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Total 911

THE PORSCHE MAGAZINE

SUPERCHARGED 993

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CELEBRATING

50 YEARS OF RS

993 v 964 v 2.7

Back-to-back tests... from Porsche's own collection!

THE FIRST RENNSPORT

Inside story on how Porsche created the iconic 2.7 Carrera RS

PINKY LAI INTERVIEW

Designer of the Porsche 996 answers YOUR questions

964 CARRERA CUP US EDITION

Why Porsche's Stateside 1990s competition never made the grid

FUTURE
Digital Edition
ISSUE 218

BEVERLY HILLS CAR CLUB

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1994 Porsche 911 Speedster-14999

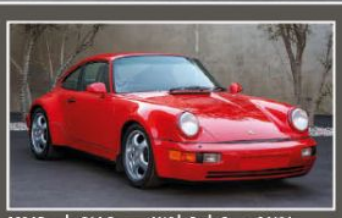
Presenting this limited production 1994 Porsche 911 Speedster (one of less than 469 produced for the US market). Featured with only 6,710 miles on the odometer and is available in its factory color code #80K Guards Red with a black interior. The vehicle comes with a clean Carfax and is equipped with a 5-speed manual transmission, Flat 6 Cylinder 3.6-liter engine, automatic speed control, air conditioning, RS door panels, power windows, power steering, soft top, 4-wheel disc brakes, jack, and spare tire. Both the color code and options sticker are still in place under the hood. Als includes the original owner's manual and maintenance booklet with service stamps. An extremely low mileage, highly collectible, and well-taken care of third-generation Porsche 964 Carrera C2 Speedster that is mechanically sound.

For $235,000

1990 Porsche 964 Carrera 4 Targa-14910

Presenting this exciting 1990 Porsche 964 Carrera 4 Targa featured with 73,428 miles on the odometer and is available in its factory color code #700 black with a black interior. The vehicle comes with a clean Carfax and is equipped with a 5-speed manual transmission, Flat 6 Cylinder 3.6-liter engine, automatic speed control, air conditioning, power windows, power steering, sports seats, Porsche D90 wheels, 4-wheel disc brakes, spare tire, and jack. Also includes paint meter reading photos. A very presentable and well-equipped sports car that is mechanically sound.

For $108,500



1994 Porsche 964 Carrera 4 Wide-Body Coupe-14684

Presenting this amazing and highly collectible 1994 Porsche 964 Carrera 4 Wide-Body Coupe (1 of 267 ever produced). Available in Guards Red with a black interior. The vehicle comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 3.6-liter engine, automatic speed control, air conditioning, power windows, power steering, sunroof, 4-wheel disc brakes, and spare tire. Also includes the original owner's manual, maintenance booklet as well as service documents and receipts copies dating from 2000 to 2021 totaling over $37,000. Do not miss your chance to jump into the ownership of this one-year limited-production factory Wide-Body air-cooled 964 that is mechanically sound.

For $265,000

1973 Porsche 911E Targa-12666

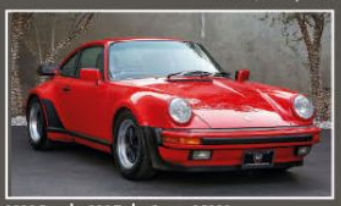
Here is a recently discovered 1973 Porsche 911E Targa featured here with matching numbers is available in its factory color code #117 Light Yellow with a black interior. It comes equipped with a 5-speed manual transmission, 4-wheel disc brakes, G26 Group option: S trim, heated rear glass, sway bars, S instrument, air conditioning, and Fuchs wheels. This is an extremely original Porsche 911E (please review paint meter reading photos). A very sought-after original blue plate California car that is an excellent addition to any Porsche enthusiast. Don't miss your chance to acquire this original 911 that is mechanically sound.

For $108,500

1973 Porsche 911T Coupe-14966

Presenting this highly collectible 1973.5 Porsche 911T Coupe featured with matching numbers and is available in its factory color code #936 Silver Metallic with a black interior. The vehicle comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 2.4-liter engine, dual carburetors, 4-wheel disc brakes, Fuchs wheels, and spare tire. An excellent original long hood California sports car that is mechanically sound.

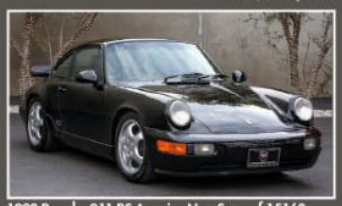
For $89,950



1989 Porsche 930 Turbo Coupe-15138

Presenting this highly collectible 1989 Porsche 930 Turbo Coupe is featured with matching numbers (Certificate of Authenticity copy included) and 98,336 kilometers on the odometer (61,101 miles). Available in its factory color code #80K Guards Red with a black interior. The 930 Turbo comes with a clean Carfax and is equipped with a G50 5-speed manual transmission, Flat 6 Cylinder 3.3-liter engine, K27 turbocharger, sport cams, upgraded fuel injectors, extra capacity intercooler, 935 clutch plate, 935 flywheel, Borla exhaust, air conditioning, sports seats, power windows, sunroof, 4-wheel disc brakes, Fuchs wheels, jack, spare tire, and tool kit. Both the color code and options sticker are still in place under the hood. Also includes service documents and receipts copies totaling over $9,000. A well-equipped air-cooled Porsche that will be an excellent addition to any classic car collection. Do not miss your chance to jump into the ownership of this amazing and strong running 930 Turbo that is mechanically sound.

For $195,000



1993 Porsche 911 RS America Non-Sunroof-15160

Presenting this highly collectible 1993 Porsche 911 RS America Non-Sunroof (one of 701 examples built for 1993) and is available in its factory color code #741 black with a black interior. The vehicle comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 3.6-liter engine, air conditioning, power windows, aftermarket sound system (factory stereo included), rear seat delete, sports seats, RS door panels, 4-wheel disc brakes, spare tire, and tool kit. Also includes the original owner's manual, and maintenance booklet, as well as service documents and receipts copies totaling over $38,000 invested in the vehicle which includes a major service done in the last 2 years. Do not miss your chance to own this amazing, strong-running, and well-maintained RS America that is mechanically sound.

For $169,500

1979 Porsche 930 Turbo Coupe-14909

Presenting this amazing color combination 1979 Porsche 930 Turbo Coupe featured with matching numbers and 73,614miles on the odometer. Available in Petrol Blue Metallic with a black interior. The 930 Turbo comes equipped with a 4-speed manual transmission, Flat 6 Cylinder 3.3-liter engine, air conditioning, sports seats, power windows, sunroof, 4-wheel disc brakes, Fuchs wheels, and spare tire. Also includes service documents and receipts copies totaling over $6,000. An extremely sought-after air-cooled Porsche Turbo that is mechanically sound.

For $139,950

1990 Porsche 964 Carrera 4 Coupe-12689

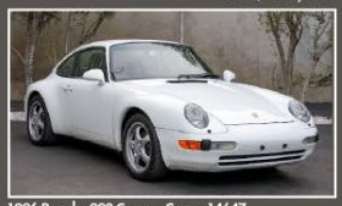
Presenting this beautiful 1990 Porsche 964 Carrera 4 Coupe featured with 33,589 on the odometer and is available in its factory color code #700 black with a black interior. It comes with a clean Carfax and is equipped with a 5-speed manual transmission, Flat 6 Cylinder 3.6-liter engine, air conditioning, automatic speed control, power windows, power steering, jack, 4-wheel disc brakes, D90 wheels, and jack. Both the color code and options sticker are still in place under the hood. Also included with this vehicle are paint meter reading photos. An extremely desirable low mileage 964 Coupe that is mechanically sound.

For $125,000

1964 Porsche 356C Factory Sunroof Coupe-13555

Here is a rare 1964 Porsche 356C Factory Sunroof Coupe featured with matching numbers (Kardex copy included). Available in its factory color code #6407 Signal Red with a black interior. The vehicle comes equipped with a 4-speed manual transmission, 1600c engine, dual carburetors, sunroof, matching numbers hood/decklid, chrome wheels, and 4-wheel disc brakes. An excellent 356C Coupe that is ready to be driven and enjoyed. This extremely sought-after Porsche had the same owner since 2000 and is mechanically sound.

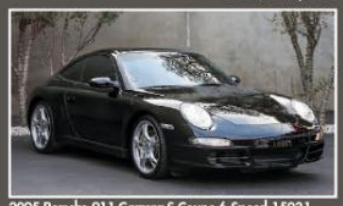
For $108,500



1996 Porsche 993 Carrera Coupe-14647

Presenting this one-owner 1996 Porsche 993 Carrera Coupe featured with 61,191 miles on the odometer is available in its factory color code #908 Grand Prix White with a black interior. The vehicle comes with a clean Carfax and is equipped with a 6-speed manual transmission, Flat 6 Cylinder 3.6-liter engine, automatic speed control, air conditioning, 8-way electrical front seats, power mirrors, power windows, power steering, sunroof, 4-wheel disc brakes, spare tire, tool kit, air compressor, and jack. Also includes service documents and receipts copies dating from 2000 to 2019 totaling over $21,000. Do not miss your chance to jump into the ownership of this low-mileage sports car that has been lovingly cared for by the original owners (husband and wife) since new. This is a well-maintained air-cooled 993 that is mechanically sound.

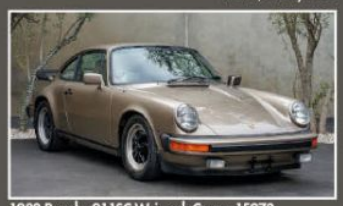
For $96,500



2005 Porsche 911 Carrera S Coupe 6-Speed-15031

Presenting this extremely low mileage, one-owner 2005 Porsche 911 Carrera S Coupe 6-Speed featured with only 6,393 miles on the odometer and is available in its factory color combination of black with a black interior. The Carrera S Coupe comes equipped with a 6-speed manual transmission, automatic speed control, air conditioning, power windows, power steering, sport seats, self-dimming mirrors, sport chrono package, heated front seats, sunroof, 4-wheel disc brakes, and Lobster Claw wheels. Also includes a copy of the Certificate of Authenticity. A beautiful 997.1 that is a California car in pristine condition and the vehicle is mechanically sound.

For $89,950



1980 Porsche 911SC Weissach Coupe-15073

Presenting this limited edition 1980 Porsche 911SC Weissach Coupe (1 out of 406 ever produced) featured here with matching numbers and 61,126 miles on the odometer. Available in its factory color code #655 Platinum Metallic with doric gray leather with a burgundy piping interior. The 911SC comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 3.0-liter engine, air conditioning, power windows, sunroof, 4-wheel disc brakes, Fuchs wheels, spare tire, and tool kit. Also includes service documents and receipts copies dating from 1987 to 2021 totaling over $26,000. An excellent opportunity to jump into the ownership and this gorgeous low-mileage sports car that is mechanically sound.

For $74,500

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Welcome

It's outrageous to think that Porsche's 911 Rennsport is now half a century old. The reality is the RS models have accelerated in tech nearly as much in the past decade as in the entirety of the 40 years prior, but this is to be expected. What is remarkable, though, is that textbook RS DNA is still very much present, no matter which generation you drive: think high-revving, emotive engines, taut suspension, and razor-sharp responses to throttle, steering and shift inputs.

I mentioned that rapid acceleration of tech in recent Rennsports (excuse the pun), but the Holy Grail of 911 RS lineage lies somewhere in the air-cooled classics. They're the pinnacle of a glorious era of engineering, where the genius behind their fine-tuning was mechanical rather than technological. We've been lucky enough to test the first three models back-to-back this issue, with all three cars hailing from the Porsche Museum's own collection.

Zuffenhausen is clearly cranking up its efforts to celebrate this milestone of the most iconic 911, with rumours circulating of an incoming model from the fabled Motorsport department named... 'ST'. Yes, a little bizarre I know, considering the ST obviously wasn't an RS, though the good news is the original was an RS on steroids, which raises the pulse when thinking of the potential here for a 2022 edition. Either way, it's great that the company is insistent on treating us to such special 911s still powered by glorious, atmospheric engines and with a manual transmission at its heart. Enjoy these days while they're here: as we face up to the inevitable takeover of e-mobility in years to come, we could well look back on this period as the pinnacle of the modern sports car.

"That textbook RS DNA is still very much present, no matter which generation you drive"

LEE SIBLEY • Editor at large
E: lee.sibley@futurenet.com

Opening Shot

Photograph by **Steven Hall**

Typically British weather didn't put off these hardcore enthusiasts of the Porsche 996, who gathered at Heritage Parts Centre to celebrate the marque's 25th anniversary with a special Fried Eggs Anniversary Cars & Coffee meet. More than 70 Porsche 996s were in attendance to mark a quarter of a century since the first water-cooled 911 rolled off the Zuffenhausen production line.


HERITAGE
PARTS CENTRE
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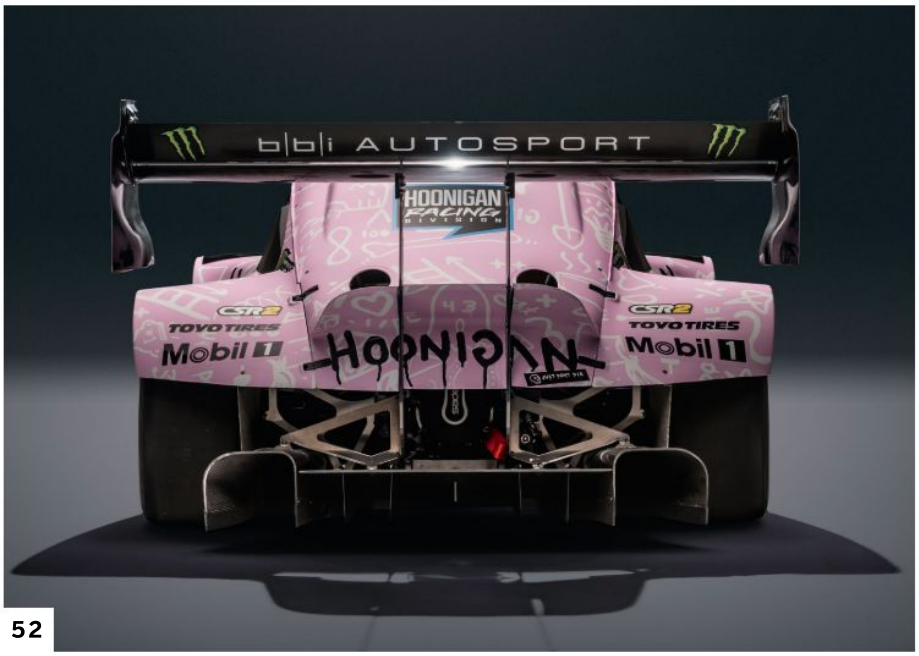
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Update

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

New 911 ST spied at the 'Ring

The rumoured 911 ST has been spotted in testing at the Nürburgring, in what could be a new Motorsport department special

Talk of a forthcoming 911 ST model has been building up for some time. Now, thanks to **Total 911's** eagle-eyed photographers, we can bring you the first visual of a test mule spotted at the Nürburgring Nordschleife. The prototype provides some clues on what we can expect from the new model. Some industry observers are tipping it as the third Heritage Design model from Porsche Exclusive, following in the tyre tracks of the 911 Targa and Sport Classic.

However, this ST development car appears to be based on the 992 GT3 Touring. This fits with the notion that the car will utilise the 992 GT3's 4.0-litre, 510hp, naturally aspirated flat six that's linked to a Porsche Motorsport-derived, six-speed manual gearbox, with the whole affair tipping the scales at as little as 1,300kg.

Closer examination reveals the double-bubble roof and Gurney flap as found on the latest iteration of 911 Sport Classic, together with pull-door handles, similar to those seen on the GT3 Cup, and those spied on a mule presumed to be the next GT3 RS – different to the aforementioned Heritage cars. There's also a fresh front wing design with a new vent sat behind the front wheels but forward of the doors – again, as seen on GT3 RS prototypes. The doors sport unique profiles, too. The wheels are centre-locking items presumed to mimic what's come before, with staggered sizes front to rear.

Supporting the assumption that what we're looking at is the next Heritage Design 911 comes a placeholder for a roundel – or badge – on the rear deckled. However, this sits on the opposite side to the two preceding Heritage cars. And then there's this bombshell throwing some real doubt into the mix...

When **Total 911** recently quizzed Boris Apenbrink, head of Porsche Exclusiv Manufaktur, we were told that none of the Heritage Design cars will feature Porsche Motorsport engines. With two more Heritage cars due by the end of 2023, this could point to the ST – which we're assuming does have such a mill driving its rear wheels – being a full fat special edition from Andreas Preuninger's fabled GT department. Perhaps this isn't the next Heritage Design 992 after all?

None of this has been confirmed by Porsche. The original 911 ST numbered just 24 cars, yet **Total 911** expects this modern iteration to run to 2,000 vehicles.

The original 911 ST

One of the rarest Porsche 911s ever made, the original 911 ST was also one of the lightest – weighing in at around 930kg. It was based on the 911 2.4S Coupe and was modified for racing and rallying. Just 24 were officially produced by the-then 'Porsche Sports Division' at the end of 1971, with a view to going racing in Group 3 (Series GT) and Group 4 (Modified GT). Back then, drivers such as Jürgen Barth raced a 911 ST at Daytona, Sebring, on the Targa Florio and at the 1,000km race on the Nürburgring. The direct predecessor of the 911 Carrera 2.8 RSR, the 2.5 ST has racing pedigree like few other 911s.

Seventy years of Clubs celebrated

To mark the 70th anniversary of the first Porsche Club, the brand is planning a worldwide celebration

Porsche has always been supportive of clubs populated by enthusiasts of its brand. The first Porsche Club was founded 70 years ago this year and today there are more than 700 worldwide with over 240,000 members in 86 different countries.

The international success story can be traced back to 1952 when, just two years after the delivery of the first Porsche sports car in Germany, customers joined forces to form what's now known as the Porsche Club Westfalen (originally called Westfälischer Porsche Club Hohensyburg). The first international Porsche Club outside of the marque's domestic market was established in Belgium in 1953, while Porsche Club of America – now the largest Porsche Club in the world – arrived in 1955. Today, around five new Porsche Clubs are set up every year.

"Porsche would not be Porsche without the global community of friends and fans who come together to share their passion for our brand," said Detlev von Platen, member of the executive board for sales and marketing at Porsche AG.

To mark the 70th anniversary in 2022, Porsche is planning a worldwide campaign and a roster of events under the banner Enduring Passion. This will include an online hub where members from any Porsche Club can publish personal stories about their clan. Porsche is also supporting Porsche Club events such as the 356 Meeting in the Netherlands, the Porsche Parade USA and Le Mans Classic.

Ten years at Nardò

Porsche bought the Nardò Technical Center a decade ago, and on the 10th anniversary is looking back fondly

The Nardò Technical Center (NTC) in southern Italy became a key Porsche proving ground in 2012 when the brand acquired the site. A decade on and Porsche is celebrating the milestone by underlining how the NTC has changed.

Founded in 1975, the site in the Apulian region has been transformed in the past 10 years into a cutting-edge, 700-hectare site with 20 test tracks. Today, Nardò is a centre for high-performance testing of what Porsche calls "connected vehicles".

The site is operated by Porsche Engineering, with a staff that's double the size of the workforce in 2012. An 80 million Euro investment by Porsche has brought every aspect of it up to standard, and Nardò is now a state-of-the-art development facility. The centrepiece, however, remains the epic 7.8-mile ring road around the site, which was completely renovated in 2019. It now includes optical fibre cabling for data transmission as well as various traffic signals, which enables the testing of automated driving systems.

Russell Built Safari 911 emerges

Based on a 964 Turbo, the Safari Sportsman by Russell Built Fabrication follows its Baja-style 911 of 2019

California's Russell Built Fabrication raised eyebrows with its Baja-style 911 at the 2019 Specialty Equipment Market Association (SEMA) show. Now it's back with a new offering: the Safari Sportsman kit for the 964 generation 911. This new design is based on a 964 Turbo, and features a raised ground clearance, lengthened wheelbase and wider track. All this, so we are told, while retaining the responsive and sporty feel of any Porsche 911.

The Safari Sportsman kit can be ordered either as a package or in modular form. This enables owners to pick from a list of accessories and options to go as far as they please towards the full look. Crucially, the kit bolts straight on and requires little to no fabrication work to the original body, leaving the option of returning the base car back to its factory form at any time. The list of parts is comprehensive and includes all of the chassis components and bodywork required to give a 964 Turbo the safari rally look. Prices for the kit start at $135,000, which includes installation.

News in Brief

New Racing men's polo shirt

This new Porsche Racing polo shirt reflects the motorsport history of the brand with a modern twist. Badges inspired by the Porsche 959 in its iconic Rothmans livery are joined by large 'Racing Porsche' lettering on the back with further Rothmans colours picked up throughout. Have £65 at the ready and navigate your way to **shop.porsche.com** to purchase Porsche item number WAP45100M0NRTM.

1:18 911 GT3 Touring

This detailed 1:18 scale model of the 991 GT3 Touring is perfect for any true Porsche collector's desk. Painted in eye-catching Fish-Scale Silver grey, it measures 264x160x115mm and is priced at £290. It comes with gift packaging too, so we'd suggest that you leave this page of **Total 911** open on the coffee table at home. Note down Porsche item number WAP0211650N002 to buy yours from **shop.porsche.com**.

Total 911
THE PORSCHE MAGAZINE

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Views

The very best of your Porsche opinions

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40 years of the Cabriolet

Dear Sir,
Cracking letter submitted last issue in support of 911 Cabriolets. We're all 'au fait' with the Coupe 911, but half of all sales are dedicated to open 911s (either Targa or Cabriolet models).

I own a 964 Cabriolet that I use for summer fun (I also have a 997 GT3 for track work) and think that the car looks great with the roof down – it really suits!

I'm sure you're aware that it's 40 years of the 911 Cabriolet this year. Perhaps the magazine can celebrate this alternative anniversary with a nod to those of use who prefer our 911 experience with the sun on our backs.

Vince Bright

This is exactly what we'll be doing very soon, Vince! The Cabriolet plays an important role in the history of the 911 and we'll be documenting this is glorious fashion – stay tuned...


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PORSCHE

Safari 911s

Dear Sir,
Well done to your team on producing a great issue celebrating the Porsche 996 – I thought it was a very thorough effort.

While I found the feature on the Safari 996 project interesting and respect the owner's intentions, I just don't understand the whole safari movement, and am scratching my head as to why it's become so popular as an idea for a project car?

Outside of establishments such as Tuthill Porsche in the UK, which builds proper competition cars to go rallying, I just don't 'get' the whole idea of building a car that you can't ultimately use for pleasure purposes, as there's nowhere for you to take it. Unless I've got this totally wrong and safari cars are the new mode of transport of choice for farmers wanting to get around their estate?!
John Kane

Safari projects have been undertaken by enthusiasts for years, chiefly in homage to Porsche's accomplishments on the legendary Paris-Dakar Rally. The movement has gained in popularity in recent years, helped by the incredible builds of the Leh Keen Project. It's worth noting, though, that Mr Keen's cars are built in the USA, where there's plenty of space and terrain in which to use an off-road 911. Granted, the same cannot be said for the UK, where land isn't as abundant.

Regardless, we're pleased to see enthusiasts undertaking unique projects to create their own expression of what their dream Porsche 911 looks like – whether it's low to the ground on slicks or high in the sky on knobbly tyres. The choice lies entirely with the owner.

944 to 997

Dear Sir,
In 2020, after 11 years of 944 ownership, I bought a one-previous-owner, every-scrap-of-paper-back-to-the-original-order, 2007 997.1 C2 manual. It's Atlas grey, with a bare-bones spec apart from the really useful stuff like Bi-Xenon lights, Sports exhaust – and heated seats!

In a perfect world I'd have had a brighter colour, and more luxury (I'm a 'tourer', not a track bunny), but am really getting on with the car and it's a keeper. I'd love to do a write-up on the car, because I've gone through the paperwork and put everything that's ever been done to it, including costs, on a spreadsheet.
Richard Furneaux

Congratulations on the new purchase, Richard. You'll already know how awesome the Porsche crowd is from your 944 days, but we can confidently state that 997 ownership will offer you something different.

We've said recently in this magazine that the 997.1 is a brilliant value-for-money 911, offering modern 911 technologies such as PASM and Sport mapping for 996 money. Your 997 is all the 911 you really need.

Ask the expert

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

Scott Gardner
Job title
Technical director, Bahnsport
Porsche experience
15 years

Dear Sir,
I own a 2001 996 Carrera 4 and I've got a problem with the centre instrument cluster, which is pixellating. I'm finding it difficult to track down a company to use to tackle the problem.

Are you able to share any ideas on what the issue is, and how to fix it?
Andy Burke

We're starting to see a few instrument clusters failing on the digital display panel on the 996 and 997 generation cars, often with no warning or obvious cause. Unfortunately, new instrument clusters are often expensive to replace direct from Porsche, although of course it's the best option to guarantee a solution.

In the first instance contact your local Porsche Centre and ask them for a price. As well as removing the faulty cluster and installing the replacement, some coding/programming will be required to set your mileage and fuel level calibration data to your vehicle, and this will have to be factored into your potential costs.

The other option is to send your original cluster away for a repair. There are various companies out there that can provide this as a service, such as Cluster Repairs UK, Cartronics or Autotronics to name but a few. However, the best advice I can offer is to telephone around and ask them about their process, turnaround times, prices and also guarantees. Furthermore, check to see if this is a repair that the company has done before and that they're confident the fault can be resolved.

Typically, costs can range from £150 to £400 (with VAT to be added on top) for their services to repair a cluster depending on the specific fault. Note that instrument clusters are a tight fit into pinch clips and require some force to pull them out once the fixing screws are removed. With this in mind, you'll need to make sure that the area will be protected as best as possible to prevent any consequential damage while technicians remove the cluster.

Hope this helps, and good luck!

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Spotted

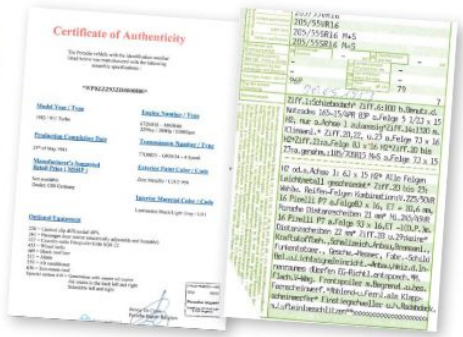
Total 911 assesses the rare and unusual Neunelfers that are currently for sale from around the world

Possibly as a result of us poring over the specification of the new 992 Sport Classic, **Total 911's** perusal of Porsche classifieds this month has had a bit of a Turbo theme. Special ones, too, or at least ones that stand out from the norm. Air-cooled first, which is special enough, but add Flachbau into the mix and we're into a rarefied section of the market. Divisive, too, because not everyone's a fan of Porsche's slant-nosed special. However, if you're like us then you can't help but think there's a bit of 935 racer cool about them.

They're rare, yes, but there are a few on the market. A Zinn metallic German example with 56,000km available in France at RSC Automobile appeals, not least because it's had some contrasting grey DP Motorsport decals on its distinctive nose. In the UK we found an original factory C16 930 Turbo SE G50 RHD example – one of only 50 built – that's covered just shy of 13,000 miles since its 1989 registration. Redline Specialist Cars is asking just £50 under £140,000 for it, which is less than you'll need for a 992 Turbo before you've started ticking options for it.

Rarer than this C16 Flachbau is a 991 Turbo S on sale at Paragon. One of just 40 Turbo S GB Editions, it was originally available in red, white or silver. It came with bespoke features such as a gloss black rear spoiler door handles and wing mirrors, 20-inch Sport Classic alloy wheels, Porsche script on its flanks and some Turbo S Exclusive GB Edition badging in the black-and-carbon trimmed interior. Each also came with a build book, as well as an Exclusive GB Edition car cover and design sketches. Paragon's silver example has covered just 16,357 miles since 2015 and is listed at £117,995. A regional speciality, perhaps, but one that's not without appeal.

Back to air-cooled, because you can't discuss Turbos without the 993 coming into play. We discovered a rare Cabriolet a few months back, but this one's a Coupe, and while it's not a limited number car, or even an S, it's a car we'd love to own. On sale at Simon Drabbler, it was supplied in the launch year of 1996 and comes in Aventura green, which is an unusual shade for a Turbo. Having covered around 60,000 miles, it comes with a full service history, as well as invoices for an engine rebuild in 2018. Choice options include Sports seats, 40 per cent locking differential and a sunroof. It's listed at £134,500, which looks like drive-away money in the current marketplace. 911



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50 YEARS OF RENNSPORT

Written by **Ben Barry** Photography courtesy **Porsche**

Half a century on from production of the first, Total 911 tests the air-cooled 911 Rennsport models back-to-back from Porsche's own collection, while exploring the evolution of the RS legend

The ducktail or bürzel spoiler might look like a finishing touch on the back of a 911 Carrera RS 2.7, which launched 50 years ago this year at the Paris Motor Show, but it was the first step in creating one of the most iconic sports cars of all time.

Today, we're in Stuttgart to meet Tilman Brodbeck, the man who developed the ducktail, and drive examples not only of the original RS in both Touring and Sport trim from Porsche's own collection, but enjoy back-to-back comparisons with their air-cooled successors from the 964 and 993 generations. Later, we'll also chat with August Achleitner, the former head of 911 development, to get some context on those later models.

Tilman's waiting to meet us at Porsche's incredible storage facility in Kallenberg, just outside Stuttgart. It's a Noah's ark of Porsche's heritage where every car cover hides a surprise: a rear-engined 924 here, a diesel-engined Beetle there, a Le Mans-winning 962 in a corner like it's in for an interim service.

Tilman explains how he got the Porsche gig in October 1970 after studying aeroplane technology and aerodynamics at Darmstadt University, located in south-west Germany. Toying with a 2.7 RS model car for reference, he tells **Total 911** how one of his first jobs was creating a gumshield-like front airdam for the regular 911, with the aim of reducing its front-end lift ("Maybe you know in the beginning we used to add lead to the front bumper to make it a little bit heavier," reveals Tilman).

A steel part would have taken two years to manufacture due to tooling, but it reduced lift, improved the drag coefficient and Ferdinand Piëch wanted to get it into production sharpish, ➲

so fibreglass was used instead. All the better that customers paid a premium for replacements come the inevitable kerb crunch.

Then – along with his early-30-something boss Hermann Burst – Tilman was called into head of development Helmuth Bott's office. "I was still very young," says Tilman, now 77 but then just 26 years old, "so you think something's wrong, what's going on? But Bott explained that our racing customers have big trouble with the BMW 1602 and 2002 and the famous Ford Capri, because in the curves they were faster than our customers. [He told us] you can do everything you need to do, but not create a new car, so people must be able to change something on their own cars."

Tilman had recently swapped his beloved rear-engined Fiat 850 Coupe for the updated version that had an extra 5bhp, and he had added a little flick to the trailing edge of the engine cover. "I was astonished – it felt a lot faster. I knew it wasn't possible with just 5bhp, so I asked the people at the Darmstadt wind tunnel if it could be the new engine cover – but they said it was just styling. Nobody knew at the time," he smiles.

Following his gut, Tilman nonetheless began working on what would become the ducktail rear spoiler. Sheet metal and wooden blocks were used for initial mock-ups, and three different variants were tested in a wind tunnel over three days. The chosen design reduced lift, increased air cooling to the engine and actually reduced drag.

Looking round the RS in baking 28°C heat outside, finished in a pastel yellow with the obligatory Carrera script in black (actually altered compared with the car shot for the original brochure), it looks dainty compared with modern wings, yet so purposeful that you could identify it even under a car cover.

It's incredible to think that Tilman's colleagues initially laughed at his creation. The laughs soon stopped when test driver Günter Steckkönig drove faster and felt more secure doing so during testing at Weissach and the Hockenheimring. Safety concerns over motorcyclists rear-ending the RS led to a reduced height, and the styling studio crafted a more presentable form in fibreglass that inevitably created some compromise, but it was job done. Lift was reduced by a third.

And that should have been that: an aerodynamic kit offered to existing customers. In fact, the front and rear spoilers were offered as a kit ("They had to take the two together!" stresses Tilman), but the 911 had been on sale for a while and Porsche management wanted to create a closer link to the racetrack, so the Carrera RS 2.7 was born. Famously, RS was a reduction of Rennsport, or motorsport in German, and Carrera derived from the Carrera Panamericana race and previously used on the 356, 904 and 906, if never a 911.

The RS was the first 911 to receive staggered wheels (6x15 inches at the front, 7x15 inches at the back). The rear wheel arches were widened by 42mm to fit them, the chassis was stiffened and used lighter aluminium components, thicker anti-roll bars, reinforced rear control arms and cross-member reinforcement. Finally, the engine was bored from 2.4 to 2.7 litres, unlocking 210bhp and 255Nm. It was the fastest German sports car of its day... not that Porsche's sales boss was particularly enthused. He estimated it would shift perhaps 10 units.

So much for that. The RS was unveiled in October 1972, and by November the 500-unit minimum production run for homologation into Group 4 motorsport had been met. And Porsche kept churning them out until, by July 1973, the total stood at 1,580 – enough for Group 3 racing, too.

I jump in the more luxurious Touring – the M472 option in Porsche-speak, of which 1,038 were produced – squishing into deeply comfortable

LEFT Behind the wheel of the 2.7 RS Touring. Its 2,687cc engine could achieve a top speed of 153mph

RIGHT To compete with BMWs and Fords on the track, the RS underwent a range of modifications, including staggered wheel fitment

BELOW Demand for the 2.7 RS far exceeded Porsche's expectations, with final sales of the Sport and Touring versions tallying 1,580

Model 911 Carrera RS 2.7 Touring
Year 1973

Engine

Capacity 2,687cc
Compression ratio 8.5:1
Maximum power 210bhp at 6,300rpm
Maximum torque 255Nm at 5,100rpm
Transmission Five-speed manual

Suspension

Front Independent, torsion bar
Rear Independent, torsion bar

Wheels & tyres

Front 6x15-inches; 185/70 R15
Rear 7x15-inches; 215/60 R15

Dimensions

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

Performance

0-62mph 5.8 seconds
Top speed 153mph

seats. I turn the ignition key, tap at the throttle like it's a bass-drum pedal and the RS coughs spasmodically before catching in a breathy burst of revs, and soon we're heading out on to the street with the Sport ahead of me and the 993 and 964 behind.

The steering's perhaps lighter than expected, the ride nicely pliant at a crawl, and other than a long-winded and vague gear shift that gives you the fear about mis-shifting, it's a lovely thing to potter around town in. Soon, though, we're running free over the fast, smooth tarmac that winds in long, arcing curves over the landscape like a river through a valley. Just awesome.

Considering its modest performance, the RS still picks up its heels pretty cleanly, and surprises with its bandwidth. The modern stuff might rev to a ferocious nine grand, but with the noise and the rate of progress, instinct sees me initially shifting at 5,000rpm before clocking the red marker at 7,200rpm on the dial – although the figures say the full 210bhp peak is uncorked at 6,300rpm. A treble-laden soundtrack and a top end spinning in perfectly synchronised mechanical harmony are all bound up in the thrill of the performance.

A 2.7 RS demands you adapt to it, not vice versa. I learn to be quick and positive with the shift so I'm less likely to get lost somewhere in between, and I double-blip down-shifts because the revs fall away so quickly. Occasionally on a steady throttle there's an out-of-context spit of a backfire to liven things up.

The nose has a certain floatiness at speed, which you feel through the steering. The rack's responsive off-centre, but there's not much in the way of weight or detail in those first few degrees that tell you everything's going to be okay, and that the front wheels are actually turning. It's something you just have to learn to trust, to keep winding on the lock, and feel the forces rhythmically ebbing and flowing through your palms.

There's some progressive roll over the outside front wheel as it settles into a corner, and a sense that the weight is very much at the rear and ready to move once you snap shut the throttle. Resist the urge, keep it on.

Pedal weights are nicely judged – there's progressive weight from the clutch, quick bite from a brake that's like squishing a football, initial tension at the top of the throttle giving way to a zing of response – but the brake's so high and the throttle so low I can't heel and toe, not even make a mess of it. Considering how important that is to managing the flow of weight transfer, it just leaves me a little reticent to lean harder on the RS. I'd have to get that sorted if I were ever lucky enough to own one.

Overall, though, the vibe is more sporting GT than hardcore road racer, and highly enjoyable as a result. The Sport (or M471) is a gnarlier kind of character. Porsche made 200 of these examples, with a pared-back spec that depended on the customer order – staples such as removed rear seats and carpets, and thinner glass. Weight fell a quoted 115kg to 960kg, and buyers saved cash, too: the Sport added 700 Deutschmarks to the 34,000DM price, while the Touring cost an extra 2,500DM.

The seats are thimble-like fabric buckets, and though not particularly uncomfortable, they do sit you bolt upright. My knees are more prone to snagging the steering wheel, adding to my clumsiness with the far-from-perfect pedals. I'm guessing there's more road noise, but with the windows dropped it makes no difference. Instead I notice a baggier feel to this gear shift (I really don't want to snag first instead of third), but also a chunkier, tougher feel overall. The suspension is apparently the same, but removing weight in effect stiffens it. This is something you detect through more heft in the steering, and a firmer edge to the chassis. The Touring has a more delicate, fluid feel and the seats are just better.

So the 2.7 RS sold far more than expected, did the business in racing (RSR versions won the Daytona 24 Hours and Targa Florio in 1973) so why are we skipping forwards almost two decades to the next RS, the 964 Carrera RS of 1991? Mostly because the 930 Turbo arrived soon after the original RS, and enabled Porsche to homologate the turbocharged 934 and 935 for racing. But that was very much a luxurious road car, far removed from its racing equivalents.

You'll know the following years weren't particularly kind to the 911, as new boss Ernst Fuhrmann backed the 928 and essentially tolerated the 911 so long as no extra investment was required.

ABOVE The 964 RS is the only 911 Rennsport to this day to feature an active rear wing

RIGHT August Achleitner, former head of 911 development, reveals the 964 RS's design was, in part, a return to the car's racing origins

Model	964 Carrera RS
Year	1991

Engine

Capacity	3,600cc
Compression ratio	11.3:1
Maximum power	256bhp at 6,500rpm
Maximum torque	315Nm at 5,500rpm
Transmission	Five-speed manual

Suspension

Front	MacPherson strut
Rear	Semi-trailing arms

Wheels & tyres

Front	7x17-inches; 205/50 R17
Rear	9x17-inches; 255/40 R17

Dimensions

Length	4,250mm
Width	1,650mm
Weight	1,220kg

Performance

0-62mph	5.4 seconds
Top speed	163mph

Thankfully, the arrival of Peter Schutz in 1981 reversed its fortunes, with the 959 pushing technological boundaries and soon after the 964-era 911 taking a significant step forward with coil springs replacing the previous torsion bars front and rear, as well as ABS and power steering, together with optional all-wheel drive and Tiptronic gearboxes.

The 964 RS overlooked some of that progress in favour of an elemental rawness inspired by Porsche's Carrera Cup one-make race series. Former head of 911 development August Achleitner remembers the logic when he drops in for a chat during our visit. "The Carrera Cup had been very successful, and for these race enthusiast customers who were not racers, a car that was closer to the race car fitted quite well into this landscape," explains the 66-year-old "Mister 911".

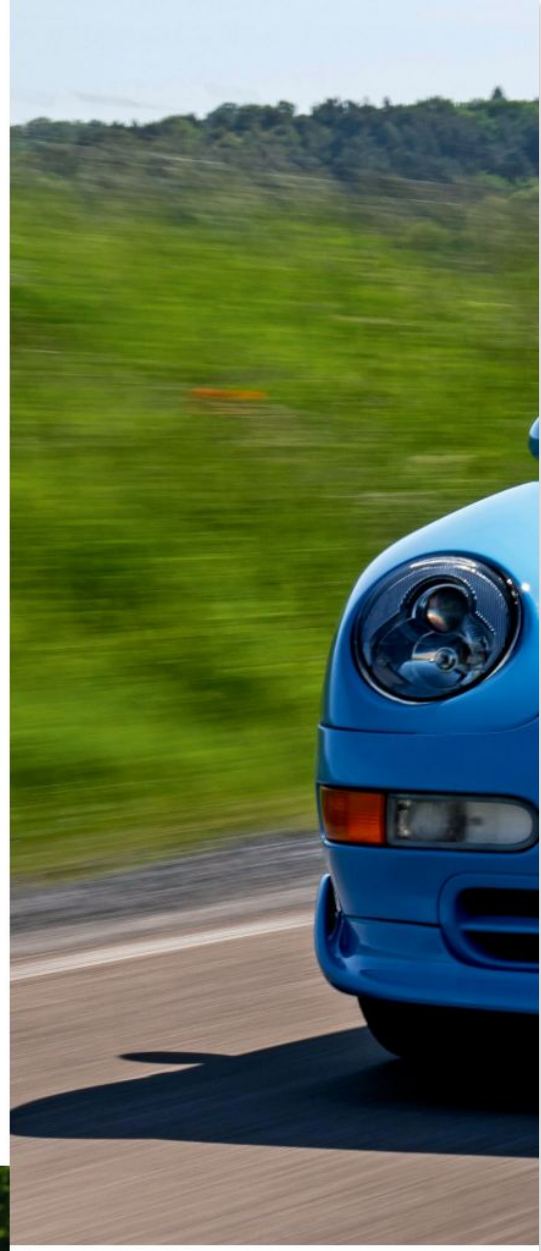
The 964 RS bodyshell was seam-welded, sound-deadening deleted, and weight-stripped wherever possible: thinner side glass, an aluminium bonnet, and deleted electric windows and rear seats shed around 150kg, coming in at 1,220kg. Weight loss was critical to performance simply because the engine retained the Carrera's 3,600cc capacity and was boosted by only 10bhp to 256bhp. Even then, the lightest 964 RS is down 5bhp on the 2.7's power-to-weight figure. Again, there were two key versions: the base car and a more 'luxurious' Touring (though a super-rare 3.8 and the Sport or N/GT – a road-going version of the 911 Cup racer homologated for Group N/GT competition – were also available).

Today we're driving the base model, with its huge 40mm suspension drop, 17-inch alloys apparently greased up into the arches and – uniquely for a 911 RS – an entirely spoiler-free appearance courtesy of a rear wing that raises automatically from the decklid at speed. The basics fix much of what was wrong with the 2.7. The leather-trimmed fixed bucket seat drops me lower on the deck, the pedals are more intuitively aligned for heel-and-toe and the gear shift has a more precise engagement, even if it's more knuckly than slick.

I'm not sure I'll need to move the lever, though – first is so tall I could probably use it everywhere, but playing tunes as you heel-and-toe is all part of the fun, and the rest of the gears are more closely stacked. Despite its so-so performance figures, the 964 RS feels sparky and responsive down low, if not exactly bursting with energy, and a little grumbly and industrial. That all changes when you wind past 4,000rpm. Suddenly momentum is with you. The car's on the boil, with the air-cooled motor spinning and chattering past 6,000rpm.

When it was launched, the press criticised the RS for overly firm suspension. It certainly rides firmly, but it feels more like intimate communication to me, where every nuance of the road surface is relayed and the car responds as one unified entity. I feel far more comfortable to commit to a corner knowing I've got a better chance of sorting out what happens next, where a 2.7 is more of a leap of faith. The newer model's less fingertippy, more scruff of the neck.

The steering is the 964 RS's least-pleasing feature. Some markets including the UK benefited from power assistance, but this is one of the unassisted models. It's far more precise and has a meatier feel than the 2.7, so you gain more confidence and feedback as soon as you twist it off-centre, but there's zero self-centring in effect. Let go of the steering wheel and it just hangs there. I'd definitely want power assistance.



ABOVE The 993 RS was the first Porsche to include the new VarioRam intake system

LEFT The large rear wing and wheel arches housing 18-inch alloy wheels are obvious pointers to the 993 RS Clubsport's motorsport leanings

RIGHT Tilman Brodbeck holds a scale model of a 2.7 RS, that features his key contribution to Porsche's success: the iconic ducktail

Model	993 Carrera RS Clubsport
Year	1995

Engine

Capacity	3,746cc
Compression ratio	11.3:1
Maximum power	296bhp at 6,000rpm
Maximum torque	355Nm at 5,400rpm
Transmission	Six-speed manual

Suspension

Front	MacPherson strut
Rear	Multi-link LSA axle

Wheels & tyres

Front	8x18-inches; 225/40 R18
Rear	10x18-inches; 265/35 R18

Dimensions

Length	4,245mm
Width	1,735mm
Weight	1,270kg

Performance

0-62mph	5.0 seconds
Top speed	172mph

After such a long hiatus between previous models, the 993 RS made a bow in 1995, just four years after the 964. Homologated for GT2 racing, the 993 RS dusted off the now-familiar RS formula: deleted rear seats, thinner glass and a more purposeful feeling generally. From the outside it communicates its motorsport intent far more extrovertly than the 964 courtesy of fat arches covering larger 18-inch alloys – chunky 10Js at the rear – and a rear wing like a dragster's parachute. Yet the emphasis switched to more all-round usability. Porsche describes the 993 RS as balancing "sports-car allure and comfort, leaving behind the hard, sports-car only character of its predecessor". Perhaps that's why weight fell by a less-impressive 100kg.

There was, though, a counterpoint: the Clubsport version we're driving. It gets the exterior wings as standard (which were optional on the regular model), and inside there are fabric bucket seats, a weld-in rollcage – modern RS products are actually pretty luxurious, but the Clubsport could have easily driven straight off a racetrack. No question it's the most intimidating as you clip yourself into the factory six-point harnesses.

Turn the key and rather than the flat six it's the single-mass flywheel that dominates with an industrial churn that sounds like marbles in a cement mixer. Somewhere in there you'll find a 3.8-litre motor, now with 296bhp and 355Nm, increases of 40bhp and 40Nm over the 964 partly thanks to the new VarioRam intake system, where the inlet tracts can vary according to engine speed for best performance. It was the first Porsche to get hold of the technology.

Revs flick up with a blip of throttle, the clutch bites purposefully and early, so it's easy to fluff your getaway, but once on the move the 993 is the most user-friendly of them all. I enjoy the low-set seating position, beautifully weighted pedals, power steering with a just-right mix of weight and ease, and the best gear change of the lot. It's the first taste of Porsche's slicker, more modern shifts.

Truculent grumbling continues in traffic, a bit like an aging roller coaster slowing climbing the first incline, but I like the seriousness of it and the drama as it morphs into a smooth, breathy build. It's a bassier burble than the earlier cars initially – perhaps because of the variable inlet tracts – with a little race car-lite transmission whine, then a sharper, keener edge to the mechanical gnashing as you hold out for 7,000rpm or so.

I'm so smitten I initially overlook that it's not particularly rapid. No matter. The suspension flows immaculately with the road, somehow intimately connected and tied down yet more elastic than the 964. Then it gets into a really sweet rhythm, and the easy steering makes you feel completely on top of the dynamics, ready to react with a flick of the wrists.

The front end feels so secure you can just carve it into the apex while keeping up the momentum, especially because the new LSA-equipped rear axle is more than capable of keeping pace. Soon I'm carrying more speed into the corner and picking up the throttle earlier, getting every drop of performance like I'm shaking the last drops from a bottle of Heinz Ketchup. What a machine.

The last time I drove these two back-to-back, I preferred the 964. Presumably because the 964 was in sushi-raw N/GT spec and the 993 in more isolated standard 993 RS guise. Not today, though. It's a clear win for the 993 Clubsport, which is a far more hardcore machine than the 2.7 RS ever was, yet easier to drive and more engaging too. That the damping is so supple just seals the deal.

The upcoming 992 GT3 RS will almost double the 993's horsepower, claw far more mechanical grip from the surface and add impossible amounts of additional downforce. It'll no doubt be fantastic. But right now, on these roads, in this convoy, I can't imagine ever wanting more. 911

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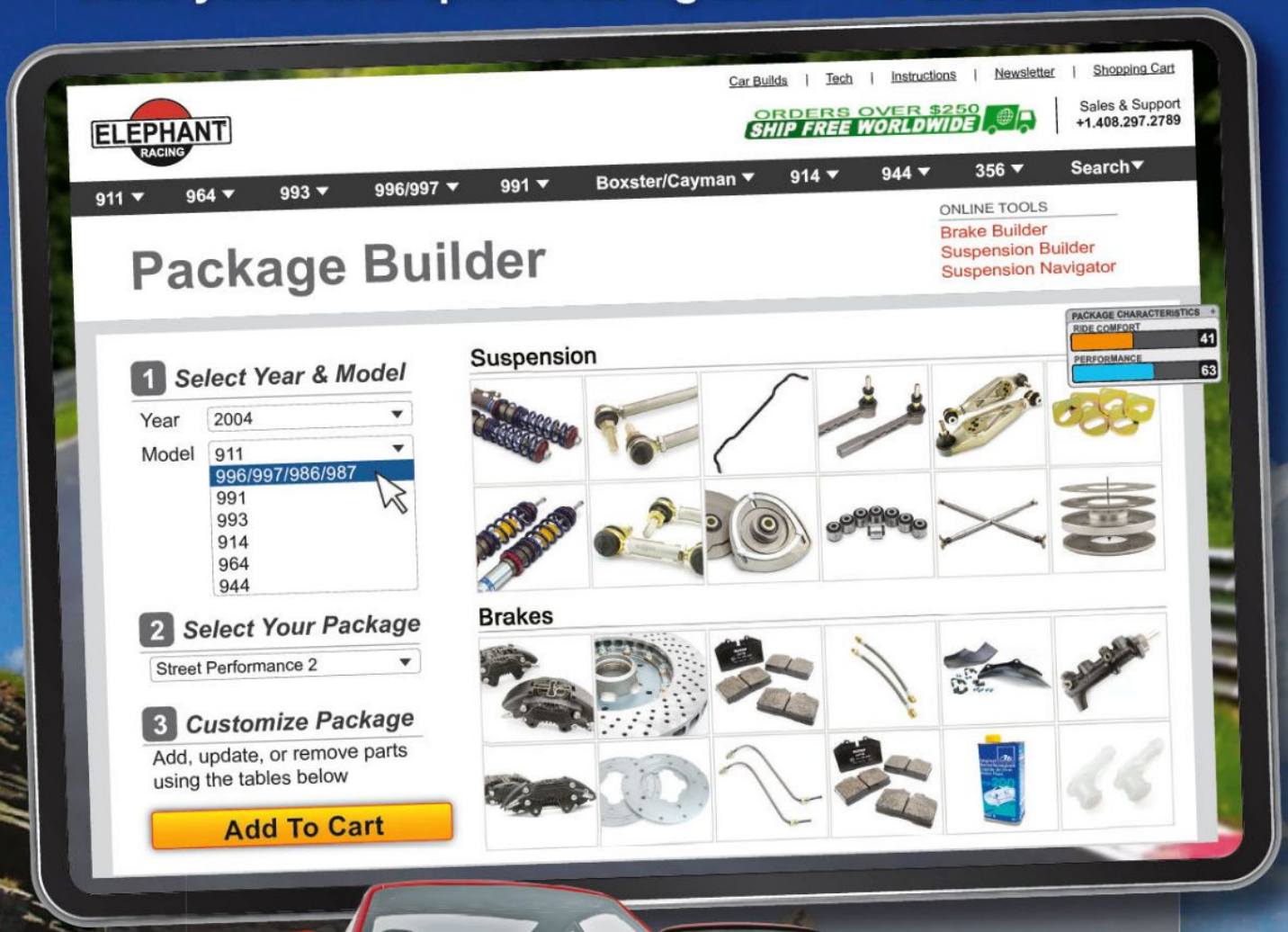

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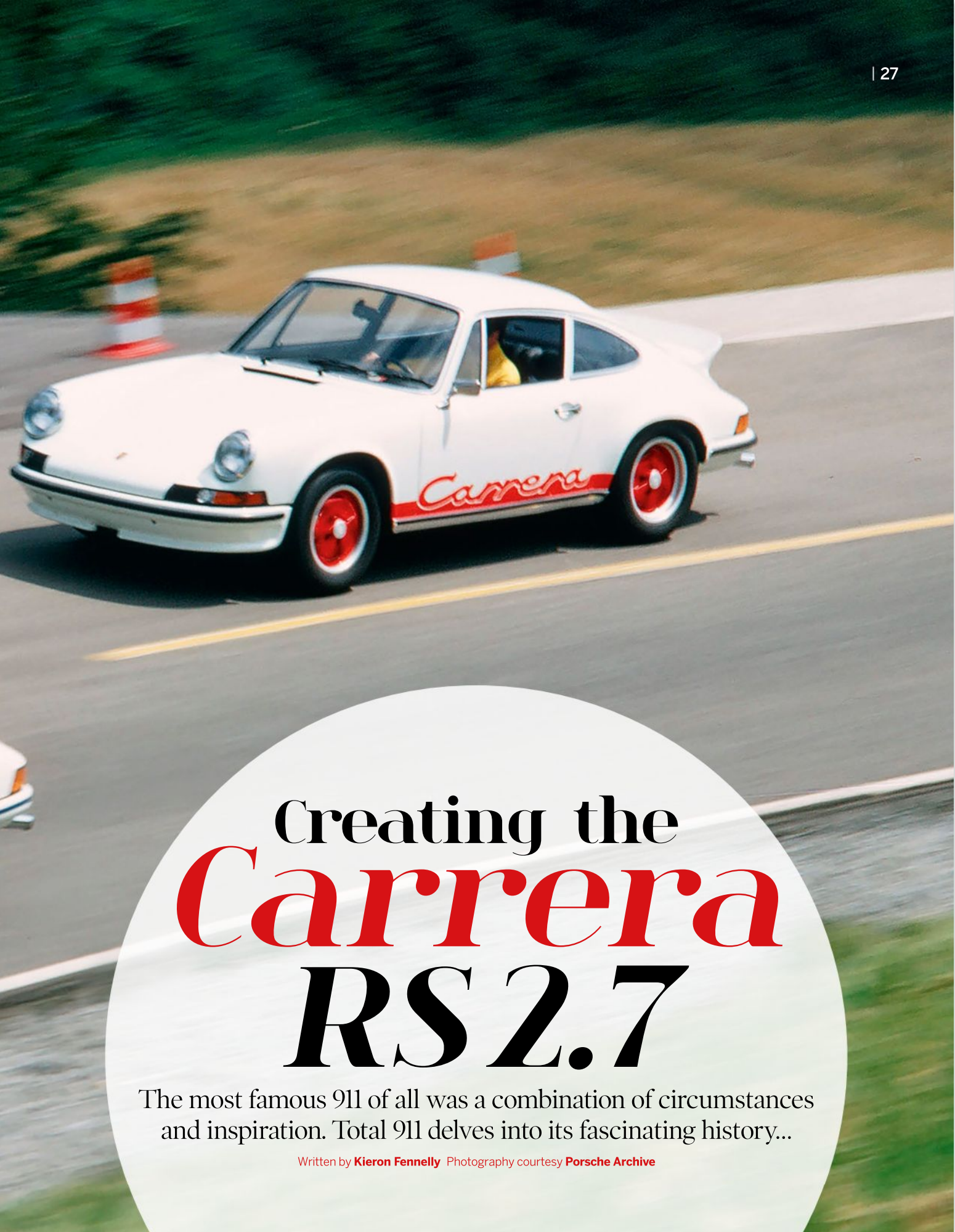


Creating the Carrera RS 2.7

The most famous 911 of all was a combination of circumstances and inspiration. Total 911 delves into its fascinating history...

Written by **Kieron Fennelly** Photography courtesy **Porsche Archive**

LEFT The weight-reduction efforts of the 911 RS's steel body continued inside, with a simplified dashboard and fixed bucket seats

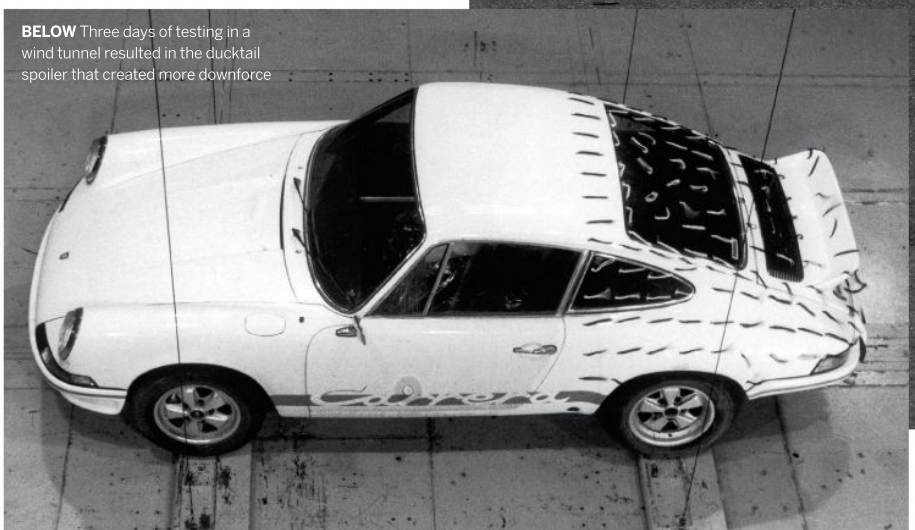
Newly appointed Porsche CEO Ernst Fuhrmann was watching the racing at Hockenheim in the spring of 1972. A keen motorsport fan, Ernst needed no professional excuse to spend a Sunday at the track. But not for the first time he could see that the V6 Cologne Capris and turbocharged BMWs were quicker than the 911s. He turned to the fellow standing next to him who happened to be Wolfgang Berger, a young, rather self-effacing chassis engineer working in Norbert Singer's group. "Why are the Capris so much faster?" Ernst demanded. "It's because manufacturers like Ford have a dedicated racing department for clients that prepares the cars so that they are as light and fast as possible within the rules," replied Wolfgang.

Ernst considered this: now that the reign of the 917 in Europe was over, it had already struck him that Porsche badly needed a front-running racer to carry the Porsche shield. There was no question of a revival of anything like the expensive 917 programme. The 911 was the obvious route, but the company needed a higher profile than the ST 2.3s and 2.5s that competed in the smaller capacity classes of Group 4.

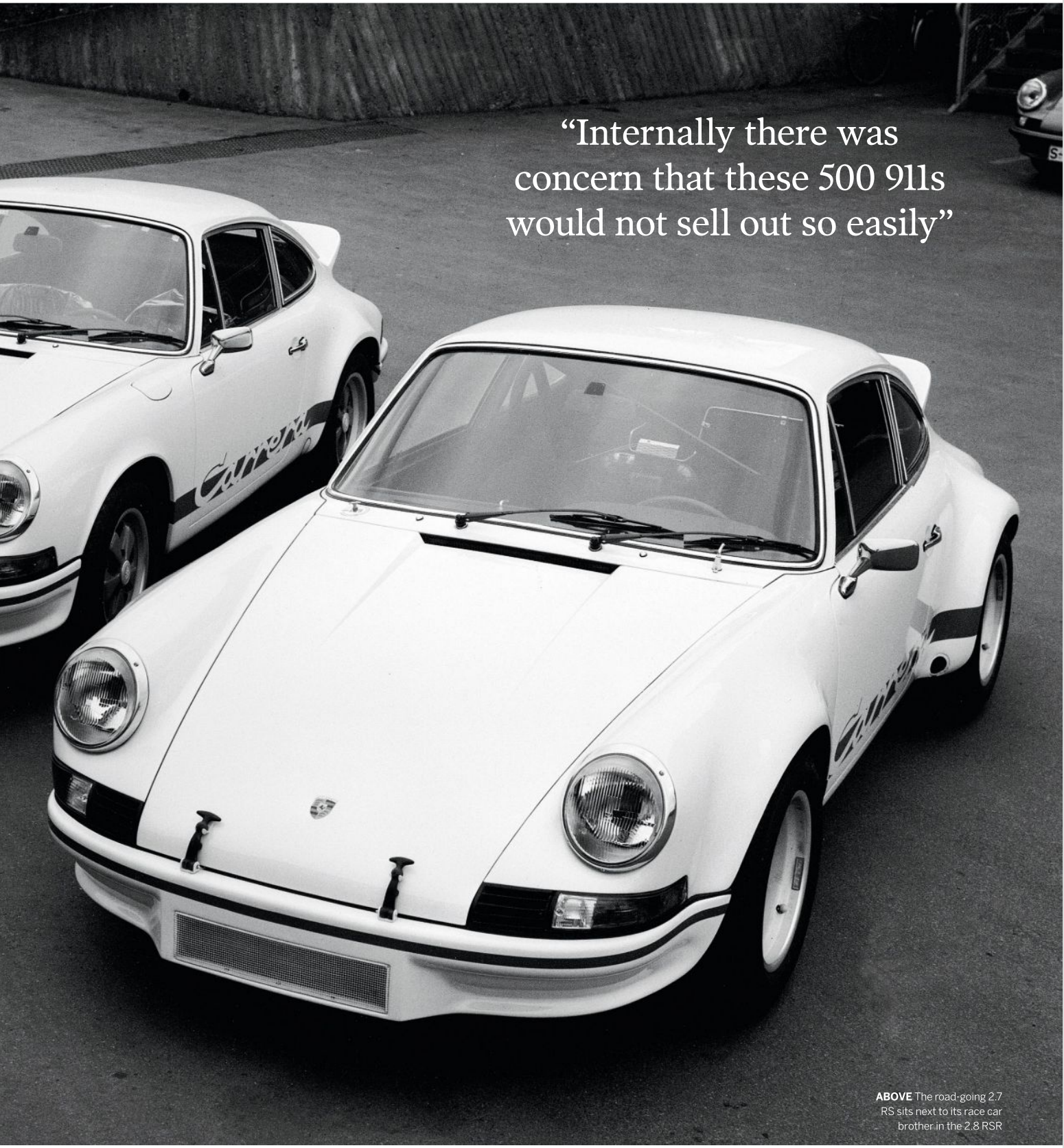
"How would we do that?" he asked Wolfgang. The latter explained that for a bespoke Group 4 car they would start with a 911 shell and re-engineer both chassis and body. More power from the engine would be required, too. Cutting across the usual lines of authority that would have meant finding Helmuth Bott, who then would have instructed Singer, Ernst simply told Wolfgang to get on with it.

It was typical of the impulsive Ernst, but as a seasoned Porsche engineer himself, Wolfgang's words had confirmed what he'd been thinking anyway, and time was of the essence. His long-term plan – indeed his intended legacy – was to replace the 911 with the 928, but in the medium term the 911 was Porsche's flag carrier and should be exploited for all it was worth.

Under Norbert Singer's auspices, work began on this Group 4 contender immediately. Wolfgang took the 911T shell, the lightest. This 911 wouldn't go to the extremes of Ferdinand Piëch's 911R that had pillars, door shuts and even the key drilled to achieve its 820kg. Five years on the homologation weight minimum was a slightly more sane 900kg. Nevertheless, to approach this, Wolfgang's 'T' was given steel body panels of 0.7mm rather than production 1-1.25mm and thinner, specially made glazing. The bumpers were in fibreglass, as were the front lid and engine cover, which were latched with



BELOW Three days of testing in a wind tunnel resulted in the ducktail spoiler that created more downforce



ABOVE The road-going 2.7 RS sits next to its race car brother in the 2.8 RSR

RIGHT Publicity still for the Porsche 911 2.7 RS, taken for the car's marketing brochure

RIGHT The final design of the ducktail was lowered by around six inches, to enable the driver to see out of the rear window

rubber catches. The cabin was rendered almost bare, with thin rubber mats instead of carpeting, simple door cards and two slim bucket seats. Unexposed metal such as door thresholds received only one undercoat and undersealing was omitted. Lighter gas struts from Bilstein replaced the 911's habitual Boge dampers and the rear axle featured 7-inch rims that enabled the fitting of wider 215x60 tyres.

Engineering director Helmuth Bott and Peter Falk, who was in charge of passenger cars, had both been instrumental in developing the early 911, and had long wanted to put wider wheels on the rear of the 911. Their instincts were correct: the combination of thicker anti-roll bars, gas-filled dampers and wider rear rubber meant the nascent RS 2.7 could sustain lateral g-levels of 0.912 when no previous 911 had reached 0.9g.

The bigger rear tyres also brought about the RS 2.7's trademark: its wider rear wings. It was a characteristic amplified a year later by the Turbo.

Work carried out in 1971 in VW's wind tunnel to overcome the 911's high-speed instability had led to the innovation of the upswept spoiler on the engine cover, which became known as the ducktail. This enhanced rear downforce by 93kg at maximum speed and improved the drag coefficient to 0.40. In its final, production guise the ducktail stuck up about six inches lower than the aerodynamicists had designed because styling chief Tony Lapine said it looked better and it also meant the driver could now see out through the rear window, a consideration for a car intended to be road-legal.

The other major advance was the flat six. Originally conceived by Hans Mezger so that its cubic capacity could be increased as required, for the RS Porsche it was bored out to 90mm, the widest to date on a 911 flat six. This would enable the RS to move up a class from the ST 2.5 and compete in the 3.0-litre category. A lesson learned with the 917 was that Mahle's recently developed Nikasil cylinder linings, though expensive, resisted wear more effectively than the Biral or chromed bores that Porsche had long used. They also dissipated heat more effectively, which meant the walls between the cylinders could be thinner. The 2.8 RSR would take this a stage further.

Developing 210bhp at 6,300rpm, the larger 2.7 engine developed 10 per cent more bhp and 15 per cent more torque than the 2.4S, yet it shared the same compression ratio at 8.5:1. This enabled it to run on the 91 Octane sold at German filling stations. This was, after all, was a car built for approval for road use. At the same time, Porsche had left sufficient

ABOVE The success of the 911 RS helped to push the Carrera name into the public's consciousness

headroom in the design of the 2.7 for further expansion, which was the raison d'être for the 2.7 RS: registration of 500 of this model would open the way to build the dedicated Group 4 racer, the 2.8 RSR.

Porsche's previous attempt to homologate a lightweight 911 had failed when its sales organisation said that it wouldn't be able to move 500 of the 911R. Its refusal to cooperate was despite pleading from Huschke von Hanstein and even Ferdinand Piëch. Five years on, Ernst would face the same opposition from Porsche's surprisingly unadventurous salesmen, but famously he called their bluff, telling them that Zuffenhausen would build the 500 cars anyway.

Internally there was concern that these 500 911s wouldn't sell out so easily. Senior managers were given one and instructed to drive them everywhere. Meanwhile, 'friends of the company' were contacted and informed that only 500 of this "very special" 911 would be made, so they might well like to place their orders before the car was officially announced. That announcement and indeed the launch of the 911, whose official title was Porsche Carrera RS 2.7, was made at the Paris Salon in early October 1972.

As it turned out, Porsche's sales force would have very little to do. The appearance of the Carrera RS was the sensation of the French motor show, much like the Jaguar E-type had been at Geneva in 1961. The Porsche stand was practically overwhelmed and a week after the Salon closed, all 500 cars had been ordered. Porsche had never previously launched a model that caused such a stir, and demand persisted to the extent that the company had to make production space early in 1973 for a further 500. These still didn't staunch demand and again, weeks before the annual shutdown, Porsche had to juggle production again to make a final batch of 590 cars. After that, no more were possible because from September 1973 the company was retooling for the impact bumper G series.

The Carrera RS 2.7 was officially homologated at 960kg, although this was deceptive because as weighed at Porsche the car had (lighter) 6-inch rims, thinner (and therefore lighter) anti-roll bars, the passenger seat was fixed, the glove box had no door and there was no interior light. Even the torsion bar covers were omitted. Then the cars returned to the workshop for fitting of correct rims and tyres, the thicker anti roll bars and an adjustable seat for the passenger. The original 500 batch all went through this routine before they were specified either as M471, the 'lightweight' version; or M472, the Touring version. Seventeen apparently were left in this denuded state and are known as the RSH (the H standing for homologation).

The 'lightweight' had the omissions that enthusiasts familiar with Porsche's stripped-out models have become used to: bare rear cabin, no passenger sun visor, simple racing bucket seats, door cards with cloth pulls, no clock and so forth. The Touring offered virtually the 911S cabin with proper door furniture and electric window lift, full instrumentation, and handsome Recaro seats even if the rear cabin was carpeted. Outside, bumpers were the standard 911 steel and chrome affairs. If the 'lightweight' M471 crossed the scales at a little over 1,000 kg, the Touring, depending on extras specified by the client, weighed nearer 1,100kg.

Homologation was achieved, but because demand was unabated it meant that Porsche didn't have to try quite as hard with the subsequent 1,090 RSs. As a result, weights increased fractionally as more convenient production shortcuts evolved and so the later cars – whether M471 or M472 – are all likely to weigh slightly more than the initial batch. Ultimately, only 200 RSs were the lightweight version, with the Touring understandably being more popular. Only 49 of the M492 RSR intended as Porsche's new weapon in Group 4 were built, before these were replaced by the G Series-based 3.0 RSR. However, by then Porsche had a new sensation: the 911 Turbo. But that – as they say – is another story... 911

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Pinky Lai

ANSWERS YOUR QUESTIONS

To celebrate the Porsche 996's 25th anniversary, designer Pinky Lai takes questions from owners and enthusiasts of the first water-cooled 911. Here's what he – and you – had to say...

Photography courtesy **Porsche Archive**

Andy Brookes: How does it feel to see your design now at 25 years of age?
Pinky Lai: I feel very proud. I still do some cross-country driving between Spain and Germany and every time I spot a 996, it just brings back amazing memories. It still looks great among all the traffic of other cars and it isn't a usual 911 for sure. It has a strong character compared to any contemporary 911. We managed to bring out two different front-end characters because of the headlamp change, and that hadn't happened before in the history of Porsche. They were always circular; however, our headlamps were sculptural.

Lee Sibley: You described the opportunity with the 996 as Porsche's last bullet. Deep down, did you think that you were designing the last 911?
PL: No, because there was another event going on almost at the same time for me. I had some drama in my personal life: I was showing up at the company part-time because I had to take care of my family and it was a nightmare. I said to Harm Lagaay, head of Style Porsche at the time, "I will make the time up but right now I need to look after my family." So I split my time and over the next three weeks I did a lot of sketches and then one was picked, and that was it.

One of the leading modellers (who modelled the 356), he was the most senior, and he walked past my design and said, "That is my model." So for me, because he liked it, it was already a winner. It was such an internal competition between designers and so it was a great compliment from him. And then the rest is history.

I didn't worry about whether it was the last 911 – and maybe that was my advantage because I wasn't thinking, "This will be my last and I need to do my best." My family drama changed my mindset so I didn't worry whether my design would be the last.

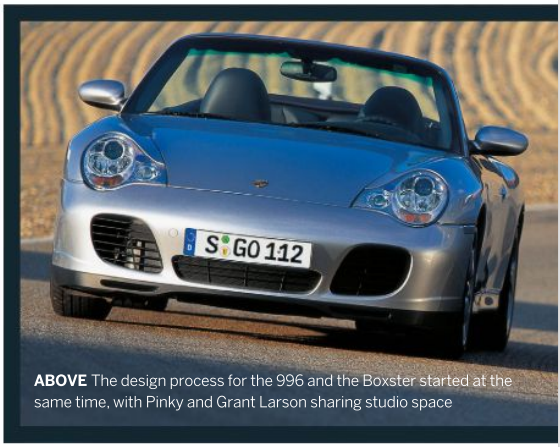
Tim Eagle: Was there a design feature you had doubts over yet left in, and are now proud of?
PL: Strangely, no. Everything I wanted, I managed to get into the design. Even the spoiler at the back, which wasn't allowed at the beginning. In Porsche, they always have this catalogue: before you even start designing, they hand over the catalogue so you know the performance, body shape, aerodynamic efficiency, et cetera that we had to achieve with our design.

They said that there wasn't to be any moving parts at the back, so the spoiler had to be fixed. It was a long battle in the wind battle. They didn't think my model was up to scratch. However, my model was the last surviving model to be tested and approved by the board of directors. We got into the aerodynamic testing stage and we spent hundreds of hours, and finally I managed to use a trick: instead of the whole spoiler moving, I started with just one louvre moving to demonstrate how to change the aerodynamics.

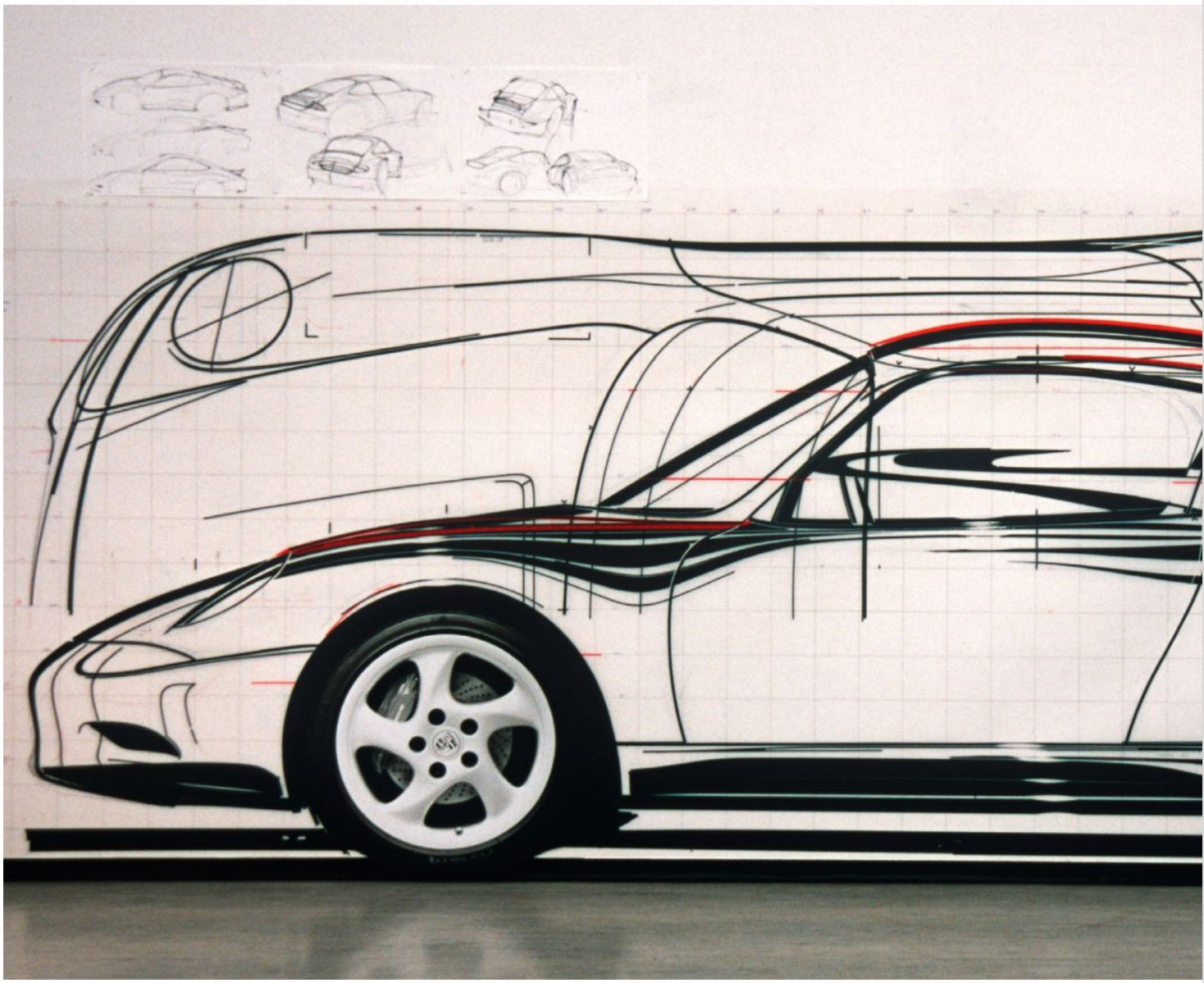
I had to bring in the project manager because he was the one who was controlling the costs. I showed him and he inevitably asked me how much would it cost and while they were working on that, I then started moving all of the louvres and that changed the game. The project manager was forced to spend money on the spoiler because if you want a car that achieved a lap at the Nürburgring, the car needed it.

Tim Eagle: Was there one aspect you wanted in the design, but Porsche didn't allow it?
PL: In hindsight, there was one feature that didn't make the car. It was the front wiper: it was a commercial wiper system. However, I had intended to create a sculptural wiper arm for the car. I did some sketches with the special wiper system, but it ➲

BELOW By moving one louvre at a time, Pinky Lai was able to demonstrate the extra performance that the 996 could achieve



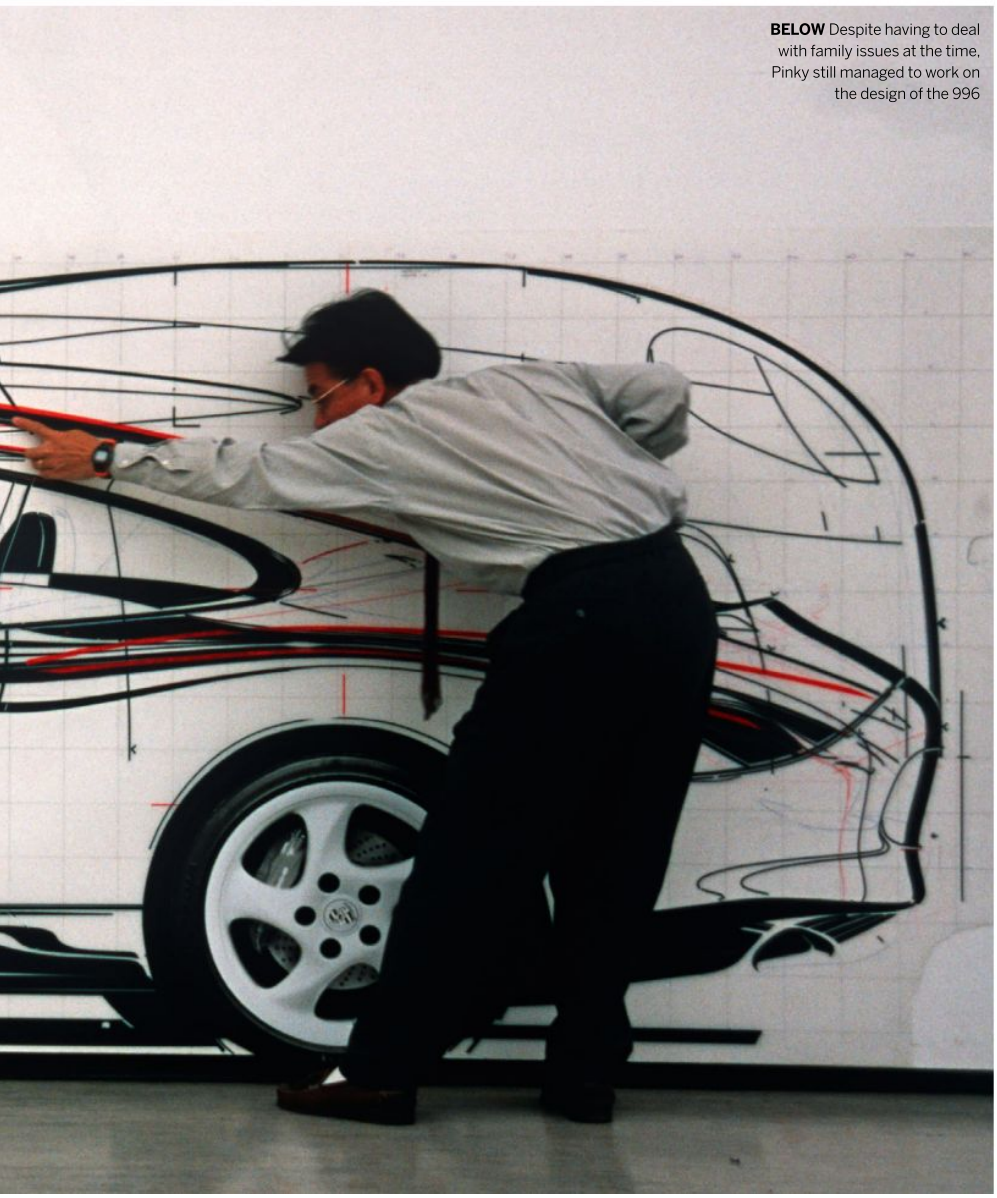
ABOVE The design process for the 996 and the Boxster started at the same time, with Pinky and Grant Larson sharing studio space



was too expensive at the time. I think the design was put on the rear wiper of the Cayman. Every detail was under so much scrutiny by the cost-controlling team. Every time they walked past and saw something new, they challenged it. It was a nightmare because they were around the studio every day.

Tim Eagle: Which design feature are you most proud of overall on the 996?
PL: It's difficult to break down the car in detail as I still look at a car as a whole sculpture first, whether it's appealing or not. The first stage of modelling is getting the shape right. Then we looked at the detail. Take the headlamp as an example. If you do or don't like it, what you need to remember is that it took a lot of time to come up with that detail because we didn't have the digital tools back then to create the design. Everything was hand-built for the model or hand-drawn for the design.

Kester Hewitt: The 996 and the Boxster project started on the same day. How did you work together and share aspects, but still do your own thing and make it your own?
PL: It was the first time in my life and my colleagues' life that we experienced that working process. The studios were next to one another, but were divided. The first few days into the projects, we would move along across the same scope of sections on the cars and there was a lot of crossover. It was a real experience learning how to work together. Grant Larson was working on the Detroit Show car Boxster and then he had to turn that into a life-size model because the show car wasn't feasible.



BELOW Despite having to deal with family issues at the time, Pinky still managed to work on the design of the 996

> "I think we did a pretty good job considering the tension and stress, and that wasn't just the design team"

At the same time, he had to adjust the Boxster so that it fitted the 996 as well. So there was a lot going on and then we had to compare sections like the doors and fenders, and if there were size differences then we had to discuss this and compromise. I think we did a pretty good job considering the tension and stress, and that wasn't just the design team. The modelling team was also feeling the pressure and struggling. It was tough for them trying to transition a part of the Boxster to the 996 and vice versa.

The nightmare area was the door panel to the rear fender. The Boxster doesn't have a C pillar to consider so you can just extend the door section. However, we couldn't do that – we had to turn it into an 'S' section. This goes from the wheel arch up to the rear quarter window. It was a much bigger challenge than on the Boxster. We were really happy with the result because the big bosses had to agree on the commonalties between the two cars and the appearance. If they could, they would have spent money building two different cars. However, they only had enough money to build one car so we did well to get 1.5 cars by sharing the designs for parts. Then the turnover was amazing for the company.

Until the 993, the assembly line hadn't changed for 30 years, and everything was really old school. Then all of a sudden we were building a one-piece body side. At that point, I thought, "Wow, this is a big deal."

Robert Schwaderer: What was the situation like at Porsche (not financially) when you were asked to come up with a new design? Was it intended as a major design evolution or was it basically an open design process?

ABOVE After making its name with air-cooled cars, the 996 signalled a new direction for Porsche by featuring a water-cooled flat six

PL: There wasn't a first briefing, it was constant evolution. There were a few times where I accompanied the boss of Research & Development to the package office. The package office was the cradle of the 996. It's where they laid out all of the engine components, wind screen angle, the whole cage inside and outside, et cetera. There was no cheating. Every time you faced the package room, the guys there were like gods because they start every new project. They put down all the dimensions and parameters and we in design had to work along with those measurements. Once those dimensions were chosen, you weren't allowed to change any element of the package. The head of R&D was very concerned because it was too one-sided. We tried to balance it between engineering and design.

At the beginning the designer only had the rough overall dimensions and then it came down to the micro details. We had to work along those sort of lines. The design element was free; however, you had to meet the design of the package. At that time, our concern was that we would look at the 993 and everything was getting too tight: you would rub shoulders when you were going through corners and you couldn't have any luxuries or comfort. So we were trying to build the 996 that big because we had all these package requirements that needed to fit. It was a real challenge. We were constantly trying not to overflow the size of the dimensions and keep it as compact as we could. We were complaining about it because the car package was getting really big.

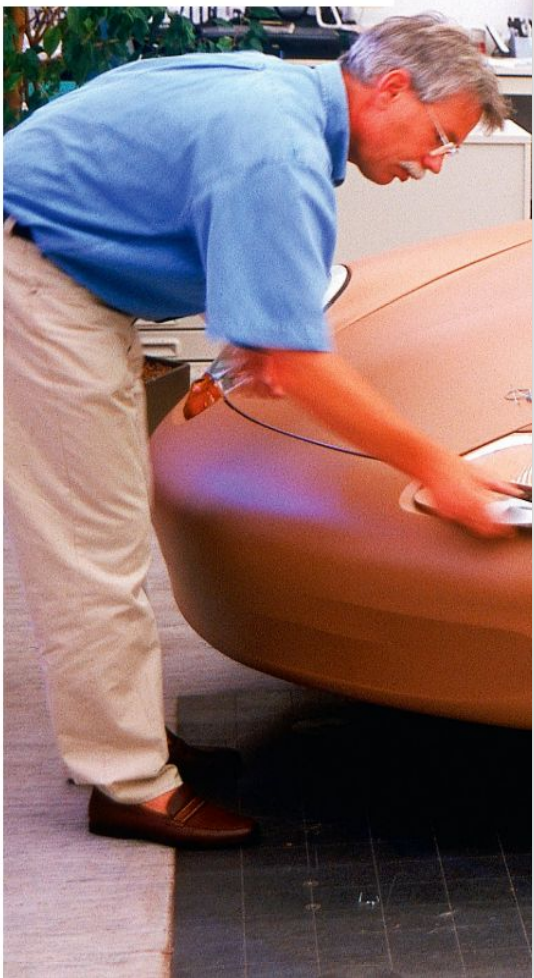
I'm really proud that we were still able to keep the 996 compact while still able to fit everything in, compared to a contemporary 911.

> "I'm really proud that we were still able to keep the 996 compact while still able to fit everything in"

Robert Schwaderer: How were you involved in the design of the initial GT3 process?
PL: GT3 is a project that was run by the Motorsport department. It was separate from the project management team. As soon as you get into any GT car, the Motorsport team looks after it.

Alex Brodie: How does it feel when you see your design driving around on the street?
PL: I would try and chase after it, and try to enjoy the sight of it. In the beginning, I actually would take photos. To me, the car is still attractive, it draws in my attention and is enjoyable to look at.

Alex Brodie: Which manufacturers nowadays do you think are achieving good things with car design?
PL: I don't really pay attention to any new generation or manufacturer. We're right in the middle of the switch from petrol engine cars to electric, so it's a really funny time for manufacturers.



LEFT The 996's active aerodynamic rear spoiler worked a treat in the wind tunnel, says Pinky

ABOVE In this publicity shot, Pinky Lai is in discussion with Harm Lagaay while designers use modelling clay to recreate their work on the 996's sweeping front-end

Michael Mont: It's hard to design cars around all the regulations that are now in place. How do you think future 911s will be designed when they need to be a certain size, weight and so on?

PL: That's a great question. I never thought of that as a challenge. If I had to do a new generation 911, I would go wild. I wouldn't have new technologies or autonomous driving, especially autonomous driving because it's a waste of time when you're talking about a 911 or any sports car in general. Why would you pay for such a car and not drive it yourself and let autonomous technology have the fun for you? Generation Z wouldn't have experienced the classic car culture... they just want the most bang for the money.

Barret Sutherland: Obviously, everyone talks about the headlights on the 996, but was that the main directive behind the face lift, and which set of headlights do you prefer?

PL: The first set of headlamps on the 996, they were already revolutionary – there was no critique on them or what they resembled. They were really hyped-up by the media. One of the headlamp proposals was orange lips for the indicator running around the main headlamp. Imagine the current shape but without the side extension to the lower corner. It was an extended stretched-lip shape. One of my proposals was for the indicator, the orange area, to not be one spot, but to be a circle. Like an orbit around the main headlamp function. Could you imagine if that design came out? It would have been more appropriate to call it that [Fried Egg] name.

> "Nobody dared to puncture a hole through the housing and then the glass"

At that time, the orange was only on the lower area and everyone was happy about it, including the CEO and board of directors, so you can't blame me for it! At the same time as that first headlamp, I was already working on the Turbo, and we knew already that the Turbo was going to have a new, wider fender. Once we had that, we managed to convince Project Management that we needed a new headlamp. We could use the same model, but we would use new headlamp glass and a new arrangement of different functions. Then we managed to get the budget for the new headlamp because we said that we would be able to use the new Turbo fender and headlamp on the next generation of the 996. Using more or less the same model, but with different housing, we had a new headlamp that was relatively inexpensive.

I was also designing the rear end and the spoiler. The spoiler on the Turbo was great. It was the first time we had that split-plane spoiler. The first run in the wind tunnel was great because it smashed it in terms of downforce and efficiency. We were so happy.

Barrett Sutherland: What headlights do you prefer on the 996? The Gen1 or the Gen2?

PL: I can't choose, but I can say that one had an advantage with the jet washers, on the Turbo. It was punctured through the glass, the chrome cap sitting on top of the jet cylinder. Then that cylinder was punctured through the housing and the glass and we were so proud of it. It was a revolution. Nobody dared to puncture a hole through the housing and then the glass. It was just fantastic. However, the 996 was just as great as well because I think even today, the colleagues at Porsche would love to create a new headlamp like that, but they're not allowed to do it. So it's something I would never regret doing. I'm so happy that we created the two headlamps. It was a real moment in history for Porsche. 911

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American Dream

This supercharged 993 RSR tribute draws upon US tuning culture to create a truly unique 911

Written by **Tim Pitt** Photography by **Mason Pacheco**

Scottsdale, Arizona is the unlikely epicentre of America's car culture. For 50 years it's hosted the week-long Barrett-Jackson Auto Show, which regularly sees around 1,700 classic cars up for auction. The city's many Cars & Coffee meets also spill over with tyre-smokin' US muscle and brand new supercars, yet Gregor Mina's 26-year-old 911 still turns hundreds of heads. Indeed, with a supercharged engine built by Scottsdale's own Patrick Motorsports, this tribute to a 993 RSR is something of a local hero.

Gregor has made Arizona his home, but his accent swiftly betrays that he isn't so local. The 44-year-old marketing consultant hails from Edinburgh, Scotland, and most of his memories of growing up there involve cars. "My dad always bought *What Car?* magazine and I would memorise all the facts and figures in the back, then talk about them incessantly," he says with a smile.

Years later, it was Gregor's dad who ignited his passion for Porsche after buying a first-generation (986) Boxster. "I think those cars are perennially underappreciated," he opines. "I can still remember driving that Boxster. Its handling felt so precise, with superb steering feel – and great build quality, too." This Damascene moment would prompt Gregor to buy his first 911, but not before he'd sampled almost everything else...

Yes, Gregor (@thewidowmaker77 on Instagram) has one of the most eclectic car histories of anyone we've met. His first car was a Volkswagen Golf Mk2, followed by Mk1 and Mk2 versions of the Golf GTI. He then worked his way through a Lotus Elise and Exige, Alfa Romeo Brera and 145 Ti, Audi TT and Volvo V70 R. After moving to the US, he embraced the homegrown culture with a string of fast SUVs and muscle cars, including a Mercedes-AMG GL63 and a Dodge Challenger R/T Scat Pack. Now, with the 993, Gregor has finally found a car he plans to keep forever.

Back to Porsche, then, and that first 911. It was a 997 Carrera and it wasn't exactly love at first drive. "I liked it, but I prefer cars that look and feel a bit different," explains Gregor. He briefly weighed up buying a 991, then decided his next Porsche would be air-cooled – and likely modified, too.

After spotting the 993 on US auction website Bring A Trailer, Gregor was determined not to be outbid. Finished in factory Basalt black, the car had been upgraded by the (now-defunct) RUF Auto Centre in Dallas, Texas, and had "pretty much every RUF option ticked". These included 19-inch alloy wheels, bigger brakes, lowered suspension and various interior upgrades, along with a Porsche 993 RS Clubsport Aerokit. The original 272hp Carrera engine, though, was essentially untouched. "It was a bit of a sheep in wolf's clothing," Gregor admits.

However, the plot thickened after the car arrived at Patrick Motorsports, an air-cooled Porsche specialist that offers its own range of backdated 911s and developed the first prototype car for Singer. When the flat six was opened and examined, it became clear that RUF had undertaken some tuning work, likely a turbo conversion, before returning the motor to natural aspiration.

Gregor can't be sure, but he suspects that the 993 may have been modified to RUF BTR2 spec, retaining its 3.6-litre capacity and rear-wheel drive, but with a single turbocharger running 11.6psi of boost for peak output of 420hp (more than the twin-turbo, four-wheel-drive 993 Turbo). There's evidence to suggest that the car lived on an airforce base and was gifted by a father to his son, so it may have been detuned for insurance reasons. If you know, let us know!

Whatever its past, the 993 was destined to become a 'wolf' once more, albeit via a different route to Turbo-bothering power and pace. Its engine was totally rebuilt and enlarged to 3.8 litres by Patrick Motorsports, with a reinforced cylinder head, RSR camshaft, Mahle pistons, Pauter-forged connecting rods, a blueprinted oil pump and a Fabspeed Supercup stainless steel exhaust. Last but not least, it also gained a supercharger.

"Supercharging isn't common in the Porsche world and I would probably have saved a lot of money and time if I'd just had the car turbocharged," says Gregor. "I wanted to do this partly because it's different, but also because I think superchargers, with their low-down torque, are better suited to road cars. It's very linear and smooth, and the combination of flat six rumble ➲

“Supercharging isn’t common in the Porsche world and I would probably have saved a lot of money and time if I’d just had the car turbocharged”

and supercharger whine is just so evocative. It sounds unlike anything else."

The 993's custom-made Magnum Powers MPX90 is a Roots-type single-screw supercharger. The design is based on the Eaton M90 – a common OEM fitment to new cars – and uses the same mounting points. Cleverly, though, its much larger intake flange can push through twice as much air, for boost pressures of up to 20psi. Here, the system runs 9-10psi for the sake of reliability: good for 400hp at the wheels, in addition to a brawny 532Nm of torque – with most of that available from just 3,000rpm.

A typical summer day in Arizona can reach 40°C, so heat soak is a major issue for performance engines. To keep cool, the 993 uses a top-mounted air-to-water intercooler, partially fed by the scoops in the rear wing. This is supplemented by an 'interchiller', developed by Dyno-Comp (another Scottsdale tuning shop), which uses freon gas from the air conditioning to super-chill coolant that circulates the intercooler. "Technically speaking, this is a water-cooled, air-cooled Porsche," jokes Gregor.

Putting all that power to the asphalt is a Wavetrac limited-slip differential, along with a six-speed manual gearbox, rebuilt using Porsche parts. "Again, we did the opposite of what most people do and went for longer ratios," explains Gregor. "The engine has so much low-down torque from the 3.8-litre conversion and the supercharger that we really wanted to take advantage of." The 993's first three gears are custom and, as Gregor later discovered, almost identical to those of the 997 GT2 – "another big-horsepower 911 with rear-wheel drive."

There's a further 997 connection with the clutch and flywheel setup, which comes from the limited-run GT3 RS 4.0. This was designed for a hydraulic clutch, so this car uses a larger slave cylinder, sourced from MPL in Germany, to provide extra assistance.

ABOVE Flat6 Illumination provided the restomod-style LED headlights that outshine the 993's originals – literally

RIGHT The 993 RS Clubsport spoiler and RSR wheel arches help to give Gregor's creation a muscular road presence

Time your shifts right and it'll hit 62mph in 4.0 seconds, then reach a top speed of 175mph.

Such additional performance demanded more stopping power, as Gregor explains: "We fitted 993 Carrera RS brakes, with 322mm front discs and six-piston calipers. Many people upgrade to the 'Big Reds' from a 993 Turbo, but the brake bias isn't as well suited to a rear-driven car."

Suspension is by KW V3 coilovers, wound down to their third-softest setting (number eight of 10) and replacing the stiffer Bilstein setup previously fitted. Despite riding "as low as a Cup car" Gregor says the ride is very compliant: "It doesn't bump or bang, yet you still have fine control and minimal body-roll." Nonetheless, a HYBRIDair front-axle lift system is all but essential. Available for the 993 and 964, it fits within the spare wheel and uses air cups in the front springs to lift the car by 50mm at any speed.

When it comes to aesthetics, Gregor cites the excess-all-areas creations of Rauh-Welt Begriff (RWB) as an influence. His biggest inspiration, though, came from California's Guntherwerks. "If Porsche had continued developing the 993, those cars represent how it would look today. That's been my ethos with this project – it excites me far more than a backdate."

Along with its towering 993 RS Clubsport spoiler, perhaps this car's most distinctive feature are its muscular RSR wheel arches. Gregor says these often see it mistaken for a GT2, but – much like the rear wing – they're designed specifically for a narrowbody 993. Fitting them involved Patrick Motorsports sawing off the original wings, then bolting on the new parts using factory-supplied gaskets. Not a job for the faint-hearted...

Filling out the haunches are a set of original (and ferociously expensive) 18-inch Speedline RS alloys shod with Michelin Pilot Sport 2 rubber. The rims have been custom-widened – to 9.5 inches at the ➲

Model	Supercharged 993 RSR tribute
Year	1996

Engine

Capacity	3,800cc
Compression ratio	11.4:1
Maximum power	400hp @ 5,750rpm
Maximum torque	542Nm @ 4,800rpm
Transmission	Six-speed manual

Suspension

Front	KW V3 coilovers
Rear	KW V3 coilovers

Wheels & tyres

Front	9.5x18-inch; 245/35/ZR18
Rear	11.5x18-inch; 315/30/ZR18

Dimensions

Length	4,245mm
Width	1,735mm
Weight	1,397kg

Performance

0-62mph	4.0sec (est.)
Top speed	175mph (est.)

front and 11.5 inches at the rear – to ensure there's no need for spacers. "For me, getting the wheels right was so important, both for setting the car's stance and achieving an 'OEM+' look," says Gregor. Mission accomplished, we reckon.

The 993 also has restomod-style LED headlights from Flat6 Illumination, with a halo-shaped outer DRL (daytime running light) that glows orange when the indicator is flashing. Gregor rates them as a massive improvement: "They emit a really crisp, white light – the original lamps feel like candles in comparison." Other neat touches include a typically RUF painted rear reflector, RUF badges and Gregor's unique Widowmaker spider logo on the front flanks.

Inside, there are silver dials, carbon-fibre trim, a PCCM head unit, a pair of ultra-rare Recaro R8 seats (retrimmed in black leather) and more RUF touches, including the sill covers and gear knob. The rear seats have been retained, much to the delight of Gregor's two young boys, but the RUF steering wheel has been swapped for a dished Momo MOD.07, as used by Porsche Motorsport on 993 Cup racers. "It's one of my favourite modifications that I've made to the car," confesses Gregor. "The smaller diameter makes the steering feel a little sharper, and the suede rim is thinner. The level of feedback is almost sensory overload."

As you've probably guessed, the 911 is certainly no pampered show queen. Scottsdale has the desert on its doorstep, and fantastic canyon roads – including the Grand Canyon and Sedona – are within relatively easy reach. Gregor is part of a Phoenix-based supercar group called PHXDriven, and he often joins fast-moving convoys with Ferraris, Lamborghinis, McLarens and newer Rennsport 911s.

What the 911 lacks in ultimate power – at least versus a modern supercar – it makes up for in driving drama. "You've got a lot of weight at the back and wide rear tyres, but when the car does let go it's progressive," we're told. "The Wavetrac diff gives it a mechanical feeling, with no electronic interference." Gregor also says it'll keep pace with his friend's 991.2 GT3 RS until the upper reaches of third gear...

When we spoke, Gregor was just a week away from finally moving back to Scotland, but his amazing 993 will be coming with him. After eight weeks in a container, it'll arrive at Southampton docks, then head due north. With an Audi RS6 as his daily driver and family holdall, Gregor's plan is to use it for road trips and European driving holidays, where left-hand drive will actually be an advantage. First stop, the Nurburgring, we wondered?

Looking ahead, Gregor rather fancies a 996 GT2 – another Porsche worthy of his Widowmaker logo, but you sense his compulsive car-buying days may be over. "For the money I've spent on this project, I could have bought a new GT3 RS. But no matter how special those cars are, somebody else will always own a similar one. I wanted something unique and this is my perfect car." 911

"The combination of flat six rumble and supercharger whine is just so evocative"


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INTRODUCING

HOONIPIGASUS

Ken Block's BBi-built Porsche racer will tackle the 2022 Pikes Peak hillclimb. Total 911 charts the efforts that went into the car's incredible six-month build

Written by **Wilhelm Lutjeharms** Photography by **GF Williams**

Proudly emblazoned on the cap that Betim Berisha is wearing during our interview is "Support your local speedshop". This should indicate, at least partly, what is undoubtedly one of his main interests: being the owner of California-based BBi Autosport.

BBi Autosport needs little introduction. This performance and motorsport outfit has been responsible for some impressive successes at the annual Pikes Peak Hill Climb. These successes have been with a long line-up of modern Porsche race cars. BBi took these cars and rebuilt them into devastating hillclimb racers, partly by having a wealth of knowledge of the track and general conditions in the USA's Pike National Forest in Colorado.

After a few years' experience, a new idea surfaced. Betim explains: "We were already in discussions with Joe Scarbo of Scarbo Performance. He sort of conceptualised a rear-engined version of this car a while back. Not as wide and not as crazy. As the renderings came through, we approached Hooningan as they had earlier asked us what we were going to do for the 100th anniversary of Pikes Peak. Long story short, we discussed some options and I said I'd like Ken Block to drive the car. They said he's interested and we all decided to see what we can put together."

That was in November 2021 and after six months, the car was unveiled in Los Angeles in mid-May with the hillclimb taking place on 26 June. Of course, quite a few things had to fall neatly into place for this to have happened in such a short space of time.

"We got this done so quickly because of the dedication of our team and the people working on this project. Everyone was fully committed to it. Verus Engineering was developing the aero while Oilstainlab was working on the look and feel of the car. Meanwhile, Scarbo and ourselves were designing the chassis. We were making moulds for carbon fibre parts before the chassis design was even completed.

"What you don't see are the electronics and wiring of the car, which are really unbelievable. Even before a chassis tube had been cut, Obsidian Engineering was already working on its system.

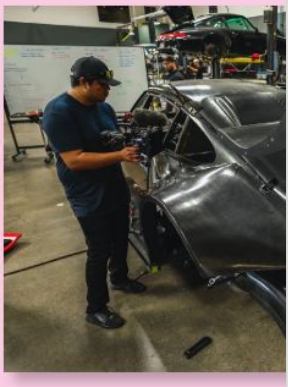
"Everything had to happen in parallel. While I'm talking to each respective party, we were trying to move everything forward. It's proven to be a very effective process, but you do need the commitment of everyone. For example, the transmission was being built in France by SADEV, and the fuel cell and system were being built in the UK by Premier Fuel Systems and Protec Fuel Pumps. While wheels were designed in Italy and being cut here in the USA, some of the electronics were coming from Germany and Australia. All happening simultaneously.

"I can't even imagine doing this in a facility more geared towards volume production, even though you might have maybe 40 people and many resources at your disposal. The way we did it with the team we have is the only way I believe we could do it."

One interesting fact is that this car is loosely based on a Porsche. "The very base of the car is a 1966 Porsche 912. Joe Scarbo and I bought the car a while back. It now has a chromoly tubular chassis. There's basically nothing left of the original car. From the tubes we have mounts on to which we clip the bodywork. The floors bolt to the bottom of the chassis, and these are made of carbon fibre. There's no dashboard and when you sit in it you can see the front shocks when you look past the steering wheel. The windshield is custom cut as we wanted to make sure there's no gasket or rubber around it, so it sits flush with the body.

"We've set out to build this car with one purpose in mind. Virtually every little piece on this car has multiple functions. One bracket will do six things, for example. We're trying to keep the weight down wherever we can. The instrument display is located inside the steering wheel, and there are no other displays in the car.

"One of the trickiest challenges of the projects was building a mid-engined, all-wheel-drive car,"

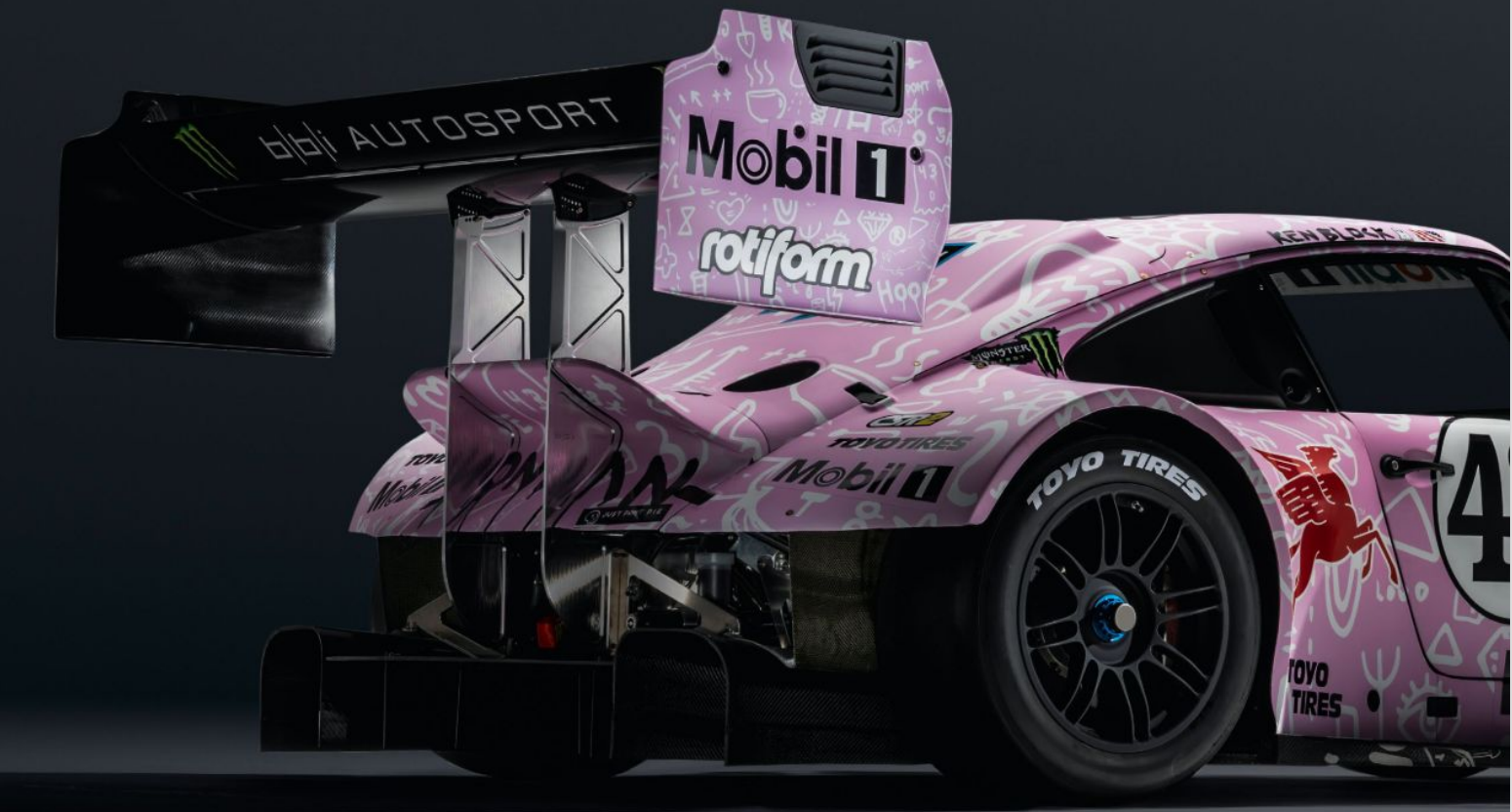


BOTTOM Construction of the car was a global effort, with components coming from England, Germany, Australia and beyond

RIGHT The distinctive livery was heavily inspired by Porsche's 917/20 "Pink Pig" that raced at Le Mans in 1971

BELOW The powerplant comes from a 2016 model 911 GT3 R, but thanks to BBi Autosport's efforts it now has triple the power delivery of the original engine

"The result is a twin-turbo 4.0-litre, flat six engine which, when run on methanol, develops 1,400bhp at sea level... and around 800bhp at the finish line at 14,115ft"



ABOVE Thanks to the team mapping out the entire mountain track, the car's GPS-controlled suspension can generate the optimum racing profile

says Betim, who goes on to explain how they managed to achieve this.

"Changing the drivetrain layout from rear-engine, rear-drive to mid-engine, all-wheel-drive meant we had to accommodate a propshaft from the gearbox – now of course in the rear of the car – to link up the front axle. This meant it had to go underneath the engine through the centre of the car. Since raising the engine enough to achieve this negatively affects the centre of gravity, we flipped the gearbox upside down, lowered the engine and ran the front driveshaft over the flat six! The front driveshaft also negated our initial idea of a centrally placed driving position, with the encased front driveshaft now running right past the driver's shoulder."

As expected, the engine is no standard road-going 911 unit. Taken from a 2016 911 GT3 R racer, the engine was redesigned with new pistons and connecting rods – to name only two notable upgrades. After all, the planned power delivery would be nearly triple what it had when it left the factory. Furthermore, the biggest racing turbochargers that Garrett's racing division has ever created were fitted. There are three injectors per cylinder and the rev limit is around 9,600rpm. The result is a twin-turbo 4.0-litre, flat six engine which, when run on methanol, develops 1,400bhp at sea level, around 1,000bhp at the start of the hillclimb and around 800bhp at the finish line at 14,115ft (4,302m) above sea level.

However, Betim's view on the horsepower figure might come as a surprise: "The horsepower figure of this car is an arbitrary number. What will dictate progress up the hill is how much traction you have and how much mechanical grip you can make. We also have mechanically locking front and rear differentials, while 50 per cent of the power goes to the front and 50 per cent to the rear. All four corners are fitted with 13-inch wide wheels.

"The SADEV SL90 six-speed sequential transmission is the same unit that was used in the Hoonicorn, Ken Block's 1,400bhp AWD Ford Mustang. We've run it in other cars and we've had great success with this gearbox."

The car's GPS-controlled suspension system enables it to alter automatically, depending on which part of the track the car finds itself. "The ride height is able to change," says Betim. "Combine this with the GPS and the result is that you can raise the ride height in the front, for example, under heavy braking if the nose dives too much. We'll do this to not disturb the aerodynamics. The faster the car goes, the more it'll suck itself to the ground. Then we'll counter that with hydraulics to keep the car at a desired height. We do that with six suspension sensors and three lasers, all talking to each other."

The team has been able to achieve a weight of only 1,000kg. But just as important will be the downforce figure as Ken heads up the mountain, trying to keep his speed as high as possible through the turns. "At sea level, at 160mph the car will generate 2,270kg of downforce." Also, how pretty is that ducktail at the rear under that monstrous wing!

The artist and snowboard Olympian Trevor Andrew designed the livery to pay homage to the 1971 Porsche 917/20 "Pink Pig" Le Mans race car. And who could miss the Pegasus horse, another connection to Porsche's racing history. Betim made it clear that it was this group of people who all brought it together, as is partly reflected in the car's name.

All eyes will be on the Pikes Peak Hill Climb, as this team sets out to take the podium at the most majestic and hair-raising hillclimb on Earth. 911

Carrera Cup USA

THE COMPETITION THAT NEVER WAS

A 911 race series set to copy the European model, the Carrera Cup USA was a non-event, despite honourable intentions. Total 911 explores why...

Written by **Kieron Fennelly** Photography courtesy **Porsche Archive**

An unsung success of Ulrich Bez's controversial three-year stint as board member for engineering was the inauguration of the Porsche Cup. One-marque championships were nothing new, but an exclusively 911 event captured race organisers' imaginations, in particular Porsche Cars North America (PCNA). This looked to be an obvious competition to mount in what had always been Porsche's largest market. The Americans also recalled the success of the IROC (International Race of Champions) series run with the 911 3.0 RS in 1972/73.

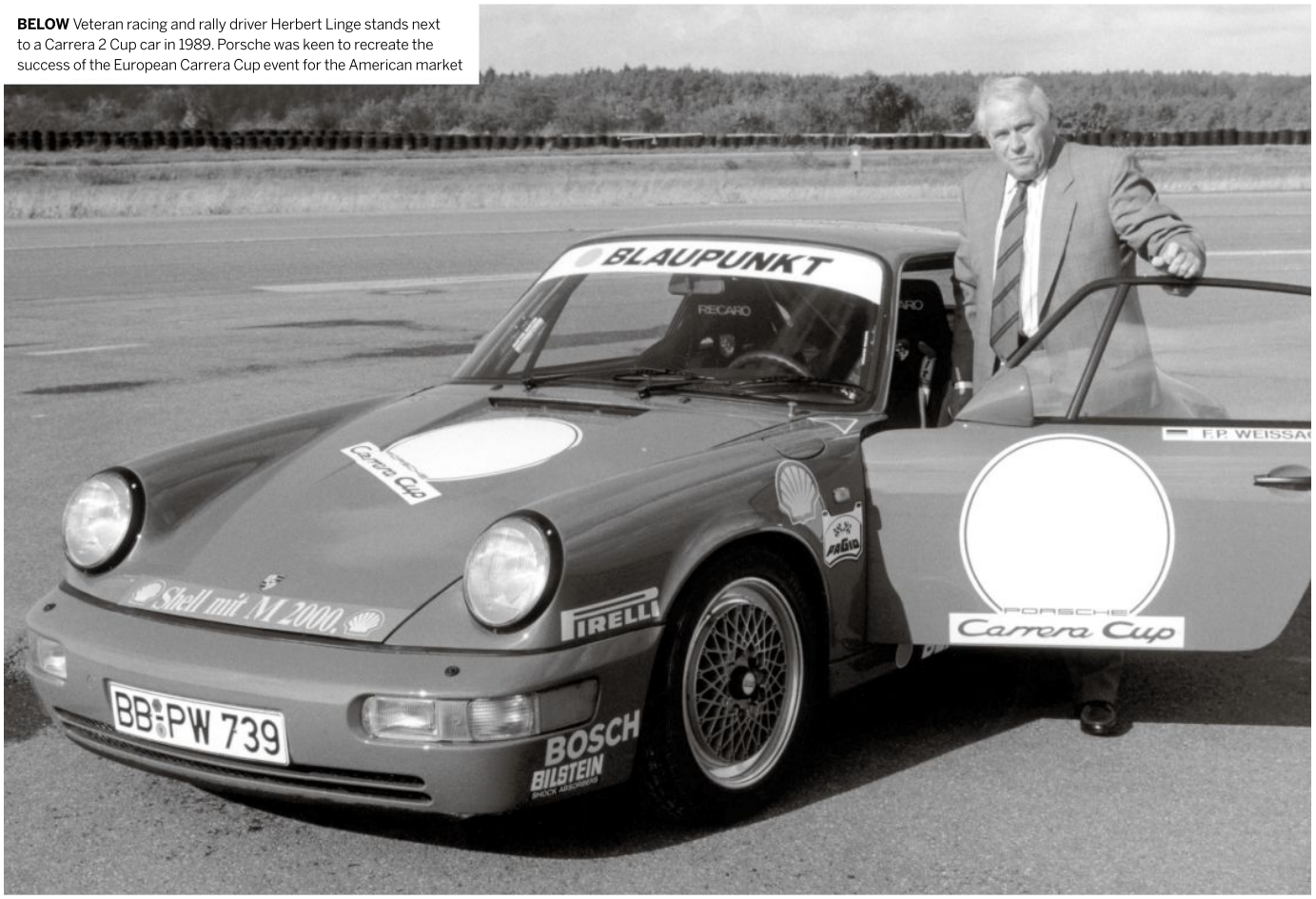
Just as two decades earlier it had sold specially prepared 3.0 RS to participating teams, in 1991 PCNA proposed a US Porsche Cup using the 964 RS as sold in Europe. However, a problem arose because Porsche AG had misgivings about how the US Department of Transport and Environmental Protection Agency would react to the import of a 911 that wasn't homologated: memories of the '959 affair' were still fresh. Porsche's twin-turbo 1980s supercar, the 959, was another model never homologated for US sales. However, with the help of Al Holbert, then chief of Porsche's US Motorsport, a batch of 959s was delivered to America for circuit racing. The DoT objected, saying these cars could be converted for road use and despite protestations from PCNA and Porsche AG, the cars had to be returned to Germany.

Zuffenhausen wanted no repeat of this debacle and insisted that any cars delivered to the US had to have full legal status. Though feasible, this would involve additional work and cost, but nevertheless the announcement of the series went ahead in November 1991 with a race calendar starting in May 1992. It was an ambitious schedule.

Porsche prepared a batch of 45 cars. These were the RS model with its spot-and-seam-welded stiffened body shell. To meet US requirements, Porsche reinstalled the components necessary for type approval. The cars were then shipped to PCNA's port at Charleston, West Virginia where they were registered by the DoT. In reality they still had the aluminium bonnet lids of the stock RS, hadn't been crash tested and their ride height was 5cm below that of the standard Carrera.

Twenty-nine modified cars were then shipped across to Andial at Fountain Valley in southern California. Andial, Porsche Motorsport's US partner, was contracted to return the cars to racing specification. The 110 hours scheduled for this labour-intensive (and third) refit didn't include the first and most complex task: the fitting of the roll cage. Andial subcontracted this to a third party and the cars came back to their workshops with multiple modifications, including front and rear struts and springs converted

BELOW Veteran racing and rally driver Herbert Linge stands next to a Carrera 2 Cup car in 1989. Porsche was keen to recreate the success of the European Carrera Cup event for the American market



to Cup specification; a simplified exhaust system with the catalytic converter refitted; and the front oil cooler replaced by a baffle "to let the road (i.e. the airstream) rather than the fan do the work", explained Andial manager Mark Popov.

Finally, the M64/03 (964 RS) engines were mounted on hardened rubber blocks, remapped and measured officially at 271bhp. It emerged later that all 29 engines had produced 275bhp (+/- 1.5bhp) on Andial's bench. The engines and gearboxes were then fitted with tamper-proof seals and the cars received 17-inch racing wheels, 8-inch rims front and 9.5-inch aft. Four cars were left unmodified except for their engines and gearboxes, the intention being to keep these for spares. The other 25 were transported to Porsche's storage facility at Reno, Nevada for delivery to customers.

Alas, there were to be no customers, or at least not enough of them and in mid-May, Porsche announced the cancellation of the championship, citing lack of a sponsor. The modified cars were sent back to Andial where in a fourth refit, they were reconverted to road cars and then despatched back to PCNA at Charleston for fitting of carpets, attention to paintwork and general refinishing. There they joined the 16 other cars that had remained unmodified, not having reached Andial.

> "An exclusively 911 event captured race organisers' imaginations, in particular PCNA"

The sudden and barely explained abandonment of the US Cup caused a wave of frustration and ill-feeling. Several teams had committed time and money to the project and Toyo for one now had 1,600 specific racing tyres on its hands.

Perusing the motoring press of the period gives an idea of the strength of feeling. *Autoweek's* cover of the 8 June 1992 issue gives Porsche very short shrift: "FAST TRACK TO NOWHERE: Quick decision to kill US Carrera Cup reflects poorly on Porsche". Inside, the issue reported on angry would-be participants who complained that Porsche had done nothing to offset the cost of entry, demanding a "performance bond" of $10,000 as well as over $100,000 for the race car, the lot payable in advance rather than over, say, the first couple of seasons.

The need to make the Cup cars road legal had been an expensive detour and Porsche AG, whose financial position wasn't strong, had tried to pass on some of the extra cost. This was a mistake: it proved impossible to create a critical mass of entrants and in the year of the "it's the economy, stupid" election, corporate sponsors didn't want to invest their PR budgets in a series with potentially fewer than 15 regular entrants. For three years, since the huge devaluation of the Dollar against the Deutschmark, Porsche had seen a comparable drop in its North American sales. The commercial situation in Europe wasn't as bad, but the company was far from secure. More subsidy to rescue the US Cup series wasn't forthcoming because Porsche lost its nerve and pronounced the championship a non-starter.

For a company with such an illustrious racing history, this was a low point. The 45 Cup cars were discreetly sold through the network. With neat plaques on their dashboards defining them as Carrera Cup US Editions together with the VIN number, the cars were priced at $78,340. The standard C2 at the time retailed at $63,900, which makes the Cup car look something of a bargain. For comparison, the 964 RS then cost about £63,000 in the UK.

Porsche, however, was still concerned about the effect that the Cup cars could have on its image.

Buyers had to sign a waiver acknowledging that "this vehicle will exhibit different ride, cornering, braking and interior noise characteristics than which are considered normal (for a regular production 911). Additionally, the electrical system is not designed for short driving, which may use up the battery." And of course, there was only a three-year corrosion warranty.

The specification of the Cup cars would today be exactly the setup the track enthusiast would be seeking: for your $78,340, you got a 911 with an aluminium bonnet; no underseal or sound proofing; manual steering and no air conditioning or sunroof; steel synchromesh rings on all gears except fifth (the 964 RS gearbox); carpeted rear (no passenger seats) RS style; race car charge system (a lighter 36Ah battery); hardened rubber engine mounts; manual mirrors; adjustable roll bars; electric windows and 4mm glass except for windscreen/rear window; 17-inch wheels, 205/50 front and 255/40 rear tyres; and limited slip differential (as fitted to the 964 RS).

Brakes were the Turbo 964 variety as also supplied on the 964 RS, and with slightly less fierce ignition mapping you had a conservative 260bhp to propel a 911 weighing around 1,290kg. All the cars were finished in white, except one painted red that had been intended as the pace car.

With no press demonstrator or any official information available, it was a while before the motoring magazines could get their hands on a Cup Edition. David Colson was eventually able to test a privately owned car and his report appeared in February 1993 for *Excellence*.

Not surprisingly, this 911 reminded him strongly of the 964 RS that he had driven in Europe. Under the title, "Phantom of the Carrera Cup: from the race series that wasn't comes the car that isn't", David describes the Cup Edition as "a rough riding beast with solid reflexes, great predictability and virtually no trailing throttle oversteer. Even in its detuned state, it skips around a great deal over bumps and generally requires a lot of attention from the driver. The RS America is slightly more forgiving of stupidity and not much less tenacious in grip. Still, for the fanatic this is the preferable hot rod because it communicates the next move just a little bit more than anything Porsche would normally authorise for street use in America."

> "The specification of the Cup cars would today be exactly the setup the track enthusiast would be seeking"

David found the on/off racing clutch difficult to get used to and commented that the car squeaked and groaned and didn't exhibit the usual hewn-from-stone Porsche characteristic, "probably because it's been dismantled more times than an Erector set." He predicted that the exclusivity of the Cup Edition would make it a collector's car, although the $210,000 paid at auction in February 2022 for one of the 25 converted for racing suggests that these 964s, which make uncomfortable road cars, are far from the most valuable of rarer 911s.

Porsche's North American operation recovered quickly from this setback. Within weeks, the marketing department was pressing ahead with the launch for the Carrera RS America, which far outsold its forecast and gave the dealer network something that it could confidently crow about. The Cup Editions therefore trickled into the market as the rarest of models. Until the 996 GT3 (which didn't arrive in the US until the Gen2 in 2004), they were the most potent non-turbo 911 in America. 911

ABOVE Olaf Manthey drives a 911 Carrera 2 Cup 964 to victory in the Porsche Carrera Cup in Germany, held in 1990. Porsche soon overcame the false start of the Carrera Cup USA with the Carrera RS America

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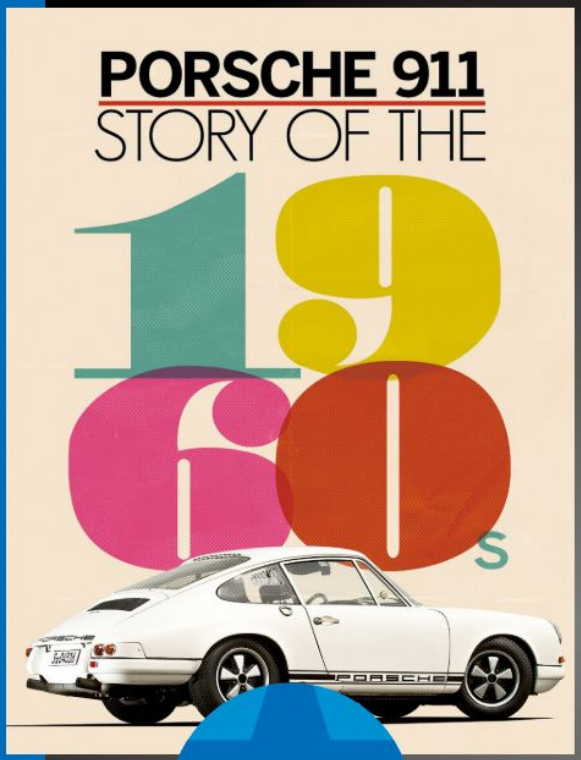
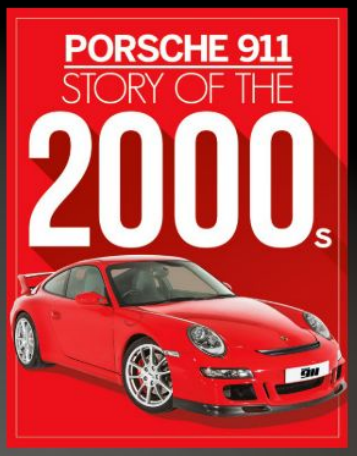
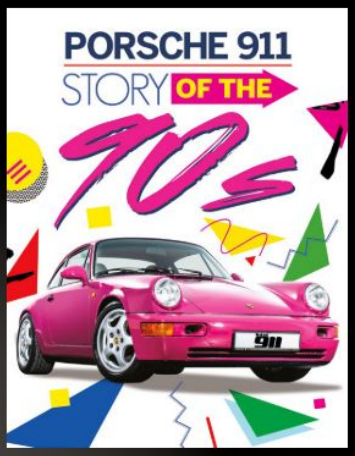
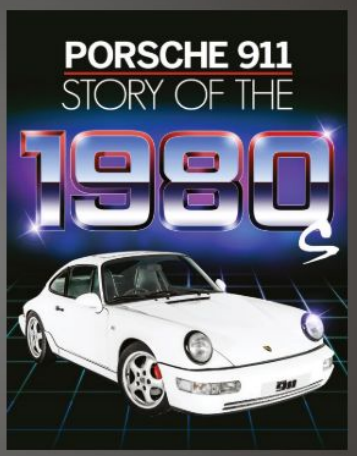
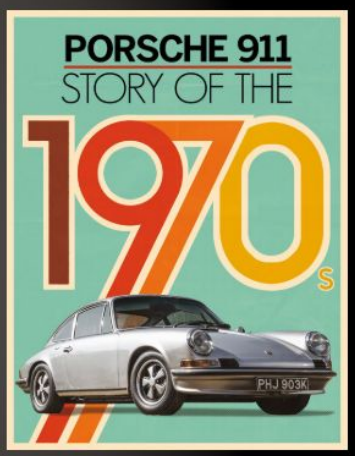


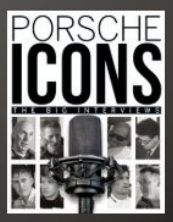
EDITOR'S PICK

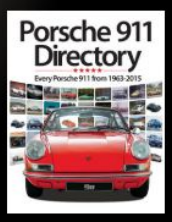












ALL AVAILABLE TODAY ON THE
APPLE APP STORE OR READLY

Living the Legend

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

Lee Sibley
Poole, UK

@9werks_lee
9WERKS TV
9WERKS Radio

Model	996.1 CARRERA
Year	1998
Acquired	JANUARY 2019

It was a privilege to host a special Fried Eggs Anniversary Cars & Coffee meet recently in honour of the quarter-century milestone of the Porsche 996. We celebrated in style over at 9WERKS, first by offering 9WERKS members an exclusive virtual roundtable with 996 designer Pinky Lai. I'd previously interviewed Mr Lai (you can find the video on YouTube via 9WERKS TV), so this time it was the turn of members to put questions to the man who, for many, designed the car they own and drive. You can catch highlights from this conversation also on YouTube.

Our special Cars & Coffee was held the following day at Heritage Parts Centre, where over 70 Porsche 996s were in attendance (despite the typically British weather) to honour the first water-cooled generation of 911. A stellar turnout ensured we had an example of every single 996 iteration there (aside from a Turbo S!) and, more importantly, it made for an awesome opportunity to bring some amazing people together to celebrate these brilliant cars.

The guys at Heritage Parts Centre were awesome, too, in opening up their premises on a Sunday morning and offering tours of their facility that stocks over 25,000 Porsche and VW parts. You can get up to 10 per cent off your basket at **www.heritagepartscentre.com** – enter the code 9WERKS10 at the checkout.

All in all it made for a spectacular weekend of 996 celebrations, and I'm chuffed that in the five years or so that I've been doing my 996-only Fried Eggs Cars & Coffee events, the name and concept has caught on around the world. I've long been an evangelist of these great 911s and it's awesome to see that, these days, so many others agree. Thanks to Pinky Lai for his time on the virtual roundtable, thanks to Heritage Parts Centre for hosting Fried Eggs Anniversary, and thanks to all 9WERKS members who joined the roundtable and/or attended the Cars & Coffee, highlights of which can be seen at **9werks.co.uk**.

James McGrath
Minneapolis, USA

@auto.amateur
Auto Amateur
AutoAmateur

Model	**996.2 CARRERA**
Year	**2002**
Acquired	**2020**

With just days to go until my 5,000 mile round-trip of the Rocky Mountains, my (almost) bi-polar personality is showing its true self. On the one hand I'm overthinking and overplanning, packing for every possible road-trip issue or complicated scenario. On the other end of the spectrum, I'm finding myself at times just saying to hell with it: whatever happens, happens and it's all part of the journey. I joke about the bi-polar nature of my trip planning because I bounce from either end of this spectrum, not just day to day but often hour to hour.

As far as tools go, I'm bringing jumper cables, a power-pack jump starter, lug nuts for the wheels with a breaker bar and torque wrench, as well as a handheld, battery-powered air compressor to inflate my tyres. I'm also toying with packing a set of wrenches and sockets, but I think if I find myself in a position where I need those I might be better off calling a tow truck. Considering we're attending several car meets, I'll be bringing a few different things for cleaning and detailing: liquids, a hand pump foaming sprayer, drying towels and microfibre towels.

Since getting my 911 back on the road last month (with the replacement transmission, clutch and engine that were installed by Porsche of Minneapolis) I've been giving the car lots of road time to try and shake out any hidden issues. I needed to reset a few warning lights that appeared on my instrument cluster due to removing the seats, seat belts and steering wheel several times over the past few months. They were easy to clear with one of the gadgets I invested in last year.

I also followed the recommendation from Porsche's service manager to look at my front control arms. I'm glad I took the time to investigate this because having dismantled the driver's side (which wasn't in too bad a condition), I found that the bushings on the passenger side were practically disintegrating. It's no wonder I was getting some vibrations through the steering wheel at speed. The job was pretty straightforward: just a few bolts to work with once the wheels had been removed and the car was up on the lift. I decided to go one step further and replace the forward struts that connect to the chassis at one end of the control arm to the other. Similarly, the bushing on the passenger side strut was past its best.

After working on the control arms I decided to replace the brake pads. This is one of my favourite DIY jobs to do on the car. It's mechanical enough to give me a satisfying sense of achievement, without being so technical that you run the risk of doing serious damage to the car. I didn't need to replace the rotors at this point, so it was a case of 30 minutes per wheel once the wheels were removed, to take off the caliper hardware, pop out and replace the pads, then put everything back together.

Finally, there's the in-car entertainment. The factory radio wasn't functional when I bought the car, but I'm not much of a radio fan. If I'm not listening to my flat six howl while I'm driving, I'm most often listening to any number of the Porsche podcasts (shout out to 9WERKS Radio!).

I decided to try out an aftermarket headunit from Amazon that gives my old girl Bluetooth phone connectivity and streaming, as well as Apple's *CarPlay* and a touch-screen that can fold out when you need it or back in if you want the classic look of the 996 interior. Wiring this up isn't for the faint of heart! It involved cutting the factory heads of the factory wiring, re-wiring everything back up to a new wiring harness... not something I'd want to attempt again. It makes the PCM 3.0/ 3.1/4.0 *CarPlay* mod that I've done dozens of times look like a walk in the park. However, with a little patience and several copper wire punctures in my fingers and thumbs (with a fair share of f-bombs), I'm Bluetoothing away in my analog 996. Bring on the road trip!

Ron Lang
Ashland, USA

@ronlangsport

Model	911S 2.4
Year	1972
Acquired	2018
Model	930 3.3
Year	1982
Acquired	2020
Model	964 CARRERA 2 REIMAGINED BY SINGER
Year	1991
Acquired	2016
Model	993 TURBO
Year	1997
Acquired	2015
Model	997.2 GT3 RS
Year	2011
Acquired	2015
Model	991.2 C4S
Year	2017
Acquired	2016
Model	991 GT3 TOURING
Year	2019
Acquired	2021

This past month has been a superb Living the Legend experience. It must be the spring weather. I've driven every 911 in the garage and with one exception, each car has been driver-involvement heaven. The exception, much to my surprise, was the 996 GT2: the legendary water-cooled widowmaker with no driver aids other than ABS and 467hp in a lightweight GT chassis. Where all the other 911s make me tingle behind the wheel, I never bonded with the GT2. It was never as exciting as everyone seems to proclaim. Yes, it's highly collectible because of very low production numbers, but driving thrills trump collectability for me. So I've sold the GT2, and stayed true to my view that without the fizz factor, a car doesn't belong.

On to sharing my two-day, 600-mile drive along the rugged and remote southern Oregon coast in the 991.2 Carrera 4S. What roads, what scenery and yes, what a car! I've mainly used this 2017 C4S as a winter 911, but I decided to put the summer wheels and tyres on it and chase apexes for a couple of days. Mostly on two-lane windy roads with very little traffic, passing opportunities are dispatched with ease. Third gear on this car is a monster. From puttering around town to 120mph, it has incredible reach.

I ordered this car from the factory and waited six months for its arrival, which was the late summer of 2016. I splurged on the options and I'm happy I did. Did the car need any of the goodies to make it right? Absolutely not. But how pleasant each has been. Starting with the sport exhaust with the closely spaced pair of rear tail-pipes. They're bassy and rumbly at low rpm, and shriek to its 7,500rpm redline. The sound is so good that I rarely use the high-end

Burmester sound system (1,000 watts, 13 speakers) that I ordered with the car. Fizzy exhaust sounds, check.

The stock spec of 420hp and 368lb ft of torque is plenty – indeed, more than enough. But I couldn't resist making this closer to an unobtainable 991.2 911 Turbo with three pedals, so I had GIAC tune the ECU to a claimed 480hp and 400lb ft. Coupled with the slick-shifting seven-speed manual, and heel-and-toeing the downshifts, I'm able to enjoy the linear power delivery from just above idle to redline that delivers the best of big torque at low rpm and great power at the top end with no turbo lag. Yes, naturally aspirated engines provide the best throttle response in general, but this car's power delivery is unimpeachable. Fizzy powertrain, check.

I loaded up the options list with my late model 911 chassis favourites: carbon ceramic brakes, active electronic sway bars (PDCC) and rear axle steering. All this add some level of complexity, but this car attacks corners and braking zones with glee. And yet the stock shocks and springs provide a lot of comfort and compliance on bumpy roads. It's an impressive combination of superb handling and ride comfort compared with some of my more aggressively set-up 911s. I've really enjoyed this car on a couple of track days, too. Fizzy handling and braking, check.

There are, of course, some compromises with every car, particularly when driver-machine interaction is the most valued criterion. The electrical-assisted steering on this car is great. The car feels quite rear-wheel-driven and I never notice any push or pull when the front wheels apply torque. I can feel the road irregularities; it's a fine system. Yet the steering feel and precision don't match that of some other 911s in the garage. I'm thinking of the 2011 997.2 GT3RS, the 1972 911S and the 1991 964 reimagined by Singer as benchmarks for steering feel. But this 991.2 C4S excels as a touring car where the other three are more point A to point A cars: perfect for a local day on our mountains, but a bit too stiff, too noisy and otherwise compromised for a multi-day tour. So moderately fizzy steering, check.

There are a few non-driving-feel elements that I enjoy about this car. I like the wingless classic 911 profile for example. I really like the Granite blue metallic paint that was a one-year-only option in 2017 (though some have specified that colour on later Paint to Sample orders). And the 18-way adjustable sport seats are secure in the corners and yet all-day comfortable.

This car is a superb 911 all-rounder. If I could only own one 911 to use for everything between going to the shops, track days, day trips, ski trips and multi-day tours, this would be the car.

Nick Jeffery
Surrey, UK

@npjeffery

@npjeffery

Model	997 CARRERA 4 GTS
Year	2012
Acquired	OCTOBER 2018
Model	997.1 GT3
Year	2007
Acquired	NOVEMBER 2019

I'm having a monumental battle with the rear reflector strip on my Carrera 4GTS, which has condensation in the unit. First, in terms of removing the unit from the vehicle. Second, in terms of identifying the nature of the problem. Third, finding a cure!

You'd think it would be easy to remove the rear reflector strip from the engine deck lid. And you'd be wrong! It's secured by two Torx bolts, six plastic clips and some adhesive tape, like that used to secure number plates. The two bolts at each end are easy enough to locate and undo, thankfully.

However, once the bolts are free, any attempt to leverage the strip off without tackling the clips and adhesive tape will result in failure of the unit. After all, it's made of plastic, exposed to the elements and over 10 years old, and so will be brittle. Better to break each of the six clips located on the underside of the engine deck lid and then carefully lever the strip away from the deck lid until you get to the adhesive tape in the middle. Here you can use a sharp knife to cut the tape to release the item from the vehicle.

Once off the car, the failure of the unit was obvious. The rubber seal located on the leading edge had failed by becoming detached at either end of the reflector strip, thus allowing water into the unit. My plan was to find a way to dry out the unit to remove the moisture. Friends suggested drilling pilot holes into the unit to allow it to breathe and release the moisture. On inspection this didn't look feasible because any pilot hole drilled from either the side or below would be visible, thus ruining the look of the unit and defeating the point of the exercise.

Initially, I opted to leave the unit in direct sunlight in the hope that would work, but it failed to do so. Upon shaking the unit some droplets of water did fall out, but a good deal of moisture remained. I then used a hair dryer to heat up the unit more aggressively, but this also failed to have the desired effect. So, I placed the unit at the top of our airing cupboard for several days and this proved the most effective solution, yet it didn't remove all of the moisture from either end. I then placed the strip in a cup of rice in an attempt to dry it out, then a bowel of rice, and then silica gel. Again, these options seemed to help, but not sufficiently so I could reseal the unit by gluing the failed seal at either end.

You might ask why go to such lengths for a piece of plastic trim that performs no function? Well, the answer lies in the cost of a replacement unit. You can only buy OEM for £985.71 plus 20 per cent VAT, so £1,182.85 – plus fitting!

Despite the exorbitant cost, I've opted to go for a replacement unit because, despite my best efforts, I wouldn't be happy with refitting the existing one even though it's significantly improved. Furthermore, the original unit could fail again. So, I've added it as another job for Paragon to do when the car goes in for some suspension work, four new tyres and to investigate a rattle coming from the rear. More on that next month!

Peter Wilson
Adelaide, Australia
@peterwilson_oz

Model	930 3.3
Year	1980
Acquired	2011

My last column described the enjoyable and trouble-free, two-day drive in the 930 to the Phillip Island historic race meeting in Victoria. All we had to do now was get home! Day one of the return trip started out warm and sunny, which was great because we had over 500km to cover on very windy roads. Much of this was along Victoria's famous Great Ocean Road, which extends from Torquay to Warrnambool, either hugging the rocky coastline or climbing into the rainforest. The traffic was heavy because it was the last day of a long weekend, but fortunately it was all heading the other way to Melbourne and we were able to drive as fast as the awesome views permitted.

We turned inland to the mountains at Skene's Creek, earlier than the main road ascent at Apollo Bay, to enjoy the amazing road and scenery through Beech Forest. Here the Mountain Ash trees climb to 90m and are surrounded by giant tree ferns, creating a green maze through which the narrow road weaves.

The closed-in feeling was heightened by a thick fog as we descended back to the coast. It felt as if we were in a different continent and climate from an hour earlier! We stopped for a quick look at the sun setting behind the Twelve Apostles limestone stacks before pushing on to our first overnight stop at Port Fairy. We stayed at the quaint Merrijig Inn, the oldest in Victoria. This last leg was unnerving because dusk sees increasing kangaroo activity and I wished that I still had my LED headlights.

Day two was much more relaxed, with a relatively short distance to reach Beachport. The scenery and weather were both amazing, especially Cape Bridgewater with its seal colony, wind farm, lovely beach café and a great driving road back on to the highway. On the open road I found that I was using the tacho as a de facto speedometer because it's so much easier to see in a classic 911. Here, 2,200rpm is 100kph and 2,500rpm is 110kph, and keeping an eye on these two figures saved me any speeding fines on this trip.

Our final day of driving was just under 400km to get back home, and we stopped for a photo with Larry the Lobster in Kingston. At 17m high, Larry is one of Australia's most impressive "big things". The car was purring along nicely until suddenly the engine exploded and all four wheels fell off! At least that's what I thought had happened. It turns out my wife had been trying to play some music via Bluetooth without success and had been turning the volume up and up without me noticing. When she finally achieved a connection, the 600W amplifier plus under-seat subwoofer were at maximum volume and nearly propelled me through the sunroof in shock!

We were 20km from home and I was starting to think that the car had rewarded my recent fixes and preparation with five days of faultless driving when the accelerator started jumping up and down under my foot. This rapidly got worse, so I pulled into a truck stop to analyse the unusual symptoms.

I figured that the only place the throttle linkage is exposed is between the cockpit and engine bay, where it passes over the driveshaft. So I lay down and started feeling around, being careful not to burn myself on the hot exhaust nearby. Sure enough, some cloth tape that I'd applied to the inner CV joints to stop grease leaks had started unravelling and was slapping the throttle linkage. This was easily torn off and the trip was completed without further drama. With the car safely back in the garage and liberally coated with squashed bugs, it was a good time to reflect on a great week of really using the car, and how a 40-year-old classic can still perform on so many different roads.

Andy Brookes
Poole, UK

@993andy

9WERKS Radio

Model	**993 CARRERA**
Year	**1995**
Acquired	**SEPTEMBER 2018**

It's like Christmas in my garage right now! I have lots of refinished parts twinkling at me – note refinished, not just new. I really enjoy bringing bits back to life, not just because it's lighter on the wallet, but it keeps more of the original parts. In some cases they're of better quality than new parts you can buy now – even some of the Porsche genuine parts. I did have to buy a few new parts for the brakes that were worn. I had them replated along with my old parts because the plating on the factory parts wasn't the greatest in my opinion.

The first items I had back were the plated parts. What a difference! It really will be a pleasure bolting all these bits back together. Everything looks brand new. I did a fair bit of preparation on the parts. You can send in your parts for plating covered in dirt and crust, but I decided that I wanted to get the best end results and respect the platers I used. Someone gave me the idea of using a dishwasher as a parts washer. I decided not to risk the wrath of Mrs B and purchased a second-hand dishwasher for £20 from Gumtree to clean all the nuts, bolts and brackets as thoroughly as possible. It did a fantastic job. I also spent an evening with the wire wheel decrusting all the components as much as possible. When the parts get to the platers they're stripped in an acid bath to remove the original plating and any remaining dirt. They're then zinc plated and yellow passivated, ready for another 25 years of service. Look how good they look.

I've had the anti-roll bars, brake backing plates and various brackets stripped and powder coated. They look better than new because the paint can be a little thin on these parts from the factory.

My brake calipers have been refurbished by **@brakecaliperreferb** to a fantastic standard. They've been striped, cleaned, refinished and rebuilt with new seals and bleed nipples for a very reasonable £520, including couriers both ways. I had them finished in a non-standard satin black. I'm extremely pleased with my choice of finish with the addition of the red Porsche logos – it's subtle and easy to maintain.

I'm midway through rebuilding my driveshafts because the CV boots were near the end of their life with small cracks showing in the rubber. They're now fully cleaned (what a filthy job that is!) and I've repainted the shafts. The CV joints will be re-greased, and once the new rubber boots are fitted they'll look like new.

I've replaced the rear subframe mounts with solid mounts from Rennline to remove some of the rubber from the rear suspension. The inner track rod ends will be replaced with GT2 items, which are solid and do without the rubber from the originals. I replaced the engine mounts a while ago with Wevo mounts. These made a big difference to controlling the movement of the engine. I've bought some Powerflex inserts for the transmission mounts to tie the transmission down. My hope is that these mods will take out some of the softness that the 993 is famed for, and replace it with some of the RS spice that I desire for my Sunday morning blasts. Fingers crossed my recipe is a good one and that I achieve the right balance!

I look forward to updating you next month on how the reassembly process has gone...

Ben Przekop
Mercer Island, USA

@benjaminprzekop

Model	**992 CARRERA S**
Year	**2022**
Acquired	**DECEMBER 2021**

Opening day! Those two simple words generate a rush of excitement for a new beginning, a welcome springtime return of an event that's been dormant for too long during the winter gloom.

For car enthusiasts in the Seattle area, the opening day of Exotics at Redmond Town Center (or ERTC to us locals) is a very big deal indeed. Although there are scores of Cars & Coffee gatherings in the area all year round, ERTC is the premier event due to its very well-organised nature, as well as its perfect car show setting at the lovely outdoor mall in the city of Redmond.

Not every car that tries to enter the show area is admitted, and ERTC's website gives a lengthy description of what it considers an "exotic". Perhaps the best description of what it considers an "exotic" is the simple question, "Ask yourself if you would drive 50 miles to take pictures of this car." Of course, you don't have to show a car to attend. There's ample parking for spectators and those who just want to enjoy the show. I've attended as an exhibitor in recent years with a variety of Porsches, from my 2004 40th Anniversary Edition 911, to my GT4, to my current 992 Carrera S, and have never been turned away, so it appears that drivers of any virtually any Porsche are warmly welcomed.

This year I drove to the venue in a convoy with a few of my fellow Mercer Islanders, and we made sure to leave super early. Although the published hours of the event are 9 to 11am on Saturday, savvy participants know that if you're planning to show your car, you need to arrive quite early, and that goes double for opening day. When we arrived a little after 7am there was already a long line of cars waiting to enter, and around 7:30am the line starting moving slowly but steadily as cars were admitted.

At the main entrance the staff direct you to a specific parking area to create marque-specific sections, and in my case to the traditional "Porsche section" where I was the fourth car to arrive. During the next hour a steady stream of cars continued to enter the Porsche lot until it was jam-packed with about 60 cars, but a very long line of cars continued to stream in for the next hour and many more Porsches were directed to wherever there were open spots in any of the other lots.

Most of the Porsches were 911s, and my 992 was parked between a beautiful 991.2 GT3 Touring in Oak green, and a 991.2 Turbo S in all-black. I split my time between standing by my car to answer questions (most of which concerned how long it had taken me to get it, what were the options and, of course, how I liked it), and walking around to look at the other several hundred cars on display.

One must-see area is always the Town Center's central courtyard, which is reserved for the most exotic and expensive cars that are placed there by invitation. If you didn't already have sensory overload before entering that rarified air, that would surely do it! And as always, the best part of participating in a show like this are the conversations with both long-time friends and new acquaintances, like my new Norwegian friend Vebjorn Antonsen, the owner of the gorgeous GT3 Touring mentioned earlier.

Awesome cars, engaging car enthusiasts and perfect, sunny spring weather. On this glorious opening day, everyone was a winner.

Max Newman
Aylesbury, UK

@maxripcor

9WERKS Radio

Model	**991.1 CARRERA S**
Year	**2013**
Acquired	**SEPTEMBER 2020**

This month's task was the MOT for the 991 – there was no service requirement according to the schedule. I booked the car in with Chris at Wrightune over in Wallingford after chatting to him about it at the 9WERKS Awards. The Wrightune team is fairly local to me and it did a great job sorting the change-over valve and dislodged front grill for me back in January.

Despite there being no service requirement in the book this year, my feeling was that it would be good practice to have an oil and filter change done at the same time; something I did annually with my 997.1 C2. With an 'MOT to MOT' mileage of 5,098 miles Chris agreed, and both jobs were tackled while I waited in Wallingford doing Zoom calls and drinking coffee. At the same time I noticed we've driven 10,000 miles in the 2015 Macan S Diesel I bought just before the bank holiday weekend last August. Plenty of Porsche miles all in, which is what I want.

The April Sunday Scramble at Bicester Heritage became a Saturday and Sunday affair, and I was able to attend both days, punctuating them with a Saturday evening run to Bristol and back for a family birthday (Macan miles). I spent the Saturday wandering around with my friend Mat Finch who arrived in his splendid silver over red 911 Carrera 3.2 Cabriolet. It's a car he's owned for 15 years, during which time RPM Technik has completely rebuilt it. It's a real labour of love for him.

Some of you may be asking why one would lavish such attention – and cash it must be said – on an unfashionable 911 drop-top? Well, it looks super-cool for starters, it's pure 1980s nostalgia, and fittingly its first registered owner was Telstar Records. Mat and his better half have enjoyed some great driving holidays to the Channel Islands with it, as well as sunny days and evenings motoring around to that sweet flat six sound. I'm envious.

Anthony Coyne
Fort Lauderdale, USA

@mr_coyne

Model	**997.2 CARRERA S**
Year	**2009**
Acquired	**FEBRUARY 2021**

The news this month is that I washed the car. I'm not a big car-wash person. I refuse to use the automatic ones as I suspect we all do, and I don't like someone else doing it (it's a waste of money), yet I rarely do it. Last washed in December, it was dirtier than a pair of used incontinence pants.

A confession: I like the way it looks when it's covered in brake dust and road grime. I was encouraged to leave it this way by a neighbour while walking the dog. They said, "I love that you don't wash it, nice to see one that's actually used." Around the Miami area there are a lot of flashy, overly loud cars, and distancing myself from this type is no bad thing. The paint likely suffers from being covered in pollutants, but the interior, covered in sand, takeaway wrappers, receipts and what-not is likely protecting it from wear. A barrier between the world and carpet.

With the six-weekly trip from Florida to Minnesota for Alfred's treatment looming (now complete), the thought of sitting in a clean, fresh 997 motivated me to embark on the epic task in hand. For the detailers reading this, I used the two-bucket method, dried it off with some microfibre towels, used a hand-held Dyson on the interior and wiped it all down with some wipe things. I finished this process off with some window cleaner.

It was hard work and took easily a couple of hours. My hands hurt for days afterwards, mostly from squeezing them between the spokes to clean the inside of the wheels and brake calipers. However, there's no denying it looks beautiful when finally clean.

Aside from this, new brake pads went on the car – a job I gave to a small local shop rather than taking it to the OPC. I could relay a story of phone calls while it was there suggesting the parts didn't fit (turns out they were putting them on the rear wheels and not the front), and confusion once more at the correct end of the car when the new OEM parts I'd supplied didn't look like the Textar ones that came out. A bill for $400 (not including parts supplied). Let's just say I won't do that again and leave it at that.

I tackled another job on the car myself. The disc on one of the PCM buttons had fallen off some time back so I bought a new one. Actually, I had to buy two because they're sold in pairs at $80.

I left Renée and Alfred at the halfway point in Tennessee on our return from the University of Minnesota. She's not left me, just spending some time with family. The journey back to Florida, around 850 miles, was a reminder of how fast this car is – something that you can forget when dailying one. It's an awesome machine, and one long empty section entering the express lane towards Atlanta, Georgia will be long remembered. A bit naughty, but what's the point of owning a 911 if you're not going to ride it like Seabiscuit once in a while. Long journeys like this may sound horrible, but doing them in this car at least makes some of it fun. I'm almost looking forward to driving back there on Friday. I'll get the bucket and sponge out first... 911

HOPE AND HOMES FOR CHILDREN

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Russia's brutal invasion of Ukraine is not just a humanitarian crisis for the Ukrainian people; it's a child protection emergency.

Up to 100,000 children warehoused in Ukraine's vast orphanage system – a network of over 700 buildings – risk being forgotten. Left to face the dangers of war alone as staff flee. As families are torn apart or forced from their homes, many more children are at risk of being separated from the love and protection they desperately need. Worse still, they are at risk of trafficking, or being placed in overcrowded, understaffed and poorly resourced orphanages in border countries.

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Will you help us by donating?

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PREMIERPORSCHE

EVERYTHING YOU NEED FOR YOUR 911

Data file
Full specs, ratings and market values of every Porsche 911 model from 1963 to 2022 can be found beginning on page 74

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
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

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

Data file

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

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

General valuations

This reflects the general market trend for a model's used value compared to the previous financial quarter. The review for 2022 Q3 will be July. The review for 2022 Q2 was April.

Ratings

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

(0 series) ★★★★☆

911 2.0-litre 1964-1967

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

(A series) ★★★★★

911R 1968

The lightest 911 of all time, the R was essentially a prototype racer fitted with a 906 flat six engine producing 210hp. Of the 19 produced, four would stay at the factory as works cars.

Production numbers	19
Issue featured	94
Engine capacity	1,991cc
Compression ratio	10.5:1
Maximum power	210hp @ 8,000rpm
Maximum torque	152Nm @ 6,800rpm
0-62mph	5.9 secs
Top speed	152mph
Length	4,163mm
Width	1,610mm
Weight	800kg
Wheels & tyres	
F	6x15-inch; 185/70/R15
R	7x15-inch; 185/70/R15

(C & D series) ★★★★★

911S 1970-1971

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

Production numbers	4,691
Issue featured	120
Engine capacity	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; 185HR

(C & D series) ★★★★☆

911T 1970-1971

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.

Production numbers	15,082
Issue featured	107
Engine capacity	2,195cc
Compression ratio	8.6:1
Maximum power	125hp @ 5,800rpm
Maximum torque	169Nm @ 4,200rpm
0-62mph	7.0 sec (est)
Top speed	127mph
Length	4,163mm
Width	1,610mm
Weight	1,020kg
Wheels & tyres	
F	5.5x15-inch; 165HR
R	5.5x15-inch; 165HR

(F series) ★★★☆☆

911T 1973

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

Production numbers	16,933
Issue featured	127
Engine capacity	2,341cc
Compression ratio	7.5:1
Maximum power	130hp @ 5,600rpm
Maximum torque	197Nm @ 4,000rpm
0-62mph	7.6 sec
Top speed	128mph
Length	4,163mm
Width	1,610mm
Weight	1,077kg
Wheels & tyres	
F	5.5x15-inch; 165HR
R	5.5x15-inch; 165HR

(G series) ★★★★★

Carrera 3.0 RS 1974

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

Production numbers	109
Issue featured	145
Engine capacity	2,994cc
Compression ratio	8.5:1
Maximum power	230hp @ 6,200rpm
Maximum torque	275Nm @ 5,000rpm
0-62mph	5.3 sec
Top speed	152mph
Length	4,135mm
Width	1,680mm
Weight	900kg
Wheels & tyres	
F	8x15-inch; 215/60/VR15
R	9x15-inch; 235/60/VR15

★★★★☆

930 3.0 1975-1977

Fitted with a KKK turbo, this was the world's first production Porsche to be turbocharged. Flared arches, whaletail rear wing 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	1,140kg
Wheels & tyres	
F	7x15-inch; 185/70/VR15
R	8x15-inch; 215/60/VR15

★★★★☆

930 3.3 1978-1983

A 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	116
Engine capacity	3,299cc
Compression ratio	7.0:1
Maximum power	300hp @ 5,500rpm
Maximum torque	412Nm @ 4,000rpm
0-62mph	5.4 sec
Top speed	160mph
Length	4,291mm
Width	1,775mm
Weight	1,300kg
Wheels & tyres F	7x16-inch; 205/55/VR16 R **8x16-inch; 225/50/VR16**

(A series) ★★★★★

911S 1968

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

Production numbers	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
Top speed	137mph
Length	4,163mm
Width	1,610mm
Weight	1,030kg
Wheels & tyres	
F 4.5x15-inch; 165/80/R15	
R 4.5x15-inch; 165/80/R15	

(A series) ★★★★★

911L 1968

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 numbers	1,603
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; 185HR	
R 5.5x15-inch; 185HR	

(A series) ★★★★★

911T 1968

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

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

(B series) ★★★★★

911E 1969

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
Issue featured	n/a
Engine capacity	1,991cc
Compression ratio	9.1:1
Maximum power	140hp @ 6,500rpm
Maximum torque	175Nm @ 4,500rpm
0-62mph	7.6 sec
Top speed	130mph
Length	4,163mm
Width	1,610mm
Weight	1,020kg
Wheels & tyres	
F 5.5x15-inch; 185HR	
R 5.5x15-inch; 185HR	

(B series) ★★★★★

911S 1969

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.

Production numbers	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	

(C & D series) ★★★★★

911E 1969-1971

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

Production numbers	4,927
Issue featured	107
Engine capacity	2,195cc
Compression ratio	9.1:1
Maximum power	155hp @ 6,200rpm
Maximum torque	196Nm @ 4,500rpm
0-62mph	7.0 sec
Top speed	137mph
Length	4,163mm
Width	1,610mm
Weight	1,020kg
Wheels & tyres	
F 6x15-inch; 185HR	
R 6x15-inch; 185HR	

(E series) ★★★★★

911E 1972

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

Production numbers	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	

(E series) ★★★★★

911T 1972

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

Production numbers	16,933
Issue featured	107
Engine capacity	2,341cc
Compression ratio	7.5:1
Maximum power	130hp @ 5,600rpm
Maximum torque	197Nm @ 4,000rpm
0-62mph	7.6 sec
Top speed	128mph
Length	4,163mm
Width	1,610mm
Weight	1,077kg
Wheels & tyres	
F 5.5x15-inch; 165HR	
R 5.5x15-inch; 165HR	

(E series) ★★★★★

911S 1972

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

Production numbers	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	

(F series) ★★★★★

Carrera 2.7 RS 1973

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

Production numbers	1,590
Issue featured	145
Engine capacity	2,687cc
Compression ratio	8.5:1
Maximum power	210hp @ 6,300rpm
Maximum torque	255Nm @ 5,100rpm
0-62mph	5.8 sec
Top speed	152mph
Length	4,163mm
Width	1,652mm
Weight	975kg (Sport)
Wheels & tyres	
F 6x15-inch; 185/70/R15	
R 7x15-inch; 215/60/R15	

(F series) ★★★★★

911E 1973

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

Production numbers	4,406
Issue featured	144
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 ATS; 185HR	
R 6x15-inch ATS; 185HR	

(F series) ★★★★★

911S 1973

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

Production numbers	5,054
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	

(G, H, I, J series) ★★★★★

911 1974-1977

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

Production numbers	9,320
Issue featured	121
Engine capacity	2,687cc
Compression ratio	8.0:1
Maximum power	150hp @ 5,700rpm (165bhp from '76)
Maximum torque	235Nm @ 3,800rpm (4,000 from '76)
0-62mph	8.5 sec
Top speed	130mph
Length	4,291mm
Width	1,610mm
Weight	1,075kg
Wheels & tyres F&R 6x15-inch; 185VR	

(G, H, I, J series) ★★★★★

911S 1974-1977

911S was now a mid-range model comparable to the previous 911E. It had the same body changes as the base model, and came as standard with 'Cookie Cutter' rims.

Production numbers	17,124
Issue featured	n/a
Engine capacity	2,687cc
Compression ratio	8.5:1
Maximum power	173hp @ 5,800rpm
Maximum torque	235Nm @ 4,000rpm
0-62mph	7.0 sec
Top speed	142mph
Length	4,291mm
Width	1,610mm
Weight	1,080kg
Wheels & tyres	
F 6x15-inch; 185VR	
R 6x15-inch; 185VR	

(G & H series) ★★★★★

911 Carrera 2.7 1974-1976

From 1974, Carrera name was given to range-topping 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	

(I & J series) ★★★★★

911 Carrera 3.0 1976-1977

Not sold in the US, the Carrera 3.0 was basically the same model as the previous Carrera, only fitted with a new 2,994cc engine, essentially from the 911 Turbo.

Production numbers	3,687
Issue featured	148
Engine capacity	2,994cc
Compression ratio	8.5:1
Maximum power	197hp @ 6,000rpm
Maximum torque	255Nm @ 4,200rpm
0-62mph	6.3 sec
Top speed	145mph
Length	4,291mm
Width	1,610mm
Weight	1,093kg
Wheels & tyres	
F 6x15-inch; 185/70/VR15	
R 7x15-inch; 215/60/VR15	

★★★★★

911 SC 1978-1983

From 1978, the SC was the only normally aspirated 911. Developed from the Carrera 3.0, but produced less power. Upgraded Sport options.

Production numbers	60,740
Issue featured	156
Engine capacity	2,994cc
Compression ratio	8.5:1/8.6:1/9.8:1
Maximum power	180/188/204hp @ 5,500rpm
Maximum torque	265/265/267Nm
0-62mph	6.5 sec
Top speed	141/146mph
Length	4,291mm
Width	1,652mm
Weight	1,160kg (1978)
Wheels & tyres F 6x15-inch; 185/70/VR15	
R 7x15-inch; 215/60/VR15	

★★★★★

SC RS 1984

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 numbers	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/VR16	
R 8x16-inch; 225/50/VR16	

★★★★★

930 3.3 1978-1983

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	116
Engine capacity	3,299cc
Compression ratio	7.0:1
Maximum power	300hp @ 5,500rpm
Maximum torque	412Nm @ 4,000rpm
0-62mph	5.4 sec
Top speed	160mph
Length	4,291mm
Width	1,775mm
Weight	1,300kg
Wheels & tyres F 7x16-inch; 205/55/VR16 R **8x16-inch; 225/50/VR16**	

★★★★★

Carrera 3.2 1984-1989

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 ratio	10.3:1
Maximum power	231hp @ 5,900rpm
Maximum torque	284Nm @ 4,800rpm
0-62mph	5.6 sec
Top speed	152mph
Length	4,291mm
Width	1,652mm
Weight	1,210kg
Wheels & tyres	
F 7x15-inch; 195/65/VR15	
R 8x15-inch, 215/60/VR15 (16" for '89)	

★★★★★

930 SE 1986-1989

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 numbers	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/VR16	
R 9x16-inch; 245/45/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
Max power	450hp @ 6,500rpm
Max 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/ZR17	
R 9x17-inch; 255/40/ZR17	

Speedster 1989

Carrera 3.2 with a steeply raked windscreen and hood and stripped interior. Porsche claims the hood wasn't designed to be 100 per cent watertight.

Production numbers	2,274 (for both wide 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/VR16	
R 8x16-inch; 245/60/VR16	

3.2 Clubsport 1987-89

Removing 'luxuries' sliced off around 40kg of weight. Revised engine management gave a higher rev limit of 6,840rpm. Suspension uprated and LSD standard.

Production numbers	340
Issue featured	126
Engine capacity	3,164cc
Compression ratio	10.3:1
Maximum power	231hp @ 5,900rpm
Maximum torque	284Nm @ 4,800rpm
0-60mph	5.1 sec
Top speed	152mph
Length	4,291mm
Width	1,650mm
Weight	1,160kg
Wheels & tyres	
F 6x16-inch; 205/55/VR16	
R 7x16-inch, 225/55/VR16	

930 LE 1989

Essentially an SE but without a slantnose front, the LE had the same engine, front spoiler, sill extensions and rear air intakes. One made for every OPC of the time.

Production numbers	50
Issue featured	110
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/VR16	
R 9x16-inch; 245/45/VR16	

964 Carrera 2 1990-1993

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

Production numbers	19,484
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/ZR16	
R 8x16-inch; 225/50/ZR16	

964 Carrera 4 1989-1993

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

Production numbers	13,353 (Coupe)
Issue featured	111
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	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/ZR16	
R 8x16-inch; 225/50/ZR16	

964 3.8 RS 1993 (C & D series)

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

Production numbers	55
Issue featured	12
Engine capacity	3,746cc
Compression ratio	11.6:1
Maximum power	300hp @ 6,500rpm
Maximum torque	359Nm @ 5,250rpm
0-62mph	4.9 sec
Top speed	169mph
Length	4,250mm
Width	1,775mm
Weight	1,210kg
Wheels & tyres	
F 9x18-inch; 235/40/ZR18	
R 11x18-inch; 285/35/ZR18	

964 Anniversary 1993-94

'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 numbers	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	
R 9x17-inch; 255/40/17	

964 RS America 1993

Offered in five colours, fixed whaletail wing and two cloth sports seats, with just four options: air-con, sunroof, 90 per cent locking rear differential and stereo.

Production numbers	701
Issue featured	157
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	164mph
Length	4,250mm
Width	1,650mm
Weight	1,340kg
Wheels & tyres	
F 7x17-inch; 205/50/ZR17	
R 8x17-inch; 255/40/ZR17	

964 C2 Speedster 93-94

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

Production numbers	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	

993 Carrera RS 1995-1996

Lightweight body as per RS tradition, teamed with a 3.8-litre engine. VarioRam intake system and remapped ECU to create 300bhp, fed to the rear wheels only.

Production numbers	1,014
Issue featured	119
Engine capacity	3,746cc
Compression ratio	11.5:1
Maximum power	300hp @ 6,000rpm
Maximum torque	355Nm @ 5,400rpm
0-62mph	5.0 sec
Top speed	172mph
Length	4,245mm
Width	1,735mm
Weight	1,279kg
Wheels & tyres	
F 8x18-inch, 225/40ZR18	
R 10x18-inch, 265/35ZR18	

993 Carrera 4S 1995-1996

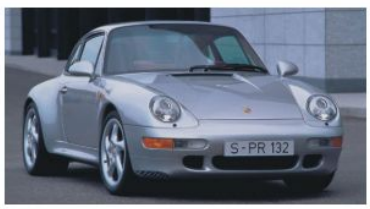
The 4S was effectively a Carrera 4 with a Turbo wide bodyshell, albeit lacking a fixed rear wing. Also boasted Turbo suspension, brakes and Turbo-look wheels.

Production numbers	6,948
Issue featured	109
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	285hp @ 6,100rpm
Maximum torque	340Nm @ 5,250rpm
0-62mph	5.3 sec
Top speed	168mph
Length	4,245mm
Width	1,795mm
Weight	1,520kg
Wheels & tyres	
F 8x18-inch; 225/40/ZR18	
R 10x18-inch; 285/30/ZR18	

993 Turbo 1996-1998

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

Production numbers	5,937
Issue featured	147
Engine capacity	3,600cc
Compression ratio	8.0:1
Maximum power	408hp @ 5,750rpm
Maximum torque	540Nm @ 4,500rpm
0-62mph	4.3 sec
Top speed	180mph
Length	4,245mm
Width	1,795mm
Weight	1,500kg
Wheels & tyres	
F 8x18-inch: 225/40/ZR18	
R 10x18-inch; 285/30/ZR18	



993 Carrera S 1997-1998

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

Production numbers	3,714
Issue featured	118
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	285hp @ 6,100rpm
Maximum torque	340Nm @ 5,250rpm
0-62mph	5.4 sec
Top speed	168mph
Length	4,245mm
Width	1,795mm
Weight	1,450kg
Wheels & tyres	
F 8x18-inch: 225/40/ZR18	
R 10x18-inch; 285/30/ZR18	

996 Turbo 2001-2005

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

Production numbers	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	

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.

Production numbers	23,055
Issue featured	155
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	320hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.1 sec
Top speed	174mph
Length	4,435mm
Width	1,830mm
Weight	1,495kg
Wheels & tyres	
F 8x18-inch; 225/40/R18	
R 11x18-inch; 295/30/R18	

996 GT2 2001-03

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

Production numbers	1,287
Issue featured	127
Engine capacity	3,600cc
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
Width	1,830mm
Weight	1,440kg
Wheels & tyres F 8x18-inch; 235/40/R18 R 12x18-inch; 315/30/R18	

996.2 C2 2002-2004

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 numbers	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/R17	
R 9x17-inch; 255/40/R17	

964 C4 Lightweight 1991

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

Production numbers	22
Issue featured	131
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	265hp @ 6,720rpm
Maximum torque	304Nm @ 6,720rpm
0-62mph	4.5 sec
Top speed	125mph
Length	4,275mm
Width	1,652mm
Weight	1,100kg
Wheels & tyres	
F	7x16-inch; 205/55/ZR16
R	9x16-inch; 245/55/ZR16

964 Turbo 1991-1992

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/ZR17
R	9x17-inch; 255/40/ZR17

964 RS 1991-1992

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

Production numbers	2,405
Issue featured	131
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	260hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.4 sec
Top speed	162mph
Length	4,250mm
Width	1,650mm
Weight	1,230kg (Sport)
Wheels & tyres	
F	7.5x17-inch; 205/50/ZR17
R	9x17-inch; 255/40/ZR17

964 Turbo S 1992-1993

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

Production numbers	81
Issue featured	108
Engine capacity	3,299cc
Compression ratio	7.0:1
Maximum power	381hp @ 6,000rpm
Maximum torque	490Nm @ 4,800rpm
0-62mph	4.6 sec
Top speed	180mph
Length	4,250mm
Width	1,775mm
Weight	1,290kg
Wheels & tyres	
F	8x18-inch; 225/40/ZR18
R	10x18-inch; 265/35/ZR18

964 Turbo 3.6 1993-1994

Engine based on modified 3.6-litre 964 unit. Distinctive 18-inch split-rim Speedline wheels covered the Big Red brake calipers. Suspension lowered by 20mm.

Production numbers	1,437
Issue featured	120
Engine capacity	3,600cc
Compression ratio	7.5:1
Maximum power	360hp @ 5,500rpm
Maximum torque	520Nm @ 4,200rpm
0-62mph	4.8 sec
Top speed	174mph
Length	4,250mm
Width	1,775mm
Weight	1,470kg
Wheels & tyres	
F	8x18-inch; 225/40/ZR18
R	10x18-inch; 265/35/ZR18

993 Carrera 1993-1997

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

Production numbers	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/ZR16
R	9x16-inch; 245/45/ZR16

993 Carrera 4 1994-1997

As per the 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 numbers	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/ZR16
R	9x16-inch; 245/45/ZR16

993 GT2 1995-1996

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

Production numbers	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/ZR18
R	11x18-inch; 285/35/ZR18

993 Turbo S 1998

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

Production numbers	346
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; 225/40/18
R	10x18-inch; 285/30/18

996.1 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/R17
R	9x17-inch; 255/40/R17

996.1 C4 1998-2001

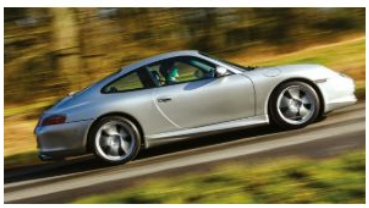
Four-wheel drive transmission fed five per cent of power in normal driving, increasing to 40 per cent when required. PSM used for first time, rolled out across the range in 2001.

Production numbers	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/R17

996.1 GT3 1998-2000

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

Production numbers	1,886
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



996.2 C4 2002-2004

Facelifted in line with rear-drive Carrera, though the all-wheel-drive version drives very much like its rear-driven brethren. Cabin received minor updates over Gen1.

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/R17
R	9x17-inch; 255/40/R17

996 Anniversary 03-04

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

Production numbers	1,963
Issue featured	112
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	345hp @ 6,800rpm
Maximum torque	370Nm @ 4,800rpm
0-62mph	4.9 sec
Top speed	175mph
Length	4,430mm
Width	1,770mm
Weight	1,370kg
Wheels & tyres	
F	8x18-inch; 225/40/R18
R	10x18-inch; 285/30/R18

996.2 GT3 2003-2005

Based on facelifted 996 Carrera, but with new wings. Suspension lowered and uprated, PCCB optional. Full-spec interior unless Clubsport option was ordered.

Production numbers	2,313
Issue featured	142
Engine capacity	3,600cc
Compression ratio	11.7:1
Maximum power	381hp @ 7,400rpm
Maximum torque	385Nm @ 5,000rpm
0-62mph	4.5 sec
Top speed	190mph
Length	4,435mm
Width	1,770mm
Weight	1,380kg
Wheels & tyres	
F	8.5x18-inch; 235/40/R18
R	11x18-inch; 295/30/R18

996 GT3 RS 2004-2005

Same 3,600cc engine as in GT3, but with weight saving, offering 280bhp per ton – an improvement of four per cent over the 996 GT3 Clubsport. PCCB optional.

Production numbers	682
Issue featured	161
Engine capacity	3,600cc
Compression ratio	11.7:1
Maximum power	381hp @ 7,400rpm
Maximum torque	385Nm @ 5,000rpm
0-62mph	4.4 sec
Top speed	190mph
Length	4,435mm
Width	1,770mm
Weight	1,360kg
Wheels & tyres	
F	8.5x18-inch; 235/40/R18
R	11x18-inch; 295/30/R18

Sales debate

Has the pandemic changed the buying habits of those in the market for used 911s?

It would be naive to think that global lockdowns and disruptions from a pandemic wouldn't bring with it some changes, but has it left a mark on the used 911 buyer? Two respected specialists concur it has.

"Yes, buyers' habits certainly changed," says Jamie Tyler of Paragon. "A lot more people are buying remotely now; this has continued from the days of only being able to buy cars via 'click and collect'." For that to thrive, stock must be of a quality to support worry-free purchase. "We have a powerful reputation, so we're lucky that people have the confidence to buy cars unseen, knowing it to be a good example," explains Jamie.

Jonathan Ostroff of Hexagon Classics agrees, but adds that the post-lockdown free-for-all has altered. "The early excitement of online auction sites has given way to a more cautious approach to online auctions," he says, adding, "this is because tales of poorly described cars, rejected sales contracts and underfunded auction house fees have become more commonplace." He agrees this is good news for established dealers, pointing out that buyers "opt for the peace of mind that comes from doing business with established organisations."

There is, in effect, little change. The best way to buy a great 911 has always been to go to a respected specialist. The fact that they stock, prepare and offer a 911 for sale means it must already have passed in-depth checks. That may come at a slight premium but Jonathan – quoting 19th century writer John Ruskin – says, "It is unwise to pay too much, but it is worse to pay too little." Jonathan highlights that, "The choice of several cars, properly prepared and a high level of aftersales, go a long way."

Jonathan notes that buyers are now also happier to wait for their ideal car. "Buyers are certainly more adept and precise in their searches," he says. Jamie points out that some are compromising on a wish list, due to the available stock. "There's definitely more of a 'you only live once' attitude, and people just want to get out and enjoy themselves," he finds. Good, used stock is increasing recently, now that new cars are entering the market again.

Buyers' habits will always change, but for now, online – from reputable experts – is here to stay.

996 Turbo S
2004-2005

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

Production numbers	1,563
Issue featured	132
Engine capacity	3,600cc
Compression ratio	9.4:1
Maximum power	450hp @ 5,700rpm
Maximum torque	620Nm @ 3,500-4,500rpm
0-60mph	4.2 sec
Top speed	191mph
Length	4,291mm
Width	1,830mm
Weight	1,590kg
Wheels & tyres	
F 8x18-inch; 225/40/R18	
R 11x18-inch; 295/30/R18	

997.1 Carrera
2004-2008

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

Production numbers	25,788
Issue featured	112
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	325hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.0 sec
Top speed	177mph
Length	4,427mm
Width	1,808mm
Weight	1,395kg
Wheels & tyres	
F 8x18-inch; 235/40/R18	
R10x18-inch; 265/40/R18	

997.1 GT3 RS
2006-2007

Similar to GT3, with 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	
F 8.5x19-inch; 235/35/R19	
R 12x19-inch; 305/30/R19	

997 GT2
2007-2009

Essentially a 997 Turbo but with rear-wheel drive only. Had a more track-orientated suspension and brake setup, with GT3-style interior and extra power.

Production numbers	1,242
Issue featured	127
Engine capacity	3,600cc
Compression ratio	9.0:1
Maximum power	530hp @ 6,500rpm
Maximum torque	680Nm @ 2,200-4,500rpm
0-62mph	3.7 sec
Top speed	204mph
Length	4,469mm
Width	1,852mm
Weight	1,440kg
Wheels & tyres	
F 8.5x19-inch; 235/35/ZR19	
R 12x19-inch; 325/30/ZR19	

997.2 GT3 RS 2009-2012

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 numbers	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; 325/30/ZR19	

997 Speedster
2010

Built to mark Porsche Exclusive's 25th year. Shorter windscreen, but rake angle same as 997 Carrera. Wide body with 19-inch Fuchs wheels. Rear-wheel drive.

Production numbers	356
Issue featured	128
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	408hp @ 7,300rpm
Maximum torque	420Nm @ 4,400-5,600rpm
0-62mph	4.4 sec
Top speed	190mph
Length	4,440mm
Width	1,852mm
Weight	1,540kg
Wheels & tyres F 8.5x19-inch; 235/35/ZR19 R 11x19-inch; 305/30/ZR19	

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

997 Turbo S
2011-2013

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

Production numbers	2,000
Issue featured	123
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	530hp @ 6,250-6,750rpm
Maximum torque	700Nm @ 2,100-4,250rpm
0-62mp	3.3 sec
Top speed	195mph
Length	4,435mm
Width	1,852mm
Weight	1,585kg
Wheels & tyres F 8.5x19-inch; 235/35/ZR19 R 11x19-inch; 305/30/ZR19	

991.1 Carrera
2011-2015

The first of the newest and latest Gen7 911s, it takes styling hues from the 993. A redesigned chassis with lengthened wheelbase reduces the overhang of the engine.

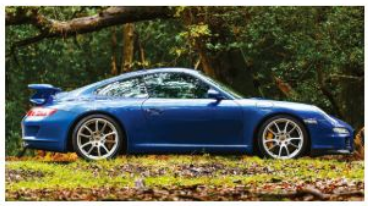
Production numbers	Unknown
Issue featured	137
Engine capacity	3,436cc
Compression ratio	12.5:1
Maximum power	350hp @ 7,400rpm
Maximum torque	390Nm @ 5,600rpm
0-62mph	4.8 sec
Top speed	179.6mph
Length	4,491mm
Width	1,808mm
Weight	1,380kg
Wheels & tyres	
F 8.5x19-inch; 235/40/ZR19	
R 11x19-inch; 285/35/ZR19	

997.1 Carrera S 2004-2008

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

Production numbers	41,059
Issue featured	107
Engine capacity	3,824cc
Compression ratio	11.8:1
Maximum power	355hp @ 6,600rpm
Maximum torque	400Nm @ 4,600rpm
0-62mph	4.8 sec
Top speed	182mph
Length	4,427mm
Width	1,808mm
Weight	1,420kg

Wheels & tyres
F 8x19-inch; 235/35/R19
R 11x19-inch; 295/30/R19



997.1 GT3 2006-2007

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

Production numbers	2,378
Issue featured	117
Engine capacity	3,600cc
Compression ratio	12.0:1
Maximum power	415hp @ 7600rpm
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

997.1 Carrera 4 2005-08

Like the 997 Carrera, but with drive to all four wheels via a multi-disc viscous coupling, transferring between five and 40 per cent of traction to the front. 44mm wider at rear.

Production numbers	8,533
Issue featured	3
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	325hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.1 sec
Top speed	174mph
Length	4,427mm
Width	1,852mm
Weight	1,450kg

Wheels & tyres
F 8x18-inch; 235/40/R18
R 11x18-inch; 295/35/R18

997.1 C4S 2005-2008

The same 3.8-litre, 355bhp engine as the Carrera S, with four-wheel-drive system on C4. 44mm wider than Carrera S to accommodate for wider rear wheels and tyres.

Production numbers	30,973
Issue featured	111
Engine capacity	3,824cc
Compression ratio	11.8:1
Maximum power	355hp @ 6,600rpm
Maximum torque	400Nm @ 4,600rpm
0-62mph	4.8 sec
Top speed	179mph
Length	4,427mm
Width	1,852mm
Weight	1,475kg

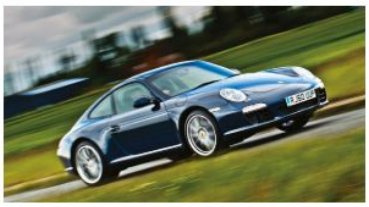
Wheels & tyres
F 8x19-inch; 235/35/R19
R 11x19-inch; 305/30/R19

997.1 Turbo 2005-2008

Similar to 997 C4S body, but with extra intakes at the front and sides. Essentially the 996 Turbo engine, but with all-new twin turbos. VTG gave best of small/large turbos.

Production numbers	19,201
Issue featured	159
Engine capacity	3,600cc
Compression ratio	9.8:1
Maximum power	480hp @ 6,000rpm
Maximum torque	620Nm @ 1,950-5,000rpm
0-62mph	3.9 sec
Top speed	193mph
Length	4,450mm
Width	1,852mm
Weight	1,585kg

Wheels & tyres F 8.5x19-inch;235/35/R19 R **11x19-inch; 305/30/R19**



997.2 Carrera 2008-2012

Revised with restyled LED rear lights and front driving lights. M97 engine replaced with a 91 DFI unit, using fewer parts – with no problematic Intermediate Shaft.

Production numbers	10,500
Issue featured	144
Engine capacity	3,614cc
Compression ratio	12.5:1
Maximum power	345hp @ 6,500rpm
Maximum torque	390Nm @ 4,400rpm
0-62mph	4.9 sec
Top speed	179mph
Length	4,435mm
Width	1,808mm
Weight	1,415kg

Wheels & tyres
F 8x18-inch; 235/40/ZR18
R 10.5x18-inch; 265/40/ZR18

997.2 Carrera S 2008-12

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

Production numbers	15,000
Issue featured	61
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	385hp @ 6,500rpm
Maximum torque	420Nm @ 4,400rpm
0-62mph	4.7 sec
Top speed	187mph
Length	4,435mm
Width	1,808mm
Weight	1,425kg

Wheels & tyres
F 8x19-inch; 235/35/ZR19
R 11x19-inch; 295/30/ZR19

997.2 C4S 2008-2012

Body as per C4 but with larger engine. Utilised 997 Turbo's 4WD and PTM. Viscous coupling gives way to electromagnetically controlled multi-plate clutch.

Production numbers	7,910 (Coupe)
Issue featured	111
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	385hp @ 6,500rpm
Maximum torque	420Nm @ 4,400rpm
0-62mph	4.7 sec
Top speed	185mph
Length	4,435mm
Width	1,852mm
Weight	1,480kg

Wheels & tyres
F 8x19-inch; 235/35/ZR19
R 11x19-inch; 305/30/ZR19

997.2 GT3 2009-2012

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 numbers	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; 235/35/ZR19
R 12x19-inch;305/30/ZR19

997.2 Turbo 2009-2013

Same as the original 997 Turbo but with new LED tail-lights and front driver lights. Larger tailpipes and DFI engine, with fuel consumption cut by 16 per cent.

Production numbers	3,800
Issue featured	152
Engine capacity	3,800cc
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
Length	4,450mm
Width	1,852mm
Weight	1,570kg

Wheels & tyres
F 8.5x19-inch; 235/35/ZR19
R 11x19-inch; 305/30/ZR19

997 GT3 RS 4.0 2010

Engine was upgraded and aerodynamically tweaked, with the angle of the rear wing increased and dive planes on either side of the front nose. A future collectors' gem.

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/ZR19
R 12x19-inch; 325/30/ZR19

997 918 Edition 2010

These exclusive 997 Turbo S-spec 911s were only available to those who had paid a deposit for a 918 Spyder. Acid green badging and brake calipers.

Production numbers	121
Issue featured	74
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	530hp @ 6,250-6,750rpm
Maximum torque	700Nm @ 2,100-4,250rpm
0-62mph	3.3 sec
Top speed	195mph
Length	4,435mm
Width	1,852mm
Weight	1,585kg

Wheels & tyres F 8.5x19-inch; 235/35/ZR19 **R** 11x19-inch; 305/30/ZR19

997 GT2 RS 2010-2011

GT2 went back to its roots with lightweight body and interior, plus extra power. Recognisable thanks to carbon fibre bonnet, air intake and mirrors.

Production numbers	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/ZR19

997 C2 GTS 2010-2012

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

Production numbers	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; 235/35/19
R 11x19-inch; 305/30/19

997 C4 GTS 2011-2012

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 Carrera S 2011-2015

Same as Carrera, with seven-speed manual 'box but utilising bigger engine. Slightly larger front brakes than the standard Carrera, PASM as standard equipment.

Production numbers	Unknown
Issue featured	114
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	400hp @ 7,400rpm
Maximum torque	440Nm @ 5,600rpm
0-62mph	4.5 sec
Top speed	188.9mph
Length	4.491mm
Width	1,808mm
Weight	1,395kg

Wheels & tyres
F 8.5x20-inch; 245/35/ZR20
R 11x20-inch; 295/30/ZR20

991.1 Carrera 4 2012-2015

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 numbers	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;305/35/ZR19

991.1 Carrera 4S 2012-2015

Same wider body styling as C4, coupled to 3.8-litre 400bhp engine. Also features six-piston brake calipers at front. PTV spread torque more evenly.

Production numbers	Unknown
Issue featured	118
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	400hp @ 7,400rpm
Maximum torque	440Nm @ 5,600rpm
0-62mph	4.5 sec
Top speed	185mph
Length	4,491mm
Width	1,852mm
Weight:	1,445kg

Wheels & tyres
F 8.5x20-inch; 245/35/ZR20
R 11x20-inch; 305/30/ZR20

991.1 GT3 2013-2015

Wide body from 991 Carrera 4 was used for the first time. Mezger engine from previous GT3s replaced with revamped DFI version of Carrera S engine. PDK only.

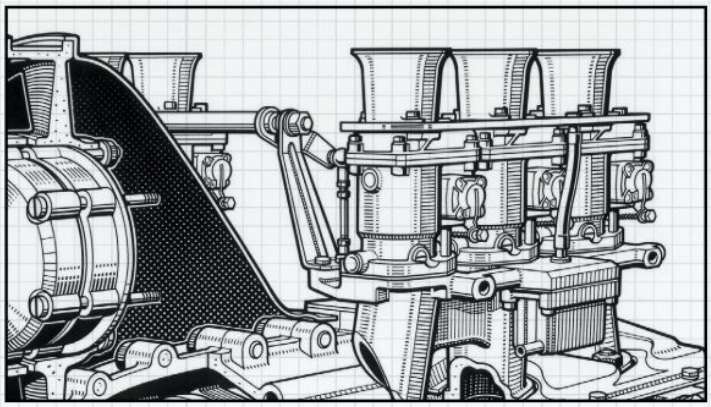
Production numbers	3,000 (estimate)
Issue featured	143
Engine capacity	3,800cc
Compression ratio	12.9:1
Maximum power	475hp @ 8,250rpm
Maximum torque	440Nm @ 6,250rpm
0-62mph	3.5 sec
Top speed	196mph
Length	4.545mm
Width	1,852mm
Weight	1,430kg

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

Technology explained

060 PORSCHE CARBURETTORS

What is a carburettor, and how does it work? Alisdair Cusick dives into this key component



We may live in an age of electronic everything on a 911, but that hasn't always been the case. The direct fuel injection (DFI) of today is no different. Up to 1972, 911s used a carburettor for fuel delivery. The carburettor, or carb, controls air and fuel going into the engine to match demand from the throttle. Made of alloy, there are three main elements: the float chamber, the carb throat and the accelerator pump.

First is the float chamber, which is nothing more than a fuel tank that supplies fuel to the emulsion tube. The fuel pump delivers fuel into the float chamber and as the level rises, a hinged float touches a needle valve, shutting off supply – like a toilet ballcock. As fuel is used, the level drops, the needle valve opens to constantly maintain the crucial float height, and therefore fuel pressure to the emulsion tube.

The carb throat is the large circular hole through the carb, where air enters at one end and the air-fuel mix is delivered at the other end into the intake manifold. Between them is the emulsion tube that's nothing more than an outlet sitting in the middle of the throat; a venturi; and below that the butterfly valve of the throttle plate. Fuel sits in the emulsion tube at the same height as in the float chamber. As the engine runs, air enters the carb throat and passes over the venturi. This constricts the air, creating negative pressure and thereby sucking at the only place it can: the fuel and air mix in the emulsion tube. This mix atomises with the air – ideally at the correct balance of 14.7 parts air to one part fuel – which enters the intake manifolds and then the cylinders. Here, the spark plugs ignite it in the correct sequence, and the crank rotates.

An engine needs to rev above idle though, and that's where the throttle plate comes in. When the throttle is depressed, the throttle butterfly opens in the carb throat, which allows more air in. This, in turn, sucks more fuel in and causes engine revs to increase.

The accelerator pump is an additional circuit linked to the throttle plate. Under quick throttle increase, the accelerator pump squirts in a measured amount of extra fuel straight above the venturi. Because this occurs before the vacuum is formed, this enriches the fuel mix ahead of the emulsion tube, aiding the engine to accelerate.

The carb is a clever device that relies on constantly balancing air and fuel at the correct mix, while matching the demand of the throttle. There's an art to carburettor setup and those skills aren't easily found, not least because for the past 50 years 911s have relied on mechanical and then electronic fuel injection systems, driven by efforts to reduce emissions and increase performance.

★★★★☆

991.1 Turbo 2013-2014

New Turbo marks introduction of rear axle steering, plus PDK-only transmission to forced-induction 991 models.

Production numbers	Unknown
Issue featured	109
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	520hp @ 6,000rpm
Maximum torque	660Nm @ 1,950rpm
0-62mph	3.4 sec
Top speed	195mph
Length	4,506mm
Width	1,880mm
Weight	1,595kg
Wheels & tyres	
F 8.5x20-inch; 245/35/ZR20	
R 11x20-inch; 305/30/ZR20	

★★★★☆

991.2 Carrera S 2015-2018

Shares Carrera's 3.0-litre turbocharged 9A2 engine, and features revised turbos, exhaust and engine management to produce an additional 50hp.

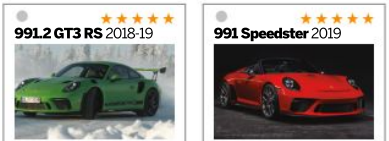
Production numbers	Unknown
Issue featured	132
Engine capacity	2,981cc
Compression ratio	10.0:1
Maximum power	420hp @ 6,500rpm
Maximum torque	500Nm @ 1,700-5,000rpm
0-62mph	3.9 sec
Top speed	191mph
Length	4,499mm
Width	1,808mm
Weight	1,440kg
Wheels & tyres **F** 8.5x20-inch; 245/35/ZR20 **R** **11.5x20-inch;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

★★★★☆

991.2 C2 GTS 2017-2019

Similar specification and 'black accent' styling as per 991.1, available in both rear-wheel and all-wheel drive form. C4 GTS quicker than C2 GTS.

Production numbers	Unknown
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	194mph
Length	4,528mm
Width	1,852mm
Weight	1,450kg
Wheels & tyres **F** 9x20-inch; 245/35/ZR20 **R** 12x20-inch; 305/30/ZR20	



★★★★★

991.2 GT3 RS 2018-19

Latest GT3 RS gets GT3 facelift but with NACA ducts and suspension from GT2 RS. 20hp increase over Gen1, with chassis and aerodynamic revisions.

Production numbers	100 UK cars (est)
Issue featured	164
Engine capacity	4,000cc
Compression ratio	Unknown
Maximum power	520hp
Maximum torque	480Nm
0-62mph	3.2 sec
Top speed	193mph
Length	4,549mm
Width	1,880mm
Weight	1,420kg
Wheels & tyres	
F 9.5x20-inch; 265/35/ZR20	
R 12.5x21-inch; 325/30/ZR21	

★★★★★

991 Speedster 2019

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

Production numbers	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; 245/35/ZR20	
R 12x12-inch; 305/30/ZR20	

★★★★★

992 Carrera S 2019-

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	530Nm @ 2-5,000rpm
0-62mph	3.5 sec
Top speed	191mph
Length	4,519mm
Width	1,852mm
Weight	1,515kg
Wheels & tyres	
F 8.5x20-inch; 245/35/ZR20	
R 11.5x21-inch; 305/30/ZR21	

★★★★★

991.2 Carrera 4 2016-08

New 9A2 turbocharged engine fused with all-wheel-drive running gear, now electro-hydraulically controlled. Distinguishable by wider body and full-width rear brake light.

Production numbers	Unknown
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** 8.5x19-inch; 235/40/ZR19 **R** 11.5x19-inch; 295/35/ZR19	

★★★★☆

991.1 Turbo S 2013-2015

Same dimensions as the 991 Turbo, but with a tweaked map to provide extra 40bhp. Turbo options standard, including centre-lock wheels and PCCB.

Production numbers	Unknown
Issue featured	115
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	560hp @ 6,500-6,750rpm
Maximum torque	700Nm @ 2,100-4,250
0-62mph	3.1 sec
Top speed	197mph
Length	4,506mm
Width	1,880mm
Weight	1,605kg
Wheels & tyres	
F 9x20-inch; 245/35/ZR20	
R 11x20-inch, 305/30/ZR20	

★★★★★

991.2 C4 GTS 2017-2019

As 991.2 Carrera GTS but with PTM four-wheel drive electrically controlling drive between both axles (rear always driven). Red connecting strip on rear.

Production numbers	Unknown
Issue featured	151
Engine capacity	2,981cc
Compression ratio	10.0:1
Maximum power	450hp @ 6,500rpm
Maximum torque	550Nm @ 2,150-5,000rpm
0-62mph	3.8 sec
Top speed	193mph
Length	4,528mm
Width	1,852mm
Weight	1,515kg
Wheels & tyres	
F 9x20-inch; 245/35/ZR20	
R 12x20-inch; 305/30/ZR20	

991 Anniversary 2013-2014

Exuberantly styled 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.

Production numbers	1,963
Issue featured	112
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	400hp @ 7,400rpm
Maximum torque	440Nm @ 5,600rpm
0-62mph	4.5 sec
Top speed	188mph
Length	4,491mm
Width	1,852mm
Weight	1,420kg
Wheels & tyres	
F 9x20-inch; 245/35/ZR20	
R 11.5x20-inch; 305/30/ZR20	

991.1 Carrera GTS 2014-16

Big-spec GTS utilises wide 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.

Production numbers	Unknown
Issue featured	157
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	430hp @ 7,500rpm
Maximum torque	440Nm @ 5,750rpm
0-62mph	4.0 sec
Top speed	190mph
Length	4,491mm
Width	1,852mm
Weight	1,425kg
Wheels & tyres	
F 9x20-inch; 245/35/ZR20	
R 11.5x20-inch; 305/30/ZR20	

991.1 C4 GTS 2014-2016

Almost the same as the C2 GTS, but with additional traction offered by four-wheel drive. As a result, performance times are altered slightly over its rear-driven variant.

Production numbers	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; 245/35/ZR20	
R 11.5x20-inch; 305/30/ZR20	

991.1 GT3 RS 2015-2017

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 numbers	6,000
Issue featured	136
Engine capacity	3,996cc
Compression ratio	12.9:1
Maximum power	500hp @ 8,250rpm
Maximum torque	460Nm @ 6,250rpm
0-62mph	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	

991.2 Carrera 2015-2018

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

Production numbers	Unknown
Issue featured	137
Engine capacity	2,981cc
Compression ratio	10.0:1
Maximum power	370hp @ 6,500rpm
Maximum torque	450Nm @ 1,700-5,000rpm
0-62mph	4.2 sec
Top speed	183mph
Length	4,499mm
Width	1,808mm
Weight	1,430kg
Wheels & tyres	
F 8.5x19-inch; 235/40/ZR19	
R 11.5x19-inch; 295/35/ZR19	

991.2 Carrera 4S 2016-18

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
Maximum power	420hp @ 6,500rpm
Maximum torque	500Nm @ 1,700-5,000rpm
0-62mph	3.8 sec
Top speed	189mph
Length	4,499mm
Width	1,852mm
Weight	1,490kg
Wheels & tyres	
F 8.5x20-inch; 245/35/ZR20	
R 11.5x20-inch; 305/30/ZR20	

991.2 Turbo 2016-2018

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

Production numbers	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/ZR20	
R 11.5x20-inch; 305/30/ZR20	

991.2 Turbo S 2016-2018

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

Production numbers	Unknown
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 9x20-inch; 245/35/ZR20	
R 11.5x20-inch; 305/30/ZR20	

991 R 2016

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

Production numbers	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; 245/35/ZR20	
R 12x20-inch; 305/30/ZR20	

991.2 GT3 2017-2019

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 numbers	222 (UK, est)
Issue featured	153
Engine capacity	3,996cc
Compression ratio	13.3:1
Maximum power	500hp @ 8,250rpm
Maximum torque	460Nm @ 6,000rpm
0-62mph	3.9 sec (manual)
Top speed	199mph
Length	4,562mm
Width	1,852mm
Weight	1,413kg (manual)
Wheels & tyres	
F 9x20-inch; 245/35/ZR20	
R 12x20-inch; 305/30/ZR20	

991 GT2 RS 2017-2019

Fastest factory 911 of all time. Highly modified Turbo S engine with sprayed intercoolers. Rear wheel drive, PDK only. New inlets on bonnet feeds air to brakes.

Production numbers	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; 265/35/ZR20	
R 12.5x21-inch; 325/30/ZR21	

991 Turbo S Exclusive Edition

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	500
Issue featured	170
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	607hp
Maximum torque	750Nm @ 2,250-4,000rpm
0-62mph	2.9 sec
Top speed	205mph
Length	4,507mm
Width	1,880mm
Weight	Not specified
Wheels & tyres F 9x20-inch; 245/35/ZR20	
R 11.5x20-inch; 305/30/ZR20	

991 Carrera T 2018

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 8.5x19-inch; 245/40/ZR19 R 11.5x19-inch; 295/35/ZR19	

992 Carrera 4S 2019-

As with the 992 Carrera S, but with active all-wheel drive providing variable torque to the front axle. Identifiable by silver decklid slats (C2S has black).

Production numbers	In production
Issue featured	174
Engine capacity	2,981cc
Compression ratio	10.5:1
Maximum power	450hp @ 6,500rpm
Maximum torque	530Nm @ 2-5,000rpm
0-62mph	3.4 sec
Top speed	190mph
Length	4,519mm
Width	1,852mm
Weight	1,565kg
Wheels & tyres	
F 8.5x20-inch; 245/35/ZR20	
R 11.5x21-inch; 305/30/ZR21	

992 Carrera 2020-

The base 992 was revealed some nine months after the S. Visually different to the C2S thanks to smaller wheels and two single-exit exhaust tips.

Production numbers	In production
Issue featured	189
Engine capacity	2,981cc
Compression ratio	10.2:1
Maximum power	385hp @ 6,500rpm
Maximum torque	450Nm @ 1,900-5,000rpm
0-62mph	4.0 sec
Top speed	182mph
Length	4,519mm
Width	1,852mm
Weight	1,505kg
Wheels & tyres F 8.5x19-inch; 235/40/ZR19 R 11.5x20-inch; 295/35/ZR20	

992 Carrera 4 2020-

Same spec as the 992 Carrera, albeit with variable torque sent to the front wheels in an improved multi-plate clutch AWD PTM system over the 991.2.

Production numbers	In production
Issue featured	N/A
Engine capacity	2,981cc
Compression ratio	10.5:1
Maximum power	385hp @ 6,500rpm
Maximum torque	450Nm @ 1,950-5,000rpm
0-62mph	4.0secs
Top speed	180mph
Length	4,519mm
Width	1,852mm
Weight	1,555kg
Wheels & tyres F 8.5x19-inch; 235/40/ZR19 R 11.5x20-inch; 295/35/ZR20	

992 Turbo S 2020-

3.8-litre version of 992 Carrera's engine, with intercoolers now on top and air filters housed behind side air intakes. PSE and Sports chassis optional for first time.

Production numbers	In production
Issue featured	190
Engine capacity	3,745cc
Compression ratio	8.7:1
Maximum power	640hp @ 6,750rpm
Maximum torque	800Nm @ 2,500-4,000rpm
0-62mph	2.7 secs
Top speed	205mph
length	4,535mm
Width	1,900mm
weight	1,640kg
Wheels & tyres F 8.5x20-inch; 255/35/ZR20 R 11.5x21-inch; 315/30/ZR21	

992 Targa HDE 2020-

First of four Heritage Design specials from Porsche Exclusive, inspired here by Porsche sports cars of the 1950s and 1960s.

Production numbers	992
Issue featured	193
Engine capacity	2,981cc
Compression ratio	10.5:1
Maximum power	450hp @ 6,500rpm
Maximum torque	530Nm @ 2-5,000rpm
0-62mph	3.6secs
Top speed	189mph
Length	4,519mm
Width	1,852mm
Weight	1,675kg
Wheels & tyres	
F 8.5x20-inch; 245/35/ZR20	
R 11.5x21-inch; 305/30/ZR21	

992 GT3 2021-

New swan neck wing design, double wishbone front axle and GT3 R diffuser. 50 per cent more downforce over 991.2 GT3, sub seven-minute 'Ring time.

Production numbers	1,000 (est, for 2021)
Issue featured	199
Engine capacity	3,996cc
Compression ratio	13.3:1
Maximum power	510hp @ 8,400rpm
Maximum torque	470Nm @ 6,100rpm
0-62mph	3.4secs
Top speed	199mph
Length	4,573mm
Width	1,852mm
Weight	1,418kg (manual)
Wheels & tyres	
F 9.5x20-inch; 255/35/ZR20	
R 12x21-inch; 315/30/ZR21	

PARTNER PROMOTION

RPM Technik

PROJECT PERFECTION

959 engine built by RPM Technik

RPM Technik may be the go-to specialist for your modern GT Porsche models, however, they also offer a huge depth of air-cooled expertise for bespoke air-cooled project builds, factory perfect restorations and technical engineering services.

RPM Technik Special Projects department

The continual evolution and growth of the Special Projects department has resulted in the expansion into an additional dedicated building for air-cooled restorations. Equipped with two ramps, a rotisserie and a raft of period system testing equipment such as flow benches and a huge Bosch motor tester and gas analyser. "We are something of a rarity" says Ollie Preston, RPM Technik founding director. "New replacement parts aren't available and there are very few people who know how to repair the period components. We stand separate to many specialists as we have the both the knowledge and the testing equipment to get these old girls running again."

The Special Projects department also share access with the company's engine and transmissions shop and Beissbarth geometry facility. On-site machining equipment allows RPM Technik to overhaul cylinders heads and a state-of-the-art Tumbler refinishes engine cases and other components kindly and without risking contamination of the oil pathways that other media blasting techniques can risk.

3.8 litre engine developed in-house, producing 385bhp @7500rpm

One of two Porsche 959's recommissioned by RPM Technik

THE RESTOMOD 964 BACKDATE

There is a certain well known Californian builder of restomodded 964's that has a lot of column inches on this type of project. However, RPM Technik had a client that wanted his perfect incarnation of a 911 to be narrow bodied with some very specific details to bring the car to his perfect specification. Being an artisan in his field of jewellery, he had a clear vision of how he wanted the interior and exterior of the car to look. However, RPM Technik were given free rein to do all the mechanical and technical designs to make this something that would be the very best of its type. The spec is vast. The build has a carbon roof, uprated suspension and brakes, rebuilt gearbox with motorsport synchros and LSD, PAS delete, genuine 2.7 RS LWT panels, bespoke rear grill, electric heater system, heated front windscreen, bespoke carbon fibre bumpers, innovative oil cooling system and backdate gauges.

One of the masterpieces of this build is under the engine lid. The capacity of the original 250bhp 3.6 litre engine was raised to 3.8 litres and so started a long R&D exercise that is only just now coming to its ultimate iteration. This Alpha variant of the engine developed 385bhp @7500rpm and had the option of three different engine maps to suit the application in hand. The current engine is expected to dyno at more power, yet will be a more responsive and usable engine for town driving. This final evolution has even more bespoke engineering. This includes CNC-flowed cases and cylinder heads, custom rods, custom barrels and pistons, GT3 crankshaft, bespoke cams, individual throttle bodies and a carbon fibre air box. These engines are available for approximately £75,000 as a crate engine, run in and complete with their own ECU and bespoke wiring loom, fitting most air-cooled models.

THE LEGEND PORSCHE 959

The levels of attention to detail are matched by the investment in original workshop manuals and model-specific maintenance tools. Such tooling has allowed RPM Technik to recommission and restore not one but two 959s. The basic shape might look like a 911 but the level of tech in these models is staggering when you consider the concept was first worked on in 1981, over 40 years ago! The 959 had centre lock magnesium wheels and tyre pressure sensors – technology that only made it onto mainstream Porsches with the 991 GT3 over 25 years later. Both 959s needed engine rebuilds and the white 959 also needed fully recommissioning after being released from a bonded warehouse where it spent two decades standing idle.

The engine rebuild on the Silver 959 required a very high level of perseverance and ingenuity. Engine components for a 959 just aren't available anymore. As a result, both turbochargers were rebuilt, a custom wastegate fabricated and a specialist motorsport subcontractor used modern alloys to create identically light, but more robust, replacements to the fatigued titanium valves.

To maximise the provenance on the white 959, and to highlight the interesting backstory to this example, there are no plans to repaint the bodywork. Instead, it has received a very time consuming decontamination and deep detailing exercise that took 10-man days!

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Porsche Torque with Alex Manos

The Beverly Hills Car Club founder and CEO shares his views on special edition Porsches and what they mean to him

The name Targa came from the Targa Florio sports car road race in Sicily, in which Porsche had scored seven victories since 1956, with four more to come in 1973.

The 911E Targa's shape is unmistakable thanks to its iconic fly line and elegant roof. This design has characterised Porsche since 1963, and is part of the legend of the company's sports cars. Yet despite that somewhat macho image, there's something cute and charming about all Porsche 911s. And it goes far beyond a mere familiarity with the shape. It always seems there's something beautifully primal in the appearance of Porsches.

The Porsche 911E was the mid-range option in the E- and F-series 911s, with production running from 1969 to 1973. The model benefitted from the larger 2.4 that used a longer stroke for a total displacement of 2,341cc. 1972 Porsche 911Es had steel wheels that were upgraded in 1973 to a 6Jx15 alloy wheel by ATS.

Capable of reaching 0 to 60mph in 6.2 seconds and with a top speed of 143mph, Porsche's 911E model of 1969-1973 essentially replaced the short-lived 911L (Luxus). The 911E was designed to be the more comfortable, more drivable model of the 911 series – slotting between the tamer 911T (Touring) and the high-performance type 911S (Super). In these years, the least-expensive model in Porsche's range was the four-cylinder 912, followed by the Type 914. Adding together the Targa, Coupe and Karmann Coupe versions of the 911E, a total of 12,159 911Es were produced.

In the manner of much German machinery the Porsche 911 was the result of bringing together a myriad extremely efficient pieces of engineering. The 911E's designation derives from the German word for injection: einspritzung. The mechanical fuel injection (MFI) system used on the 911E (and 911S) was jointly developed by Bosch and Porsche. It's similar to the injection system used in the Carrera 6 of 1966. In addition to more precise control of the fuel-air mixture and equality of distribution among the cylinders (compared to carburettors), the MFI contributed toward meeting the nascent emissions control regulations of the time. The 1969 Types 911E and 911S also featured a new, high-voltage capacitor ignition system that addressed the spark plug fouling problems experienced in earlier 911s.

Mechanically, the very notion of the 911 was notable for being rear-engined and air-cooled. From its inception, the 911 was modified both by private teams and the factory itself for racing, rallying and other types of automotive competition.

The original 911 series is often cited as the most successful competition car ever. This is mostly down to the powerful 911-derived 935 that won the 24 Hours of Le Mans race in 1979 and other major races.

Intended as the luxury model of the marque, the 911E came standard in most markets with the Comfort package. These included ventilated brake discs with aluminium calipers, velour carpeting, a leather-covered steering wheel, heavy bumper rub strips and rubber guard inserts, chrome rocker-panel trim and gold-coloured script on the rear deck.

The 911E was developed by Boge in conjunction with Porsche in an effort to improve handling and ride quality, and was fitted with self-levelling hydro-pneumatic dampers. These negated the need for front torsion bars and anti-roll bars, while also automatically adjusting the height of the front of the car to compensate for weight in the trunk. Such dampers – or struts – were standard equipment on 911E models from 1969 through to 1971. Yet for buyers seeking more sporty handling, conventional springing could be specified when ordering a new model 911E. Meanwhile, for a really soft ride you could order smaller, 14-inch wheels with higher-profile tires.

With astonishing performance and its archetypal silhouette, the Porsche 911E showcases the characteristic harmony of tradition and modernity at the core of the marque. The Porsche 911E is a sporty, timeless vehicle that to this day boasts outstanding sports car action. 911

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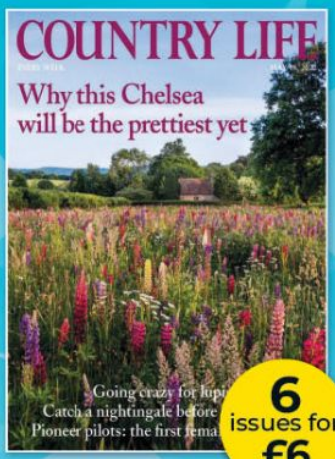

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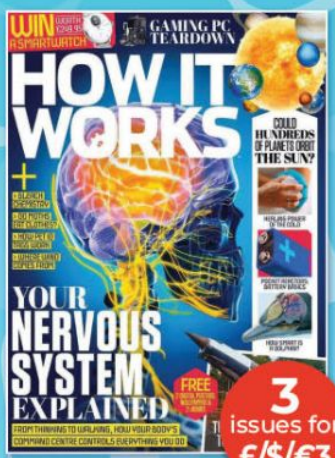

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COMMISSION YOUR PORSCHE 911 AS FINE ART

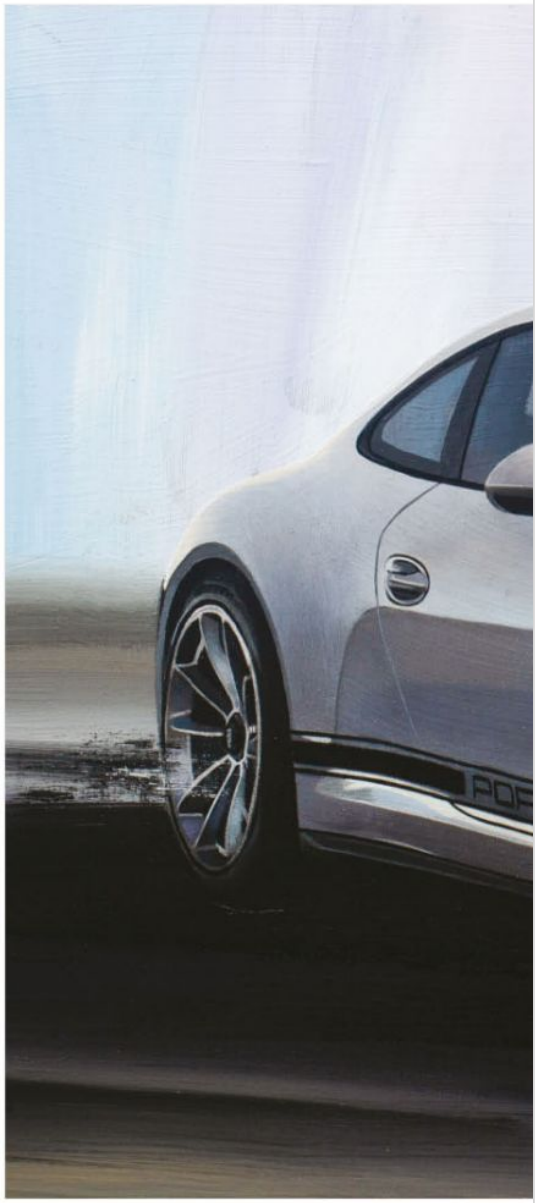
Many 911 owners would already consider their car to be a piece of automotive art – we certainly do – and gazing over the curvaceous bodywork can give many hours of pleasure. But there's more than one way to enjoy the stunning appearance, and having it committed to canvas would be special indeed. Which brings us to the work of renowned artist, Rob Hefferan. Fascinated with art since childhood, his first exhibition in 2003 showcasing his skills in figurative work and portraiture was a resounding success. It's those skills along with an international reputation for quality and unrivalled attention to detail that has led to his work being commissioned by numerous celebrity clients, and it turns out that Rob has another passion; "I've been obsessed with cars since I was young, and that developed into a love for Porsches, and the 911 in particular".

A serial owner of our favourite sports car, his collection has included the 996, both generations of 997 model, and he now enjoys a 991 Carrera S. A proper car guy, then, which is why he's decided to focus his talents on the Zuffenhausen marque, offering owners and enthusiasts the opportunity to have their pride and joy recreated as fine art. He admits this is a new challenge and one he relishes, already having set to work creating around a dozen paintings of various Porsches. While such artwork isn't entirely new, what's different here and core to Rob's ethos is capturing even the smallest of details that make each car unique. And having seen it for ourselves we are talking about beautiful pieces of art here, the sort of work that would complement 911 ownership in a way that other pictures just can't. Painted either in oils or acrylic depending on the timescales involved, each work can take anything from 150 to 300 hours to complete and the work is also unusual compared to other automotive artists in that he is happy to depict not just the car but to include the owner as well. It's where the talent for portrait work really pays off.

As for the process of commissioning a painting, an owner can either provide pictures of the car or Rob will travel to view your 911, employing a professional photographer to take dozens of detailed reference shots from which to work. It's a painstaking process but one that results in something very special, but there was something we were keen to ask and that's whether he had a favourite 911. "Not really" says Rob. "I love all of them, but if pushed I guess I'd have to say it's the cars from the 1960's that most capture my attention."

"It's the shape and form that I find so appealing, and the way the light falls on the bodywork. There are few cars like it, and I really admire Porsche's heritage, especially when it comes to motorsport." That emphasis on history and quality really shines through when it comes to the finished painting, and whether you own just the one car or are lucky enough to have a collection to see them represented in such a way is likely to prove very hard to resist.

You can see examples of Rob's work by visiting his website at **www.robhefferanautomotiveart.com**, but we'll say now that you should be prepared to find yourself as tempted to commission his services as we are. **911**

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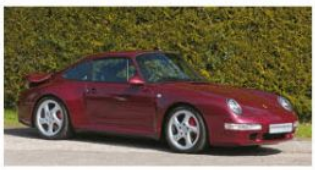

911 Turbo (993)

Arena Red • Black Leather Sports Seats
18" Turbo Wheels • Electric Sunroof
Full Leather Interior • Air Conditioning
Previously Sold & Serviced by Paragon
62,139 miles • 1996 (P)

£154,995

911 GT3RS (997)

Jet Black • Black Nomex Bucket Seats
19" Orange GT3 Wheels • Porsche
Ceramic Composite Brakes • Satellite
Navigation • Rear Roll Cage • 15,441
miles • 2007 (07)

£149,995

911 Turbo S GB Edition (991)

GT Silver • Black Leather Sports Seats
PDK Gearbox • 20" Sport Classic Wheels
One of just 40 UK Cars • Sport Chrono
Burmester Premium Sound System
16,357 miles • 2015 (64)

£117,995

911 Carrera 2 S (992)

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

£102,995

Boxster GTS 4.0 (718)

Guards Red • Black Half-Leather Sports
Seats • Manual Gearbox • 20" Satin
Platinum Carrera S Wheels • Switchable
Sports Exhaust • Sport Chrono
1,501 miles • 2021 (71)

£82,995

911 Turbo S (997)

Carrara White • Black Leather Adaptive
Sports Seats • PDK Gearbox • 19" Centre
Lock Wheels • Porsche Ceramic
Composite Brakes • Sport Chrono
29,893 miles • 2010 (60)

£82,995

911 Turbo S (997)

Carrara White • Black Leather Sports
Seats • PDK Gearbox • 19" Centre Lock
Wheels • Porsche Ceramic Composite
Brakes • Previously Sold & Serviced by
Paragon • 39,721 miles • 2011 (11)

£79,995

Macan GTS

Volcano Grey • Black Leather Sports
Seats • 20" RS Spyder-Design Wheels
Glass Panoramic Roof • Switchable
Sports Exhaust • 20,870 miles
2020 (20)

£68,995

911 Carrera 2 S (991)

Agate Grey • Black Leather Sports
Seats • PDK Gearbox • 20" Carrera
Classic Wheels • Touchscreen Satellite
Navigation • Switchable Sports Exhaust
Sport Chrono • 49,234 miles • 2013 (13)

£59,995

Boxster GTS (981)

Guards Red • Black Half-Leather Sports
Seats • PDK Gearbox • 20" Turbo Design
Wheels • Switchable Sports Exhaust
Touchscreen Satellite Navigation
Sport Chrono • 41,498 miles • 2014 (64)

£52,995

911 Carrera 4 S (997)

Arctic Silver • Black Leather Sports Seats
Manual Gearbox • 19" Carrera Sport
Wheels • Sports Steering Wheel
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60,231 miles • 2009 (58)

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993 C2S VS 997 GTS

Air-cooled or water-cooled: which is the best wide-bodied Carrera?

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The most powerful woman at Porsche in the 1960s and 1970s

NEUNELFERS IN NORWAY

Total 911 goes hairpin hunting with Porsche Club Norway

RARE PORSCHES SPOTTED

We round up unusual 911s that are on sale from around the world

*Contents may be subject to change

Porsche Moment

Total 911 recounts the story behind a famous picture from Porsche's past...

It's a pleasant late summer's afternoon and a small group of cyclists look as if their race has recently finished, judging from the lengthening shadows and generally relaxed atmosphere. This was essentially a social event, arranged annually at the Weissach track by Porsche's inventive PR boss, Manfred Jantke.

Very much a sportsman himself, Manfred – whose tall figure is seen in conversation with managing director Ernst Fuhrmann – came up with the idea of an annual bike race between Porsche employees who wanted to have a go, and Porsche motorsport customers and racing drivers. Also present in the foreground is Helmuth Bott, another of Porsche's typically hands-on senior managers who was always ready to muck in for the good of the company.

Standing just behind Helmuth, partially obscured, is Rolf Stommelen, a doughty Porsche racer and 1977 German champion who achieved seven wins from 18 starts in various 935s. Rolf was another physically fit individual who was running and cycling long before such regimes became either fashionable or the norm among professional racing drivers. However, one year he failed to endear himself to Manfred by turning up with a tandem bicycle on which he and a partner streaked away from the rest of the field.

Helmuth is taking an interest in the bike ridden by Wolfgang Berger. Another of those undemonstrative yet highly competent graduate engineers who seemed to gravitate to Porsche in the 1960s, Wolfgang was the man who transformed the 911T, the lightest of the 911 range, into the 2.7RS. This task was given to him by Ernst when Wolfgang explained to him that on the track the 911S was being outpaced by Ford Capris and BMWs. This was because both Cologne and Munich had dedicated competition departments that interpreted the rules to lighten their shells significantly. Wolfgang subsequently inherited development of the 936 and later wrote the definitive book on the model, which he published himself. He died in December 2021.

In the background to the left is the NSU Ro 80, an extraordinarily innovative design from the German motor manufacturer. In addition to being front-wheel drive (rare above Mini-size cars 40 years ago), it used the extremely powerful Wankel engine that was famous for its rotary combustion chambers. NSU's inability to make this engine reliable led to the financial difficulties that forced to company to merge and eventually be subsumed by Audi.

The photograph is undated, but the presence of a 928 on the right-hand side suggests that it must be 1978, or possibly 1979 because by 1980, Ernst had left Porsche. 911

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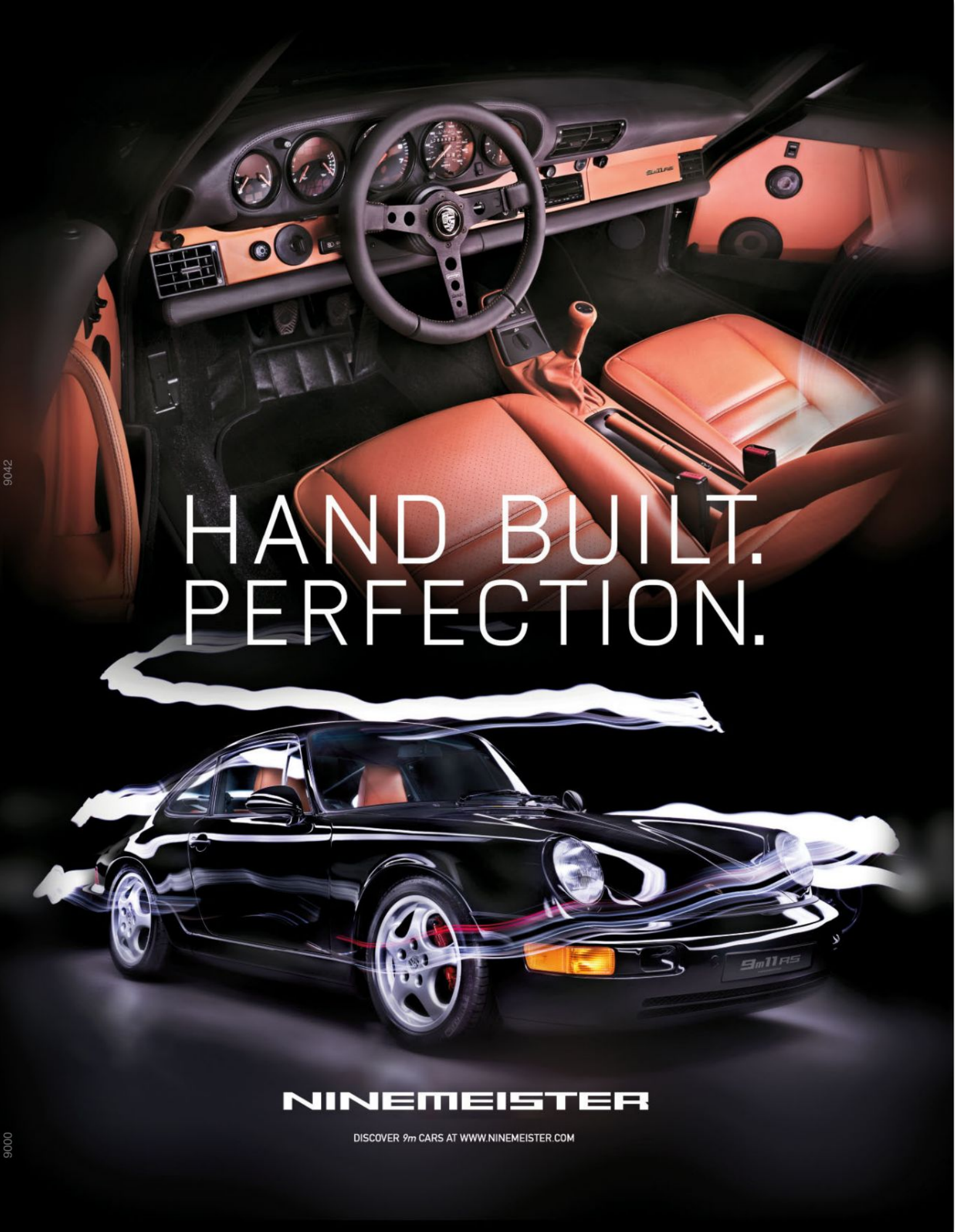
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