2,106
Issue featured	n/a
Engine capacity	1,991cc
Compression ratio	9.1:1
Maximum power	170hp @ 6,800rpm
Maximum torque	183Nm @ 5,500rpm
0-62mph	7.0 sec (est)
Top speed	140mph
Length	4,163mm
Width	1,610mm
Weight	995kg
Wheels & tyres	
F 6x15 inch; 185/70	/R15
R 6x15 inch; 185/70	/R15





After incidents of people filling

series 911s with petrol via

the external oil-filler, the filler

4,406

144

8.0:1

7.5 sec

137mph

4,163mm

1,610mm

1,077kg

2,341cc

165hp @ 6,200rpm



The 911S had the same upgrades as the 911E, including deletion of the external oil filler also adopted black trim around the front and rear lights and black front quarter grilles. Production numb 5.054

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



triple-choke carburettors led to the relatively lower power output of 130bhp despite the new 2,341cc engine size. Production numb **Issue featured**

Engine capacity Compression ratio Maximum power Maximum torque 197Nm @ 4.000rpm 4,163mm 1,610mm Weight Wheels & tyres 1,077kg F 5.5x15 inch; 165HR R 5.5x15 inch; 165HR

🔘 (G, H, I, J series) ★ ★ ★ ★

911S was now a mid-range

model comparable to the

body changes as the base

with 'Cookie Cutter' rims.

Production number

Issue featured

0-62mph

Top speed

Length

Width

Weight

Wheels & tyres

F 6x15 inch: 185VR

R 6x15 inch; 185VR

Engine capacity

Compression ratio

previous 911E. It had the same

model, and came as standard

Maximum power 173hp @ 5,800rpm

Maximum torque 235Nm @ 4,000rpm

17,124

2,687cc

8.5:1

7.0 sec

142mph

4,291mm

1,610mm

1,080kg

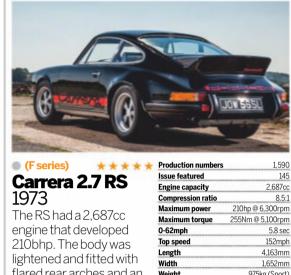
n/a

911S 1974-77



grille with a '2.4' badge. External

Production numbe	rs 5,054
Issue featured	120
Engine capacity	2,341cc
Compression ratio	8.5:1
Maximum power	190hp @ 6,500rpm
Maximum torque	211Nm @ 5,200rpm
0-62mph	6.6 sec
Top speed	140mph
Length	4,163mm
Width	1,610mm
Weight	1,077kg
Wheels & tyres	
F 6x15 inch; 185/70	/R15
R 6x15 inch; 185/70	/R15



flare optic and

* *	Production number	S
	Issue featured	
·	Engine capacity	2
	Compression ratio	
	Maximum power	210hp @ 6,3
	Maximum torque	255Nm @ 5,1
	0-62mph	
5	Top speed	1
-	Length	4,1
th	Width	1,6
an	Weight	975kg (
rt	Wheels & tyres F 6x15 inch; 185/70/ R 7x15 inch; 215/60/	

oduction numbers	1,590
sue featured	145
gine capacity	2,687cc
mpression ratio	8.5:1
aximum power	210hp @ 6,300rpm
aximum torque	255Nm @ 5,100rpm
62mph	5.8 sec
p speed	152mph
ngth	4,163mm
dth	1,652mm
eight	975kg (Sport)
neels & tyres	
5x15 inch; 185/70/R	15
x15 inch; 215/60/R	15

returned to under the engine decklid. Fitted with the front spoiler of the 911S. Production nu **Issue featured Engine capacity** Compression ratio Maximum power Maximum torque 206Nm @ 4,500rpm 0-62mph Top speed Length Width Weight Wheels & tyres F 6x15 inch ATS; 185HR R 6x15 inch ATS: 185HR

1	12
110.10	
THP 300R	
Production numbers	2.850

BO 3.0 75-77 ted with a KKK turbo, was the world's first oduction Porsche to be turbocharged. Flared arches, whaletail rear wir and four-speed gearbox were standard.

Production numbers	2,850
Issue featured	157
Engine capacity	2,994cc
Compression ratio	6.5:1
Maximum power	260hp @ 5,500rpm
Maximum torque	343Nm @ 4,000rpm
0-62mph	5.5 sec
Top speed	155mph
Length	4,291mm
Width	1,775mm
Weight 1,140	
Wheels & tyres	
F 7x15 inch; 185/70/V	R15
R 8x15 inch; 215/60/\	/R15

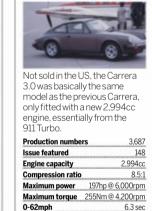




(G & H series) * * * * * 911 Carrera 2.7 1974-76 From 1974, Carrera name

was given to rangetopping 911. Essentially the same engine as previous year's RS for all markets except USA. Whaletail available from 1975.

Production numbers	1,667
Issue featured	134
Engine capacity	2,687cc
Compression ratio	8.5:1
Maximum power	210hp @ 6,300rpm
Maximum torque	255Nm @ 5,100rpm
0-62mph	6.3 sec
Top speed	148mph
Length	4,291mm
Width	1,652mm
Weight	1,075kg
Wheels & tyres	
F 6x15 inch; 185VR	
R 7x15 inch; 205VR	



Top speed Length 4,291mm Width 1,610mm 1,093kg Weight Wheels & tyres F 6x15 inch; 185/70/VR15 R 7x15 inch; 215/60/VR15





911T 1967-69

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

(E series)

911T 1972

0-62mph

Top speed

Length

Width

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

🔘 (A & B series) \star \star 🛧 🖈

carbs instead of	fuel injection.
Production number	rs 6,318
Issue featured	127
Engine capacity	1,991cc
Compression ratio	8.6:1
Maximum power	110hp @ 5,800rpm
Maximum torque	156Nm @ 4,200rpm
0-62mph	8.8 sec (est)
Top speed	124mph
Length	4,163mm
Width	1,610mm
Weight	1,020kg
Wheels & tyres	



oil filler on right rear wing confused some.

Issue featured	120
Engine capacity	2,341c
Compression ratio	8.5:
Maximum power	190hp @ 6,500rpm
Maximum torque	211Nm @ 5,200rpm
0-62mph	6.6 se
Top speed	140mp
Length	4,163mm
Width	1,610mm
Weight	1,077k
Wheels & tyres	
F 6x15 inch; 185/70/	′R15
P 6y15 inch: 185/70	/P15

rrera 2.7 KS	Engine capacity	2,6870
73	Compression ratio	8.5
-	Maximum power	210hp @ 6,300rpr
RS had a 2,687cc	Maximum torque	255Nm @ 5,100rp
ine that developed	0-62mph	5.8 se
bhp. The body was	Top speed	152mp
	Length	4,163mi
tened and fitted with	Width	1,652mi
ed rear arches and an onal ducktail. Sport Touring available.	Weight	975kg (Spor
	Wheels & tyres F 6x15 inch; 185/70/ R 7x15 inch; 215/60/	
	(1 & J series) 911 Carrera	3.0 1976-77
	Ti	The second

be	ers 3,687	0
	148	07
	2,994cc	93
tio	8.5:1	19
r	197hp @ 6,000rpm	
е	255Nm @ 4,200rpm	Fitte
	6.3 sec	this
	145mph	pro



152mph 4,291mm

1,652mm

1,210kg



930 3.3 1984-89

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

Compression ratio 7.0:1 Maximum power 300hp @ 5,500rpm Maximum torque 432Nm @ 4,000rpm 0-62mph 5.4 sec Top speed 161mph Length 4,291mm	Production number	s 11,135
Compression ratio 7.0:1 Maximum power 300hp @ 5,500rpm Maximum torque 432Nm @ 4,000rpm O-62mph 5.4 sec Top speed 161mph Length 4.291mm Width 1,775mm Weight 1.300kg (1.335kg from '86) Wheels & tyres 1.300kg (1.335kg from '86)	Issue featured	144
Maximum power 300hp @ 5,500rpm Maximum torque 432Nm @ 4,000rpm O-62mph 5,4 sec Top speed 161mph Length 4,291mm Width 1,775mm Weight 1,300kg (1,335kg from '86) Wheels & tyres 161mph	Engine capacity	3,299cc
Maximum torque 432Nm @ 4,000/pm O-62mph 5.4 sec Top speed 161mph Length 4,291mm Width 1,775mm Weight 1,300kg (1,335kg from '86) Wheels & tyres 161mph	Compression ratio	7.0:1
0-62mph 5.4 sec Top speed 161mph Length 4.291mm Width 1.775mm Weight 1.300kg (1.335kg from '86) Wheels & tyres 1.300kg (1.335kg from '86)	Maximum power	300hp @ 5,500rpm
Top speed 161mph Length 4,291mm Width 1,775mm Weight 1,300kg (1,335kg from '86) Wheels & tyres 1	Maximum torque	432Nm @ 4,000rpm
Length 4,291mm Width 1,775mm Weight 1,300kg (1,335kg from '86) Wheels & tyres	0-62mph	5.4 sec
Width 1,775mm Weight 1,300kg (1,335kg from '86) Wheels & tyres	Top speed	161mph
Weight 1,300kg (1,335kg from '86) Wheels & tyres	Length	4,291mm
Wheels & tyres	Width	1,775mm
	Weight 1,30	0kg (1,335kg from '86)
F 7x16 inch; 205/55/VR16	Wheels & tyres	
	F 7x16 inch; 205/55/	'VR16

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 148 Engine capacity 3,164cc Compression ratio10.3:1Maximum power231hp @ 5,900rpm Maximum torque 284Nm @ 4,800rpm 0-62mph 5.6 sec

Top speed

Length

Width

Weight

Wheels & tyres

F 7x15 inch; 195/65/VR15 **R** 8x15 inch, 215/60/VR15 (16" for '89)



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

Production number	ers 50 (UK only)
Issue featured	146
Engine capacity	3,299cc
Compression ratio	7.0:1
Maximum power	330hp @ 5,500rpm
Maximum torque	432Nm @ 4,000rpm
0-62mph	4.6 sec
Top speed	173mph
Length	4,291mm
Width	1,775mm
Weight	1,335kg
Wheels & tyres	
F 7x16 inch; 205/55	5/VR16
R 9x16 inch; 245/45	5/VR16

**** 959 1986-1988

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

Production numbers	337
Issue featured	142
Engine capacity	2,850cc
Compression ratio	8.3:1
Maximum power	450hp @ 6,500rpm
Maximum torque	500Nm @ 5,000rpm
0-60mph	3.9 sec
Top speed	196mph
Length	4,260mm
Width	1,840mm
Weight	1,450kg
Wheels & tyres	
F 8x17 inch; 235/45/2	R17
R 9x17 inch; 255/40/2	ZR17

- O Latran

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

Production numbers 2.274 (for both

WIG	de and narrow bodied)
Issue featured	128
Engine capacity	3,164cc
Compression ratio	10.3:1
Maximum power	235hp @ 5,900rpm
Maximum torque	284Nm @ 4,800rpm
0-60mph	6.0 sec
Top speed	148mph
Length	4,291mm
Width	1,775mm
Weight	1,220kg
Wheels & tyres	
F 6x16 inch; 205/45	5/VR16
R 8x16 inch; 245/6	0/VR16





**** 996 Carrera 4 1998-2001

993 Carrera 4S

The 4S was effectively

wide bodyshell, albeit

Also boasted Turbo

a Carrera 4 with a Turbo

lacking a fixed rear wing.

suspension, brakes and Turbo-look wheels.

1995-96



Production num

Engine capacity

Compression ratio

Wheels & tyres F 8x18 inch; 225/40/ZR18

R 10x18 inch: 285/30/ZR18

Maximum power

Maximum

0-62mph

Top speed Length

Width

Weight

Issue featured



Maximum torque 355Nm @ 5,400rpm

1,014

119

3,746cc

11.5:1

5.0 sec

172mph

4,245mm

1,735mm

1,279kg

300hp @ 6,000rpm

wheels only Production nu

Issue featured

Engine capacity

Compression ratio

Maximum power

Wheels & tyres F 8x18 inch, 225/40ZR18

R 10x18 inch. 265/35ZR18

0-62mph

Top speed

Length

Width

Weight

6,948

109

3,600cc

11.3:1

5.3 sec

168mph

4,245mm

1,795mm

1,520kg

285hp @ 6,100rpm

340Nm @ 5,250rpm



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Devon Porsche





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

Production number	ers 22,054
Issue featured	111
Engine capacity	3,387cc
Compression ratio) 11.3:1
Maximum power	300hp @ 6,800rpm
Maximum torque	350Nm @ 4,600rpm
0-62mph	5.2 sec
Top speed	174mph
Length	4,430mm
Width	1,765mm
Weight	1,375kg
Wheels & tyres	
F 7x17 inch; 205/50)/R17
R 9x17 inch; 255/40	D/R17



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

Production numbe	rs 1,858
Issue featured	117
Engine capacity	3,600cc
Compression ratio	11.7:1
Maximum power	360hp @ 7,200rpm
Maximum torque	370Nm @ 5,000rpm
0-62mph	4.8 sec
Top speed	188mph
Length	4,430mm
Width	1,765mm
Weight	1,350kg
Wheels & tyres	
F 8x18 inch; 225/40	/R18

R 10x18 inch; 285/30/R18



Distinguished by wide rear arches, air intakes and deep front wing, plus part-fixed, partretractable rear wing. Different engine to 3.6-litre 996 unit.

Production number	s 20,499
Issue featured	152
Engine capacity	3,600cc
Compression ratio	9.4:1
Maximum power	420hp @ 6,000rpm
Maximum torque	560Nm @ 2,700
	4,600rpm
0-62mph	4.2 sec
Top speed	189mph
Length	4,435mm
Width	1,830mm
Weight	1,540kg
Wheels & tyres	
F 8x18 inch; 225/40/	′R18
R 11x18 inch; 295/30	/R18



deformable bumpers over coil-spring suspension and four-wheel-drive marked this radical overhaul of the '87 per cent new' 911.

Production numbe	ers 13,353 (Coupe)
Issue featured	111
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	250hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.7 sec
Top speed	162mph
Length	4,250mm
Width	1,652mm
Weight	1,450kg
Wheels & tyres	
F 6x16-inch; 205/55	5/ZR16
R 8y16-inch ⁻ 225/50	1/7R16



Combined the 964 bodyshell with the hood and windscreen of the Carrera 3 2 Speedster plus RS interior. It is thought Porsche planned to build 3,000, but demand fell.

Production numbe	e rs 936
Issue featured	128
Engine capacity	3,600cc
Compression ratio) 11.3:1
Maximum power	250hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.5 sec
Top speed	161mph
Length	4,250mm
Width	1,652mm
Weight	1,340kg
Wheels & tyres	
F 7x17-inch; 205/50)/ZR17
R 9x17-inch; 255/40)/ZR17



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

Production number	e rs 173
Issue featured	131
Engine capacity	3,600cc
Compression ratio	8.0:1
Maximum power	430hp @ 5,750rpm
Maximum torque	540Nm @ 4,500rpm
0-62mph	3.9 sec
Top speed	189mph
Length	4,245mm
Width	1,855mm
Weight	1,290kg
Wheels & tyres	
F 9x18-inch; 235/40	0/ZR18
R 11x18-inch; 285/3	35/ZR18



Rear-drive Carrera 2 offered an emphatically more traditional 911 experience, and was 100kg lighter, but looked identical to the Carrera 4. Tiptronic was a new option.

Production number	ers 19,484
Issue featured	119
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	250hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.6 sec
Top speed	162mph
Length	4,250mm
Width	1,652mm
Weight	1,350kg
Wheels & tyres	
F 6x16-inch; 205/55	5/ZR16
R 8x16-inch; 225/50	0/ZR16

1,437

120

7.5:1

4.8 sec

174mph

4,250mm

1,775mm

1,470kg

5,937

147

3,600cc

4.3 sec

180mph

4,245mm

1,795mm

1,500kg

8.0:1

3,600cc

360hp @ 5,500rpm

964 Turbo 3.6 1993-94

Engine based on modified

covered the Big Red brake

by 20mm.

Production num

Issue featured

Engine capacity

Compression ratio

Maximum power

Weight Wheels & tyres

F 8x18 inch; 225/40/ZR18

R 10x18 inch; 265/35/ZR18

993 Turbo 1996-98

Fitted with two KKK

turbochargers in order to

4's transmission system.

Brakes were 'Big Reds'.

Production number

Issue featured

0-62mph

Top speed

Length

Width

Weight

Wheels & tyres

F 8x18-inch; 225/40/ZR18

R 10x18-inch; 285/30/ZR18

Engine capacity

Compression ratio

reduce lag. Power went to all

four wheels using the Carrera

Maximum power 408hp @ 5,750rpm

Maximum torque 540Nm @ 4,500rpm

0-62mph

Top speed

Length

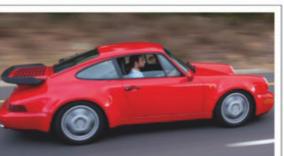
Width

3.6-litre 964 unit. Distinctive 18-

inch split-rim Speedline wheels

calipers. Suspension lowered

Maximum torque 520Nm @ 4.200rpm



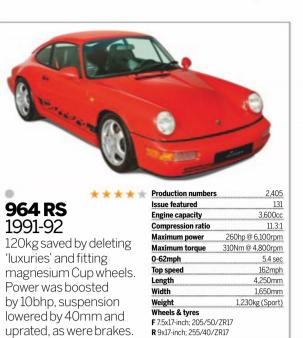
**** 964 Turbo 1991-92 This used the revised 964 bodyshell, extended arches and 'teatray' wing. The engine was essentially the 3.3-litre unit from the previous model, but updated.

Production numbers	3,660
Issue featured	160
Engine capacity	3,299cc
Compression ratio	7.0:1
Maximum power	320hp @ 5,750rpm
Maximum torque	450Nm @ 4,500rpm
0-62mph	5.4 sec
Top speed	168mph
Length	4,250mm
Width	1,775mm
Weight	1,470kg
Wheels & tyres	
F 7x17 inch; 205/50/Z	R17
R 9x17-inch; 255/40/Z	R17



of surplus parts from 953 Paris-Dakar project. Highlights include four-way adjustable differential, short-ratio gearbox and stripped interior.

ers 22
131
3,600cc
11.3:1
265hp @ 6,720rpm
304Nm @ 6,720rpm
4.5 sec
125mph
4,275mm
1,652mm
1,100kg
5/ZR16
5/ZR16



***** 993 Carrera 1993-97

> Restyled bodywork had sweptback headlamps, curvaceous wings and blended-in bumpers. The 3,600cc engine was revised, with VarioRam available from 1996.

Production number	ers 38,626
Issue featured	160
Engine capacity	3,600cc
Compression ratio) 11.3:1
Maximum power	272hp @ 6,000rpm
Maximum torque	330Nm @ 5,000rpm
0-62mph	5.6 sec
Top speed	168mph
Length	4,245mm
Width	1,735mm
Weight	1,370kg
Wheels & tyres	
F 7x16 inch; 205/55	5/ZR16
R 9x16 inch; 245/4	5/ZR16

003.0	* * * * *
993 Ca	arrera 4 1994-97
-	
-11	
	e 993-model Carrera,

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

Production number	ers 2,884 (Coupe)
Issue featured	111
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	272hp @ 6,000rpm
Maximum torque	330Nm @ 5,000rpm
0-62mph	5.8 sec
Top speed	166mph
Length	4,245mm
Width	1,735mm
Weight	1,420kg
Wheels & tyres	
F 7x16 inch; 205/55	5/ZR16
R 9x16 inch; 245/45	5/ZR16



Production numbe	rs 9
Issue featured	11
Engine capacity	3,6000
Compression ratio	11.3
Maximum power	250hp @ 6,100rp
Maximum torque	310Nm @ 4,800rp
0-62mph	5.7 se
Top speed	162mp
Length	4,250m
Width	1,775mi
Weight	1,470
Wheels & tyres	
F 7x17-inch; 205/50	/17
R 9x17-inch; 255/40	/17



3,714

118

3,600cc

285hp @ 6,100rpm

340Nm @ 5,250rpm

11.3:1

5.4 sec

168mph

4,245mm

1,795mm

1,450kg

con, sunroof, 90 per cent locking rear differential and stereo.

K OX17-INCH;	255/40/281/
9 93 Ti	* * * * * urbo S 1998
74	IT IL
R	00.9

Wheels & tyres

F 7x17-inch; 205/50/ZR17

70

157

11.3:1

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

Production number	ers 345
Issue featured	115
Engine capacity	3,600cc
Compression ratio	8.0:1
Maximum power	450hp @ 5,750rpm
Maximum torque	585Nm @ 4,500rpm
0-62mph	4.1 sec
Top speed	186mph
Length	4,245mm
Width	1,795mm
Weight	1,583kg
Wheels & tyres	
F 8x18 inch; 225/40	0/18
R 10x18 inch: 285/3	30/18



***** 996 Carrera 1998-2001

An all-new 911 with larger, restyled bodywork and a water-cooled engine. Interior was redesigned in order to enable better ergonomic efficiency and more room.

Production numbers	56,733
Issue featured	160
Engine capacity	3,387cc
Compression ratio	11.3:1
Maximum power	300hp @ 6,800rpm
Maximum torque	350Nm @ 4,600rpm
0-62mph	5.2 sec
Top speed	174mph
Length	4,430mm
Width	1,765mm
Weight	1,320kg
Wheels & tyres	
F 7x17-inch; 205/50/R	17
R 9x17-inch; 255/40/R	17





993 Carrera S

The features that come

similar to the Carrera 4S's,

only this time in rear-wheel

superb handling and wide-

drive. Sought after for its

with the Carrera S are

1997-98

body looks.



Production numbers

Issue featured

Engine capacity

Compression ratio

Maximum power

Maximum torque

Wheels & tyres

F 8x18-inch; 225/40/ZR18

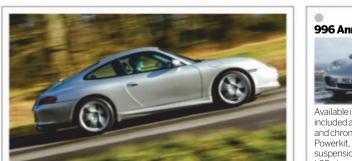
0-62mph

Top speed

Length

Width

Weight







'30 Jahre' anniversary 964 utilised a 'Turbo' wide body melded to the four-wheel-drive Carrera running gear. Available in Viola metallic, Polar silver or Amethyst.

Production number	rs 911
Issue featured	112
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	250hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.7 sec
Top speed	162mph
Length	4,250mm
Width	1,775mm
Weight	1,470kg
Wheels & tyres	
F 7x17-inch: 205/50	/17

996 Carrera 4S 2001-05

Basically a C4 featuring a Turbo bodyshell, without rear air intakes, but with a full-width rear reflector panel. Suspension and brakes were similar to the Turbo spec.

roduction numbers	23,055
ssue featured	155
ingine capacity	3,596cc
compression ratio	11.3:1
Aaximum power	320hp @ 6,800rpm
Aaximum torque	370Nm @ 4,250rpm
)-62mph	5.1 sec
op speed	174mph
ength	4,435mm
Vidth	1,830mm
Veight	1,495kg
Vheels & tyres	
8x18-inch; 225/40/R	18



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

1,287 127 3,600cc **Engine capacity** Compression ratio 9.4:1 Maximum power 462hp @ 5,700rpm Maximum torque 620Nm @ 3,500-4,500rpm 0-62mph 4.1 sec Top speed 196mph Length 4,450mm 1,830mm Width Weight Wheels & tyres 1,440kg **F** 8x18-inch; 235/40/R18 **R** 12x18-inch; 315/30/R18



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

Production number	ers 29,389
Issue featured	136
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	320hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.0 sec
Top speed	177mph
Length	4,430mm
Width	1,770mm
Weight	1,370kg
Wheels & tyres	
F 7x17-inch; 205/50	I/R17
R 9x17-inch; 255/40)/R17

*****	Pro
Gen2 996 C4	Iss
	Eng
2002-04	Co
Facelifted in line with	Ma Ma
rear-drive Carrera, though	0-6
the all-wheel-drive version	Тор

drives very much like

Cabin received minor

updates over Gen1.

its rear-driven brethren.

Production numbers	10,386
Issue featured	107
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	320hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.0 sec
Top speed	177mph
Length	4,430mm
Width	1,770mm
Weight	1,430kg
Wheels & tyres	
F 7x17-inch; 205/50/R	17
R 9x17-inch; 255/40/R	17

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and the second second		14	-
ALC: NO	and the second s		1000
-		-	Concernance of the local division of the loc

Available in GT silver, and included a Turbo front bumper and chrome Carrera whee Powerkit -10mm sports suspension and mechanical LSD standard.

ers 1,963
112
3,596cc
b 11.3:1
345hp @ 6,800rpm
370Nm @ 4,800rpm
4.9 sec
175mph
4,430mm
1,770mm
1,370kg
0/R18
30/R18

Sales debate Will the 991 lead to a spike in classic Speedster values?



Nearly a year after it was first revealed as a concept study at Goodwood's Festival of Speed, the 991 Speedster has at last entered production. With a numbered production run of just 1,948 units available for worldwide markets, the first open-topped GT car is sure to be in high demand. Just like with the GT3 models it is based on, many will miss out on securing a build slot.

Release of the new Speedster has cast a light on older variants of this unique model too – as you will have seen earlier in this very issue, Porsche even brought along its entire cavalry of Speedster models for journalists to sample at the 991's launch. But will this extra attention convert to an upsurge in values of the older Speedster models?

"It certainly casts a light on them," says Hexagon Classics' Jonathan Franklin. "Some people may not even know Porsche made a 911 Speedster as far back as the G-series or even 964, so it's good from a historical standpoint. Will it lead to increases in values? You might get the odd owner trying to ride the wave of publicity by offering a car at an inflated price, but otherwise the market will stay pretty much the same. As ever, the good cars are highly desirable and will command a high premium over average cars."

Jonathan's thoughts are largely echoed by Karl Meyer of Porsche specialists 2911, who says the exclusivity of the Speedster marketplace dictates that little change will likely take place. "The Speedster market is pretty unique in that it only appeals to collectors. Especially with the older cars, due to the shortcomings of the roof, it's not likely going to be your only 911. It's more a car to use once or twice a year on a special occasion, so mileage tends to be lower and condition better. They rarely come up for sale publicly, so while we might see one or two extra cars come to market, their price won't change too much. I think a far more reasonable bet would be to say we'll see more 991s for sale than any of the older cars put together, as the usual flippers do their best to make a quick buck on a genuinely brilliant sports car which deserves to be driven. Greater numbers and better practicality of the 991 model means the next few months will be more interesting for new Speedster values over old."







Same as the original 997 Turbo but with new LED tail-lights and driver lights up front. Larger tailpipes and DFI engine, with fuel consumption cut by 16% Production number 3,800 Issue featured 152 3,800cc Engine capacity **Compression ratio** 9.8:1 Maximum power 500hp @ 6,000rpm Maximum torque 650Nm@1.950-5,000rpm 0-62mph 3.4 sec Top speed 194mph 4,450mm Length Width 1,852mm Weight 1,570kg Wheels & tyres F 8.5x19-inch: 235/35/7R19 R 11x19-inch; 305/30/ZR19



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

Production number	r s 1,500
Issue featured	125
Engine capacity	3,800cc
Compression ratio	12.2:1
Maximum power	450hp @ 7,900rpm
Maximum torque	430Nm @ 6,750rpm
0-62mph	4.0 sec
Top speed	192mph
Length	4,460mm
Width	1,852mm
Weight	1,370kg
Wheels & tyres	
F 9x19-inch; 245/35	/ZR19
R 12x19-inch; 325/3	0/ZR19



• *****	Production numbers	356
007 Smoodeter	Issue featured	128
997 Speedster	Engine capacity	3,800cc
2010	Compression ratio	12.5:1
	Maximum power	408hp @ 7,300rpm
Built to mark Porsche	Maximum torque	420Nm @ 4,400-
Exclusive's 25th year.		5,600rpm
Shorter windscreen, but	0-62mph	4.4 sec
	Top speed	190mph
rake angle same as 997	Length	4,440mm
Carrera. Wide body with	Width	1,852mm
19-inch Fuchs wheels.	Weight	1,540kg
Rear-wheel drive.	Wheels & tyres F 8.5x1 ZR19 R 11x19-inch; 305,	



997 Carrera 2004-08

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

8	Y	more powerful and PASM. 19-in standard, with b	
Production numbers	25,788	Production numbe	rs 41,059
Issue featured	112	Issue featured	107
Engine capacity	3,596cc	Engine capacity	3,824cc
Compression ratio	11.3:1	Compression ratio	11.8:1
Maximum power 32	5hp @ 6,800rpm	Maximum power	355hp @ 6,600rpm
Maximum torque 370	Nm @ 4,250rpm	Maximum torque	400Nm @ 4,600rpm
0-62mph	5.0 sec	0-62mph	4.8 sec
Top speed	177mph	Top speed	182mph
Length	4,427mm	Length	4,427mm
Width	1,808mm	Width	1,808mm
Weight	1,395kg	Weight	1,420kg
Wheels & tyres		Wheels & tyres	
F 8x18-inch; 235/40/R18		F 8x19-inch; 235/35	5/R19
R 10x18-inch; 265/40/R18		R11x19-inch; 295/30	0/R19



Track focused, but based on narrow-bodied Carrera with reworked 996 GT3 engine PASM standard, revs to 8,400rpm, 200 higher than the Gen2 996 GT3.

Production number	ers 2,378
Issue featured	117
Engine capacity	3,600cc
Compression ratio	12.0:1
Maximum power	415hp @ 7,600rpm
Maximum torque	405Nm @ 5,500rpm
0-62mph	4.3 sec
Top speed	192mph
Length	4,445mm
Width	1,808mm
Weight	1,395kg
Wheels & tyres	
F 8.5x19-inch; 235/	35/R19
R 12x19-inch: 305/.	30/R19



▼ ★★	ſ
997 GT3 RS	
2006-07	
Similar to GT3, with	
wider rear hodyshe	I

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.

Production numbers	1,106
Issue featured	156
Engine capacity	3,600cc
Compression ratio	12.0:1
Maximum power	415hp @ 7,600rpm
Maximum torque	405Nm @ 5,500rpm
0-62mph	4.2 sec
Top speed	194mph
Length	4,460mm
Width	1,808mm
Weight	1,375kg
Wheels & tyres	

997 Carrera S 2004-08

As per the 997 Carrera, but with



Cam2 007 C46	Issue featured
Gen2 997 C4S	Engine capacity
2008-12	Compression ra
	Maximum powe
Body as per C4 but with	Maximum torqu
larger engine. Utilised 997	0-62mph
Turbo's 4WD and PTM.	Top speed
	Length
Viscous coupling gives	Width

Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	385hp @ 6,500rpm
Maximum torque	420Nm @ 4,400rpm
0-62mph	4.7 sec
Top speed	185mph
Length	4,435mm
Width	1,852mm
Weight	1,480kg
Wheels & tyres F 8x19 inch; 235/35/3 R 11x19-inch; 305/30,	
	Compression ratio Maximum power Maximum torque O-62mph Top speed Length Width Wieth Wheels & tyres F &x19 inch; 235/35/

en2 997 G	T3 2009-12
	Ċ

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

Production number	s 2,200
Issue featured	117
Engine capacity	3,797cc
Compression ratio	12.2.:1
Maximum power	435hp @ 7,900rpm
Maximum torque	430Nm @6, 250rpm
0-62mph	4.1 sec
Top speed	194mph
Length	4,460mm
Width	1,808mm
Weight	1,395kg
Wheels & tyres	
F 8.5x19-inch; 235/3	
R 12x19-inch;305/30	/ZR19



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997 Sport Classic 2010

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

Production numbers	s 250
Issue featured	146
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	408hp @ 7,300rpm
Maximum torque	420Nm@4,200-
	5,600rpm
0-62mph:	4.6 sec
Top speed:	187mph
Length:	4,435mm
Width:	1,852mm
Weight:	1,425kg
Wheels & tyres	
F 8.5x19-inch; 235/35	5/ZR19
R 11x19-inch; 305/30	/ZR19



▼ *****	Production number	s
997 GT3 RS 4.0	Issue featured	
	Engine capacity	
2010	Compression ratio	
	Maximum power	500hp@8,
Engine was upgraded and	Maximum torque	460Nm @ 5
aerodynamically tweaked,	0-62mph	
with the angle of the rear	Top speed	
	Length	4
wing increased and dive	Width	1
planes on either side of	Weight	
the front nose. A future collectors' gem.	Wheels & tyres F 9x19-inch; 245/35/ R 12x19-inch; 325/30	

Production numbers	600
Issue featured	125
Engine capacity	3,996cc
Compression ratio	12.6:1
Maximum power	500hp @ 8,250rpm
Maximum torque	460Nm @ 5,750rpm
0-62mph	3.9 sec
Top speed	193mph
Length	4,460mm
Width	1,852mm
Weight	1,360kg
Wheels & tyres	
F 9x19-inch; 245/35/Z	R19
R 12x19-inch; 325/30/	ZR19

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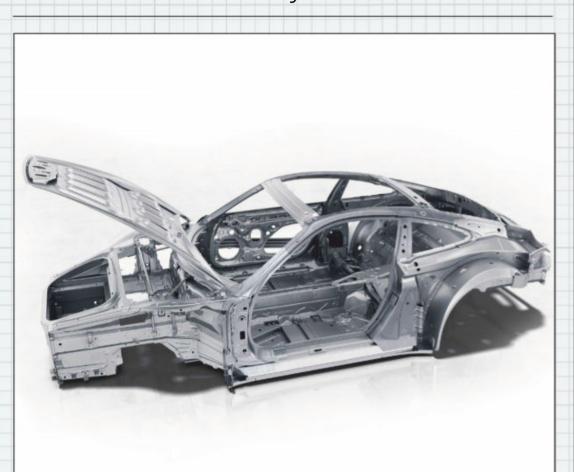
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Technology explained

024 LIGHTWEIGHT BODY CONSTRUCTION

The 992's body uses more multi-materials than ever before. Here's how and why



Porsche's 992 may be the biggest yet, but thanks to an innovative approach to its body construction, the eighth generation 911 weighs exactly the same as the 991 model before it - all while being saddled with more tech and everhigher crash safety requirements.

The 992 achieves a weight of 240 to 280 kilograms, depending on the model chosen, thanks to a lightweight composite construction. Now, the entire outer shell of the 911 is made from aluminium, aside from the front and rear apron, dramatically reducing weight. Cast-alloy parts are used on the front shock mount, the rear tunnel cell and the impact absorber mounts, with what Porsche defines as 'extruded aluminium profiles' used for elements including the front and rear main chassis members, interior and exterior door sills and the 992's floor bracing. It is now only the parts surrounding the passenger compartment which are made from hot-formed steel, in order to provide maximum protection for occupants in the event of a collision.

These different composite materials are joined together by element



997 918 Edition 2010

S-spec 911s were only

available to those who

had paid a deposit for a

918 Spyder. Acid green

badging and brake calipers.

Issue featured 3,800cc Engine capacity npression rati Maximum power 530hp @ 6,250-6,750rpm These exclusive 997 Turbo 700Nm @ 2,100 4,250rpm 0-62mpl 3.3 sec 195mph Top speed 4,435mm Length Width 1,852mm Weight 1,585kg Wheels & tyres F 8.5x19-inch; 235/35/

ZR19 R 11x19-inch: 305/30/ZR19

997 GT2 RS	2010-11
S.	
GT2 went back lightweight bod plus extra powe thanks to carbo air intake and m	y and interior, r. Recognisable n fibre bonnet,

Production number	s 500
Issue featured	155
Engine capacity	3,600cc
Compression ratio	9.0:1
Maximum power	620hp @ 6,500rpm
Maximum torque	700Nm @ 2,500-
	5,500rpm
0-62mph	3.5 sec
Top speed	205mph
Length	4,460mm
Width	1,852mm
Weight	1,370kg
Wheels & tyres	
F 9x19 inch; 245/35/	/ZR19

R 12x19 inch: 325/30/7R19



22mm wider body than C2 with 10mm wider tyres and connecting rear tail light as standard. Also features a torque distribution indicator on the digital dash clock

Production number	ers Unknown
Issue featured	98
Engine capacity	3,436cc
Compression ratio	12.5:1
Maximum power	350hp @ 7,400rpm
Maximum torque	390Nm @ 5,600rpm
0-62mph	4.9 sec
Top speed	177mph
Length	4,491mm
Width	1,852mm
Weight	1,430kg
Wheels & tyres	
F 8.5x19-inch; 235/	40/ZR19
R 11x19-inch;305/3	5/ZR19



9.8:1

991.1 Carrera 4S 2012-15

PTV spread torque more evenly.

118 3,800cc 12.5:1 400hp @ 7,400rpm 440Nm @ 5,600rpm 4.5 sec 185mph 4,491mm 1,852mm 1,445kg 8.5x20-inch; 245/35/ZR20



Unprecedented aero package now delivers 997 RS 4.0's max downforce at just 93mph Features modified 4.0-litre DFI version of 991.1 GT3 engine PDK-only Production r 5,000 Issue featured 136 **Engine capacity** 3,996cc 12.9:1 Compression ratio 500hp @ 8,250rpm n power Maximum torque 460Nm @ 6,250rpm 3.3 sec

0-ozinpii	3.3 Sec
Top speed	193mph
Length	4,545mm
Width	1,880mm
Weight	1,420kg
Wheels & tyres	
F 9.5x20-inch; 265/35/ZR20	
R 12.5x21-inch; 325/30/ZR21	





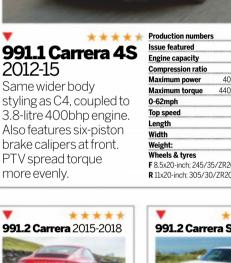
Facelift model substantially changed underneath with power coming from completely new 3.0-litre 9A2 turbocharged engine. PASM now standard Production nu Unknow



991 GT2 RS 2017-19

R 11.5x19 inch; 295/35/ZR19







Shares Carrera's 3.0-litre turbocharged 9A2 engine, with revised turbos, exhaust and engine management to

Production number	s Unknown
Issue featured	132
Engine capacity	2,981cc
Compression ratio	10.0:1
Maximum power	420hp @ 6,500rpm
Maximum torque	500Nm@1,700-
	5,000rpm
0-62mph	3.9 sec
Top speed	191mph
Length	4,499mm
Width	1,808mm
Weight	1,440kg
Wheels & tyres	
F 8.5x20 inch; 245/3	35/ZR20
R 11.5x20 inch: 305/	30/7R20

welding, full self-piercing riveting and, for joining aluminium parts to steel components, roller hemming. The 992 features a total of 180 metres of bonded seam by the time its bodywork is complete and ready for painting. New technologies call for new premises to operate in, which is why Porsche has built a 69,000m² building at Zuffenhausen specifically for building the bodies of its sports cars. Spread over three floors, the building makes better use of HRC - Human-Robot-Collaborations - which has a higher level of sensor-based automation working alongside a traditional workforce to build the bodies. Porsche has utilised multi-material bodies for its 911 for decades, but the 992's solution is more complex than ever as it aims to deliver even more to its expectant customers within a lightweight, sports car package.



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

Production number	ers 222 (UK, est)
ssue featured	153
Engine capacity	3,996cc
Compression ratio) 13.3:1
Maximum power	500hp @ 8,250rpm
Maximum torque	460Nm @ 6,000rpm
)-62mph	3.9 sec (manual)
fop speed	199mph
.ength	4,562mm
Vidth	1,852mm
Veight	1,413kg (manual)
Wheels & tyres 9x20 inch; 245/3 12x20 inch; 305/	

on bonnet feeds	Turbo S engine ercoolers. Rear K only. New inlets air to brakes.
	rs 2,000 (estimate)
Issue featured	161
Engine capacity	3,800cc
Compression ratio	9.0:1
Maximum power	700hp @ 7,000rpm
Maximum torque	750Nm @ 2,500-
	4,500rpm
0-62mph	2.8 sec
Top speed	211mph
Length	4,549
Width	1,880mm
Weight	1,470kg
Wheels & tyres	
F 9.5x20-inch; 265/3	35/ZR20
R 12.5x21-inch; 325/	30/ZR21

The work of Porsche's Exclusive department, with extensive use of carbon on the bonnet, roof and side skirts. Power is hiked to 607hp, Turbo Aerokit standard. Production numbers **Issue featured** 170 Engine capacity 3,800cc **Compression ratio** 9.8:1 Maximum power 607hp 750Nm @ 2.250-Maximum torque 4,000rpm 0-62mph 2.9 sec Top speed 205mph Length 4,507mm 1,880mm Width Weight Not specified Wheels & tyres F 9x20-inch; 245/35/ZR20 R 11.5x20-inch; 305/30/ZR20

**** 997 C2 GTS 2010-12

C4's wider rear body, and powered by the 3.8-litre Carrera Sengine, with a Powerkit producing extra 25bhp. GTS is laden with Porsche options

Production number	rs Unknown
Issue featured	157
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	408hp @ 7,300rpm
Maximum torque	420Nm@4,200-
	5,600rpm
0-60mph	4.6 sec
Top speed	190mph
Length	4,435mm
Width	1,852mm
Weight	1,420kg
Wheels & tyres	
F 8.5x19-inch; 235/3	5/19
R 11x19-inch; 305/30	0/19



Wide body from 991 Carrera 4 was used for the first time Mezger engine from previous GT3s replaced with revamped DFI version of Carrera Sengine PDK only Production numbers 3,000 (estimate) **Issue featured**

Engine capacity	3,800cc
Compression ratio	12.9:1
Maximum power	475hp @ 8,250rpm
Maximum torque	440Nm @ 6,250rpm
0-62mph	3.5 sec
Top speed	196mph
Length	4,545mm
Width	1,852mm
Weight	1,430kg
Wheels & tyres	
F 9x20-inch; 245/3	5/ZR20
R 12x20-inch; 305/	30/ZR20



New 9A2 turbocharged engine fused with all-wheel-drive running gear, now electrohydraulically controlled. Distinguishable by wider body

Production numbers	Unknowr
Issue featured	133
Engine capacity	2,981cc
Compression ratio	10.0:1
Maximum power	370hp @ 6,500rpm
Maximum torque	450Nm @ 1,700
	5,000rpm
0-62mph	4.1 sec
Top speed	181mph
Length	4,499mm
Width	1,852mm
Weight	1,480kg
Wheels & tyres F 8.5	x19-inch; 235/40/
ZR19 R 11.5x19-inch; 2	95/35/ZR19



Like C2 997 GTS but slightly heavier and with 4WD. In either C2 or C4 form, it represented a great saving over optioning up a 997 Carrera counterpart.

Production numbers	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	4.6 sec
Top speed	188mph
Length	4,435mm
Width	1,852mm
Weight	1,480kg
Wheels & tyres	
F 8.5x19-inch; 235/35	ZR19
R 11x19-inch; 305/30/	/ZR19

991.1 Turbo 2013-15

New Turbo marks introduction

of rear axle steering, plus PDK-

only transmission to forced

induction 991 models.

Production numbers

mpression ratio

Weight Wheels & tyres F 8.5x20 inch; 245/35/ZR20

R 11x20 inch; 305/30/ZR20

Issue featured

Engine capacity

Maximum power

Maximum torque

0-62mph

Top speed

Length

Width

Unknown

3,800cc

6,500rpm

5,000rpm

3.4 sec

195mph

4,506mm

1,880mm

1,595kg

520hp@6,000

660Nm@1,950

9.8:

109



Width

997 Turbo S 2011-13 A standard 997 Turbo but more power and higher level of standard equipment including PCCB, centre-lock wheels, crested sports seats and Sport Chrono Plus.

991.1 Turbo S 2013-15

Same dimensions as 991

Turbo, but with a tweaked map

to provide extra 40bhp. Turbo

centre-lock wheels and PCCB.

Maximum torgue 700Nm @ 2,100-4,250

options standard, including

Production numbers

Issue featured

Engine capacity

0-62mph

Top speed

Length

Width

Weight

Wheels & tyres

F 9x20-inch; 245/35/ZR20

R 11x20-inch, 305/30/ZR20

Compression ratio

Unknown

3,800cc

6,750rpm

3.1 sec 197mph

4,506mm

1,880mm

1,605kg

560hp@6,500-

9.8:1

115



Production numbers

Issue featured

Engine capacity

Compression ratio

Maximum power

Maximum torque

0-62mph

Top speed

Length

Weight

Wheels & tyres

9x20-inch; 245/35/ZR20

R 11.5x20-inch; 305/30/ZR20

Width

1,963

3,800cc

400hp @ 7,400rpm

440Nm @ 5,600rpm

12.5:1

4.5 sec

188mph

4,491mm

1,852mm

1,420kg

112



Gen7 911, it takes styling hues from the 993. A redesigned chassis with lengthened wheelbase reduces overhang of

Production number	ers Unknown
Issue featured	137
Engine capacity	3,436cc
Compression ratio	12.5:1
Maximum power	350hp @ 7,400rpm
Maximum torque	390Nm @ 5,600rpm
0-62mph	4.8 sec
Top speed	179.6mph
Length	4,491mm
Width	1,808mm
Weight	1,380kg
Wheels & tyres	
F 8.5x19 inch; 235/4	40/ZR19
R 11x19 inch; 285/3	5/ZR19



'box but utilising bigger engine. Slightly larger front brakes than the standard Carrera, PASM as standard equipment.







body and a host of good options including Powerkit, PASM, Sport chrono, Sport exhaust to name a few, all for £7,000 more than Carrera S.

157

Production numb Unknown **Issue featured** 3,800cc **Engine capacity** Compression ratio 12.5:1 430hp @ 7,500rpm Maximum power Maximum torque 440Nm @ 5,750rpm 0-62mph 4.0 sec Top speed 190mph Length 4,491mm Width 1,852mm 1,425kg Weight Wheels & tyres 9x20 inch; 245/35/ZR20 R 11.5x20 inch: 305/30/ZR20



offered by four-wheel drive. As a result, performance times are altered slightly over its reardriven variant.

Production numbe	ers 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	4.4 sec
Top speed	188mph
Length	4,491mm
Width	1,852mm
Weight	1,470kg
Wheels & tyres	
F 9x20 inch; 245/3	5/ZR20
R 11.5x20 inch; 305	/30/ZR20

991.2 C4 GTS 2017-19

As 991.2 Carrera GTS but with

controlling drive between both

axles (rear always driven). Red

Maximum power 450hp @ 6,500rpm

connecting strip on rear.

Production numbe

Issue featured

Engine capacity

Compression ratio

Maximum torque

0-62mph

Top speed

Length

Width

Weight

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

R 12x20-inch; 305/30/ZR20

PTM four-wheel drive electrically

Unknown

2,981cc

5,000rpm

3.8 sec

193mph

4,528mm

1,852mm

1,515kg

550Nm @ 2,150-

10.0:1

151

* * * * *	991
-	

and full-width rear brake light

		Frouuction numbe
duction numbers	Unknown	Issue featured
ie featured	133	Engine capacity
ine capacity	2,981cc	Compression ratio
npression ratio	10.0:1	Maximum power
kimum power 370h	np @ 6,500rpm	Maximum torque
kimum torque 45	50Nm @ 1,700-	
	5,000rpm	0-62mph
2mph	4.1 sec	Top speed
speed	181mph	Length
gth	4,499mm	Width
th	1,852mm	Weight
ght	1,480kg	Wheels & tyres
eels & tyres F 8.5x19-in	nch; 235/40/	F 8.5x20 inch; 245/
9 R 11.5x19-inch; 295/3	35/ZR19	R 11.5x20 inch; 305



As per C4 but using revised turbos, exhaust and engine management from C2S to produce extra 50hp. Faster 0-62mph than C2S for first time Production numbers Unknown Issue featured 154 Engine capacity 2,981cc Compression ratio 10.0:1 120bp@64 Maximum power Maximum torque

420np @ 6,500rpm	Maximum
500Nm @ 1,700-	Maximum
5,000rpm	
3.8 sec	0-62mph
189mph	Top speed
4,499mm	Length
1,852mm	Width
1,490kg	Weight
50.0270-0000-0000-0000-000-00-	Wheels & t
/35/ZR20	F 9x20-inch
5/30/ZR20	R 11.5x20-ir



Revised 9A1 engine from 991.1. producing 540hp thanks to modified inlet ports in cylinder head, new injection nozzles and higher fuel pressure.

Production number	rs Unknown
Issue featured	135
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	540hp @ 6,400rpm
Maximum torque	710Nm @ 2,250-
	4,000rpm
0-62mph	3.1 sec
Top speed	199mph
Length	4,507mm
Width	1,880mm
Weight	1,595kg
Wheels & tyres	
F 9x20-inch; 245/35	5/ZR20
R 11.5x20-inch; 305/	/30/ZR20



991 Anniversary

Carrera S with wide body

and generous spec. Many

styling cues inside and out

taken from original 901.

Powerkit only came as

standard spec in US.

Exuberantly styled

2013-14

As per 991.2 Turbo but with power boosted to 580hp thanks to new turbochargers with larger compressors. Fastest ever 911 from 0-62mph.

Production numbers	unknowr
Issue featured	145
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	580hp @ 6,750rpm
Maximum torque	750Nm @ 2,250
	4,000rpm
0-62mph	2.9 sec
Top speed	205mph
Length	4,507mm
Width	1,880mm
Weight	1,600kg
Wheels & tyres F 9x2 ZR20	20-inch; 245/35/
R 11.5x20-inch: 305/3	30/ZR20



991 GT3 RS engine mated to revised six-speed manual gearbox. Features Carrera Cabriolet active rear wing with diffuser aiding downforce. Lightweight flywheel optional.

Production number	ers 991
Issue featured	153
Engine capacity	3,996cc
Compression ratio	13.2:1
Maximum power	500hp @ 8,250rpm
Maximum torque	460Nm @ 6,250rpm
0-62mph	3.8 sec
Top speed	201mph
Length	4,532mm
Width	1,852mm
Weight	1,370kg
Wheels & tyres	
F 9x20-inch; 245/3	5/ZR20
R 12x20-inch; 305/	30/ZR20



Similar specification and 'black accent' styling as per 991.1, available in both rear-wheel and all-wheel drive form. C4GTS quicker than C2 GTS.

Production numbers	s Unknowr
Issue featured	150
Engine capacity	2,981cc
Compression ratio	10.0:1
Maximum power	450hp @ 6,500rpm
Maximum torque	550Nm @ 2,150
	5,000rpm
0-62mph	4.1 sec
Top speed	194mpł
Length	4,528mm
Width	1,852mm
Weight	1,450kg
Wheels & tyres	
F 9x20 inch; 245/35/	/ZR20
R 12x20 inch; 305/30	D/ZR20
Length Width Weight Wheels & tyres F 9x20 inch; 245/35/	4,52 1,85 1,4 7ZR20













Purist take on the 991.2 Carrera with 20kg of weight saved and regearing of seven-speed manual gearbox. Same 370hp engine as Carrera, PDK optional,

Production numbers	5,000
Issue featured	162
Engine capacity	2,981cc
Compression ratio	10.0:1
Maximum power	370hp @ 6,500rpm
Maximum torque	450Nm @ 1,700-
	5,000rpm
0-62mph	4.1 sec
Top speed	183mph
Length	4,499mm
Width	1,808mm
Weight	1,410kg
Wheels & tyres F 8.5	x19-inch; 245/40/
ZR19 R 11.5x19-inch; 2	295/35/ZR19



• *****	Production numbers	100 UK cars (est)
991.2	Issue featured	164
	Engine capacity	4,000cc
GT3 RS 2018-19	Compression ratio	unknowr
	Maximum power	520hp
Latest GT3 RS gets GT3	Maximum torque	480Nm
facelift but with NACA	0-62mph	3.2 sec
ducts and suspension	Top speed	193mph
	Length	4,549mm
from GT2 RS. 20hp	Width	1,880mm
increase over Gen1 with	Weight	1,420kg
mainly aerodynamic and chassis revisions.	Wheels & tyres F 9.5x20-inch; 265/35/ZR2 R 12.5x21-inch; 325/30/ZR	



Limited-edition special from Flacht to mark 70 years of Porsche. Engine taken directly from 991.2 GT3 with its sixspeed manual compulsory.

Production number	ers 1,948
Issue featured	172
Engine capacity	3,996cc
Compression ratio	13.3:1
Maximum power	500hp @ 8,250rpm
Maximum torque	460Nm @ 6,000rpm
0-62mph	3.9 sec
Top speed	199mph
Length	4,562mm
Width	1,852mm
Weight	unknown
Wheels & tyres	
F 9x20-inch; 245/3	5/ZR20
R 12x12-inch: 305/3	30/ZR20



All-new eighth generation of 911 carries over 9A2 engine from 991.2, though all cars are now wide bodied with subtle visual tweaks.

Production numbers	In production
Issue featured	174
Engine capacity	2,981cc
Compression ratio	10.5:1
Maximum power	450hp @ 6,500rpm
Maximum torque 53	0Nm@ 2-5,000rpm
0-62mph	3.5 sec
Top speed	191mph
Length	4,548mm
Width	1,852mm
Weight	1,515kg
Wheels & tyres	
F 8.5x20-inch; 245/3	5/ZR20
R11.5x21-inch: 305/30	0/ZR21

• *****	Production numbers	In production
002 Comments 46	Issue featured	174
992 Carrera 4S	Engine capacity	2,981cc
2019-	Compression ratio	10.5:1
LOID	Maximum power	450hp @ 6,500rpm
As with the 992 Carrera	Maximum torque	530Nm@ 2-5,000rpm
S, but with active all-wheel	0-62mph	3.4 sec
drive providing variable	Top speed	190mph
	Length	4,548mm
torque to the front axle.	Width	1,852mm
Identifiable by silver	Weight	1,565kg
decklid slats (C2S has black).	Wheels & tyres F 8.5x20-inch; 245/3 R11.5x21-inch; 305/3	

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1973 911 2.7 Carrera RS Lightweight	Tangerine / Black Cloth. 1 of 17 RHD Versions	N/A
1974 911 Targa 2.7 MFI	Gemini Blue/Beige Brown Trim. Total restoration	82,200
1986 911 Super Sport Targa	Grand Prix White / Black Leather Piped White	29,300
1987 928 S4 Auto	Venezia Blue / Navy Leather. Air Con, Electric Sunroof	44,100
1988 911 Carrera Targa Jubilee Edn LHD	Diamond Blue / Dark Blue-Purple Leather. G50 Gearbox	91,000
1989 911 Carrera Sport Cabriolet	Grand Prix White / Blue Leather piped White. El Sport Seats	50,300
1989 911 Carrera Sport Cabriolet	Guards Red / Linen Porsche Cloth. Sports Suspension	56,500
1992 964 RS Lightweight LHD	Midnight Blue / Black-Grey Leather. C10 Swiss Supplied	20,600
1993 964 Turbo 3.6	Midnight Blue / Black Leather. Electric Sunroof	22,500
1993 964 Speedster LHD	Guards Red / Black-Grey Leather. Air Conditioning	9,800
1995 993 Turbo	Arena Red / Black Leather. Air Conditioning	2,200
1996 993 Turbo X50 L.H.D	Grand Prix White/ Black Full Leather, Air Con, El Sunroof	26,200
1996 993 Turbo	Midnight Blue / Grey Leather. Sunroof, Air Conditioning	23,600
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2004 996 Turbo Tip S Cabriolet	Atlas Grey / Black Leather. Hard Top	37,500
2009 997 C2S Manual Coupe	Basalt Black / Black Leather, 19" Turbo Wheels, PCM Navigation	39,800
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2012 991 Carrera 2 3.4 Manual Cabriolet	Guards Red / Black Leather. BiXenons, Sports Exhaust	26,300
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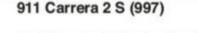


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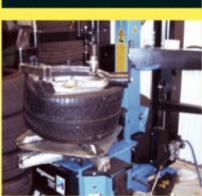
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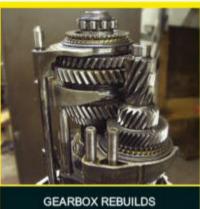
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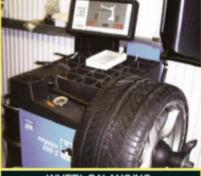
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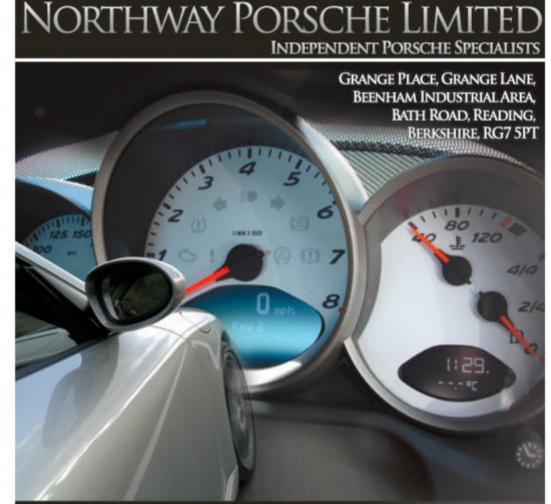
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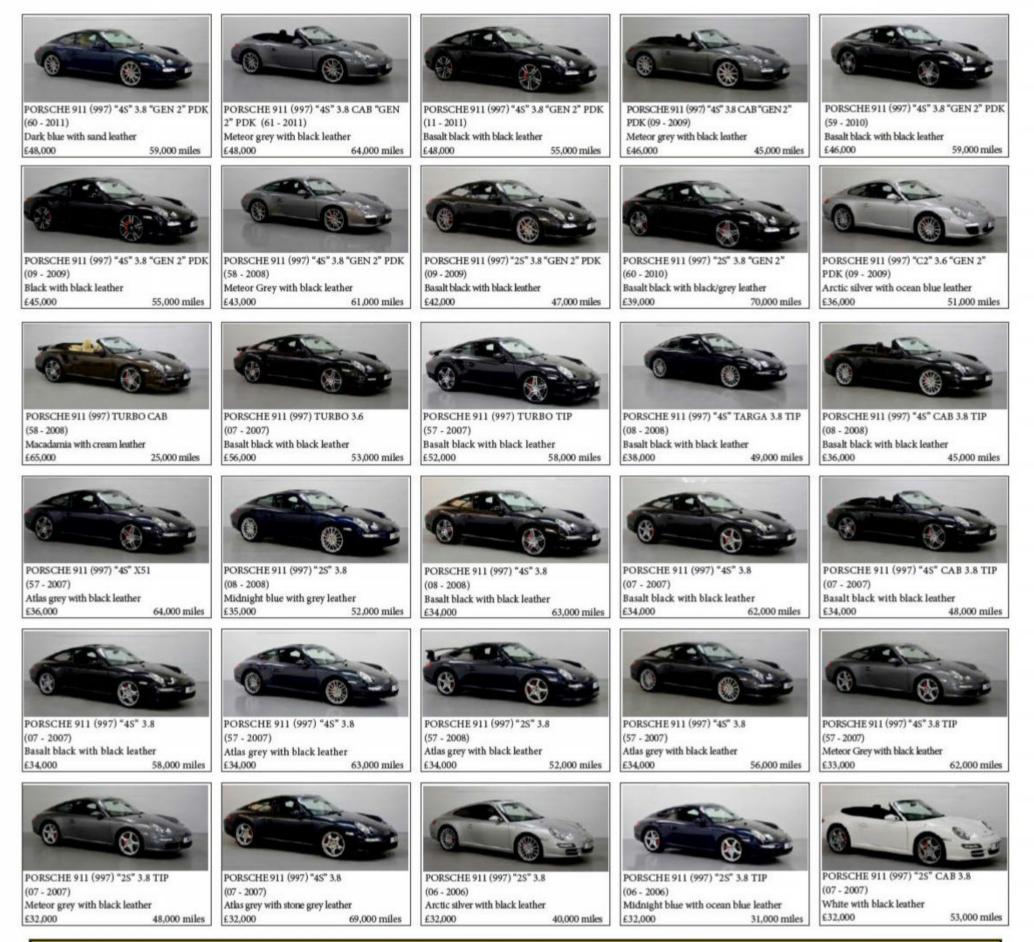


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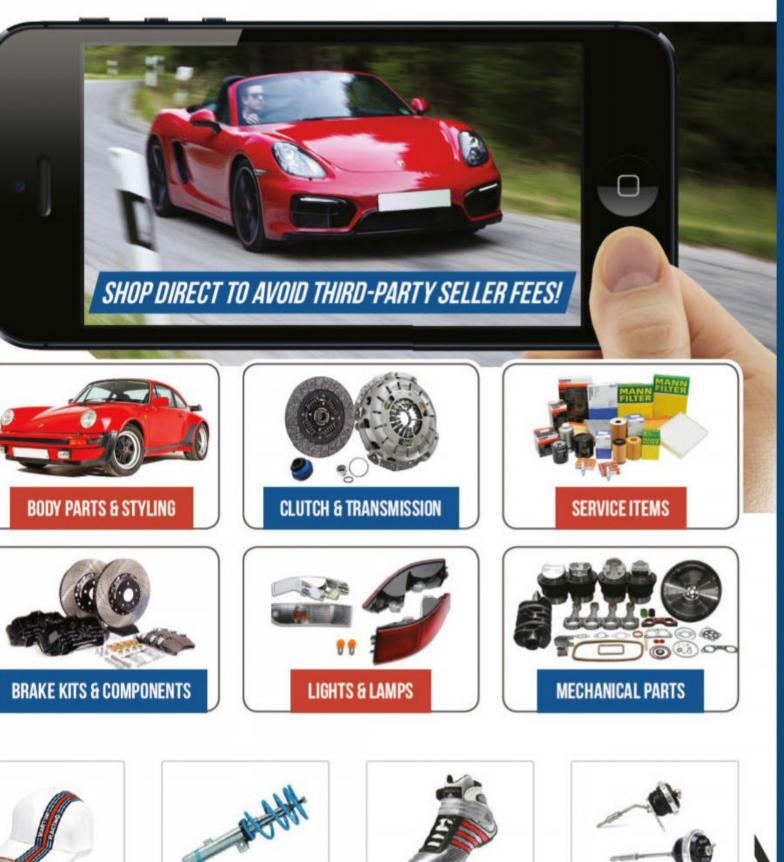
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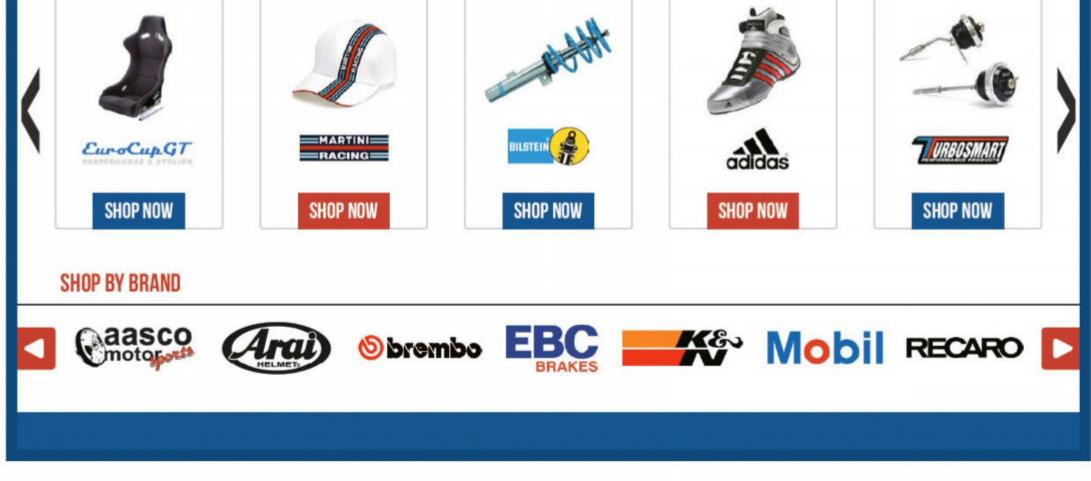


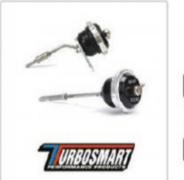
















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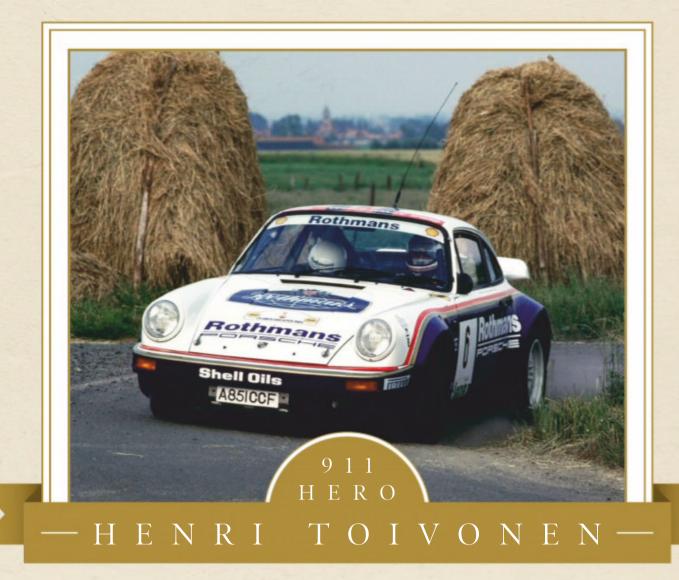
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His relationship with the 911 was a short one, but this talented Finn added yet more victories to Porsche's motorsport legend, this time on the rally stage

Written by Chris Randall Photography courtesy Porsche Archive

or aficionados of rallying, the name Henri Toivonen needs little introduction. Once the youngest winner of a World Championship event at the age of just 24, his life was cut cruelly short following a crash on the 1986 Tour de Corse at the wheel of the fearsome Lancia

Delta S4. It was to spell the end of the Group B era, but we're here to take a closer look at his links with the Porsche 911, and for that we have to head back 35 years.

With delays to the 959 that Porsche was developing for an allout assault on Group B, an interim project was needed, and it would involve David Richards and his company, Prodrive. Already keen to take Porsche rallying, he was handed five of the 20 911 SC RS cars that had been homologated and set about signing drivers. One of them would be Toivonen, and with



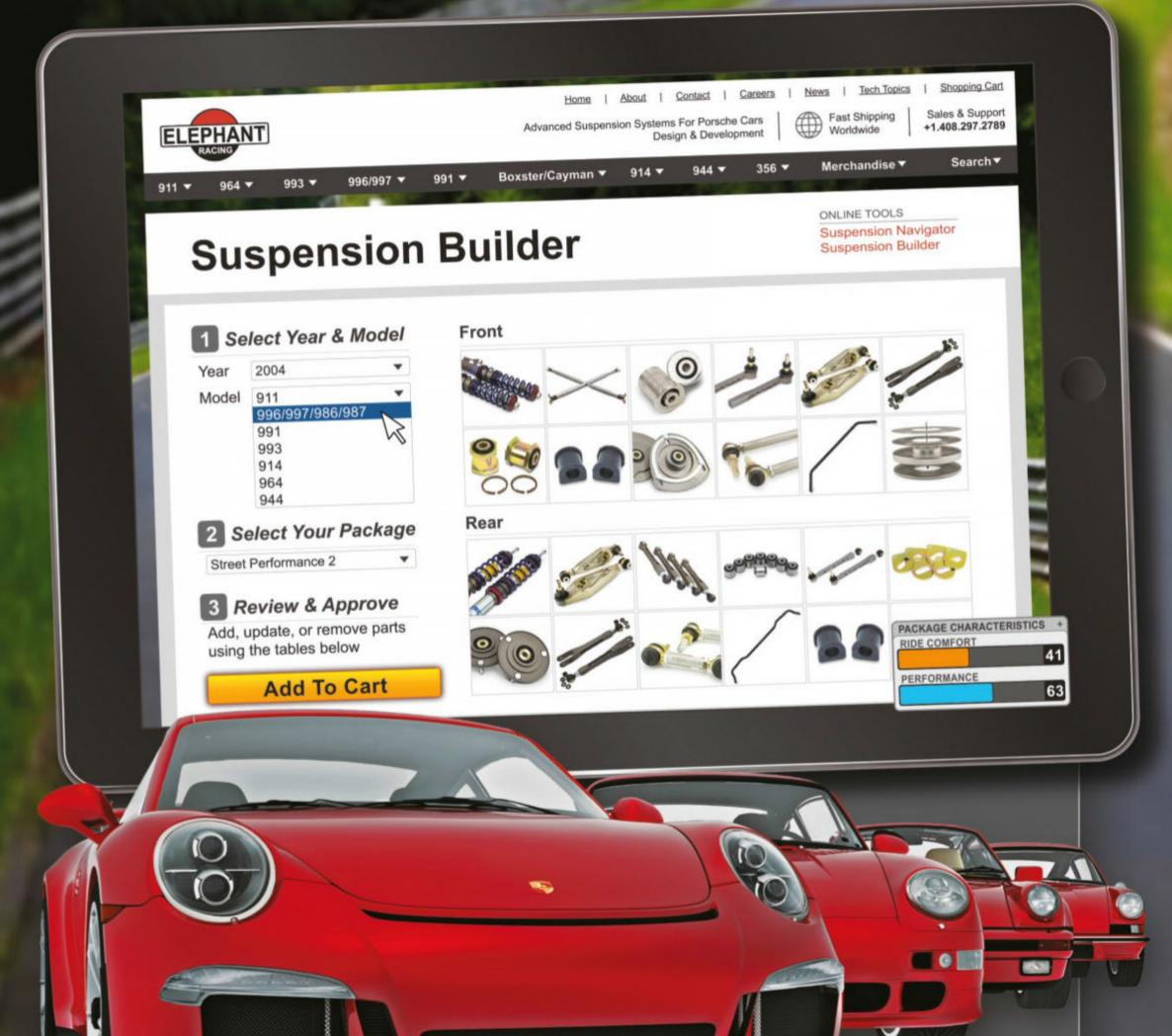
before a back injury brought about an enforced lay-off. The missed events saw the Championship slip from his grasp, and he would finish the season in second place behind the eventual winner, Carlo Capone. In truth he was some way behind, but that aside he had reinforced his position as one of the world's finest rally drivers, and

> proven the abilities of Prodrive and the mettle of the SC RS when it came to top-level motorsport. Unfortunately there was no opportunity to take the title the following year, as Toivonen swapped to Lancia.

Born in August 1956 in the Finnish town of Jyväskylä, motorsport was in Toivonen's blood. His father Pauli had won the 1968 European Rally Championship in a Porsche 911T, but it was circuit racing that initially attracted the young Henri. He was as talented on the race track as he was to become on loose surfaces, taking part in a few Formula 3 races in a car run by Eddie Jordan, as well as testing a March Fl car. And just to prove the point, the SC RS wasn't his only outing behind the wheel of a Porsche. For the Mugello round of the 1983 European Endurance Championship he partnered Derek Bell and Jonathan Palmer in a 956, where they finished 3rd. While that day in Corsica brought a tragic end to his short life, Henri Toivonen's link with Porsche and the 911 is one that's still fondly remembered decades later.

Rothmans sponsorship the team embarked on the 1984 European Rally Championship with high hopes. Familiar with Richards from their time at Opel, the talented Finn made a steady start to the season, later bagging a 3rd and two 2nd places. With both car and driver hitting top form, Toivonen would take victory on the Costa Smeralda along with co-driver Juha Piironen. Seasoned campaigner Ian Grindrod was in the co-driver's seat for the victory at Ypres, and then it was Piironen again for the win on the Madeira round

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