

964 TURBO 3.6 BUYING GUIDE



Total 911

THE PORSCHE MAGAZINE

S/T: CREATING A 911 LEGEND

Full build story & road test of the sports purpose icon



GT3 LEGACY

992 v 996: first and latest GT3s do battle to mark two decades of the modern Motorsport 911

+
**EARLY 911
SUSPENSION TESTING**
HISTORY OF OPEN-
TOPPED 911S
**PORSCHE AND
E10 FUEL**



HERBERT LINGE

Porsche race and rally legend discusses his stellar career

50 YEARS OF WEISSACH

A look back at half a century of Porsche's famous R&D facility

BOSCH CIS EXPLAINED

Comprehensive breakdown of the '70's K-Jet fuelling system

FUTURE
ISSUE 200
Digital Edition

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Presenting this original paint 2007 Porsche 911 Carrera Coupe. 6-Speed featured with 86,579 miles on the odometer is available in Basalt Black Metallic with a sand beige interior. The 911 Coupe comes with a clean Carfax and is equipped with a 6-speed manual transmission, Flat 6 Cylinder 3.6-liter engine, automatic speed control, air conditioning, heated front seats, Sport Chrono package, Xenon headlamps, power shifter, Bose sound package, navigation, power mirrors, power windows, power steering, sunroof, and 4-wheel disc brakes. Also included are paint meter reading photos as well as a copy of the Certificate of Authenticity. An excellent original and well-maintained Porsche Carrera that is mechanically sound.

A bright yellow Porsche 914 driving on a road. The car is a two-door convertible with a black roll-over protection bar. It is driving on a paved road with trees and a white van in the background.

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

A red Porsche Boxster convertible is shown from a front-three-quarter view. The car is parked on a paved surface with a light-colored wall and some foliage in the background. The top is down, revealing the interior. The car has distinctive round headlights and a black front grille.

Here is a 1991 Porsche 964 Carrera 2 Cabriolet featured with 43,600 and available in its factory color code #80K. Guards Red with a sand beige interior. The vehicle comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 3.6-liter engine, automatic speed control, air conditioning, power windows, power steering, soft top, boot, 4-wheel disc brakes, and D90 wheels. A well-equipped and taken care of low mileage 964 Porsche that is mechanically sound.

A dark blue Porsche Boxster convertible is shown from a front-three-quarter view. The car is parked on a light-colored surface, and its top is down, revealing the interior. The car's design features round headlights and a distinctive front grille.

1982 Porsche 911SC Target-13878

ers is a 1982 Porsche 911SC Targa, Euro Spec featured with 80,006 miles on the odometer and matching numbers (Certificate of Authenticity copy included). Available in its factory color of Pacific Blue Metallic with a black interior. The vehicle comes with a clean Carfax and is equipped with 5-speed manual transmission, rear window wiper, power windows, 4-wheel disc brakes, jack, and Fuchs wheels. Also included with this vehicle is a receipt for a major service done less than 100 miles ago at a cost of \$6,742. A beautiful color combination 911SC that has just come out of the dry desert states of Arizona.

A white Porsche Carrera GT convertible is shown from a front-three-quarter view. The car is parked on a paved surface with trees and a building in the background. The top is down, and the car's distinctive round headlights and orange side stripes are visible.

Here is a 1983 Porsche 911SC Cabriolet featured here with matching numbers is available in its factory color code #901 Grand Prix White with a black interior. It comes with a clear Carfax and is equipped with a 5-speed manual transmission, air conditioning, power windows, soft top, boot, 4-wheel disc brakes, Fuchs wheels, and tool kit. A well-priced 911SC that is mechanically sound.

A red Porsche 914 convertible car, shown from a front-three-quarter view. The car is parked on a light-colored surface against a plain background. It features round headlights, a black front grille, and a black convertible top. The wheels are silver with black tires.

Here is a 1977 Porsche 911S Targa featured with matching numbers is available in Guards Red with a black interior. The factory color is Ascot Green (color code #258). Equipped with a 5-speed manual transmission, a Flat 6 Cylinder 2.7-liter engine, 4-wheel disc brakes, a jack, and cookie-cutter wheels. Also included with this vehicle are receipts totaling over \$8,000. A well-priced 911S Porsche that is mechanically sound.

A dark blue Porsche Carrera GT is shown from a front-three-quarter view. The car is parked on a paved surface with a light-colored wall and trees in the background. The car's design features large, round headlights and a prominent front grille.

Here is a 1991 Porsche 964 Carrera 4 Coupe with 76,891 miles on the odometer is available in its (special order) color code #0732 Amazon Green Metallic with a sand beige interior. The vehicle comes equipped with a 5-speed manual transmission, Flat 6 Cylinder 3.6-liter engine, automatic speed control air conditioning, power windows, 8-way electrical seat (left & right), power steering, sunroof, 4-wheel disc brakes, and jack. Also included with this vehicle are receipts totaling over \$3,000. An excellent opportunity to acquire such an amazing color combination air-cooled 964 that is mechanically sound.

A dark-colored Porsche 911 (Type 996) is shown from a front-three-quarter view. The car is parked on a paved surface with a light-colored wall and some foliage in the background. The car's design features rounded headlights and a prominent front bumper.

Metallic with a blue interior. The vehicle comes equipped with a 3-speed G500 automatic, cooler (rear & rear), automatic speed control, air conditioning, steering wheel with power windows, locking differential, automatic handbrake, turn signal, disc brakes, Puch, two spares, tool kit, compass, and a first aid kit. The code and options add up to a total of \$11,000.00. Also, add \$1,000.00 for the reading phase to a total of \$12,000.00. Also, add \$1,000.00 for the 2019 Dodge Ram 1500 and towing over \$18,000.00. An excellent and original Dodge that is ready to be driven and enjoyed. Do not miss your chance to own a Dodge Ram 1500.

A light blue Porsche 914 convertible is shown from a front-three-quarter view. The car is parked on a white surface against a white background. It features round headlights, a black front grille, and a black convertible top. The wheels are silver with a multi-spoke design.

Here is a 1975 Porsche 911S Targa that is available in Ice Green Metallic with a black interior. The vehicle comes equipped with a 5-speed manual transmission, air conditioning, 4-wheel disc brakes, and Fuchs wheels. A well-priced 911S Targa that is mechanically sound.

A red Porsche 914 convertible car, shown from a front-three-quarter view. The car is parked on a light-colored surface against a plain white background. It features round headlights, a black front grille, and a black convertible top. The interior has yellow seats. The license plate area displays the word 'Carmax'.

The 1976 Porsche 911S Targa featured here with matching numbers is available in its factory color code #027 Guards Red with a sand beige interior. It comes equipped with a manual transmission, 4-wheel disc brakes, and Porsche Phone Dial wheel. A well-priced 911S Targa that is mechanically sound.

The 1983 Porsche 911SC Cabriolet featured here with matching numbers is available in its factory color code #7000 black with a black interior. This vehicle comes with a clean Carfax and is equipped with a 5-speed manual transmission, Flat 6 Cylinder 3.0-liter engine, air conditioning, power windows, soft top, boots, Hella fog lights, 4-wheel disc brakes, and Phone Dial wheels. A well-priced 911SC that has just come out of the dry desert state of Arizona and is mechanically sound.

A white Porsche 911 Carrera 2-door coupe is shown from a front-three-quarter view. The car is parked on a paved surface with trees and a building in the background. It features round headlights, a black front grille, and black side mirrors. The license plate is partially visible as '1-10-10'.

This matching numbers 1988 Porsche 911 Carrera Coupe is available in its factory color code of #908 Grand Prix White with a black interior. The 911 comes with a clean Carfax and is equipped with a G50 5-speed manual transmission, Flat 6 Cylinder 3.2-liter engine, air conditioning, power windows, sunroof, 4-wheel disc brakes, Fuchs wheels, jack, and spare tire. Both the color code and options sticker are still in place under the hood. Also included are the original owner's manual, warranty/maintenance booklet (service stamps included), as well as service documents and receipts totaling over \$2,000. An excellent investment and a beautiful Porsche 911 Carrera Coupe.

A black Porsche Carrera GT sports car is shown from a front-three-quarter view. The car is parked on a paved surface in front of a light-colored wall and some trees. The car's design is sleek and aerodynamic, with distinctive headlights and a low profile. The wheels are black with red accents on the brake calipers.

This factory color 2001 Porsche 911 Turbo 6-Speed featured with 107,343 miles on the odometer is available in its factory color code #741 black with a black interior. The vehicle comes equipped with a 6-speed manual transmission, Flat 6 Cylinder 3.6-liter engine, automatic speed control, air conditioning, power windows, power steering, sunroof, power mirrors, 4-wheel disc brakes, and TECH-ART wheels. Also included with this vehicle are paint meter reading photos. A well-equipped low mileage 911 Turbo that is mechanically sound.





Welcome

I've just got back from a memorable trip to the Museum on Porscheplatz, where the company once again held 'Sound Nacht' after a COVID-induced two-year hiatus. It was a huge privilege to attend: the event, split between Weissach and the Museum, has been watched online by some 50,000 people around the world, while just 22 of us were afforded the priceless experience of being present at the Museum on a warm Saturday evening as the cars were fired up and played their own concert in front of us.

The carefully chosen sports cars – each with their own, unique soundtrack – were joined by legends such as Walter Röhrl, Roland Kussmaul and August Achleitner, who shared stories on each of the models with a genuine warmth and passion that can only come from a manufacturer with such rich road and race history as Porsche.

Of course, the company doesn't *need* to organise Sound Nacht: there's no real commercial purpose, as new Porsche sports cars are barely mentioned, let alone present. The event is

run by real enthusiasts within the company (which again marks it out from others) in a kindred nod to those of us who also have petrol running through our veins. Its very concept is simply marvellous, and Porsche's commitment to administering it every year even more so.

However, there's a real argument that as the years roll by, Sound Nacht will take on even greater significance. With automobiles changing at an ever-quicker pace thanks to digitisation and the adoption of e-power, Sound Nacht will act as the reference point for a decorated period of motoring history where cars were powered by mechanical parts, not computers, and with their striking soundtrack at the epicentre of the emotions they garner.

Porsche clearly recognises this, which is why it insists on giving enthusiasts one glorious night a year where these brilliant sports cars are brought back to life in the name of automotive nirvana, their memories etched into our minds, their sounds joyously ringing in our ears.

“Sound Nacht will act as the reference point for a decorated period of motoring history”







Porsche Opening Shot

Photograph by
Porsche AG

Former works driver Marc Lieb warms up the 12-cylinder engine of the 1969 Porsche 917, before it takes to the track at Weissach for hot laps as part of the Porsche Museum's innovative 'Sound Nacht: Next Level'. Broadcast to a global audience for the first time, the event brings road and race legends back out to play for one stellar evening of entertainment for enthusiasts who get to experience the sights – and sounds – of some of Porsche's finest machinery once more.

Contents

ISSUE #210 OCTOBER 2021

ESSENTIALS

8

Update

A comprehensive round-up of your latest Porsche-specific news

10

Views

Highlights from your Porsche correspondence via email, social media and [Total911.com](https://www.Total911.com)

26

Subscriptions

Become a loyal subscriber and get the magazine delivered right to your door

66

Living the Legend

Real-world reports from our global collective of 911 owners

75

Premier Porsche

All the industry contacts you need to buy, tune, restore or upgrade your Porsche 911

76

Data file

Stats, specs, and updated market values for every 911 model 1963-2021

98

Porsche Moment

In the first of a new series, we study the details behind a significant snapshot from Porsche's past

FEATURES

16

Legacy of GT3

Lee Sibley examines nearly 25 years of GT3 development with a back-to-back test of the first and latest examples

28

Modified S/T

We experience an incredibly rewarding drive in a special S/T build

36

Porsche Index: 964 Turbo 3.6

It's your ultimate guide to the 'Bad Boys' poster 911 of the 1990s

44

The big interview: Herbert Linge

We sit down with racing driver Herbert Linge to discuss his long and remarkable career at Porsche

52

50 years of Weissach

Total 911 looks at how Porsche's top secret Research and Development Centre has evolved over the last half century

60

Porsche roof systems

Kieron Fennelly lifts the lid on the tech behind Porsche's material-top 911s, both new and old



66

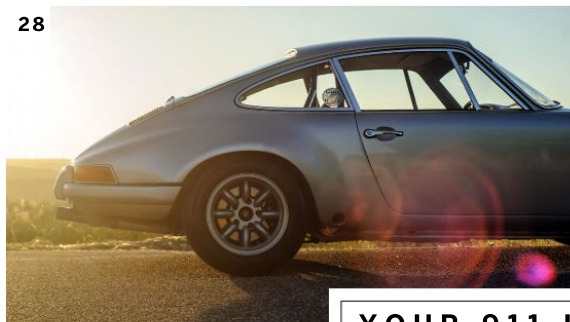


44



98

28



36



YOUR 911 HOME

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www.magazinesdirect.com



16



52



60

Update

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



‘Sound Nacht: Next Level’ revives iconic flat six symphonies

20 legendary road and race cars fire up their engines on a special night for enthusiasts

The Porsche Museum's celebrated 'Sound Nacht' returned after a two-year hiatus on 18 September as road and race cars from the company's past were brought back to life in a stunning audio and visual spectacle for enthusiasts.

The event, split between two locations at Weissach at the Museum on Porscheplatz, was broadcast live around the world for the first time, with a total audience of more than 50,000 viewers treated to the symphonies of 20 carefully selected sports and race cars. The engines of selected road

cars were fired up, with the race cars enjoying dynamic laps on the test track at Weissach.

A host of Porsche legends were on hand to regale stories of each sports car from their respective period, including Hans Stuck, Walter Röhrl, Roland Kussmaul, Tony Hatter, August Achleitner and Norbert Singer. Meanwhile Porsche brand ambassadors Mark Webber and Marc Lieb, as well as current works driver Pascal Wehrlein, put the race cars through their paces on track. Automotive stars of the two-hour event, dubbed



a special sound spectacle, included Porsche's 901 'chassis 57' project, the first 930 Turbo, a 959 Sport and Carrera GT. Race cars enjoying hot laps at the track in Weissach included the 917 and 962 C, the latter driven by Hans Stuck to the 1987 Sprint Championship and featuring the first rendition of Porsche's PDK double-clutch gearbox.

Enthusiasts who missed the live broadcast can watch it again via Porsche's YouTube channel, plus there's a behind-the-scenes video from the Porsche Museum available via 9WERKS TV on YouTube.

News in Brief

Eighth Experience Centre opens

Porsche has opened its eighth Porsche Experience Centre (PEC) in Franciacorta, Italy. The new, 5,600-square metre site features a 2.5km handling circuit, a low-friction handling circuit, and a paddock with 29 garages for events such as Carrera Cup Italia. "People in Italy are passionate about our brand. Here, they can now indulge that passion," said Porsche CEO Oliver Blume.



Ten Voorde is 2021 Supercup champion

Dutch racer Larry ten Voorde wrapped up a commanding 2021 Supercup season as champion of the premier one-make series for 911 GT3 Cup cars. Ten Voorde, of the GP Elite squad, was already assured of the championship title going into the final race at Monza, before storming to his fourth win of the eight-race season from pole. Germany's Laurin Heinrich took the season's rookie title.





DLS takes to the 'Ring

Singer's reimagined 964 goes for TUV approval

The California-based 964 restoration company, Singer Vehicle Design, has been out testing with its latest project on the Nürburgring Nordschleife as it seeks European homologation for its DLS.

The Design Lightweight Study, which is based on the 964-generation Porsche 911, is built in the UK and is Singer's most complex road car

restoration. Its 4.0-litre, 500hp flat six engine was developed with Williams Advanced Engineering, with input from the late Hans Mezger and fellow Porsche legend Norbert Singer.

The Singer team was joined at the 'Ring by Porsche's GT Department head, Andreas Preuninger, though it is believed this was not in

any official capacity. Mr Preuninger is a known admirer of Singer's reimagined 964s. This was the first time Rob Dickinson's California-based concern had tested a DLS mule at the famous Green Hell, as Europe awaits delivery of its first DLS. Early commissions have so far gone to customers in North America.

Construction begins on world's first commercial plants for eFuels

Porsche begins project to produce eFuels in Chile



A joint venture between Porsche and Siemens Energy to produce nearly CO₂-neutral eFuels has begun in earnest after construction started on an industrial plant in Punta Arenas, Chile. The ceremony for this pioneering project took place on 10 September in the presence of Chile's energy minister Juan Carlos Jobet.

The Haru Oni project takes advantage of the perfect climatic conditions for wind energy in Magallanes province in southern Chile to produce the virtually carbon-neutral fuel using low-cost green wind power. The pilot plant is scheduled to start production in mid-2022.

Michael Steiner, member of the Executive Board for Research and Development at Porsche AG, said: "We see ourselves as pioneers when it comes to renewable fuels, and we want to drive development forward. This fits in with our clear overall sustainability strategy: it means that Porsche as a whole can be net CO₂ neutral as early as 2030. Fuels produced with renewable energy can make a contribution to this.

"Our icon, the 911, is particularly suited to the use of eFuels. But so are our much-loved historic vehicles... our tests with renewable fuels are going very successfully. eFuels will make it possible to reduce fossil CO₂ emissions in combustion engines by up to 90%. Among other things, we'll be using the first fuel from Chile in our Porsche Mobil 1 Supercup racing cars from 2022."

SVP Motorsport appointed Alcon brakes distributor

Performance brakes now available for rapid delivery

UK-based SVP Motorsport, an independent Porsche and FIA Motorsports specialist, has been appointed the official European distributor for Alcon brakes. The performance brakes, a popular upgrade for many Porsche enthusiasts, are now available for both rapid delivery from, and fitting at, SVP's facility in Worcester as it continues its mission to maintain and race all things Porsche.

To celebrate, **Total 911** readers can also enjoy 10% off all Alcon stock, available via its website, by using the code 'TOTAL911SVP' at the checkout. The full range of stock can be viewed by visiting [svp-motorsport.com](https://www.svp-motorsport.com).



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Views

The very best of your Porsche opinions

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Just do it

Dear Sir,

Great mag as usual. My story below is my attempt
to spread the fun and ease of working on one's
own 911 and the sense of achievement (and cost
savings) it can bring.

I am the lucky owner of a 996 Targa, the very one,
which according to the previous owner, appeared
on the cover of issue 130 of **Total 911**. Being a 996,
it developed the dreaded bore score tapping noise
and after two years of driving regardless, I thought
I'd better re-build the engine before it got too fed up.

To cut a long story short, I made foundations,
rebuilt a second-hand shed (space for the engine
rebuild), lifted the car, separated the gearbox,
removed the engine, took it apart, split the cases,
cleaned the valves, rebuilt the heads, had cylinders
4-6 machined and iron liners fitted (I don't have
tooling for that), re-built the engine, put it back in
the car, refitted the gearbox, replaced all the brake
lines, bought a welder, learnt how to weld (thanks
YouTube), repaired and Gundo hacked my exhausts.
The new engine has now done 152 miles (it hasn't
gone bang yet) and I am a very happy chappy.

As I was on a budget and cylinders/pistons 1-3
still looked very nice, I decided to only replace liners
4-6 and their pistons. For budget reasons I didn't
replace the clutch or IMS bearing, but as I now know
how to access the eight bolts on the gearbox and
remove the pressure plate, I can probably do this in
a few hours when funds are available.

All of the above was done either outside on a
sloping drive, or in my shed, using standard tools,
over an eight-month period during evenings, by
someone (me) with little experience. I made a
'special' tool to lock the cams and another to insert
the gudgeon pin circlips (scary moments) and

bought an engine stand. Everything else was done
using standard tools. I also now have 850 pictures
for reference if I ever need to do it again.

The point of my story is that I am not an expert,
not a mechanic and not a genius, so if I can do
it, anyone can do it. Porsches and their engines
are very easy to work on, so don't be scared just
because it says 'Porsche'. An engine is an engine.
Have a go, it's very satisfying and will make your
own 911 that little bit more special.

Don't pay someone else, just do it!

Peter Flynn

**A first-class example of somebody rolling up
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991 reliability issues #1

Dear Sir,

Having read Paul Helps' letter on reliability of the 991 (Total 911 issue 208) I thought I'd share my experience of my 991.2. At two years old and with 14,000 miles and a Porsche service just completed, I drove to the south of France with friends in their own 911s of various vintages. After an enthusiastic drive through a mountainous area we stopped for coffee. 20 minutes later when I started the engine it blew two litres of oil in a huge cloud of smoke out of its exhaust. We all thought the engine had blown but being in the middle of nowhere I decided that as it seemed to be running I'd risk a gentle drive down the hill to the nearest town. The smoke cleared and the gauge showed a low oil level. I added a litre and

then at the next stop another litre and all was well. Makes you wonder though why a fairly new car recently serviced would behave that way. I sold it shortly afterwards and swore I'd never buy a three-litre turbo-engined Porsche again. I have a number of classic Porsches but my new replacement is a four-litre naturally aspirated manual Spyder!

Trevor Cartner

Thanks for sharing your tales, Trevor. The 991.2's 9A2 engine appears fairly reliable by all accounts, save for water pump failures which aren't uncommon. Your story is the first time that we've heard about losing significant amounts of oil.



In our last issue we published Jason Showers' letter highlighting his adventures with a Petrol blue Targa. We printed an excellent picture by Jerry Keefer without giving appropriate credit. Check out Jerry's work at keeferfineart.com.



991 reliability issues #2

Dear Sir,

I'm writing in response to Paul Helps' letter "Am I just unlucky?", in September's edition. I have a 2014 991.1 S Cabriolet, purchased in September 2019, with only 18,000 miles. It's a high days and holidays car which, due to COVID, has not been used in the manner intended – in fact I've put less than 2,000 miles in it, so far.

Make what you will of this, but I've had only one major issue, a dynamic engine mount failure during a spirited open-top drive last December. This was dealt with under warranty by Portsmouth OPC, which was a huge relief as the mount itself is around £1,200 at retail!

As there are three mounts in total I naturally voiced my concern that the others could soon fail, but as expected the OPC was not going to entertain carrying out that kind of preventive maintenance!

Interestingly, this repair actually cured a kind of torque steer twitchiness I was getting when coming off the power at high revs, so I guess that mount wasn't working properly all along. I hope the other two mounts will continue to behave themselves when I do get down to the south of France next summer (maybe!).

That's the sum of my woes to date, but I think I'll definitely be extending my Porsche warranty when it expires at the end of September.

Steve Tremlett

A Porsche Warranty is highly advised, though do be aware there are certain obligations you must fulfil in order for the warranty to remain valid, such as running N-rated tyres.



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,

My 991.1 Carrera S Cabriolet is seven years old and has not had a PDK gearbox oil change, on my previous 997.2 I seem to remember these being due every six years or 60k miles? Is my car overdue or has it been missed?

Daniel Klarmy

Yes you are correct, on the 997.2 the service schedule for the PDK gearbox clutch fluid change is every six years or 60,000 miles, whichever comes sooner. Regarding the PDK transmission fluid, this is due every 12 years or 120,000 miles.

On the 991 variation the service schedule was extended and no longer due every six years/60,000 miles. The fluids (both clutch oil and transmission oil) will be due at 12 years/120,000 miles so your 911 is not overdue and hasn't been missed.

It's important to stick to these schedules as gearbox repairs can be expensive. There is a filling/bleed procedure to follow on the diagnostic tester to ensure the fluid




levels are correct at the relevant oil temperatures, as the PDK gearboxes can be sensitive to the levels being incorrect.




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PORSCHE

GUEST COLUMN



Main dealer vs independent specialist

Having now sat on both sides of the fence, Gold-certified technician Scott Gardner discusses the ins and outs of the main dealer vs independent specialist debate

At the start of the year, I would never have imagined being in the position I am now. I was going into my 15th year at my local Porsche Centre as workshop manager and Gold level master technician, yet I've just received the keys to a premises of my own. Myself and my business partner, James Belbin, have embarked on a journey to set up a new Porsche specialist on the UK's south coast, named Bahnsport. It's a journey which has been a dream for years and is now turning into reality.

Bahnsport started trading in April 2021 as a mobile Porsche specialist offering honest, transparent and professional services for all Porsches, specialising in the water-cooled era. In offering the mobile service,

we could trade straight away while the journey began to find a premises and arrange a lease agreement – a challenge and time-consuming operation in itself. We secured a modern space in the heart of Dorset, which is now our base. The next task was getting our name out there to establish ourselves and our services.

It's a daunting task, starting a new business, with many hurdles to overcome. However, James had a loyal following of Porsche owners from his previous specialist business, JMB Automotive. His customer base, paired with my privilege of personally knowing a lot of Porsche owners in the surrounding area and attending local meets, meant that inbound bookings were immediate. The response to Bahnsport has been overwhelming with the influx of enquiries and demand for our services more than we could ever imagine at these early stages of starting out.

And what of the main dealer versus independent specialist debate we all hear so much about? It's apparent that the all-important main dealer 'stamp' isn't as crucial as you'd believe, with many two-year-old vehicles coming to us for their first service. Some still prefer the main dealer for servicing and choose us for the advisory work though, as the cost savings can be significant, plus you're far more likely to get a

more personal service from a specialist, where you'll enjoy direct contact with the technician who worked on your Porsche.

From our side too, another bonus of being outside the official Porsche network is the wide spectrum of aftermarket parts, upgrades and solutions now at our disposal (a main dealer can only install genuine parts). It's given us a few more options to explore when recommending upgrades to enthusiasts!

However, setting up an independent enterprise has also presented challenges to overcome, for example insurances, diagnostic equipment, specialist tooling, and existing relationships with suppliers. These have all previously been at my disposal with full access to workshop manuals and wiring diagrams, something we no longer have immediate access to. Now we have the keys to our own workshop though, we have a blank canvas to work from – it's exciting and daunting at the same time.

A big thank you is in order to everyone for their support and help so far, and to our new customers for being so positive, kind and loyal. It's been an amazing journey over the last five months and I invite you to follow us on social media (@BahnsportLtd). As the saying goes, the best is yet to come... **grr**





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When polar ice melts, it harms habitats as far away as Asia and Africa. In 2022, conservationist (and Christopher Ward Challenger) Tom Hicks will lead an expedition to the North Pole to measure ice melt rates for the David Shepherd Wildlife Foundation (DSWF). On his wrist will be the C60 Anthropocene GMT. Able to monitor two time zones at once, waterproof to 600m and with a sapphire dial that recalls polar ice, it can withstand whatever the Arctic throws at it. And with five percent from the sale of each watch going to DSWF, it's playing its own part in the fight against climate change.



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Ward**

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GT3 Legacy

Total 911 explores Porsche's GT3 bloodline with a fast road drive of the first and latest homologation specials

Written by **Lee Sibley** Photography by **Ali Cusick**





It's easy to forget just how much change has taken place at Porsche in the last quarter of a century. In that time, the 911 lineup has flourished both in the number of different models available as well as numbers produced – comfortably more 911s have been made in the last 25 years than the 33 beforehand.

Porsche also diversified its products by introducing the Cayman, Cayenne, Panamera, Boxster and Macan, as well as the Carrera GT and 918 supercars; then it opened eight new experience centres worldwide, a new factory at Leipzig (with a micro factory currently being assembled in Malaysia); got taken over by VW; and started making electric cars, beginning with the Taycan. Pretty much the only constant has been the location of Porsche's HQ at Zuffenhausen, where the 911 continues to be built, albeit alongside said Taycan.

Even at Zuffenhausen though, a new era was being ushered in precisely 25 years ago: its 911 was completely redesigned from the ground up for the first time since the model's inception in 1963. A new car, the Boxster, would be built alongside it, sharing a variation of the same engine – an engine that would be cooled by water rather than air. Today, these facts are immaterial to the enthusiast. A quarter of a century ago, the move was seismic.

Two short years later, the company was also saying hello to a new age for its Motorsport cars with the fabled Carrera RS expunged in favour of a model sporting just two letters and a number: GT3. In the first instance, Porsche's new car from Weissach would homologate the 996 to go racing, in the best traditions of a Porsche sports car. But it would do much more than that: the first 'hot' 996

would start a deep love affair between devout driving enthusiasts and pretty much anything to roll out of what is now known as the 'GT Department'. Nearly 25 years and the production of 20,000 models over seven generations later (not including RS), the 'GT3' appellation might well be the most evocative in the Porsche lexicon.

The latest and greatest of those is of course the 992 GT3. We have previously tested it on its customary proving ground, the race track. But the magic of the GT3 as a homologation special is that while its skills are honed for the circuit, it's also applicable to street driving.

Around town, there's no question it's an easier proposition than the 991.2 it replaced: the clutch and shifter are much lighter and easier to engage – even from cold – and mechanical chatter from the clutch release bearing is less perceptible in the cabin, which also filters out a degree of rolling tyre noise too. It's not as agricultural in urban areas as the 991.2, which makes daily driving a semi-realistic proposition, though a stiff ride should still deter all but the most committed of enthusiasts.

That's not to say the GT3 experience has been diluted in the latest offering. Even at low speeds, its front axle feels sharper, and whereas in the 991 you had to be hitting the upper echelons of its maximum 9,000rpm for the motor to really sing, here the flat six symphony begins in earnest from as little as 5k. Clearly, the bandwidth of the GT3's performance has been increased, but great roads are where it pleases most, which is why we find ourselves in the middle of nowhere on the North York Moors, with an old friend in tow. A fun, smooth(ish) network of roads running mostly in parallel over these picturesque moors, they are simply a paradise for those who

BELOW Refined driver position contributes to a lower centre of gravity

BELOW Swan neck strut design is a first on a road 911 and generates 50% more downforce over 991.2 (combined with diffuser)





Model 992 GT3

Year 2020

Engine

Capacity 3,996cc

Compression ratio 13.3:1

Maximum power 510hp @ 8,400rpm

Maximum torque 470Nm @ 6,100rpm

Transmission Six-speed manual

Suspension

Front Independent; double wishbone with anti-roll bar; all chassis mounts ball joints; integrated helper spring; PASM

Rear Independent; multi-link; anti-roll bar; partial chassis bearings with ball joints; integrated helper spring; PASM

Wheels & tyres

Front 9.5x20-inch; 255/35/ZR20

Rear 12x21-inch; 315/30/ZR21

Dimensions

Length 4,573mm


Width 1,852mm

Weight 1,418kg

Performance

0-62mph 3.9 secs (manual)

Top speed 199mph



“On a public road, the barometer of accomplishment is smiles, not sector times, which puts the 996 eye to eye with its distant, exuberant relative in the 992”





ABOVE 996.1 GT3 actually weighed 30kg more than an equivalent C2, but boasted a dry-sumped 'Mezger' engine, uprated chassis and bigger brakes

Model **996.1 GT3**

Year 1999

Engine

Capacity 3,600cc

Compression 11.7:1 ratio

Maximum power 360hp @ 7,200rpm

Maximum torque 370Nm @ 5,000rpm

Transmission Six-speed manual

Suspension

Front Independent; MacPherson strut; anti-roll bar

Rear Independent; multi-link; anti-roll bar

Wheels & tyres

Front 8x18-inch; 225/40/R18

Rear 10x18-inch; 285/30/R18

Dimensions

Length 4,430mm

Width 1,765mm

Weight 1,350kg

Performance

0-62mph 4.8 sec

Top speed 188mph



BELOW Angle of bi-planed 'taco' wing could be manually adjusted





love driving – and my current predicament is equally as heavenly.

The view ahead consists of a winding road twisting excitedly over quiet moorland; the view behind is dominated by the swan neck uprights of the 992's wing but behind that, a flash of red reveals Neil Plumptre's 996.1 GT3. Separated by 22 years, these two homologation specials neatly bookend Porsche's GT3 story – and as we've just discovered, much has changed at the company in the interim. So is it reflected in the cars that share a name?

Our drive of the new Touring in issue 208 revealed the 992 GT3's front axle to be a quantum leap over the 991, so quick and sharp is the car at its nose. However, there are differences – albeit subtle – between the Touring and this track-oriented, winged equivalent. Its ride is slightly stiffer, for one, and the steering wheel is noticeably busier over bumpy blacktop too, requiring something of a wrestle to keep the car from tramlining all over the road's divots.

Another big difference to that drive in the Touring concerns the GT3's transmission. Our Touring on test was PDK, whereas this winged GT3 has Porsche's six-speed Motorsport gearbox – and what a revelation it is. Sporting the lightest pedal of any Porsche GT car I've driven, the shifter too is fairly weightless (but not superfluously so), offering a short, precise throw. It's simply a joy to use and is the best ally yet to the brilliant 510hp, 4.0-litre flat six stuffed out back.

My only gripe is pedal positioning. It's less than ideal in the 992, the accelerator's organ pedal placed too far over and with too much of an offset to the brake pedal to facilitate seamless heel and toe. There is a cheat though, as selecting Sport mode sees the car automatically rev match to keep the GT3 smooth between downshifts, while on the way back up, the GT3 reveals another neat feature of its arsenal: flat shifting. In the 992 there's no need to lift off the throttle when changing up a gear, thereby reducing

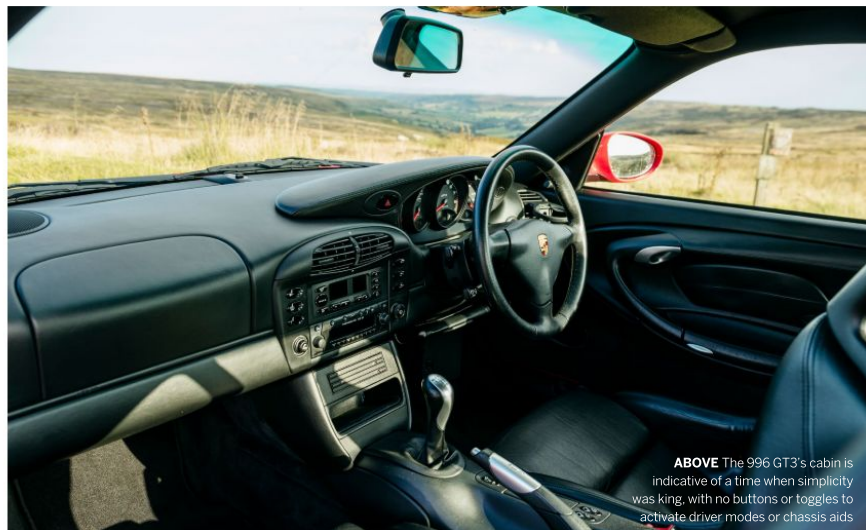
the amount of time the 911's rear wheels are starved of power. Instead, with my right foot planted to the floor, a kick at the clutch with my left foot and a swift slide of the shifter sees the GT3 accept a deft gear change in rapid time. That, and the fact it can tap into an additional 100Nm of torque, means the thunderous 992 can muster a sizeable margin of space to its distant forebear in a straight line, though in corners the latest GT3 has the ability to dust off the 996 completely.

The 992's mechanical grip is simply astonishing. Unrivalled among other road-based 911s, the sheer speed I'm able to carry through bends is frankly ludicrous, and yet the GT3 never feels like it's even remotely beginning to tickle the limits of adhesion. No matter how hard I push, or how bumpy the road becomes, this GT3 refuses to break contact with the floor, which is evidently a key factor behind its ability to cover ground so quickly and with such assurance.

After an hour or so of playing cat and mouse across the moors, we pull over for a debrief, and Neil – a serial owner of more than 30 Porsche in the last 16 years – is equally stunned by the 992's grip. "That thing's mad," he says, pointing at the Shark blue car. "There were a couple of times you went into a corner with such speed. I thought surely you'd be in trouble, but it just gripped and gripped. I can't believe it." It's an apt appraisal indicative of the 992 GT3's sizeable capabilities, rather than those of the wally in charge of steering it.

Before Neil and I swap cars, we take in their profiles on the hillside. Even when merely parked next to one another, it's hard to believe these two 911s share much more in common than the model denomination stamped to their backsides. The sculpted 996 is small and dainty compared to the jagged 992 with its more aggressive styling.

Aesthetically, the 996 is only a minor rework over its Carrera sibling: still narrow-bodied and with



ABOVE The 996 GT3's cabin is indicative of a time when simplicity was king, with no buttons or toggles to activate driver modes or chassis aids

exhausts remaining faithful to the 911's rear corners, there are none of the extra vents that would appear ahead of the bonnet and on the rear PU from the 997 onwards either. Even the bi-planed 'taco' wing sitting atop the decklid feels reassuringly minuscule compared to the 992's swan-necked approach to aerodynamics.

The 996 does sit 30mm lower than its C2 sister though, plus there's a raft of changes you don't immediately see like adjustable dampers, stiffer springs, bigger brakes, plus a 993 GT2-spec gearbox and dry-sumped 'Mezger' flat six in the back.

Stepping into the 996, it really does hit home just how much the GT3 has evolved in the years under Mr Preuninger's tutelage. This first GT3 may have heralded the modern era of Porsche GT car, but to experience it really is like going back in time. The simplicity of its cabin is indicative of the 996's general approach to fast motoring: there's no Sport button, let alone a Mode wheel as part of any Sport Chrono Package. As for the Sport setting of Porsche Stability Management, with its greater slip angle? The only tools for mitigating traction here are your feet and hands.

I'm sat far higher up in the 996 too (though the Clubsport leather buckets offer an excellent hold), the steering wheel placement feels awkward, the only adjustment being a forwards/backwards movement, and the manual shifter feels like it's placed somewhere down near my knees. It shows Porsche really has honed the driver's seating position to perfection in the years since.

We venture back out on the same roads we've just explored, where it takes just seconds for Porsche's first GT3 to endear itself to me. Vision, first of all, is first class: I can see all the 996's extremities from

the driver's seat, which makes placing this stunning, 35,000 mile example on the road a far easier task than in the bulky 992. Its pedals too are ideally placed and offer the perfect tools for quick heel and toe, even if the clutch has such weight to it that it feels akin to a gymnasium leg press.

The wheel is jostling about in the palms of my hands, and the chassis is already showing itself to be playful as we move through a succession of medium-speed bends. Building pace, the M96/79 boxer shows plenty of character and eagerness to rev to its 7600rpm redline as I try and chase down the 992. Before long we reach a fast, darting S-bend, where earlier the 992's lightning-quick directional changes and ability to maintain grip had left both Mr Plumpton and I dumbfounded.

Needless to say, the 996 will not carry anywhere near as much velocity into this first right-hander, and so while the 992 monsters on, I'm hitting the 996's brakes to scrub speed for an acceptable corner entry. Turning in, it takes a while for the car's nose to follow my inputs at the wheel by comparison to the razor-sharp 992, but the process in this 996 is nevertheless beautiful: you feel so much more of *everything*, from rear to front load, to lateral weight transfer, to the (at times) teetering levels of grip being eked from those much skinnier Pirelli tyres.

The 996 darts right, I then lift slightly, push the wheel left and feed the throttle in, before accelerating hard out of the S-bend... wow! This GT3 feels alive in my grasp, and at considerably less speed than the 992 needs to muster to deliver the same feeling. The 996 just feels so playful: whereas in the 992 you never quite feel in sole charge of the car, the 996.1 lets you take it by the scruff of the neck, giving you complete autonomy to find yours or the car's limit, whichever

comes first. The experience rewards on a whole new level, and really highlights why many view this pre-computer era as the high watermark of sports cars, if not in terms of their technical prowess but the sheer engagement they offer. So how to compare the first and latest Porsche GT3?

Really, there's no comparison to be had between the 996.1 and 992. They hail from completely different eras, and it shows. There's an innocence to the 996 in its approach to performance, yet the 992 is simply a technical masterpiece, the result of more than two decades of obsessive attention to every gram of weight, every drop of petrol, and every molecule of air that goes near it. The 992 GT3 is a race car with a sat nav, whereas the 996 is simply a classic sports car.

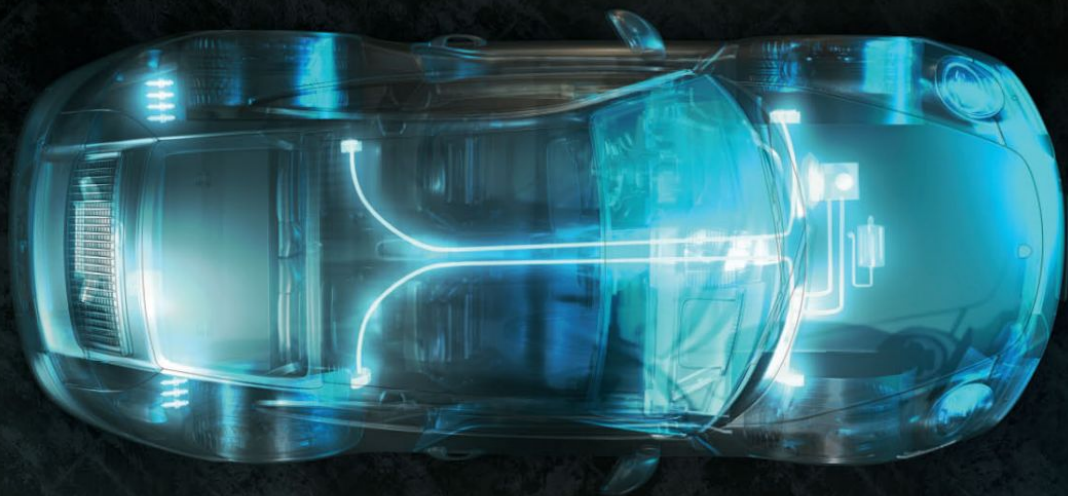
However, on a public road, the barometer of accomplishment is smiles, not sector times, which puts the 996 eye to eye with its distant, exuberant relative in the 992. On this metric alone, choosing a champion is difficult.

It's hard to look past the sheer theatre of the 992, but as we get our final shot at sunset to wrap up an entertaining day on the moors, it doesn't stop me from asking Neil if I can drive his 996 back to base for a late evening supper. There's just something about its purity through simplicity that I'm drawn to, and I'm keen to savour it one last time.

And that's how our day ends: two GT3s chasing down the very last remnants of sunlight en route back to civilisation, the 996 and I following the warm glow of the 992's full-width rear light bar as it dances in the darkness across the deserted moorland roads.

Where to from here? Only Mr Andreas Preuninger really knows for the short term, but one thing's for certain: in another 22 years' time, Porsche's GT3 will be another very different beast indeed. **911**





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A scenic landscape featuring a winding asphalt road that curves through a field of purple heather. In the background, there are rolling green hills and a distant valley with fields and trees under a hazy sky. A road sign is visible on the right side of the road.

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Written and photographed by **Steve Hall**









As I inhale my Big Mac and fries after a busy day photographing and driving on the surrounding roads, the distant sky works through a post-sunset colour pallet of ochre and magenta before finally turning deep purple and blue; even the wind farm on the horizon somehow looks quite pretty. Maybe it helps that it's several kilometres away, giving the giant power generators typical of this mid German countryside an appearance more akin to cute windmills. But it's not the rolling countryside nor the wind farm on the horizon that are captivating me here; it's the simply lovely shape of a beautiful 1970 911S – long since updated to S/T spec – a few metres in front that's capturing my attention.

My burger tastes all the better after a day's hard work running around the aforementioned countryside capturing this fabulous car, culminating in the kind of gorgeous sunset us photographers dream of (but despite forecasts promising as much, often don't quite happen). It's not every day you get to shoot a car this pretty, this rare, this special, so of course you want to do it justice. You, dear reader, can be the judge of that, but right here and right now I'm feeling happy with the day's work.

I'm sure the debate could rage for a *very long time* over which of the eight generations of 911 is the most aesthetically pleasing, and that's discounting the multitudinous iterations within each generation – literally hundreds to choose from, all the way back to 1963. Revisiting the pictures as I write this piece, I'm at a loss to name one better than this. As if to prove

how many variations exist within each 911 generation, I'd pass on the early 2.0-litre model, which is fundamentally the same shape, but with its narrow body and inset wheels is just a bit too delicate, a little effete for these tastes. 1973's 2.7 RS is perhaps the iconic 911 shape for the ages and it's definitely right up there. But for me there's something about the juxtaposition of that delicate, elegant glasshouse, the lack of spoilers or any other accoutrements, whilst also leaving the viewer in no doubt as to the fact this car has some *attitude* thanks to those gorgeously flared wheelarches, the whole car sitting lower so the wheels only just fit. You can thank the FIA for the latter, as their '70s rule change allowed an extra two inches of bodywork across the axles to accommodate larger wheels; this also explains the mismatched Fuchs up front and Minilites at the rear; in period, there were no Fuchs wide enough, a true case of form following function in the best Porsche tradition. Nevertheless, it's a fabulous looking 911 – indeed it's a fabulous looking car, period.

Starting life in 1969 this car was delivered to Spain in December as a factory 911S, endowed with a 168bhp 2.0-litre flat six – a power figure short of many other sportscars of the day perhaps, but then most of those weighed considerably more than the little 911's lithe 1,020kg kerbweight. Nonetheless, the owner barely had it a year before it was sent back to Stuttgart for a factory upgrade to S/T spec, the new 2.2-litre motor delivering an altogether more exciting 227bhp – surpassing the magic 100bhp/litre, in 1971. The fact its maximum torque was a more manageable 225Nm, delivered at 6,300rpm, says everything you need to know about the peaky delivery an S/T ☺



ABOVE Originally a '69 S, this 911 returned to the factory to be upgraded to S/T spec

engine brought – after all, factory S/Ts were largely intended for sportscar racing categories right around the globe.

I'm sure the powertrain alone would have given this car a new lease of life, but the owner also ticked the box for the factory option bodykit: after receiving its new heart it made its way to the bodywork department in Zuffenhausen where it would be transformed with those lovely rear arches, expertly welded in, whilst the front fenders were replaced along with new front and rear bumpers, all manufactured in fibreglass to save weight. Here's a fun fact – the lightweight nature of the existing aluminium bonnet meant that the final part of an S/T conversion was to add balsa wood strips to the underside of the bonnet, this to account for the extra top speed and associated additional aerodynamic load which could otherwise deform the hood at speed. Naturally, new wheels – 7x15 inches up front, 9x15 inches rear – completed the package with period sports tyres to contain the added performance.

The purist in me would love to be driving the car as it was then, to all intents and purposes identical in spec to one of the original 21 factory 911 S/Ts (or 23, depending where your data is from – the extra two being pure racing cars). The combination of a kerbweight now well under 1,000kg, 35% more power, the wider track helping accommodate wheels and tyres that deliver grip and agility commensurate with the motor's attitude. That's a pleasure that fell to the original owner for over 20 years whereupon it went from one sunny clime to another, landing in San Diego, California, where it resided until 2008, before returning to 'der vaterland'.

Now well beyond its 40th year, between 2012 and 2018 it was subject to what was presumably a well-deserved restoration: a full nut and bolt job with no limit to budgetary constraints. On the contrary in fact, this is where things take a turn to their current iteration. With the engine out – in fact the whole

car in pieces – the owner thought 'why not look at some tempting upgrades...' and what could be more tempting than more power?

And whilst the aim was more power, a keen eye was kept on driveability; the original S/T motor is an exciting and intoxicating thing to use, but its torque light, high-revving nature was always better suited to the racetrack than the street, where this car is intended to be enjoyed. So the S/T's 2.2-litre flat six was supplanted by a 2.8-litre motor which brought in twin spark heads, Magneti Marelli double ignition distributor and twin coils. Fuelled by Weber 46mm carburetors the sharper cams, freer breathing manifolds and race exhaust help this engine turn fuel into power, torque and... noise. Oh, the noise... We'll return to that.

The headline figure is 245bhp at 6,600rpm, so you can see that it's nothing like as 'peaky' as the engine that previously inhabited the engine bay, whilst still delivering more power – there ain't no replacement for displacement, as our Stateside friends like to say. But the real headline is 280 Nm of torque, arriving at 4,700rpm – fully 1,600 revs earlier than before. Of course, those figures still tell the story of an engine that loves to rev and is exciting to use, but it reveals the philosophy of dialling back that race style delivery just enough to make for a more pleasurable road car. Fundamentally, the idea was to enhance power and retain the driving character, whilst making performance that much more useable and accessible. Transmitting that power to the road is the usual Type 901 five-speed dogleg gearbox mated to a ZF limited slip diff, which we won't be troubling on today's bone-dry open sweeping roads, largely because the whole thing is so well tied down by its Koni suspension, firm enough to press those relatively fat, lightly treaded Yokohamas into the surface. But on these roads at least – which are all billiard table smooth, as is the way with rural roads in this part of Germany – it's not in the least bit harsh, ☺



BELOW Iconic S/T arches shroud 9-inch wide Minilite rear wheels



ABOVE Factory S/Ts left Zuffenhausen with a spartan interior, close-ratio gearbox and thinner glass windows





Model 911 S/T evocation

Year 1969

Engine

Capacity 2,800cc

Maximum power 245bhp @ 6,600rpm

Maximum torque 280Nm @ 4,700rpm

Transmission Type 901 5-speed manual, dogleg

Suspension

Front McPherson struts, torsion bar, anti-roll bar

Rear Trailing arms, torsion bar, anti-roll bar

Wheels & tyres

Front 7x15-inch Fuchs; 205/55/R15

Rear 9x15-inch Minilites; 225/60/R15

Dimensions

Length 4,163mm

Width 1,661mm

Weight 962kg

Performance

0-62mph 5.5secs (est)

Top speed 150mph (est)





“The richly layered competition between induction noise, mechanical meshing and race pipes beyond 6,000rpm melds into a sound so good I’m not sure I’ve heard anything better from a flat six”

demonstrating pliancy via moderate amounts of roll in tighter bends.

But I’m getting ahead of myself: you’ve read the history of this fascinating and unique car, perhaps I’ve hinted at what’s to come with the race exhaust and 245bhp in a 962kg car. Hours spent in the countryside capturing images provide the opportunity to hear it from outside – an aggressive, serrated bark as it accelerates away, a booming crackle on the overrun as it slows into a bend. The sight and sound of this car is utterly beguiling and I can’t wait to drive it.

I have to admit, I’m feeling a little bit cautious given its value (it’s currently for sale just short of €400k), rarity and aggressive nature – despite being assured to ‘just go have fun’. Climbing inside only accentuates how simple and focused this car is; the fully caged rear is a reminder that S/T spec is very much for racing. The fixed back buckets are heavily bolstered from the midriff down, holding your torso tightly in place whilst the lack of upper bolster means using your core to keep shoulders upright when building lateral load. I’d like the seats a smidge more upright – like a touring car racer – because the seat is on the back of the runners for a workable hip to pedal distance, making my arms a bit straighter than I’d prefer. Still, its driving position is miles better than most contemporaries.

Slot the silver sliver into the ignition, hidden just behind the left side of the wheel. Rotate clockwise and the engine catches almost immediately, the electronic ignition and already warm fluids doing their bit. The noise, even at idle, is aggressive,

immersive and in your face. There’s no sound deadening – none – so if it sounds like the motor is in the cabin with you, that’s because it pretty much is. Naturally, you give the throttle a blip – just to gauge response you tell yourself, fibbing – and the shriek from over your right shoulder is something else. You need to hear this thing under load.

So you push the left pedal, it’s pretty heavy and doesn’t give much feedback. You crank the longer than expected gearlever towards your knee then down to slot first, hoping you won’t need it again once rolling. You ease out the pedal... and stall. Well, I did say I was going to be careful. Next time I give it more rpm, the engine flares as I let the clutch out quick and smooth; we’re rolling. Straight away I can tell this car prefers to be grabbed by the scruff and *driven* as trying to ease my way into things results in driveline shunt, revs dropping sharply as I’m too slow on the upshift. So I do as the car is imploring me to and, well, give it some.

Bloody hell. The sheer volume and quality of noise that arrives from behind shouldn’t really be a surprise, but for a moment I’m like a rabbit caught in headlights, the limiter chiding me to grab another gear. Remember that external sound I described earlier? Well that, times ten. Then add in all kinds of other mechanical music depending where throttle and revs are, from the baleful moan as you back off the gas, to the richly layered competition between induction noise, mechanical meshing and race pipes, finally melding beyond 6,000rpm into a sound so good I’m not sure I’ve heard anything better from a

flat six. And forgive me for stating the obvious, but it’s really rather brisk. Not punch in the guts quick, but enough to get your attention, the short gearing keeping you on your toes; it’s probably on par with a 996 at road speeds, but the diminutive size and sonic assault would have you believe it’s miles faster.

It corners beautifully too, as much I could tell on these mostly fast open roads. I don’t feel inclined to probe the limits in fourth gear whilst piloting somebody else’s unique, €400k 911, but what I can tell you is the chassis feels absolutely nailed down, the front crystal clear in its response, the rear following faithfully whilst displaying typical classic 911 ability to change line via throttle. It’s so immersive and responsive that you derive a huge amount of pleasure just *driving* without needing to have your arse on fire. The S/T Stops well too, as sub tonne cars tend to, whilst the gearshift is undeniably a little vague across the gate – like all these early 911 ‘boxes, time would have you dialled into its ways. It makes those occasionally well-executed rev matched downshifts all the more rewarding, indulging yourself in one more flare of revs from that sublime engine. What a machine this S/T is.

Returning to our muster point for sunset shots, I’m absolutely smitten and buzzing with adrenaline, wondering what it must be like to drive this thing hard over an Alpine pass or – even better – a racetrack. Truth is, from our all too brief meeting, I already know it’d be utterly life affirming. But then, for a fully concentrated triple espresso hit of classic 911, you’d expect nothing less... **911**



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964 TURBO 3.6

The 'Bad Boys' 964 commands a high price today, so it's crucial you're buying the right example. Total 911 presents a full dossier on the 3.6 Turbo

Written by **Kieron Fennelly**



HISTORY AND TECH

The 964 Turbo was almost the car that never was. The Vorstand approved the new 964 range in April 1984 with launch planned in autumn 1987. This would include Typ 965, the turbo version for which Porsche had greater ambitions than with the 930: it was planned that the 965 would share some of the technology of the 959 supercar that Weissach was building. Besides of course being turbocharged, the 965 would have options such as air suspension, four-wheel drive and PDK as well as some of the aerodynamics of the 959. However, in what was an extraordinarily intense period in Porsche engineering, the timetabling went awry: so innovative was some of the 959 technology

that suppliers could not deliver and while that programme fell behind, so did the 965's. Even the 964 Carrera 4 was launched a year late, and when the C2 followed in 1989, there still was no sign of the Turbo: Porsche's flagship was missing, an absence which caused much comment.

Project 965, to be called the 969, had stalled, its woes part of the wider troubles Porsche was facing by 1988. Ulrich Bez, hired back to Porsche from BMW, took over R&D in late 1988 and one of his first decisions was to abandon the (still engine-less) Typ 965. An interim Turbo model was needed and 911 programme manager Fritz Bezner suggested installing the 930's 3.3 in the 964. With the X33 engine upgrade and 320bhp, the new model just met Porsche's performance benchmarks and it was also straightforward to build: the company was able to present it to

considerable acclaim in March 1990: the addition of power steering greatly enhanced the driving experience, the 964 cabin was improved and the 3,800 cars sold would make handsome profits.

So unexpectedly successful did it prove that the 'proper' 3.6 964 Turbo did not appear until 1993, but although this was destined to be the last single-turbo, traditional rear-drive Turbo, Porsche did want it to benefit from some of the advances of the 3.6 engine. The compression ratio was only 7.5:1, but higher boost and 3.3 Turbo S camshafts lifted power and torque by an impressive 15%. Still using K-Jetronic injection and with no electronic boost control or air-mass, metering the 3.6T was hardly state-of-the-art, but it was still a sensational performer: 0-160km in 9.5s and 290kph though with a voracious appetite for 98 Octane. ➡



WHAT'S IT LIKE TO DRIVE?

Contemporary correspondents had been more impressed with the 964 3.3T than they anticipated. The Turbo had such a reputation for wild, sudden oversteer, the majority were relieved that the 964 simply understeered on dry roads. Undoubtedly the 964's completely new chassis had much to do with this; on the 3.6T, even wider rear tyres and new 18-inch rims coupled with a front suspension lowered by 20mm continued this improvement. So good in fact was the 3.6T's traction that standing starts of the dropped clutch variety resulted in wild axle tramp. Porsche's nicely weighted power steering was praised, but the 3.6T's inevitably stiffer suspension meant a fidgety ride on imperfect surfaces and some road noise in the cabin transmitted by the thicker rear trailing arms of the RS. The 3.6 however delivered its torque more evenly than earlier Turbos and combined with the steering, shorter-throw gear lever and lighter clutch, the latest Turbo was more relaxing to drive.

The cabin is surprisingly intimate and visibility through the upright windscreen better than modern Turbos. Underway, it feels vintage, with constant feedback through the non-adjustable steering wheel. The five-speed shift is heavy enough to demand a firm hand and although contemporary reports suggested the 3.6T was quite flexible, this is relative and in the best single-turbo tradition power starts to build quickly from 2,700rpm and then comes in an invigorating wave to 5,500rpm. With no electronic safeguards, control of those 360 horses is entirely in the driver's hands; pressing on along twisting roads requires full attention, but alert drivers should not be caught out as easily as the 930 could snare them. The 3.6T will not keep up with a hard-driven manual 992 C2S, but the 964T's driver will be having a far more exciting time.

BELOW The 964 Turbo 3.6 was the last to feature a single turbo and five forward gears



THE VALUES STORY

When **Total 911** first sampled a Turbo 3.6 in early 2007, vendor Ray Northway was selling it for £42,000. That was probably the lowest point in the then 13-year-old 964T's value cycle. The buyer was in Ireland and the 3.6T would return to the UK about five years later, selling for £100,000; then came the massive rise in air-cooled prices and the 3.6T was sold subsequently in 2014 for about £150,000. The value of that car might have increased a further 10% over the next year, then will have remained static until 2021, says Ray Northway. "All used prices have gone up this year," he explains, "but it's the lower price ranges that have increased the most: a £25k Porsche might have gone up £5,000, as might a £75K car, but obviously in percentage terms the cheaper model has gained more." Although it had had significant use in its earlier life, Northway estimates that this 3.6T would be in the £180k bracket now. ➔





MARKET RIVALS

A standard, un-customised 964 3.6 Turbo falls into the £160-£200,000 bracket, which offers an intriguing choice of top-end Porsches...

964 RS 3.6

The overtly sport-focused RS is less accelerative than the Turbo, though not far behind, but demands more of its driver, including a capacity to absorb a bone-shaking ride. A precision tool nonetheless, but the Turbo is easier-going.



992 Turbo S

£190,000 buys a year-old 911 Turbo S from current production. Refined yet dizzying pace delivered with astounding effortlessness, modern 911 Turbos tend to change hands frequently and are the steepest decliners on the 911 depreciation curve.



993 Turbo

At this price, you might expect to find a rare X50-fitted model which had 430PS and was timed at 300kph by AM&S. The 993 Turbo had a more developed version of the 3.6 with twin turbocharging, four-wheel drive and a six-speed gearbox – a genuine GT.



911S

Today the first 911S feels positively dainty, but it has an almost naïve lightweight simplicity and bonds completely with the discerning driver. At this price, expect either a comprehensive and faultless restoration or conceivably an untouched, barely used original.



BUYING ONE

The 3.6T marks a landmark in 911 production; behind the scenes, Porsche was moving towards twin turbocharging and all-wheel drive and plans were afoot for water-cooled engines. During 14 months of production a mere 1,500 3.6Ts were built. The model combines immense performance with robust build: the flat six required relatively little modification to withstand the stresses of turbocharging and (in 993 GT2 guise) reliably produced over 600hp in competition engines that could perform a whole season with little more than routine maintenance.

Mike Northway of Northway Porsche observes that unlike the 964 Carrera, 3.6Ts are almost all collector's items. The pair that he maintains is typical: the cars materialise once a year for an MOT and oil change. Porsche's service schedule specified intermediate attention every 12,000 miles and a major service after 24,000, but on a car travelling barely 1,000 miles per annum, maintenance is more inspection than service. As a rule, spark plugs and brake fluid are never left in situ more than four years and other consumables, such as tyres, batteries and windscreen wipers, are judged on age.

Buying a 964 3.6T is then a very different proposition from a 964 Carrera: plenty of these will have covered well over 200,000 miles and often will have been rebuilt. The 3.6 Turbo was clearly a low-volume, run-out model and like any limited-edition Porsche, it attracted the attention of collectors, becoming weekend rather than commuting cars. Some did see use such as the Irish example which had covered 60,000 miles in its first few years, but many will show lower mileages. Problems are related to lack of use which particularly afflicts air-cooled engines where seals dry out, become porous and start leaking: unlike the turbocharger bodies of the water-cooled 911 Turbos which rust through, the heavier design of the 964's single blower resists corrosion, but its seals can leak oil if the car lies unused for long periods. The bigger Turbo brakes on the other hand do not seize in their calipers as the stock 964's tend to. Often the air conditioning will have ceased functioning, and many owners simply neglect to have it repaired, as it's an expensive rebuild. Sunroofs jam (usually a cable has failed) or leak, requiring a time-consuming intervention to fit new seals. Unless panels have at some point been replaced incompetently, neither the 964T's body nor its chassis should show any sign of corrosion. The striking three-piece Speedline rims are prone to deterioration.

On a purchase running well into six figures, a buyer might expect the car to be in perfect order, but this is not a given. These details as well as the service history need to be checked, especially if purchasing from a private owner, and an independent inspection is always advisable. ➔





ABOVE The four-spoke wheel with large centre airbag was unique to the Turbo 3.6



DESIRABLE OPTIONS

Like its predecessors, the 3.6 Turbo was fully equipped. Items like the sound system need to be period-correct – a Bluetooth upgrade for instance should be suitably disguised. For customers who wanted more power, Porsche Exclusive offered the X88 kit: a larger turbocharger, revised valve timing and reworked heads and manifolds raised power to 385bhp. Distinguished by their twin exhaust outlets each side, a mere 88 of these were built in early 1994 as well as 76 Flachbau 964 Turbos also with the X88 engine. If these X88s are genuine Exclusive cars (some are aftermarket conversions), on the basis of rarity alone they are worth commensurately more than the stock 3.6T. A limited-slip differential with 20% lock up in drive and 100% on overrun was fitted as standard, but buyers looking for automatic transmission would have to wait until 2001 for the 996 Turbo.



ABOVE Tea tray wing housed a single intercooler. Speedline wheels were the reserve of the 964 Turbo 3.6 and 3.8 RS



INVESTMENT POTENTIAL

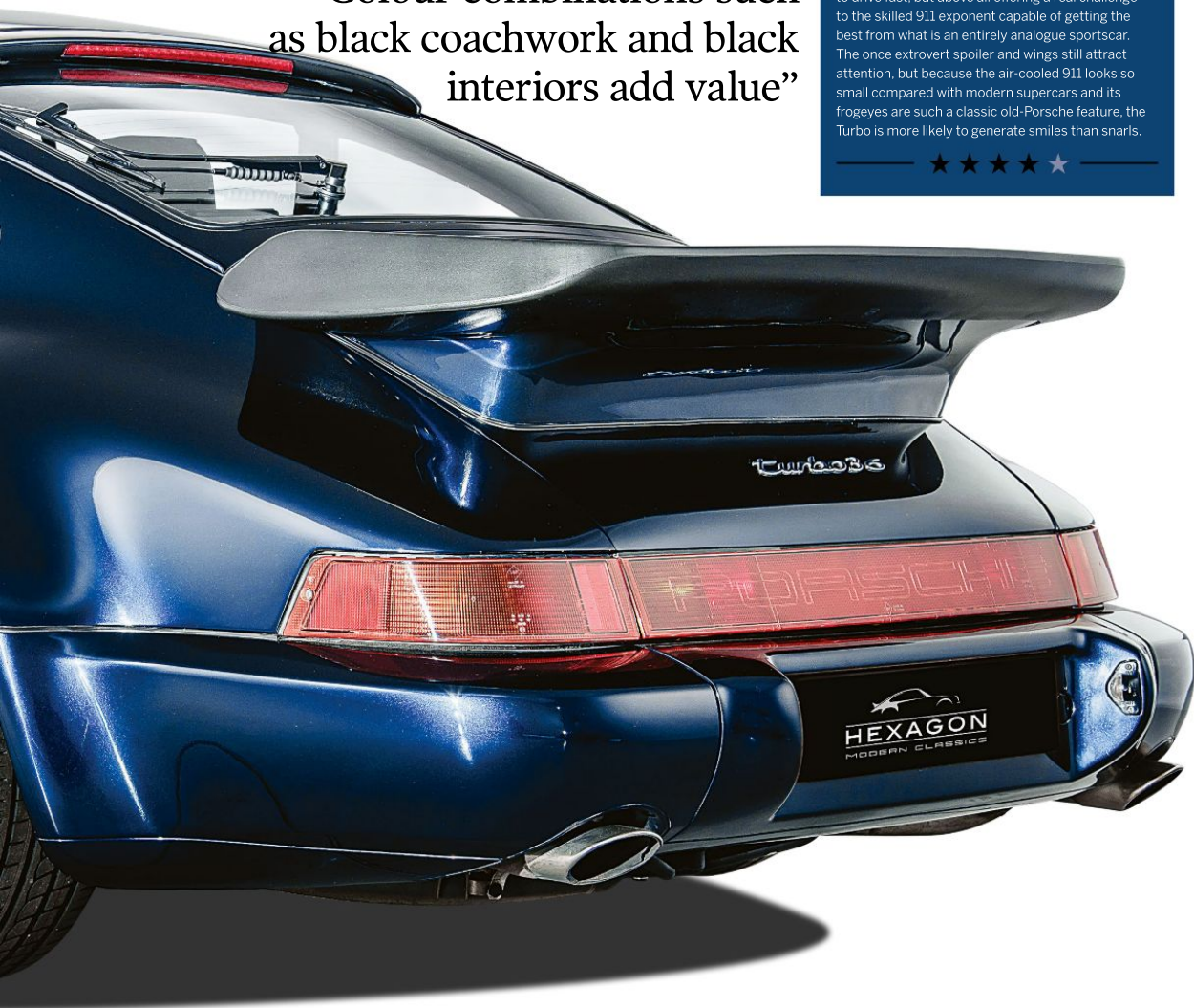
The best investments will be absolutely original cars with complete histories and verifiable mileages. Colour combinations such as black coachwork and black interiors add value, as do rare, special shades like Venetian or Satin blue metallic with matching leather. Opinion among professionals is that the value of the 3.6 Turbo is likely to move in line with other low-volume air-cooled 911s. The really low-mileage examples, especially those

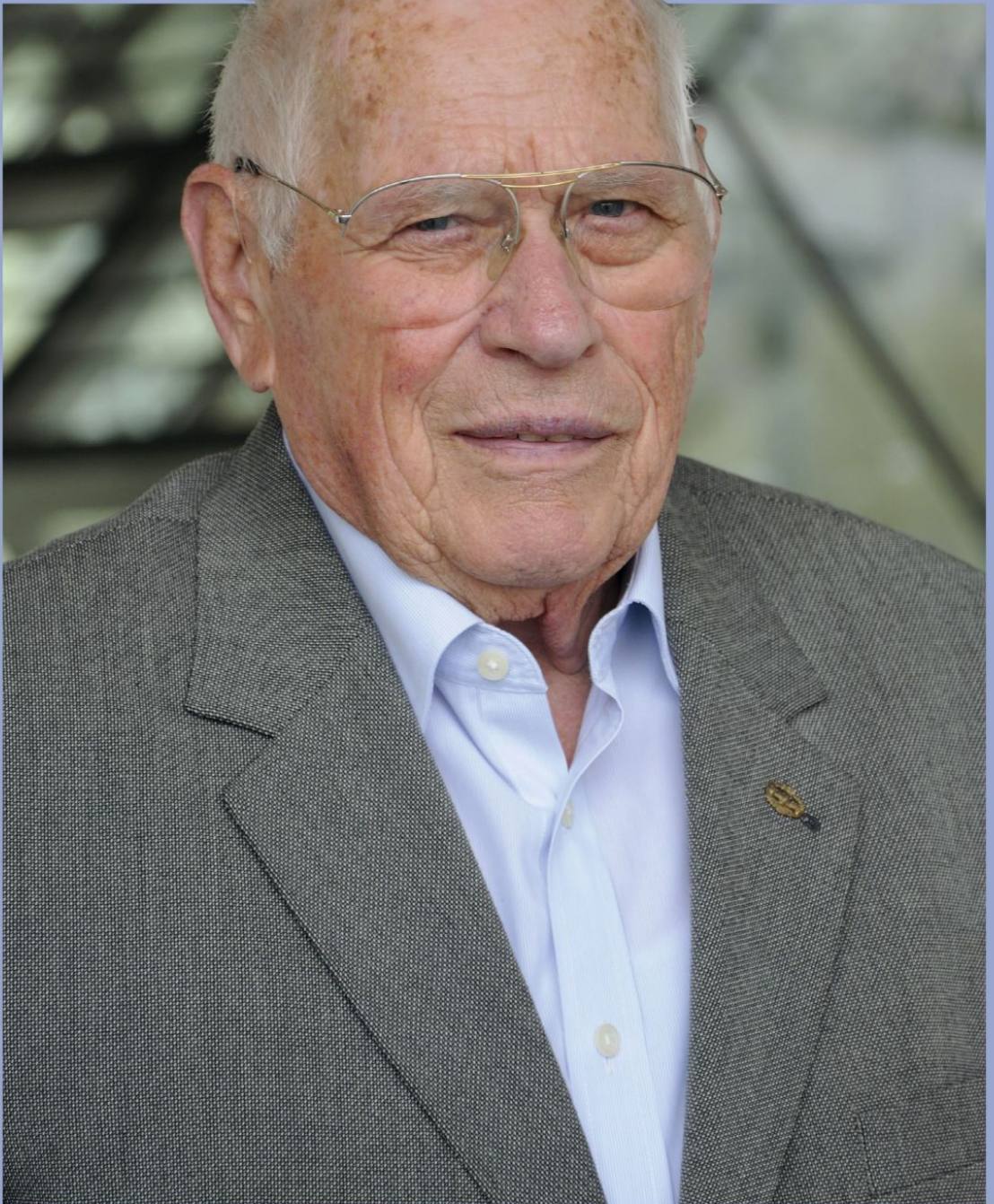
with the X88 kit (of which only 13 were RHD) combined with famous provenance will be worth far more: Jonathan Leach of Cridfords observes that at stratospheric price levels, when a particularly rare 911 might be the only one on the market, a rich collector may pay a world record amount. A buyer is unlikely to lose money on a 3.6 Turbo, but a usable car will not appreciate in the same way as a concours car which inevitably will be driven only rarely if at all.

“Colour combinations such as black coachwork and black interiors add value”

TOTAL 911 VERDICT

The 964 was the last 911 to be built before the cost accountants and work-study specialists alighted upon Porsche's predilection for over-engineering everything. The final rear-drive and single-turbo 911 was by some margin the best yet: Weissach enhanced the Turbo's driveability and the 964 3.6 Turbo lacked only the sophistication and better mpg that the Motronic management already used on the Carrera would have endowed. If the ride was sportscar rather than 'boulevard' the 3.6 Turbo's lower, wider stance ensured sharper road holding than before. Today, this is much more than a mere weekend toy: a practical classic 911 in which to go touring, untemperamental in traffic, easy enough to drive fast, but above all offering a real challenge to the skilled 911 exponent capable of getting the best from what is an entirely analogue sportscar. The once extrovert spoiler and wings still attract attention, but because the air-cooled 911 looks so small compared with modern supercars and its frogeyes are such a classic old-Porsche feature, the Turbo is more likely to generate smiles than snarls.





THE BIG
INTERVIEW

Herbert Linge

The man who suggested Porsche build an R&D facility at Weissach has also given graciously to Porsche road and racing for nearly 50 years. Total 911 sits down with Herbert Linge to discuss his remarkable career

Written by **Glen Smale** Photography courtesy **Porsche Archive**

Herbert Linge began his career at Porsche in Stuttgart on 1 April 1943. He was one of the first apprentices to work for Porsche, and he would go on to enjoy 44 long and fruitful years with the company. Although he retired in 1987, Linge continues to attend Porsche events and has to this day remained a diehard Porsche enthusiast.

But more than 'just' a test driver and a works racing driver for the company, Herbert Linge was also instrumental in the establishment and development of numerous achievements for the company, both on and off the track. Here, Herr Linge shares some of his memories from his time at Porsche...

You started with Porsche five years before the first 356 was produced. Why did Ferry Porsche decide to place the engine behind the rear axle of his cars when most cars were front-engined?

With the engine in the front, the bodywork at the front would be much higher. For instance, if you put the engine in the front of the Volkswagen it would become like the Mini. Initially his idea was to have

the engine in the centre, like a race car. But this was not good for the sale of normal road cars because you had no luggage room in the back and nothing at the front, and the engine noise would not be acceptable for a road car. So the engine had to be placed in the rear to have more room inside the cabin.

Launching a new rear-engined sports car required certain driving characteristics that many people were not familiar with. Was this not risky for a new company?

Early on with the smaller pushrod engine, which was lighter, the weight [at the back] did not give too many problems. The problems came with the heavier engines, but with the 911, they had the opportunity to change the suspension. With the Volkswagen axle, the rear-engined car was difficult to drive and only certain drivers could really handle this car with a lot of power. But I still think there was also a big advantage in braking because the weight was transferred to the front axle, and there was also a big advantage with acceleration in rallies. If you knew how to play the violin, you could work it ➔



very nicely! Today, we have a car with its engine at the back that nobody is scared of anymore, because everything the drivers complained about 30 years ago has been fixed.

At the end of the '52 season, Ferry Porsche said that you needed a purpose-built race car with a more powerful race engine. Can you outline the importance of this engine for Porsche?

Well, first of all the pushrod engine was giving us a lot of trouble because you couldn't rev the engine any higher, it was at its limit. We needed a new crankcase and a new cylinder head, basically everything needed to be replaced, so it ended up that we built something specially for racing. Dr. Fuhrmann was really trying to build an engine which could be used on both the road and the track. This was very difficult in the beginning as the engine had numerous shafts which made it expensive for a road car.

In the '53 Carrera Panamericana, the 550 Spyders still had the normal pushrod engines. They only started with the four overhead cam Fuhrmann engine in the '54 Mille Miglia. In the beginning of '54 I drove the Spyder with Hans Herrmann in the Mille Miglia, and this was the first official race with the Fuhrmann four-cam engine [Herrmann and Linge finished 6th overall, winning the Sports 1500 class].

The next race was the 24 Hours of Le Mans [Johnny Claes and Pierre Stasse finished 12th overall

and 1st in the Sports 1500 class] and then we put the Fuhrmann engine into one of the aluminium bodied 356s for the Liège-Rome-Liège race. I drove with Helmut Polensky and we won overall. Then I drove a 550 Spyder with Claude Storz in the 1954 Tour de France and we finished 2nd overall and won the 1500 Sports Car Class. That was our first year with the four-cam engine.

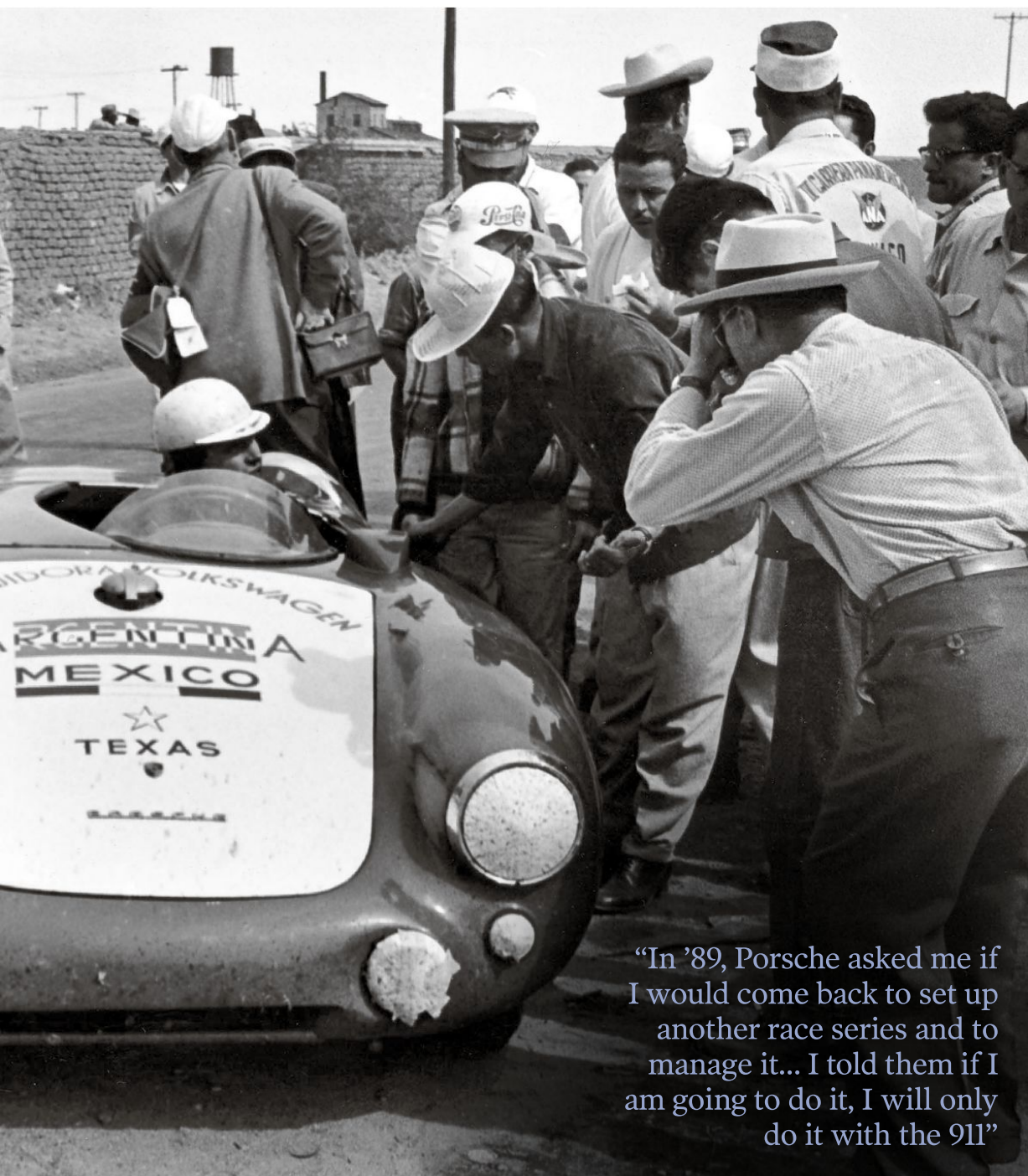
In the early 1960s Porsche decided it could no longer be competitive internationally by producing a car that was good for both the road and the track. You had to build cars for the road and dedicated race cars for the track.

The factory only raced the 904 once with a Fuhrmann four-cam four-cylinder engine, this was in the Targa Florio in '64 and Porsche finished 1st and 2nd overall. From then on, the factory raced the 904 with the six-cylinder engine and in some cars we also had the eight-cylinder engine. The six-cylinder 904 was fantastic, and it showed us that it was no longer possible to take a production car and convert it for international racing.

With the 904 six-cylinder and eight-cylinder we knew that a special race car was to be needed in the future, and so we made the 906 immediately after this. At that time Porsche was concentrating on the World Sports Car championship. The 906, 910 and 907 were made to win this championship, but the step up to the 908 was an expensive race car for the customer. ➔

LEFT AND BELOW Linge was responsible for setting up the 550 Spyders that achieved class wins at the Carrera Panamericana in 1953 and 1954





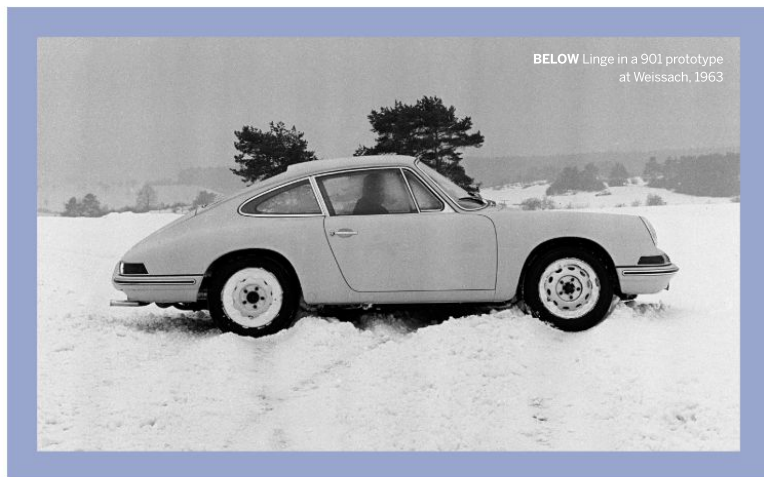
"In '89, Porsche asked me if I would come back to set up another race series and to manage it... I told them if I am going to do it, I will only do it with the 911"



ABOVE Marathon de la Route, Nürburgring, 20-24 August 1968: The #28 Porsche 911S driven by Herbert Linge/Dieter Glemser/Willi Kauhsen calls into the pits during the night



RIGHT Herbert Linge and Jonathan Williams with a 908/2 Spyder at Le Mans, 1970



BELOW Linge in a 901 prototype at Weissach, 1963

During the 1960s while Porsche was tackling the World Sports Car championship, the 911 was very much a road car with no strong 'hammer' model. How did the Carrera RS materialise?

Sometimes the decision to build a racing car out of the production car is determined by the rules. When we built the Carrera RS, it was because we wanted the customer to race it, so it had to fit with the rules. We then had to decide how many customers wanted to have a race car, because we also had to allow for some owners who were not going to race them, instead they might want to just drive their car on the road. So then we had to make the race car road legal too, for it to have a German road licence. At this time, the sports car rules were not very stable, so with the 2.7 RS we felt that a lot of people would race with this car, until the rules for sports cars were stable

once again. But with all this uncertainty we had a lot of discussions with the sales department to finalise what the car was going to be like. They wanted us to build the RS, but they didn't want the windows with the 'leder strap', they wanted window winders, and they wanted a heater in it and a radio.

With so many options, it is very difficult to decide how many cars you are going to build and to which specification. But I think in the Porsche sales department, as long as I can remember, they were always too pessimistic, always!

About those sales, when Ferry Porsche made the 356 Gmünd car, he planned to make just 50 cars, but looking back, you produced thousands of 356s. With the 911 Carrera RS it was the same, first you planned just 500 cars but ended up producing more than 1,500. Why the ultra conservative approach?

Well, because nobody wants to take the risk. If you estimate to produce 500 cars and you only sell 300, you lose the cost of the other 200 cars, and no salesman will take that risk. We had the same problem with the 911 Turbos, they said we should make a hundred Turbos and we made more than 15,000! Ferry Porsche never made any decision without having long discussions with Max Hoffman and Johnny von Neumann, the big dealers in the States. We always figured that about 55-65% of the production would go to the States, because we knew that we could never build a car just for Europe.

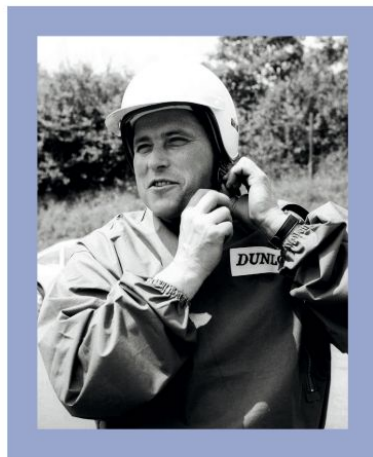
You drove in the Marathon de la Route in 1968 at the Nürburgring, this was an 84-hour endurance race over three-and-a-half days! How did you, never mind the car, survive such a feat of endurance?

The 911S was the first Porsche model to come out with the Bosch mechanical fuel injection, and for us this was a test with these three cars. I drove with Dieter Glemser and Willi Kauhsen, we did it





ABOVE Linge's #28 911S runs ahead of the sister #30 911R of Hans Schuller/Franz Blank/Günter Steckkönig at the 1968 Marathon de la Route



ABOVE Linge oversaw the inaugural Carrera Cup campaign



with only three drivers! We drove for around two hours with one refuelling, but at night we did double stints so the other drivers could sleep longer.

We had a funny regulation where repairs could only be done by the driver in parc ferme, but for every minute you spent on the repair, you lost one lap. After about six or seven hours, I had a problem with the mechanical fuel injection pump and I had to repair this myself, but it took me six minutes to get it running again, so we lost six laps. Then we had to decide if we wanted to carry on at the same speed we had been doing up until that time, or if we wanted to try for the lead again. We took the second option and so we decided to drive flat out during the night, and after about ten hours, we had recovered the six lost laps and we took the lead again. It was a fantastic race. But a lot of cars had mechanical problems, and with the difficult weather conditions and so many cars all with big differences in speed, for the drivers it was very tough.

You know at Le Mans you could relax a little bit, I mean it was a tough race, but the Nürburgring was no place to close the eyes. We finished 1st overall in that race in 1968.

Although you retired in 1987, Porsche asked you to come back to run a one-make series. Initially they wanted to use the 928, but you disagreed – can you talk us through that?

That was in '89, it was one year before we started with the Carrera Cup. I had finished working but they asked me if I would come back to set up another race series and to manage it. After the 944 Turbo Cup, their idea was to do this series with the 928 but I told them immediately, if you want to do it with the 928 then I am not going to do it, because that car was not built to be a race car. The 928 was a very good GT road car, but it was not a racing car, it was too heavy and too big. I told them if I am going to do it, I will only do it with the 911. Oh, they said, the 911 is too expensive, it is going to cost a lot of money, but I said no, it will cost less than the 928 – so they finally agreed that I could do it with the 911. We started with the 911 in 1990 and I managed the first Carrera Cup for two years.

What was it like working for Ferry Porsche?

In the beginning when we were building the aluminium Coupé for racing, he came down to the

shop every day. I was still a young mechanic, but he took me by the hand into a corner and said now I want to know what's in your mind, and he listened to you whatever you told him. He never answered you then, but maybe two days later he would come back and say, "Ja, it's working." When I came back from the States, I was at the race track every weekend. He didn't want my report that I had written to my boss in the department, he wanted me in his office to talk with face-to-face. He wouldn't say anything, but the next day there would be a sign in the Experimental Department with an announcement about what I had told him.

Sometimes when we started with something new and we worked around the clock, Ferry Porsche would come to the workshop in the middle of the night and bring us something to eat and drink, asking if everything was going alright. In '63 or '64, he invited all the mechanics by name that had been at Le Mans and we had a meal at his private house. This was not in a restaurant or somewhere else, it was in his house, and his wife did the cooking and she also talked with each mechanic. He knew everyone personally, it was unbelievable. **911**

A red classic car, possibly a Porsche 911, is shown from the front. It has a black license plate that reads 'SmarTrack'. A white rectangular device with a large black 'D' and the text 'Driver Detection' is attached to the front bumper. The background shows other cars in a parking lot.

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50 Years of Weissach

As Porsche's legendary Weissach development centre celebrates its 50th anniversary, we tell its story so far

Written by **Tim Pitt** Photography courtesy **Porsche Archive**

Weissach looks like any other pretty Swabian village. Nestled in a lush valley near the foothills of the Black Forest, its neat, whitewashed houses cluster around a historic church steeple. The pace of life here seems slow. Or it does until you drive west on the L1177, also known as Porschestrasse, for a couple of kilometres. Then you enter a very different world.

The *Entwicklungszentrum Weissach* (EZW) is the place where Porsche dreams become reality. From design sketches to pre-production prototypes, all the marque's road and race cars are developed here. Surrendering your mobile phone to pass through its carefully guarded gates, you enter a huge 100-hectare site swarming with 6,500 staff – a population close to that of Weissach itself. The buzz of activity is relentless, the air often filled by the smell of tortured tyres or yowl of a flat six.

For people like us, Weissach holds the same allure as Fiorano does for Ferrari fans. The factory at

Zuffenhausen, 15 miles away, is where most Porsches (and all 911s) are assembled. But Weissach is where they are designed, engineered and tested. It's also the home of Porsche Motorsport – and spiritual home of Andreas Preuninger's hallowed GT division. This year, the EZW celebrates its 50th anniversary, so join us for a tour of its past and present. A lot has changed since 1971...

In fact, the Weissach story starts in 1960, four years before the 911 came into being. Ferry Porsche, son of company founder Ferdinand, was looking for a quiet, open area to test new cars. His colleague Herbert Linge, who won the Tour de Corse that year in a 356 Super 90 and later raced a 917 at Le Mans, suggested the fields near his home in Weissach. After reaching an agreement with the mayors of Weissach and nearby Flacht, a ground-breaking ceremony took place on 16 October 1961. In time, both villages would become synonymous with Porsche performance.

The first facility at Weissach was a circular skid pad, some 200 metres in diameter. Here, on this unassuming patch of asphalt, is where the handling of early 911s was honed. Porsche soon added more test tracks, including sections of rough and potholed ☹️

road to assess suspension durability and ride comfort. An off-road course was built in 1967 (a full 35 years before the Cayenne came along), followed by the high-speed Can-Am and mountain circuits in 1971. On 1 July of that year, the EZW was officially opened. It has grown in size and stature ever since.

The 911 is integral to the Weissach story. Indeed, it was the 911 Turbo of 1975 – a road car using cutting-edge technology developed for motorsport – that first showcased the talents of Porsche's new creative hub. With wide-bodied styling, 260 turbocharged horses and a top speed of 155mph, the 930 catapulted Porsche straight into supercar territory – and onto bedroom walls around the world. It was the perfect shop window for Weissach.

Bookending the arrival of the 930 were some incredible achievements in motorsport. The wild 1,100hp 917/30 totally dominated the 1973 Can-Am season, then the 936 triumphed at Le Mans in 1976 and 1977. This was followed by the 935 destroying all-comers in sports car racing, also winning at Le Mans in 1979. On the road or track, Porsche was increasingly a force to be reckoned with.

In 1977, Weissach gave its name to a new type of rear axle, along with one of the most tortuous acronyms ever invented. The *Winkel Einstellende, Selbst Stabilisierende Ausgleichs-Charakteristik* axle – roughly translated as 'angle-adjusting, self-stabilising and equalising characteristic' – debuted on the 928, the luxurious GT originally slated to replace the 911. It was developed by Hans-Hermann Braess and Gebhard Ruf (no relation to Alois of Ruf Automobile fame), initially by using an Opel Admiral

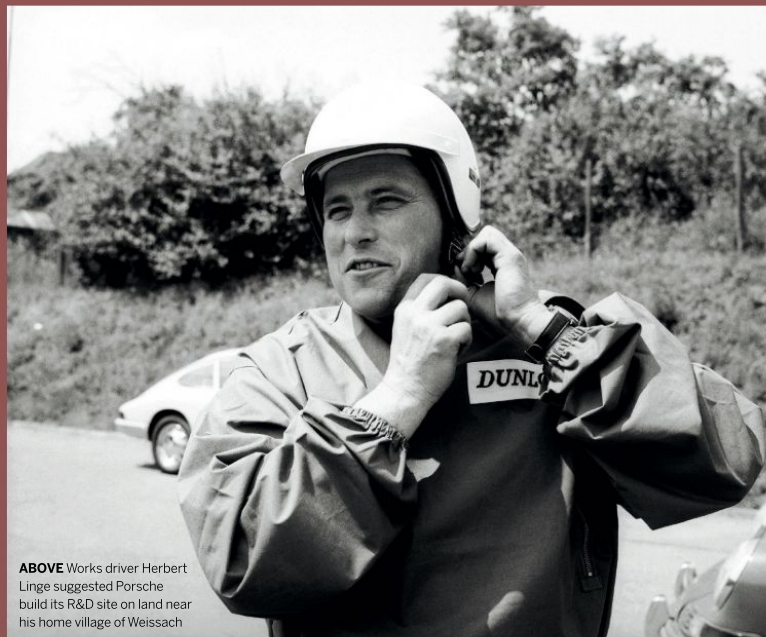
fitted with 928 suspension and a second steering wheel in the rear seat.

Braess and Ruf used elasto-kinematic rubber bushes between the axle and suspension components to make the rear wheels 'toe-in' when cornering (i.e. point in the direction of the turn). The Weissach design enhanced stability and counteracted oversteer, as Porsche test driver Frank Lovis recalled: "It didn't make the car any faster in curves, but it did make it much easier to handle, especially for average drivers."

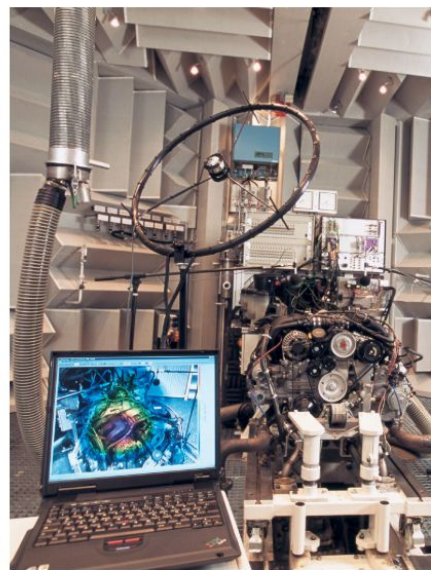
In hindsight, the Weissach axle may also have been a reaction to criticism of the early 3.0-litre 911 Turbo and its lively handling. Porsche's own words on the topic certainly have a ring of familiarity: "Seemingly respectable family cars are suddenly being referred to as 'widow makers', and sports cars have the reputation of being 'for men only'. Drivers who enter curves at high speeds and take their foot from the gas have to countersteer immediately to prevent the rear of the car from fishtailing."

Porsche engineers and test drivers continued to develop axle kinematics, notably for the 993 of 1994. Its multi-link rear suspension reacted to both longitudinal and lateral forces, creating the safest and easiest-to-drive 911 thus far. The technology then evolved to incorporate active rear-axle steering, first introduced on the 911 with the 991 GT3. Weissach technology had come full-circle, making cars easier to handle *and* faster in curves.

The EZW itself has also evolved over time. In 1981, the main complex grew to 4,000 square metres, with the surrounding offices also enlarged. A wind tunnel was added in 1986, just as the then-new 959



ABOVE Works driver Herbert Lingg suggested Porsche build its R&D site on land near his home village of Weissach



ABOVE A 991 Turbo Cabriolet in the acoustic chamber
TOP Monitoring noise distribution of the Carrera GT in 2003



ABOVE Norbert Singer, Jacky Ickx and Klaus Ziegler during development of the 956 in Weissach, 1982

BELOW Porsche's 919 e-hybrid on the test track





TOP Norbert Singer in the historic Motorsport workshop in Weissach
ABOVE An aerial view of Weissach's track and skid pad in 2000

BELOW The test track has helped Porsche fine-tune the handling of its sports cars



heightened Porsche's interest in aerodynamics. A crash-test facility followed, a decade before the first Euro NCAP safety scores were published. In 2014, Weissach underwent the biggest renovation in its history, at a cost of £130 million. Additions to the site included a new wind tunnel, electronics integration centre and open-plan design studio.

Even in today's world of computer-aided simulation, every Porsche starts life as a full-size clay model in this design hub. The sophisticated hand-crafted sculptures include details such as intakes and panel gaps to allow initial airflow tests. Designers, model makers, aerodynamicists and ergonomics experts, including those focused on Porsche Connect software integration, work together under one roof.

In addition to frontal area, lift, drag and downforce – the 992 GT3's signature 'swan neck' rear wing was tested here – Weissach's latest wind tunnel can also measure sound. With the vehicle mounted on a fast-moving conveyor belt surrounded by 600 microphones, a 3D 'acoustic photograph' highlights any problem areas for wind noise (typically around the door mirrors or wheel wells). Porsche says its experts "now devote roughly one in six measurements to aeracoustics," and the shift towards near-silent EVs, such as the Taycan and

also the forthcoming electric Macan, make this an ongoing priority.

One thing Weissach couldn't replicate in the past was extremes of temperature; engineers had to travel to Finland or South Africa, for example, to test in the cold or heat. Such expeditions still happen, of course (witness recent spy photos of the 992 'Safari'

testing in the Scandinavian snow), but much development now takes place in the EZW's four on-site climate chambers. These can simulate anywhere from Siberia to the Sahara, with a range of minus 40 to plus 90 degrees Celsius. Specific tests include spraying the windows with water after a night at minus 18 degrees, then defrosting the windscreen, or checking the door handles still operate at 40 below zero.

A specific climate wind tunnel also replicates hard driving in hostile temperatures.

Speaking of hard driving, every component is pushed to its limits at Weissach. The drive unit building contains 18 test benches where road and race engines, plus electric motors, are evaluated side-by-side. A specially developed high-voltage bench can operate a full hybrid or multi-motor system, helping engineers assess how the various components work together. Other test rigs measure specifics such as EV charging speed or the relative ➔

“There are more than 1,900 development vehicles located at or around Weissach”



ABOVE Hans Mezger and Valentin Schäffer in Weissach, dated 6 March, 1987

performance of synthetic eFuels (as used in 992 GT3 Supercup race cars). Up the road at the electronics integration centre, smaller parts such as lights and switches are hooked up to wiring harnesses and control units for round-the-clock testing, too.

Once the parts have been proven and static testing is complete, a car moves to the prototype stage. Incredibly, there are more than 1900 development vehicles located at or around Weissach. Some are simply mules, like that classic Opel Admiral, while many are camouflaged versions of forthcoming models, including pre-production prototypes. The original multi-storey near the main gate holds 255 cars, while a secure parking area in the nearby town of Hemmingen houses a further 120. The majority, however, are inside the EZW's new prototype parking garage, which opened in January 2021. Its 15 levels provide spaces for 1,150 cars and 400 electric charging points.

We'd all love to wander around Weissach's crystal ball of future fun. Sadly, entering one of these car parks requires an electronically verified permit, plus a transponder in the car itself. Porsche famously tightened security further still in 2009, when its new hypercar was under development. All locks to the workshop were replaced and even security guards were only given one key – made from plastic and solely for emergency use. The 918 Spyder, launched four years later, proved to be worth the wait.

The 918 Spyder was also notable for being the first car offered with a Weissach Package. This £60,000 option (actually less than 10 per cent of the £640,141 list price) added small winglets for extra downforce and reduced weight by 41kg, thanks to thinner sound insulation and magnesium wheels. It also offered six-point harnesses and a choice of liveries, including one inspired by the 1970 Le Mans-winning Salzburg 917. Three seconds quicker than the 'standard' 918 around the Nürburgring, this was the ultimate Porsche – and it propelled the name 'Weissach' into public consciousness.

In 2018, the Weissach Package for the 991.2 GT3 RS made this connection even more explicit, with a map of the test track stitched into seats. The full caboodle included magnesium wheels from the GT2 RS (saving 11kg), a titanium rear roll cage, an exposed carbon fibre bonnet and roof, and more carbon fibre for the front anti-roll bar and PDK shift paddles. Total weight loss was 29kg, with even more aggressive styling to accompany the 9,000rpm flat six.

Interestingly – and slightly confusingly – the 991 GT3 was also advertised as being 'Born in Flacht'. This neighbouring village to Weissach is the closest conurbation to Porsche's Motorsport Centre, a 12,000 square metre facility with its own wind tunnel, driving simulators and pit stop training area. Look closely at 911 race cars and you'll often spot a 'Made in Flacht' sticker near the rear light.

Future Weissach-branded models – including a 992 GT3 RS – seem likely, but the test centre is equally proud of its past. While the official archive is found in Zuffenhausen, a basement store at Weissach, known as department EVS3, contains more than 100,000 design sketches and technical drawings from Porsche history. Preserved on rolled-up sheets of yellowing parchment, some date back more than 70 years. The collection also includes more than a million aperture cards, from the days before electronic data storage, which curator Uwe Geisel has been digitising for future generations. If you have a question about a classic 911, Geisel can probably help.

Porsche is rightly proud of Weissach, the amazing cars it has developed and the 400 patents it files every year. To celebrate its anniversary, a special exhibition has opened at the Porsche Museum, which runs until 5 December. '50 Years of Porsche Development at Weissach' starts off with the history of the site, including a Weissach works fire engine from 1972. Visitors can then peer inside a wind tunnel and use an augmented reality app to explore the various different areas of technology, such as the climate chamber and crash-test facility. Moving onto design, engineering and motorsport, the exhibition ends with a model of Weissach itself. It's a must-see if you make the pilgrimage to Zuffenhausen, and a fitting tribute to the place that keeps the 911 at the top of its game. **911**



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Porsche Roof Systems

The 992 Cabriolet and Targa's roof lifting mechanisms are the culmination of remarkably clever technology garnered from over half a century of open-topped production Porsche 911s

Written by **Kieron Fennelly**



W

hen the future 911, project 901, was conceived, Porsche's engineers gave little thought to an open version and once again, it was pressure from Porsche's largest market, America, which brought a convertible 911 into consideration. However, the prototype's chassis flexed alarmingly and combined with the uncertainties in the

USA caused by Ralph Nader's infamous book *Unsafe at Any Speed*, Porsche in its natural caution shelved the open 911 project. But demand not just from California, but also from Porsche's German salesmen for some sort of opening roof stimulated the Porsche design department to style the so-called Targa top: this was shown to great acclaim in late 1965 and was brought to market in 1967. That design, with its striking hoop and removable roof panel, generated a significant following and would remain almost unchanged until 1993. In the meantime, advances in chassis and body manufacture technique meant that a convertible version would join the 911 range in 1982. Originally with a manually erected hood, by 1986 this had become electrically operated on all models – de rigueur in the 911's price bracket.

Given that over a half century, a third of 911s have been open-topped and that today, 39% of sales are Cabriolet or Targa versions, opening roof mechanisms have become central to Porsche's DNA, and the roof system is now developed several months before the rest of the car. The air-cooled 911 hoods folded on to the rear of the car, but the advent of the redesigned 996 platform enabled the hood to be integrated: each new 911 model has seen significant improvements to the operation and quality of the hood. The contemporary 911 Cabriolet not only exactly matches the silhouette of the Coupé, but has a heated rear screen; interestingly a hardtop – always a two-man job to install and often a nuisance to store – is no longer offered. The latest hood also deploys five seconds faster than the 997's did and the canvas top is now a truly all-weather item.

A regular Porsche subcontractor, usually Valmet of Finland, builds the hood, though concept and design are purely Porsche's. In the case of the new Targa top, patents were registered in the names of Dr. Ing. h.c F. Porsche and Magna Roof Systems.

Typical of Porsche's concern for lightness and in particular avoiding excess weight above the waist line, the frame of a Porsche hood uses a combination of magnesium and plastics yet is still robust enough to offer roll over protection. When the hood is assembled, the material is totally flush with no visible seams, contributing to noise reduction and aerodynamics. ➔



TOP Early 912 Targa with roll bar
RIGHT 996 introduced Porsche Side Impact Protection



With the redesigned Targa, Porsche used essentially the same mechanism developed for the 991 Cabriolet. Whereas the simpler hood of the Boxster was purely electric, with two electric motors, the larger hood of the 991 Cabriolet would have required no fewer than four electric drives to pull the roof tight and maintain sealing up to 315kph. The multi-drive solution added avoidable extra weight and one of Porsche's boasts for the 991 was that it was 30kg lighter than its predecessor. Instead, an electro-hydraulic system using four individual cylinders, two operating the roof and two the rear deck, was devised and applicable to both 991 open models. This intelligent duplication was possible because of the design similarity between both roof systems: the new Cabriolet dispensed with the traditional folding hood of the 997 and instead had three solid panels which lift out, followed by a fourth which is the glass rear screen.

The Targa has one lifting roof panel plus the one-piece rear window and deck. Both mechanisms are designed to function in the same way. When deployed by the driver, and going from closed to open, two actions occur simultaneously: the rear deck, which in the case of the Targa is the rear screen as well, lifts while the hood panels/Targa top are also hoisted and then lowered vertically into the stowage area behind the rear seats; the rear deck then returns to its position. Additionally, the Targa hoop which has opened like a clam shell to release the panel, closes again. No extra drive is necessary to actuate this – it runs off the hydraulic mechanism, and this additional action is the main reason why opening or closing the Targa takes 19 seconds to complete, six more than the Cabriolet. Targa deployment can take place only when the car is stationary. The Targa panel comprises the same material as the Cabriolet hood and the whole car weighs only 40kg more than the Cabriolet.

RIGHT 991 Cabriolet's roof matched the Coupé's silhouette for the first time

“Over a half century, a third of 91ls have been open-topped”

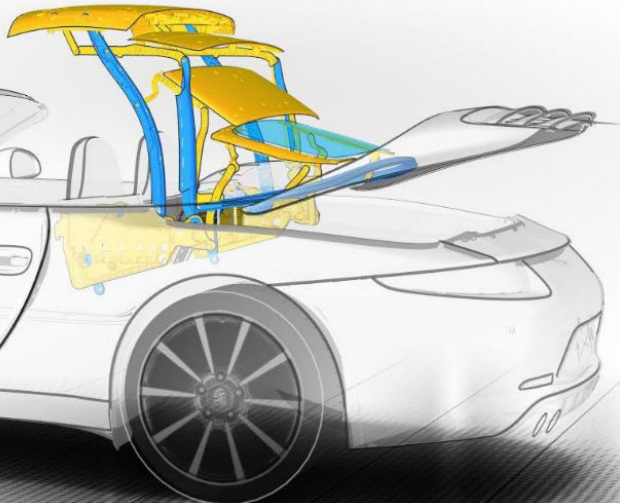
Specific proving tests for the hoods included hydro-pulse testing: a rig caused the car to vibrate vigorously while the roof successfully performed 1,000 activation cycles, simulating 100,000km of driving.

The 991.1 Targa reprised a design which Porsche had already made its own, before deciding in the early 1990s that the manual top was obsolete and conceiving the equally innovative sliding glass top of the 993 Targa. This model was something of a compromise as the (air-cooled) shell was originally engineered as a Coupé only and over time the sliding roof can stick;

by contrast the entirely new 996 platform was designed with both convertible modes in mind. This brought 25% greater rigidity (33% for the C4) and allowed Porsche incidentally to introduce the opening rear window on the 911 Targa it had long wanted to install. The 997 Targa continued this feature, which allows convenient access to the rear. Rather impressively, the 991 version of the Targa managed to retain this thoughtfulness: activating

the rear lid caused it to lift together with the glass window, making extracting luggage more straightforward than the 911 Coupé route through the cabin.

Some said it was a traditional Targa-look 997 with a fixed top and lift-out panel shown at Dinslaken by one of the German tuners which inspired Weissach's stylists to revisit this Porsche icon, but far more likely, they already had the concept on a studio drawing board. The result in any case was an unprecedented revival and updating of a much-admired original design, the entire concept accomplished in a way which Porsche, alone among manufacturers, seems able to achieve. **911**



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The screenshot shows the Elephant Racing website's 'Package Builder' tool. At the top, there's a navigation bar with links for 'Car Builds', 'Tech', 'Instructions', 'Newsletter', and 'Shopping Cart'. A banner indicates 'ORDERS OVER \$250 SHIP FREE WORLDWIDE'. The main header includes the Elephant Racing logo and a search bar. Below the header, the 'Package Builder' section is divided into three steps: 1. Select Year & Model, 2. Select Your Package, and 3. Customize Package. Step 1 shows a dropdown for 'Year' set to 2004 and a 'Model' dropdown with options 911, 996/997/986/987, 991, 993, 914, 964, and 944. Step 2 shows a dropdown for 'Street Performance 2'. Step 3 includes a table for 'Suspension' and 'Brakes' parts. A yellow 'Add To Cart' button is at the bottom. On the right, a 'PACKAGE CHARACTERISTICS' table shows 'RIDE COMFORT' at 41 and 'PERFORMANCE' at 63. The background of the website interface shows a red sports car on a road.

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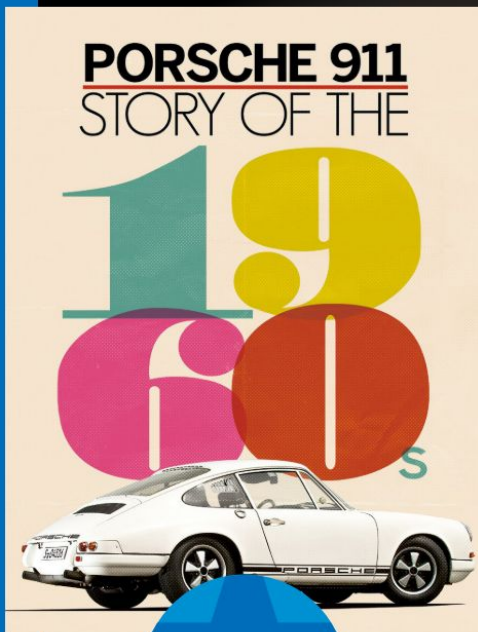
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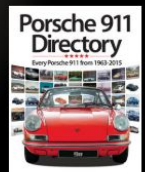
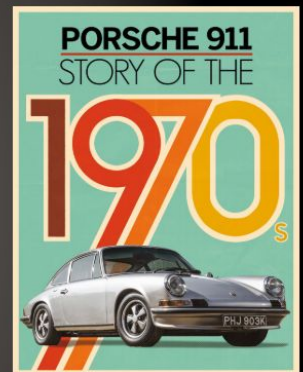
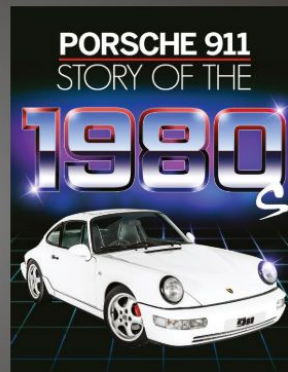
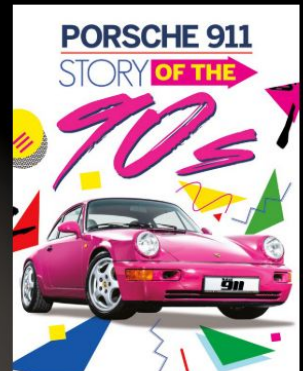
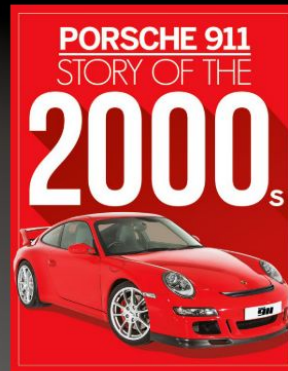
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Living the Legend

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



Andy Brookes
Poole, UK

@993andy

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



I'm stepping in for Phil Farrell this month, as he is deep in a building project with no fun time to be able to get out and about in his GTS.

I think a few of you may know my face, or should that be voice, as I host the *Road to Redline* podcast (recently renamed *9WERKS Radio*) with Lee. I'm also the owner of the Guards red 993 that has gained some silly stripes this year.

We have taken a bit of a break from podcasting these last few weeks, which has allowed me more time to have a few trips out this summer. The first one that I'd like to mention is the new Porsche Night at 'Duke of London'. I have been to Merlin's little venture in Brentford a couple of times now, the first was for a 'drive-in cinema' evening last year that was so welcomed in the midst of lockdowns – a glorious hot evening, watching one of my favourite films *Layer Cake*, my favourite

lady by my side, eating fab pizza in the 993 surrounded by other petrolheads in all sorts of cool cars, what a great evening.

Back to the Porsche Night – amazing support from the Porsche community. I'm guessing the location (an old industrial space) can take around 100 cars tightly packed in on the blue tarmac, which always makes for very distinctive photos. The star of the event for me was a certain Turquoise blue 993 with German numberplates, it's Marcus Eckermann's (former MD of Porsche UK) car. In amongst so many modified cars, the standard car shone like a beacon, all because of that Turquoise blue, what a colour. I took particular interest in the car due to its spec, not just the colour. It's almost identical to mine: no sunroof, same black interior, LSD, no rear wiper. Marcus tells me it was one of the original press cars, which is interesting as I am led to believe that mine was as well. I think I need to leverage some contacts and see if I can find out more about the early life

of my 993. Marcus took equal interest in my car and said he liked my modifications to it; I'm wondering if he was being polite! The drive back home was an interesting one as my friend Paul with his 959 popped up from Dorset as well. Driving in convoy with the 959 is a huge pleasure, the noises and interesting glow from the exhaust are amazing to hear and see on a night drive. So, if you're in London or up for a good drive on a Wednesday evening once a month, sign up to the 'Duke of London' email list to find out when the next one is.

The same week also saw the Oilcooled event at Boxengasse. Unfortunately the weather forecast for the Saturday was abysmal, but undeterred I joined up with a few other Porsche owners from Dorset, with a 356 and 3.2 Carrera in the mix. I was so glad I braved the weather forecast. The guys at Boxengasse knocked it out of the park: the new layout with arrival through the trees worked great, the fresh tarmac drives through the event space



James McGrath

Minneapolis, USA

@auto.amateur

Auto Amateur

autoamateur.
buzzsprout.com

Model **991.1 CARRERA**
Year **2013**
Acquired **2019**

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



I have a question for you... is it okay to put second-generation hardware on a first-generation model? More specifically and

in my case, 991.2 hardware on a 991.1...?

Just as one wave of mods crests, I get the urge to find the next. I recently completed a series of interior updates to my 991, adding some leather trim with red deviated stitching to go with the other red interior accents I have: my red Sport Chrono face, red tach face and red seat belts. I thought that was going to be it, done! Nope. It took about ten minutes on YouTube, watching a new video from Andrew at 'NineElevenSouth', to find the next mod to obsess over: second-generation 991 tail lights on a first-generation 991. Are you kidding me?! I had no idea this was possible.

As much as I enjoy the look of the 991.1, I have never really warmed to the

newer, sleeker looking LED tail lights that came with the first generation of the model. However, I have been extremely envious of the newer three-dimensional tail lights that arrived with the 991.2. For the everyday car enthusiast, I doubt anyone would care about the differences between the look of the two 991 generations. But to a Porsche nut, the eyes go straight to the differences. The more refined running lights below the headlights, the small indentations on the bonnet/hood that hark back to the 964, and of course the newer looking tail lights. Like said Porsche nuts, that's what happens whenever I see a 991.2. Now I knew the 991.2 lights wouldn't fit my 991.1 rear bumper, but with Andrew's YouTube video I came to learn that with a 991.2 rear bumper (which DOES fit the 991.1) you can make it work! So that was that... I spent the last month searching (and finding) the parts I need to make this mod happen. I found some used 991.2 tail lights on eBay along with a used rear bumper that just needed a paint job. I had to buy some new trim pieces to go with the bumper, such as a couple of specialty fasteners, a new centre valance (or splitter) and two new reflectors.

I'm hopefully just days away from completing this job. But while I'm excited about how it's going to look, I'm now questioning whether or not I'm going to be able to live with having the rear end of a 991.2 with the front end of a 991.1. What do you think? Add your comments to the photos on my Instagram, or simply send help. I need help...



onto the show field and made for a great entrance into the event – everyone wants to make an entrance, hey! Thankfully many others decided to brave the weather and the place was full of some fantastic cars, but also their fantastic owners; in truth I barely got to see many of the cars as I spent the day in conversation with so many good people, and that's what makes all the events that I go to brilliant – meeting great people with the same mindset. The weather was cooperating until just gone lunchtime, then the heavens opened and scared a lot of people to run off home. I decided to stay until the rain had stopped; this presented me with an opportunity as Richard Payne (that slammed Rubystone 964) decided to leave, so the plinth on the Porsche stand was free where he had been parking. The Porsche Classic guys gave me the permission I needed to park there, and so a photo session commenced!

Over and out from me, Phil should be back next month.





Max Newman
Aylesbury, UK

@maxripcor

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



Last month I wrote about the sale of the 997 – a painless transaction for a price I was really happy with. It meant I avoided having

my pants pulled down in the trade or dealing with endless tyre kickers and test pilots. It also meant I didn't have to go down the Collecting Cars route. Such is the hype around Collecting Cars that I was interested to see how the car would fare, and found the finality of the auction format quite appealing. But those guys insist on an aggressive reserve – I understand it helps stimulate the auction – but I couldn't cope with the anxiety.



So imagine my delight when the guy I sold the car to listed it on Collecting Cars soon afterwards. I was keen to see it do well but on the final morning it was languishing well below what it was worth, and I still felt anxious despite not even having anything at stake. But in the final hour it rallied strongly and sold for an excellent £24,000 (plus buyer's premium) which represented a fair risk premium for the vendor.

The interest continued further when the new owner contacted me through LinkedIn a couple of days later. It transpired he lives in London so I invited him along to the monthly Porsche Night at Duke of London a couple of days later. We arrived at the same time, me in the 991 now wearing MNZ 911, and the 997 wearing the original EU54 registration, which I had never actually seen on it during my ownership. We parked next to each other and it was fascinating to hear about his buying process, and I enjoyed sharing some of my experiences and maybe even a little advice from my decade with the car.

It's his first 911, his first Porsche, his first sports car no less, and I was delighted to see a baby seat already installed and golf clubs across the backseat. He plans to use it! I also recommended that he continues the relationship with Paragon to maintain the car as they know it intimately. I'm looking forward to seeing the car around and going on some runs together. It's a great car, I hope he enjoys it as much as I did.

Whilst I was on holiday I left the 991 in the care of Ryan at Lava Studios. Lava have cleaned and polished the car for me a few times which is why it always looks so good, but the more time I've spent with

it, looking at the details, the more I began to notice some swirl marks, orange peel, and some hard to shift tree sap. Often I'd notice these defects under the cruel detailing lights at Lava Studios – a canny move guys! I decided to commit to Lava's full paint correction, polish and coating service, and take any pressure of time out of the equation.

The bodywork was treated to some stone chip touch-ups, a two-stage paint correction, ceramic coating, and two layers of a hydrophobic coating – then allowed to cure for a couple of days. Ryan also removed the wheels to ceramic coat them, clean the inner wheel arches, and polish the visible exhaust back box; and also went through the interior.

You might be expecting me to say the car looks 'like new', but that could give you a frame of reference that might not do justice to the results if you haven't put your car through a similarly thorough process, in the hands of a firm like Lava Studios. I expected to be wowed by the paint finish of course, but wasn't prepared for the wheels, arches, and interior to look so good too. Breathtaking.

I know that kind of thing isn't for everyone, and you might think it should be tucked away in a garage following such a process, but it looks so good that I actually want to drive it more and more. It is my daily after all. The stone chips which follow are irritating but inevitable. What did really grind my gears though was going to a Porsche event where the water-cooled cars were parked in a freshly mown field, where the grass coated the cars. The event focuses on air-cooled Porsches which is cool, but if I go next year then I'll just take the BMW or even scoot over on my bicycle.





Ron Lang

Ashland, Oregon

@ronlangsport

Model **911S 2.4-LITRE**
Year **1972**
Acquired **2018**

Model **930 3.3**
Year **1982**
Acquired **2020**

Model **964 CARRERA 2 REIMAGINED BY SINGER**
Year **1991**
Acquired **2016**

Model **993 TURBO**
Year **1997**
Acquired **2015**

Model **996 GT2**
Year **2003**
Acquired **2021**

Model **997.2 GT3 RS**
Year **2011**
Acquired **2015**

Model **991.2 C4S**
Year **2017**
Acquired **2016**

Model **GT3 TOURING**
Year **2019**
Acquired **2021**



When the 911 gets under your skin, the itch can become relentless. At least that's true for someone like myself who is admittedly

compulsive and perennially curious. My latest scratching of the itch is this 2019 991.2 GT3 Touring. But let me start with how I got to this example.

As I looked around the garage, I decided to sell the 718 Cayman GT4. I had only driven it 600 miles in a year of ownership. And I had gone to some effort to spec the build of the car to my liking and waited for a six-month delay in production and delivery. I also once owned a 2016 GT4. Neither car could get my attention quite like the 911s. The GT4 is a superb machine with impeccable road manners. Fortunately, it's a lovely example in my view and I sold the car to a good friend and established Porsche enthusiast. He tells me he's very happy with the car. He also has several air-cooled 911s currently in his stable.

Then, I succumbed to the times by getting (gasp!) a new 2021 Toyota RAV4 Prime Hybrid, a plug-in that gets 42-45 miles on battery before the uninspiring four-cylinder engine fires up. To my surprise, it is a comfortable, decent-handling, small SUV and gets over 40 U.S. MPG when running both battery and petrol combination. And it's the second fastest Toyota currently available, 305 horsepower and



0-60 in 5.7 seconds. As an around town grocery getter and a comfortable ride with the wife to dinner and short trips, it is quite lovely.

But we are focused on Porsches and 911s in particular here. So the point of the RAV4 is that I decided it made my 2019 Panamera Turbo Sport Turismo redundant. Though the Pan only has 7,000 miles on it, and it goes/stops/turns wonderfully, I just could not think of how often I might select it for a drive over the Toyota – strange perhaps but true.

So thereafter my feeble mind somehow rationalised selling the Panamera and getting another 911. And though I had already owned a 991.2 GT3 manual (Miami blue with carbon buckets), this GT3 Touring grabbed my attention. I liked that it has the comfort seats and I know what to expect from the searing engine, crisp gearbox and superb handling. And I know that my track days are largely behind me and I am blessed to have other cars well-suited to track days when desired. Thus the extra downforce from the aero appendages on a standard GT3 are superfluous to my wishlist. This is a road-dedicated GT3 sans tall rear wing and extended front spoiler. My intent is to actually take it on some tours.

I like the exterior design, something somewhat common over the 911 years but not so much with GT3 Tourings. The Carrara white metallic paint has

full film on the exterior, but under the film are black stripe decals as a pair running front to rear and Porsche logo side stripes. I like the combination as it evokes a bit of early long-hood 911s, at least above the rockers. The gloss black door handles and exterior mirror bases follow the theme.

As I mentioned, the interior has the 18-way comfort seats which admittedly are not as sporty as the carbon buckets but certainly ease ingress and egress. Lots of extra leather and deviated yellow stitching has been applied to the interior spec to make this a quasi-luxury spec GT3 interior given the hardware that lies below.

And what hardware it is. You've all no doubt read reviews of the 991.2 GT3 six-speed driving experience, so I can only add that from my personal experience it is very involving and in a good way. This is not a car for a quiet cruise – this is the full-fat 911 GT experience. Loud but in a musical way, firm but in a reassuring way, impeccable ceramic brakes and wonderful shift/clutch/steering feel.

It is no wonder that Porsche is producing nearly as many GT versions of the 911 as the more mainstream Carrera flavours in recent years. I would not have a GT3 Touring as my daily driver, sometimes one just wants to get from point A to point B in quiet comfort. Lots of cars do that well, including the 991.2 Carrera 4S in the garage. But for full 911ness (is that a word?) a relatively innocent-looking GT3 Touring is a pinnacle experience, one that I hope many of you have a chance to enjoy.





Peter Wilson
Adelaide, Australia
@peterwilson_oz

Model **930 3.3**
Year **1980**
Acquired **2011**



One of the enjoyable aspects of joining the Porsche community is the pleasant surprise of bumping into like-minded individuals.

This was the case with work colleague Mike and his 996 Carrera and 997 Turbo a couple of years ago, and more recently with Graeme Hedges. I have known Graeme for many years, primarily as a school dad with kids in the same school years as mine. At that time, I knew he had a Porsche, but that was before I had purchased my 930 and I knew nothing about the marque.

At a more recent crossing of our paths (at a Porsche Club of South Australia event) he was in another 911, so I thought it would be good to catch up for a chat about all things Porsche. It turns out that Graeme still has his first Porsche, which I now know to be a black 2008 997 (2009 model year) Carrera S that he purchased in 2010. Graeme is only the second owner, and the car was initially used by Porsche Australia as a display car and is hence very well optioned. This has been Graeme's daily driver ever since and has now clocked up over 100,000km.



The 911 bug had bitten and the next car into the garage was a 991.1 GT3 RS in GT silver which Graeme purchased new in Dec 2016. The GT3 was obviously quite a weapon and Graeme exercised it at track days at The Bend motorsport park, commenting however that the mandatory PDK transmission made it feel like he wasn't fully driving the car.

Graeme still had the GT3 when he fell in love with the 991.2 Speedster concept car that he saw on display at the Goodwood Festival of Speed in July 2018.

This ticked all the boxes for Graeme, as the first Speedster produced by the Porsche GT department and basically being a GT3 without a roof but having the all-important six-speed gearbox. Graeme immediately placed his order for a GT silver Speedster and secured the fourth allocation to South Australia, one of only 20 or so cars imported into Australia. It was a long wait however and he eventually took delivery in February 2020, trading in the 991.1 GT3 RS. Since then, Graeme has kept the kilometres low and although entering the touring class of the Adelaide Rally, has no intention of tracking the Speedster, acknowledging its rarity and collectability.

Over these years of Porsche ownership Graeme also experimented with a couple of Ferraris, but the Porsche brand won the competition for his loyalty and the rivals from Maranello have all been sold.

The 997 daily driver and 991 Speedster for special driving are not alone in the garage however, as Graeme's wife Stacey has also joined the club with a 2018 Macan in Volcanic grey. It is clear that the Porsche brand has a strong following here, further evidenced by a complete wall of the garage being dedicated to 1:18 scale models in individual shelves. There are many marques represented in the collection but the dominant one is Porsche, with models spanning from 356s through various historic racers to current Cup cars. As a bit of a model collector myself (but not at this level) it was great to see some interesting subjects and a brilliant display facility.

It was great to catch up with Graeme again, chew the fat over his Porsche history and wander around his garage. Hopefully a driving day will feature in the near future.





Lee Sibley
Poole, UK

@lee_sibs

9WERKS TV

9WERKS Radio

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



Boy, it felt good to be back on track again. Unbelievably, my recent outing to Castle Combe was my first track day in more than two years,

thanks to a mixture of COVID restrictions and an unwillingness to significantly bugger up my then-new paint.

Castle Combe is an old RAF airfield used during World War Two: measuring 1.85 miles long, it essentially skirts the perimeter of the old airfield, and so

there are right-turns aplenty, and very little run-off. It's a circuit I know well, being the nearest applicable track to me (Thruxton is actually closer, yet its measly noise limits aren't much good for most Porsche).

I therefore jumped at the opportunity to attend my first track day since the autumn of 2019 as part of the Guild of Motoring Writers' Big Day Out, open to Guild members only, and registered my 996 for the excursion.

By my own standards, my preparation of the 911 for its Big Day Out of 2021 was pretty piss-poor. It sat unused for ten days prior, and then early on the morning of the event, I checked fluid levels and tyre pressures. That was it.

It needn't have mattered: these Porsches are brilliant machines (despite the reputation of my particular generation!), very capable of driving you to the track, round it with haste for the day, and back home again thereafter – provided due care and maintenance is adhered to in the interim.

Needless to say, my 996 performed brilliantly: outgunning far superior machinery, I was particularly blown away by the sheer grip on offer from the Michelin Pilot Sport 4s I'd recently



upgraded to. I pushed the car hard all day long and there was relatively little let-up in performance, save for a little extra brake pedal travel in the afternoon. It really was exhilarating to get back out on track and reminded me just how much I enjoy circuit work in my own 911. I'm certain it won't be another two years before the next outing.



Natalie Stratos
London, UK

Model **911 SC TARGA**
Year **1982**
Acquired **NOV 1994**



The next hiccup came earlier than anticipated. I was pulling up outside the vets, switched the engine off and the car literally filled

with smoke. My instinct was that oil was dripping on the exhaust and the holes in the back seat leg wells and air vents were letting the smoke in. I opened the doors to let the smoke escape and then popped the engine cover. I couldn't see where oil was leaking, if in fact it was. I nervously restarted the engine and drove her home with no issues. As I parked and switched the engine off it started to fill with smoke

again. I feel heartbroken; being without my car feels unnatural, like a part of me is missing.

So it begins. The nervous wait for one of my mechanics to collect her and give me bad or really bad news. Fraiser has been looking after my car on and off for years. Since then he has actually bought his own. I like to think I played a hand in the love he now shares for all things Porsche. He was so happy to hear I still have her. It always seems to delight people from past and present that I have held onto her through thick and thin.

I needed a car to continue with my work so my gorgeous friend who has a 2015 Porsche Cayman let me borrow his for a shoot. It is the only Porsche I have driven other than mine. I actually think the Cayman's lines, especially down the rear window, are the most similar to my car's model.

What a car! The drive was smooth, secure and she was super fast and responsive to my every move. I felt the power and comfort synchronise beautifully. I still wouldn't swap my Targa though. However much one likes to think these modern Porsches are what a true Porsche lover would drive, I believe to experience the real feel of a Porsche is to



go back to its stripped-out version. Don't get me wrong, I would love one of each!

I will hopefully have better news on where my car is on its route to getting back on the road in my next piece. For now, thank you @harperfinedining for the car loan and hopefully I will take your baby on a road trip to get a better feel for the more modern Porsche. Maybe I will be converted... let's see.





Nick Jeffery
Surrey, UK

Instagram @npjeffery
Twitter @npjeffery

Model **997 CARRERA 4 GTS**
Year **2012**
Acquired **OCT 2018**

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



Since becoming a member of B Road Hunting Club (@brhc.group) I often pop in for a coffee and a chat with like-minded enthusiasts

whenever I am in the area. The club is based at the former Bentley Motor Museum, Harvey's Lane, Lewes and is open Thursday to Sunday. If you are in the area, pop in and enjoy the chilled car club atmosphere!

Porsche Club GB (PCGB) Surrey Region (@porsche_club_gb_surrey) have been active hosting their first meets this year alternating between Redhill Aerodrome and Fairoaks Airport from 09:00 on the second Sunday every month. All Porsches are most welcome!

I attended the PCGB GT3 Register cars & coffee morning at RPM Technik. The event was supported by CAT Driver Training (@catdt) who I have used before. Colin and the team there are simply superb at helping you improve your



driving skills and understanding both on and off track. Colin did a talk for those attending on the art of trail braking in both mid and rear-engined Porsches, which was absolutely fascinating!

Then it was Boxengasse Oilcooled '21, which started off dry but ended with biblical rainfall! Seeking shelter in Autofarm (usually noted for their air-cooled 911 expertise) a water-cooled car in their workshop really caught my eye...

It was a seriously impressive, reworked and reimagined 997.2 Carrera GTS. The attention to detail and level of workmanship was first class, a real stunner where the lucky owner should be totally blown away! Modifications include:

- Paint to customer sample Jaguar British Racing green
 - OEM carbon fibre bonnet
 - Sport Classic front splitter
 - Black interior detail to headlights
 - OEM GT3 rear bumper and central exhaust
 - PCCB
 - Carbon fibre air box with uprated filters
 - Momo steering wheel
 - Classic gear shifter
 - Bespoke quilted leather with contrasting stitching to rear shelf, rear seat backs plus door cards and frunk
 - Lightweight remotely operated battery
- The build was so brilliantly executed it looks as if Porsche Exclusive built it!

The following day it was the inaugural 'Porsches at The Hall' event organised by James Vellacott (@911_spy) and Guy Feltham (@askgeez), supported by two OPCs – Colchester and East London. Ingatstone Hall is a very picturesque 16th century manor house in Essex. I was invited to display my GT3 in the courtyard of the main house alongside

numerous other examples of Stuttgart's finest, including a Carrera GT, two 992 GT3s, a 991 R, a 991 GT2 RS, a couple of GT3 Tourings, numerous GT3 RSs including the fabled 997.2 4.0, other GT3s, a 356, an impact bumper and a stunning Rubystone 964 Turbo! Display cars were asked to assemble at 10:00, and we were treated by the owners to a private tour of the house. Other friends from the Porsche community started arriving from midday and soon the visitors car park and driveway was littered with a glittering array of cars. A truly fabulous event.

Unfortunately, my 981 Spyder was struck by some falling debris from an oncoming skip lorry, which marked the PPF in a couple of places and put a nasty chip in the windscreen. Thankfully Paragon (@paragonporsche) have a preferred windscreen repair expert who did a fabulous job on the screen at very short notice. Adam and Mark at Supercar Paint Protection (@supercarpaintprotection) stepped up to the plate again, carrying out the PPF repair so the Jet black Spyder is back to her former glory.

Looking ahead, I have booked the GTS in for its MOT, a precautionary oil change between services and to replace the front brake pads. I have also booked in the GT3, although in addition to its MOT it will need a service and brake fluid change. I assumed it was going to be a 'big one' as Paragon carried out a minor service as part of the pre-sale preparation two years ago, but fortunately the car has been 'over serviced' with Northway Porsche performing a major service with spark plugs only a couple of months before I acquired it. So, a minor service it is then!



Anthony Coyne
Fort Lauderdale, FL

@elferusa

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



This Porsche is my only car in the US. So far it's worked out well: René, our dog Alfred and myself have travelled 10,000 miles during the first

six months with this 2009 997. Sure, it's a little compromised sometimes, but overall it's as expected – a proper daily driver 911. Brilliant. What I didn't expect was to use it as an ambulance.

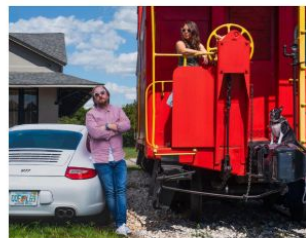
While we were in Tennessee one recent Saturday night, or the small hours of Sunday to be more precise, Alfred suffered a seizure. He had a brain tumour removed back in March, and we'd not witnessed one since surgery.

For those unfamiliar with seizures (as I was last year), anything over five minutes long is serious and needs emergency medical attention. The initial grand mal went way beyond five minutes. We battled to get him under control using everything we had in our arsenal of drugs without success. After 30 minutes we realised we were in a battle we couldn't win without urgent professional help.

Throwing on clothes, I ran to the garage, pulled the car out and we all bundled in, Alfred on René's lap up

front, her holding him as best she could, while the dog continued going from aftershocks to seizures. We just hoped we could get to the Animal Emergency & Specialty Center of Knoxville before any serious damage was inflicted – if it hadn't already been. A 30-mile drive, probably 40-45 minutes during the day, except this journey was in the dead of night. Nothing was out on the roads. We carried as much speed as we dare, as smoothly as we could, the car positioned on the centre line until we reached the city outskirts to improve our reaction space should any deer run in front as we passed through the forest areas.

We made it in under 25 minutes. The critical care medical team were waiting for us (we'd called ahead) and they rushed Alfred into the emergency room. It was 10:00am before they were able to stabilise him fully and stop the clusters. It had taken almost ten hours. At times we were unsure if he would be coming home, with one of the discussions taking place in the room where many loved animals spend their final moments with their humans. They were dark hours. But Alfred has proved before he's a resilient little creature, and a couple of days later he was ready to leave – much to the



surprise of the hospital. Dr Arnold, whose care he is under at the University of Minnesota, had been regularly calling the critical care specialists Dr Hodgson and Dr Fansler in Knoxville. As soon as she heard he was on his feet and eating she authorised him to go home.

He's currently making progress, although his eyesight is now very poor. There is hope it may improve, and over the past days I'm convinced it is doing so (updates on him can be found at www.elferusa.com).

Finding out what options Alfred has will involve a visit to his neurology team in Minnesota. It's a 1,800-mile journey from Florida. Alfred is likely too big to fly in the approved sized cabin bag – I think I know how we are getting there.



Ian Harris
Shoreham, UK

@harrisclassics

Model **3.2 CARRERA
COMMEMORATIVE EDITION**
Year **1988**
Acquired **DEC 2020**

Model **911 SC**
Year **1980**
Acquired **JUNE 2020**

Model **964 CARRERA**
Year **1993**
Acquired **JULY 2021**

Model **991.2 GT3**
Year **2019**
Acquired **MARCH 2021**



It's been a month since I bought my 964 and I couldn't be happier. If I was building a 964 C2 to my spec, it would

almost be the same as the one I've just bought. The three main things I want to change are the interior, wheels and maybe one day the colour. I know that sounds a crazy thing to do, but the paint isn't perfect and I'm not a huge fan of black cars, as this is a keeper car I'm not worried about the re-sale value and will enjoy the project.

The interior at the moment consists of pole position front seats, RS-style door cards and standard rear seats fitted. I've

spoken to a local trim shop who have said they can do a rear seat delete for me, but wanting to save on some pennies I'd decided to strip the interior myself, how hard can it be?!

So one Saturday I go to my garage and remove the two front seats, then it was time to strip out the rear. I started by unbolting the rear seats and then removed the carpets, I cannot believe how good the glue is that they used in 1991! The carpets are really well glued down and it was a lot harder than expected, and as the carpet came out I also removed the insulation fitted beneath. It isn't a hard job but is a lot more time consuming than I had thought, and a full day later the rear of my car was finally stripped out. I also angle grinded (with great care!) the brackets and other items that need to be removed. The car was then delivered to Craig at CW trimming for a lightweight rear carpet set that I had chosen. I went with a leather edging to the carpets in grey and also to get the rear main panel to read 'Carrera 3.8' in grey also, as opposed to the standard Carrera RS as I'm not trying to turn my 964 into an RS replica.

Having owned a 964 RS in the past I found it too stiff, the chassis and



suspension was hard for the Sussex B roads where I live. So whilst the car was with Craig for just over a week having the works completed, I had a bolt-in roll cage I'd bought for a previous car that I'd never fitted installed too, and also decided for the extra cost to get the complete carpets replaced throughout the whole car so it matched perfectly.

I'm thrilled with the results, I think it looks superb and I also get a lot of engine noise with the removal of the insulation. The install including the alloy roll cage is also a lot lighter than the previous setup. Next up on the 964 I'm going to address the bad paint and also look at wheel upgrades. I'm really enjoying this build, half the fun of ownership is making the car your own...



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Data file

Full specs, ratings and market values of every Porsche 911 model, including the 997 Carrera GTS models, can be found beginning on page 76

Plus

Showroom

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

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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 2021 Q4 will be October. The review for 2021 Q3 was July.

Ratings

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



● (O series) ★★★★★
911 2.0-litre 1964-1967
The 911 that started it all when the prototype appeared in 1963, this car set the style for all 911s to follow. Developed to replace the 356, a four-pot 912 was also made.

Production numbers	9,250
Issue featured	123
Engine capacity	1,991cc
Compression ratio	9.0:1
Maximum power	130hp @ 6,100rpm
Maximum torque	149Nm @ 5,200rpm
0-62mph	8.3 sec
Top speed	138mph
Length	4,163mm
Width	1,610mm
Weight	1,079kg
Wheels & tyres	
F	5.5x15-inch; 165/80/R15
R	4.5x15-inch; 165/80/R15



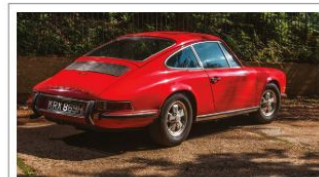
● (A series) ★★★★★
911R 1968
The lightest 911 of all time, the R was essentially a prototype racer fitted with a 906 flat six engine producing 210hp. Of the 19 produced, four would stay at the factory as works cars.

Production numbers	19
Issue featured	94
Engine capacity	1,991cc
Compression ratio	10.5:1
Maximum power	210hp @ 8,000rpm
Maximum torque	152Nm @ 6,800rpm
0-62mph	5.9 sec
Top speed	152mph
Length	4,163mm
Width	1,610mm
Weight	800kg
Wheels & tyres	
F	6.5x15-inch; 185/70/R15
R	7.5x15-inch; 185/70/R15



● (C & D series) ★★★★★
911S 1970-1971
An upgrade in engine size gave the 911S 182bhp. Unlike the 911E, the S didn't gain improved low-down power and torque, so you had to keep the revs up for good power.

Production numbers	4,691
Issue featured	120
Engine capacity	2,195cc
Compression ratio	9.8:1
Maximum power	180hp @ 6,500rpm
Maximum torque	199Nm @ 5,200rpm
0-62mph	6.6 sec
Top speed	145mph
Length	4,163mm
Width	1,610mm
Weight	1,020kg
Wheels & tyres	
F	6x15-inch; 165HR
R	6x15-inch; 165HR



● (C & D series) ★★★★★
911T 1970-1971
Like the E, the 911T's torque curve was flatter, making the car more drivable. Ventilated discs from the S were fitted, and a five-speed gearbox became standard.

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



● (F series) ★★★★★
911T 1973
US-bound F series 911Ts were the first 911s to have Bosch K-Jetronic fuel injection, improving emissions. This was mainly mechanical, with some electronic sensors.

Production numbers	16,993
Issue featured	127
Engine capacity	2,341cc
Compression ratio	7.5:1
Maximum power	132hp @ 5,600rpm
Maximum torque	197Nm @ 4,000rpm
0-62mph	7.6 sec
Top speed	128mph
Length	4,163mm
Width	1,610mm
Weight	1,077kg
Wheels & tyres	
F	5.5x15-inch; 165HR
R	5.5x15-inch; 165HR



● (G series) ★★★★★
Carrera 3.0 RS 1974
Updated version of the 1973 2.7 RS, complete with impact bumpers and Turbo-spec whitetail rear wing. Steel arches added by hand at the factory, with 917 brakes.

Production numbers	109
Issue featured	145
Engine capacity	2,994cc
Compression ratio	8.5:1
Maximum power	238hp @ 6,000rpm
Maximum torque	275Nm @ 5,000rpm
0-62mph	5.3 sec
Top speed	152mph
Length	4,185mm
Width	1,680mm
Weight	900kg
Wheels & tyres	
F	8x15-inch; 215/60/R15
R	8x15-inch; 235/60/R15



▼ 930 3.3 1978-1983
Larger engine resulted in extra 40bhp, and an intercooler on top of the engine led to the adoption of a 'teatray'. Brakes were upgraded from 917 racer.

Production numbers	5,807 (plus 78 to 79 Call cars)
Issue featured	116
Engine capacity	3,296cc
Compression ratio	70:1
Maximum power	300hp @ 5,500rpm
Maximum torque	412Nm @ 4,000rpm
0-62mph	5.4 sec
Top speed	160mph
Length	4,291mm
Width	1,795mm
Weight	1,300kg
Wheels & tyres	F 7.0x15-inch; 265/95 VR16 R 8.5x16-inch; 225/50/VR16



● 911 SC 1978-1983
From 1978, the SC was the only normally aspirated 911. Developed from the Carrera 3.0, but produced less power. Upgraded Sport options.

Production numbers	60,740
Issue featured	156
Engine capacity	2,994cc
Compression ratio	8.5:1/8.6:1/9.8:1
Maximum power	180/188/200hp @ 5,500rpm
Maximum torque	265/265/267Nm @ 4,200rpm
0-62mph	6.5 sec
Top speed	141/142mph
Length	4,291mm
Width	1,665mm
Weight	1,300kg (1670kg)
Wheels & tyres	F 6.5x15-inch; 185/70/R15 R 7.5x15-inch; 215/60/R15

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● (A series) ★★★★★
911S 1968



Porsche soon produced more powerful variants. The first of these was the 911S – for Super – which had a higher compression engine and twin Weber 40D5 carburetors.

Production numbers	4,015
Issue featured	148
Engine capacity	1,996cc
Compression ratio	9.8:1
Maximum power	160hp @ 6,000rpm
Maximum torque	179Nm @ 5,200rpm
0-62mph	8.9 sec
Top speed	137mph
Length	4.163m
Width	1.610m
Weight	1,030kg

Wheels & tyres
F 4.5x15-inch, 185/80/R15
R 4.5x15-inch, 185/80/R15

● (A series) ★★★★★
911L 1968



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

Production numbers	1,603
Issue featured	138
Engine capacity	1,996cc
Compression ratio	9.0:1
Maximum power	130hp @ 6,100rpm
Maximum torque	177Nm @ 4,600rpm
0-62mph	12.4 sec
Top speed	132mph
Length	4.163m
Width	1.610m
Weight	1,080kg

Wheels & tyres
F 5.5x15-inch, 185/8R
R 5.5x15-inch, 185/8R

● (A series) ★★★★★
911T 1968



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

Production numbers	6,338
Issue featured	127
Engine capacity	1,996cc
Compression ratio	8.6:1
Maximum power	110hp @ 5,800rpm
Maximum torque	156Nm @ 4,200rpm
0-62mph	8.8 sec (est)
Top speed	124mph
Length	4.163m
Width	1.610m
Weight	1,020kg

Wheels & tyres
F 5.5x15-inch, 185/8R
R 5.5x15-inch, 185/8R

● (B series) ★★★★★
911E 1969



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

Production numbers	2,826
Issue featured	n/a
Engine capacity	1,996cc
Compression ratio	9.1:1
Maximum power	140hp @ 5,800rpm
Maximum torque	179Nm @ 5,500rpm
0-62mph	7.9 sec
Top speed	130mph
Length	4.163m
Width	1.610m
Weight	1,020kg

Wheels & tyres
F 5.5x15-inch, 185/8R
R 5.5x15-inch, 185/8R



● (B series) ★★★★★
911S 1969
Like the E, the S gained a fuel injection, boosting power to 170bhp. To help cope with the extra demands on the engine, an additional oil cooler was fitted in the front right wing.

Production numbers	2,106
Issue featured	n/a
Engine capacity	1,996cc
Compression ratio	9.1:1
Maximum power	170hp @ 6,800rpm
Maximum torque	182Nm @ 5,500rpm
0-62mph	7.0 sec (est)
Top speed	140mph
Length	4.163m
Width	1.610m
Weight	999kg

Wheels & tyres
F 6x15-inch, 185/70/R15
R 6x15-inch, 185/70/R15

● (C & D series) ★★★★★
911E 1969-1971



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

Production numbers	4,927
Issue featured	107
Engine capacity	2,316cc
Compression ratio	9.1:1
Maximum power	155hp @ 6,200rpm
Maximum torque	196Nm @ 5,500rpm
0-62mph	7.0 sec
Top speed	137mph
Length	4.163m
Width	1.610m
Weight	1,020kg

Wheels & tyres
F 6x15-inch, 185/8R
R 6x15-inch, 185/8R

● (E series) ★★★★★
911E 1972



2.341cc was achieved by increasing the stroke from 66mm to 70.4mm while at the same time leaving the bore unchanged. The new 91S transmission was stronger.

Production numbers	4,406
Issue featured	117
Engine capacity	2,341cc
Compression ratio	8.0:1
Maximum power	160hp @ 6,200rpm
Maximum torque	206Nm @ 4,500rpm
0-62mph	7.5 sec
Top speed	137mph
Length	4.163m
Width	1.610m
Weight	1,070kg

Wheels & tyres
F 6x15-inch, 185/8R
R 6x15-inch, 185/8R

● (E series) ★★★★★
911T 1972



A lower compression ratio and the inclusion of Zenith 40 TINI triple-choke carburetors led to the relatively lower power output of 150bhp despite the new 2.341cc engine size.

Production numbers	16,933
Issue featured	107
Engine capacity	2,341cc
Compression ratio	7.5:1
Maximum power	130hp @ 5,600rpm
Maximum torque	193Nm @ 4,000rpm
0-62mph	7.8 sec
Top speed	129mph
Length	4.163m
Width	1.610m
Weight	1,077kg

Wheels & tyres
F 5.5x15-inch, 185/8R
R 5.5x15-inch, 185/8R

● (E series) ★★★★★
911S 1972



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

Production numbers	5,054
Issue featured	120
Engine capacity	2,341cc
Compression ratio	8.5:1
Maximum power	130hp @ 6,500rpm
Maximum torque	211Nm @ 5,200rpm
0-62mph	6.6 sec
Top speed	140mph
Length	4.163m
Width	1.610m
Weight	1,077kg

Wheels & tyres
F 6x15-inch, 185/70/R15
R 6x15-inch, 185/70/R15

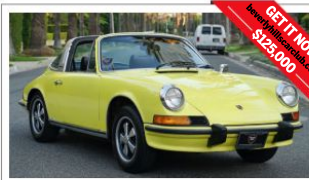
● (F series) ★★★★★
Carrera 2 RS 1973



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

Production numbers	1,590
Issue featured	145
Engine capacity	2,687cc
Compression ratio	8.5:1
Maximum power	210hp @ 6,300rpm
Maximum torque	259Nm @ 5,000rpm
0-62mph	5.8 sec
Top speed	152mph
Length	4.163m
Width	1.652m
Weight	979kg (Sport)

Wheels & tyres
F 6x15-inch, 185/70/R15
R 7x15-inch, 215/60/R15



● (F series) ★★★★★
911E 1973
After incidents of people filling E-series 911s with petrol via the external oil-filler, the filler returned to under the engine decklid. Fitted with the front spoiler of the 911S.

Production numbers	4,406
Issue featured	144
Engine capacity	2,341cc
Compression ratio	8.0:1
Maximum power	160hp @ 6,200rpm
Maximum torque	206Nm @ 4,500rpm
0-62mph	7.5 sec
Top speed	137mph
Length	4.163m
Width	1.610m
Weight	1,077kg

Wheels & tyres
F 6x15-inch, 185/8R
R 6x15-inch, 185/8R

● (F series) ★★★★★
911S 1973



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

Production numbers	5,054
Issue featured	120
Engine capacity	2,341cc
Compression ratio	8.5:1
Maximum power	130hp @ 6,500rpm
Maximum torque	211Nm @ 5,200rpm
0-62mph	6.6 sec
Top speed	140mph
Length	4.163m
Width	1.610m
Weight	1,077kg

Wheels & tyres
F 6x15-inch, 185/70/R15
R 6x15-inch, 185/70/R15



● (G, H, J series) ★★★★★
911 1974-1977

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

● (G, H, J series) ★★★★★
911S 1974-1977

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



● (G, H, J series) ★★★★★
911T 1974-1977

911T was now a mid-range model comparable to the previous 911E. It had the same body changes as the base model, and came as standard with 'Cookie Cutter' rims.



Production numbers	17,124
Issue featured	n/a
Engine capacity	2,687cc
Compression ratio	8.5:1
Maximum power	173hp @ 5,800rpm
Maximum torque	239Nm @ 4,000rpm
0-62mph	7.0 sec
Top speed	142mph
Length	4.291m
Width	1.610m
Weight	1,080kg

Wheels & tyres
F 6x15-inch, 185/8R
R 6x15-inch, 185/8R

● (G & H series) ★★★★★
911 Carrera 2.7 1974-1976



From 1974, Carrera name was given to range topping 911. Essentially the same engine as previous year's RS for all markets except USA. Whaletail available from 1975.

Production numbers	1,667
Issue featured	134
Engine capacity	2,687cc
Compression ratio	8.5:1
Maximum power	210hp @ 6,300rpm
Maximum torque	259Nm @ 5,000rpm
0-62mph	6.3 sec
Top speed	148mph
Length	4.291m
Width	1.652m
Weight	1,079kg

Wheels & tyres
F 6x15-inch, 185/70/R15
R 7x15-inch, 205/6R

● (I & J series) ★★★★★
911 Carrera 3.0 1976-1977



Not sold in the US, the Carrera 3.0 was basically the same model as the previous Carrera, only fitted with a new 2.994cc engine, essentially from the 911 Turbo.

Production numbers	3,687
Issue featured	148
Engine capacity	2,994cc
Compression ratio	8.5:1
Maximum power	197hp @ 6,000rpm
Maximum torque	259Nm @ 4,200rpm
0-62mph	6.3 sec
Top speed	145mph
Length	4.291m
Width	1.610m
Weight	1,093kg

Wheels & tyres
F 6x15-inch, 185/70/R15
R 7x15-inch, 215/60/R15

● (K series) ★★★★★
930 3.0 1975-1977



Fitted with a KKK turbo, this 3.0 was basically the same model as the previous Carrera, only fitted with a new 2.994cc engine, essentially from the 911 Turbo.

Production numbers	2,850
Issue featured	157
Engine capacity	2,994cc
Compression ratio	8.5:1
Maximum power	260hp @ 5,500rpm
Maximum torque	343Nm @ 4,000rpm
0-62mph	5.5 sec
Top speed	155mph
Length	4.279m
Width	1.721m
Weight	1,140kg

Wheels & tyres
F 7x15-inch, 185/70/R15
R 8x15-inch, 215/60/R15

● (K series) ★★★★★
SC RS 1984



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

Production numbers	21
Issue featured	158
Engine capacity	2,994cc
Compression ratio	10.3:1
Maximum power	259hp @ 7,000rpm
Maximum torque	250Nm @ 4,000rpm
0-62mph	4.9 sec
Top speed	153mph
Length	4.235m
Width	1.75m
Weight	940kg

Wheels & tyres
F 7x15-inch, 205/55/VR16
R 8x15-inch, 225/50/VR16

● (K series) ★★★★★
930 3.3 1978-1983



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

Production numbers	5,807 (plus 78 to 79 Call cars)
Issue featured	116
Engine capacity	3,299cc
Compression ratio	10.3:1
Maximum power	300hp @ 5,500rpm
Maximum torque	412Nm @ 4,000rpm
0-62mph	5.4 sec
Top speed	150mph
Length	4.291m
Width	1.775m
Weight	1,300kg

Wheels & tyres
F 7x15-inch, 205/55/VR16
R 8x15-inch, 225/50/VR16

● (K series) ★★★★★
930 3.3 1978-1983



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

Production numbers	5,807 (plus 78 to 79 Call cars)
Issue featured	116
Engine capacity	3,299cc
Compression ratio	10.3:1
Maximum power	300hp @ 5,500rpm
Maximum torque	412Nm @ 4,000rpm
0-62mph	5.4 sec
Top speed	150mph
Length	4.291m
Width	1.775m
Weight	1,300kg

Wheels & tyres
F 7x15-inch, 205/55/VR16
R 8x15-inch, 225/50/VR16

● (K series) ★★★★★
Carrera 3.2 1984-1989



Almost the same galvanised body as the SC. Engine was claimed to be 80 per cent new, and the first production 911 to feature an ECU to control ignition and fuel systems.

Production numbers	70,044
Issue featured	148
Engine capacity	3,164cc
Compression ratio	10.3:1
Maximum power	231hp @ 5,900rpm
Maximum torque	284Nm @ 4,800rpm
0-62mph	5.6 sec
Top speed	152mph
Length	4.291m
Width	1.652m
Weight	1,290kg

Wheels & tyres
F 7x15-inch, 195/65/VR16
R 8x15-inch, 215/60/VR15 (6" for 89)

● (K series) ★★★★★
930 SE 1986-1989



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

Production numbers	50 (UK only)
Issue featured	148
Engine capacity	3,299cc
Compression ratio	10.1:1
Maximum power	330hp @ 5,500rpm
Maximum torque	432Nm @ 4,000rpm
0-62mph	4.6 sec
Top speed	173

Speedster 1989



Carrera 3.2 with a steeply raked windscreen and hood and a sloped interior. Porsche claim the hood was not designed to be 100 per cent water-tight.

Production numbers	2274 for both wide and narrow-bodied
Issue featured	128
Engine capacity	3.166cc
Compression ratio	10.3:1
Maximum power	230hp @ 5,500rpm
Maximum torque	284Nm @ 4,800rpm
0-62mph	5.0 sec
Top speed	168mph
Length	4.291mm
Width	1.775mm
Weight	1,229kg
Wheels & tyres	
F	6x16-inch 205/45/VR6
R	8x16-inch 245/60/VR6

3.2 Clubsport 1987-89



Removing 'luxuries' sliced off around 43kg of weight. Revised engine management gave a higher rev limit of 6,840rpm. Suspension updated and 1.5D standard.

Production numbers	340
Issue featured	126
Engine capacity	3.166cc
Compression ratio	10.3:1
Maximum power	231hp @ 5,500rpm
Maximum torque	284Nm @ 4,800rpm
0-62mph	5.1 sec
Top speed	162mph
Length	4.291mm
Width	1.650mm
Weight	1,160kg
Wheels & tyres	
F	6x16-inch 205/55/VR16
R	7x16-inch 225/55/VR16

930 LE 1989



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

Production numbers	110
Issue featured	3,298cc
Engine capacity	3,298cc
Compression ratio	10.3:1
Maximum power	330hp @ 5,500rpm
Maximum torque	432hp @ 4,000rpm
0-62mph	4.4 sec
Top speed	173mph
Length	4.291mm
Width	1.775mm
Weight	1,359kg
Wheels & tyres	
F	7x16-inch 205/55/VR16
R	8x16-inch 245/45/VR16



964 Carrera 2 1990-1993

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

Production numbers	13,644
Issue featured	119
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	250hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.5 sec
Top speed	162mph
Length	4.250mm
Width	1.652mm
Weight	1,350kg
Wheels & tyres	
F	6x16-inch 205/55/VR16
R	8x16-inch 225/50/VR16



964 Carrera 4 1989-1993

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

Production numbers	13,353 (Cops)
Issue featured	111
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	250hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.5 sec
Top speed	162mph
Length	4.250mm
Width	1.652mm
Weight	1,450kg
Wheels & tyres	
F	6x16-inch 205/55/VR16
R	8x16-inch 225/50/VR16



(C & D series) 964 3.8 RS 1993

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

Production numbers	55
Issue featured	12
Engine capacity	3,746cc
Compression ratio	11.6:1
Maximum power	300hp @ 5,500rpm
Maximum torque	309Nm @ 5,250rpm
0-62mph	4.9 sec
Top speed	168mph
Length	4.250mm
Width	1.775mm
Weight	1,210kg
Wheels & tyres	
F	8x18-inch 235/40/2R18
R	9x17-inch 285/35/2R18



'30 Jahre' anniversary 964 utilised a Turbo wide-body moulded to the four-wheel-drive Carrera running gear. Available in Volk metallic, Polar Silver or Armettyst.

Production numbers	911
Issue featured	112
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	250hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.7 sec
Top speed	162mph
Length	4.250mm
Width	1.775mm
Weight	1,470kg
Wheels & tyres	
F	7x17-inch 205/50/17
R	9x17-inch 255/40/17



964 RS America 1993

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

Production numbers	701
Issue featured	157
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	250hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.5 sec
Top speed	164mph
Length	4.250mm
Width	1.650mm
Weight	1,340kg
Wheels & tyres	
F	7x17-inch 205/50/2R17
R	9x17-inch 255/40/2R17



964 C2 Speedster 93-94

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

Production numbers	936
Issue featured	128
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	250hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.5 sec
Top speed	162mph
Length	4.250mm
Width	1.652mm
Weight	1,340kg
Wheels & tyres	
F	7x17-inch 205/50/2R17
R	9x17-inch 255/40/2R17



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

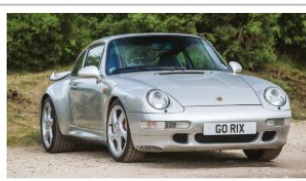
Production numbers	1,014
Issue featured	119
Engine capacity	3,746cc
Compression ratio	11.6:1
Maximum power	300hp @ 6,000rpm
Maximum torque	350Nm @ 5,400rpm
0-62mph	5.0 sec
Top speed	172mph
Length	4.245mm
Width	1.735mm
Weight	1,279kg
Wheels & tyres	
F	8x18-inch 225/40/2R18
R	10x18-inch 265/25/2R18



993 Carrera 4S 1995-1996

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

Production numbers	6,948
Issue featured	109
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	285hp @ 6,100rpm
Maximum torque	340Nm @ 5,250rpm
0-62mph	5.3 sec
Top speed	168mph
Length	4.245mm
Width	1.795mm
Weight	1,520kg
Wheels & tyres	
F	8x18-inch 225/40/2R18
R	10x18-inch 285/30/2R18



993 Turbo 1996-1998

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

Production numbers	5,937
Issue featured	147
Engine capacity	3,600cc
Compression ratio	9.0:1
Maximum power	408hp @ 6,100rpm
Maximum torque	540Nm @ 4,500rpm
0-62mph	4.3 sec
Top speed	180mph
Length	4.245mm
Width	1.795mm
Weight	1,500kg
Wheels & tyres	
F	8x18-inch 225/40/2R18
R	10x18-inch 285/30/2R18



993 Carrera S 1997-1998

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

Production numbers	3,714
Issue featured	118
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	285hp @ 5,250rpm
Maximum torque	340Nm @ 5,250rpm
0-62mph	5.4 sec
Top speed	168mph
Length	4.245mm
Width	1.795mm
Weight	1,450kg
Wheels & tyres	
F	8x18-inch 225/40/2R18
R	10x18-inch 285/30/2R18



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

Production numbers	20,499
Issue featured	132
Engine capacity	3,600cc
Compression ratio	9.4:1
Maximum power	420hp @ 6,000rpm
Maximum torque	550Nm @ 2,700rpm
0-62mph	4.2 sec
Top speed	180mph
Length	4.435mm
Width	1.830mm
Weight	1,540kg
Wheels & tyres	
F	8x18-inch 225/40/VR18
R	10x18-inch 295/30/VR18



996 Carrera 4S 2001-2005

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

Production numbers	22,055
Issue featured	155
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	320hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.1 sec
Top speed	174mph
Length	4.435mm
Width	1.830mm
Weight	1,495kg
Wheels & tyres	
F	8x18-inch 225/40/VR18
R	10x18-inch 295/30/VR18



996 GT2 2001-2003

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

Production numbers	1,287
Issue featured	127
Engine capacity	3,600cc
Compression ratio	9.4:1
Maximum power	462hp @ 5,700rpm
Maximum torque	620Nm @ 3,500rpm
0-62mph	4.500rpm
Top speed	141mph
Length	4.460mm
Width	1.830mm
Weight	1,490kg
Wheels & tyres	
F	8x18-inch 235/40/VR18
R	12x18-inch 355/30/VR18



996 C2 2002-2004

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

Production numbers	29,389
Issue featured	136
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	320hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.0 sec
Top speed	170mph
Length	4.430mm
Width	1.770mm
Weight	1,370kg
Wheels & tyres	
F	7x17-inch 205/50/VR17
R	9x17-inch 255/40/VR17



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

Production numbers	22
Issue featured	131
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	265hp @ 5,720rpm
Maximum torque	304Nm @ 6,720rpm
0-62mph	4.5 sec
Top speed	125mph
Length	4,275mm
Width	1,650mm
Weight	1,100kg
Wheels & tyres	
F 7x16-inch, 205/55/2816	
R 9x16-inch, 245/55/2816	



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

Production numbers	3,660
Issue featured	160
Engine capacity	3,296cc
Compression ratio	7.0:1
Maximum power	320hp @ 5,720rpm
Maximum torque	450Nm @ 4,500rpm
0-62mph	3.4 sec
Top speed	168mph
Length	4,250mm
Width	1,775mm
Weight	1,470kg
Wheels & tyres	
F 7x17-inch, 205/50/2817	
R 9x17-inch, 255/40/2817	



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

Production numbers	2,405
Issue featured	138
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	250hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.4 sec
Top speed	162mph
Length	4,250mm
Width	1,650mm
Weight	1,230kg (sport)
Wheels & tyres	
F 7.5x17-inch, 205/50/2817	
R 9x17-inch, 255/40/2817	

★★★★★
964 Turbo S 1992-1993

 150kg lighter than Turbo. Intakes in the rear arches funnelled air to the brakes, while the engine power was boosted by 60bhp. RS-spec updated suspension.

Production numbers	81
Issue featured	108
Engine capacity	3,296cc
Compression ratio	7.0:1
Maximum power	381hp @ 6,000rpm
Maximum torque	490Nm @ 4,800rpm
0-62mph	4.6 sec
Top speed	180mph
Length	4,250mm
Width	1,775mm
Weight	1,290kg
Wheels & tyres	
F 8x18-inch, 225/40/2818	
R 10x18-inch, 265/35/2818	



★★★★★
964 Turbo 3.6
1993-1994
 Engine based on modified 3.6-litre 964 unit. Distinctive 18-inch split-rim Speedline wheels covered the Big Red brake calipers. Suspension lowered by 20mm.

Production numbers	1,437
Issue featured	120
Engine capacity	3,600cc
Compression ratio	7.5:1
Maximum power	360hp @ 5,500rpm
Maximum torque	520Nm @ 4,200rpm
0-62mph	4.8 sec
Top speed	174mph
Length	4,250mm
Width	1,775mm
Weight	1,470kg
Wheels & tyres	
F 8x18-inch, 225/40/2818	
R 10x18-inch, 265/35/2818	



★★★★★
993 Carrera 1993-1997
 Restyled bodywork had swept-back headlamps, curvaceous wings and blended-in bumpers. The 3,600cc engine was revised, with VarioRam available from 1996.

Production numbers	38,626
Issue featured	160
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	272hp @ 6,000rpm
Maximum torque	330Nm @ 5,000rpm
0-62mph	5.6 sec
Top speed	162mph
Length	4,245mm
Width	1,735mm
Weight	1,370kg
Wheels & tyres	
F 7x16-inch, 205/55/2816	
R 9x16-inch, 245/45/2816	



★★★★★
993 Carrera 4 1994-1997
 As per the 993-model Carrera, but with four-wheel drive. Transmission was half the weight of the previous Carrera 4, and was designed to give a more rear-drive feel.

Production numbers	28,884 (Coupé)
Issue featured	131
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	272hp @ 6,000rpm
Maximum torque	330Nm @ 5,000rpm
0-62mph	5.8 sec
Top speed	166mph
Length	4,245mm
Width	1,735mm
Weight	1,420kg
Wheels & tyres	
F 7x16-inch, 205/55/2816	
R 9x16-inch, 245/45/2816	



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

Production numbers	173
Issue featured	131
Engine capacity	3,600cc
Compression ratio	9.0:1
Maximum power	430hp @ 5,750rpm
Maximum torque	540Nm @ 5,000rpm
0-62mph	3.9 sec
Top speed	189mph
Length	4,245mm
Width	1,855mm
Weight	1,290kg
Wheels & tyres	
F 9x18-inch, 235/40/2818	
R 11x18-inch, 285/35/2818	



★★★★★
993 Turbo S 1998
 The final hurrah for the last air-cooled 911. With 450bhp for UK models, it was the fastest and most luxurious road-going model Stuttgart had ever produced. Manual only.



★★★★★
996.1 Carrera
1998-2001
 An all-new 911 with larger, restyled bodywork and a water-cooled engine. Interior was redesigned in order to enable better ergonomic efficiency and more room.

Production numbers	56,733
Issue featured	160
Engine capacity	3,387cc
Compression ratio	11.3:1
Maximum power	300hp @ 6,800rpm
Maximum torque	350Nm @ 4,600rpm
0-62mph	5.2 sec
Top speed	174mph
Length	4,430mm
Width	1,765mm
Weight	1,320kg
Wheels & tyres	
F 7x17-inch, 205/50/R17	
R 9x17-inch, 255/40/R17	



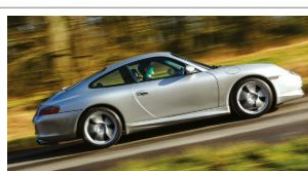
★★★★★
996.1 C4 1998-2001
 Four-wheel drive transmission fed five per cent of power in normal driving, increasing to 40 per cent when required. PSM used for first time, rolled out across the range in 2001.

Production numbers	22,054
Issue featured	131
Engine capacity	3,387cc
Compression ratio	11.3:1
Maximum power	300hp @ 6,800rpm
Maximum torque	350Nm @ 4,600rpm
0-62mph	5.2 sec
Top speed	174mph
Length	4,430mm
Width	1,765mm
Weight	1,375kg
Wheels & tyres	
F 7x17-inch, 205/50/R17	
R 9x17-inch, 255/40/R17	



★★★★★
996.1 GT3
1998-2000
 Commonly called the Gen1 GT3, this was a lightweight 996 with power driving the rear wheels. Suspension was lowered by 30mm and brakes were updated.

Production numbers	1,885
Issue featured	117
Engine capacity	3,600cc
Compression ratio	11.7:1
Maximum power	360hp @ 7,200rpm
Maximum torque	370Nm @ 5,000rpm
0-62mph	4.8 sec
Top speed	188mph
Length	4,430mm
Width	1,765mm
Weight	1,350kg
Wheels & tyres	
F 8x18-inch, 225/40/R18	
R 10x18-inch, 285/35/R18	



★★★★★
996.2 C4
2002-2004
 Facelifted in line with rear-drive Carrera, though the all-wheel-drive version drives very much like its rear-driven brethren. Cabin received minor updates over Gen1.

Production numbers	10,386
Issue featured	107
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	320hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.0 sec
Top speed	179mph
Length	4,430mm
Width	1,770mm
Weight	1,430kg
Wheels & tyres	
F 7x17-inch, 205/50/R17	
R 9x17-inch, 255/40/R17	



★★★★★
996 Anniversary 03-04
 Available in GT silver, and included a Turbo front bumper and chrome Carrera wheels. Powerkit, -10mm sports suspension and mechanical LSD standard.



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

Production numbers	2,313
Issue featured	142
Engine capacity	3,600cc
Compression ratio	11.7:1
Maximum power	381hp @ 7,400rpm
Maximum torque	385Nm @ 5,000rpm
0-62mph	4.5 sec
Top speed	182mph
Length	4,435mm
Width	1,770mm
Weight	1,380kg
Wheels & tyres	
F 8.5x18-inch, 235/40/R18	
R 11x18-inch, 295/30/R18	



★★★★★
996 GT3 RS
2004-2005
 Same 3,600cc engine as in GT3, but with weight saving, offering 280bhp per ton – an improvement of four per cent over the 996 GT3 Clubsport. PCCB optional.

Production numbers	682
Issue featured	161
Engine capacity	3,600cc
Compression ratio	11.7:1
Maximum power	381hp @ 7,400rpm
Maximum torque	385Nm @ 5,000rpm
0-62mph	4.4 sec
Top speed	186mph
Length	4,435mm
Width	1,770mm
Weight	1,360kg
Wheels & tyres	
F 8.5x18-inch, 235/40/R18	
R 11x18-inch, 295/30/R18	

Sales debate

Will the introduction of E10 fuel affect values of classic Porsche?



In September, the UK introduced a new grade of standard petrol, called E10. The letter comes from the chemical blended into the fuel, called ethanol, and the number comes from the maximum amount added: 10%.

The idea is the bio-ethanol is derived from crops such as maize, sugar and wheat, then blended into the petrol. In growing those crops, the plant absorbs CO2 from the atmosphere, then, as the fuel is burnt, it emits less CO2 – resulting in a reduction in motoring emissions across the board.

But, ethanol is a solvent and has been found to cause damage to rubber, plastic, fibreglass, solder and alloys: all materials common to 911 fuel systems. Because of this, Porsche has a publicised list of cars that are compatible with E10, and it excludes every air-cooled 911. In fact, only 911s from 1998 onwards can use the new fuel. Porsche advises all cars incompatible with E10 to only use the E5 Super Unleaded petrol, classed now as the 'Protection Grade', and rated at 97 octane. With that in mind, will values of 911s that can't use the new fuel be affected?

Not so, goes the thinking. Jonathan Aucott of Tamworth-based Avantgarde Classics thinks E10 compatibility won't make any difference to 911 prices at all. "Every customer I've sold a 911 to, I've said to put Super Unleaded in anyway," he says. "In the same vein as [the change to] unleaded, this will pass unnoticed. At worst, an additive will become part of the process of filling up," he suggests.

Philip Raby, of Bosham-based Philip Raby Specialist Cars agrees, making the point: "Most 911s don't do a huge annual mileage, so the extra cost of using Super Unleaded won't be a concern," he says. "Plus, you could make the argument it is a bit of a non problem, as you should be using Super Unleaded in a 911 anyway. I don't think it will affect values," he adds.

So whilst the headline may appear startling, 911 values seem safe. All you need to do to ensure future enjoyment of any beloved 911, is to simply use the fuel it should be having anyway.



996 Turbo S 2004-2005

A 911 Turbo with the previously optional 300hp power upgrade, with larger turbochargers, uprated intercoolers and a revised ECU. PCOB standard.

Production numbers	1,563
Issue featured	132
Engine capacity	3,600cc
Compression ratio	9.4:1
Maximum power	450hp @ 5,700rpm
Maximum torque	620Nm @ 3,500-4,500rpm
0-62mph	4.2 sec
Top speed	191mph
Length	4.29m
Width	1.83m
Weight	1,500kg
Wheels & tyres	
F 8x18-inch; 235/40/R18	
R 11x18-inch; 295/30/R18	



997.1 Carrera 2004-2008

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

Production numbers	25,788
Issue featured	112
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	325hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.0 sec
Top speed	177mph
Length	4.427m
Width	1.808m
Weight	1,395kg
Wheels & tyres	
F 8x18-inch; 235/40/R18	
R 10x18-inch; 255/40/R18	



997.1 GT3 RS 2006-2007

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

Production numbers	1,106
Issue featured	156
Engine capacity	3,600cc
Compression ratio	12.0:1
Maximum power	413hp @ 7,600rpm
Maximum torque	409Nm @ 5,500rpm
0-62mph	4.2 sec
Top speed	194mph
Length	4.40m
Width	1.808m
Weight	1,372kg
Wheels & tyres	
F 8.5x19-inch; 235/35/R19	
R 12x19-inch; 305/30/R19	



997 GT2 2007-2009

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

Production numbers	1,242
Issue featured	127
Engine capacity	3,600cc
Compression ratio	9.0:1
Maximum power	520hp @ 5,500rpm
Maximum torque	680Nm @ 2,200-4,500rpm
0-62mph	3.7 sec
Top speed	204mph
Length	4.468m
Width	1.852m
Weight	1,440kg
Wheels & tyres	
F 8.5x19-inch; 235/35/R19	
R 12x19-inch; 325/30/R19	



997.2 GT3 RS 2009-2012

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

Production numbers	1,500
Issue featured	125
Engine capacity	3,800cc
Compression ratio	12.2:1
Maximum power	450hp @ 7,500rpm
Maximum torque	430Nm @ 6,750rpm
0-62mph	4.0 sec
Top speed	192mph
Length	4.460m
Width	1.852m
Weight	1,370kg
Wheels & tyres	
F 9x19-inch; 245/35/R19	
R 12x19-inch; 325/30/R19	



997 Speedster 2010

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

Production numbers	356
Issue featured	128
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	408hp @ 7,300rpm
Maximum torque	420Nm @ 4,400-5,600rpm
0-62mph	4.4 sec
Top speed	190mph
Length	4.440m
Width	1.852m
Weight	1,540kg
Wheels & tyres	
F 8.5x19-inch; 235/35/R19	
R 11x19-inch; 305/30/R19	



997 Sport Classic 2010

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

Production numbers	250
Issue featured	146
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	408hp @ 7,300rpm
Maximum torque	420Nm @ 4,400-5,600rpm
0-62mph	4.6 sec
Top speed	187mph
Length	4.455m
Width	1.852m
Weight	1,425kg
Wheels & tyres	
F 8.5x19-inch; 235/35/R19	
R 11x19-inch; 305/30/R19	



997 Turbo S 2011-2013

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

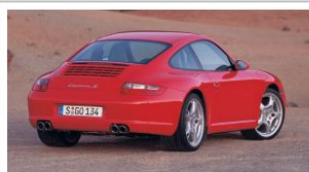
Production numbers	2,000
Issue featured	123
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	510hp @ 6,250-6,750rpm
Maximum torque	700Nm @ 2,300-4,250rpm
0-62mph	3.3 sec
Top speed	199mph
Length	4.435m
Width	1.852m
Weight	1,580kg
Wheels & tyres	
F 8.5x19-inch; 235/35/R19	
R 11x19-inch; 305/30/R19	



997.1 Carrera 2011-2015

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

Production numbers	Unknown
Issue featured	137
Engine capacity	3,436cc
Compression ratio	12.5:1
Maximum power	350hp @ 7,400rpm
Maximum torque	350Nm @ 5,600rpm
0-62mph	4.8 sec
Top speed	179mph
Length	4.493m
Width	1.808m
Weight	1,380kg
Wheels & tyres	
F 8.5x19-inch; 235/40/R19	
R 11x19-inch; 285/35/R19	



997.1 Carrera S 2004-2008

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

Production numbers	41,059
Issue featured	307
Engine capacity	3,800cc
Compression ratio	11.8:1
Maximum power	355hp @ 6,600rpm
Maximum torque	400Nm @ 4,600rpm
0-62mph	4.9 sec
Top speed	182mph
Length	4,427mm
Width	1,808mm
Weight	1,429kg
Wheels & tyres	
F 8.5x18 inch, 235/35/R19	
R 12x19 inch, 295/30/R19	



997.1 GT3 2006-2007

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

Production numbers	2,378
Issue featured	117
Engine capacity	3,600cc
Compression ratio	12.0:1
Maximum power	415hp @ 6,800rpm
Maximum torque	405Nm @ 5,500rpm
0-62mph	4.1 sec
Top speed	193mph
Length	4,445mm
Width	1,808mm
Weight	1,399kg
Wheels & tyres	
F 8.5x18 inch, 235/35/R19	
R 12x19 inch, 305/30/R19	

997.1 Carrera 4 2005-08

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

Production numbers	8,513
Issue featured	3
Engine capacity	3,596cc
Compression ratio	11.1:1
Maximum power	329hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.1 sec
Top speed	174mph
Length	4,427mm
Width	1,852mm
Weight	1,450kg
Wheels & tyres	
F 8x18 inch, 235/40/R18	
R 11x18 inch, 255/35/R18	

997.1 C4S 2005-2008

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

Production numbers	30,973
Issue featured	111
Engine capacity	3,826cc
Compression ratio	11.8:1
Maximum power	355hp @ 6,600rpm
Maximum torque	400Nm @ 4,600rpm
0-62mph	4.9 sec
Top speed	179mph
Length	4,427mm
Width	1,852mm
Weight	1,479kg
Wheels & tyres	
F 8x19 inch, 235/35/R19	
R 12x19 inch, 305/30/R19	

997.1 Turbo 2005-2008

Similar to 997 C4S body, but with extra intakes at the front and sides. Essentially the 996 Turbo engine, but with all-new twin turbos. V10 gave best of small/large turbos.

Production numbers	19,201
Issue featured	159
Engine capacity	3,600cc
Compression ratio	9.8:1
Maximum power	480hp @ 6,000rpm
Maximum torque	620Nm @ 1,950rpm
0-62mph	3.9 sec
Top speed	193mph
Length	4,450mm
Width	1,853mm
Weight	1,589kg
Wheels & tyres	
F 8.5x19 inch, 235/35/R19	
R 12x19 inch, 305/30/R19	



997.2 Carrera 2008-2012

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

Production numbers	10,500
Issue featured	144
Engine capacity	3,614cc
Compression ratio	12.5:1
Maximum power	345hp @ 6,500rpm
Maximum torque	390Nm @ 4,400rpm
0-62mph	4.9 sec
Top speed	178mph
Length	4,435mm
Width	1,808mm
Weight	1,419kg
Wheels & tyres	
F 8x18 inch, 235/40/ZR18	
R 10.5x18 inch, 265/40/ZR18	



997.2 Carrera S 2008-12

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

Production numbers	15,000
Issue featured	61
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	389hp @ 6,500rpm
Maximum torque	420Nm @ 4,400rpm
0-62mph	4.7 sec
Top speed	187mph
Length	4,435mm
Width	1,808mm
Weight	1,429kg
Wheels & tyres	
F 8x19 inch, 235/35/ZR19	
R 12x19 inch, 295/30/ZR19	



997.2 C4S 2008-2012

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

Production numbers	7,910 (Coupe)
Issue featured	111
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	385hp @ 6,500rpm
Maximum torque	420Nm @ 4,400rpm
0-62mph	4.7 sec
Top speed	185mph
Length	4,435mm
Width	1,852mm
Weight	1,482kg
Wheels & tyres	
F 8x19 inch, 235/35/ZR19	
R 12x19 inch, 305/30/ZR19	



997.2 GT3 2009-2012

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

Production numbers	2,200
Issue featured	117
Engine capacity	3,797cc
Compression ratio	12.2:1
Maximum power	439hp @ 7,500rpm
Maximum torque	430Nm @ 6,250rpm
0-62mph	4.1 sec
Top speed	194mph
Length	4,460mm
Width	1,808mm
Weight	1,399kg
Wheels & tyres	
F 8.5x19 inch, 235/35/ZR19	
R 12x19 inch, 305/30/ZR19	



997.2 Turbo 2009-2013

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

Production numbers	3,800
Issue featured	125
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	500hp @ 6,000rpm
Maximum torque	650Nm @ 1,950rpm
0-62mph	3.4 sec
Top speed	194mph
Length	4,450mm
Width	1,852mm
Weight	1,570kg
Wheels & tyres	
F 8.5x19 inch, 235/35/ZR19	
R 12x19 inch, 305/30/ZR19	



997 GT3 RS 4.0 2010

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

Production numbers	600
Issue featured	125
Engine capacity	3,996cc
Compression ratio	12.5:1
Maximum power	500hp @ 8,250rpm
Maximum torque	460Nm @ 5,750rpm
0-62mph	3.9 sec
Top speed	193mph
Length	4,460mm
Width	1,852mm
Weight	1,360kg
Wheels & tyres	
F 9x19 inch, 245/35/ZR19	
R 12x19 inch, 325/30/ZR19	



997 918 Edition 2010

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

Production numbers	121
Issue featured	74
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	530hp @ 6,250rpm
Maximum torque	700Nm @ 2,100rpm
0-62mph	4.250rpm
Top speed	3.3 sec
Top speed	195mph
Length	4,435mm
Width	1,852mm
Weight	1,385kg
Wheels & tyres	
F 8.5x19 inch, 235/35/ZR19	
R 12x19 inch, 305/30/ZR19	



997 GT2 RS 2010-2011

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

Production numbers	500
Issue featured	155
Engine capacity	3,600cc
Compression ratio	12.5:1
Maximum power	620hp @ 6,500rpm
Maximum torque	700Nm @ 2,500rpm
0-62mph	3.5 sec
Top speed	205mph
Length	4,460mm
Width	1,852mm
Weight	1,370kg
Wheels & tyres	
F 9x19 inch, 245/35/ZR19	
R 12x19 inch, 325/30/ZR19	



997 C2 GT3 2010-2012

C4's wider rear body, and powered by the 3.8-litre Carrera S engine, with a Powerflex producing extra 20bhp. GT3 is laden with Porsche options.

Production numbers	Unknown
Issue featured	157
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	429hp @ 7,300rpm
Maximum torque	420Nm @ 4,200rpm
0-62mph	4.6 sec
Top speed	190mph
Length	4,435mm
Width	1,852mm
Weight	1,420kg
Wheels & tyres	
F 8.5x19 inch, 235/35/ZR19	
R 12x19 inch, 305/30/ZR19	



997 C4 GT3 2011-2012

Like C2 997 GT3 but slightly heavier and with 4WD. In either C2 or C4 form, it represented a great saving over optioning up a 997 Carrera counterpart.

Production numbers	Unknown
Issue featured	125
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	408hp @ 8,300rpm
Maximum torque	420Nm @ 4,200rpm
0-62mph	4.6 sec
Top speed	188mph
Length	4,435mm
Width	1,852mm
Weight	1,480kg
Wheels & tyres	
F 8.5x19 inch, 235/35/ZR19	
R 12x19 inch, 305/30/ZR19	



991.1 Carrera S 2011-2015

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

Production numbers	Unknown
Issue featured	114
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	400hp @ 7,400rpm
Maximum torque	440Nm @ 5,600rpm
0-62mph	4.5 sec
Top speed	188.9mph
Length	4,490mm
Width	1,808mm
Weight	1,399kg
Wheels & tyres	
F 8.5x20 inch, 245/35/ZR20	
R 12x20 inch, 265/30/ZR20	



991.1 Carrera 4 2012-2015

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

Production numbers	Unknown
Issue featured	98
Engine capacity	3,436cc
Compression ratio	12.5:1
Maximum power	350hp @ 7,400rpm
Maximum torque	390Nm @ 5,600rpm
0-62mph	4.9 sec
Top speed	177mph
Length	4,490mm
Width	1,852mm
Weight	1,430kg
Wheels & tyres	
F 8.5x19 inch, 235/40/ZR19	
R 12x19 inch, 305/35/ZR19	



991.1 Carrera 4S 2012-2015

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

Production numbers	Unknown
Issue featured	118
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	400hp @ 7,400rpm
Maximum torque	440Nm @ 5,600rpm
0-62mph	4.5 sec
Top speed	185mph
Length	4,490mm
Width	1,852mm
Weight	1,449kg
Wheels & tyres	
F 8.5x20 inch, 245/35/ZR20	
R 12x20 inch, 305/30/ZR20	



991.1 GT3 2013-2015

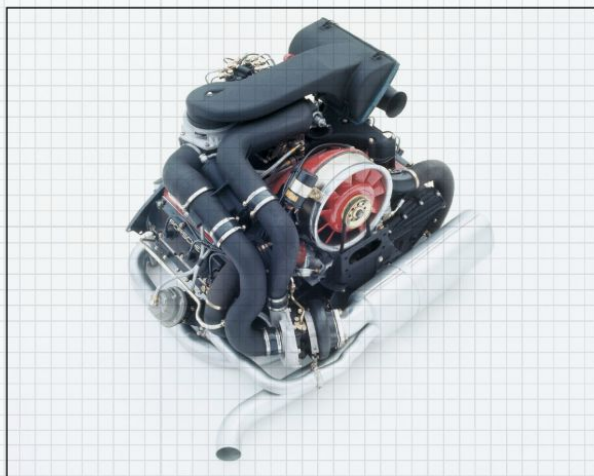
Wide body from 991 Carrera 4 was used for the first time. Mezger engine from previous GT3s replaced with revamped DFI version of Carrera S engine. PDK only.

Production numbers	3,000 (estimate)
Issue featured	143
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	475hp @ 6,250rpm
Maximum torque	479Nm @ 6,250rpm
0-62mph	3.5 sec
Top speed	196mph
Length	4,545mm
Width	1,852mm
Weight	1,430kg
Wheels & tyres	
F 9x20 inch, 245/35/ZR20	
R 12x20 inch, 305/30/ZR20	

Technology explained

052 BOSCH CONTINUOUS INJECTION SYSTEM (CIS)

It replaced MFI as the de facto Porsche injection system, but how does it work?



The first 911s relied on the humble carburettor to deliver fuel into the cylinder. Whilst that did the job, in searching for ever greater power – and lower emissions – Porsche advanced to mechanical fuel injection (MFI) for the 1969 911S, but progressed again in 1973, when MFI gave way to a further improvement: Continuous Injection System, or CIS, made by Bosch.

Appearing in the mid-'73 model year on the 2.4 911T, it continued right up to the SC in 1983, and on Turbo models until 1994. Officially titled CIS K-Jetronic – the K denoting Kontinuerlich – it relies not on alternately pulsing fuel at high pressure through the injectors as with MFI, but by continuing a rate of fuel, at a lower pressure.

The MFI injectors relied on 250psi to finely atomise fuel, but the CIS needs a fraction of that, just 80psi. This steady fuel pressure achieved atomisation, but because it was a constant flow it meant that there was fuel left in the intake ports when they closed, until the next operation of intake valves. The gain of the system was in the improved mix of air and fuel, which meant a more thorough burn, helping tailpipe emissions: an ever pressing concern, even then.

K-Jetronic uses two key components to function: an airflow sensor and a fuel distributor, in the mixture control unit. Fed by an electronic fuel pump, the mixture control unit decides how much pressurised fuel is delivered to each cylinder, driven by airflow. An airflow sensor plate links with the fuel distributor to meter the fuel needed, according to throttle input. Open the throttle, airflow increases, which in turn moves the air sensor plate. As the plate rises under increased airflow, this activates the control plunger, which delivers fuel via metering slots (one for each cylinder), on to all injectors at once, rather than via injection valves of electronic injection.

Beyond the injector, fuel enters the intake ports. The intake valves control fuel into the combustion chamber itself, but the CIS continually provides atomised fuel, ready for the next time the valve opens.



991.1 Turbo 2013-2014

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

Production numbers	Unknown
Issue featured	109
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	520hp @ 6,000rpm
Maximum torque	660Nm @ 1,950rpm
0-62mph	3.4sec
Top speed	195mph
Length	4,506mm
Width	1,885mm
Weight	1,595kg
Wheels & tyres	F 8.5x20-inch; 245/35/ZR20 R 11x20-inch; 305/30/ZR20

991.1 Turbo S 2013-2015

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

Production numbers	Unknown
Issue featured	115
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	560hp @ 6,500rpm
Maximum torque	675Nm @ 2,100-4,250
0-62mph	3.1sec
Top speed	197mph
Length	4,506mm
Width	1,885mm
Weight	1,602kg
Wheels & tyres	F 9x20-inch; 245/35/ZR20 R 11x20-inch; 305/30/ZR20

991.2 Carrera S 2015-2018

Shares Carrera's 3.0-litre turbocharged 9A2 engine, with revised turbo, exhaust and engine management to produce extra 50bhp.

Production numbers	Unknown
Issue featured	132
Engine capacity	2,981cc
Compression ratio	10.0:1
Maximum power	422hp @ 6,500rpm
Maximum torque	500Nm @ 1,700-5,000rpm
0-62mph	3.9sec
Top speed	182mph
Length	4,499mm
Width	1,808mm
Weight	1,480kg
Wheels & tyres	F 8.5x20-inch; 245/35/ZR20 R 11.5x20-inch; 305/30/ZR20



991.2 Carrera 4 2016-2018

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

Production numbers	Unknown
Issue featured	133
Engine capacity	2,981cc
Compression ratio	10.0:1
Maximum power	370hp @ 6,500rpm
Maximum torque	450Nm @ 1,700-5,000rpm
0-62mph	4.1sec
Top speed	181mph
Length	4,499mm
Width	1,852mm
Weight	1,480kg
Wheels & tyres	F 8.5x19-inch; 235/40/ZR19 R 11.5x19-inch; 295/35/ZR19



991.2 C2 GTS 2017-2019

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

Production numbers	Unknown
Issue featured	150
Engine capacity	2,981cc
Compression ratio	10.0:1
Maximum power	450hp @ 6,500rpm
Maximum torque	550Nm @ 2,150-5,000rpm
0-62mph	4.1sec
Top speed	194mph
Length	4,528mm
Width	1,852mm
Weight	1,480kg
Wheels & tyres	F 9x20-inch; 245/35/ZR20 R 12x20-inch; 305/30/ZR20

991.2 C4 GTS 2017-2019

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

Production numbers	Unknown
Issue featured	151
Engine capacity	2,981cc
Compression ratio	10.0:1
Maximum power	450hp @ 6,500rpm
Maximum torque	500Nm @ 2,150-5,000rpm
0-62mph	3.8sec
Top speed	193mph
Length	4,528mm
Width	1,852mm
Weight	1,579kg
Wheels & tyres	F 9x20-inch; 245/35/ZR20 R 12x20-inch; 305/30/ZR20

991.2 GT3 RS 2018-19

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

Production numbers	100UK cars (est)
Issue featured	164
Engine capacity	4,000cc
Compression ratio	Unknown
Maximum power	520hp
Maximum torque	480Nm
0-62mph	3.2sec
Top speed	192mph
Length	4,568mm
Width	1,880mm
Weight	1,420kg
Wheels & tyres	F 9.5x20-inch; 265/35/ZR20 R 12x21-inch; 325/30/ZR21

991 Speedster 2019

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

Production numbers	1,948
Issue featured	172
Engine capacity	3,996cc
Compression ratio	13.3:1
Maximum power	500hp @ 6,500rpm
Maximum torque	460Nm @ 6,000rpm
0-62mph	3.9sec
Top speed	199mph
Length	4,560mm
Width	1,852mm
Weight	Unknown
Wheels & tyres	F 9x20-inch; 245/35/ZR20 R 12x21-inch; 305/30/ZR20

992 Carrera S 2019-

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

Production numbers	In production
Issue featured	174
Engine capacity	2,981cc
Compression ratio	10.5:1
Maximum power	430hp @ 6,500rpm
Maximum torque	530Nm @ 2,500rpm
0-62mph	3.5sec
Top speed	191mph
Length	4,508mm
Width	1,852mm
Weight	1,515kg
Wheels & tyres	F 8.5x20-inch; 245/35/ZR20 R 11.5x21-inch; 305/30/ZR21



991 Anniversary 2013-2014

Exuberantly styled Carrera S with wide body and generous spec. Many styling cues inside and out taken from original 901. Powerkit only came as standard spec in US.

Production numbers	1,963
Issue featured	112
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	400hp @ 5,600rpm
Maximum torque	440Nm @ 2,500rpm
0-62mph	4.5 sec
Top speed	189mph
Length	4.49m
Width	1.85m
Weight	1,420kg
Wheels & tyres	
F 9x20-inch, 245/35/ZR20	
R 11.5x20-inch, 305/35/ZR20	

991.1 Carrera GTS 2014-16



Big spec GTS utilises wide body and a host of good options including Powerkit, PASM, Sport chrono, Sport exhaust to name a few, all for £7,000 more than Carrera S.	
Production numbers	Unknown
Issue featured	157
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	430hp @ 5,700rpm
Maximum torque	440Nm @ 2,500rpm
0-62mph	4.0 sec
Top speed	190mph
Length	4.49m
Width	1.85m
Weight	1,420kg
Wheels & tyres	
F 9x20-inch, 245/35/ZR20	
R 11.5x20-inch, 305/35/ZR20	

991.1 C4 GTS 2014-2016



Almost the same as the C2 GTS, but with additional traction offered by four-wheel drive. As a result, performance times are altered slightly over its rear-driven variant.	
Production numbers	Unknown
Issue featured	125
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	430hp @ 5,700rpm
Maximum torque	440Nm @ 2,500rpm
0-62mph	4.1 sec
Top speed	188mph
Length	4.49m
Width	1.85m
Weight	1,470kg
Wheels & tyres	
F 9x20-inch, 245/35/ZR20	
R 11.5x20-inch, 305/35/ZR20	



Unprecedented aero package now delivers 997 RS 4.0's max downforce at just 93mph. Features modified 4.0-litre DFI version of 991.1 GT3 engine; PDK only.	
Production numbers	6,000
Issue featured	136
Engine capacity	3,996cc
Compression ratio	12.9:1
Maximum power	500hp @ 6,250rpm
Maximum torque	460Nm @ 2,500rpm
0-62mph	3.7 sec
Top speed	193mph
Length	4.45m
Width	1.88m
Weight	1,420kg
Wheels & tyres	
F 9.5x20-inch, 265/35/ZR20	
R 12.5x21-inch, 325/35/ZR21	

991.2 Carrera 2015-2018



Facelift model substantially changed underneath with power coming from completely new 3.0-litre 9A2 turbocharged engine. PASM now standard.	
Production numbers	Unknown
Issue featured	137
Engine capacity	2,980cc
Compression ratio	10.0:1
Maximum power	370hp @ 5,500rpm
Maximum torque	450Nm @ 1,700rpm
0-62mph	5.000rpm
Top speed	183mph
Length	4.49m
Width	1.88m
Weight	1,450kg
Wheels & tyres	
F 8.5x19-inch, 235/40/ZR19	
R 11.5x19-inch, 295/35/ZR19	

991.2 Carrera 4S 2016-18



As per C4 but using revised turbos, exhaust and engine management from C2S to produce extra 50hp. Faster 0-62mph than C2S for first time.	
Production numbers	Unknown
Issue featured	154
Engine capacity	2,980cc
Compression ratio	10.0:1
Maximum power	420hp @ 6,500rpm
Maximum torque	500Nm @ 1,700rpm
0-62mph	3.8 sec
Top speed	189mph
Length	4.49m
Width	1.85m
Weight	1,490kg
Wheels & tyres	
F 8.5x19-inch, 245/35/ZR20	
R 11.5x20-inch, 305/35/ZR20	



991.2 Turbo 2016-2018

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

Production numbers	Unknown
Issue featured	135
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	540hp @ 6,400rpm
Maximum torque	700Nm @ 2,250rpm
0-62mph	4.000rpm
Top speed	311mph
Length	4.507m
Width	1.88m
Weight	1,559kg
Wheels & tyres	
F 9x20-inch, 245/35/ZR20	
R 11.5x20-inch, 305/35/ZR20	



991.2 Turbo S 2016-2018

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

Production numbers	Unknown
Issue featured	145
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	580hp @ 6,750rpm
Maximum torque	760Nm @ 2,250rpm
0-62mph	2.9 sec
Top speed	205mph
Length	4.507m
Width	1.88m
Weight	1,600kg
Wheels & tyres	
F 9x20-inch, 245/35/ZR20	
R 11.5x20-inch, 305/35/ZR20	



991 R 2016

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

Production numbers	991
Issue featured	153
Engine capacity	3,996cc
Compression ratio	13.2:1
Maximum power	500hp @ 6,250rpm
Maximum torque	460Nm @ 2,500rpm
0-62mph	3.8 sec
Top speed	207mph
Length	4.532m
Width	1.852m
Weight	1,370kg
Wheels & tyres	
F 9x20-inch, 245/35/ZR20	
R 12x20-inch, 305/35/ZR20	



991.2 GT3 2017-2019

New 4.0-litre engine from 991.2 Cup car. Retains 9,000rpm redline; six-speed manual Sport transmission now a no-cost option. Revised airflow to front and rear.

Production numbers	222 (UK spec)
Issue featured	153
Engine capacity	3,996cc
Compression ratio	13.3:1
Maximum power	500hp @ 6,250rpm
Maximum torque	460Nm @ 2,500rpm
0-62mph	3.9 sec (manual)
Top speed	199mph
Length	4.562m
Width	1.852m
Weight	1,413kg (manual)
Wheels & tyres	
F 9x20-inch, 245/35/ZR20	
R 12x20-inch, 305/35/ZR20	



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



991 Turbo S Exclusive Edition

The work of Porsche's Exclusive department, with extensive use of carbon on the bonnet, roof and side skirts. Power is hiked to 607hp. Turbo Aerokit standard.

Production numbers	500
Issue featured	170
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	607hp
Maximum torque	750Nm @ 2,500rpm
0-62mph	4.000rpm
Top speed	219 mph
Length	4.507m
Width	1.88m
Weight	Not specified
Wheels & tyres	
F 9x20-inch, 245/35/ZR20	
R 12.5x20-inch, 305/35/ZR20	



991 Carrera T 2018

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

Production numbers	5,000
Issue featured	162
Engine capacity	2,980cc
Compression ratio	10.0:1
Maximum power	370hp @ 5,500rpm
Maximum torque	450Nm @ 1,700rpm
0-62mph	5.000rpm
Top speed	183mph
Length	4.49m
Width	1.88m
Weight	1,400kg
Wheels & tyres	
F 8.5x19-inch, 235/40/ZR19	
R 11.5x19-inch, 295/35/ZR19	

992 Carrera 4S 2019



As with the 992 Carrera S, but with active all-wheel drive providing variable torque to the front axle. Identifiable by silver decklid slats (C2S has black).	
Production numbers	In production
Issue featured	174
Engine capacity	2,980cc
Compression ratio	10.5:1
Maximum power	450hp @ 6,500rpm
Maximum torque	530Nm @ 2,500rpm
0-62mph	3.4 sec
Top speed	190mph
Length	4.531m
Width	1.852m
Weight	1,565kg
Wheels & tyres	
F 8.5x19-inch, 245/35/ZR20	
R 11.5x20-inch, 305/35/ZR21	

992 Carrera 2020



The base 992 was revealed some nine months after the S. Visually different to the C2S thanks to smaller wheels and two single-exit exhaust tips.	
Production numbers	In production
Issue featured	189
Engine capacity	2,980cc
Compression ratio	10.5:1
Maximum power	385hp @ 6,500rpm
Maximum torque	450Nm @ 1,900rpm
0-62mph	5.000rpm
Top speed	180mph
Length	4.531m
Width	1.852m
Weight	1,565kg
Wheels & tyres	
F 8.5x19-inch, 235/40/ZR19	
R 11.5x20-inch, 295/35/ZR21	

992 Carrera 4 2020



Same spec as the 992 Carrera, albeit with variable torque sent to the front wheels in an improved multi-plate clutch AWD P7M system over the 991.2.	
Production numbers	In production
Issue featured	N/A
Engine capacity	2,980cc
Compression ratio	10.5:1
Maximum power	385hp @ 6,500rpm
Maximum torque	450Nm @ 1,950rpm
0-62mph	5.000rpm
Top speed	180mph
Length	4.531m
Width	1.852m
Weight	1,559kg
Wheels & tyres	
F 8.5x19-inch, 235/40/ZR19	
R 11.5x20-inch, 295/35/ZR21	

992 Turbo S 2020



3.8-litre version of 992 Carrera's engine, with intercoolers now on top and air filters housed behind side air intakes. PSE and Sports chassis optional for first time.	
Production numbers	In production
Issue featured	190
Engine capacity	3,745cc
Compression ratio	8.7:1
Maximum power	640hp @ 6,750rpm
Maximum torque	800Nm @ 2,500rpm
0-62mph	4.000rpm
Top speed	217 mph
Length	4.531m
Width	1.930m
Weight	1,640kg
Wheels & tyres	
F 8.5x20-inch, 255/35/ZR20	
R 11.5x21-inch, 315/30/ZR21	

992 Targa HDE 2020



First of four Heritage Design specials from Porsche Exclusive, inspired here by Porsche sports cars of the 1950s and 1960s.	
Production numbers	992
Issue featured	193
Engine capacity	2,980cc
Compression ratio	10.5:1
Maximum power	450hp @ 6,500rpm
Maximum torque	530Nm @ 2,500rpm
0-62mph	3.6 sec
Top speed	189mph
Length	4.531m
Width	1.852m
Weight	1,679kg
Wheels & tyres	
F 8.5x19-inch, 245/35/ZR20	
R 11.5x21-inch, 305/35/ZR21	



992 GT3 2021

New swan neck wing design, double wishbone front axle and GT3 R diffuser. 50% more downforce over 991.2 GT3, sub 7-min Ring time.

Production numbers	1,000 (est. for 2021)
Issue featured	199
Engine capacity	3,996cc
Compression ratio	13.3:1
Maximum power	510hp @ 8,400rpm
Maximum torque	470Nm @ 3,000rpm
0-62mph	3.4 sec
Top speed	199mph
Length	4.573m
Width	1.852m
Weight	1,418kg (manual)
Wheels & tyres	
F 9.5x20-inch, 255/35/ZR20	
R 12x21-inch, 315/30/ZR21	

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LEFT Fuchs Wheel Prior to Restoration

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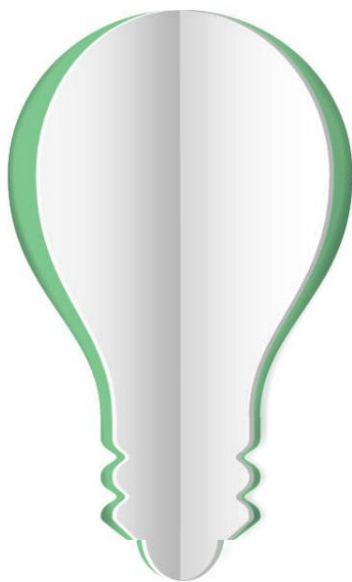
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993 TURBO S
RHD HIGH SPEC
1 OF 23



2011
PORSCHE
997 GT3RS 4.0
#211 OF 600
12000 MILES

1997
PORSCHE
993 CARRERA S
ZEMITH BLUE
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**911 Carrera RS (993)**

Grand Prix White • Dual-Tone Leather Recaro Bucket Seats • 18" Split Rim Wheels • Factory RS Clubsport Spoilers Previously Serviced by Paragon 59,083 kms (36,712 miles) • 1995 (N)

£249,995**911 Carrera 2 GTS (991)**

Carmin Red • Black Half-Leather Sports Seats • PDK Gearbox with Paddles • 20" Black Centre Lock Wheels • Sports Exhaust • Sport Chrono • 25,112 miles • 2014 (64)

£77,995**911 Carrera 2 Targa (993)**

Iris Blue • Marble Grey Leather Seats Tiptronic S Gearbox • 17" Targa Split Rim Wheels • Air Conditioning • Sports Exhaust • Previously Sold & Serviced by Paragon • 29,259 miles • 1996 (P)

£71,995**911 Turbo (997)**

GT Silver • Black Leather Adaptive Sports Seats • Tiptronic S Gearbox 19" Turbo Wheels • Satellite Navigation Previously Sold & Serviced by Paragon 52,542 miles • 2007 (07)

£54,995**911 Carrera 4 S Targa (997)**

Atlas Grey • Black Leather Seats • PDK Gearbox with Paddles • 19" Carrera S II Wheels • Sport Chrono • Previously Sold & Serviced by Paragon • 45,287 miles • 2010 (60)

£44,995**Boxster Spyder (987)**

Jet Black • Black Leather Sports Seats PDK Gearbox with Paddles • 19" Boxster Spyder Wheels • Full Leather Interior Sport Chrono • Air Conditioning Heated Seats • 14,528 miles • 2011 (11)

£44,995**Boxster Spyder (987)**

Jet Black • Black Leather Sports Seats Manual Gearbox • 19" Turbo II Wheels Switchable Sports Exhaust • Heated Seats • Porsche Sound Pack Plus 33,234 miles • 2011 (61)

£41,995**Cayman S (981)**

Carrera White • Black Leather Sports Seats • 19" Cayman S Wheels PDK Gearbox • Switchable Sports Exhaust • Previously Sold & Serviced by Paragon • 23,381 miles • 2015 (65)

£39,995**Macan S Diesel**

Volcano Grey • Black Leather Seats PDK Gearbox with Paddles • 21" Turbo Design Wheels • Heated Seats Cruise Control • Front & Rear Parking Sensors • 22,373 miles • 2017 (17)

£39,995**911 Carrera 2 S (997)**

Arctic Silver • Dark Blue Leather Adaptive Sports Seats • Tiptronic S Gearbox • Satellite Navigation • 19" Sport Design Wheels • Sport Chrono 23,707 miles • 2004 (54)

£35,995**911 Carrera 2 S (997)**

Atlas Grey • Dark Grey Leather Seats Manual Gearbox • Switchable Sports Exhaust • Satellite Navigation Previously Sold & Serviced by Paragon 64,290 miles • 2004 (54)

£31,995**Cayman S (987 GEN II)**

Basalt Black • Black Leather Sports Seats • Manual Gearbox • 19" Black Carrera S Wheels • Previously Sold & Serviced by Paragon • 56,583 miles 2011 (11)

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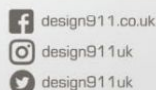
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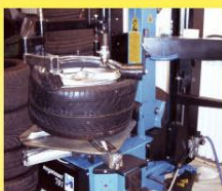
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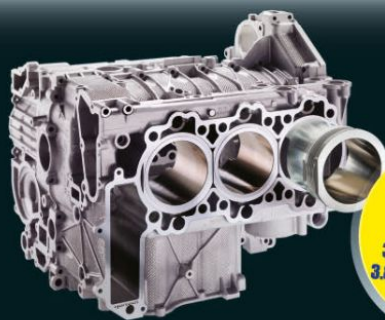


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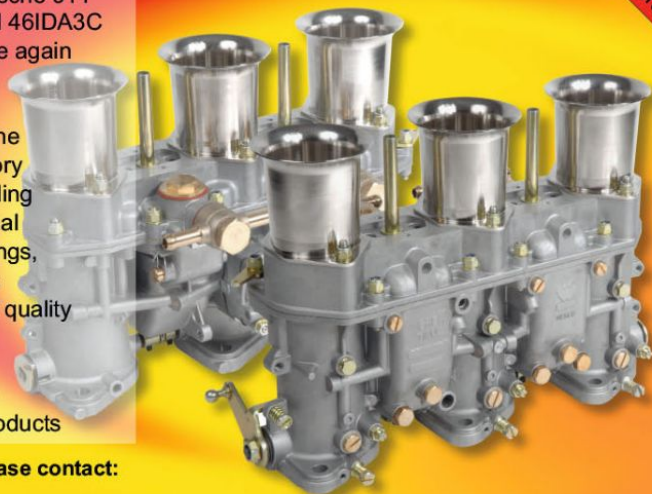
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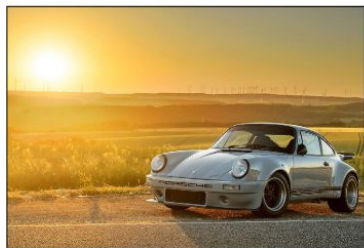
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Porsche Moment

In the first of a new series, Total 911 explores the story behind iconic moments in Porsche's past

Weissach, 1965. In this scene a 911 is undergoing suspension testing at Porsche's now-famous search and development track. After years of trying to test cars on the public highway, in 1960, Porsche had bought a tract of land lying just west of the rural town of Weissach to create its own proving facility. After the earthmovers had smoothed out some of the terrain, the first task was the skid pan because Ferry had learned from Zora Arkus-Duntov, Chevrolet engineer and sometime Porsche works driver, that a skid pan was indispensable. Helmuth Bott, then chief development engineer, architected a 3km circuit around the natural bowl of the landscape. Within this, inner circuits, test hills and handling loops were steadily constructed.

The 911 pictured is undergoing suspension testing. To the right is a stretch of 'knobbly'

surface, its tarmac and stone edgings clearly new; extensions to the track network at Weissach would continue for many more years. In 1965 though, the testers had few facilities beyond half a dozen huts. Construction of the substantial office and R&D complex would not begin until 1969. To hone the 911 its development engineers at least had the track, and in those early years, they certainly needed it, for some 911s could exhibit what even the usually diplomatic Paul Frère called "beastly handling". Peter Falk spoke of hundreds of miles driven around Weissach with test cars on the absolute limit, never knowing whether the rear or the front was going to slide first. Here the 911 has the notorious lead-filled overriders, fitted to add weight (22kg) to the front as Porsche sought to overcome the car's inherent

instability. Eventually this was largely resolved, but not before Ferdinand Piëch, by then second-in-command at Porsche, ordained a lengthening of the wheelbase. Within a short period, anti-roll bars and wider tyres, without entirely taming the 911, made it a car a skilled driver could take confidently to the limit.

Besides his legendary 917 programme, Piëch also found a further outlet for the money Porsche was earning from its design work for VW: by the time he left the company in 1972, R&D and Styling were already installed and Weissach was well on its way to becoming today's high-tech development centre. Piëch's successor Bott opened the doors to third-party contract work and by 1980, Weissach was responsible for at least a quarter of Porsche's income, and has remained so.

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