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Turbo Study

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PERFORMANCE DRIVING
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**GRANT
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The man who gave us the
997 talks to Total 911



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Porsche's first attempt at an automatic transmission
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ISSUE 25

Digital Edition

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1992 Porsche America Roadster-13884



Presenting this exciting 1992 Porsche America Roadster that is available in its factory color code #B0K Guards Red with a sand beige interior. The vehicle comes with a clean Carfax and is equipped with a 5-speed manual transmission, Flat 6 Cylinder 3.4-liter engine, automatic speed control, air conditioning, power windows, power steering, rear seat delete, soft top, boot, 4-wheel disc brakes, spare tire, and 5-spoke wheels. Both the color code and options sticker are still in place under the hood. A very sought-after car that is an excellent addition to any Porsche enthusiast. Don't miss your chance to acquire this original limited-production Porsche America Roadster that is mechanically sound.

For \$125,000



1963 Porsche 911SC Cabriolet #4095

The 1963 Porsche 911SC Cabriolet featured here has matching numbers is available in its factory color code #79H black with a black interior. This vehicle comes with a clean Carfax and is equipped with a 5-speed manual transmission, Flat 6 Cylinder 2.6-liter engine, air conditioning, power windows, and two-tone black leather interior. A well-maintained and well-used classic that is a true gem of the classic car world.

For \$38,500



1970 Porsche 911S Coupe #4031

This highly desirable 1970 Porsche 911S Coupe is available in its factory color code #B0K Guards Red with a grey interior. The vehicle comes equipped with a manual transmission, Flat 6 Cylinder 2.8-liter engine, fuel-injection, and a clean Carfax. A well-maintained and well-used classic that is a true gem of the classic car world.

For \$39,950



1977 Porsche 911S Coupe #4343

Presenting this matching numbers 1977 Porsche 911S Coupe that is available in its factory color code #114 Desert Sage with a tan interior. The 911S comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 2.7-liter engine, air conditioning, power windows, and a clean Carfax. A well-maintained and well-used classic that is a true gem of the classic car world.

For \$41,500



1977 Porsche 911S Speedster #4312

Presenting this 1977 Porsche 911S Speedster Coupe that is available in its factory color code #114 Desert Sage with a tan interior. The vehicle comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 2.7-liter engine, air conditioning, power windows, and a clean Carfax. A well-maintained and well-used classic that is a true gem of the classic car world.

For \$39,950



1977 Porsche 911S Coupe #4386

This matching numbers 1977 Porsche 911S Coupe is available in its factory color code #B0K Guards Red with a black interior. The vehicle comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 2.7-liter engine, air conditioning, power windows, and a clean Carfax. A well-maintained and well-used classic that is a true gem of the classic car world.

For \$44,500



1977 Porsche 911S Coupe #4342

Presenting this matching numbers 1977 Porsche 911S Coupe that is available in its factory color code #114 Desert Sage with a tan interior. The vehicle comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 2.7-liter engine, air conditioning, power windows, and a clean Carfax. A well-maintained and well-used classic that is a true gem of the classic car world.

For \$56,500



1975 Porsche 911S Target #3639

Here is a 1975 Porsche 911S Target that is available in its factory color code #114 Desert Sage with a tan interior. The vehicle comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 2.7-liter engine, air conditioning, power windows, and a clean Carfax. A well-maintained and well-used classic that is a true gem of the classic car world.

For \$39,950



1973 Porsche 911E Target #2666

Here is a matching numbers 1973 Porsche 911E Target that is available in its factory color code #114 Desert Sage with a tan interior. The vehicle comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 2.7-liter engine, air conditioning, power windows, and a clean Carfax. A well-maintained and well-used classic that is a true gem of the classic car world.

For \$108,500



1984 Porsche Carrera Coupe Turbo-L #491-13956

The rare limited production 1984 Porsche Carrera Coupe Turbo-L #491-13956 is available in its factory color code #B0K Guards Red with a black interior. The vehicle comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 2.8-liter engine, air conditioning, power windows, and a clean Carfax. A well-maintained and well-used classic that is a true gem of the classic car world.

For \$79,950



1986 Porsche Carrera Coupe #4002

Here is a matching numbers 1986 Porsche Carrera Coupe that is available in its factory color code #114 Desert Sage with a tan interior. The vehicle comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 2.8-liter engine, air conditioning, power windows, and a clean Carfax. A well-maintained and well-used classic that is a true gem of the classic car world.

For \$82,500



1978 Porsche 911S Speedster #4204

Presenting this matching numbers 1978 Porsche 911S Speedster Coupe that is available in its factory color code #114 Desert Sage with a tan interior. The vehicle comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 2.8-liter engine, air conditioning, power windows, and a clean Carfax. A well-maintained and well-used classic that is a true gem of the classic car world.

For \$59,950



1987 Porsche Carrera Coupe #4204

Here is a matching numbers 1987 Porsche Carrera Coupe that is available in its factory color code #114 Desert Sage with a tan interior. The vehicle comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 2.8-liter engine, air conditioning, power windows, and a clean Carfax. A well-maintained and well-used classic that is a true gem of the classic car world.

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Welcome

There's no doubt about it – Singer Vehicle Design's latest creation is nothing short of sensational. The Turbo Study, which the company is calling its third act, brings turbocharger technology to its reimagined road vehicles for the first time, itself an interesting proposition considering most 'purists' believe the ultimate in driving fun lies with atmospheric engines. I'm sure the Turbo Study will change that.

Clearly, it's been a busy and, at times, challenging year at Singer since founder Rob Dickinson kindly took the reins as guest editor for *Total 911*'s special 200th edition in January 2021. Back then, Rob told us that "turbocharging is very much in our future," as plans were clearly afoot for this Turbo Study development.

Alongside this, the company has had to deal with tough economic and supply problems as the world has grappled with the fallout of COVID-19, as well as Brexit, which has had a direct impact on production of its UK-based DLS programme. After

tasking Williams Advanced Engineering and then Multimatic with assembly of its DLS cars, Singer has now taken this in-house, thanks to the construction of a stunning facility in the heart of the UK's 'Motorsport Valley', with a host of ex-McLaren employees joining the team. Meanwhile, in the US, Singer has finally moved into a much larger facility to continue production of its Classic programme vehicles, and is in the midst of a big recruitment drive. Dozens of jobs are available at its new facility to Torrance, CA, if you're interested.

My fellow podcast co-host Andy Brookles and I had a fascinating chat with both Rob and Maz Farwaz, Singer's CEO, for a recent *9WERKS* Radio episode (check it out via your preferred podcast platform) about these developments, which makes the Turbo Study's release all the more remarkable. That it comes in the midst of such upheaval and growth behind the scenes is truly amazing. Singer is promising more soon, and off the back of this latest study, we can't wait to see – nor guess – which 904-based avenue the company is set to explore next.



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“Singer Vehicle Design's latest creation is nothing short of sensational”

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911 Opening Shot

Photograph courtesy
Andreas Mau/CarPix AB

Total 911's spies have captured the next-generation Porsche 992.2 out on public roads for the first time, after the company undertook some cold-weather testing in northern Sweden. Many new details can be seen on the mule, including vertical (rather than horizontal) front grille slats, a new decklid design that's seemingly split into two, as well as a new placement of the exhausts. Porsche will launch the 992.2 in 2023.





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Update

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



New exhibition celebrates 50 years of Porsche Design

As Porsche Design turns 50, Stuttgart's Porsche Museum commemorates the occasion with an eye-catching display

Last issue we announced the 911 Edition 50Y Porsche Design. This is a limited edition 992 created to mark the 50th anniversary of Porsche Design – the creative agency founded in 1972 by Butzi Porsche and his brother Hans-Peter. Further celebrations to mark the agency's golden anniversary are taking place at the Porsche Museum in Stuttgart, where a special exhibition charts its history, and runs until 10 July.

From its design offices in Zell am See, Berlin, Ludwigsburg, Los Angeles and Shanghai, Porsche Design has built up a reputation for creating high-quality products including watches, sunglasses, luggage and leather goods. Collaborations with internationally recognised consumer goods brands, household appliance makers and industrial giants such as Eln, KEF, LaCie, Morita and Panasonic have been prolific over the years.

Five decades of work from Porsche Design are now on display at Porscheplatz 1, showcasing how the lifestyle brand has become famous for its functional yet pure design aesthetic. As well

as various exhibits, visitors will be able to enjoy a presentation of the life and work of F.A. Porsche, his design philosophy and the impact of his creative influence. Taking centre stage in the exhibition's display cabinets are two different versions of the milestone Chronograph 1 timepiece: the 1972 Limited Edition Chronograph 1 and the 911 Edition 50 Porsche Design variant.

Further instantly recognisable Porsche Design classics on display include P'8478 aviator sunglasses, the P'9521 cellphone and P'3613 tobacco pipe. Of course, no Porsche Museum exhibition would be complete without cars and this one is no different. It features vehicles that F.A. Porsche either created or came from his private collection. Among them is a 904 Carrera GTS, a 993 Speedster and a 1972 911S 2.4 Targa restored by Porsche Classic, together with a 992 Edition 50Y Porsche Design – one of only 750 being built.

The Porsche Museum is open from Tuesdays to Sundays, 9am to 6pm. For further information visit www.porsche.com/museum.



New must-have book for enthusiasts

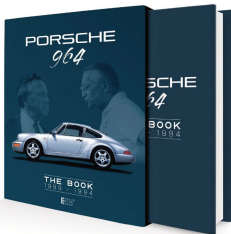
Porsche 964: The Book 1989-1994 takes a deep dive into the iconic third-generation Porsche 911

This is the definitive tome for Porsche enthusiasts dedicated to the 964 generation 911. The latest high-end publication from Berlin Motor Books will immerse you in fascinating facts and figures on the most celebrated generation of Porsche's 911 sports car, and is a **Total 911** favourite.

Porsche 964: The Book 1989-1994 contains unpublished photographs from the Porsche Archive, including those of the 964's development at Weissach in the 1980s. You'll be able to pore over every facet of the 964's history and evolution, and every 964 model is detailed in the 370-page book, with extensive, exhaustive information supplied on even lesser-known models and prototypes, including the extremely rare 964 Clubsport.

As well as being an ideal resource, Porsche 964 – which is printed on high-quality paper and housed in a thick slipcase – provides detailed purchasing advice and price trends, to give you the fullest picture of the 964 and what goes into running one.

Limited to – appropriately enough – just 1,994 copies, Porsche 964 is available from www.berlinmotorbooks.de and is priced at 99 Euros.



LMDh prototype starts testing

Porsche's LMDh prototype – its next Le Mans challenger – takes to the track



Testing of the latest Porsche endurance racer, designed for the new LMDh prototype racing category, has begun. The new challenger will start racing in 2023 and aims to win the world's biggest FIA WEC World Endurance Championship races, such as the 24 Hours of Le Mans, Daytona and Sebring.

Engine regulations for the LMDh category provide freedom in terms of displacement, design and number of cylinders. However, revs are capped at 10,000rpm and drive-by noise can't exceed 110 decibels. The Porsche hybrid machine is fitted with a large-capacity twin-turbo V8 engine that runs on renewable fuels. Some of its other parts are supplied by Williams Advanced Engineering (battery), Xtrac (transmission) and Bosch (motor-generator unit and electronics). In race trim the hybrid drive system produces around 680PS (500kW).

Porsche enhances its in-car PCM system

The addition of new features to Porsche's infotainment software make it more versatile, intuitive and intelligent



Version 6.0 of Porsche Communication Management (PCM) software boasts a raft of new functions. The most apparent alteration is a revised interface that makes use of coloured icons. Yet perhaps the most noteworthy change is in music streaming functionality. Streaming service Spotify is now integrated into the PCM.

Drivers can link their account to the vehicle using their Porsche ID and use Spotify without the need for a smartphone – all required data is included in Porsche Connect. Elsewhere, improved Voice Pilot assistance makes it easier to access several functions including news, the operating manual and in-car music, and there's an option for wireless Android Auto connectivity.

The PCM's new functions are standard as of now on every newly configured Porsche 911 model.

News in Brief

Porsche Esports Carrera Cup GB returns

Porsche Esports Carrera Cup GB, the virtual championship for professional sim racers, is back for 2023 on the iRacing platform. Twenty six of the fastest racers, qualified for the 16-race season, which runs until May. Viewers can watch all the action – complete with professional commentary – either live or after each event via the Porsche Twitch channel at www.twitch.tv/porsche.



Porsche Design Book marks golden anniversary

If you can't make it to Stuttgart's Porsche Museum to explore 50 years of Porsche Design, this book is the next best thing. It focuses on Buja: Porsche and includes excerpts from interviews, memories from friends and family, and 250 images depicting the history of Porsche Design and Studio F. A. Porsche. The \$45 book is available from shop.porsche.com (search for Porsche item number 4056487027036).





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991.1 GT3 article

Dear Sir,

Thank you for the excellent article on the 991.1 GT3 engine issue and hopefully it'll give reassurance to anyone contemplating buying a GT3. When my engine was replaced under the warranty, Porsche Guildford was excellent and I have the G series engine. I've had two separate mechanics tell me it's essentially the RS engine in 3.8 guise and it definitely feels as if there's more torque across the

mid-range than the original. Has anyone put the new engine on the dyno?

James Wyatt

We're glad you enjoyed the feature, James. We're not aware of anybody who's dyno'd their 991.1 GT3. If they have, please get in touch. Don't forget that Porsche is known for underquoting its performance figures...



Power measurements

Dear Sir,

My son is a big fan of Porsche sports cars, and recently purchased issue 213 of *Total 911* ('GTS vs Rivals' on the cover), and he found a mistake on page 83, which is the horsepower figure for the 992 Turbo S.

On Porsche's website the figure is listed as 650PS, while your magazine says 640hp. This is for your kind information.

Jamal Qafisheh

The 650PS as quoted by Porsche refers to the 992 Turbo S's metric horsepower. This converts to 640 mechanical horsepower (hp), which is what we at *Total 911* like to quote in our power figures to ensure continuity from the measurement style used for classic cars. You've raised an interesting issue that could be worthy of a feature: looking at the different power measurements and how they're calculated.

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,

The 992 Carrera derivatives seem to be popular and have held their value nicely since launch, but what are the known mechanical gremlins to have surfaced in the three years since launch?

Russell Watkins

All cars have their niggles or 'common' issues, and the 992 is no different. The first model year 992s had multiple recalls released ranging from software programming updates on most of the control units to replacing hardware such as engine mounts due to PADM warnings. Most cars have all been done and resolved. Interior noises seem to be high on the list of gripes such as door rattles or the plastic, grommet-style membrane creaking. Speakers are also known to fail. Rear light units can suffer water ingress and there have also been a few teething problems with the Porsche Connect tracking system's reliability. The leather strap on the seat back is a common failure, as is the PDK razor-style selector, which can suffer from cracks in the plastic housing.

These are mostly the 2019 model year vehicles. Engine and gearboxes are excellent, as are the suspension and braking systems. But I would advise extending your warranty if you have an early example.

Spare issues?

Dear Sir,

I'm making space, so if you get any requests for back issues feel free to pass on my email address.


I have most issues from 152

onwards and would be happy to help – although I'm trying to hang on to those with 996 content.

Colin Lowdon

We'll gladly print this, Colin, as you may well come to the rescue of other *Total 911* readers wishing to fill gaps in their collection. Of course, if you're after an issue from the previous six months and would like a fresh new copy (or indeed a digital version!), readers can also order from www.magazinesdirect.com and have the issues delivered to their door. Don't forget, if one subscribes, you'll never miss an issue...





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PORSCHE

GUEST COLUMN



Upgrading your driving engagement

With an engineering background and previous career in Formula One, performance driver coach Neil Furber reveals his blend of driving tips and vehicle technology explanations to help you get more from your rear-engined machine

When it comes to 911s, vehicle tuning isn't necessary due to the heady base-level performance of even the most basic rear-engined thoroughbred. Nevertheless, some will enjoy tinkering or get an expert to do it. Once we look at full-bore racing variants, that's another story entirely. But one thing that unites any showroom-fresh Stuttgart machinery with modified metal and purpose-built racing cars is, to quote an old favourite, the nut behind the wheel.

Spend even just a few minutes with a top-level driving coach and almost anybody will find that there's more to be gained by tuning the driver than by almost any modification or dealer-fitted upgrade. With this in mind, I thought that **Total 911** readers may appreciate the inside track on the secret weapons that can unlock maximum value from any personal tuning you may choose to undertake.

Woven into the infamous 'common knowledge' surrounding what makes a good driver, we hear things like reactions and natural talent. While they play their part, I'm here to tell you that they're far less relevant than you may have been led to believe. Experience, concentration, 'seat time' and eyesight are far more significant factors contributing to a driver's performance. And yet there's one thing that's more important than anything else – the secret weapon. Engagement.

In our digital age, many budding drivers desire a 'knowledge download' achieved by tapping into the expert's brain. Sadly, this isn't possible – yet! The next best thing is a blend of reading, watching, listening and sitting alongside the pros. Then plenty of practice. Some incur cost, some do not. What I'm giving you here is the inside track on how to squeeze more from these resources so that, in turn, you can extract more from your unequivocally capable car.

Although engagement can refer to the one-way sensations a sports car delivers to you, I'm talking about a much broader experience. True engagement



is a two-way, multi-faceted and all-encompassing existence. Let me explain.

The first and arguably crucial step to truly upgrading your driving is considering your attitude. You've got to want to improve and admit that you don't know it all. Even so, I'm not just talking about gaining skills and building on what you already know. That's worthwhile and much of the journey, but it's your driving's foundations that must be re-evaluated and tuned towards perfection: how you sit in the car; why you adjust something as you do; why you have a certain habit or method for each and every aspect of making your car do anything at all.

The brain forms habits to enable you to do more complex things. Shortcuts. Auto-pilot. But if you're going to have habits, why not make them excellent habits? You won't win in motorsport with inferior pit-stops and a sub-standard setup just because you've always done it that way. Motorsport (and F1 in particular) is all about seeking excellence – continued incremental improvement, no matter how small.

If you engage with your driving in this manner, you can unlock so much more from any resource. Ask yourself questions: why did that happen when

I did that? How can I simplify my actions and make things easier for myself? Is the car trying to tell me something here? I think you get the picture. I can't give you the entire download that you may seek, but I can point you in a couple of directions.

Next time you're in the car, have a think about why your seat, steering wheel and mirrors are where they are. Can any of this be improved? Approaching any bend, have you thought about your road position, the car's entry speed, what gears you're using, your grip levels, any hazards or your steering technique? When you turn the wheel, what can you feel from the tyres? Here's a top tip: relax your grip on the steering wheel and slow things down...

To summarise, true engagement is more than how the car makes you feel. It's two-way communication with the car, your environment and other drivers. The more ways through which you can communicate and link observations, thoughts and decisions, the better equipped you'll be to take any driver development to the next level. The goal, then, is to restrain habits and think your way to your best driving.

You can find more information on Neil and his driving services by visiting drive/tenths.com.



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REVEALED: SINGER'S NEW ERA

Turbo

Total 911 takes a first look at Singer's third act: a 964-based homage to the legendary 930 Turbo



Study

Written by **Ben Barry** Photography courtesy **Singer Vehicle Design**





"Everything's been touched, but at the same time it has to feel sincere to the original 930"





LEFT Reimagined G sports steering wheel and Sport seat profile typifies the Turbo Study's exquisite attention to detail



Rob Dickinson, founder of the California-based Singer Vehicle Design, still remembers his first ride in a Porsche 911, as a wide-eyed 11-year-old back in 1976. "It was a black 930 Turbo with red tartan seats which left me dry-mouthed and speechless," he says of Porsche's first ever turbocharged road car, which at that point was only a year old.

Goodness knows what the young Rob would make of the Turbo Study that his older self has just unleashed on the world. Rather incredibly, this is the first time he's worked Singer's magic on a road-going turbocharged 911 (the turbocharged ACS is for off-road competition), and its 'third act' following the Classic series and DLS models.

"The DLS project took the normally aspirated air-cooled engine to its natural apogee, and now I think the time is right to move to the other aspect that's synonymous with Porsche, the turbo engine, and celebrate arguably the most important 911 in Porsche's heritage," says Rob.

"It's a car that was incredibly meaningful for me as a child. For many it was the pin-up of the era, and this also represents a chance to really focus on an iconic model [the 'Classic' focuses on an era] and pour as much love on to it as possible. We've had a lot of interest from clients for a number of years and we've been working on this project for two years... it's very exciting."

Taking that seminal 930 Turbo as inspiration, the Turbo Study subjects the period 911 to Singer's painstaking attention to detail that always seems undersold by the rather slapdash-sounding 'restomod' tag, and stretches the Singer formula towards road-focused GT comfort.

"Our study very much presents the Turbo in the way Porsche did in 1978 as a super-refined, luxury, top-of-the-range, grand-touring supercar,"

explains Rob. "This is our vision of the 930 Turbo, but turned up to 11."

Like the original, the Turbo Study features a turbocharged, air-cooled flat six, manual gearbox and rear-wheel-drive layout. Iconic details including a whaletail rear spoiler, full-width rear light bar, Fuchs alloys, shark fin rear-wheel arch spats and engorged rear track are all present and correct, but the muscle is exaggerated, the detail crisper. It's like twisting a camera's focus ring to make every nuance pin-sharp.

Yet like everything Singer works its magic on, what appears to be a relatively simple if beautifully executed concept on the surface becomes more complex the deeper you dig. As Rob puts it, "Everything's been touched, but at the same time it has to feel sincere to the original 930."

This isn't, for instance, a 1975-1989 Porsche 930 Turbo. Instead, the Turbo Study sticks with Singer's preferred and later 964 foundations. The logic is that these successor models, produced from 1989 to 1994, were the last to retain the classic 911 shape. They still feature the air-cooled flat six and trailing arm rear suspension, but are an altogether more modern proposition courtesy of coil-sprung suspension, power steering, ABS and optional all-wheel drive (an option not ticked by this particular owner, if offered by Singer to its clients since 2010). And Singer, of course, has already invested heavily in bringing the 964 formula up to date. It's understandable (and fitting given Porsche's preference for doing the same) that the company should build on its 12 years of expertise from its HQ in the city of Zuffenhausen.

Before his seminal passenger ride, by coincidence British-born Rob spotted a 911 Turbo parked outside a pub in his native Norwich, this time finished in white. The aesthetics stopped him in his tracks. "It was fascinating to me how the 911 had become this lantern-jawed, extended rubbery thing with impact bumpers, where before it was a slender-hipped, chrome-draped, delicate little thing. I was struck ☺



by how gratuitously pornographic it was, the sheer audacity of it. For 11-year-old me, Porsche became synonymous with beautifully moulded black rubber."

Finished in icy Wolf blue paint, Singer's vision of the 930 Turbo is even more X-rated. An original '64 body is first fully stripped, media-blasted, rust-proofed and strengthened with additional welding, before lightweight carbon fibre panels are added: including the front and rear wings, bonnet, engine lid and – if there's no sunroof – the roof itself. At around 1,270kg, the Turbo Study is about 30kg lighter than a 3.3-litre original, all fitted with far larger wheels, extra luxuries and optimised thermal management – in part explaining why the weight saving isn't greater.

Then there are the details again, including – yes – even the strangely alluring rubber with its striking 3D definition, which works wonderfully with the satin-black wheel centres and Michelin rubber stretched over the barrels of the wheels. Frankly, it's Bo Derek in scuba gear.

The piercing headlights are obviously modern reinterpretations of the original, but so too are the tail lights and full-width rear light bar, despite a factory appearance. Fuchs-style wheels shod with Michelin Pilot Sport 4S or Cup 2 tyres step up from

Singer's regulation 17 inches to 18s shared with the DLS, with the dish on the rears like a giant hamster wheel. "You could argue the bodywork of the 930, the wheel arches in particular, made promises the wheels couldn't keep," says Rob. "We've tried to fix that." The 18s, in turn, enable Singer to run larger brakes – in this case Brembo calipers gripping cross-drilled carbon-ceramic discs.

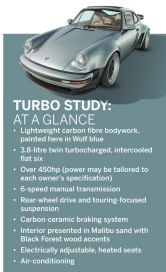
Even before you open the engine lid, the rear bodywork provides clues as to how the Turbo Study's forced-induction loop is cooled. Take the rear wing, for instance. It's honed in deference to the 3.0-litre original's with its strong horizontal line that culminates in an upswep flourish. It's unlike the later 3.3 that sandwiched a box between the wing and engine lid to package a large intercooler, yet looked like a chest freezer. "We were eager to present an early whaletail rear spoiler, because it's one of the most gorgeous pieces of sculpture," says Rob.

Look carefully at the rear shark fin graphic and you'll notice that while it faithfully echoes the original – intended simply to prevent stone chips striking the vulnerable rear arches – it also incorporates a large air vent to feed cooling air to the engine's induction. Rob reveals this was always



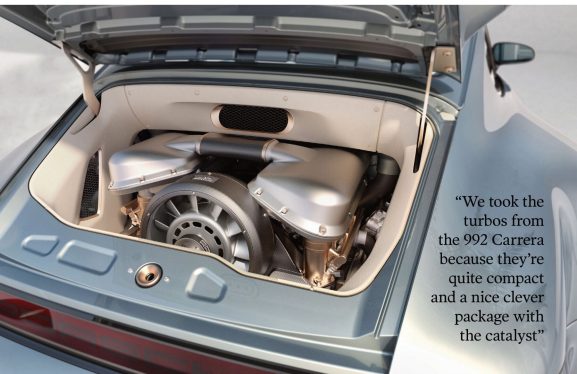
ABOVE Despite being based on a 964, the Turbo Study features iconic 930 design traits including a whale tail, wide arches with shark fins, plus chunky bumperettes





TURBO STUDY: AT A GLANCE

- Lightweight carbon fibre bodywork, painted here in Wolf blue
- 3.8-litre twin turbocharged, intercooled flat six
- Over 450hp (power may be tailored to each owner's specification)
- 6-speed manual transmission
- Rear-wheel drive and touring-focused suspension
- Carbon-ceramic braking system
- Interior presented in Malibu sand with Black Forest wood accents
- Electrically adjustable, heated seats
- Air-conditioning



“We took the turbos from the 992 Carrera because they’re quite compact and a nice clever package with the catalyst”



part of the plan rather than a neat solution stumbled on later in development. "We really wanted to think about how it was cooled and turbocharged," he says.

Lift the rear decklid and the engine bay looks more HG Wells than Hans Mezger, with a carbon fibre fan shroud and cleanliness to shame an operating theatre. The lump itself is a 964-based 3.8-litre turbocharged engine, rebuilt and blueprinted by Porsche Motorsport North America from its base at the Porsche Experience Center in Los Angeles, and also using Porsche Motorsport parts (although it's completely unrelated to the unit in Singer's ACS – its first venture into the world of forced induction). This time, the twin-turbocharged setup borrows BorgWarner blowers with electrically controlled wastegates from today's 992 Carrera range.

However, one thing is missing: the intercooler, particularly the one that perched atop the 990 3.3-litre model. "We wanted to avoid being faced with a big ugly intercooler when you opened the decklid," says Rob. "You never really got to see a 990 Turbo engine. The intercooler obliterated it, even if it did have a kind of brutish charm."

Singer's CEO Mazen Iwaz says the intercoolers are "actually in the intake plenum, above the throttle bodies", explaining the neater look of these air-to-water chillers (original 990s used air-to-air cooling). Oil circulating round the engine, meanwhile, is also cooled by a water-to-oil heat exchanger, helping to manage the greater thermal loads of an engine more powerful than the original 260-300bhp 990s.

Power outputs are tailored to each customer, but quoted as "starting from" 450bhp. Drive is taken to the rear wheels via a six-speed manual gearbox, although Singer is still debating whether that should be an off-the-shelf Porsche transmission or a bespoke unit. The idea is to create a factory feel, not just chase headlines and 0-60mph times.

"Anyone can hot-rod a turbo engine, but does it feel hot-rodged, or does it feel like it was born that way?" asks Mazen rhetorically. "The boost is relatively low, because the car is meant to be refined, not laggy. We took the turbos from the 992 Carrera because they're quite compact and a nice, clever package with the catalyst. It's a two-valve air-cooled lump, but we've added things like modern bearings and software to that relatively old system – it's a very cool combination, and not at all like a modern car."

All-wheel drive is optional, traction control a standard-fit comfort blanket, but for now a six-speed manual transmission is standard – though Mazen admits that PDK is "a discussion" and doesn't entirely rule it out.

The ride height and suspension is tuned for highway cruising – if still with an underlying sporting focus – and Mazen is at pains to point out that while the trailing arm rear suspension does channel road noise into the cabin, the feel of that setup is part of the essence of these pre-1990s 911s. Besides, Singer has worked hard on dialling down NVH (noise, vibration and harshness) with modern bushings, bearings and sound-proofing, while additional

adjustability of components and modern damping adds to the phaser refinement.

It's certainly refined when you open the driver's door, with a feel that again riffs deferentially on the 990 Turbos, including its fluted door cards, the classic five-gauge dash layout, heated and electrically adjustable Sports seats with integrated headrests and figure-hugging bolsters, but again the execution takes the 1970s theme to another level entirely. The upholstery is beautiful Malibu sand leather trim with restrained Black Forest wood trim inserts, the retro dials reimagined with a striking modern clarity. Elsewhere, there's a new twist on the three-spoke steering wheel, large speaker grilles integrated in faithful reimaginings of the original door cards and centre console, and even a wireless smartphone charger that's positioned just ahead of the gear stick.

Rob is delighted with how Singer's latest endeavour has turned out, particularly because the original tugged so profoundly at his heart strings. "I believe the Turbo Study is a fitting tribute to a car that changed my life, and many others," he says. It seems the "many others" with the necessary means agree, and Singer reveals that 70 orders have been placed so far for bespoke commissions based around the Turbo Study theme.

Most of us can only dream, but we'll be able to see the Turbo Study up close and in action at the Goodwood Festival of Speed, held on 23-26 June, 2022. No doubt a few 11-year-old kids will never be quite the same again. **5000**

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Porsche's Sportomatic gearbox paved the way for Tiptronic and PDK, but can it be a fun feature on a classic car? Total 911 puts it to the test in a 2.2T



Written by **Kyle Fortune** Photography by **Alli Cusick**

Sportomatic

An Automatic Choice?



“They’re a real talking point,” says Philip Roby, discussing the merits of the Sportomatic transmission. A talking point today as it was when Porsche introduced the Sportomatic in August 1967. The reception from the motoring press wasn’t overly favourable, though. Oddly

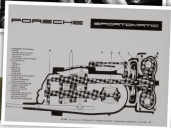
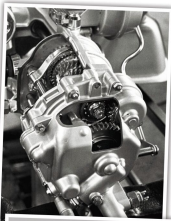
enough, given the marketplace’s desire for automatic transmissions, it was the US publications that were most critical. *Car and Driver* derided it as a “funny name, but the transmission is a funny transmission”, noting that the Sportomatic isn’t a conventional automatic transmission inasmuch as it doesn’t actually change gears itself.

The reception elsewhere was more favourable. *Auto Motor und Sport* found it to be advantageous for “shift happy” driving. *Autocar* praised it while conceding other’s criticisms: “Rarely have we been quite so unanimous in our acceptance of a road test car, and rarely, too, have we disagreed so much with some of our contemporaries.” Even Ferry Porsche would have reservations, saying: “If you make a sports car with an automatic transmission, there’s part of your clientele that says, ‘that’s not a sports car’.”

Divisive then, but like the Tiptronic and PDK automatic transmissions that followed, this response

was predictable. Being a Porsche, its early solution for easing the burden of busy traffic for its urban-based customers was a half-way house solution. You still shifted the gears, but did so without having to use a clutch – or rather, use a clutch pedal. The Sportomatic might have upset some of the press and some customers, but its introduction undoubtedly brought the 911 to a wider audience. When you’re in the business of selling cars, and increasingly reliant on sales in the USA, this was no bad thing.

Porsche’s novel and unusual clutchless manual solution was as much a result of the need for an “automatic” as it was the difficulty in finding a transmission that would work with a high-revving, six-cylinder engine. The company had experimented with various solutions with the 356 – borrowing technology from Volkswagen to do so – but the eventual solution would be an amalgam of a conventional four-speed manual transmission and a hydraulic torque converter. The clutch remained, but it was operated automatically by a vacuum servo motor, signalled via microswitches that were linked to the gearlever. The flywheel was replaced by the three-element torque converter, enabling the car to idle with the car in gear and the clutch engaged. The clutch was a smaller 7-inch item because it didn’t



ABOVE: Contemporary advertising poster showing Sportomatic componentry, below: a cross-sectioned box



“The benefits are difficult to ignore, and if you’re a town or city 911 driver then its positives arguably outweigh the negatives”



BELOW The shifter works just like a manual example, but even touching it disengages the clutch, so your actions need to be swift and precise







need to cope with the conventional pressures and heat of a traditional manual transmission. Naturally, the result of this inside the car is no clutch pedal. Instead, there's just an accelerator and a brake pedal, with the latter having a larger surface area than a traditional three-pedal manual 911.

As with almost every Porsche technological innovation or introduction, the Sportomatic was proven on the race track, with Porsche choosing the gruelling Marathon de la Route, held at the Nurburgring on 22-26 August, 1967. The 84-hour endurance event ran between 1965 and 1971, with manufacturers regularly using it as a means to test the mechanical stamina of new cars. Helmut Bott, then Porsche's chief engineer in development, admitted that trialing new systems or development models at the Marathon de la Route was cheaper than hiring the Nurburgring, adding that such a test wouldn't be possible at Porsche's own Weissach track.

Three 911s would enter in 1967 under the team name Porsche System Engineering: a 2.0-litre 911 with a manual transmission; a 911S with a Sportomatic transmission; and a 911R also featuring the Sportomatic. Each Porsche had their engines 'rally tuned' to 175hp.

The regular 911 would crash out, sadly killing its driver and triple Tour de France race winner Georges Benoit, but the two Sportomatic cars continued the race. The 911R Sportomatic took an early lead before dropping back with mechanical issues, allowing the 911S Sportomatic to lead briefly before it retired with engine issues. That 911R Sportomatic, driven by Hans Herrmann, Jochen Neerpasch and Vic Elford, would retake the lead, finally winning the gruelling 84-hour race having covered 380 laps, or 6,148 miles, with an average speed of 73.15mph over the duration of the race. That's despite Bott admitting, "We don't drive constantly on the limit. We just don't have it in us!"

The Sportomatic's reliability, now confirmed on track, meant the two-pedal 911 would become a road-going reality. The relatively simple yet novel two-pedal system, or 'selective automatic transmission', started production in July 1967 with A-Series 911s. The Sportomatic required additional attachment lugs to be fixed to their engines and was offered on the 'T' and 'U' models.

Despite some reservations by US publications, as many as 25 per cent of 911 sales would feature the Sportomatic. Although its early success would wane over its life, it became a special-order model in 1970. With torque limits increasing as Porsche upped power and torque, the 911 was 'uprated' to a 3-speed unit in 1976; the 2.7's torque was considered sufficient for three speeds. Sportomatic was finally decommissioned in 1979 and it would be nearly 10 years until Porsche fitted the 911 with the Tiptronic in the 964 model in 1988. A more conventional automatic, Tiptronic at least offered owners the convenience of a fully automatic mode, although there was a manual override for those who wanted to drive the transmission.

Today, I care little what transmission is in the beautiful 911T that's at Philip Raby's showroom. A 1971 model, delivered to its first owner at Grand Rapids, USA, it looks sensational in its Burgundy 2424 paint and black leatherette interior. The car was optioned with Comfort Equipment, including a leather steering wheel, instruments and oil tank, and like the 911S, has 5.5x15-inch chrome wheels and a tinted windshield. It rolled off the production line on 1 December, 1970.

Arriving in the UK in 2013, it's been immaculately restored, including a bare metal respray, and a full engine and transmission rebuild. It looks just like it did when it was presented to its original owner in the US. It feels it, too, and getting in you don't immediately notice that it's a Sportomatic. Porsche's



semi-automatic presents the ultimate subterfuge, with the gearlever appearing identical to that of a conventional manual 911.

It's only when you look at the gearknob's lettering that you realise something's different. The lack of a clutch pedal confirms your findings. That gearknob reads L, D, D3 and D4, with P and Reverse also offered. To start the car the Sportomatic has to be in Park. Reverse is beneath that, with L, D, D3 and D4 taking the positions where you'd expect to find first, second, third and fourth. Porsche suggested that D was the gear to be used when moving away under normal conditions, with L (for Low) best reserved for hill starting. That might have been Porsche's advice, but when performance was tested by *Car and Driver* it noted that when the quarter-mile test was done using L to start, it shaved half a second off the overall time. The torque converter shared the engine's oil supply – increasing the oil capacity by 2.3 litres – while the multiplying effect of the torque converter enables the Sportomatic driver to pull away in any of the four available gears.

Performance and economy figures were broadly similar to the conventional manual 911s. However, some contemporary tests saw 911L with Sportomatics able to rival a manual 911s around some tracks and hillclimbs. This supported the idea that the transmission worked better at higher revs, where the reduced need to shift gears could prove advantageous. Porsche's own press information at the time stated: "The high efficiency of the hydraulic torque converter, in conjunction with the fast gear shifts possible with the Sportomatic, enable almost the same road performance to be achieved as in a Porsche with a conventional clutch and gearbox. The

Sportomatic shows its superiority in heavy traffic, when hill climbing and on icy roads, where accidental or uncontrolled jerking movements when gear shifting or surges in power at the rear wheels can be quite dangerous."

There's a hand throttle between the front seats. This makes it possible for the revs to be raised slightly to overcome the possibility of the Sportomatic stalling at lower revs when manoeuvring. It's a simple, effective transmission. It's not difficult to get your head around driving it: the gearshift moves easily through its gate, with a microswitch within it allowing the clutch to engage the next gear. As with a conventional manual, you do need to lift the accelerator when doing so, otherwise the engine revs rise, but it's quick and easy to get into the rhythm of it. You also have to remember not to either touch or hold onto the gearstick when not shifting. Doing so disengages the clutch, which is less than ideal.

It's a bit of a boon in traffic, which is very much the point. The D keeps it moving nicely, although you can feel the torque converter working below 3000rpm, particularly when trying to take off briskly. It's not unlike the feeling of a clutch slipping slightly, even though the clutch is fully engaged.

Once above those revs, it's quite enjoyable. It's different rather than difficult. And it gets better the harder you work both the gearstick and the engine. It's a transmission that functions best when you work it properly, which is a surprise to someone who counts themselves as something of a die-hard manual driver. It's a more appealing transmission than Td anticipated, to the point that while I wouldn't necessarily seek out a Sportomatic transmission, neither would I rule one out.

The benefits for some are difficult to ignore, and if you're a town or city 911 driver then its positives arguably outweigh the negatives. As Ruby says, it's definitely a talking point. And thanks to relatively small sales in the UK and a good number of Sportomatics having been converted to manual transmissions, it's a rare car – one of historical significance and genuine mechanical interest.

Porsche's typically unusual solution is one that works, and one that actually works rather well. That 911R and the Marathon de la Route win gives it some motorsport credibility, too, should any question either its validity or your choice. **911**

Thanks

For more information on this 2.2T or any of Philip Ruby's stock, visit www.philipruby.co.uk.

Total 911 verdict

Think of the Sportomatic as a clutchless manual rather than an automatic, because that's what it is. It has the benefits of both, and while there's some trade-off at lower revs, when driven properly and quickly there's a lot of fun to be had. The drive home in traffic is made effortless with the Sportomatic's ease, too.

LIKES

- Ease in traffic, quickness of shift and ability to shift

DISLIKES

- Torque converter effect at lower revs does affect the performance

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THE BIG
INTERVIEW

Grant Larson

Across three glittering decades at Porsche, the American designer has given us the 986 Boxster, Carrera GT and the GT2 RS-derived 935 race car, as well as returning the 911 to a traditional look with the 997. The man himself talks to Total 911 about highlights from his career at Porsche...

Total 911: As a designer at such a powerhouse motoring company as Porsche – where you're inspired by tradition but not constrained by it – surely you must consider yourself to have one of the best jobs in the industry?

Grant Larson: That's a very good way of putting it. If you look around the industry, every company has its own buzz words and at Porsche it's 'tradition' and 'innovation', which allows us to cover all grounds.

Your current role as head of Special Projects at Porsche enables you to be more creative than, say, mainline 911 production...

Generally it does, but it depends on the project. Of course, many of them have a lot to do with a traditional aspect, particularly with the 911. I always think of it this way: if you have fantastic history, you use it to your advantage.

That's what a lot of customers also expect, and so you must be careful how much you change – how far you take the 911, as an example. One customer once said, when we were working on the next generation of 911, "Don't ruin my car!" He'd already claimed it as his, and that shows the level of burden which is levied at you.

When you joined Porsche in 1989 from Audi, what sort of company did you walk into?

I spoke to friends in the industry who indicated there would be a lot of work to do, but by the time I arrived there was a lot of uncertainty in terms of which direction to go, a lot of management moves. But once all that had taken hold, it turned out to be the best decision of my life.

What were some of your initial tasks at Porsche as a rookie designer?

Alongside the 911, Porsche also made some transaxle cars such as the 944 and 928. I was part of a team experimenting with transitioning the 944 into a 968. This included work to the form of the rear window; I also worked on a 968 Roadster built at, of all places, ASC (American Sunroof Corporation) of Detroit, but the car was never shown. It showed up in our Museum around 25 years later! We also had this other project waiting for us: the 989, the first four-door, front-engined Porsche. It was a wish of the Porsche family to have a bigger car – we called it a Learjet for the street. It eventually turned into something of a conservative 911-looking car, but the price got out of hand so the company scrapped that. Then ➡





BELOW Grant (left) and the design team that worked on the Booster Studio for the 1993 Detroit Motor Show



"I always think of it this way: if you have fantastic history, you use it to your advantage"



there was a management change and in came Horst Marchart, who had the idea of a platform share with the 986 and 996. At last there was light at the end of the tunnel!

The design of the Boxster can be described as your first 'big moment'. What was the process to bring a new concept to life in the early 1990s?

I was placed in a department for advanced development. I was always pushing to bring different groups together from within the company – suspension, gearbox, body – as they all had their own advanced ideas. I said we should put all these ideas together on a car.

Shortly after, I was at the Tokyo Motor Show in 1991. Looking around, I realised a lot of our rivals were doing 'show' or 'concept' cars, but Porsche was not. We already knew at this point a new Porsche car was coming for 1996, but we didn't want to have to wait five years to bring a fresh design to the public. So, at Tokyo, a memo was sent to the design office to put some ideas together for a show car. It was based on some of the early ideas of what we thought a Boxster should be, and by its release in 1993 it motivated the public to see what we had in store. The production version of the Boxster was then refined and released to the public three years later.

You're credited with the 997's design, which took the 911 back to a more 'traditional' aesthetic. Where did this decision come from?

That was my doing. Of course, you don't go through these things on your own – you communicate with your boss and your team. To take it back a step, with the 996 we were pushing the corner with development costs, and Harm Lagauz was also intent on doing something new. At Porsche, the company had been making round headlamps since 1948. The Boxster adopted longer headlamps that incorporated other functions (such as turn signals and fog lights). These were more cost-effective to manufacture

and so this was our contribution to helping the company survive at the time, by keeping our fingers on development costs. But there were a lot of compromises in terms of shut lines, for example.

With the 997 of 2005, we had a lot more time on our side, but we also had more development money. This enabled us to refine the things you see immediately, but also the things you don't see immediately, like shut lines between panels. The car became more 'Porsche-like'.

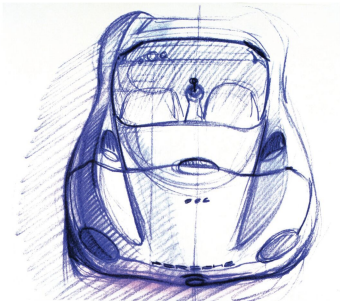
Is it true that the 997 was essentially designed in the USA?

With both the 987 and 997, we had the idea to start Harm Lagauz's dream of a Californian design studio, like many companies had out there. We thought that was where our clientele were: there was a big market share there so let's go and design some Porsches. We did a test programme with the initial 987 and 997 studies, then created full-size models from sketch to a full size see-through model in six months.

We brought them back to Germany and said, "Look what we can do in California in a short amount of time." There were supposed to be more advanced models; however, the packaging team kept bringing them closer and closer to production, so when it came to officially start the project with the 997, there were people just starting sketches. However, we had these see-through, full-size models that were nearly on package except for the cowl line, so they thought, "Forget the sketch phase, let's just take these models." That wasn't how it was supposed to happen. Nevertheless, we did some sketch phases and developed that further, but we confirmed the fact that perhaps a Californian studio could do us good.

Where does the Carrera GT fit into that?

Well, around 2000, we took over a studio that Samsung had started when it was initially going to produce cars. It was great because it was already kitted out and you could just walk in and start designing Porsches. The first project that Porsche



wanted to start was the Carrera GT, though at that time it was called SCM, or Sports Car Millennium.

It was great for the studio. The responsibility of the studio was to push engineering services, so the whole business case of the studio in California was given to Porsche engineering. That studio would design for some of the external contracts that Porsche Engineering secured, whether it was GM, Ford, boat manufacturers... they were really doing all kinds of stuff. That was the California Design Studio, and they were doing that and had the Carrera GT to work on, too.

It had a good start with some super sketches and good ideas, but then it suffered a little bit in the execution and some of the packaging. The studio tried to listen to the engineers in terms of overhangs and the designs. Back in Germany, we were watching this and said that they were saying 'yes' too much. We came in and supported them and based on Jason Hill's original sketch we redid the whole car with their support and talent, and that's how that Carrera GT show car came about.

You also helped with design development of the Sport Classic of 2010...

So in 2008, you got a project that comes from your boss asking you to figure out who's going to do this project. The 911 Sport Classic had references to the past, so it was handed to me to do because I liked Porsche's history. It honestly took us all by surprise how successful it was. There was big support for that car by Alex Fabig who runs Sonderwunsch, the

department that Rolf Sprenger initially started. The 911 Sport Classic was the restart into the limited production cars, or special editions. They started off with 250, so a low amount of cars, but it went really well; we proved that it was the right thing to do.

Parallel to that, we were doing a 997 Speedster. It had nothing to do with the Exclusive guys; we were just working on it and then for some reason it got axed. We were about 80 per cent done with the development and they axed it as a derivative saying that we couldn't sell enough. The Exclusive guys saw this and thought, "Hold on a minute, here's a car that's almost ready to produce. Let's take over that and make it a limited run." That brought me closer to the Exclusive people such as Boris Apenbrink.

Then along came Matthias Müller and Wolfgang Hatz and we restricted everything. With their input and experience from the VW groups, they pumped a lot more into the Advance Design and that's when I went into the Special Projects area and got to work on cars such as the Turbo S Exclusive Series, the Booster Rengsnyder and a lot of marketing editions for different countries like the one for Jacky Ickx, which was a cool car.

What was it like working on the new 935?

It was funny how that started. In our presentation hall at the time there was the early GT3 R, which was based on the 997. There was no design whatsoever; it just sat there in naked carbon fibre. It was part of some presentation for board members. ☺



LEFT An early drawing of the Booster Studie show car

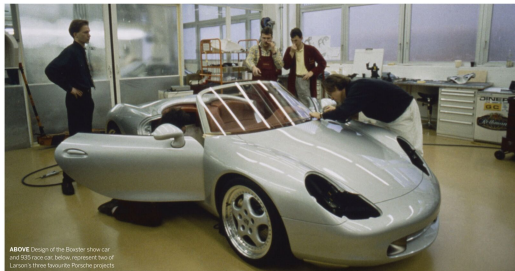
BELOW Larson had a hand in both the 997 Sport Classic and Speedster





ABOVE The 997 took the 911 back to a traditional look, but quality was greatly improved too





ABOVE Design of the Bowster show car and 935 race car; below, represent two of Larson's three favourite Porsche projects



So, all these cars are sat there and the one that stopped me was this race car, knowing that it actually wasn't designed very well because there wasn't a lot of design that took place on the race cars at that time. Essentially, at the beginning of the project they had some talented people who were doing some visual stuff, but towards the end of the project if you needed an extra hole and you're out there at the test track, you just get a saw and cut it out and you would just measure that.

I grabbed these guys and said there was a lot more potential in motor sport and race cars. Then when Dr Frank-Steffen Walliser took over Motorsport, I bumped into him and told him the same thing and he agreed. So we started working on some of the Motorsport cars, the first one being the RSR. They used us in the studio because this was the first RSR with the so-called engine in front of the rear axle, and they wanted to know how far we could take the car within the regulations.

So we did some studies and digital modelling and Frank really liked working with us, so we did what we

could with that, and that was my first step into the Motorsport side of things. I then worked on the GT3 R, the current one, and the next one.

Meanwhile, we always had these ideas about 70 years of Porsche and what we could do. One was called Mission 70, which was what they called one of these unseen cars. It was a mid-engine elongated coupe with a visible engine. The seed of "70 years of Porsche" was planted so Frank went to my boss, Michael Mauer, and asked for some ideas for it.

We thought that for the Motorsport side of things we could do it like a study. This would be a flat nose/ slant nose based on the early 935. He thought that would be a cool idea, but I wasn't so sure; you take the character, the eyes, of a 911 and shove them off... I just wasn't sure. However, I was mistaken because I think the car really took off. Once we got into it, the potential became more evident.

Our reference car for the 935 was the 1978 Moby Dick. I thought that if we're going to do this then we're going to do it loud and make a really dominant spoiler and extend the back in, and make it obvious

that this was an homage to the Moby Dick. We didn't expect it to make such a big splash.

So we built this really nice model and put it in the hall and had a look at it and just thought, "Wow!" It was just something you don't see in our design studio that often. We then got the go-ahead for it and every step of the way, Dr Walliser did a very good job of selling it to the board of directors and then introduced it at RennSport Reunion in 2008.

Which project do you consider to be your greatest legacy?

Every project is different, but the Bowster project played a very important role in the turnaround at Porsche, and made Porsche a company that was accessible for a lot of people.

However, the three coolest projects I was involved in were the Bowster show car, the Carrera GT show car, which had a really interesting development story; and then the 935 project. And then, of course, the projects that I'm not allowed to talk about and you don't know about yet! **EM**

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996 GT2

A ferocious performer, the 996 GT2 is a blistering 911 that still flies relatively under the radar. Total 911 presents your complete guide to buying one

Written by **Kieron Fennelly**
Photography by **Ali Cusick**



HISTORY AND TECH

Porsche Turbos have an illustrious record in motorsport. The 934 and 935 dominated sports car racing in the 1970s and when Group C took over from Groups 4 and 5 in the 1980s, Porsche's 956/962 ruled the roost until the factory withdrew after six victorious seasons.

A new category, the BPR championship, revived GT racing that had been in danger of fading out.

Once again, Porsche fielded a works model initially based on the 964 RS – the RSR – but for the 1995 season the factory entered the GT2 class with a turbocharged racer based on

the new 993 Turbo, converted from all-wheel to rear drive. Some 240 road-going versions of the 993 GT2 were built.

Despite 600bhp, the competition GT2s didn't achieve the dominance of their predecessors in the face of increasingly competitive mid-engine rivals. When the 996 replaced the 993, Weissach elected to switch its motorsport focus to the GT3 category. This had the advantage of being substantially cheaper, which would attract more customers. It was also an imaginative way of maintaining a competitive presence on the much-reduced motorsport, severely pruned by Wiedeking to pay for Cayenne development costs.

After some brief testing at the Nürburgring, Porsche knew that a 996 GT2 wouldn't be fast enough against more agile Ferraris or thundering seven- and eight-litre Corvette Vipers. Series production of the 996 GT2 would nonetheless go ahead because, as Porsche put it, there was always a demand for an even faster 911 Turbo. Five hundred-plus

horsepower 911 Turbo offerings from both Ruf and TechArt also suggested the tuning fraternity was ready to oblige if Porsche did not and naturally, Weissach would hardly turn down this challenge.

Launched to the press near Venice in February 2001, the GT2 was differentiated visually from the Turbo by its deeper, purposeful-looking front splitter and bonnet vent panel; a Clubsport cabin as on the GT3 was a no-cost option. Under the engine cover, a larger intercooler and turbochargers, and a bespoke air-induction system contributed to an output of 462PS and 457lb/ft, which rose to 482PS and 472lb/ft on the Gen2 car in 2003. The GT2 kept the Turbo's 9.4:1 compression ratio, used the GT3's short-shift manual gearbox and was rear drive only. Its throttle was manually actuated, dispensing with the Turbo's fly-by-wire control, and Porsche's new ceramic brakes were fitted, but beyond ABS and a limited slip differential the GT2 had no PSM or traction control. This approach left a remarkable level of responsibility in the hands of the driver. ➔



WHAT'S IT LIKE TO DRIVE?

The GT2 was all about performance and Porsche used Auto Motor & Sport's 317kph (196mph) to proclaim this was its fastest production car yet. Autocar found the 996 Turbo was 0.1 second quicker to 60mph thanks to its better traction, but from that point on the GT2, weighing 110kg less and packing 50 more horses, streaked away. Testers discovered that so colossal was the GT2's torque that traction of the 315 section rear tyres was easy to break even on dry roads. Such was the ferocity of acceleration that Car & Driver advised drivers to think before using anything like full throttle during overtaking.

The GT2 handling surprised and disappointed the magazines. In the absence of electronic safeguards, to offset the classic 911 tendency to oversteer (exacerbated here by the GT2's immense power), Porsche appeared to have configured the GT2 to understeer. This was not to the taste of serious racers such as Steve Sutcliffe in particular: understeer on the wet Italian roads of the press launch that he attended for Autocar was "worrying."

Ride quality was also odd, being neither very firm nor especially compliant. Autocar thought that the relatively soft rear suspension was an

attempt by Porsche to make the GT2 a car for all seasons. However, for some testers the 996 felt strangely uncontrolled through fast sweeping bends. The hydraulic steering also seemed to have been muted to reduce feedback and the overall result was a model which, in Karl Ludvigsen's words, was as schizophrenic as any car Porsche had offered. The GT2 was originally created with competition in mind, but finally turned out, it seemed, as a heavily uprated Turbo – lacking the security and usability of the all-wheel-drive 996 Turbo, this was a 911 for special occasions.

RIGHT The 996 GT2 was the first road-going Porsche to feature carbon-ceramic brakes as standard



THE VALUES STORY

The 996 GT2 was launched at a UK price of £116,000 in 2001, followed in 2003 by the Gen2 model at £126,000. Set against the £86,000 of the Turbo, to many commentators this seemed steep and the GT2 would depreciate more at the rate of the 996 Carrera than a top-of-the-range model.

The lowest point was reached in 2008 at about £50,000 and the market generally went through an uncertain period until values started to increase from 2011 to 2012. The high point in Porsche pricing was reached around 2016 when the Gen1 GT2 changed hands at around £135,000, with the Gen2 some £20,000 more, falling back subsequently to today's £115,000 to £135,000 levels. Mark Sumpter of Paragon is surprised that current pricing has remained static for as long because it's compared with the rise in values of other Porsche models. ➔





MARKET RIVALS

996 GT2 prices fall in a fairly wide bracket: around £110,000 to £120,000 for the Gen1 and rising to £135,000 for the Gen2. This opens the field to both classic 911s and 991 varieties.

2.2S (1970-71)

£135,000 buys a fully restored RHD 380bhp S, the early 911 enthusiast's Porsche that's irresistible fun on twisting B-roads, but not so valuable that the owner would be afraid to use it. This is the fate seemingly of most 2.7RSs.



997.2 GT3 RS

The much-admired 997 GT3 sits its final analogue form here, priced largely between £125,000 and £140,000. The plain 997 GT3 sells at around £300,000. Obviously lacking the outright performance of the GT2, the naturally aspirated GT3 is a more precise driving tool.



991.1 GT3

These GT3s benefit from a more advanced electronically controlled chassis and a new 3.8-litre engine. Introduced in 2013, early examples sell around £115,000; the later 4.0-litre models command an additional £30,000 to £40,000.



991.2 Turbo S

£125,000 buys a low-mileage S Coupe from 2018, while a further £10,000 unearths a Cabriolet example that's seen even less use. The 991 Turbo S provides almost the performance of the 996 GT2, but is more rounded and altogether less demanding.



BUYING ONE

The first consideration is accident damage and repair quality. The absence of traction control and PSM caught out more than one driver, especially in the early career of these models. One man who knew the GT2 well was Andrew Means of the now-defunct Gmund Cars, which for years specialised in uber-Porsches.

Speaking to **Total 911** in 2008, five years after 996 GT2 production ended, Means opined that perhaps 30 per cent of the 130 RHD GT2s imported to the UK had suffered accident damage and that some would have been written off. Undoubtedly, many cars were company purchases acquired for the badge cachet and used with all the disregard this often involves.

In the ensuing years, the attrition rate was significantly lower, with second and third owners far more likely to be enthusiasts with a genuine interest in the car. However, with perhaps 40 per cent of the UK GT2 contingent having suffered damage or worse, chassis and body inspections as well as the usual verifiable history should be an essential part of any transaction. Paragon's Pete Twyman advises for example looking for signs that the chassis has been bent around a lamppost at some point.

The engine and gearbox rarely give any trouble in service and the Mezger flat six has none of the sensor failures that are a feature of the more complex 991/981 flat six generation. If the turbos go wrong the problem is usually rusting of the casing or wastegate arms, which corrode and seize or fracture. Senior technician at JZM, Andy David, observes that corrosion is now the main problem on the GT2's low-slung underside: this was not fully undersealed, and brake and power steering lines suffer in particular from salty roads. In contrast, the bodywork is solid and Andy has detected corrosion only at the tops of the front turrets. Paul Stacey from Northway Porsche adds that the GT2's springs corrode and crack. These are Elbach items (unlike the 996 Turbo) and combined with the largely Porsche Motorsport arms and geometry mean that a GT2 suspension rebuild can become an expensive undertaking.

The GT2 had much reduced sound deadening, so any suspension rattles are more obvious inside the cabin, but they don't necessarily betoken wholesale replacement. Pete Twyman warns that cars stored for long periods in damp conditions suffer from seized steering locks and starter motors. And after 20 years, exhaust bolts may well be comprehensively fused in the manifolds unless these have already been renewed. As long as storage was at least undercover, water ingress from rain shouldn't be a concern. ➔

BELOW Like its GT3 sister, the 996 GT2 was available with Clubsport or Comfort-spec interiors



BELOW The GT2's dry-sumped flat six was revised to give out 462hp, exactly 10% more than the 996 Turbo



DESIRABLE OPTIONS

The GT2 came with lighter Sports seats, was carpeted but otherwise had a bare rear cabin, and a simplified radio. There was no sunroof, but the electric windows were retained. Automatic climate control and Bose sound system were chargeable extras while the GT3 Clubsport cabin, with competition harnesses, fire-retardant bucket seats and half roll cage was a no-cost option. The Gen2 added PCM, a CD radio upgrade, a carbon fibre rear wing and corresponding front apron. Handsome 18-inch wheels saved 34kg over the previous model. Most buyers would consider air conditioning as the only essential option. Both generations had carbon ceramic brakes as standard.



ABOVE The GT2 featured a revised front PU with larger air intakes over the 996 Turbo

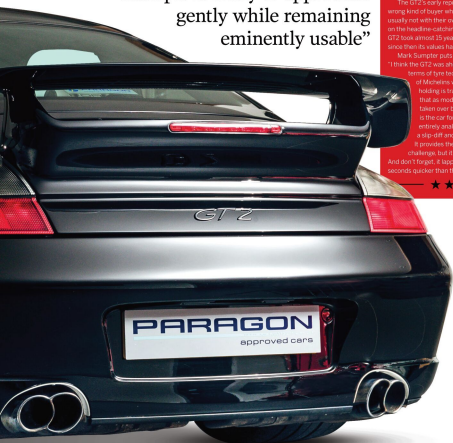


INVESTMENT POTENTIAL

The 996 GT2 is a rare Porsche. Around 1,200 were built, and made in two batches: the Gen2 was the less numerous. For comparison, 1,590 2.7 RSs were made and their rarity has made them essentially collectors' 911s. Mark Sumpter points to the GT2 models that succeeded and preceded the 996: the 997 GT2 RS

that now commands upwards of £300,000 and the 993 GT2, the Evo version of which has reached seven figures. While no one would predict such an explosion for the 996 GT2, a carefully chosen second-generation example is likely to appreciate gently while remaining eminently usable, unlike a 993 GT2 (or RS 2.7).

"A carefully chosen second-generation example is likely to appreciate gently while remaining eminently usable"



TOTAL 911 VERDICT

Much like the 964 RS was damned 30 years ago for offering less equipment, largely the same performance, a bone-shattering ride and at for £6,000 more than the 964 Carrera, the 996 GT2 received the same cold shower. Yet a decade later, even as they were dismissing the 996 GT2, those same critics were also sniping the prices of the 964 RS that was finding its motor as the trackday 911. Opinions had clearly changed.

In 2007 when GT2 values were reaching their lowest, a feature in **Total 911** explained that the model had inspired this negative reaction because the critics' received idea of what it would be, turned out to be so different when they tried the car itself.

The GT2's early reputation wasn't helped by the wrong kind of buyer whose purchasing criterion (and usually not with their own money) was often based on the headline-catching 196mph top speed. The GT2 took almost 15 years to recover from this, but since then its values have stagnated.

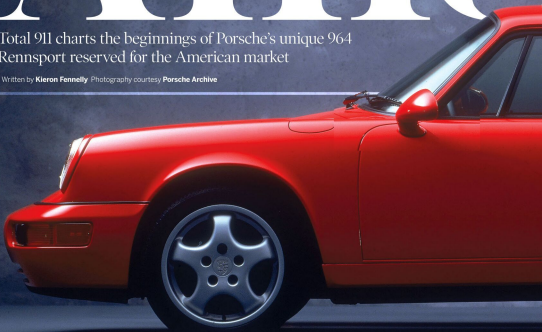
Mark Sumpter puts the model in perspective: "I think the GT2 was ahead of its time, certainly in terms of tyre technology. Shod with the kinds of Michelins we use now, the GT2's road holding is transformed." And Mark adds that as modern 911s are increasingly taken over by electronic systems, this is the car for the purist. "The GT2 is entirely analogue. No electronics, just a slip-diff and a motorsport gearbox. It provides the intelligent driver with a challenge, but it's also extremely usable. And don't forget, it lapped the Nürburgring 10 seconds quicker than the 996 GT3!"



Story of the 964 RS America

Total 911 charts the beginnings of Porsche's unique 964 Rennsport reserved for the American market

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



erica



At the end of the 1980s when California's new anti-smog legislation became operative, it was apparent that highly tuned cars such as the Porsche 911 would be affected. Breathing through carburetors and running on premium fuel, the 911 was soon in hot water with traffic authorities. The S was even withdrawn for a year in 1989 so that Porsche could reduce its emissions by replacing the Webbers with mechanical injection.

Yet as the law became tighter this proved to be only a temporary fix and by 1994 the now 2.7 flat six had been converted to K Jetronic injection. This was a second-generation system developed by Bosch for Porsche, which metered out fuel far more carefully and worked with now-mandatory catalytic converters.

The timing of American laws meant that Porsche's largest market wouldn't have access to the final mechanical injection 911: the celebrated Carrera 2.7 RS. Naturally, this caused dismay, but it would prove to be simply the first of a series of disappointments for US buyers, who would be deprived not just of the 930 Turbo for most of the 1980s, but also the 929. This was a disaster for Porsche because America would have taken probably two-thirds of production, now lost as a result.

When reviews of the new '964 RS reached the US in 1991, frustration understandably resurfaced. However, when PCNA (Porsche Cars North America) asked Zuffenhausen to consider homologating the 964 RS, Porsche turned its US subsidiary down. The company claimed that the cost of crash-testing potentially half a dozen cars couldn't be justified, even against a forecast of 250 cars. At the time the company was walking a financial tightrope and couldn't afford to take risks with a 911, which was already registering poor sales in the US because of

the collapse of the dollar. In 1991 Zuffenhausen had even begun assembling the Mercedes 500E to make profitable use of redundant production space.

This refusal, however, was to reckon without Fred Schwarz, PCNA's ebullient new CEO, and Vic Elford, whom local Porsche enthusiasts enlisted to help. Elford had been living in America since 1984 when he joined Renault Motorsport as US team manager. Naturally, given his fame and competition record, the outgoing Elford was popular with the Porsche community and readily assented to assist representations to Zuffenhausen.

Perhaps Elford's long-standing friendship with Ferdinand Piëch helped, and perhaps the new sales boss at Zuffenhausen, Dieter Laxy, saw an opportunity here, but in any case this would prove to be a successful piece of lobbying. At the Detroit Show in January 1992, a new model appeared on the stand: the Porsche Carrera RS America.

Initially, North American dealers weren't excited by this seemingly reduced-specification Porsche 911. They recalled the Clubsport that was introduced without fanfare four years earlier and had generated minimal interest. Priced at \$46,000 – the same as the standard 3.2 Carrera but without the latter's air conditioning, sound system or central locking – it seemed to be a car without a purpose. Car & Driver announced that it offered no performance advantage, administering effectively a veritable kiss of death, for eventually a mere 28 Clubsports were sold in the US.

However, the RS America was different. Unlike the ill-fated Clubsport which turned up virtually unannounced, not only was the RS America the 911 that enthusiasts had asked for, but wisely, at \$53,700 it was priced \$10,000 below the 964 Carrera 2. It also resembled the 964 RS, which they had all read about, but knew they couldn't buy. 🚗



ABOVE Guards red was one of three standard colour options available on the 964 RS America. The two metallic choices cost an extra \$1,030.





The February issue of *Road & Track* described the concept concisely, if somewhat irreverently: "In order to shave 10 grand off the price and about 80lbs off the weight, Zuffenhausen has left off power steering, sound deadening, armrests with built-in cubbies, while including (at no extra cost) sports suspension, oversize wheels and tyres, unique badges and a fixed whale tail spoiler similar to the Turbo's."

Bearing in mind it used the same homologation papers and so had to follow much of the specification of the 964 Carrera 2, the RS America turned out altogether superior to the cynical marketing exercise it might have been. Recertifying the model ruled out using much of the Rest of World (RoW) RS specification. The RS America thus had to employ the standard C2 spot-welded shell and window glazing, and steel rather than aluminium boot lid. The RS America was fully undersealed and galvanised, and the flat six was the stock M64/01 rated at 250PS; its dual-mass flywheel, gearbox and ABS brakes came straight from the standard 964 C2. The RS America wasn't offered in C4 or Tiptronic versions.

Inside, the RS America retained the driver and passenger airbags and Porsche's heavy but comfortable electrically adjustable Sport seats that



ABOVE Porsche's marketing department described the RS America as "pure profan Porsche."



"The RS America not only outperformed the standard Carrera, but cost \$10,000 less and was for once a Porsche RS that North Americans could buy"

were trimmed in corduroy rather than leather. Combined with the bolsters, the seats gave better lateral support and were more practical than leather in hot climates. The rear cabin had no seats, and were simply carpeted as the original RS 2.7 had been. Belatedly, the Department of Transport ruled that this space had to be taken up to prevent carriage of a non-seatbelt-wearing passenger, so subsequent RS Americas were delivered with two storage lockers to fill the seat wells.

Although retaining the electric windows, the RS America borrowed the simplified door furniture of the RS with its plain door cards and leather pull straps. These straps proved popular and would feature on the subsequent 993 RS and the later GT3s. Door mirrors were manually adjustable, and the RS America used a simplified wiring loom and was fitted with two speakers and an amplifier for the radio – a \$986 option. A heated rear window was standard, but not the rear wiper; the standard Porsche alarm system was fitted.

The other changes to the standard 964 specification showed Porsche using its parts bin with habitual imagination. The ride height of the RS America had to remain the same as the standard Carrera, but Porsche fitted the firmer coil springs and uprated dampers of the 964 Turbo together with the thicker (22mm) front anti-roll bar. This was effectively the M103 suspension upgrade, a \$640 option on the stock Carrera. Wheels were cast 17-inch hollow light alloy Cup 7-inch front and 8-inch rear, again a \$1,852 option on the Carrera 2. Not only was

the RS America \$10,000 cheaper, but it also included \$2,000 of options – a point not lost on buyers.

The RS America came in three primary colours: Guards red, Black or Grand Prix white. Two metallic shades – Polar silver or Midnight blue – were available as a \$1,030 extra. Characteristically, the options catalogue ran to only four items compared with the 48 of the standard 911. Besides the radio, a limited slip differential (40 per cent locking value) was an additional \$913, an electrically operated sunroof for \$1,952 and air conditioning at \$2,805. Though the most expensive, the air con proved the most popular option and approximately 75 per cent RS Americas were so equipped. Half were specified with radios and/or sunroofs and two-thirds with the LSD. Only 12 cars were ordered with no options at all.

The Cup alloys, the scripted 'RS' on the flanks ahead of the rear wheels and the RS America decal on the engine cover served to differentiate the RS America from its more expensive sibling, although the key difference – and the RS America's trademark – was the fibreglass whale tail spoiler that replaced the 964's mechanically operated device. Although not a true lightweight by Porsche standards, at 2,951lbs (1,340 kg) the RS America was still some 40kg lighter than the US specification Carrera 2 thanks to the absence of power steering and air conditioning, electric sunroof and its lighter alloy wheels.

However, this was enough for PCNA's marketing department to describe it as "a pure protein Porsche", going on to say, "Porsche now commemorates the 20th anniversary of the Porsche 911 RS with the ➤



ABOVE Compared to the C2 version, the RS America was a noticeably sharper driving experience

creation of the Porsche 911 RS America. Released in the spring of 1992 as a 1993 model, the RS America is available only in North America. The 1993 RS America captures the spirit of the RS in its emphasis on performance." Fred Schwab went further, claiming: "If you like autocross, this is your car. If you are a time trier, you need this car. If driving is for fun, you need this car, the car the PCNA built."

With such a billing, the RS America had much to live up to, especially after the flop of the Clubsport. This time, however, there were few disappointments. Porsche had carefully managed expectations, as this extract from *Excellence* from August 1992 shows: "For years Americans have heard all about the great Porsches they couldn't have. If it was a good one, you couldn't buy it over here. Emissions, laws, crash restraints, you name it, our puritanical heritage insisted on constructing a labyrinth of laws that conspired to keep trick Porsches abroad."

The article's author, David Colson, goes on to bemoan the plethora of "tape and paint jobs" that had been offered to Porsche buyers in the US when the rest of the world had the choice of all the "R, RS and RSR versions and their derivatives, but all that was about to change."

This sets the tone for the rest of the article, which goes into raptures about the RS America: that it not only outperformed the standard Carrera, but cost

\$10,000 less and was, for once, a Porsche RS which North Americans could buy. Indeed, it was even made just for them. Other test reports were similarly enthusiastic. It helped that no one was expecting a replica of the uncompromising European 964 RS.

The RS America's acceleration and top speed were little different from those of the Carrera 2. *Road & Track* recorded 0-60mph in 5.3 seconds and 0-100mph in 13.0 seconds, in line with factory claims, but *Car & Driver* recorded 4.6 seconds for 0-60mph. This magazine's testers were known for their brutal treatment of clutches. There was general agreement that the RS America's performance appeared to fall half-way between the stock Carrera 2 and the RoW RS, which they found entirely reasonable. The RS America's restrained aesthetics also impressed the native scribes, as did the distinguishing whale tail.

It was the suspension and steering that really got their ink, not to say blood, flowing. The RS America shared the same clever variable ratio manual steering rack as the RoW (but not UK) RS and combined with the firmer Turbo suspension and wider rims, the result was a noticeably sharper driving experience. Indeed, despite having exactly the same engine as the stock Carrera, the dynamics of the RS America were noticeably more vivid and it just seemed faster. No doubt the absence of sound deadening in the rear bulkhead that Porsche had cannily left out

contributed to the enhanced sense of involvement, and it was evident that everyone who sampled the car enjoyed it.

Two magazines stated air conditioning ought to have been a standard fitting. Another thought that the limited slip differential should have been part of the package. Yet opinion was that, given its financial and technical constraints, Porsche had produced a 911 worthy of the RS badge. The public agreed: by October 1992 PCNA was selling equal numbers of the standard 911 Carrera and the RS version. By the time of the final deliveries in May 1994, 701 RS Americas had been sold – three times the forecast that led to the car's development in the first place.

On the other side of the Atlantic, initial reaction was that the RS America was merely a low-specification Porsche 911 that should never have borne the hallowed initials. But time has changed perspectives: RS America clearly fits the "less is more" approach and it's also possible to discern the genesis of the successful GTS category that would surface on the run-out 992. Conceived with little room for manoeuvre, the RS America turned out to be a crisp-handling 911 in the lightweight Porsche idiom. Very desirable today, it enjoys a significant following and examples that have not been over-customised have long changed hands for well over twice the price of a comparable C2. **911**



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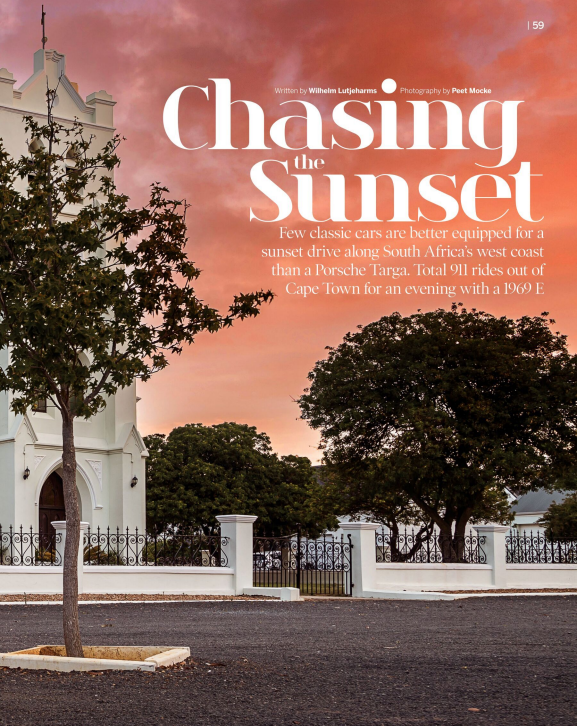
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Written by **Wilhelm Lutjeharms**Photography by **Peet Mocke**

Chasing the Sunset

Few classic cars are better equipped for a sunset drive along South Africa's west coast than a Porsche Targa. Total 911 rides out of Cape Town for an evening with a 1969 E





There are few more enticing prospects than leaving the city in one of your favourite cars, getting away from the traffic and then heading to the countryside for a beautiful sunset drive.

After a few blistering hot days during Cape Town's summer, I thought we'd have the same type of weather during our planned afternoon drive. However, in the morning there was a short rain spell, clearing the air with some clouds hanging around into the afternoon. It cooled the landscape and cleaned the air, resulting in the perfect refreshing atmosphere for our outing.

The owner of this beautiful Tangerine orange 1969 911 2.0E Targa had the car fully restored a couple of years ago. She drove the car all the way down from Johannesburg to Cape Town in December 2020. It was a perfect road trip to celebrate the two years of restoration, as the journey was around 1000 miles over the course of three days.

Today, we wait until most of the traffic has cleared from Cape Town's road network and then leave the city. Because it's already 6pm (the sun only sets around 8pm) most of the inner-city traffic has dispersed, so we make our way along the R27 that

hugs the coast and heads through mostly residential areas. Between the mundane and regular city traffic, the Targa stands out. This is thanks in no small part to its compact footprint compared to today's significantly larger vehicles, and its beautiful orange colour.

We decided to keep the roof on for the first part of the journey. I'm quite surprised by the lack of creaks and rattles. This is, after all, a 53-year old car, but even from the Targa top there aren't any significant noises. It's at times like these that you could mistake your driving experience with that of a Coupe of the same year.

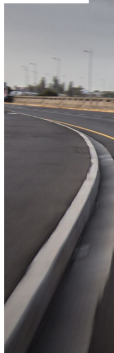
The Targa is comfortable to potter around in. Although the gearbox takes a few shifts to learn, it soon becomes easy to navigate your way through the dogleg gearbox. My view from the driver's seat is excellent and I have a near-perfect idea and view of the car's extremities.

We stop at Bloubaergstrand Beach, offering one of the best-known sights and sounds of Cape Town – the typical postcard that you'd sent back home in the previous century or Instagram-board photograph that you'd take today. Come here on St Valentine's evening and the beach is packed, thanks to the perfect view over the bay to Cape Town and the ☺

ABOVE LEFT Evening in Cape Town, and the 1969 2.0E Targa prepares to hit the road

ABOVE RIGHT All-round glass allows the driver to take in Cape Town's urban sights from behind the wheel

RIGHT Traffic is light as the Targa heads out of Cape Town and towards the sunset



“The rhythmic beating of the flat six engine is more audible and the smell of the ocean stays as we drive on”







ABOVE Classic lines, a tractable E-spec engine and a slightly longer wheelbase for more balanced handling means the '69 Targa has ideal touring credentials



city's most visible landmark: Table Mountain. Today the misty clouds are covering the mountain, but we can still clearly see its outlines. The Targa's exterior colour offers a strong contrast to the grey sky and blue water, and a number of joggers turn their heads to take a second look.

I pull the lever below the 'B' pillar to open the engine lid. These early 911 models' engine bays are so spacious – you can clearly see all the exterior parts of the engine. Having only around 2,600 miles on the odometer since its full restoration, it looks brand new, replete with all its stickers at the bottom.

The 911E replaced the 911L in 1969. With a new dual-rail injection pump, the E now offered 100hp more, for a total of 140hp. A brand-new Targa retailed for DM26,470 in Germany, which was a DM1,780 premium over the Coupe.

Before we leave we decide to take the roof off and enjoy some al fresco motoring – this is what the car was designed for, after all. This can be done by a single person, but having two pairs of hands makes it quicker and easier. Simply turn the two levers on the inside of the cabin that are situated above the windscreen, and then lift the roof up. You then press

the outer frames towards each other and it folds up like a concertina. We open the front lid and carefully place it on the compartment floor before closing the lid again. Immediately it's as if the matte (brushed) metal Targa hoop becomes more of a feature than when the Targa top was in place.

As we pull away, the rhythmic beating of the flat six engine is more audible and the smell of the ocean stays as we drive on. We make our way through Bloubergstrand and head along a short stretch of the M9 towards the N7. There are some eucalyptus trees along the way before the vast expanse of farms in the countryside become visible. A short stint on the N7 takes us north. It's here where the Targa shows another of its useable features. It easily keeps up with modern traffic with the rev counter sitting just below 4,000rpm at an indicated 75mph. Put your foot down and the speed simply continues to increase, allowing ample performance for overtaking traffic. Impressive performance for a 2.0-litre engine!

I'm also impressed by how little wind buffeting there is in the cabin – especially considering I have the driver's side window open and I'm over six feet tall. The cabin is marginally noisy, but with slightly

Model 2.0E Targa
Year 1969

Engine

Capacity 1,991cc
Compression 9.1:1
ratio

Maximum power 140hp @ 6,600rpm
Maximum torque 175Nm @ 4,500rpm
Transmission Five-speed manual

Suspension

Front Independent MacPherson strut, torsion bar, anti-roll bar
Rear Independent torsion bar, anti-roll bar, trailing arm

Wheels & tyres

Front & Rear Dunlop SP Sport FM800, 6x25-inch; 195/65 R15

Dimensions

Length 4,363mm
Width 1,630mm
Weight 1,020kg

Performance

0-62mph 8.2 seconds
Top speed 133mph



raised voices I can even keep a conversation going with Peet Mocke, the photographer who's joined me on my evening expedition.

We fill up with petrol at the fuel station and make our way down the road to the village of Philadelphia. The white NGK church that dates from 1863 is one of the local landmarks, along with a number of other quirky shops and the Pepper Tree restaurant. All of them are closed for the day, but we can't help but look to the skies and appreciate the corresponding orange it's turning into with a dash of pink.

As we leave this small countryside town I press the throttle a little bit deeper. This will be my last chance to enjoy a few corners before we join the highway leading back towards Cape Town. The lightweight and compact nature of the 911 presents itself immediately, especially through the turns. You can't rush the five-speed gearbox, but then you also don't want to because you can spend more time appreciating the steering feedback, the balanced suspension and the willing engine. Even from 3,000rpm the engine is eager to rev; and past 4,000rpm even more so. This leaves ample room for more performance on offer – the redline only arrives just before 5,000rpm.

The relatively small steering wheel brims with feedback. There's no power steering, but because the car is so light and most weight is on the rear axle, it takes very little effort through the steering wheel to

point the car in your desired direction. That was even the case at parking speeds.

It's at times like these that the 911 shrinks around you. With the roof off, you also have all your sensations elevated, be it the setting sun visible on the horizon or the mechanical sound from the little 2.0-litre flat six engine. Apply the brakes and the E easily scrubs off speed, giving you even more confidence to drive the car in the way it was intended. 1969 also signalled the start of the 911's B-Series production, when these car's wheelbase was increased by 57mm, marginally improving on-the-limit handling.

Back on the highway with the roof down, the cooler environment makes a perfect drive back to the city. These roads are in near-spotless condition, and the combination of the relatively plump P95-65 R15 tyres on beautiful 15-inch Fuchs contributes to the comfortable ride. The seats are another highlight. If you spend hours in seats and you never think about them, then they're doing a fine job. In this Targa you never doubt you're driving a sports car, but the level of comfort is welcoming – especially if you've spent a long time in the seat.

The view over the orange bonnet ties in perfectly as the sun sets in the west and the day comes to an end. I used to frown a little when someone said they've bought a Targa, but now I understand it a little better. It does offer the best of both worlds. **SM**

TARGA TOP RESTORATION AND MAINTENANCE

You don't want a Cabriolet, but you also don't want a Coupe. That's where Porsche's Targa slots in perfectly. The Targa top is constructed from a foldable metal frame while the material is a thick layer of vinyl. Regular maintenance can include treating the vinyl with silicone as it fights the sun and water (should you choose to drive it in those conditions), while minor lubrication of the joints will also help to keep it in perfect working order. Don't forget that if you've loaded your front trunk full of luggage, the Targa top can also easily slip in behind the two front seats.

Tim Abbott of Porsche Master Craftsmen, who restored this car two years ago and has worked on several Targas over the years, had the following to say regarding the Targa top: "To restore or rebuild a Targa top, you must use the original material – thankfully it's available. You can buy it already made up to the correct size, or you can buy the material and then your trimmer can cut it to size.


"The secret with these tops is to not necessarily fit new rubbers. The old rubber would have formed over the years for the specific Targa top and would have already compressed in the right places. Also, all these tops leak – you'll never find one that doesn't leak. If you fit new rubbers, it's likely that it will leak even more. That is because some of the windows might not line up, etc. It's often quite a juggle between old and new rubbers.

"Only use a minor amount of clear, silicone lubricant for the joints as you want to keep the top clean and not dirty your hands or the car when removing or installing the top. It actually shouldn't need lubricant as they have nylon sleeves in them."

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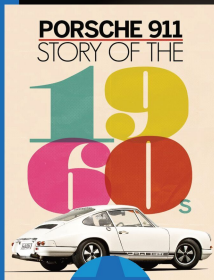
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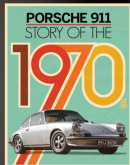
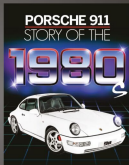
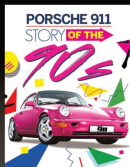
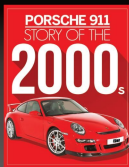
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Living the Legend

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



Ian Harris
Shoreham, UK
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Model 3.2 CARRERA
COMMEMORATIVE EDITION
Year 1988
Acquired DECEMBER 2020

Model 964 ANNIVERSARY
Year 1993
Acquired FEBRUARY 2022

Model 964 CARRERA
Year 1993
Acquired JULY 2021

Model 996 2 GT3
Year 2004
Acquired JANUARY 2022



Many years ago I came across one of the most amazing Porsche barn finds in the UK, and recently posted some images on my Instagram

page. Many people have asked how I found the car and ended up buying it.

Let's go back to December 2014. My wife's friend was a Brighton estate agent where we lived, who'd gone to value a house. In the garden was a rusty Porsche. He said it was pretty far gone and past restoration. I didn't think too much about it, assuming it would be an old transaxle car or basket case that was well past repair. The estate agent told me the rough location of the car and left it at that.

Some three months later I started to think about the car again, because it was located within a stone's throw of where I was living the time. Each day when I

walked to the shops or took the dog out, I'd stick my head over the fences in the areas where I knew the car was. And one day I hit the jackpot. In front of me was a right-hand drive 3.0-litre Turbo. Even better, it was a Martini Turbo with Dr Ferdinand's orthopaedic seats!

I knocked on the door and made contact with the owner. The story was that he had the Martini Turbo as a company car and was the second owner. He'd done 70,000-plus miles on the car and ended up buying it, storing the Porsche in his garage. Ill health and early retirement meant the owner moved to Cyprus to his holiday home. Some 16 years later, and his son had been looking after the family home. When the owner returned to the UK he found that his son had pushed the car out from the garage into the garden, to make room for his motorbikes and gym equipment. The Porsche had been left outside for years, until I found it.

A few months and lots of negotiations later, I managed to secure the car late on a Friday night, with the stipulation that the car had to be gone by Monday morning. I talked my father into helping and we loaded up a trailer with shovels and winches to pull/dig the car out. It had been sat on a slope and the tyres were flat – the bottom of the engine and gearbox were in the mud. Furthermore, the back footwells of the car were full of water because the doors hadn't been shut properly. We had to cut down a couple of trees that had grown around the car and take down some fence panels, just to drag it out from the garden. It was a mission to say the least, but we managed to get it on the trailer – and the car was mine.

I spent the next few weeks trying to get as much information as I could on the Martini Turbo. It was an unofficial limited edition model: anyone could order a 930 Turbo with the Martini stripes. According



Lee Sibley
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9WERKS TV

9WERKS Radio

Model **996.1 CARRERA**
Year **1998**
Acquired **JANUARY 2019**



I'd gone into 2022 rather unsure of the direction in which to take my 996 project. Currently (touch wood!), the car is performing brilliantly:

everything works, there are no creaks or rattles, and both the engine and chassis feel super tight. I've enjoyed driving the 996 of late, so much so I've put more miles on it than my '09 Cayenne, despite the salty roads. That's love for you, I guess!

A bugbear has manifested over the course of those winter miles, however, and this concerns my front seats. Because I've replaced the steering wheel and gear shifter, the seats (along with the 996's pedals) are the only remaining touch points from stock. The pedals are great and I have no interest in changing them, but the perfection of the MOMO wheel's grip and solid feel of my 917-inspired wood shifter only intensifies the feeling that my current factory seats are letting the driving experience down in a big way.

I've made no secret of the fact I don't rate the seats in my car – or any 996, for that matter – for several reasons. They offer no lateral hold, they offer little in the way of lumbar support, and with the optional 'ruffled' leather look as on mine,

the seats look utterly knackered when in fact they're in good condition. Simply put, they have to go, and my recent excursions have only intensified this feeling.

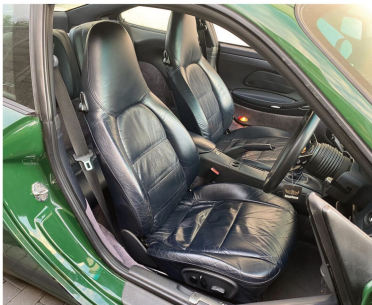
What are the options? Well, as my seats are non-Sport, the first port of call is naturally to consider 996 Sport items. However, previous experience has taught me these also fall short in comfort, adjustability and lateral hold. Wider at the top compared to non-Sport seats, the 996-era Sport seats are still far too narrow at the shoulders, and so you sit 'on' them rather than hunkering 'into' them. With those dismissed, I'd looked at Pole Position seats by Recaro, ever the benchmark for an aftermarket throne in a sports car. A friend has a set fitted to his C4S, although a road test revealed them to sit too high, cutting off the top of the 996's clocks from the point of view of the driver. This was no good to me.

After considering many other options, I've decided on a Porsche seat from the 996's successor, the 997. A pair of 997 Sport seats are a direct fit for a 996. They offer everything mentioned above that the 996 seats don't, and you sit slightly lower, too. A pair of 997 Sports seats, therefore, are the perfect solution to the problem, and so they're what I'm after. Got a set, or know of a pair? Please do get in touch...

to my research there were three 3-litre Turbos and six 3.3-litre versions; the stripes, Grand Prix white paint, and red and blue Dr Ferdinand Orthopaedic pad seats gave it the Martini edition moniker.

I stored the car in my unit because I was getting married the following week. I'd put a post on the Porsche owners club looking for more information about the car, got married to my amazing wife and embarked on our two-week honeymoon. I checked my emails half-way through the holiday. I'd received an offer on the car I couldn't refuse. When we returned to the UK the car was sold and with the money we were able to buy our first home.

The Martini changed hands a few times before being handed to Williams Crawford, which conducted a nuts-and-bolts restoration. The car sits in its showroom and if you search 'YouTube for '1977 Martini Turbo restoration', you can see a video of the restoration process.





Ben Przekop
Mercer Island, USA

@benjaminprzekop

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



"What's your new 992 like to drive?", friends keep asking me, and all I can tell them is, "Wet Mode works really well!" Blame our lovely Pacific

northwest winter weather of snow, ice, rain and cold. Hopefully, next month will give me some dry-weather opportunities to turn that Drive Mode switch to Sport Plus and tell you more.

For now, let me give you a virtual tour of the 992's exciting new exterior and interior styling, and functional controls. The 992 must be seen in person to be fully appreciated, and when you do I think you'll agree it exudes muscular, powerful, functional design. My favourite view is from the rear three-quarters, where the new wider body has been sinuously sculpted around the massive tires, with the wraparound rear light cluster adding just enough linear sharpness to relieve the curvy aesthetic.

In typical Porsche fashion, every vent you see on the car is functional and yet artfully rendered, such as the rear engine air intake with its gloss black strakes and



integrated brake light. As you approach the car it unlocks the door and turns on the lights, while the flush-mounted door handle flips up to welcome your hand, as if to greet you with "Your Porsche is ready, your lordship." Again, a functional feature that's elegantly executed.

As I sit in the heated and ventilated 18-way Sports Seat Plus with its adjustable side and thigh bolsters, it hugs me perfectly, ready to handle the high G-forces this car can deliver with aplomb. Gripping the heated multi-function steering wheel – such a comfort on cold winter days – I glance at the new five-dial instrument cluster. This is arguably the biggest visual change with the 992. As ever in the 911, the tachometer is in the centre. In this latest rendition it's still an analogue, physical gauge, but it's now flanked by four configurable, electronic gauges on either side.

You'll notice that because of the width of the five-gauge layout, the two outermost dials are partially obscured by the rim of the steering wheel, and you have to lean forward slightly to read them. On hearing this you might be wondering why, since Porsche was designing an all-new dashboard, it didn't employ a three-gauge cluster that appears on its other cars. This would enable you to see all the gauges easily through the top half of the steering wheel. Total 911 readers should already know the answer: it's because the 911 has always had five gauges, and the layout has always been wider than the steering wheel (see the 901 dash photograph). It's part of the sacrosanct 911 design heritage!

As you look around the rest of the interior, the dashboard has a clean, horizontal look that evokes 911s of the past while simultaneously feeling modern and functional. The centre console is now much simplified and has just a few toggle switches and knobs for the most frequently used functions, such as radio volume, climate control, sports exhaust and PASM, and there are two "diamond" buttons that can be set to any PCM function you choose.

The new, shorter PDK gear selector works perfectly with a lovely tactile feel, thanks to the knurled metal surface that also matches the toggle switches and ignition key. Together they convey a beautifully cohesive, functional design. And all of the switches and dials have that bank vault feeling of solidity and quality in their operation, which adds to your confidence that this entire car has been designed for robust and enthusiastic use that will last for many years.

Can you tell I'm in love with this car? And that I'm anxious for better weather?!





Natalie Stratos
London, UK

Model
Year
Acquired

911 SC TARGA
1982
NOVEMBER 1994



I got my 'first born' back on Friday and we went straight out to Notting Hill Gate for a test run. Being apart for so long and driving a various assortment of modern cars in her absence made me forget just how exhilarating it is to drive her!

I had to wipe the windscreen down the whole way because I was too nervous to open the windows in case the fuse blew and I couldn't shut her and leave her parked securely. The water ingress and being stationary for a while made the condensation crazy. On the drive home I opened the window the whole way and the situation cleared up.

Everything on my Targa needs attention, but it was magnificent to be sitting in her battered and worn leather

seats. You have to focus so intensely, like playing an online game – *Grand Theft Auto* that my sons played incessantly comes to mind. It's that adrenalin rush of all of one's senses being on high alert. There's no cruising in my Targa, and yet I prefer it. She held the road so well and nipped in and out of traffic with such agility. I missed her so much. At least the heating was working and so I ditched the hot water bottles.

We parked off the Portobello Road and she was back where she began life with me, when I lived in Ladbroke Grove. She was a regular sight when I had a shop on the flyer end of the Portobello Road. In those days it was fantastic to have a Chelsea and Kensington parking permit because its reach was so far and wide. I could park anywhere with no parking apps or worry of fines. Now my

poor car is encouraged not to drive into London and immediately hits the ULEZ (Ultra Low Emission Zone) charge before I've even left Richmond. I have a garage that's offered to take the existing engine out, store it at a rental cost, and replace it with an electric engine. It's the way forward maybe, but for now no way. For a start financially it's impossible. I wonder how many classic car owners will take this route in order to be kinder to the environment and also to be able to use their beloved vehicle. I'm a great believer that these old cars should be seen and not hidden away in a garage.

The next day I decided to clean her myself. So many people stopped to talk to me and admire a 1982 Porsche Targa. It never gets tiring to see how happy she makes kids, women and men. It's a labour of love, but just so therapeutic.

I saw how bad her bubbling is under the headlights again and around her badge. It doesn't seem that long ago that I had her completely resprayed, but it's obvious they didn't do a good-enough job. She's going back into the garage in a couple of weeks to replace the engine cover latch. It's seized up and won't close completely, but I just couldn't wait any longer until the garage had time to fix this because Frazer is so busy. He'll also try and look at the wiring of my windows and why they randomly blow a fuse. The list is just so long, but that's the price of an older Porsche which is used on a daily basis, and I wouldn't change it for the world. The journey continues.





Nick Jeffery
Surrey, UK

@npjeffery

@npjeffery

Model **997 CARRERA**
4 GT5
Year **2012**
Acquired **OCTOBER 2018**

Model **997.1 GT3**
Year **2007**
Acquired **NOVEMBER 2019**



I always wanted a GT3. For one reason or another I didn't get round to buying one until November 2019. The 996 Carrera 4S was my

first Porsche, the 996 Turbo my second. The latter was a huge mistake where I should have kept my money and waited until I could afford what I really wanted. We live and learn...

Having owned the GT3 for over two years now I thought I'd try an experiment. I always said I wouldn't want it as my only Porsche or a daily vehicle, but in a moment of madness felt I should challenge my own thinking. This was driven by two things. I've arguably not been driving the GT3 as much as I should do, putting too many miles on my Carrera 4GTS and Spyder. In addition, the GT3 is going into Paragon Porsche mid-February for a new offside rear mud guard, some suspension work, a set of Michelin Pilot Sport 4S tyres and full geometry, so I want to get some value from the old rubber first.

I've spent the past couple of weeks using the GT3 as my daily driver in an attempt to reassess the car and its ability. Yes, it's a serious car. Yes, it demands respect and requires absolute concentration. And yet, I didn't get out of the car on any of the given days with backache, or a stiff neck, left arm or left leg! In fact, most of the time I just had an insanely huge grin on my face! You really could daily one if you had no other choice – and the fuel consumption wasn't horrific, either. Of course, I caught the front splitter a few times and winced when trying to negotiate the



pothole-ridden tarmac prevalent across south-east England. And yet I thoroughly enjoyed each and every one of those drives, although I avoided rush-hour travelling where possible and stuck to my mantra of giving motorways a wide berth.

The other thing I noticed, and touched upon briefly in a column a year or so back, is that when the car is used as a daily the usually obstinate gearbox and stiff clutch feel a little more forgiving and more compliant than they would when the car is left standing for weeks on end. I think the first-generation 997 has enough civility and is just compliant enough to be used as a daily driver for the committed enthusiast. It has a well-appointed and relatively modern cabin, an excellent driving position and, while interior noise levels by modern standards are unacceptably high, you could live with it. I think it would be a different story if the car were a Club Sport specification with the obligatory bucket seats. The fact that it's a Comfort spec car with the Sports seats make it more akin to an early version of a GT3 Racing.

During the experiment the GT3 was subjected to all manner of trips, from an early morning blast across Surrey, Hampshire and Sussex (and bottoming out the front splitter multiple times) to the Porsche Club GB Surrey Region monthly meet at Redhill Aerodrome with numerous speed humps to negotiate. A trip to the local Sainsbury's for some



shopping and petrol also served to dry the brakes off after a wheel wash to remove the layers of brake dust from the 19-inch rims. One day I dropped my son to his work in Guildford town centre before a run across Surrey Hills and a walk around Newlands Corner, and fitted in a trip to my favourite circuit, Goodwood, for an alfresco lunch. It even served as a delivery truck to pick up some items on my son's behalf to take back home from university. During this extended period of daily activity the car ran perfectly, used no oil and averaged a pretty reasonable 24.8mpg.

The experiment has served to remind me just how good the 997 generation GT3 truly is. It's easy to get blasé about things and accustomed to the norm, but it's only when you take a step back and immerse yourself in the whole experience that you're reminded what makes GT cars so utterly brilliant and highly addictive! They really are that special!





Max Newman
Aylesbury, UK

@maxipcor

9WERKS Radio

Model: 991.1 Carrera S
Year: 2013
Acquired: SEPTEMBER 2020



It's said that absence makes the heart grow fonder. I like the sentiment, but don't necessarily agree.

Sometimes I think it

gives you the space you need to realise you're better off without each other. As my interest in Boxsters continued I'd been asking myself whether I'd be happy to live without a 911, and then Karma came calling and I was forced into a week-long 911 hiatus. Karma?

On my way home from a great coffee at The Espresso Lounge in Tring I was met by an error message on the dash: 'Fault cooling system Visit garage'. Being a yellow warning I cruised on home and searched online for it. There was a recurring theme suggesting that the fault would likely be traced to the charge-over valve(s), and not uncommon on 991s like mine. Still – bummer.

I'd already decided to visit local marque specialist – Wrigthtune in Wallingford, Oxfordshire – to fix the loose piece of trim below the front bumper that I mentioned a couple of issues ago. Editor Lee Sibley is a fan of the company's no-nonsense, naturally aspirated 911 impressed me with his straight-talking style when he guested on the 9WERKS Radio podcast. This latest problem was the catalyst to get it organised.

The trim was an easy fix for the guys at Wrigthtune and the fault was indeed

traced to one of the charge-over valves (fortunately an easily accessible one). With my 9WERKS membership 10 per cent discount it wasn't an expensive episode, and I appreciated first-hand the straightforward but bespoke service that Chris offers.

Wrighttune is an hour from home for me and logistics meant that I was without the 991, as I said earlier, for a full week; albeit still mobile thanks to the Macan and venerable BMW 335i Touring. As the days passed I asked myself – challenged myself, even – to consider if I could let the 911 go, sensibly bank some cash, and buy a 981 Boxster S with the rest?

I don't want to appear to be a 911 snob because I don't feel as though I am – although if there were a place to do so it's surely in the pages of *Total 911* – but there really is something special about a 911. As I've said before I'm totally 'Team Porsche'; but if possible that will always include a 911.

The temperature was struggling to get above zero when I collected the car from Chris, but the drive home was still a total joy. Some of that joy came from things that aren't unique to a 911, such as a sonorous, naturally aspirated six-cylinder motor instead of the turbo diesel (albeit mercifully six-cylinder) in the Macan. But so much came from the way a 911 goes down the road and how that feels through your extremities. And also the intangible feeling of pleasure and



pride that I get from just being in a 911... my 911.

I would definitely like a Boxster of some description though, and it feels like a car I'd like with a manual gearbox. If you recall, when I sold the 997 I left myself without a manual gearbox to enjoy for the first time in nearly 20 years. How I feel about that, some six months later, is another thing I've asked myself of late. When I'm day-dreaming about cars to buy, be it a £15k Boxster 987 or a £150k 991 GT3, I often think about the process of stroking a manual gearbox down the road. Yet day-to-day, when I'm out on the road in auto or on the paddles I don't give it a moment's thought. I guess that for now, I'm good.



Peter Wilson
Adelaide, Australia
@peterwilson_oz

Model 930 3.3
Year 1980
Acquired 2011



I'm glad we were able to have a relaxing summer break, because my Porsche has decided to give me a nightmare start

to 2022! The car sat idle for about three weeks, and I attached a trickle charger prior to tackling some of the unsolved gremlins from last year. These included pulling left under braking and occasional misfires under low load.

I had a local independent specialist take the car for a drive and give his thoughts on the brakes. I'd noticed a gentle veer left under braking and then right once the brakes were released. The specialist tried something new, which involved jumping on the brakes and letting go of the wheel! The wheel turned violently left and the car followed: his verdict being that the right-hand brakes weren't working properly as opposed to any suspension play that I suspected.

I pulled the brakes apart (again) and still couldn't find a fault with discs, pistons or pads. Another possibility is a collapsed flexible brake hose, so I've ordered a set and will swap them out. I've also booked the car in for a dynamic



brake test at a Subaru dealer (keep that secret to yourself). I'll share the outcomes next month.

Having given up on the brakes, I went to take the car for a gentle drive. I'd only gone a kilometre or so before the car started misfiring and then cut out. I couldn't believe this was happening again after previous failures and all the work on fuel pump wiring, the ignition system and so on. This car is out to break me!

I managed to get it started and back into the garage, then started looking at fuel pumps because it had showed symptoms of fuel starvation and running lean under load. Both pumps were running, but the front one was making excessive noise and is the only part of the system that I haven't replaced. Add a new fuel pump to the shopping list...



While under the car I noticed that the engine was sitting askew and on closer inspection saw the LHS engine mount had collapsed. I jacked up the engine and removed the mounts. The car raises significantly as the engine weight is removed from the chassis and it needs to be jacked quite high. Then I encountered one of the 911's worst design 'features': the loose nuts securing the mounts to the chassis. Why couldn't they have been caged? The nuts are easy to reach when there's no engine, but almost impossible when it's in situ. I had replaced the mounts when rebuilding the engine, but they must have been faulty because the rubber centre had pushed through the metal. New mounts obtained and installed, but I still have the brake and fuelling problems to sort. What a hobby!



Andy Brookes
Poole, UK
@993andy
5WERKS Radio

Model 993 CARRERA
Year 1955
Acquired SEPTEMBER 2008



Have you given your car a name? I've had a few cars that have acquired names over the years. The most memorable was the

Type 3 Variant called the Green Goddess. My mum named it and it seemed very fitting.

I had to come up with a name for the 993 for Martin (@theghostoutlaw) for the splendid calendar that he produces to support Dementia Research. The previous owner called it The Red Baron, but I was never sold on that. I came up with Old Stripie in a moment of desperation for the calendar. Again, I wasn't convinced that it was fitting.

I've since been chatting with Tony, the owner of @pablo_the_porsche, and asked him why Pablo was called Pablo. He replied: "Pablo Escobar had a Targa that had his name on the side. My buddy Bryan (@achtungkraft) made a decal and put it on my car before our drive to Rennsport. When we were there, we were interviewed for the 992 launch video, and the producer kept calling the car Pablo. The name stuck."

As a cousin from Stuttgart with such a related look inspired by Pablo, it seems

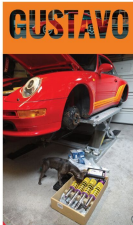
only right that the 993 should be named after Pablo's cousin and right-hand man: Gustavo de Jesús Gaviria Rivero. The outlaw name is pretty fitting for a car that's definitely not for the purest. What do you think?

Quick update on the 993. I think you'll have realised that I'm pretty hands-on in the garage. My wife bought me a scissor lift for my last big birthday. What a wonderful tool it is – probably the best tool I've ever owned. If you're thinking of getting one, just do it!

The lift is being put to great use this winter because I'm replacing the suspension with KW V3s. The wheels will be refurbished after a little curb action last summer, and the awful Nankang tyres will be replaced with some lovelyMichelins in normal sizing. The Nankangs were pretty stretched to allow the aggressive fitment under the wheel arches of the 954 that they were originally specced for. The beefier tires will require the wheel arches to be rolled a little to enable them to fit in the arches nicely. While I have the car up in the air I'll be replacing a few suspension bushes, refurbishing the calipers, replating fixings and refinishing all the suspension components. I also plan on covering all the chassis bits and bobs, including the wheel

arches, with ceramic coating to make future cleaning a breeze.

Other plans include some upgrades to the headlamps, new reflector strip for the rear, and fixing that front splitter once and for all. Time is ticking and spring is getting close, so I best get back to the garage...





Ron Lang
Ashland, USA

@ronlangsport

Model Year Acquired
911S 2.4-LITRE
1972
2018

Model Year Acquired
930 3.3
1962
2020

Model Year Acquired
964 CARRERA 2
REIMAGINED BY
SINGER
1991
2006

Model Year Acquired
993 TURBO
1997
2005

Model Year Acquired
996 GT2
2003
2021

Model Year Acquired
997.2 GT3 RS
2011
2015

Model Year Acquired
991.2 C4S
2017
2016

Model Year Acquired
991 GT3 TOURING
2019
2021



Last month's column introduced my 2021/2022 winter project: a rebuild of the transaxle on the 1982 930 Turbo. As I said at the time, I

suspected there would be some further needs to be addressed once the driveline was removed, enabling me to take a closer look at various components. After all, this is a 40-year-old 911 with 75,000 miles on the odometer. The service records in the file show plenty of attention paid to the car over the decades without the engine having been previously removed.

So now the punch list for repairs has begun. While the gearbox is out being rebuilt, the first and most noticeable area is the exhaust system. The car has an aftermarket muffler, but the rest of the system from the headers through the heat exchangers and on to the turbo are original equipment Porsche parts and, by their condition, appear to be original.

Originality has its virtues. I continue, for example, to treasure the original paint-to-sample tangerine exterior colour, even with myriad touch-ups from rock chips on the front. But old parts eventually wear out and that certainly applies to the

exhaust. There are several cracked welds now evident on the pipes, and evidence of prior re-welding to repair one of them. The bracket holding the turbo in place has cracked and been repaired at least once. The whole system is old, rusty and tired.

I've decided to replace the entire exhaust system. Choosing a replacement wasn't particularly difficult. I could have selected a replacement OEM Porsche system. However, those are hard to find, albeit attractive for their originality. I looked at a few aftermarket systems with the primary goal of quality, because I'm not seeking to increase engine performance with this change. With its larger K27 turbo and ANDIAL intercooler components, the car makes plenty of power. And I have no interest in putting on a stiffer boost spring to increase turbo pressure before the waste gate opens.

The end result is that a Fabspeed exhaust has been ordered. Each system is made to order, so there'll be a delay in receiving the new components, hopefully coinciding with delivery of the rebuilt transaxle. I've used Fabspeed products in the past with good results, so I'm confident I'll be getting a quality product.

Also added to the work list will be some minor oil leak repairs, valve



adjustment and spark plug replacement. No doubt there's more to be done and all of the work comes as no surprise to me. I only hope that I'm treating the car the right way, keeping it as much as possible true and correct to the intentions of Porsche when this car was originally designed and constructed.

More updates on this winter project next month. In the meantime, I'm enjoying my 'winter 911': the 2017 991.2 Carrera 4S with Pirelli Sottozeroes mounted. We've had a good-sized series of snow storms here the past few weeks, and this 911 carries on through the white stuff most admirably.



Anthony Coyne
Fort Lauderdale, USA

@mr_coyne

Model Year Acquired
997.2 CARRERA S
2009
FEBRUARY 2021



While there was no 4,000 mile round-trip this month, I did drive to Whole Foods a few times, and visited drive-thru fast food places more often than I used to.

a few times. Many thousands of miles driving has made me a connoisseur of eating on the road, and I can attest to the 997 being a good place to munch inside. Porsche probably didn't have this in mind when building the car, but it did include a couple of pop-out cup holders. And the dash is gently sloped with a decent lip to allow food to sit without sliding off. Come to think of it, if you park up somewhere with a view then with the

right takeaway it could rival an experience at a restaurant. I proposed to my now-wife eating from the seat of a 992 with some fish and chips overlooking the ocean in Newquay, south-west England.

So, I feel I'm qualified to make a definitive ranking on US drive-thru food. Forget your Michelin Guides – these are the places to eat Stateside in 2022.

1. Check-It-A

Just outstanding in every way. The food is delicious, every single one of the locations is spotless, the staff smart and polite. No matter where in the US I sample its tasty, wholesome delights, it always lives up to expectation. The menu offers a few surprises like the chicken tortilla soup, and a kale crunch salad for true foodies.

2. Shake Shack

Much debate went into second place, with a strong argument for In-N-Out Burger from René. The latter has no shops on the East coast so the Shack wins for me. I also like the shakes more, so much more I struggle to order one elsewhere having sampled the ones from here. And somehow the container is measured to 'just' fit the cup holder in the 997. The trick ordering here is to go with the signature dish: a Shack Burger with fries. The rest of the menu can feel like it's trying too hard.

3. Taco Bell

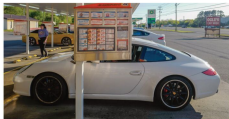
Every time I go here I'm amazed just how well it does Mexican food. The menu has so much more to offer than the obvious soft- or hard-shell tacos, and can be a delight to delve into once you become confident ordering your meal.

4. A&W

You may need to pick these carefully – I can't believe they're all as old school as the one I go to. Pull up to a covered parking space, read the illuminated menu and push a button to talk into a speaker and order. A waitress then appears with your food like something from the 1950s. But it isn't just the Back to the Future appeal that lands it a slot on this coveted ranking: it's down to pure culinary excellence. Little delights like corn dogs tease your attention, while the burgers pair beautifully with traditional shakes.

5. McDonald's

I was hoping to give the final position to a more left-field eatery like Panda Express. Yet there's good reason why the Golden Arches not only revolutionised our eating habits, but won over our hearts and minds. It ranks so highly here because of consistency. Be it a breakfast (before 10:30am) or a late-night feed on a dark Interstate road, McD's always delivers.





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Data file

Full specs, ratings and market values of every Porsche 911 model from 1963 to 2022, including the F-series and 992-generations, can be found beginning on page 78



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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 Q2 will be April. The review for 2022 Q1 was January.



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

 911 2.0-litre 1964-1967		Production numbers 1964-1967: 12,229
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.		Engine featured 1.8-litre
Engine capacity 1.8-litre		Engine power 105hp @ 5,500rpm
Transmission 4-speed		0-60mph 8.2 sec
Top speed 125mph		Weight 1,000kg
Wheels & tyres 4 x 15-in. 165-170mm		Price £1,200-£1,500



The lightest GLI of all time, the Riva is essentially a prototype car fitted with a 906 flat six engine producing 230hp. Of the 19 produced, four would stay at the factory as show cars.

Product line numbers	2
Issue featured	7
Engine capacity	1,000cc
Compression ratio	8.5:1
Maximum power	220hp @ 5,500rpm
Maximum torque	352lb-ft @ 3,800rpm
0-60mph	5.9 sec
Top speed	202mph
Length	6,350mm
Width	1,600mm
Weight	820kg
Wheels & Tyres	
Front	255/45-18
Rear	255/45-18



Any upgrade in engine size gave the 9L15 180bhp. Unlike the 9L1E, the S didn't gain improved low-downpower and torque, so you had to keep the revs up for good power.

Production numbers	4,500
Issue featured	57
Engine capacity	2,200cc
Compression ratio	9.8
Maximum power	180hp @ 4,500rpm
Maximum torque	229ft-lb @ 1,200rpm
G 62mph	54 sec
Top speed	160mph
Length	4.26x
Width	1.65mm
Weight	3,000lb
Wheels & tires	
Front	15x5 inch, 205/45
Rear	15x6 inch, 205/45



● (C&D series) ★ ★
911T
1970-1971

Maximum power	120hp @ 5500rpm
Maximum torque	200lb-ft @ 4300rpm
0-60mph	7.5 sec (est.)
Top speed	127 mph
Length	4.85m
Width	1.60m
Weight	1,620kg
Wheels & Tyres	
#3-Speed (each wheel)	200/45-16
#1-Speed (each wheel)	200/45-16



● (F series) ★ ★ ★
911T
1973

US-bound F series 901s were the first 901s to have Bosch K-Jetronic fuel injection, improving emissions. This was mainly mechanical, with some electronic components.



Updated version of the 1973 2.7T5, complete with impact bumpers and Turbo-spec exhaust rear wing. Steel arches added by hand at the factory.

Production numbers	10
Issue featured	14
Engine capacity	2394cc
Compression ratio	8.5
Maximum power	22hp @ 5200rpm
Maximum torque	20.9nm @ 5000rpm
0-120mph	5.2sec
Top speed	252mph
Length	4.25m
Width	1.680m
Weight	900kg
Wheels & Tyres	
Front wheel	125-90-160



930 3.0 1975-1977

Fitted with a KKK turbo this was the world's first production Porsche to be turbocharged. Flare arches, whaletail rear wing and four-speed gearbox were standard.



A larger engine resulted in extra 40bhp, and an intercooler on top of the engine led to the adoption of a 'teatray'. Exhausts were undersized from 48 to 36 in.

Production numbers	1,885 (July 78-79)
Lower featured	79 Cal van
Engine capacity	2,296cc
Compression ratio	7.0
Maximum power	300hp @ 5,000rpm
Maximum torque	43.9m @ 4,000rpm
0-60mph	5.4 sec
Top speed	80 mph
Length	4,276mm
Width	1,715mm
Weight	1,300kg
Wheels & Tyres	15-in disc, 205/55R15



Speedster 1989



Camera 2.2 with subengine, styled with carbon fiber and handbuilt to specifications. Handcrafted. Retooled steel designed for 100 per cent waterproofing.

Production numbers	2,229 (each with engine listed)
Year featured	1989
Engine capacity	2.2L
Compression ratio	10:1
Maximum power	220hp @ 5,500rpm
Maximum torque	280lb-ft @ 4,000rpm
0-60 mph	8.2sec
Top speed	140 mph
Length	4.57m
Width	1.77m
Weight	1,070kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8

3.2 Chipmunk 1987-89



Hot-rodding turned sleek at around 820-kg weight. Revealed engine may appear quite a bit higher on front of 3.2 Chipmunk. Suspension, brakes and LSD standard.

Production numbers	340
Year featured	1988
Engine capacity	3.2L
Compression ratio	10:1
Maximum power	220hp @ 5,500rpm
Maximum torque	280lb-ft @ 4,000rpm
0-60 mph	8.2sec
Top speed	140 mph
Length	4.57m
Width	1.77m
Weight	1,070kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8

930 LE 1989



Essentially an RS without a rearview mirror. The LE has the same engine, third optics, air intakes and rear air intakes. Decelerator for every 0-60 mph.

Production numbers	30
Year featured	1989
Engine capacity	3.0L
Compression ratio	10:1
Maximum power	200hp @ 5,500rpm
Maximum torque	250lb-ft @ 4,000rpm
0-60 mph	4.1sec
Top speed	170 mph
Length	4.57m
Width	1.77m
Weight	1,170kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8



964 Carrera 2 1990-1993

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

Production numbers	21,644
Year featured	1991
Engine capacity	3.6L
Compression ratio	11:1
Maximum power	260hp @ 6,000rpm
Maximum torque	300lb-ft @ 4,000rpm
0-60 mph	5.4sec
Top speed	160 mph
Length	4.57m
Width	1.65m
Weight	1,500kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8



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 '91.

Production numbers	30,633 (each with engine listed)
Year featured	1989
Engine capacity	3.6L
Compression ratio	11:1
Maximum power	260hp @ 6,000rpm
Maximum torque	300lb-ft @ 4,000rpm
0-60 mph	5.7sec
Top speed	160 mph
Length	4.20m
Width	1.65m
Weight	1,600kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8



964 3.8 RS 1993

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

Production numbers	50
Year featured	1993
Engine capacity	3.8L
Compression ratio	11:1
Maximum power	280hp @ 6,000rpm
Maximum torque	280lb-ft @ 4,000rpm
0-60 mph	4.1sec
Top speed	170 mph
Length	4.57m
Width	1.77m
Weight	1,170kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8



964 Anniversary 1993-94

1993-94 anniversary 964 utilized a Turbo 964 bodyshell to the four-wheel-drive Carrera running gear. Available in Vario metallic, Polar silver or Amethyst.

Production numbers	50
Year featured	1993
Engine capacity	3.6L
Compression ratio	11:1
Maximum power	260hp @ 6,000rpm
Maximum torque	300lb-ft @ 4,000rpm
0-60 mph	5.7sec
Top speed	170 mph
Length	4.57m
Width	1.77m
Weight	1,170kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8



964 RS America 1993

Offered in five colours, fixed whitetail wing and two 400hp sports seats. Only just four options air on, surround 90 per cent locking rear differential and stereo.



Production numbers	50
Year featured	1993
Engine capacity	3.6L
Compression ratio	11:1
Maximum power	260hp @ 6,000rpm
Maximum torque	300lb-ft @ 4,000rpm
0-60 mph	5.7sec
Top speed	160 mph
Length	4.20m
Width	1.65m
Weight	1,600kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8



Lightweight body in an RS tradition. Rear-wheel drive, 18-inch engine, Vario metallic paint and remapped ECU to create 302hp. Not for the weakly.

Production numbers	1,044
Year featured	1996
Engine capacity	3.6L
Compression ratio	11:1
Maximum power	300hp @ 6,000rpm
Maximum torque	280lb-ft @ 4,000rpm
0-60 mph	5.2sec
Top speed	170 mph
Length	4.57m
Width	1.77m
Weight	1,170kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8



993 Carrera 4S 1995-1996

The 4S was effectively a Carrera 4 with Turbo widebodyshell, albeit lacking a fixed rear wing. Accelerated Turbo suspension, brakes and Turbo look wheels.

Production numbers	3,164
Year featured	1996
Engine capacity	3.6L
Compression ratio	11:1
Maximum power	280hp @ 6,000rpm
Maximum torque	280lb-ft @ 4,000rpm
0-60 mph	5.2sec
Top speed	170 mph
Length	4.57m
Width	1.77m
Weight	1,170kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8



993 Turbo 1996-1998

Fitted with two KKK Turbochargers in power vented turbo duo-lag. Power went to all four wheels using the Carrera 4's transmission system. Brakes were 'Big Reds'.

Production numbers	537
Year featured	1997
Engine capacity	3.6L
Compression ratio	11:1
Maximum power	300hp @ 6,000rpm
Maximum torque	300lb-ft @ 4,000rpm
0-60 mph	4.3sec
Top speed	170 mph
Length	4.57m
Width	1.77m
Weight	1,170kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8



993 Carrera S 1997-1998

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

Production numbers	3,164
Year featured	1998
Engine capacity	3.6L
Compression ratio	11:1
Maximum power	280hp @ 6,000rpm
Maximum torque	280lb-ft @ 4,000rpm
0-60 mph	5.2sec
Top speed	170 mph
Length	4.57m
Width	1.77m
Weight	1,170kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8



996 Turbo 2001-2005

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

Production numbers	20,419
Year featured	2001
Engine capacity	3.6L
Compression ratio	11:1
Maximum power	300hp @ 6,000rpm
Maximum torque	280lb-ft @ 4,000rpm
0-60 mph	5.2sec
Top speed	170 mph
Length	4.57m
Width	1.77m
Weight	1,170kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8



996 Carrera 4S 2001-05

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

Production numbers	23,805
Year featured	2001
Engine capacity	3.6L
Compression ratio	11:1
Maximum power	300hp @ 6,000rpm
Maximum torque	280lb-ft @ 4,000rpm
0-60 mph	5.2sec
Top speed	170 mph
Length	4.57m
Width	1.77m
Weight	1,170kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8



A lightweight, Turbo-bodied 996 with updated turbochargers, long-rod suspension, PCCB rear brake discs and a 220hp.



996 C2 2002-2004

Facelifted with Turbo-style headlamps and revised front and rear bumpers. It's with more powerful 3.6-litre engine and VarioCam Plus. Manual and Tiptronic boxes optional.

Production numbers	25,380
Year featured	2002
Engine capacity	3.6L
Compression ratio	11:1
Maximum power	300hp @ 6,000rpm
Maximum torque	280lb-ft @ 4,000rpm
0-60 mph	5.2sec
Top speed	170 mph
Length	4.57m
Width	1.77m
Weight	1,170kg
Wheels & tires	F 16x wheels, 225/50VR8 R 16x wheels, 225/50VR8



964 C4 ★★★★★
Lightweight 1991
964 Leichtbau made use of surplus parts from 963's Paris Dakar project. Highlights include four-way adjustable differential, short-rear-gear box and stripped interior.

Production numbers	27
Base list price	\$140,000
Engine capacity	3.3L
Compression ratio	8.1:1
Maximum power	209hp @ 5,500rpm
Maximum torque	209lb-ft @ 3,700rpm
0-60mph	4.5sec
Top speed	170mph
Length	4.07m
Width	1.75m
Weight	1,370kg

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18



964 Turbo ★★★★★
1991-1992
This used the revised 964 bodyshell, extended arches and 'teardrop' wing. The engine was essentially the 3.3-litre unit from the previous model, but updated.

Production numbers	3980
Base list price	3,700
Engine capacity	3,296cc
Compression ratio	7.9:1
Maximum power	209hp @ 5,500rpm
Maximum torque	400lb-ft @ 3,700rpm
0-60mph	3.4sec
Top speed	180mph
Length	4.07m
Width	1.75m
Weight	1,470kg

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18



964 RS ★★★★★
1991-1992
120kg saved by deleting 'luxuries' and fitting magnesium C-up wheels. Power was boosted by 10bhp, suspension lowered by 40mm and updated, as were brakes.

Production numbers	2,020
Base list price	25
Engine capacity	3,300cc
Compression ratio	8.1:1
Maximum power	269hp @ 5,500rpm
Maximum torque	308lb-ft @ 4,800rpm
0-60mph	3.4 sec
Top speed	180 mph
Length	4.07m
Width	1.75m
Weight	1,270kg (Steel)

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18



964 Turbo S ★★★★★
1992-1993
180kg lighter than Turbo, 160mm of the rear axle travel, fuel-injected as before, whereas the engine cover was bolted by 60bhp, 450 rpm uprated, as were brakes.

Production numbers	1,020
Base list price	32
Engine capacity	3,300cc
Compression ratio	8.1:1
Maximum power	309hp @ 5,500rpm
Maximum torque	430lb-ft @ 4,800rpm
0-60mph	4.1 sec
Top speed	180 mph
Length	4.07m
Width	1.75m
Weight	1,270kg

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18



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	1,457
Base list price	52
Engine capacity	3,600cc
Compression ratio	7.9:1
Maximum power	269hp @ 5,500rpm
Maximum torque	308lb-ft @ 3,700rpm
0-60mph	4.1 sec
Top speed	180 mph
Length	4.07m
Width	1.75m
Weight	1,470kg

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18



993 Carrera ★★★★★
1993-1997
Restyled bodywork had swept-back headlamps, curvaceous wings and blended-in bumpers. The 3.6-litre engine was revised, with VarioRam available from 1996.

Production numbers	34,520
Base list price	390
Engine capacity	3,600cc
Compression ratio	8.1:1
Maximum power	209hp @ 5,500rpm
Maximum torque	308lb-ft @ 3,700rpm
0-60mph	5.8 sec
Top speed	180 mph
Length	4.07m
Width	1.75m
Weight	1,370kg

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18



993 Carrera 4 ★★★★★
1994-1997
As per the 993 model Carrera, but with four-wheel drive. Transmission was half the weight of the Carrera Carrera, and body design led to a more than 100kg saving.

Production numbers	2,886 (Steel)
Base list price	52
Engine capacity	3,600cc
Compression ratio	8.1:1
Maximum power	209hp @ 5,500rpm
Maximum torque	308lb-ft @ 3,700rpm
0-60mph	5.8 sec
Top speed	180 mph
Length	4.07m
Width	1.75m
Weight	1,770kg

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18



993 GT2 ★★★★★
1995-1996
911 Turbo, but with reduced equipment. Also included rear-wheel drive, lightweight alloy track car. Fitted with huge front and rear wings and bolt-on arch extensions.

Production numbers	27
Base list price	140
Engine capacity	3,600cc
Compression ratio	8.1:1
Maximum power	400hp @ 5,500rpm
Maximum torque	360lb-ft @ 3,700rpm
0-60mph	3.3 sec
Top speed	180 mph
Length	4.07m
Width	1.75m
Weight	1,470kg

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18



993 Turbo S ★★★★★
1996
The brother-in-law for the latest model 911, with 430bhp for UK models, it was the fastest and most luxurious road-going Porsche. Eight-speed gearbox. Production: Manually.



996.1 Carrera ★★★★★
1996-2001
Arrived in 1996, with larger, restyled bodywork and a water-cooled engine. Interior was redesigned in order to enable better ergonomic efficiency and more room.

Production numbers	9,750
Base list price	30
Engine capacity	3,600cc
Compression ratio	10.5:1
Maximum power	209hp @ 5,500rpm
Maximum torque	308lb-ft @ 3,700rpm
0-60mph	4.3 sec
Top speed	180 mph
Length	4.07m
Width	1.75m
Weight	1,370kg

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18



996.1 GT3 ★★★★★
1996-2001
Four-wheel drive transmission led to 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	2,004
Base list price	18
Engine capacity	3,600cc
Compression ratio	9.1:1
Maximum power	309hp @ 5,500rpm
Maximum torque	308lb-ft @ 3,700rpm
0-60mph	3.2 sec
Top speed	180 mph
Length	4.07m
Width	1.75m
Weight	1,370kg

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18



996.1 GT3 RS ★★★★★
1999-2000
Commonly called the Gent GT3, this was a lightweight 996 with power driving the rear wheels. Suspension was lowered by 30mm and brakes were updated.

Production numbers	3,000
Base list price	27
Engine capacity	3,600cc
Compression ratio	10.5:1
Maximum power	309hp @ 5,500rpm
Maximum torque	308lb-ft @ 3,700rpm
0-60mph	3.2 sec
Top speed	180 mph
Length	4.07m
Width	1.75m
Weight	1,370kg

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18



996.2 C4 ★★★★★
2002-2004
Facelifted in 2002 as the rear-drive Carrera, though the all-wheel-drive version drives very much like its rear-driven brethren. Cabin received minor updates over Gent.

Production numbers	20,386
Base list price	32
Engine capacity	3,600cc
Compression ratio	10.5:1
Maximum power	209hp @ 5,500rpm
Maximum torque	308lb-ft @ 3,700rpm
0-60mph	4.3 sec
Top speed	180 mph
Length	4.07m
Width	1.75m
Weight	1,470kg

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18



996 Anniversary C4 04 ★★★★★
2004
Arrived in 2004, and included a Turbo and a bumper and a large Can-Am wheel. Powerful, 120mm sports suspension and mechanical LSD were added.

Production numbers	1,964
Base list price	52
Engine capacity	3,600cc
Compression ratio	10.5:1
Maximum power	209hp @ 5,500rpm
Maximum torque	308lb-ft @ 3,700rpm
0-60mph	4.3 sec
Top speed	180 mph
Length	4.07m
Width	1.75m
Weight	1,470kg

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18



996.2 GT3 ★★★★★
2003-2005
Based on facelifted 996 Carrera, but with new wings. Suspension lowered and updated. PCOB optional. Full-spec interior unless Outpost option was ordered.

Production numbers	2,122
Base list price	42
Engine capacity	3,600cc
Compression ratio	9.1:1
Maximum power	309hp @ 5,500rpm
Maximum torque	308lb-ft @ 3,700rpm
0-60mph	3.2 sec
Top speed	180 mph
Length	4.07m
Width	1.75m
Weight	1,370kg

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18



996 GT3 RS ★★★★★
2004-2005
Same 3.6-litre engine as in GT3, but with weight saving, offering 280bhp per ton – an improvement of four per cent over the 996 GT3 Outpost. PCOB optional.

Production numbers	1,962
Base list price	52
Engine capacity	3,600cc
Compression ratio	10.5:1
Maximum power	309hp @ 5,500rpm
Maximum torque	308lb-ft @ 3,700rpm
0-60mph	3.2 sec
Top speed	180 mph
Length	4.07m
Width	1.75m
Weight	1,370kg

Wheels & Tyres
F 19x8 inch, 225/45ZR18
R 18x8 inch, 225/45ZR18

Sales debate

Is the 991.1 taking over from the 997.2 as the sweet spot of modern 911s?



The go-to model for many in the market for a modern-era 911 has been the 997.2, and for some time. That perfect balance of driver appeal, proven tech and a swathe of model variants meant nothing else in the 911 market offered the same at an equivalent price point.

Enter the 991.1. For a roughly comparable price it could be seen as the new answer to the best modern 911. Does the market agree? Jamie Tyler of Paragon thinks perhaps not quite yet. "I think the 997.2 will be ahead of the 991.1," he says. "The Gen2 997 was a cool car, perfect in size, the last of the hydraulic steering cars, lots of feedback. It's really engaging and exciting to drive." Turning to the 991.1, Jamie strikes an optimistic tone: "The 991.1 will have a following in the future, as they're the last of the naturally aspirated non-GT cars."

RPM Technik's Greg Daly concurs. "The 997.2 is still a real high point in modern 911s," he says. "They're relatively petite cars, with a lovely suspension setup and engine that works well with the total package," adding that "the manual six-speed gearbox, though rare, is a bonus." The oldest 997.2 models are 13 years old though, and Greg points out that ongoing maintenance has to be kept up "to avoid lumpy bills." As ever, there's much to balance out in a decision on the 'better' model for a buyer.

Greig counters all this by adding, "Although the 991 Carreras dipped under £40k for a short while a year or so back, they're back up to mid/late £40k and upwards again, which is a reflection of the market interest in them."

What does go in favour of the 991.1 is the production numbers over the earlier car. "Getting hold of a 991.1 is a bit easier than a 997.2," says Greig. Combine availability with practicality, and that might make it the car for you. "The 991 can easily be your daily driver and weekend special - retaining a naturally aspirated engine! - while also being a bit lower maintenance," he points out.

Paragon's Jamie has the last word, rightly making the point that the 991's cockpit was a departure from the traditional 911 interior. It may be different, "but you grow to like it... you just have to move on," he says.

The 997.2 might be the market favourite - for now - but the 991.1's time is not far away.



996 Turbo S 2004-2005	Production numbers 1,982
Zero to 60 3.9s	Power 500hp
Engine capacity 3,600cc	Compression ratio 11.5:1
Maximum power 450hp @ 5,500rpm	Maximum torque 400lb-ft @ 4,250rpm
Maximum torque 320lb-ft @ 2,250rpm	0-60mph 3.9s
Top speed 177mph	Length 4,270mm
Width 1,780mm	Weight 1,590kg
Wheels & Tyres P 18-inch 275/350R18	
R 18-inch 275/350R18	



997.1 GT3 RS 2006-2007	Production numbers 1,006
Zero to 60 3.9s	Power 380hp
Engine capacity 3,600cc	Compression ratio 12.5:1
Maximum power 410hp @ 6,000rpm	Maximum torque 300lb-ft @ 4,250rpm
Maximum torque 280lb-ft @ 3,250rpm	0-60mph 3.9s
Top speed 177mph	Length 4,270mm
Width 1,780mm	Weight 1,370kg
Wheels & Tyres P 18-inch 275/350R18	
R 18-inch 275/350R18	

997.2 GT3 RS 2008-2012



Wider front arches and larger wing. Dynamic air inlets on front and rear. An optional, without door handles, wheel arches and roof spoiler.

997.2 GT3 RS 2008-2012	Production numbers 1,588
Zero to 60 3.9s	Power 380hp
Engine capacity 3,600cc	Compression ratio 12.5:1
Maximum power 410hp @ 6,000rpm	Maximum torque 300lb-ft @ 4,250rpm
Maximum torque 280lb-ft @ 3,250rpm	0-60mph 3.9s
Top speed 177mph	Length 4,270mm
Width 1,780mm	Weight 1,370kg
Wheels & Tyres P 18-inch 275/350R18	
R 18-inch 275/350R18	

997 Speedster 2010



Built to mark Porsche's 75th anniversary, the 997 Speedster is a limited edition car, but it's also a very special car. It's the only 911 with a removable roof.

997 Speedster 2010	Production numbers 216
Zero to 60 4.4s	Power 380hp
Engine capacity 3,600cc	Compression ratio 12.5:1
Maximum power 410hp @ 6,000rpm	Maximum torque 300lb-ft @ 4,250rpm
Maximum torque 280lb-ft @ 3,250rpm	0-60mph 4.4s
Top speed 177mph	Length 4,270mm
Width 1,780mm	Weight 1,370kg
Wheels & Tyres P 18-inch 275/350R18	
R 18-inch 275/350R18	



997 Turbo S 2011-2013	Production numbers 1,000
Zero to 60 3.9s	Power 500hp
Engine capacity 3,600cc	Compression ratio 11.5:1
Maximum power 450hp @ 5,500rpm	Maximum torque 400lb-ft @ 4,250rpm
Maximum torque 320lb-ft @ 2,250rpm	0-60mph 3.9s
Top speed 177mph	Length 4,270mm
Width 1,780mm	Weight 1,590kg
Wheels & Tyres P 18-inch 275/350R18	
R 18-inch 275/350R18	

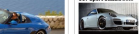


997.1 Carrera 2004-2008	Production numbers 23,786
Zero to 60 6.2s	Power 250hp
Engine capacity 3,600cc	Compression ratio 11.5:1
Maximum power 225hp @ 5,500rpm	Maximum torque 270lb-ft @ 4,250rpm
Maximum torque 200lb-ft @ 3,250rpm	0-60mph 6.2s
Top speed 177mph	Length 4,270mm
Width 1,780mm	Weight 1,590kg
Wheels & Tyres P 18-inch 275/350R18	
R 18-inch 275/350R18	



997 GT2 2007-2009	Production numbers 1,242
Zero to 60 3.9s	Power 500hp
Engine capacity 3,600cc	Compression ratio 11.5:1
Maximum power 450hp @ 5,500rpm	Maximum torque 400lb-ft @ 4,250rpm
Maximum torque 320lb-ft @ 2,250rpm	0-60mph 3.9s
Top speed 177mph	Length 4,270mm
Width 1,780mm	Weight 1,590kg
Wheels & Tyres P 18-inch 275/350R18	
R 18-inch 275/350R18	

997 Sport Classic 2010



Based on the 997.1 Carrera, the 997 Sport Classic is a limited edition car, but it's also a very special car. It's the only 911 with a removable roof.

997 Sport Classic 2010	Production numbers 256
Zero to 60 6.2s	Power 250hp
Engine capacity 3,600cc	Compression ratio 11.5:1
Maximum power 225hp @ 5,500rpm	Maximum torque 270lb-ft @ 4,250rpm
Maximum torque 200lb-ft @ 3,250rpm	0-60mph 6.2s
Top speed 177mph	Length 4,270mm
Width 1,780mm	Weight 1,590kg
Wheels & Tyres P 18-inch 275/350R18	
R 18-inch 275/350R18	



991.1 Carrera 2011-2015	Production numbers 30,000
Zero to 60 6.2s	Power 250hp
Engine capacity 3,600cc	Compression ratio 11.5:1
Maximum power 225hp @ 5,500rpm	Maximum torque 270lb-ft @ 4,250rpm
Maximum torque 200lb-ft @ 3,250rpm	0-60mph 6.2s
Top speed 177mph	Length 4,270mm
Width 1,780mm	Weight 1,590kg
Wheels & Tyres P 18-inch 275/350R18	
R 18-inch 275/350R18	



997.1 Carrera S
2004-2008

As per the 997 Carrera, but with more powerful 3.8-litre engine and PASM 39-in-wheelbase as standard, with bigger vented brakes. Featured quad exhaust tailpipes.

Production numbers	52,097
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	299hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.9 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,400kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



997.1 GT3
2006-2007

Track-focused, built on narrow-bodied Carrera with reworked 996 GT3 engine. PASM as standard, revs to 8,400rpm, 2007 higher than the 996 GT3.

Production numbers	2,775
Base fuel tank	30.0 gal
Engine capacity	3,500 cc
Compression ratio	13.1:1
Maximum power	400hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.1 sec
Top speed	175mph
Length	144.0 in
Width	146.0 in
Height	139.0 in
Weight	1,370kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



997.1 Carrera 4 2006-08

Like 997.1 Carrera, but with 20-in alloy wheels, with multi-disc air suspension, 4-wheel drive (as standard), 400hp, 400lb-ft torque, 4.9 sec 0-60, 180mph top speed.

Production numbers	8,031
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	299hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.9 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,400kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



997.1 Carrera S 2005-2008

The same 3.8-litre, 299hp engine as the Carrera 3.8, with four-wheel drive system as standard. Maximum torque 400lb-ft, 4.9 sec 0-60, 180mph top speed.

Production numbers	20,039
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	299hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.9 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,400kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



997.1 Carrera S 2005-2008

Similar to the 997.1 Carrera, but with additional 20-in alloy wheels, 400hp, 400lb-ft torque, 4.9 sec 0-60, 180mph top speed.

Production numbers	20,039
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	299hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.9 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,400kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



997.1 Carrera
2008-2012

Revised with restyled LED rear lights and front driving lights. M87 engine replaced with 912B1 unit, using fewer parts – with no problem: Intermediate Shift.

Production numbers	52,097
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	299hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.9 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,400kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



997.1 Carrera S 2008-12

Allowed as per the Carrera, but with larger 3.8-litre engine, again using fewer components and 400hp, 400lb-ft torque, 4.9 sec 0-60, 180mph top speed. PDK optional, see the Carrera.

Production numbers	52,097
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	299hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.9 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,400kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



997.1 Carrera S 2008-12

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

Production numbers	199,500
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	299hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.9 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,400kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



997.1 Carrera S 2008-12

Updated as per the Carrera, but with a single front and rear wing, revised PSM centre-lock wheels and better brakes. 400hp, 400lb-ft torque, 4.9 sec 0-60, 180mph top speed.

Production numbers	2,229
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	299hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.9 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,400kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



997.1 Carrera S 2008-12

Same as the original 997 Turbo, but with restyled LED lights and anchor front air lights. Larger tailpipes and 400hp, 400lb-ft torque, 4.9 sec 0-60, 180mph top speed.

Production numbers	1,880
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	299hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.9 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,400kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



997 GT3 RS 4.0
2010

Engine was upgraded, and aerodynamic tweaked, with the angle of the rear wing increased and five planes on either side of the front nose. A future collector's gem.

Production numbers	500
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	300hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.1 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,370kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



997 918 Edition
2010

These exclusive 997 Turbo S-spec 918s were only available to those who had paid a deposit for a 918 Spyder. Adorned with badging and brake callipers.

Production numbers	50
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	300hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.1 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,370kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



997 GT3 RS 2010-2011

GT2 vent back bulbouts with light-weight body and interior. 400hp, 400lb-ft torque, 4.9 sec 0-60, 180mph top speed.

Production numbers	500
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	300hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.1 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,370kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



997 GT3 RS 2010-2011

GT2 vent back bulbouts with light-weight body and interior. 400hp, 400lb-ft torque, 4.9 sec 0-60, 180mph top speed.

Production numbers	500
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	300hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.1 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,370kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



997 GT3 RS 2010-2011

Like 997 GT3 RS, slightly heavier and with 400hp. 400lb-ft torque, 4.9 sec 0-60, 180mph top speed.

Production numbers	500
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	300hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.1 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,370kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



991.1 Carrera S
2011-2015

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

Production numbers	28,000
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	300hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.1 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,370kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



991.1 Carrera S 2011-2015

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

Production numbers	28,000
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	300hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.1 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,370kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



991.1 Carrera 4S
2012-2015

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

Production numbers	28,000
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	300hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.1 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,370kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



991.1 Carrera 4S 2012-2015

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

Production numbers	28,000
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	300hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.1 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,370kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18



991.1 Carrera 4S 2012-2015

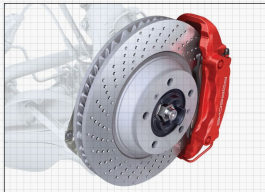
Same as Carrera, but with seven-speed manual box, utilising bigger engine. Slightly larger front brakes than the standard Carrera. PASM as standard equipment.

Production numbers	28,000
Base fuel tank	30.0 gal
Engine capacity	3,800 cc
Compression ratio	13.1:1
Maximum power	300hp @ 5,500rpm
Maximum torque	400lb-ft @ 4,000rpm
0-60mph	4.1 sec
Top speed	180mph
Length	144.0 in
Width	146.0 in
Height	140.0 in
Weight	1,370kg
Wheels & Tyres	F 18-in x 205/35/18 R 18-in x 205/35/18

Technology explained

057 INTERNALLY VENTED BRAKES

Total 911 explains how Porsches past and present channel air to keep their brake discs cool



Porsche 911s owe much in terms of development to the racetrack. Racing may appear to be about speed, but you don't win a race with a throttle. It might seem counter-intuitive, but racing is all about the slow, not the go. Brake as late and hard as possible and you can go faster for longer, carrying as much speed as possible so you can get back on the accelerator again. And it's precisely the late-and-hard race doctrine where our tech subject this month originates.

Braking works by applying the friction of the pad material against a moving, kinetic surface (the brake drum or a brake disc). That friction creates heat, and for years that heat buildup had to be managed during racing. Brake drums gave way to become more open, solid discs 60 years ago on the Porsche 356 B in a bid to improve brake performance. Even then, drivers needed to carefully preserve materials in the brake system. Careless, aggressive use during racing built up too much heat and either the brake materials or the brake system could fail.

Enter Gerhard Mitter, a mountain racing legend of the 1960s. In 1965 he used a Porsche 906-B Bergspyder, a legend of Porsche race cars. Weighing a scant 570kg, the Bergspyder was powered by a 256bhp (260PS) 2.0-litre, eight-cylinder engine. The really interesting component, however, sat modestly in the front axle, where the brakes use double-walled discs with a secret drilling between the walls of the disc.

The drillings channelled cooling air through the hot, spinning discs. This reduced the brake component temperatures and prevented fall-off in brake performance. Mitter was now free from the need to nurse the brakes. This meant he could brake much more aggressively at later points on the track, resulting in a clear competitive advantage.

Ever-keen to use any lessons from the racetrack, let alone one with such a performance advantage, Porsche transferred the 906-B's internally vented brake disc technology to a production 911 as quick as it could. Just one year later, in fact, on the 911S of 1966. The technology later became standard on all 911s, right up to the present day.

Steve McQueen said, "Racing is life," but Porsche freely admits to modifying that sentiment: "Yes, racing is life. The rest is automotive development."



991.1 Turbo 2013-2014
New Turbo marks introduction of rear axle steering, plus PDK-only transmission to forced-induction 991 models.

Production numbers	18,000
Year featured	2013
Engine capacity	3,000cc
Compression ratio	10.5:1
Maximum torque	420hp @ 5,000rpm
0-100mph	3.7sec
Top speed	180mph
Length	4,500mm
Width	1,850mm
Weight	1,600kg

Wheel & Tyre
P 19x24 inch 355/35ZR20
R 19x24 inch 355/35ZR20



991.1 Turbo 2013-2015
Surfing down the 911 Turbo, but with a lowered ride to provide extra 45bhp. Turbo up the scale stand out on the lock wheels and PDK.

Production numbers	18,000
Year featured	2013
Engine capacity	3,000cc
Compression ratio	10.5:1
Maximum torque	420hp @ 5,000rpm
0-100mph	3.7sec
Top speed	180mph
Length	4,500mm
Width	1,850mm
Weight	1,600kg

Wheel & Tyre
P 19x24 inch 355/35ZR20
R 19x24 inch 355/35ZR20



991.2 Carrera S 2015-2018
Shares Carrera's 3.0-litre turbocharged SAZ engine, and features revised turbos, exhaust and engine management to produce an additional 50hp.

Production numbers	18,000
Year featured	2015
Engine capacity	3,000cc
Compression ratio	10.5:1
Maximum torque	420hp @ 5,000rpm
0-100mph	3.7sec
Top speed	180mph
Length	4,500mm
Width	1,850mm
Weight	1,600kg

Wheel & Tyre
P 19x24 inch 355/35ZR20
R 19x24 inch 355/35ZR20



991.2 Carrera 4 2015-16
New SAZ turbocharged engine based on the 911 Turbo's, but with a lowered ride to provide extra 45bhp. Turbo up the scale stand out on the lock wheels and PDK.

Wheel & Tyre
P 19x24 inch 355/35ZR20
R 19x24 inch 355/35ZR20



991.2 C2 GT3 2017-2019
Similar specification and 'black accent' styling as per 991.1, available in both rear-wheel and all-wheel drive form. C4 GT3 quicker than C2 GT3.

Production numbers	18,000
Year featured	2017
Engine capacity	3,000cc
Compression ratio	10.5:1
Maximum torque	420hp @ 5,000rpm
0-100mph	3.7sec
Top speed	180mph
Length	4,500mm
Width	1,850mm
Weight	1,600kg

Wheel & Tyre
P 19x24 inch 355/35ZR20
R 19x24 inch 355/35ZR20



991.2 C4 GT3 2017-2019
All-new C4 GT3 with PDK, which is an electrically controlled drive shaft that allows for always-on drive. Rear cornering is on point.

Wheel & Tyre
P 19x24 inch 355/35ZR20
R 19x24 inch 355/35ZR20



991.2 GT3 RS 2018-19
Latest GT3 RS gets GT3RS (Racing) designation, suspension from GT3 RS, 20hp increase over GT3 RS, and aerodynamic revisions.

Production numbers	18,000
Year featured	2018
Engine capacity	3,000cc
Compression ratio	10.5:1
Maximum torque	420hp @ 5,000rpm
0-100mph	3.7sec
Top speed	180mph
Length	4,500mm
Width	1,850mm
Weight	1,600kg

Wheel & Tyre
P 19x24 inch 355/35ZR20
R 19x24 inch 355/35ZR20



991.2 Carrera S 2019
All-new night generator of 911 Carrera S, though all are now based on the 911 Turbo's, but with a lowered ride to provide extra 45bhp. Turbo up the scale stand out on the lock wheels and PDK.

Wheel & Tyre
P 19x24 inch 355/35ZR20
R 19x24 inch 355/35ZR20



991 Anniversary 2013-2014

Exuberantly styled Carrera S with wide body and generous spats. Many styling cues made it out from under original 901. Powerful only came as standard spec in U.S.

Production numbers	1,980
Base featured	92
Engine capacity	3,000cc
Compression ratio	13.5:1
Maximum power	450hp @ 6,500rpm
Maximum torque	448lb-ft @ 5,000rpm
0-60mph	4.1 sec
Top speed	180mph
Length	4.40m
Width	1.87m
Height	1.40m
Wheel & Tyre	
Front wheel	265/35-20
Rear wheel	305/35-20



Production numbers	2,000
Base featured	92
Engine capacity	3,000cc
Compression ratio	13.5:1
Maximum power	450hp @ 6,500rpm
Maximum torque	448lb-ft @ 5,000rpm
0-60mph	4.1 sec
Top speed	180mph
Length	4.40m
Width	1.87m
Height	1.40m
Wheel & Tyre	
Front wheel	265/35-20
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Wheel & Tyre	
Front wheel	265/35-20
Rear wheel	305/35-20



991 GT3 RS 2015-2017

Unprecedented aerodynamic aero package now delivers 991 GT3 RS 4.0's max downforce at just 93mph. Features modified 4.0-lit DFI engine of 991 GT3 engine; PDK only.

Production numbers	5,000
Base featured	92
Engine capacity	2,996cc
Compression ratio	13.5:1
Maximum power	500hp @ 6,750rpm
Maximum torque	408lb-ft @ 5,250rpm
0-60mph	3.2 sec
Top speed	205mph
Length	4.54m
Width	1.89m
Height	1.47m
Wheel & Tyre	
Front wheel	265/35-20
Rear wheel	305/35-20



Production numbers	2,000
Base featured	92
Engine capacity	2,996cc
Compression ratio	13.5:1
Maximum power	370hp @ 6,500rpm
Maximum torque	408lb-ft @ 5,250rpm
0-60mph	4.2 sec
Top speed	190mph
Length	4.54m
Width	1.89m
Height	1.47m
Wheel & Tyre	
Front wheel	265/35-20
Rear wheel	305/35-20



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Height	1.40m
Wheel & Tyre	
Front wheel	265/35-20
Rear wheel	305/35-20



Production numbers	2,000
Base featured	92
Engine capacity	2,996cc
Compression ratio	13.5:1
Maximum power	580hp @ 6,500rpm
Maximum torque	500lb-ft @ 5,250rpm
0-60mph	3.1 sec
Top speed	205mph
Length	4.54m
Width	1.89m
Height	1.47m
Wheel & Tyre	
Front wheel	265/35-20
Rear wheel	305/35-20



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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 I pushed I guess I'd have to say it's the cars from the 1960s 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**





“I’ve been obsessed with cars since I was young, and that developed into a love for Porsches, and the 911 in particular”



Rob Williams

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911 GT3 (991 GEN II)

Carrera White Metallic • Black Half-Leather 918 Bucket Seats • PDK Gearbox 20" GT3 Centre Lock Wheels • Porsche Ceramic Composite Brakes • Clubsport Package • 4,392 miles • 2017 (67)

£145,995



911 GT3 (991 GEN II)

Crayon • Black Half-Leather 918 Bucket Seats • Manual Gearbox • 20" GT3 Centre Lock Wheels • Porsche Ceramic Composite Brakes • Clubsport Package 11,418 miles • 2018 (67)

£145,995



911 GT3 (996)

Arctic Silver • Black Leather Bucket Seats 18" GT3 Wheels • Bi-Xenon Headlights Rear Roll Cage • Guards Red Seat Belts Previously Sold & Serviced by Paragon 50,727 miles • 2003 (53)

£82,995



911 GT3 (996)

Arctic Silver • Black Leather Bucket Seats 18" GT3 Split Rim Wheels • Rear Roll Cage • Air Conditioning • Previously Sold & Serviced by Paragon • 67,632 miles • 1999 (V)

£79,995



Boxster GT5 (981)

Dark Blue Metallic • Luxor Beige Leather Sports Seats • Manual Gearbox • 20" Carrera Classic Wheels • Switchable Sports Exhaust • Full Leather Interior Sport Chrono • 29,538 miles • 2015 (15)

£54,995



Cayman GT5 (981)

Carmine Red • Black Half-Leather Sports Seats • PDK Gearbox • 20" Black Carrera S Wheels • Switchable Sports Exhaust Touchscreen Satellite Navigation Sport Chrono • 34,770 miles • 2014 (64)

£53,995



Cayman T (718)

Jet Black Metallic • Black Half-Leather Bucket Seats • PDK Gearbox 20" Carrera S Wheels • Switchable Sports Exhaust • Sport Chrono 6,252 miles • 2019 (19)

£52,995



Boxster S (718)

Jet Black Metallic • Black Leather Sports Seats • PDK Gearbox • 20" Black Carrera S Wheels • Switchable Sports Exhaust Touchscreen Satellite Navigation 16,671 miles • 2017 (17)

£52,995



911 Turbo (996)

Basalt Black • Black Soft Ruffled Leather Seats • Tiptronic S Gearbox • 18" Turbo II Wheels • Factory Hardtop • Satellite Navigation • Previously Sold & Serviced by Paragon • 59,273 miles • 2003 (53)

£49,995



Boxster S (718)

Lava Orange • Black Leather Sports Seats • PDK Gearbox • Sport Chrono 20" Black Carrera S Wheels Switchable Sports Exhaust 12,247 miles • 2016 (16)

£49,995



Boxster (718)

Gentian Blue • Black Leather Sports Seats • PDK Gearbox • 20" Platinum Carrera S Wheels • Touchscreen Satellite Navigation • Parking Sensors 27,021 miles • 2019 (69)

£45,995



Boxster S (981)

Carrara White • Black Leather Fully-Electric Seats • PDK Gearbox • 19" Black Boxster S Wheels • Front & Rear Parking Sensors • Full Leather Interior 16,969 miles • 2012 (12)

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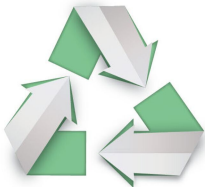
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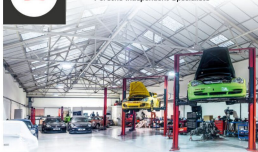
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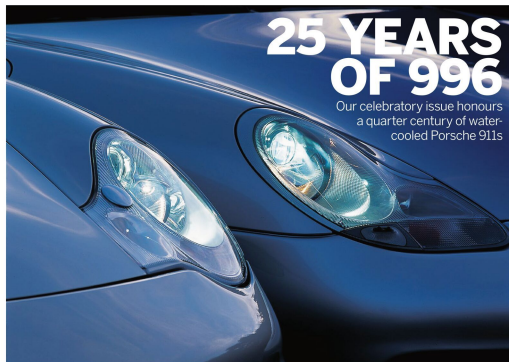
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The date is October 2000, and the venue is Pirelli's Vizzola proving ground near Milan. Two 996 Turbos are aligned on the tarmac together with Paul Frère, who's here to cover the 996 Turbo press launch. In fact, that event had already taken place in southern Spain; Porsche had invited Frère and a handful of other journalists to Italy to sample its latest innovation: PCCB brakes. On Frère's right is the taller Dieter Röschelsen, Porsche's long-serving test driver, now retired, whose memoirs – if he could be persuaded to write them – would make fascinating reading.

Frère's presence would have been considered automatic. He'd been compiling the seventh edition of his *Porsche 911 Story*, and had long been the doyen of Porsche writers. Another veteran Porsche observer, Peter Morgan, has described how at the company's press conferences there was always a chair at the front reserved for Frère. At 83 the Belgian was as fit

and active as ever, but his career would come to an end prematurely by a road accident in 2006 from which he never properly recovered.

But the real star here is, of course, the 996 Turbo. This was the high-speed GT that Porsche had striven to create with the scrapped 965 project a decade earlier, a doomed attempt to transfer some of the technology of the 959 to a much-upgraded 911 Turbo. Then, Porsche's fortunes had been at their lowest. However, by 2000 and with six years of solid profit under its belt – the engine that Weissach had struggled in vain to build for the 965.

The new 996T used a blown, lower-compression version of the 24-valve, 3.6-litre engine designed for the GT3 and was four-

wheel drive to boot. A masterpiece of packaging with its intercoolers, oil coolers and engine coolant radiators all housed in the new shell, the latest generation Porsche Turbo was a properly integrated GT from the outset, producing its 420 horsepower and 550Nm with aplomb and, so it would prove, remarkable long-term dependability.

The 996 Turbo's ceramic-carbon brakes were a real innovation. By early 2001 some Mercedes SL55s could also be ordered with ceramic front brakes fitted by AMG, but Porsche was first with PCCB as an option on both axes. It was typical of the thorough preparation and development of this Porsche Turbo. Despite a high opening price tag (£86,000 in the UK, 40 per cent more than the 996 Carrera) Porsche had obviously found its market. Some 22,000 996 Turbos were built between 2001 and 2005, compared with 32,000 over the entire 25 years of the air-cooled variety.



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