



C4S TO SCOTLAND 991.2 TAKES ON THE NORTH COAST 500

Total 911

THE **PORSCHE** MAGAZINE

GAME CHANGERS

How has history judged the most controversial models of 911 evolution?



www.total911.com

FULL EXPOSÉ 991 GT2 RS

Blistering new turbocharged Rennsport
driven by Andreas Preuninger

**FASTEST
EVER 911!**

PLUS

- PSM explained
- Car care mega test
- Luftgekühlt 4 pictures
- Classic 911 goes electric

RARE 3.2 CARRERA

1988 Commemorative Edition: a bona fide collectible or mere marketing ploy?

Future

ISSUE 154

PRINTED IN THE UK £4.99

Digital Edition

GreatDigitalMags.com

ROAD TO RACE

What it takes to convert your 996 Carrera into a championship racer



Welcome



One million: that's how many Porsche 911s (and counting) have now rolled off the production line at Zuffenhausen and are currently gracing roads all over our precious planet. It's an incredible milestone that is uniquely hard to comprehend – there is simply no other car of such prestige, made by one company alone, on virtually the same production line (to allay all you Model T/ VW Beetle/ Toyota Corolla anoraks) that can lay claim to such a feat.

To enthusiasts the 911 has endured some pretty drastic transformations over the years (you can read about the biggest evolutions in our 'game changers' feature beginning on page 32) but, on the face of it, the 911 has always remained pretty much the same: a 2+2 premium sports car for everyday use, powered by a flat six internal combustion engine. Such purity and

longevity is absolutely astounding considering the changes this planet has witnessed in the timeframe of our 911's existence.

To give you some perspective, when the first 911 rolled off the production line in 1963, man hadn't yet set foot on the moon. Heart transplants were pure fantasy, oil hadn't been discovered in Dubai, and a young Australian chap named Rupert Murdoch had only just taken over a handful of his late father's local newspapers. It is a totally different planet we live in today, but the Porsche 911 remains a constant pillar of automotive prowess.

So, whether your 911 is your humble daily driver (like mine), a coveted weekend road or track machine, or one of several models in a collection, we are all part of the 911 legend, of motoring history itself. Your 911 is quite literally one-in-a-million. Surely then, there's never been a better time to fire up that flat six and head out for a drive.

“When the first 911 was produced, man hadn't yet set foot on the moon”





911 Opening Shot

Even in conditions of biblical rain and overbearing storm clouds, there can be no hiding from the majesty afforded by Scotland's spectacular North Coast 500 route. Meanwhile, confirming its distinction as the best everyday sports car during our road trip, Porsche's subliminal 991.2 C4S is at home in the adverse elements.

Photography by **Daniel Pullen**



Contents

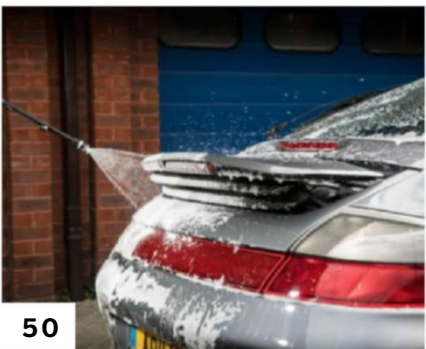
ISSUE #154 JUNE 2017

ESSENTIALS

Update All the big news, sport, history, products and columnists from your world of Porsche	08	Premier Porsche The finest industry contacts you need to buy, tune, restore or upgrade your Porsche 911	85
Views Highlights from your Porsche correspondence via email, social media and Total911.com comments	20	Data file Stats, specs, and current market trends for every model from 1963-2017	86
Subscriptions Become a loyal subscriber and get the magazine delivered to your door	42	Coming soon What's in the next issue of the world's only magazine dedicated to Porsche's 911	113
Living the Legend Our real-world Porsche 911 owners update you on their latest flat six escapades	76	Great Roads We're back in Scotland to sample one of the UK's best roads – and it's in the Queen's back yard	114

FEATURES

991 GT2 RS first look Andreas Preuninger takes us for a drive in a prototype ahead of the production car's launch	24	C4S to Scotland It's billed as the everyday 911, but can Porsche's 991.2 C4S shine in Total 911's most challenging road trip yet?	56
The game changers They're the 911s that proved most controversial at launch, but has history looked kindly on them?	32	PSM explained How exactly does Porsche's Stability Management traction system work?	64
3.2 Commemorative edition As Porsche celebrates one million 911s built, we drive the car produced to celebrate 250,000	44	996 road v race car Want to convert your 996 Carrera into a championship-ready race car? We show you how to do it	68
2017 car care mega test In a Total 911 first, we reveal the best car care products with a huge, critical group test	50		



44



56



YOUR 911 HOME

For back issues, subscriptions and other Total 911 products visit www.imagineshop.co.uk



“The GT2 RS is expected to beat its internal rivals”



24



64



114

Update

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



Porsche celebrates one million 911s

991 Carrera S in Irish green given to Porsche family to hail landmark seven-digit production run

On May 11 2017, Porsche celebrated building the one millionth 911 to roll off its Zuffenhausen production line. Presented to Dr Wolfgang Porsche as part of the family's private collection, the 991.2 Carrera S is finished in Irish green (green shades are a long tradition for Porsche family cars) and comes with a high specification – including plenty of Exclusive features that evoke the first 911 of 1963.

At a special ceremony at Werk II, Porsche outlined the importance of its 911 sports car, telling journalists: "The two-door car remains

the most strategically important model in the product range and makes a huge contribution to maintaining Porsche's position as one of the most profitable car manufacturers in the world."

The occasion was particularly exceptional for Dr Wolfgang Porsche, chairman of the Supervisory Board at Porsche AG, who has been a part of the development of the 911 since day one. He told **Total 911**: "54 years ago, I was able to take my first trips over the Grossglockner High Alpine Road with my father. The feeling of being in a 911 is just as enjoyable now as it was then.

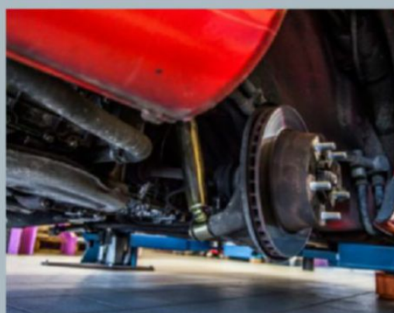
That's because the 911 has ensured that the core values of our brand are as visionary today as they were in the first Porsche 356/1 from 1948."

The legacy of Porsche's darling sportscar is unrivalled in the automotive world: all one million cars were produced on practically the same production line at Zuffenhausen, and 70 percent of all 911s made are still on the road today.

The one-millionth 911 will embark on a world tour, taking in road trips in the Scottish Highlands (which you will read about in **Total 911**), at the Nürburgring, the USA and China, to name a few.

KW Variant 3 kit for G-series 911s

German suspension experts KW have begun rolling out their new Variant 3 damper kits for classic G-series Porsche 911s. The uprights are bump and rebound adjustable and work with factory front and rear torsion bars, negating the need for strut conversions. For more information email info@kwaautomotive.co.uk.



Porsche & Microsoft's 24-hour virtual Le Mans

Following Porsche's partnership with Microsoft (**Total 911** issue 153), the two giants have announced the creation of a virtual race over 24 hours to run concurrently to the main Le Mans race. Various qualifying rounds will take place and the winner will be crowned at the official Le Mans prizegiving ceremony after the main race on 18 June.





What's on in 2017

- Le Mans @ Zuffenhausen
17-18 June
for the fourth year, the Museum will open for the entirety of the LM24 race.
- Goodwood FoS
June 29 – July 2
World's largest motoring garden party returns to Goodwood house.
- Neunelfer Cars & Coffee
16 July
The 911-only event combines with an open day at Poole Accident Repair.
- Porsche Alpine Tours
27-30 August
A four-day driver's tour exclusively for the owners of GT, R and Turbo S.
- Classics at the Castle
3 September
The UK's best classic car show returns to Hedingham, Essex after a short hiatus.

964 Turbo S sails past half-million pound mark

Silverstone Auctions' May sale sees further rise on Leichtbau's stock as rare Porsche prosper

A 1993 Porsche 964 Turbo S Leichtbau, one of the stars of **Total 911's** 150th special issue looking at the most iconic 911s of all time, sold for an incredible £556,875 (\$724,343) including premiums at Silverstone Auctions' May Sale.

By the time the hammer had fallen at Silverstone Circuit, the Lightweight,

which is one of just 81 examples made worldwide, ensured it had stolen the show as the highest value sale of the entire auction. A fierce bidding war between two bidders in the room for the collectible car comes only weeks after RM Sotheby's Amelia island auction where a similar 1992 car realised £1.07 million (\$1.4 million).

This continues evidence of a buying trend among collectors who are looking for low-production, low-mileage Porsches.

Elsewhere in Silverstone Auctions' May Sale, modern classic Porsche sold well: a 1989 3.2 Speedster selling for £164,250 (\$213,672), which exceeded its lower estimate by £19,250.



Porsche opens third Classic Centre

Norwegian city of Son welcomes special centre for classic Porsche cars

Zuffenhausen has continued its development of the new Porsche Classic arm with the opening of a new Classic centre in Son, Norway. Situated an hour's drive from the capital, Oslo, the new Classic centre will be uniquely responsible for sales and servicing of vintage and modern classic Porsche. "The level of motivation of the workforce at the

Porsche Classic Centre Son and the trust the classic customers place in their expertise is impressive," said Alexander Fabig, director of Porsche Classic at Porsche AG.

Porsche's Classic arm now comprises three Classic Centres at Son, Gelderland in Holland and Rouen, France, as well as 51 Centres certified as Classic partners.



Rennsport to host Total 911 cars & coffee

Porsches of all varieties will descend on the Cotswolds on 25 June

911 Rennsport are hosting a cars & coffee morning in association with **Total 911** magazine on Sunday 25 June. Running from 8am until 12:30pm, the event will be held at 911 Rennsport's picturesque premises at Cotswolds Business Village, Moreton-in-Marsh. Attendees can take advantage of an access-all-areas format to the day and look at

the backdates and bespoke builds 911 Rennsport are quickly gaining a reputation for. "We're delighted to be able to welcome Porsche aficionados into our home on Sunday 25 June," 911 Rennsport's managing director, Paul Cockle, tells us. "It'll be great to show people what we do and the roads around here are nice too, so it'll make for the perfect road trip!"



LUFTGEKÜHLT 4

California's air-cooled Porsche pilgrimage, created by Patrick Long and Howie Idelson, is becoming one of the world's best events in honour of Zuffenhausen

Words & Photography by **Chris Siebenaler**

Translated as 'air cooled' from the German language, Luftgekühlt has become a staple in the classic Porsche sphere through its unwavering striving toward perfect curation. The event has germinated from a small get-together to a large-scale gathering featuring notable street and race cars. This has amassed an immense fan base through the past four years, and doesn't show any sign of stopping.

From the dream team consisting of Le Mans winner Patrick Long and creative director Howie Idelson, Luftgekühlt attracts thousands of enthusiasts

and owners, gathering them for a late-morning ritual to celebrate the passion behind the air-cooled Porsche deep in the heart of SoCal. This year, Long and Idelson have teamed up with some of the industry's finest to make the event's fourth instalment the best one yet.

This year's event was undoubtedly the most memorable yet, allowing visitors to walk among some of the rarest and most special cars to ever compete in motorsport, from the most successful GT2 ever made to a 959 Group B rally car sporting Rothman's livery, plus a line-up of very RS model since the 911R.

It was the myriad special cars like those in an event like this that truly summed up what made Luftgekühlt 4 so special. Among the notable cars from the old days of motorsport, hundreds of businesses and owners showed off their rides, and perfectly encapsulated the spirit of the Porsche brand and its eclectic mix of patrons.

Even before Luftgekühlt 4 opened its doors, the show had quickly established itself as a must-see event for Porscheophiles. With planning already under way for 'Luft5', we can't wait to see how Long and Idelson will make the occasion even better.



Motorsport

The latest news and results from racing series around the globe



Porsche aim to catch up at Le Mans

Double points will close gap on LMP1 rivals Toyota; RSR must improve

Two races into the LMP1 season, it's Porsche's main rivals, Toyota, who have taken the lead in the WEC championship after successive wins at Silverstone and Spa.

After the season opener in Britain, Spa proved particularly challenging for the two 919 e-hybrid prototypes. The driving trio of Earl Bamber, Timo Bernhard and Brendon Hartley brought their no.2 car home in third place after battling a slow puncture. Meanwhile the no.1 car of reigning world champions Neel Jani, Andre Lotterer and Nick Tandy started from pole position for the six-hour sprint in Belgium. However, two unfortunately-timed periods of full-course yellow flags allowed rivals to steal an unassailable lead. A fourth-placed finish would

have to do, meaning Porsche had no response to the emphatic one-two finish from Toyota.

The result means Porsche, who for the first two races have been testing a lower-downforce aerodynamic package specific to the demands of La Sarthe, sit second in the WEC constructors' championship, nine points behind Toyota, while Weissach's two driver crews sit second and third in the LMP1 drivers' championship.

Meanwhile in LMGTE, the mid-engined 991 RSR continues to struggle in competition on European soil after both sister cars crossed the line in fifth and sixth at Spa. Head of Porsche Motorsport, Frank Steffen-Walliser, will be hoping the RSR can close the gap in pace to the dominant Ferrari and Ford at Le Mans.



Six class victories for Porsche at 2017 N24

Unrivalled success for Zuffenhausen's race cars at epic Eifel marathon

The 2017 Nürburgring 24-Hours proved spectacularly successful for Porsche's customer teams, helping the Zuffenhausen manufacturer to an impressive six class wins at the Eifel marathon.

In front of some 205,000 spectators, the best placed 911 was the no.31 911 GT3 R of team Frikadelli Racing, finishing the twice-round-the-clock race in sixth place. Frikadelli's no.30 sister car finished up in 17th position overall.

Elsewhere, Manthey Racing won the SP7 class with Porsche's 911 GT3 Cup MR, while Black Falcon TMD Friction squad triumphed in the V6 class in a 911 Carrera. Porsche's remaining class victories came courtesy of the GT4 Clubsport, after Manthey Racing and Falken Motorsport's 911 GT3 R's were forced into retirement.



Steffen Höllwarth: "We'll be back in force"

Strong performances in Texas for RSR scuppered by bad luck

Steffen Höllwarth, Porsche Programme Manager for the IMSA SportsCar Championship, has vowed Porsche will return from the summer break "in full force" after another blistering display from the no.911 and no.912 RSRs was undermined by instances of bad luck.

Off the back of second- and third-placed finishes so far this year, the best works car placed

fourth in Austin, Texas, following a shunt with a GTD-class Porsche and a 60-second penalty. It was rough justice for Patrick Pilet in the no.911 car after he'd come from fourth on the grid to take the lead. A collision also put an end to Wolf Henzler's race (standing in for Kevin Estre who was competing in the WEC at Spa) and Laurens Vanthoor, who finished eighth due to repair stops.

Motor racing in June & July 2017

April

WEC Le Mans 24-Hours
17-18 June

Carrera Cup GB Round 7: Le Mans
17 June

IMSA SportsCar Championship round 5: Watkins Glen
2 July

Porsche Supercup round 4: Red Bull Ring, Austria
9 July



RSJ SPORTS CARS

Specialising in Porsche Cars



Cayman GT4 Clubsport (65 - 2015)
Basalt Black with Black Leather,
4k miles.....£94,000



(997) Turbo Cab 3.8 PDK (11 - 2011)
GT Silver with black leather,
45k miles.....£70,000



(997) "4S" 3.8 "Gen 2" PDK (60 - 2010)
Basalt Black with Black Leather,
57k miles.....£47,000



(997) "2S" 3.8 "Gen 2" PDK (09 - 2009)
White with Black Leather,
37k miles.....£46,000



(997) "2S" 3.8 "Gen 2" PDK (08 - 2008)
Red with Black Leather,
50k miles.....£40,000



(997) Turbo 3.6 Tip (06 - 2006)
Basalt Black with Black Leather,
56k miles.....£52,000



(997) Turbo 3.6 Tip (07 - 2007)
GT Silver with Black Leather,
66k miles.....£48,000



(997) "4S" 3.8 Cab (57 - 2008)
Meteor Grey with Black Leather,
54k miles.....£37,000



(997) "4S" 3.8 (57 - 2007)
Midnight Blue with Grey Leather,
58k miles.....£35,000



(997) "4S" 3.8 Tip (56 - 2006)
Silver with Black Leather,
48k miles.....£34,000



(997) "2S" 3.8 Tip (57 - 2007)
Midnight Blue with Black Leather,
33k miles.....£34,000



(997) "2S" 3.8 Tip (07 - 2007)
Basalt Black with Black Leather,
60k miles.....£33,000



(997) "2S" 3.8 (57 - 2007)
Cobalt Blue with Ocean Blue Leather,
62k miles.....£33,000



(997) "2S" 3.8 (08 - 2008)
Meteor Grey with Grey Leather,
55k miles.....£33,000



(997) "2S" 3.8 Tip (07 - 2007)
Red with Black Leather,
57k miles.....£33,000



(997) "2S" 3.8 Tip (07 - 2007)
Cobalt Blue with Grey Leather,
55k miles.....£33,000



(997) "2S" 3.8 (05 - 2005)
Silver with Ocean Blue Leather,
34k miles.....£30,000



(997) "2S" 3.8 (05 - 2005)
Silver with Red Leather,
52k miles.....£30,000



(997) "2S" 3.8 (55 - 2005)
Silver with Ocean Blue Leather,
53k miles.....£28,000



(997) "2S" 3.8 Tip (55 - 2005)
Basalt Black with Grey Leather,
58k miles.....£28,000



(996) Turbo 3.6 Tip (53 - 2003)
Silver with Black Leather,
49k miles.....£45,000



(996) Turbo 3.6 Tip (03 - 2003)
Basalt Black with Black Leather,
71k miles.....£40,000



Porsche Cayman "S" 3.4 PDK (63 - 2013)
Agate Grey with Black Leather,
31k miles.....£43,000



Porsche Boxster "S" 3.4 (13 - 2013)
Dark Blue with Grey Leather,
29k miles.....£36,000



Porsche Boxster "S" 3.4 PDK (12 - 2012)
Red with Black Leather,
24k miles.....£35,000



Porsche Macan 2.0 PDK (65 - 2016)
Basalt Black with Black Leather,
13k miles.....£50,000



Porsche Cayenne "GTS" 4.8 Tip (58 - 2008)
Basalt Black with Black Leather,
58k miles.....£23,000

STS House, Bristol Way Slough, Berkshire, SL1 3QE
T: 01753 553 969 www.rsjsportscars.com

PORSCHE WANTED (2003 TO 2014)

This month in history

A look back through the archives to important July milestones from the 911's past

1962

Porsche records its Grand Prix victory

When Formula 1 went to 1.5-litres in 1961, it seemed tailor-made for a Porsche, which thanks to Stirling Moss had proved quite successful in the 1,500cc F2. But F1 was much more competitive, and during the opening 1961 season, except for one second place, the four-cylinder 718s of Gurney and Bonnier were left behind. Led by Hans Mezger, Porsche worked hard over the winter on a new flat-eight engine and a new car, the 804.

Development meant the F8 804 was not ready until mid-season but thanks to retirements, Gurney won at Rouen, and he and Bonnier finished 1-2 at the non-championship Solitude GP the following weekend. A loose battery sadly cost Gurney the lead at the German GP, where he finished third; the 804 was outclassed at Monza, and by the time of the US GP – where Gurney was fifth – Ferry Porsche had already decided to withdraw from F1. Clearly, much more development was needed, and Porsche, on the point of launching the 911, and with the prospect of having to buy out its coachbuilder, simply did not have the resources.



1966

First 911S revealed

The first tuned production 911 was a minor sensation. A 2.0-litre sports car offering 160bhp and a top speed with a favourable wind of 140mph was unprecedented. The flat six's power was increased through deeper breathing: the compression ratio increased from 9.0:1 to 9.8:1, inlet and outlet valves grew in diameter by 3mm, actuated by a higher lift camshaft. Maximum torque was 1,000rpm later than the 911's at 5,200, and full power came at 6,000rpm, though the rev limit was set at a heady 7,300rpm, heights never subsequently reached as the cubic capacity of the air-cooled design was increased over the years.

Despite not being launched until October, journalists tried the first cars in August: *Autocar* and *Auto Motor & Sport* both remarked on the S's propensity to hang its tail out on corners, though *Autocar* loved the kick of acceleration above 3,000rpm, saying it "felt like two extra cylinders joining in." Indeed, the S was highly tuned, and drivers needed to blip the engine in traffic to prevent plug fouling, though this hardly deterred buyers. With performance to match anything with a V8, and fast enough to trouble the rare Italian exotics, the top-of-the-range 911S undoubtedly enhanced Porsche's giant-killing reputation even further.

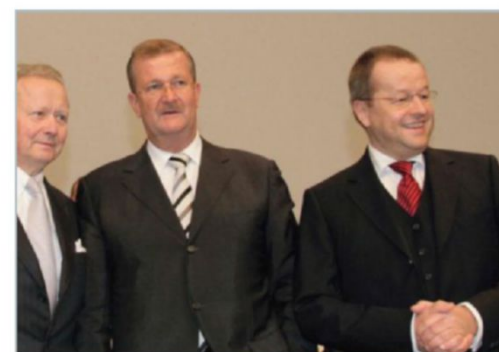
2009

Wendelin Wiedeking fired

Occasionally, fact is stranger than fiction. This was certainly so with Porsche's attempted takeover of VW, which unfolded in the best traditions of a soap opera and finished by backfiring spectacularly.

Porsche financial director Holger Härter was not a time-served Porsche man like his predecessors Walter Gnauert and Heinz Branitski; rather a man from outside the industry who understood – or claimed he understood – the markets. By 2005, Porsche was making ever greater profits, and Härter persuaded his boss Wendelin Wiedeking that Porsche should start investing some of that money, and who better than in Volkswagen? By 2008, it owned 30 per cent of the company. Commentators remarked that Porsche earned three times as much from 'financial derivatives' as it did from selling cars.

But in a series of paroxysms comprehensible only to city insiders, the VW share price went up and then plunged, effectively bankrupting Porsche. Chairman Ferdinand Porsche dramatically swept aside the ineffectual Porsche Vorstand, led by Wolfgang Porsche, and Porsche became VW group's tenth auto company. A dismissed Wiedeking left with a record-breaking pay off. Despite speculation to the contrary, Porsche under VW would continue to flourish almost as if nothing had happened.



1963

1963

Porsche completes acquisition of Karosseriewerk Reutter: little changes physically, though Porsche gains 1,000 employees.

1975

Porsche announces the return after seven years of the 912: an interim US-only model that fills the gap between the demise of the 914 and delivery of the new 924. 2,000 912Es are built.

1994

Road & Track clocks 0-60 in 4.5s for the 964 3.6 Turbo, but as it understeers round the cones of their slalom course, "the overwhelming sense of mass in the tail was intimidating."

1996

Porsche's millionth car a 993 is handed over to Baden Württemberg police. It marks the end of 40 years of police Porsches in Germany.

2007

The optional short shift of the Turbo 997 impresses with 1-150 mph in 19.6s, a couple of seconds faster than the 100kg lighter Ferrari F430, but the 4x4 Turbo "lacked steering feel."

2017

TOTAL 911 IN ASSOCIATION WITH
911 RENNSPORT PRESENTS

NEUNELFER

THE CARS & COFFEE EVENT OPEN
TO ALL MODELS OF
PORSCHE 911



SUNDAY JUNE 25 | 2016
8AM - 12PM
@ 911 RENNSPORT

COMPREHENSIVE STATIC DISPLAY FEATURING WORLD-CLASS PORSCHE EXOTICA

FULL 911 RENNSPORT BACKDATE RANGE ON SHOW

WIN PRIZES: CAR OF THE DAY, ULTIMATE TRAVELLER, SPIRIT OF PORSCHE

TAKE A LOOK IN THE 911 RENNSPORT SHOWROOM



**WIN
PRIZES**
CAR OF THE
DAY

Venue: 911 Rennsport, Cotswold Business Village, London Rd, Moreton-in-Marsh GL56 0JQ. To reserve your 911 space at the event email your name and car registration to editorial@total911.com. See you there!



Ben Barker

The FIA WEC driver shares all about his world championship campaign

- **2017:** FIA WEC Gulf Racing 991 RSR
- **2013-2016:** Porsche Mobil 1 Supercup
- **2012:** Porsche Carrera Cup GB Runner Up



Looking forward to Le Mans

Ben reveals his preparation secrets for one of the biggest events of the racing season

In terms of recognition, one race stands head and shoulders above all others in the endurance racing world, one that casual race fans can name alongside the Monaco Grand Prix or Indianapolis 500, and definitely the one that all sports car drivers want to win.

Fernando Alonso's determination to race at Indianapolis rather than soldier on at the wheel of his F1 car at Monaco was part of a bigger picture, stage two of winning motorsport's 'Triple Crown', with the Le Mans 24 Hours presumably on his radar as the final piece of the jigsaw in the future. For me and the Gulf Racing team, however, pursuit of the silverware at Le Mans is a very immediate goal.

As I write this, preparation for the race is in full swing. The 2017 FIA World Endurance Championship hasn't exactly gone our way so far, with retirement in round two at Spa-Francorchamps halting our latest bid for the podium, and while the DNF in Belgium was unfortunate, caused by a stray piece of debris destroying a wiring loom, the team is leaving no stone unturned when it comes to preparation for Le Mans.

The workshop is a hive of activity, with engines and gearboxes undergoing rebuilds in readiness

for racing twice around the clock on a track that will test cars to the limit. That level of preparation and attention to detail paid off last year, as we made it to the chequered flag without a single problem, so the team knows exactly what is needed if we are to do that again.

The official pre-race test on 4 June will go a long way to confirming the base setup for the #86 Gulf Porsche 911 RSR. Le Mans has a lower aero requirement than the other tracks we've been to this season, and we'll be running different gear ratios at the Circuit de la Sarthe, so there is a lot to work through in just a few hours to confirm the set-up direction we've predicted from work in the simulator.

For a driver, the build-up to Le Mans is just as intense, as you expect to be doing longer stints behind the wheel in a race four times as long as any other WEC round. It's not easy to wind down and relax between stints either, so you need to prepare your mind and body to go to the extreme.

I'm confident that my fitness levels are already good enough to deal with the Le Mans experience. It's not just the race that punishes you, but also the days (and nights) of practice and qualifying in the week that precedes it – and I'm not making life any easier for myself by also

tackling the supporting GT3 Le Mans Cup race with Andrew Baker.

Track action kicks off on Wednesday of race week, but Thursday already looks set to be the busiest day for me, as I'll have practice and night qualifying in the RSR, as well as practice, qualifying and a race in the GT3LMC. I reckon I'll be spending the equivalent of half a day in one car or the other – with a lot of running between paddocks in between – but it's a challenge I readily accept, and I've been doing that little bit more just to make sure I have an extra edge.

Playing 5-a-side football might not be an obvious means of preparation for sitting in the cockpit, but I've included it alongside the usual gym work and CrossFit sessions to add a little variety to the process as I make sure I'm mentally, as well as physically, prepared. With racing being unpredictable at the best of times, you can never fully plan your weekend, and need to make sure your energy levels are as high as they can be at all times, so I've been working on my diet as well as my training and preparation in the simulator.

This is the biggest race of the year, and both Gulf Racing and myself are ready for the task ahead. Bring it on!

MAXTED - PAGE

PORSCHE HISTORIC RACING



The ex-Lord Mexborough / right-hand drive

1974 Porsche Carrera 3.0 RS | Chassis # 911 460 9092

One of only six right-hand drive Porsche Carrera 3.0 RS Coupes built by the factory.

This unique (C16-UK) Mexico Blue example was acquired by Lord Mexborough in 1983 and retained by him in his collection for 30 years - part of this car's outstanding provenance. Having just 43,000 miles recorded since new, this really is one of the rarest and most desirable UK right-hand drive Porsches ever built.

MP

P.O. Box 7039 • Halstead • Essex • CO9 2WL • United Kingdom
Tel: +44 (0) 1787 477749 • Mob: +44 (0) 7771 922433 (7 Days) • Email: enquiries@maxted-page.com

www.maxted-page.com



Products

Total 911 presents three of the best motorsport-inspired chronographs for a £500 budget



Elliot Brown Bloxworth 929-015-L16

£525

You'll be hard pressed to find a better value chronograph on the market than a Bloxworth from Elliot Brown. One of five new models just released by the Dorset-based watchmakers, this 929-015-L16 is self-described as the go-to watch for car enthusiasts. Made from 316L marine-grade stainless steel, the 44mm-diameter timepiece has a lovely weight (it is the heaviest of our watches on test) and, like the 911 itself, is extremely robust and well built. Motorsporting connotations are upheld here by a cool grey face with lashings of chrome and red. Its brushed case and bezel are topped off with pebbled leather replete with grey stitching.

The timepiece otherwise is lavished with the usual Bloxworth hallmarks including a shock-absorbing steel movement housing, knurled crown and push buttons for superior grip, and a Swiss made 13-jewel chronograph movement, which has a three-year battery life.

elliottbrownwatches.com/bloxworth



NEZUMI Studios Voiture chronograph

€355-395

Creator of NEZUMI Studios, David Campo, knows exactly the sort of motorsport-inspired timepiece that will appeal to the 911 driver – he's the founder of air-cooled 911/912 outlaw group Roughneck Brigade. This Voiture racing chronograph is the Swedish-based lifestyle brand's first attempt at a timepiece, and it is marvellous. David says the Voiture is a true classic chronograph inspired by the Sixties and Seventies racing era; the case is made from 316L stainless steel with a delicate mixture of brushed and polished surfaces, and it is available with a white, black or blue watch face, punctuated by polished bevel indices and a sandwich dial incorporating two levels of polished and matte dials. Powered by a Seiko VK63 mechanical quartz movement, the watch is lightweight, in keeping with its motorsporting intent, and the product is finished with a black perforated leather strap to complete the retro racing look.

nezumistudios.com



Porsche Design Driver's Selection Sport Classic

£490

Available as either a Silver or Black edition timepiece, the Sport Classic is a timeless product from the Porsche Design's Driver's Selection series and it is a popular choice among customers. Both Swiss made and featuring a Ronda quartz movement with 13 jewels, we prefer the contrasting white tachymeter numerics adorning the Black watch's bezel. The stopwatch and split-time measurement push buttons that are located next to the Sport Classic's crown are elongated here, blending in perfectly with the toughened aluminium case. We also appreciate the decorative carbon inserts that are sat on the watch face, ever a sign of a product's sporting integrity, and this works perfectly alongside striking red accents that are reminiscent of your 911's redline. The watch additionally has a waterproof aluminium casing (to five ATM) and a rubber strap that provides lighter, fuss-free application.

shop1.porsche.com



PRE-ORDER YOUR NEZUMI BALEINE DIVE WATCH STARTING

JUNE 11

- AVAILABLE IN 3 VERSIONS -



- SPECIAL PRE-ORDER PRICING -

CHECK WEBSITE FOR DETAILS AND OTHER WATCHES

WWW.NEZUMISTUDIOS.COM

Views

Contact Total 911



Twitter
@Total911



Facebook
/total911magazine



Email
editorial@total911.com

The very best of your Porsche opinions via emails, letters, the website & social media



CA smog test: a Porsche perspective

Dear Sir,

I'll start by saying I love the Living the Legend section of **Total 911**. I can also relate to Tony McGuinness and his comments regarding the California smog test (**Total 911** issue 150). When you live with MOT tests in the UK, our California motor vehicle regulations must seem quite strange.

I am very lucky that my 1973 911 Carrera RS replica is exempt, though I have had time-wasting aggravation passing the test with a couple of my other cars.

One thing that Tony did not mention is that 1996 and newer cars no longer get a rolling road smog

test. Now, the tester just plugs into the car's OBD2 port and reads the fault code history.

This is great unless you have a fault code, or you have had one recently and the fault fixed and code deleted. I had this happen with two of my cars where a minor fault code was fixed and deleted, and I had to bring the vehicle in repeatedly after logging more than 300 miles before they would pass the CA test.

It is nice that our air is cleaner, but the car owner has to put up with added time and cost with the current system as a result. However, there is little hope of the CA regulators giving



© Chris Hunter

us any sympathy, they will only be happy when we give up our cars – or drive all-electric ones.

Dick Lague

We appreciate we must all assume a responsibility to protect our planet for now and for future

generations, though as you say, the caveat is a perpetual headache for motorists who are simply running their car. We are fortunate that the Porsche 911's emissions figures are generally excellent for a sports car with such a high-performance engine.

Write to or email us with your Porsche opinions and the star correspondence will receive a complimentary copy of the **Porsche 911 Buyer's Guide 2nd Edition** bookazine worth £9.99!



Four banger, no clanger

Dear Sir,

I found great intrigue in an article from your latest issue (**Total 911** issue 153) concerning the Porsche 912. I've owned a 1966 Porsche 912 for the last 11 years and I love its pure Porsche lines and properly classic driving experience, with minimal grip from skinny tyres all round (the back end gets nervous from time to time!). It has an engine that sings wonderfully without attempting to shoot me forward at such a pace that I might become a person of interest to the local constabulary, as well as a frankly hilarious chassis that has all the wobble of a slinky (remember those?). This car is way more fun to drive than many people give it credit for, so it's about time that more people realised their value. They're better value than most 911s,

that's for sure!
Clive Bennett

The 912 is a fun car to drive, of that there is no doubt. By way of values, they can never be on par with a 911 of the era purely because their equipment and

spec isn't anywhere near as polished. There is a reason Porsche marketed the 912 far below the 911 in terms of sale price. However, a 912 can be the basis of a fun Porsche project, particularly if we're talking a 912/6 build...



Ask the expert

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



Scott Gardner
Job Title
Gold Diagnostic Technician
Place of work
Porsche Centre Bournemouth, UK
Time at Porsche
11 years

Q: "I've noticed the rear spoiler on my 997.2 Carrera S activates and deactivates at different speeds. I assumed the spoiler activated at 78mph like my previous 996 but on occasion it seems to deploy earlier (whether I'm in Sport mode or not). Is this normal or is something wrong?"
Malcolm Hares, Sweden

Scott's answer: "The spoiler in 'automatic' mode will deploy at 75mph and then retract at 37mph. This happens when the engine temperatures are below 55°C. If the temperature is above 60°C the spoiler will extend at 50mph and retract 20mph. If there is a fault with the spoiler drive you will get a warning message displayed."

Lightweight Speedster?

Dear Sir,

I wonder if you can clarify something for me. I've heard rumours that Porsche is going to build a lightweight 991 Speedster with the 991 R engine, due for release later this year. I know that **Total 911** is pretty hot for disclosing spy shots, so I wonder if you've seen anything? Should I put down a deposit for one?

John M. Williams

You'll remember we told you back in issue 146 that Porsche was planning to produce special Speedster and Sport Classic 991s due for release later this year. However (and we've learned never to say 'never' with Porsche) the car is unlikely to be a lightweight with the R's flat six. The strengthening of the body and chassis required for the Speedster to remain structurally rigid puts paid to any assumptions of a lightweight car. By way of engine, we would expect something that's in line with the 997 version, which utilises a Carrera S engine with Exclusive Powerkit. But then again, like we said, never say never!



Cairngorms continued

Dear Sir,

Following on from our 'evolution of Carrera' group shoot (from issue 153), we were back in the Cairngorms again yesterday (not for the first time since **Total 911** was here) – which

always supplies some great opportunities for photos. Please see attached.

Paul Barlow

As we've pointed out in our great roads entry for this

issue, Cairngorms' Old Military Road really is one of the best driving roads in the UK, it's the perfect playground for any Porsche 911. We're pleased to see your GTS gracing the route again, if a little jealous!



Manual GT3 for sale

Dear Sir,

My name is Dimitris Taloumis and I am from Athens, Greece. I have a very nice Porsche 997.1 GT3 Clubsport, model year 2008, with only 86 kilometres on the clock from new. As you can imagine, the car has very rarely been driven in its nearly ten years of life. Unfortunately the time has come to sell the car and I wondered if I could do this via **Total 911**? If any of your readers are



interested in the car, please encourage them to get in touch – as a manual car, it'd be great if it went to another enthusiast who's serious about his Porsche collection.

Dimitris Taloumis

Now that's a low mileage car! As Dimitris says, if you're interested in the car, please get in touch and we can connect you.

**Total
911**
THE PORSCHE MAGAZINE

Future Publishing Limited
Richmond House, 33 Richmond Hill
Bournemouth, Dorset, BH2 6EZ

Editorial

Editor **Lee Sibley**
lee.sibley@futurenet.com
01202 586291

Senior Art Editor **Stephen Williams**

Contributors

Rob Clarke, Richard Klevenhusen, Tony McGuinness, Joel Newman, Sean Parr, Gina Purcell, Chris Randall, Chris Wallbank, Kyle Fortune, Joe Croser, Greg James, David Grover, Kieron Fennelly, Daniel Pullen, Dana Pawlicki, Wilhelm Lutjeharms, Craig Llewellyn, Joe Williams, Neil Watson, Duwyne Aspeling, Rich Pearce, Steve Wright, Carrie Mok, Charles Ginger

Cover images

Porsche AG

Photography

All copyrights and trademarks are recognised and respected

Advertising

Media packs are available on request
Regional Advertising Director **Mark Wright**
mark.wright@futurenet.com
Advertising Manager **Toni Cole**
toni.cole@futurenet.com
Account Manager **Alex Choma**
alex.choma@futurenet.com

International

Total 911 is available for licensing. Contact the International department to discuss partnership opportunities
International Licensing Director **Matt Ellis**
matt.ellis@futurenet.com

Print Subscriptions & Back Issues

Web www.myfavouritemagazines.co.uk
Email contact@myfavouritemagazines.co.uk
Tel **0344 848 2852**
International **+44 (0) 344 848 2852**

Circulation

Circulation Director **Darren Pearce**
01202 586200

Production

Head of Production US & UK **Mark Constance**
Production Project Manager **Clare Scott**
Advertising Production Manager **Joanne Crosby**
Digital Editions Controller **Jason Hudson**
Production Manager **Nola Cokely**

Management

Finance & Operations Director **Marco Peroni**
Creative Director **Aaron Asadi**
Art & Design Director **Ross Andrews**

Printed by

Wyndeham Peterborough, Storey's Bar Road,
Peterborough, Cambridgeshire, PE1 5YS

Distributed by

Marketforce, 5 Churchill Place, Canary Wharf, London, E14 5HU
www.marketforce.co.uk Tel: 0203 787 9060

We are committed to only using magazine paper which is derived from responsibly managed, certified forestry and chlorine-free manufacture. The paper in this magazine was sourced and produced from sustainable managed forests, conforming to strict environmental and socioeconomic standards. The manufacturing paper mill holds full FSC (Forest Stewardship Council) certification and accreditation

Disclaimer

All contents © 2017 Future Publishing Limited or published under licence. All rights reserved. No part of this magazine may be used, stored, transmitted or reproduced in any way without the prior written permission of the publisher. Future Publishing Limited (company number 2008885) is registered in England and Wales. Registered office: Quay House, The Ambury, Bath BA1 1UA. All information contained in this publication is for information only and is, as far as we are aware, correct at the time of going to press. Future cannot accept any responsibility for errors or inaccuracies in such information. You are advised to contact manufacturers and retailers directly with regard to the price of products/services referred to in this publication. Apps and websites mentioned in this publication are not under our control. We are not responsible for their contents or any other changes or updates to them. This magazine is fully independent and not affiliated in any way with the companies mentioned herein.

If you submit material to us, you warrant that you own the material and/or have the necessary rights/permissions to supply the material and you automatically grant Future and its licensees a licence to publish your submission in whole or in part in any/all issues and/or editions of publications, in any format published worldwide and on associated websites, social media channels and associated products. Any material you submit is sent at your own risk and, although every care is taken, neither Future nor its employees, agents, subcontractors or licensees shall be liable for loss or damage. We assume all unsolicited material is for publication unless otherwise stated, and reserve the right to edit, amend, adapt all submissions.

ISSN 1746-6130



Future is an award-winning international media group and leading digital business. We reach more than 57 million international consumers a month and create world-class content and advertising solutions for passionate consumers online, on tablet & smartphone and in print.

Future plc is a public company quoted on the London Stock Exchange (symbol: FUTR).
www.futureplc.com

Chief executive Zillah Byng-Thorne
Non-executive chairman Peter Allen
Chief financial officer Penny Ladkin-Brand

Tel +44 (0)1225 442 244

JZM
PORSCHE

SALES
SERVICING
TUNING
PARTS
ACCESSORIES

jzmporsche.com

SUMMER SURGERY CHECK

Book your car into our Saturday Surgery Health Check and you will **receive £25.00 off** any subsequent work booked in before the end of **June 2017**.

Quote the REF: **SUMMER 2017**

EVERYTHING FOR **YOUR PORSCHE**



996 TURBO 2002

BASALT BLACK, 8,500 MILES, INVESTMENT GRADE | OFFERED AT \$85,000

2003 **996 TURBO**

WELL OPTIONED, LOW MILES, RECENTLY SERVICED | OFFERED AT \$70,000



LIMITED
NEXT GENERATION CAR GUYS



@LBILIMITED

PHILADELPHIA, USA • 215-459-1606

SALES@LBILIMITED.COM

991 GT2 RS THE PROTOTYPE

Andreas Preuninger takes Total 911's Kyle Fortune for a drive in the final 991 GT2 RS prototype ahead of the production car's launch

Written by **Kyle Fortune** Photography by **Justin Leighton**

I'm laughing. I can't help myself, sitting on a plane home from Stuttgart, earphones in, transcribing the conversation I've recorded between myself and Porsche GT department's Andreas Preuninger. I hear a 3.8-litre turbocharged engine roar as we chat. Nothing too amusing in that. Except my reaction. Even above the engine's gloriously guttural note there's a long expletive exclaimed in accompaniment. The GT2 RS will do that to you, its performance in a league that's beyond the ordinary, even from something wearing a GT badge on its rump.

Only it isn't. Being a prototype, even the crest on the bonnet is hidden, the rear a mix of GT3 RS panels, bonded-on disguising, a pair of massive exhaust pipes and good, old-fashioned tape. Not that there's any hiding what this is, the GT2 RS not among Porsche's best kept secrets. It's not like the 911 shape isn't recognisable, either, and just in case ➡







“The expectation is that it’ll meet and then beat any internal competition”

you were in any doubt, if those exhausts are hot you’ll see the catalysts glowing orange from behind. After seven years too, a new GT2 RS is arguably overdue, Preuninger admitting customers have been asking about a new one for some time.

Well it’s coming, officially, and we’ve been for a very early ride in it. So early that the first pre-production cars don’t actually start running down the line for another couple of weeks. It’s those cars that will homologate the figures for Porsche’s most extreme 911. This black, battle-scarred car represents 991 GT2 RS genesis, which somewhat explains why it looks like something of an engineering lash-up.

Not that Preuninger would ever describe his new baby as such. Underneath the black wrap there’s evidence of Lava orange, this GT2 RS starting life as a GT3 RS. The metamorphosis from a naturally-aspirated, 500hp, 4.0-litre car to a forced induction 3.8-litre is one that the GT man describes as a labour of love, that’s accounted for many, many man hours.

Start pressing him on the details and it’s clear to see why. He’s quick to point out that the GT2 RS is very much not just a chipped Turbo S. Yes, the 9A1 engine block is the same, though there’s some differing machining, the internals being revised to cope with its greater output. Porsche isn’t prepared to admit how much, yet, the only figure that’s being

banded about being 650hp. Only there’s a *greater than* sign in front of that.

We’ve all read the rumours of how much more that might be, but until the actual number is properly homologated nobody’s officially saying anything. That’s true of the torque too, which is said to be in excess of the 750Nm quoted for the Turbo S.

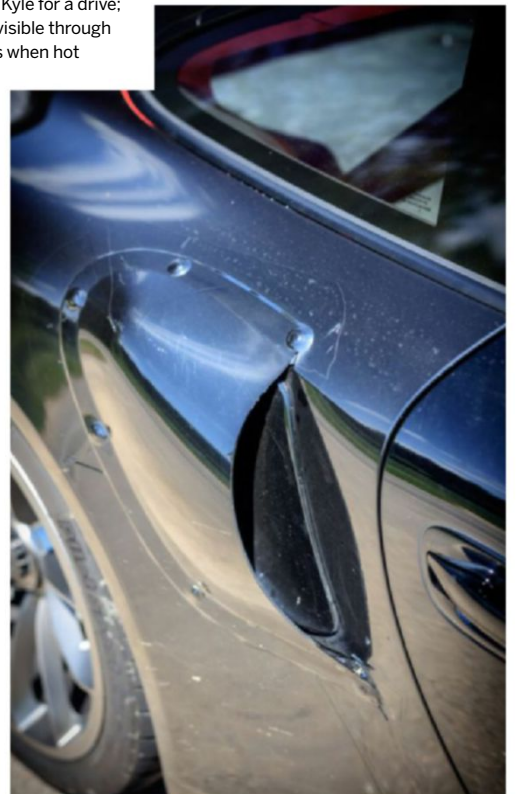
Take those (rather conservative) figures and compare them to the 997 GT2 RS’s 612hp and 700Nm and even that’s quite a leap. Allowing it are new turbos and a higher boost pressure, though it’s the intercooling that’s most critical to the engine’s greater performance. There’s now spray-cooled intercoolers, these operate at higher temperatures, spraying a finely controlled mist of water onto the intercooler’s netting. The evaporation effect reduces the intake temperature by as much as 15 degrees. Given the 911’s inherent difficulty in thermal management because of its rear-engined configuration that’s a huge gain, and equally crucial in allowing the new GT2 RS’s monstrous performance.

The system itself is fed by a five-litre tank under the bonnet, which can be filled with regular water, Preuninger joking that it works best with the water from Weissach’s well. In normal use it’ll not need filling too often, but three hot laps of the Nürburgring should see it empty completely. ➔





Clockwise from above Loud and lairy interior is pure GT2 RS; new side air intakes will be unique to this turbocharged Rennsport; Preuninger takes Kyle for a drive; glowing cats are visible through big bore exhausts when hot



There is, as with its predecessor 997 GT2 RS, rear-wheel drive, Preuninger saying they debated using four-wheel drive but decided it would make it impossible to properly distance it from the Turbo S. That it saves around 50kg is handy, too, the kerb weight goal being under 1,500kg (a Turbo S is quoted at 1,675kg, for comparison).

The manual six-speeder has gone, replaced by a seven-speed PDK. Preuninger is unapologetic, saying: "PDK is for the RS models, we like the idea of the driver's cars. It is perfect for the GT3, but for anything with the RS badge on it we think it's about lap times, about competition and the PDK has an absolute edge over everything else. With the amount of torque it has, it's wise to have a PDK gearbox." This fitting of PDK allows the fully electronically controlled rear-differential to feature, with 0-100% lock-up on offer.

Being rear-wheel drive, he admits that the GT2 RS will, inevitably, "lose some traction from the get-go", the official line being less than 3.0 seconds to 62mph, though the expectation is that it'll meet and then beat any internal competition above that, being comfortably below nine seconds to 124mph (200km/h). Mighty quick, then, and in keeping with its top dog 911 status, the top speed is anticipated to be in excess of 211mph (340km/h). They'll find out in the next few weeks for sure, but the promise is

for the fastest production 911 ever, which given the considerable downforce its revised bodywork will produce while it's doing that is impressive indeed.

Creating that is a combination of elements. The tall rear wing is an RS signature, held up on aluminium struts which, like the GT3 RS's, is adjustable. There will be ducts venting above the front wheels, lowering pressure in the wheel wells, the treatment of which will be visually distinct to those featuring on the GT3 RS and, hence, this prototype. There's a unique front end, too, a more prominent splitter, the bumper here featuring GT2 RS lettering in the central intake. Those NACA ducts on the bonnet are there to accelerate air down and over the front discs for superior cooling of the standard PCCB brakes.

They'll make it to production too, their benefit greater than merely brake cooling, contributing also to a lower coefficient of drag by reducing turbulent air over the car. Under the engine will be a more radical diffuser which, combined with all the other aerodynamic revisions, will produce downforce at its top speed slightly below 400kg, extraordinary for a road car.

The new GT2 RS is a car which, Preuninger admits, will look very different to this prototype here, saying it'll be a loud car visually inside and

out. Underlining that is the fact around 60% of the 997 GT2 RSs were optioned with a red Alcantara interior similar to that of the prototype here. While that overt look might be against the company's usual philosophy, it's very much in keeping with the GT2 RS's audience. The rear intakes fore of the rear wheel will again be bespoke for the GT2 RS, with the majority of the GT2 RS's unique detailing being made of visible carbon fibre.

It will, claims Preuninger, "Say 'here I am, I'm the king, I'm the alpha animal'. It's an RS and RS means race, and that's deliberate. We've been under attack regarding lap times, people keep telling us we're only concentrating on old school stuff like manuals and feeling and driveability – suggesting that's only an excuse that we're not fast enough anymore. The GT2 RS is proof positive that those people are completely wrong." It's obviously – understandably – been around the Nürburgring then as part of its development and will, in due course, set a lap time. Like everything else numerical relating to the GT2 RS today, what it'll be is very much open to speculation. Let's just say very, very fast then, until we can put a real number to it, though the old car could do 7:18 and the 991.2 GT3's achieved 7:12... Into the sixes? If it wants to beat its rivals it'll have to be. What's impossible to ignore is the physicality of the thing. ➔



GT2 RS: What we now know

- Power to be greater than 650hp
- **Max torque in excess of 750Nm**
- Sub 3.0-second 0-62mph time
- **Top speed in excess of 211mph**
- Expected 'Ring time of close to seven minutes flat
- **Fully rose-jointed suspension**
- Heavily revised 3.8-litre Turbo S engine with spray-cooled intercoolers
- **Rear-steer & PCCBs standard equipment**
- PDK only
- **Weissach pack available, saving 30kg**



Right and below right Front wheel arch vents will be 'visually distinctive' from those on the GT3 RS – we think carbon fibre; Adjustable rear wing though is reminiscent of GT3 RS





Below and bottom Bonnet-mounted vents feed air to cool the front brakes; Headlight-printed cammo film hides DRLs. Expect front bumper to follow design of 997 predecessor





“The new GT2 RS’s spring rates are set to be the most extreme ever for a Porsche 911 road car”

Even fresh from the experience of the new GT3’s high rev potency, the GT2 RS feels on a different level. The brutality of the forces that engine places on you is 918-esque in its elasticity, if not having quite the Porsche hypercar’s ludicrous electrically-aided immediacy. It’s at its mightiest when already moving; the way the GT2 RS exploits the briefest gaps on the enlightened high-speed German roads is incredible. Speeds of 100km/h, then 200km/h, then 300km/h are mentioned by Preuninger as they’re passed, seeing the rest of the traffic go into reverse as the GT2 RS asserts its dominance.

Like that 918 Spyder, the GT2 RS will be offered with a Weissach pack which, if chosen (everyone will) should reduce the kerb weight by a further 30kg or so. Allowing that will be a titanium roll cage, it accounting for as much as 7 kg, magnesium wheels that drop 12kg over the standard alloy ones (those sharing the 265/ZR20 front and rear 325/30 ZR21 sizes and coming shod with GT2 RS specific Michelin Pilot Sport Cup 2s). Also included is

carbon fibre anti-roll bars and other suspension elements in the lightweight weave. Even the standard magnesium roof is replaced by a carbon fibre one with the Weissach pack. It is amazing that the GT department’s obsession with efficiencies and weight having has found a way to make a carbon roof lighter than that once lightest magnesium one.

Even so equipped, the GT2 RS isn’t wholly stripped of civility, Preuninger saying that with so much power on offer, taking out all the sound proofing just isn’t necessary. You’ll want to leave the radio and air conditioning in it, then, as everyone does, while the rear glass is exactly that – not Perspex, though it’s lightweight Gorilla Glass, of the type used in mobile phones.

If the engine dominates with its brutal, forceful shove and outrageous, rousing blaring exhaust note, then the chassis is a bit more subtle. That’s despite rose-joints throughout, the only link to the chassis not featuring a ball-joint being that for the rear-wheel steering system. The dampers are upside-down

racing items, with two modes, the spring rates the most extreme ever for a Porsche road car, basically being that of a Cup car set up for the Nürburgring. That’s double the spring rate up front compared to the new GT3.

On the (admittedly smooth) roads surrounding Weissach, it rides well, Preuninger describing the steering as immediate and rich in detail, allowing him to feel what’s going on at the front axle. That’s obvious given the speed he’s carrying, the turn-in clear in its immediacy, aided by the standard rear-wheel steer. There’s obviously huge stability from the chassis and ridiculous levels of grip and traction, the GT2 RS monstrosity bends on the country roads around Weissach. There’s no slack, no body roll, the standard lightweight bucket seats a necessity to hold you tightly against the huge cornering forces. Without a steering wheel to hang onto it’s quite a ride.

“I like the absolute brutal power that this has. It’s a joy to drive on the track, it’s so precise, it’s so nimble and agile and a lot easier to drive than a 997 GT2 RS, which was a brute, to the point where you couldn’t handle it sometimes – and this one has way more power,” says Preuninger. We’ll find out just how much in good time but on early evidence the new 991 GT2 RS is a hilarious, thrill-ride of a car, which is exactly as it should be: distinct, outrageous and, like the expletives it’ll force from its passengers, more than a little bit rude. **911**

996.1 CARRERA

THE GAME CHANGERS

They're the cars that significantly evolved the 911's story but as a result proved most controversial among purists. We look at whether history has been kind to Porsche's game changers

Written by **Joe Williams** Photography by **Dan Pullen & Rich Pearce**

964 CARRERA 4



991.2 CARRERA



G-SERIES 911

G-SERIES 911

FIRST RELEASED

1974

CONTROVERSY

Impact bumpers significantly changes established 911 silhouette

VERDICT NOW

As quintessentially classic as the earliest 911s and arguably better value

The 911 was a mere ten years old when Porsche revealed an all-new look for the car at the London Motor Show in 1974. Indeed, the 911's entire line-up had changed: the T and E (Touring and Injection) models had disappeared entirely, while the S now occupied the middle of the range. Porsche's entry-level 911 was called simply that – '911' – while the top-spec model was the 'Carrera'.

This reshuffling signified the extent of the changes Porsche had wrought. Most prominently, the new 'G-series' cars were fitted with bigger-capacity 2.7-litre engines, though this 300cc increase didn't always translate into a better driving experience compared to the older, 2.4-litre cars – particularly for US versions of the 2.7 Carrera, which used a Bosch K-Jetronic fuel injection from the 2.4 S rather than Mechanical fuel injection used on the Carrera RS. The need for this? Stringent US emissions laws, which demanded cleaner, more economical running, and it was more Stateside lawmaking that transformed the way the G-series 911 looked, too.

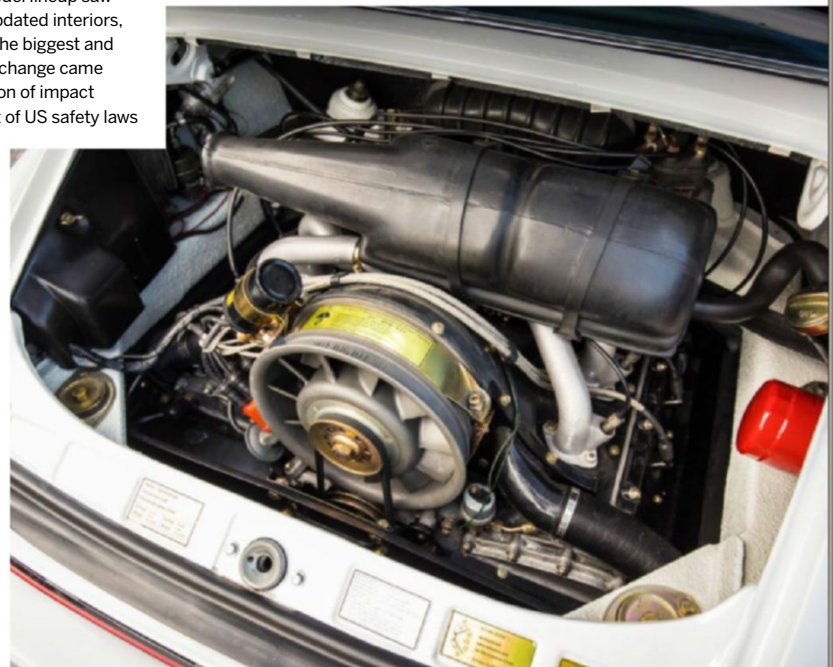
The US National Highway Traffic Safety Administration regulated that all passenger vehicles had to come fitted with aluminium impact bumpers to protect lights, safety equipment and the engine at speeds of up to 5mph. In essence, it was the NHTSA that effectively designed the G-series 911, providing regulations for size and height of these new impact bumpers. The simplistic silhouette of Butzi Porsche's 911 design was changed forever, but Zuffenhausen had little choice; the US had been an important market for Porsche for the last 15 years. Porsche had to comply or miss out entirely. It chose the former, causing consternation among what we'd soon learn to call purists, though in truth a wider resistance to the new impact-bumper 911s was only minimal; most but the few who raced the cars merely found the 911 was becoming a much more mature, civilised car.

These new looks found favour, as Porsche wouldn't overly change them (save for a brief switch between chrome and black window surrounds in the late Seventies) for a full decade and a half. Today, an automotive purity in design, unmolested over such a period of time, seems absurd, and will doubtless never be repeated. With so much time having elapsed, the G-series cars can only be quintessentially classic, most of its admirers struggling to remember its combative debut some 43 years previously. ➔





1974 saw big changes for Porsche's 911 after a decade of only modest revisions. A new model lineup saw new engines and updated interiors, though for purists the biggest and most controversial change came from the introduction of impact bumpers, the result of US safety laws





The first all-wheel drive 911 took its groundbreaking technology from the much-heralded 959 supercar. However, purists at the time bemoaned the 964 C4's additional 100kg weight and tendency to understeer





964 CARRERA 4	
FIRST RELEASED	
1989	
CONTROVERSY	VERDICT NOW
Introduced four-wheel drive to the 911	Widely accepted as a good 911, though it's not a track car

As we've established, today the G-series represents the staple 911 for many, its impact bumpers and mechanical operation forming the bedrock of Porsche's 911 image. However, a caveat to this unwavering longevity to the 911's setup meant the car was ageing by the end of the 3.2 Carrera era. Even Porsche's attempt at a sporting thoroughbred in the 1986 Carrera Clubsport didn't work, the 340 units sold proving little more than an accumulative flop. If Zuffenhausen was to remain ahead of the game, its 911 needed big changes.

This came in 1989 with the arrival of a 911 claimed by CEO Peter Schutz to be 80 per cent new. The changes appeared sweeping even from first sight: the 964-generation car had front and rear bumpers more elegantly smoothed into its bodywork, an active rear wing that deployed at 50mph and retracted at 6mph, plus a 3.6-litre flat six engine upping power by nearly ten per cent to 250bhp. All this meant the 964 was heavier than its predecessor, which irked purists, while some even bemoaned the Bosch ABS as taking away feel. However, the biggest change was also the most jarring for enthusiasts, for the 964-generation was launched only with all-wheel drive.

Porsche wanted to draw on inspiration from traction technology honed in the Paris-Dakar rally. The thinking, in principle, was sound: the 911 is Porsche's everyday sports car and in keeping with Ferry's design brief, it should have all-wheel drive to be usable even in snow. The reality was different: the all-wheel drive system with driver-controlled diff locks was primitive, added another 100 kilograms of weight to the already portly Neunelfer, and caused severe understeer during sporty driving. This put the car at odds with Porsche's core 911 following, who wanted a lithe, rear-drive car, something they'd get a year later with the introduction of the 964 Carrera 2 in 1990, and 964 Carrera RS in 1991.

Porsche's insistence on keeping all-wheel drive within the 911's model line-up has softened resistance among enthusiasts. Today, a well-kept 964 Carrera 4 can fetch the same money as its Carrera 2 brethren, and offers plenty of thrills to a driver keen on fast road driving. The 993 C4's AWD system is more accomplished, yet as the model to herald the arrival of all-wheel drive, the '4' on the 964 C4's decklid is accepted as a reminder of the 911's thirst for pioneering evolution. 🏁

996.1 CARRERA

FIRST RELEASED

1998

CONTROVERSY	VERDICT NOW
The 911's beating heart is altered as the flat six is cooled by water	Finally realised as the best value Porsche 911 you can buy

Revealed at the 1997 Frankfurt motor show, the 996-generation 911 shared not a single nut or bolt with its predecessor, the 993. That, of course, was evident: Pinky Lai's 996 was longer and wider, notably featuring what were soon dubbed 'fried egg' headlights, which incorporated all lighting elements into the one unit and was shared with the Boxster baby sports car. Elsewhere, a revamped interior had everything, including PCM for the first time. Even the floor hinged pedals had gone.

However, this pales into insignificance compared to what changed at the back. The flat-six engine was completely new, now cooled by water rather than air. This meant for the first time there was no cooling fan dominating the view from underneath that narrower decklid – in fact, there wasn't much to look at, save for a plastic airbox. Even the sound of the car had changed, the high-pitched mechanical whirring of the 993 cars on idle replaced with more low-key grunting from the 996. Journalists on the international first drive wrote that, though these changes to the 996 made for an exquisite sports car, it had irrevocably changed the DNA of the 911.

For the most part, the 996 has been lampooned by enthusiasts. It's never helped that the 997 succeeding the 996 returned to more traditional aesthetics, and it's no surprise that 'problems' aren't too far down Google's autofill list for '996'. Values too have been low for some time – you could have picked up a GenI example for as little as £7,000 only two years ago. Nearly a full two decades after its release, it's safe to say the 996 will never be accepted by some purists. Yet this tells only half its story.

In terms of sales, the 996 generation outperformed that of the 993, dubbed by those same purists as the last beacon of the true 911 sports car. Increased income from sales married to low outgoings thanks to, among other things, a shared parts platform with the Boxster, kept the Zuffenhausen business afloat. Put simply, if it wasn't for the 996, there'd be no Porsche brand today, let alone a 911 sports car.

For all its foibles, most who've owned one will vouch for the 996's incredible value for money. Though still lagging behind its counterparts, only the 996 generation has witnessed any positive maturing in the classified markets over the last 18 months. Though it's divisive, it is still a 911 after all. Total 911 predicts history will be kinder still on the 996.1





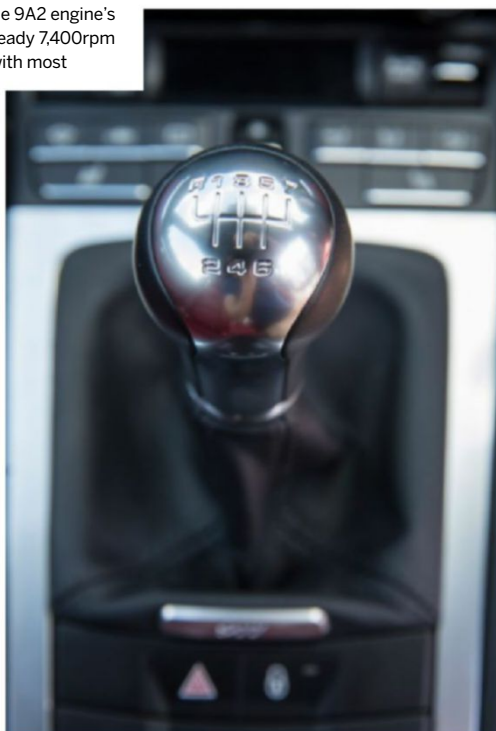
The 996 represents arguably the greatest evolution in the 911's story, with nothing whatsoever carried over from the previous 993 generation. After years of tumultuous press coverage, the first water-cooled 911 is finally gaining recognition as a great value car







History is yet to decide whether the turbocharged 991.2 Carrera has been accepted by 911 fanatics, though the 9A2 engine's ability to rev to a heady 7,400rpm has found favour with most



991.2 CARRERA

FIRST RELEASED

2016

CONTROVERSY

Turbocharging across the Carrera range signals the NA flat six's death knell

VERDICT NOW

Better than perceived, but we miss the atmospheric engine

As with the switch from air- to water-cooling at the end of the 20th century, there was an inevitability about Porsche's decision to adopt turbocharging across its Carrera range in 2016. In tandem with the automotive industry, Porsche pointed towards a necessity to reduce emissions as to why its famous, naturally aspirated flat six was to be no more (GT3 aside).

As head of the 911's production, August Achleitner and his team worked hard to ensure that despite being turbocharged, the 991.2 Carrera range would adopt characteristics of a naturally aspirated 911 where possible. As such, the Carrera's turbochargers are small in comparison to the Turbo's KKK blowers, while a fairly tall redline of 7,400rpm gives additional NA feel. Even from a noise point of view, Achleitner worked hard to mute that 'whooshing' turbocharger sound under acceleration. Meanwhile, a Sports exhaust provides the same popping and banging identifiable to the NA 991.1.

This approach has arguably paid off, journalists noting from launch that though the car is inherently different, perhaps more GT now than sports car, the manner in which the 911 has adopted turbocharging has been hugely impressive. Sure, the car lacks the throttle response of its predecessor, but otherwise the 991.2 has masked this colossal jump in how the Porsche 911's flat-six engine garners its power.

From launch, the turbocharged 991.2 hasn't proved quite as controversial as the game-changing 996 Carrera then, but the reality is that with only 18 months of production under its belt, history is still deciding its fate as a successful 911 by way of sales. The signs so far though are good: "There's certainly been no slow-up in 911 sales since the switch from 991.1 to 991.2," A Porsche spokesperson told us.

In reality, our test here has taught us several lessons. Firstly, after 50 years and at least four game-changing evolutions, Porsche is not afraid to wring short-term changes in favour of the long game. That the 911 still exists proves Zuffenhausen has never really got it wrong when building a car enthusiasts will continue to drive. Some developments have proved controversial, but it's hard to dispute the company has succeeded every time.

No matter what it has or rather doesn't have, Porsche knows how to build a 911 we will buy; history has taught us this. **911**

Thanks

The 2.7 and 964 in our pictures were supplied by Paul Stephens. For more information please call +44 (0)1440 714884. The 996 was supplied by Apsley Cars. For more information on Apsley Cars' sales and sourcing, call +44 (0)2381 847164.



**FREE
GIFT**
Worth up to
£18.99



Free Haynes Manual

Subscribe by 31 July to receive your free gift



Your Porsche 911 was simply built for the track, and now you can pedal your pride and joy with confidence thanks to the Haynes Track Day Manual. With a hive of information for all abilities, from novice to seasoned campaigner, it's perfect preparation for any day on circuit.

Lee Sibley Editor



Never miss an issue

13 issues a year, and you'll be sure to get every single one



Delivered to your home

Free delivery of every issue, direct to your doorstep



Get the biggest savings

Get your favourite magazine for less by ordering direct



Six month subscription

- ✓ Automatic renewal – never miss an issue
- ✓ Pay by Direct Debit

Recurring payment of £21 every 6 issues, saving 30% on the retail price



Instruction to your Bank or Building Society to pay by Direct Debit

Originator's reference
5 0 1 8 8 4

Name of bank

Address of bank

Account Name

Postcode

Sort Code

Account no

Please pay Imagine Publishing Limited Direct Debits from the account detailed in this instruction subject to the safeguards assured by the Direct Debit guarantee. I understand that this instruction may remain with Imagine Publishing Limited and, if so, details will be passed on electronically to my Bank/Building Society. Banks & Building Societies may not accept Direct Debit instructions for some types of account

Signature

Date



One year subscription

- ✓ Great offers, available world-wide
- ✓ One payment, by card or cheque

A simple one-off payment ensures you never miss an issue for one full year. That's 13 issues, direct to your doorstep

☐ UK £58.50 (saving 30% on the retail price)

☐ Europe £67 ☐ USA £78 ☐ Rest of the world £78

Pay by card or cheque

Pay by Credit or Debit card

☐ VISA Visa ☐ Mastercard Mastercard ☐ Amex Amex

Card number

Expiry date

Pay by Cheque

I enclose a cheque for

£

Made payable to
Imagine Publishing Ltd

Signature

Date

Your information

Name

Telephone number

Mobile number

Email address

Address

Postcode

Please post this form to

Total 911 Subscriptions, 800 Guillat Avenue, Kent Science Park,
Sittingbourne, Kent ME9 8GU

Please tick if you do not wish to receive any promotional material from Imagine Publishing Ltd
☐ By post ☐ By telephone ☐ By email

Please tick if you do not wish to receive any promotional material from other companies ☐ By post ☐ By telephone
☐ Please tick if you DO wish to receive such information by email

Order securely online www.imaginesubs.co.uk/t9e

Enter the promo code **PS17G** to get these great offers



Speak to one of our friendly
customer service team

Call **0844 249 0463**

These offers will expire on
31 July 2017

Please quote code **PS17G**

Calls cost 7p per minute plus your telephone company's access charge

This offer entitles new subscribers to receive a copy of The Track Day Manual from Haynes worth £18.99. Offer code PS17G must be quoted to receive this special subscription offer. Subscriptions will start with the next available issue. Details of the Direct Debit Guarantee are available on request. Gift stock is subject to availability. Imagine reserve the right to substitute the gift for an alternative or withdraw this offer at any time should stock run out. Please allow up to 6 weeks for your gift to arrive. This offer expires 31 July 2017.



A TRIBUTE TO FERRY

The 911 may have reached its one million production milestone, but back in 1987 Porsche celebrated the 250,000 mark with the release of a very special yet rare 3.2 Carrera: the Commemorative Edition

Written by **Wilhelm Lutjeharms** Photography by **Kian Eriksen**

An anniversary model usually goes one of two ways: either its specifications and features make it worthy of a commemorative moniker, or it is a mere marketing gimmick. Fortunately for us, Porsche usually takes the former route.

On 3 June 1987, Porsche celebrated the production of the 250,000th 911. To celebrate this landmark in the late 80s, Porsche built a special model, called the Commemorative Edition, which of course was based on the 3.2 Carrera.

Only 875 cars were manufactured and the bulk of these (300) were sent to America, 250 were designated for Porsche's home market, Germany, while 50 were delivered to the UK (30 Coupes, ten Targas, ten Cabriolets). The rest were dispatched to various smaller markets. Confusingly, the 911 also celebrated its 25th anniversary the following year in 1988. For this milestone Porsche made a rumoured 500 examples of what is referred to as the Silver Anniversary Edition. These cars seem to be less



documented than the Commemorative examples and many people get the two models mixed up, even in well-renowned Porsche books.

As previously mentioned, Porsche decided to offer the Commemorative Edition models across the 911 Carrera range. The result was customers could order them in all three available body styles: Coupé, Targa and Cabriolet. Pricing for these three models was DM87,950, DM89,800 and DM99,700 respectively.

Several unique features differentiated the Commemorative Edition from the standard 3.2 Carrera. In terms of exterior, the car sported a dark Diamond Blue Metallic paint finish with matching centres on the forged Fuchs alloy wheels. On the inside, the cabin featured a dark-blue leather interior with matching soft silver-blue velour carpets, which complemented the exterior hue perfectly. Your head rested against a thickly-padded headrest that featured Ferry Porsche's signature stitched into the leather. The latter is an element of this car that has never been repeated on a 911 since.

The passenger seat featured electric adjustment and there was an electric sliding sunroof, central locking and a more extensive headlight and windshield washer system. For better visibility during parking manoeuvres, an electrically adjustable, heated passenger side mirror was available.

Mechanical changes, however, were less significant. The highlight was a stubbier gear lever, which facilitated a shorter throw action. As a result of being produced in 1987 (although some models were registered in 1988), all the Commemorative models feature the better, more direct-shifting G50 gearbox.

Interestingly, for the 1988 model year, Porsche had precious little else to celebrate – as a matter of fact, on 19 October 1987, the Dow Jones industrial average on Wall Street fell by 508 points, wiping a whopping 23 per cent off its value. After a 23 per cent decline in US sales in '87, there was a further 32 per cent decline in '88 to a total sales number of only 15,737 units. However, it was an important year for another reason: the new 964 series was launched in the shape of the Carrera 4, the first all-wheel-drive 911.

The owner of this car has the full list of options that were available with this specific iteration of 911. These include sport shocks, a rear-window wiper, deletion of model description and a Blaupunkt SQR-46 radio (not currently fitted to our test car). When I open the front luggage cover I notice that even the loading area is covered in soft silver-blue velour carpeting, including the floor and sides.

Porsche's 930 Turbo might have been the ultimate fast touring GT 911 at the time, but this Commemorative Edition clearly bears a close resemblance in terms of luxury trimmings. Next, I walk to the back of the car to inspect its engine bay. It is pristine and also features the obligatory stickers above the bumper that indicate the correct tyre pressures, the procedure to check the engine oil level, required valve clearances and firing order of the pistons: 1-6-2-4-3-5. Invoices for this car run into five-figure numbers and include a gearbox rebuild and top-end overhaul. We are sure, then, that we've the perfect example in front of us in which to sample ➔

“Several unique features differentiated the Commemorative Edition from the standard 3.2 Carrera”



Above Not to be confused with the 3.2 Anniversary 911, only 875 Commemorative Edition cars were made worldwide across Targa, Coupe and Cabriolet body styles





The Anniversary 911s

Built to celebrate the 911's longevity in production, the Anniversary 911s are collector's specials. Here's how they differ

30 Jahre Anniversary 964

During 1993 and 1994, Porsche offered a special 964 model. It was based on the 964 Carrera 4's running gear (including suspension and brakes), but offered the body (but not the rear wing) of the 964 Turbo. Available in three colours – Viola Metallic, Polar Silver Metallic or Amethyst Metallic – it featured a larger fuel tank. The wider body and wide five-spoke wheels purposely gave the car a pseudo-964 Turbo look. The 911 examples retailed for DM145,900 in Germany.

40 Jahre Anniversary 996

Late in 2003, it was time for the 996.2 to celebrate 40 years of the 911. The car was based on the Carrera 2 and was only available with a GT Silver Metallic finish, with neat "911" lettering on the engine cover. This time a lot more were produced (an appropriate 1,963 units) and peak power increased to 345bhp at 6,800rpm (engine code M96/03S), 25bhp more than the standard models. With a fitted luggage set and a brief case included, it traded for €95,616.

50 Jahre Anniversary 991

In 2013, Porsche presented the next model in the anniversary line to celebrate half a century since the first 911. Based on the 991 Carrera S, the Powerkit was included, which hiked the power output up to 430bhp. The Sport Chrono package was also included, and the 0-62mph time was 3.8 or 4.2 seconds, depending on transmission. The car was available in two colours: Geyser Grey Metallic or a darker Graphite Grey. In the UK they retailed from £92,257.





Above A one-off 'metallic' blue interior colour matches the exterior bodywork hue, with Ferry Porsche's signature stitched into the front seat headrests

Model 3.2 Carrera
Year Commemorative Edition

Year 1988

Engine

Capacity 3,164cc

Compression ratio 10.3:1

Maximum power 231bhp @ 5,900rpm

Maximum torque 284Nm @ 4,800rpm

Transmission Five-speed manual

Suspension

Front Independent; MacPherson struts; longitudinal torsion bars; gas-filled double-action shock absorbers; anti-roll bar

Rear Independent; light-alloy semi-trailing arms; transverse torsion bars; gas-filled double-action shock absorbers; anti-roll bar

Wheels & tyres

Front 7x15-inch Fuchs; 195/65/15 tyres

Rear 8x15-inch Fuchs; 215/60/15 tyres

Dimensions

Length 4,291mm

Width 1,652mm

Weight 1,210kg

Performance

0-62mph 5.6 secs

Top speed 152mph





the delights of Porsche's rare 3.2 Commemorative Edition model.

The previous owner, also a South African, lived in Scotland sporadically, and it was during one of his stays in the UK that he had a long list of work done on the car. Some of this maintenance was simply preventative, which is why the car represented such a good buy for the current owner. Fortunately, the previous five owners were also enthusiasts; the car had an active life at the local and national Porsche clubs and events. It was then imported to South Africa four years ago, after which the previous owner decided to sell it. As far as we know, this is now the only Commemorative Edition in South Africa.

I asked the owner how he would describe this car. "This car is like a modern interpretation of the SC – it has been improved in almost every way," he said, adding that the previous owner had made sure he equipped the car with the correct Porsche-approved tyres to suit these good-looking Fuchs wheels.

Meanwhile, I realise that up until today, I've never experienced a 3.2 Carrera, making this a really special moment. The door closes with the same thud as 911s made before – and after – this model. The leather in the cabin also has a metallic tint to it, which compliments the exterior of the car beautifully. At the time it must have looked really unique compared with the more popular colours of other 911s, or

contemporary performance cars. The luxury of adjusting the driver's seat electrically allows you to achieve your ideal driving position quickly. One thing is certain: it feels more luxurious than a standard specification 3.2 Carrera!

I turn the key and the moment the engine awakes, that perfect flat six bark announces itself, although it does sound ever so slightly more sophisticated than that of the previous-generation 911 SC. Although the owner was given the original steering wheel when he purchased the car, it's currently fitted with a modern 993-series Rennsport steering wheel.

When I pull away, I immediately sense how much more immediate – and enjoyable – the short-throw G50 gearbox's changes feel. You don't need to make use of the upper part of the rev range to move the car along at pace, but when you do, the engine is very happy to oblige. From just after 4,000rpm to over 6,000rpm, the needle swings with vigour. Shift gears again, and the torque delivery is barely disturbed owing to the quick shifts that the transmission avails – that's the big difference that a great 'box can make!

The car's nose is eager to turn in; you can apply the throttle with confidence upon opening the 'wheel. Having wider tyres at the front and rear (another decision by the previous owner) evidently benefits the car's handling. But, apart from the additional grip, it is a comfortable car to drive. This specific

mountain pass I'm using for the test drive is known for its bumpiness, but the special 3.2 takes it in its stride. When bumps do filter through to the cabin, the relatively plush seats do their part to isolate you from the road's irregularities.

After a few miles I start to feel more confident behind the wheel and enjoy every moment that the free-revving engine sends the needle around the clock. Despite having notched up 104,000 miles, the car emits no notable rattles or squeaks from its cabin or suspension, which is a testament to Porsche's build quality, but also the previous owners' meticulous maintenance regime. The highlight comes a little later when the owner allows me to drive the car back to Stellenbosch, his home town, which is 25 miles from the pass...

As we leave the serpentine ribbon of asphalt, I rev each gear out as we join the highway. The Carrera picks up speed with confidence, and every time I change gears the rev needle is in the perfect spot in the rev range and again canters towards the rev limit with alacrity. Each shift can be executed with virtual perfection, especially if you blip the throttle before engaging the next gear. The road is totally clear, but when the Carrera hits an indicated 130mph I back off and marvel at how easy it was to achieve this speed.

The view from the driver's seat, with the two fenders stretching towards the headlights, the close proximity to the dashboard, the sound from the engine, and compact cabin adds to the incomparable air-cooled driving experience that these 911s deliver. The Commemorative Edition just makes the experience a little more special.

It is certainly a car with which you can undertake cross-continental jaunts. The most enjoyable update for me is the short-shift gearbox: it not only makes the overall driving so much better, but as you use it so often, you can enjoy it every moment you execute a shift. Needless to say, in this instance, Porsche did a sterling job of offering its best features in its maiden Commemorative model. **911**



ULTIMATE CAR CARE TEST

Determined to keep your Porsche in pristine condition and want to know which are the best products to maintain that all-important resale value? In a Total 911 first, our critical group test reveals the best in each class for five essential detailing processes...

Written by **Midge Burr**

Our Tester/Expert

Midge Burr is a UK journalist and consumer editor who has been testing automotive products for the best part of two decades... he has also been detailing his own cars for considerably longer.





CLASS ONE: WHEEL CLEANERS

Keeping your wheels clean is often referred to as the 'dirtiest job in detailing' and that's for good reason. Generally speaking, no other part of the vehicle has to hold up to such contamination, abuse and temperature fluctuations.

Modern wheel cleaning products remove contaminants quickly and efficiently. A relatively mild shampoo is usually sufficient for general grime removal on paintwork, but the harsh contaminants that your wheels encounter, particularly metal particles found in brake dust, makes a suitable cleaning product crucial for intense 'chemical removal'. Essentially heavy soiling needs to be dissolved as lifting it off the surface is rarely possible.

The truth is, cleaning your wheels is as much about maintenance as it is aesthetics. Add everyday contamination to the 'fruity' driving associated with sports car ownership, not to mention performance brake systems producing enough heat to nicely 'bake' it all on, and corrosion becomes almost inevitable.

There are safety considerations too. All Porsche factory wheels (and most quality aftermarket offerings) are painted and lacquered for durability. Left for any extended period and the ferrous deposits in brake dust will eat into these protective layers. Leave caked-on deposits for long enough and the metal underneath will be at risk, compromising the structure and causing irreversible damage.

The Test

The process here is a simple one. A single product for each wheel after two to three weeks of normal

driving, about the average time before you should be thinking about removing contaminants from your rims. Each product was applied as per the manufacturer instructions, agitated with a clean wheel brush and rinsed off with a normal garden hose. No professional valeting trickery here, no stain removal chemicals and no pressure washers to physically blast off contaminants.

The Verdict

All the products we picked can be considered all-rounders; they're mass-market products mild enough for use on all standard (and most aftermarket) finishes. There are many other harsh stain removers and formulations designed specifically for bare metal and polished rims of course, but with these you're getting into niche segments of the detailing market.

Chemical make-up aside, the physical characteristics are equally important. Some wheel cleaners are a thin liquid designed to flow into all the small recesses, others are extremely thick and designed to linger on the surface for maximum penetration time. Consideration needs to be given not just to the frequency of use, but to the design of your wheels. What suits complicated multi-spoke alloys may not be the same as what's most effective on simple flat-faced rims.

On our slab-sided C4S five-spoke wheels, all four products showed great cleaning power, so much so that the point of if they actually work isn't essential.

The scoring, then, comes down to other parameters including ease of use, value and how much effort is involved in application and agitation.

TOTAL 911 CHOICE



ValetPRO Dragon's Breath £9.99 (500ml)

Dragon's Breath may smell awful but we just can't fault the performance. It's a thick liquid and has no trouble dissolving grime and brake dust, and hardly any agitation is needed. The built-in iron remover turns solid deposits to a purple liquid so they can be simply rinsed off the surface. valetpro.co.uk

CLEANING POWER



EFFORT



VALUE



RUNNERS UP

Meguiar's Hot Rims, £9.99 (710mm)



It's thin and we used a little more than the ValetPRO product but you get more for your money here. Very powerful, you literally watch the grime run off, and it'll clean tyres too. A definite industry favourite. meguiars.co.uk

CLEANING POWER



EFFORT



VALUE



Armor All Shield, £14.99 (500ml)



Very very thick, lingers for ages and, like Dragon's Breath, melts through brake dust and turns iron deposits purple. Possibly harder to wash but the fact that it's a premium product certainly shines through. armorall.eu

CLEANING POWER



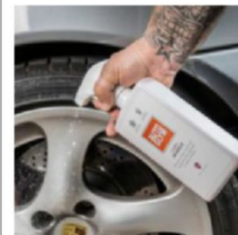
EFFORT



VALUE



Auto Glym Clean Wheels, £9.20 (500ml)



It's been around a while this one, but it does the job. Very thin but very powerful. Sprays on easily and works its way into all the nooks better than the others. A good choice and a well-established all-rounder. autoglym.com

CLEANING POWER



EFFORT



VALUE



CLASS TWO: GLASS CARE

Judging by the fact that you actually have to see out of your windows, the job of keeping them clean may well trump all others in the detailing world. After all, it's no use having the most perfectly waxed paint in the breaker's yard! Vision problems tend to be compounded in the winter months too, due to the general road grime and the fact that the evening seems to start at three in the afternoon. Then again, the famous British weather doesn't seem to help!

Of course, that's all very well, you might say, but you've got some perfectly good household glass cleaner sitting under the kitchen sink, right? Well, it may be a cost-effective alternative but using these products is probably the most common car care mistake. Household cleaners tend to contain abrasive elements and salts that can scratch laminated glass surfaces (the same reason you should never use washing-up liquid as car shampoo). Many also contain vinegar which will ruin your wiper blades in next to no time.

Genuine car products are different, they either use an extremely mild abrasive to gently lift off grime or have a high alcohol concentration, typically IPA (Isopropyl Alcohol), to dissolve grime and quickly evaporate off after a quick wipe. The most important thing about a good glass cleaner however, is the simplest – it needs to be quick and easy to get your windows sparkling.

The Test

Preparation for this test is as wholly scientific as a bucket of dirty water and a cloth to spread it



around the side windows. After smearing the glass and giving it time to dry, we applied each product (according to the instructions) before buffing with a microfibre cloth.

The Verdict

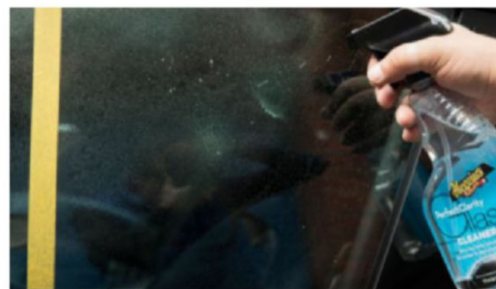
Glass cleaners typically fall into two categories: old school polishes and trigger pump sprays. We chose to test examples of both types of cleaner. Polishes, like Auto Finesse's renowned Vision product here, tend to be reserved for serious detailing buffs and have the advantages that they make short work of the more stubborn stains, can often fill light scratches and have a distinct lack of overspray. After all, most glass cleaners will be used both inside and out. Of course, these take a little more effort to apply and buff-off, but in many cases the merits outweigh this undeniable hardship.

Conversely, trigger sprays vary from reasonably viscous liquids designed to linger, to 'thin and soapy' liquids containing a mixture of alcohol and powerful cleaning agents. Both are designed to chemically remove the dirt.

Apart from their grime-shifting ability and the amount you need to use though, another key consideration is how well the packaging physically applies the product. Some manufacturers put a serious amount of research and development into making sure that their sprays 'mist' the formula, rather than simply squirt on loads of product that needs to be spread around with your cloth. In the real world, such a simple variation can make a huge difference in usability.



TOTAL 911 CHOICE



Meguiar's Perfect Clarity, £10 (473ml)

When you use the product, it's obvious that you need hardly any to cut through grime. In the long run, you'll use much less, and that matters. It's also quick and easy to apply. For such a viscous liquid it's surprisingly painless to buff away without smearing.

meguiars.co.uk

CLEANING POWER

EFFORT

VALUE

★★★★★

★★★★★

★★★★★

RUNNERS UP

Auto Finesse Vision, £11.95 (500ml)



Unlike many polish products, the residue takes hardly any effort to buff off, but it's not as easy to use. It also makes short work of the grime, perhaps the best here for heavily soiled and stained glass.

autofinesse.co.uk

CLEANING POWER

EFFORT

VALUE

★★★★★

★★★★★

★★★★★

ValetPRO Glass Cleaner, £4.99 (500ml)



This one is perhaps the best value for money. Not much product is needed to do the job, but it was just pipped by the exceptional Meguiar's spray action. That said, there's nothing not to love here.

valetpro.co.uk

CLEANING POWER

EFFORT

VALUE

★★★★★

★★★★★

★★★★★

Auto Glym Fast Glass, £8.20 (500ml)



A milky liquid that requires a little more effort than others to get off, but still extremely powerful. It wasn't my favourite trigger in misting terms, but you can't fault the end result. It's good value.

autoglym.com

CLEANING POWER

EFFORT

VALUE

★★★★★

★★★★★

★★★★★



CLASS THREE: WAXES

The paint is undoubtedly one of the most expensive parts to replace on your 911. Good paint is easily damaged and rarely cheap to maintain, and is why surface protection is the most talked-about care element.

There are more products out there for paint protection than any other. Professional detailers call these LSPs (last stage products) and they include both waxes and sealants. A polish is usually an abrasive designed to prepare the surface, restoring paint and removing underlying contaminants and swirlmarks. An LSP is simply there to protect the finished surface from the elements.

In the case of waxes, like the ones we're testing here, these are a sacrificial layer that provide a barrier from contaminants and to help bead off water before it has a chance to pool and dry on the surface.

The Test

Arguably the most important part of paint protection is all the preparation before you actually apply the LSP. Most of the damage that's commonly inflicted to paintwork is during the wash stage. For this reason, it makes sense to use a snowfoam and traffic film removal product to break down the harshest grime before contact washing with a decent car shampoo. Contrary to popular belief washing with a sponge is as acceptable as using an expensive wash mitt, as long as the sponge in question is of good quality and doesn't simply push the dirt around to scratch the paint. In other words, not one of the cheap yellow items you'll use to grout your bathroom.

After washing, rinsing and drying, sometimes you may need to use a clay bar to remove contaminants or a polish to prepare the paint. In our case the surface was near-perfect so all it took was a good going over with a pre-wax cleaner followed by a solvent wipe (with a product containing 20 to 50 per cent IPA) to remove any polish residues, silicones and drying agents from the shampoo. This also helps the wax to bond to the surface.

The Verdict

There are many type of waxes on the market, everything from the most famous hard waxes to modern creams and sprays.

Traditionally, car waxes contain a reasonably high percentage of natural wax, like montan, bees wax or carnauba, along with a whole load of solvents to make them easier to apply. Modern variations typically include conditioning oils and sophisticated polymers to help provide a high gloss. Waxes also vary in price massively, anything from £10 to £2,000, but that doesn't always reflect the quality proportionately. Some are designed to last longer than others too – many claim to offer protection from a few weeks right up to 12 months.

The key thing to remember is that it's almost impossible to compare waxes simply in terms of finish. Stating that one wax is better than another is a matter of perspective – ask yourself what you would like from the wax in terms of durability, price, ease of application and water beading. Another thing you will need to consider is how often you're planning on re-waxing the car.

TOTAL 911 CHOICE



ValetPro Beading Marvelous, £34.99 (250ml)

For a more traditional hard wax, Beading Marvelous is surprisingly easy to use. This one spreads on like butter, hazes quickly and the residue takes very little effort to buff off. As you'd expect from the name, the water beading ability is extremely impressive.

valetpro.co.uk

FINISH ★★★★★
EASE OF USE ★★★★★
VALUE ★★★★★

RUNNERS UP

Auto Finesse Glisten, £11.95 (500ml)



You can wax your whole car in seconds. It's perfect for anyone who cleans their car regularly or for interim maintenance. Water doesn't bead off quite as well as others, but the shine is great.

autofinesse.co.uk

FINISH ★★★★★
EASE OF USE ★★★★★
VALUE ★★★★★

Soft99 Kiwami, £19.99 (200g)

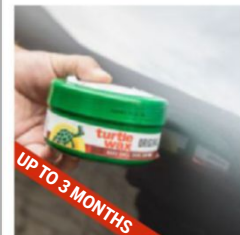


One of Japan's best selling products and it's easy to see why. It does spread on nicely but it's extremely hard to buff off the residue. The payoff however comes with the deep glossy finish and the best beading here.

nipponshine.com

FINISH ★★★★★
EASE OF USE ★★★★★
VALUE ★★★★★

Turtle Wax Hard Shell Shine, £6.50 (250g)



This product is classified as a hard wax although it's packed with 'easy-glide' silicones that make it seem more like a cream. It's easy to spread on and wipe off and, arguably, it's the best value of them all.

turtlewax.com

FINISH ★★★★★
EASE OF USE ★★★★★
VALUE ★★★★★



CLASS FOUR: TRIM DRESSINGS

Trim dressings are final finishing products designed to bring exterior plastics, vinyl and rubber back to their factory sheen, while offering protection from fading caused by the environment, particularly UV light. Of course, initially they purport to be a great way of 'tarting up' plastic trim in the present, but the key advantage is that many offer long-lasting protection for the future.

Now, admittedly, products of this type are more essential purchases for older 911s, the ones with acres of plastic trim and plenty of years under their belt battling the elements. But, even on more modern Porsches, plastic scuttle panels and window rubbers can easily be given a new lease of life.

Look at it like this: imperfections become increasingly noticeable due to the condition of the other parts around them. It's a shame to have the rest of your car gleaming, and leave plastic trim fading away in the sun.

The Test

Being a modern 911, the scuttle panel on our test car was the most suitable part for a head-to-head evaluation. The fact that it was already in great condition wasn't a problem, chiefly because it demonstrates what a difference these products can make, even on plastics that appear to be relatively clean and shiny.

We took a portion of the panel for each product and masked off an area to get a direct comparison before and after application. All products were applied with a clean microfiber cloth.

The Verdict

All these products work well – there's a clear difference between the finish before and after application. So, apart from choosing the finish you prefer with regards to shine or, subtly, perhaps the biggest consideration with any product of this type is

ease of use. Trim dressings come in a variety of formulas ranging from thin liquids to gels and pastes. Some require brushing on, but most can be applied easily with a microfiber cloth or foam applicator.

Bear in mind that there are products, particularly those designed for additional use on tyres, that can leave a sticky residue that may rub off on clothes. Suffice to say these are the ones we'd tend to avoid.

More than any other category, value is a key consideration here. After all, specialist products like these are not something that you'll want to fork out on every single time that you decide to break out the bucket and sponge. What all of the products we tested here have in common though, is that they're seriously concentrated: just a miniscule amount is needed for each application. And that also means any of these little bottles will likely provide you with years of faithful service.

“Trim dressings come in a variety of formulas”

TOTAL 911 CHOICE



Auto Glym Bumper and Trim Gel, £8.99 (325ml)

What's great about this is that it's in between a thick gel and a liquid. It gets into any small gaps and textures but it goes on reasonably thick, lingers and penetrates the plastic fully. Great for both mass market use and for OCD detailing buffs. An all-rounder, we just can't fault it.

autoglym.com

FINISH ★★★★★
EASE OF USE ★★★★★
VALUE ★★★★★

RUNNERS UP

Turtle Wax Black in a Flash, £4.50 (300ml)

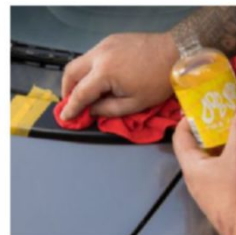


Turtle Wax's gel is extremely thick so there's little chance of dripping. You'll use slightly more but it dries quickly and offers a decent sheen. Probably the best value product on the market anywhere.

turtlewax.com

FINISH ★★★★★
EASE OF USE ★★★★★
VALUE ★★★★★

Dodo Juice Tyre and Trim, £8.95 (250ml)

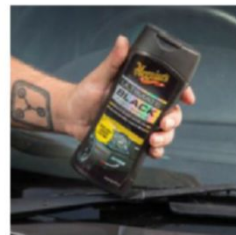


Though there's not a great deal in it, it produces an exceptional finish. More of a viscous liquid than a gel, it spreads on with the least effort. You can also use this on your tyres, a true master multi-tasker.

dodojuice.net

FINISH ★★★★★
EASE OF USE ★★★★★
VALUE ★★★★★

Meguiar's Ultimate Black, £10.99 (355ml)



The only product we tested that's more of a cream than a viscous gel, but it's easy to apply, leaves a non-greasy finish and a little goes a long way. This is great value for such a premium product.

meguiars.co.uk

FINISH ★★★★★
EASE OF USE ★★★★★
VALUE ★★★★★

CLASS FIVE: TYRE DRESSINGS

There's no doubt about it, Porsche-fitment tyres are expensive, so it stands to reason that you'll want to keep your tyres in tip-top condition. When you think about it too, your tyres are the only part of your 911 to touch the tarmac so it's pretty obvious that they will eventually suffer from continuous contact with road grime and salt. Come to think of it, the UV radiation doesn't do them much good either!

Again, tyre dressings have various physical characteristics and application methods, but it's good to remember that these products are as much about protection as they are about strutting your stuff at the local show 'n' shine. That said, we admit they look good, extremely good in fact, and their trademark finish is most likely the reason you'll be drawn to one brand or another.

Very often applying a good quality tyre dressing is the last process on the detailing to-do list and, rather aptly, they're also the focus of our final test.

The Test

Comparing the before and after finish is the name of the game here so, using a separate tyre for each product, we masked off a section and got to work. With any exterior dressing it's vital to follow the instructions and use the correct type of applicator. So, that's exactly what we did...

The Verdict

At first glance 'finish' seems to be everything here, but it's not the only important consideration.



Many lower quality 'tyre shines' have the distinct disadvantage that they'll remain sticky and quickly pick up dirt. Some will even fling-off all over your freshly-buffed paintwork, just as soon as your wheels start spinning.

With that in mind, quality is of upmost importance. It's crucial to look for a 'low sling' product that ends up dry to the touch, ideally one that's easily absorbed into the tyre. Many modern products are also 'high shearing', which means they actually get thicker as the wheels rotate, making them far less likely to splatter down the side of your car.

How the product is formulated tends to affect how it's applied. Silicone-based products will smear painted surfaces so they're ideally suited to careful application with a sponge, although this can be dirty work. However these are very economical and they're popular because they produce the most intense 'wet-look' shine. Water-based products, the ones usually found in trigger sprays, tend to be less frugal but more quickly absorbed. These often give a more subtle, classic finish (some in matte or satin), and are easy to apply cleanly – perfect if you don't like dirty fingernails. Aerosols are common nowadays, but you can end up using a lot of product to get the desired result. As is often the case, it all depends on what you want in terms of finish and ease of application.

With literally hundreds of products on the market, we had to narrow them all down to just four of the very best. These may all be different brands, but we've specifically chosen low-sling, premium-gloss products that offer shine and protection for your tyres for up to a month. **911**

TOTAL 911 CHOICE



Auto Glym High Performance Gel, £9.99 (500ml)

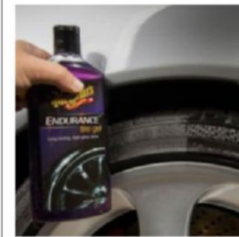
In terms of getting the coveted wet-look finish, there's little difference between this product and Meguiar's Endurance – they're both absolutely outstanding. The only real difference between this and the Meguiar's product is the price – this one is slightly cheaper.

autoglym.com

FINISH ★★★★★
EFFORT INVOLVED ★★★★★
VALUE ★★★★★

RUNNERS UP

Meguiar's Endurance Gel, £11.99 (473ml)



It's obviously been developed with maximum performance in mind. The thickest of the two gels here, it produces an exceptional finish that's dry to the touch. It also smells pretty good, which is nice.

meguiars.co.uk

FINISH ★★★★★
EFFORT INVOLVED ★★★★★
VALUE ★★★★★

Soft99 Pure Shine, £13.99 (100ml)



This liquid is milky and thinner than expected, but it's easy to use and comes with its own applicators. Yes, it's a tiny bottle but, because you hardly need any product, it's far better value than it appears.

nipponshine.com

FINISH ★★★★★
EFFORT INVOLVED ★★★★★
VALUE ★★★★★

Auto Finesse Gloss, £11.95 (500ml)



The bottle actually mists the product, rather than pumping on too much. Very quick to use, easier than any other here and keeps your hands clean. For such a thin liquid, you don't need much to do the job either.

autofinesse.co.uk

FINISH ★★★★★
EFFORT INVOLVED ★★★★★
VALUE ★★★★★

C4S TO SCOTLAND

Porsche's all-wheel-drive 991.2 is billed as the fastest everyday Neunelfer, but will it rise to the stiff trial of the Highlands in Total 911's most challenging adventure yet?

Written by **Lee Sibley** Photography by **Daniel Pullen**



Dreich. Have you heard the term before? I'll forgive you if not, and you'd be pardoned again for assuming it hails from the same fatherland, Germany, as the 911 itself. For you patrons of infinite wisdom, 'Dreich' is actually a meteorological expression from – and commonly used – in bonny Scotland, describing a combination of bleak, drizzly, cold, misty and generally miserable weather.

Now, before any accusations arrive in my mailbox of an apparent attempt to drive some sort of jingoistic wedge between the English and our good northern neighbours, hold your fire: I myself have Scottish roots (my mother was born and raised in Heriot) and besides, in 2013 the *Scotsman* newspaper claimed the phrase topped a poll of favourite Scots' words or phrases. All I will say, however, as I steer a Racing yellow 991.2 Carrera 4S due north over the Scottish borders from England, is I can see why it's popular.

The plan for our latest adventure is as follows: an overnight stop in Edinburgh for me and the C4S, before an early start the next morning to drive three hours north to Inverness, the capital of the Scottish Highlands and the start and end point of the North Coast 500 route. I'll collect our esteemed photographer, Dan, from Inverness airport, and then head west for Applecross via the stunning Bealach na Ba mountain pass, following the road as it traverses mainland Scotland's most north-westerly extremities to Durness at the very top. From there, we'd head east to John O'Groats, then down the A9 to Inverness, thereby completing the North Coast 500 loop.

Driving up through the Lowlands to Edinburgh is a pleasant experience, the smooth-surfaced A7 swaying this way and that in the rough direction of the capital. My C4S press car is lavishly specced as a capable track weapon with Sports chassis, PCCBs and carbon-backed Sport buckets, yet such is the dexterity of the 991, the car is proving its worth as an able grand tourer. A Spotify playlist fills my eardrums

via the car's orchestral Bose speakers, while PDK in full auto mode looks after smooth, intelligent gear shifts. Edinburgh is soon found and, after a solid night's sleep, I awake the next day, fire up the waiting C4S, and head further north for Inverness.

By midday, I roll into Inverness airport, noting the glorious sunshine reflecting wildly off my optional colour-coded yellow seatbelt. I meet Dan, and we pack the car with photography gear before jumping in ourselves, eager to reach Applecross in good time. With 500 miles to do in just two days, including numerous stops for photography, our task is ambitious, and we need good fortune with plenty of sunshine in order to pull it off. However, you cannot plan the weather, particularly in Scotland.

Heading west, the heavens open almost as soon as we leave Inverness. Of course, being Porsche's all-wheel-drive Carrera 4S, this poses no problems from a driver's point of view. Supported here by monstrous 245- (front) and 305- (rear) section tyres, plus an intelligent torque distribution system continuously adjusting the amount of power fed to both axles, the 991 has little trouble in finding traction on even the most water-strewn of surfaces.

However, the intense rain persists, with temperatures dropping as we begin to climb in altitude and visibility severely reduced at times due to fast-moving bouts of fog. Quickly, we realise our agenda in northern Scotland is changing somewhat. More than ten hours' drive from home, we've come all this way to deliver you a spectacular drive feature among Britain's finest scenery, yet with weather forecasts quickly changing to show little else but extreme 'dreich' for the entirety of our stay in the Highlands (the car has to be back with Porsche in three days), we know we'll be lucky to come away with anything at all.

After an hour of persistent wet driving along the A890, we reach Lochcarron then Törnappress, the start of the Bealach na Ba. Translated as 'Pass of the ➡

Below An abandoned Fiat Punto serves as a reminder of Bealach na Ba's dangers as our 991.2 C4S is driven onwards



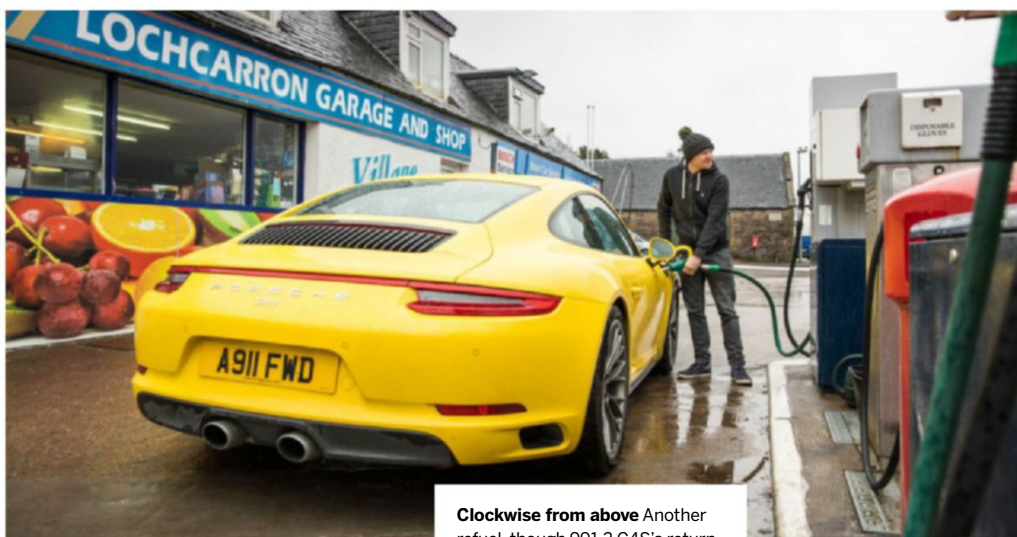
“A dramatic environment only serves to bring out the best in Porsche’s versatile 991.2 C4S”





500 miles (of sorts)

After our Great Road entry in issue 153, Scotland's North Coast 500 shouldn't be new. To recap, it's a 516-mile round route traversing the most far-flung points of the Scottish Highlands. There's plenty to see and do along the way, taking in the very best of beautiful, unspoiled Scotland, with sweeping roads punctuated by vast lochs, rugged mountains, ancient castles and breathtaking views. Of course, we'd have liked to have completed the entire loop, but Scotland's weather and our thirst for inspiring photography ensured otherwise. In the end, we managed 500 miles of sorts – 486, in fact – but this was accumulated entirely on the NC500's west coast, largely thanks to back-and-forth attempts to conquer the Bealach na Ba and Kylesku bridge (the views offered at both these points on a clear day was the driving force behind our persistence to visit them). No matter, we have it on very good authority that the west coast is the NC500's better side, so we'd encourage you to spend more time here, and perhaps even venture off-trail to explore the many other outstanding roads and sights the area has to offer. For more information on the North Coast 500 route, visit northcoast500.com.



Clockwise from above Another refuel, though 991.2 C4S's return of near 30mpg is impressive for a 420hp sports car; Been there, done that, got the sticker; Lee gets stuck in to the Highlands' morning rush hour





Model **991.2 Carrera 4S**

Year **2016**

Engine

Capacity 2,981cc

Compression 10.0:1
ratio

Maximum power 420hp @ 6,500rpm

Maximum torque 500Nm @ 1,700-5,000rpm

Transmission 7-speed PDK

Suspension

Front Independent; McPherson strut; PASM

Rear Independent; multi-link, PASM; rear axle steering

Wheels & tyres

Front 8.5x20-inch Sport Design; 245/35/ZR20 Pirelli's

Rear 11.5x20-inch Sport Design; 305/30/ZR20 Pirelli's

Dimensions

Length 4,499mm

Width 1,852mm

Weight 1,490kg

Performance

0-62mph 3.8 secs

Top speed 189mph

Cattle', the road can be described as a dainty single-track affair cutting up through dramatic mountain scenery, offering picturesque views over the Isle of Sky and Outer Hebrides from its 2,053-foot summit. Such promise should rightly form the quintessence of any road trip such as this, and we press on to the start of the pass, but not before stopping to read a purposefully imposing road sign warning us as to the potential severity of the trail ahead. 'Gradients of 1 in 5 and hairpin bends', it reads (which I consider to be more a trigger for excitement than caution), before continuing 'not advised for learner drivers, very large vehicles or caravans after the first mile'. Well, the 991 boasts by far the largest dimensions of any 911 generation, granted, but it's by no means a large vehicle, and after ten years of driving I'm certainly no learner. On we go, then.

The road begins to climb almost immediately – gently at first, before rising steeply around numerous craggy rockfaces. These mostly lie to the right and provide a little shelter from the elements, though there's an almighty drop to our left, with no guard rail for comfort. Remember, this is a single-track road: there are designated passing places chiselled into the rugged terrain every hundred yards or so but such is the nature of this trail that very often blind corners will meet you before a passing place does.

We negotiate a few of these turns and after a few minutes we think we're safely onto a straighter section of narrow road, the tarmac only elevated around six feet above dense marshland either side. An abandoned Fiat Punto is a poignant feature to

this terrain, its battered blue bodywork suggesting it may not have come to rest in the mire strictly on its wheels. We pause in the road to look down on the wreck, 'Police Aware' tape wound around it, before carrying on our journey. We better be on our guard.

Climbing in altitude again, the Porsche's windscreen wipers work overtime to frenetically clear water as quickly as it lands on the glass in front of us, affording a glimpsing view of a dramatic mountain top lunging into the clouds ahead. I say 'ahead', in that around 300 yards up from us, the road, now traversing a narrow corniche cut into the side of this spectacular mountain, completely disappears into those clouds altogether. My photographer, sodden from intermittent forays out into the elements, expresses his first concern. "That's going to be a permanent curtain of uncertainty around us," Dan says. "We've no chance of any photography in there."

"Maybe we'll rise above it?" I reason (thankfully, Dan knows me better than to suggest there may have been a metaphorical element to my retort). Well, what were we to do? The intermittent passing places were far too narrow for us to do a U-turn, even with the rear axle steering this is equipped with. Besides, this is the only road over to Applecross for miles.

We press on into the mist. The clouds are moving quickly, so our range of visibility changes by the minute. Our fog lights are on, though I am most grateful of the C4S's optional PDLS Plus lighting system with dynamic cornering lights, which measures steering angle and vehicle speed to swivel the car's main headlights into a bend. This proves

particularly useful along the Bealach na Ba, which is Stelvio-esque as it nears the top.

Eventually, we reach a small gravel car park at the summit. I turn into it, killing the engine. A blaring whoosh from the 911's heaters is replaced by a whistling of the wind outside. Despite our earlier hopes, dense cloud continues to cloak our surroundings, and my attempts to leave the vehicle for a better look prove fruitless: no sooner do I pull on the interior handle than the howling wind has already ripped the door wide open. I am thoroughly surprised it has remained attached to its hinges. Deciding against a cliff-top venture, I slam the door shut, and it's only then we realise the time: 7:30pm. It'll be getting dark soon, which will only add to our photographic woes, and our overnight stop in Ullapool is a three-and-a-half hour drive along similarly minor roads skirting the North Coast 500's westerly reaches. This is getting desperate!

There and then, we make a call. The C4S's PCM shows a quicker route back to Ullapool, which despite meaning we have to go back the way we came (out of the clouds, past the Fiat, through the blind bends, past the 'danger' sign and halfway to Inverness), we'd be at our overnight lodgings for 9:30pm. We could get a good night's sleep and arise early the next day to attempt a second go at the clearer pass.

And that's exactly what we do, soon reaching the sanctity of the sweeping A890, a beautiful, wide and flowing road bereft of any traffic. We roll into Ullapool just after 9pm, indulging in some hot food and getting to bed in preparation for an early start. ➡



“Low-down torque supplied by the 9A2 engine’s twin turbochargers is most welcome on these tight little roads”

Next morning we refuel the C4S (it’s best to always have at least half a tank of petrol here, as you’re never sure when you’ll have the chance to top up), and head two hours back to the summit of Bealach na Ba, renewed in optimism. That summit is just destined not to appear in these glorious pages, however, as our arrival in that gravel car park heralds a repeat of the conditions we were met with yesterday evening. At least now we have daylight on our side, so we persist onwards to explore what we can of the North Coast 500’s remaining 420 miles.

Before long, we descend in altitude, reaching the Applecross peninsula that’s home to just a couple of hundred people. Our vision outside of the 991’s windscreen improves dramatically, despite the rain still lashing against our Racing yellow C4S with unending persistence. Our eyes meet the crashing waves of the Atlantic ocean on the left for the first time and happily we follow its perimeter north, the road bobbing, weaving and dipping along the soaking countryside in front of us. It’s the first time on the NC500 that I can really stretch the C4S’s legs, which reminds me just how lithe the car is through twists and turns for a vehicle weighing more than 1,500 kilograms laden with all our photography equipment. Low-down torque supplied by the 9A2

engine’s twin turbochargers is most welcome on these tight little roads – even if the 991.2 misses the razor-sharp throttle response of the atmospheric 991.1 – helping us make good progress. A gnarly snare of the optional Sports exhaust on lift-off serves as a thrilling reminder of the C4S’s sporting intentions, its resonance bouncing off the hillsides as we cut inland, our waterside surroundings now mellowing into stunning lochs of varying sizes and extravagance.

We soon stumble across a herd of Highland cattle, who generally seem disinterested in a bright yellow Porsche spoiling their countryside tranquil. After a few quick snaps with our furry friends, we carry on, following the NC500 trail through the sleepy towns of Fearnmore, Shieldaig, Gairloch, Mungasdale and, finally, back into Ullapool for lunch.

The afternoon’s antics sees more spirited driving as we head north, engaging PDK’s manual mode and reveling in razor-sharp changes up and down the C4S’s gears. Porsche’s PDK system now is at a stage of being ridiculously good: the brushed aluminum levers mounted to the steering wheel have a great feel and weight to them, and their minimal travel when pulled adds to the sensation of a lightning-quick cog swap in Sport Plus. That, allied to simply impressive levels of grip constantly found beneath the

C4S’s Pirelli tyres, means we’re able to cover ground quickly while enjoying the occasion at the wheel.

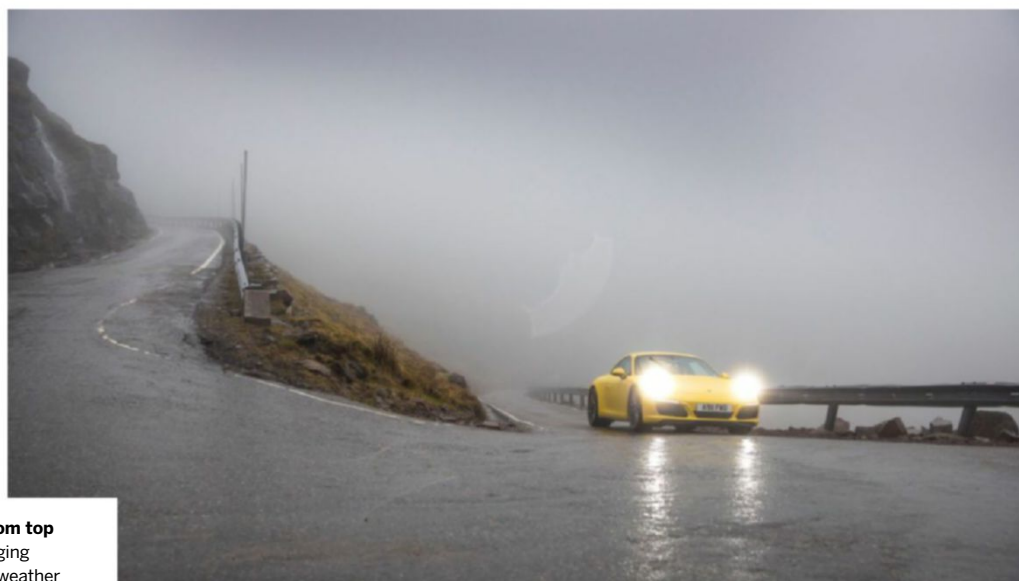
The quality of road surface in the Highlands is pretty good, shaming many more populous towns whose road networks are relied upon by considerably more people. Maybe that’s the point: with less traffic, the roads appear better preserved, though there has clearly been money spent. Even 30 miles from Scotland’s most northerly tip, we stumble across a fresh stretch of blacktop accompanied by a large sign. ‘Project part-financed by the European Union’, the notice reads, signing off ‘Europe and Scotland making it work together’. We can’t help but giggle: even after a 12-hour drive from Britain’s south coast to near the remote summit of our island’s most north-westerly tip, we seem to find connotations of ‘Brexit’ and Scotland’s retaliatory ‘IndyRef2’.

By 5pm we reach the stunning Kylesku bridge. Built in 1984, this spectacular structure is set in an idyllic location between the lochs of Glendhu and Glencoul on the A894. We’ve wanted to visit this bridge for a long time at Total 911 and at last, the moment has arrived.

I say ‘moment’ in that we don’t stay too long. We realise quickly that the adverse elements mean Kylesku bridge is imperceptible through such thick



Clockwise from top right Challenging roads, balmy weather and an array of wild animals amounts to the ultimate acid test for the 'everyday' 991.2 C4S



cloud from Dan's elevated vantage point. We want the shot, yet tonight's stop-off is three and a half hours away at John O'Groats on the mainland's north-easterly tip, and we're then due four hours south at Balmoral the next day. Moreover, the weather forecast is predicting incessant rain for the next three days, with an hour's respite scheduled for 5am the next morning. Well, we'd come all this way, so we decide to stay local for the night, arising before dawn to get the all-important picture.

We book a new hotel and elect to make a quick return trip to the tip of Scotland at Durness, just over 20 miles north. Bizarrely, the landscape gets a little flatter, with miles of marshland punctuated by sheep and little else. There is nobody else around as we push north, save for a woman in a Landrover Discovery who passes us while brazenly talking on a hand-held mobile phone. This of course is illegal in the UK, though we're amazed she's found any signal in the first place. Either way, she doesn't look too concerned: this is light years away from the CCTV-riddled streets of London, after all.

Eventually, the road sprawls into Durness, the far northerly tip of mainland UK. There's not a great deal here: the North Sea threatens the existence of a local church graveyard (I doubt its inhabitants,

mostly hailing from the 19th and 20th century, will be too worried), but that's about it, save for a few shops and a campsite. We turn around and head back to our impromptu stopover near Kylesku, preparing for another pre-dawn start.

Eight short hours later we're back in the C4S, heading to the bridge in an attempt to beat the breaking daylight. For the first time since I'd collected Dan from Inverness airport some 48 hours previously, there's no rain: after days of what had become oppressive drizzle against our 911's elegant coachwork, its absence was blissful. We reach the bridge for 5:30am, just in time for sunrise. With Dan positioned high above the bridge and gently lapping water below, all that's left to do is drive the overpass on my own one final time. It's become the crowning moment of our trip: out of the darkness and into the light, the rising sun beginning to illuminate the mountainside behind me. The wind has dropped too, the shrubbery no longer dancing maniacally from its roots, instead standing tall. It's as if everyone, or *everything*, is momentarily watching the 991.2 C4S as it prepares to sign off from its Scottish adventure.

As I bury the organ-shaped accelerator to the floor, the C4S surges forward, leaving stable ground and entering the structure's tarmac, the 911's digital

dial next to the tacho showing 0.8-bar of boost. Then, as I turn the wheel softly to the left and lift slightly before holding throttle position, the car's nose bites into the long curve as we make our way over the 130-metre expanse of water. And that's where our story ends, our Sports exhaust once again reverberating its throaty kick off the rockfaces, that single red strip running right along the C4S's rump illuminating as we go. I pull over to collect Dan and camera from their elevated hideout, and we high five, happy with the fruits of our endeavors.

It'll be a long drive back south, and there's more 'Dreich' to come, but it matters little. Battling against the throes of time and Mother Nature, we're putting this down as a triumph over adversity, even if our plans changed drastically during the course of two days. Better still, we realise our Racing yellow 911 has performed unbelievably. Such a dramatic environment dominated by mountainous terrain and unpredictable conditions only serves to bring out the best in Porsche's versatile 991.2 C4S, which still demonstrates its ability to thrill in even the most harsh of conditions. Our trip has become the car's ultimate appraisal: at no point did we require more power, less grip, or more comfort on our travels. The perfect grand tourer? Absolutely, come rain or shine. **911**



PSM EXPLAINED

Porsche Stability Management keeps your 911 pointing in the right direction, but how does it work and how has it been developed?

Written by Kieron Fennelly





Electronics made their first tentative appearance in cars in the Seventies – the 1978 Mercedes S Class pioneered a Bosch-developed ABS system. Engine management systems also started to evolve and by the Nineties, vast increases in processing power were making a wider number of applications feasible: thanks to the ability to simultaneously digest and cross-check data from multiple sources, electronic reach would increasingly know no bounds. One of the new applications was traction control, effectively an extension of ABS. A Mitsubishi offering took this stage further with control of lateral speeds in cornering and by the end of the decade, most of the premium brands were offering some form of cornering stability control. For EU-type approval, this became mandatory for all cars from November 2011.

Weissach had already tested 993 prototypes with stability control, but rather than introduce its own version, PSM, on the new 996 C2 launched in 1997, Porsche preferred to wait for the presentation of the C4 a year later. This decision was largely based

on marketing considerations. The 996 launch, the first totally re-engineered 911, was in itself enough of an event. The availability of the new C4 with PSM allowed Porsche to vaunt the security of its latest all-wheel drive model. By the same logic, the 996 Turbo which arrived in 2001 also had PSM and it became optional for the C2. By contrast, PSM was not offered on the track-oriented 996 GT3 or its turbocharged 480 horsepower brother the GT2 – a rather daring omission, thought some observers.

The basis of Porsche's stability management was essentially little different from anyone else's: it detected any anomaly such as wheelspin, understeer or oversteer and applied correction by braking a rear wheel. A Bosch-developed system which Weissach then adapted, PSM effectively unified the input of ABS, traction control and ABD (automatic brake differential) to stabilise the chassis during cornering. Sensors monitored lateral acceleration, steering wheel angle and yaw (movement around a vertical axis) to determine when intervention was needed. If the sensors signalled understeer, the inner rear wheel was braked; in the case of oversteer the outer

rear was slowed. Thomas Herold, the Weissach engineer who led the PSM team said the intention was for PSM to be virtually undetectable by the driver on dry roads: "Other cars are castrated by such systems. We didn't want the 911's entertainment factor to be influenced by the computer."

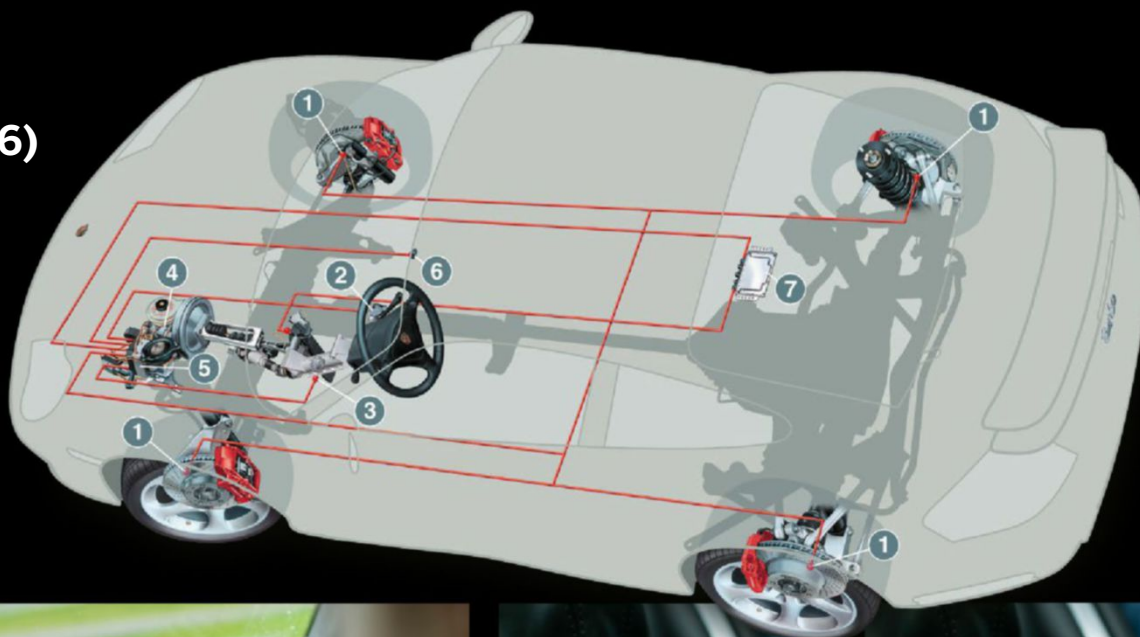
The Porsche method differed from most other stability systems in that its limits were set much higher and the driver could switch it off altogether, though it was reactivated if the brake pedal was touched. PSM's rapid intervention on wet or suddenly slippery roads – black ice, for example – was hailed as a major safety factor.

That PSM underwent continuous development throughout the life of the 996 was indicated by the fact that the system applied to the new 997 in 2004 was called 'PSM 8.0.' This encompassed many subtle improvements from a weight reduction of three kilograms to smoother intervention thanks to enhanced control algorithms. On the 997, PSM remained on and armed even if the driver believed he had switched it off: its operation waited until it detected emergency circumstances, so it would not



Porsche Stability Management (996)

1. Wheel-speed sensor
2. Integrated yaw-velocity and transversal-acceleration sensor
3. Steer-angle sensor
4. Pre-load pump
5. Hydraulic aggregate PSM 5.7 with pressure sensor and control unit
6. PSM switch
7. Motronic control unit



intrude, particularly at lower speeds (up to 70kph) allowing faster entry to tight corners. On the other hand, ABD remained active all the time to ensure traction out of corners and on variable road surfaces. The 997's ABS had a significant upgrade: new linear solenoid valves allowed more precise regulation of brake pressure, reducing the intervention of ABS – and thus unwantedly provoking other PSM systems. Where the 996 used conventional rotor impulse sensors, the 997 used far more sensitive multipole sensors on the wheel bearings, reducing untimely interruption.

For the all-wheel-drive 997s, 'pre-brake filling' shortened emergency stopping distance by arming the brakes and so reducing their application time if the driver suddenly released the accelerator. By contrast the 997 GT3s were fitted with a kind of 'PSM lite,' effectively traction control linked to a mechanically asymmetric limited slip differential. On one hand, engine torque was cut if both rear wheels spun together and if one wheel lost traction, ABD slowed it until grip was regained; the 997 GT2 featured a two-stage control which allowed PSM to be turned off completely.

The Gen 2 997 introduced PDK, and the PSM's lateral movement sensors determined when and

how hard the 911 was cornering and would prevent an untimely PDK gear change mid bend. Meanwhile the Turbo also acquired torque vectoring, PTV, a more advanced ABD and contributor to the overall PSM, which improved steering response. It varied the torque delivered to the driving wheels by reacting to steering angle, accelerator position, yaw rate and road speed: when the Turbo was driven aggressively into

“PSM had advanced hugely, and that was both in terms of complexity and efficacy”

a corner, moderate braking was applied to the inside rear wheel at the same time as the standard-fit LSD was apportioning more torque to the outer. Slowing the inner and accelerating the outer improved driver steering feel and the stability of the car, said Porsche.

In ten years PSM had advanced hugely, and that was both in terms of complexity and efficacy from the system Herold had proudly presented for the 996 C4. PSM continued to advance: Porsche considered the advent of the 991, only the third-ever 'new' 911 was enough, and no reference was made to

developments concerning stability control. However, with the second-generation model, and perhaps to offset some of the negative comment regarding the end of natural aspiration, Porsche was keen to stress the latest 911's dynamic abilities, introducing its PSM Sport mode: "Together with the optional Sport Chrono Package, PSM is extended by a Sport mode. It allows for a significantly sportier driving style, while PSM remains active in the background for an even more enhanced driving experience."

The processing power now used by premium carmakers would have sufficed for an Airbus 25 years ago and though Porsche releases no detail, Weissach has once again amplified PSM's capability through extended data usage and control of the chassis.

Essentially PSM Sport will permit a slide or loss of adhesion to develop as it responds to much wider yaw parameters. The intention is to allow track drivers more rein, but at the same time prevent the 911 spinning. Feedback from capable 911 exponents, who by their own admission are not quite in the Walter Röhrl category, is said to be enthusiastic.

As ever, we are left wondering how on earth Porsche could improve the 911 further – but then again it always does. **911**



Drive Spa-Francorchamps

What's the best way to experience the most stunning F1 circuit in the world?

The favourite Formula One circuit of many drivers, Circuit de Spa-Francorchamps is also considered to be one of the most beautiful tracks in the world, a truly spectacular ribbon of tarmac flowing across the Ardenne mountains.

▪ RSRSpa Premium Trackdays

If you're going to drive the circuit, then make it the best possible experience by joining an RSRSpa Premium Trackday. These high quality, limited entry days focus on maximising track time for each and every user.

▪ RSRSpa Driving Academy

The obsession of every driver in the world, from amateur to world champion is to go faster and faster, finding the "last few tenths". While many thousands of pounds are spent on modifying cars, we believe that the most gain is often in the area most overlooked; driver training. Regardless of your experience level, the Driving Academy at RSRSpa provides customised, one-on-one learning to make sure you reach your driving goals, whether it be the basics of track driving, or top level race secrets!

RSRSpa Premium Trackdays:

- The best way to safely experience your own car on track.
- Strict, mandatory safety briefing for all drivers.
- Trackday starts with a detailed track walk, led by Ron Simons.
- Open Pit Lane format with no sessions.
- Limited entries for a better quality track experience.
- Slick tyres and race cars allowed.
- Free overtaking rules, with sportsman-like behaviour encouraged.
- All day catering and lunch included.
- Private pit boxes available with setup possible on the previous evening.

Upcoming Trackday Dates:

Tue 20. June 2017 (107dB)
Wed 6. September 2017
Thu 28. September 2017
Fri 13. October 2017
Sat 4. November 2017

Visit www.RSRSpa.com to reserve your spot today!



RSRSpa Driving Academy

Route du Circuit 16, 4970 Francorchamps, BELGIUM
Tel.: +32 8727 5116 | Tel. (A/H): +32 471 78 38 39
www.RSRSpa.com | sales@RSRSpa.com

996 CARRERA ROAD **V** RACE

Just how much does it really cost to scratch the racing itch, Porsche Club style? Total 911 examines a 996 race car against its road-going equivalent to find out

Written by **Neill Watson** Photography by **Daniel Pullen**







McQueen was probably right: “Racing is life. Everything else is just waiting around.” And happily, if you have the luxury of being adequately funded, racing can indeed be your life, interspersed with pleasant periods of waiting around beside swimming pools in the sunshine, checking the time on your period Rolex Daytona and then strolling out to the helicopter. But back here in the real world, very few of us have the luxury to enjoy the true McQueen mantra. For the rest of us, racing has to be interspersed with long, long periods of waiting around, which includes the tiresome irritation of earning a living, paying bills, spending time with family, plus, of course, finding a way to fund that short, intense burst of competition when the lights change to green.

So if you’ve ever wondered how to get yourself into the position where you’re the one doing that slow-motion move of removing your helmet post race, revealing those steely blue McQueen eyes to wipe that winner’s perspiration from your brow and punch the air in victory, we are taking a look into

what it really takes to be on the grid in Porsche Club GB’s racing series, before digging deeper into the true art of transforming the road-going Porsche 996.1 into a race-ready car.

Richard Higgins has been racing in the UK Porsche Club series for six years now, starting out with a Porsche 968 before progressing to the 996 3.4-litre you see in these images. His journey is a fine example of the typical progression of many drivers in the series and typifies the ethos of Porsche Club competition, that of providing an excellent platform to go racing Porsche 91Is without costs spiralling out of control and above all, containing the ‘chequebook racing’ element of motorsport the world over, whereby a single competitor can simply buy their way to victory through superior equipment.

That’s not to say racing in Porsche Club at the higher level of Class One is cheap. It isn’t. Anyone thinking they can simply buy a road-going 996, strip it, add the required safety devices and be out there will be sadly disappointed. Even the most cursory examination of the images here shows the level of detailed preparation that goes into the cars

in the series. However, compared with other high profile, non-professional race championships, it is comparatively affordable. Additionally, it has the benefit of being well supported by Porsche GB and enjoying a set of common sense regulations that balance costs versus benefit at every turn and seek to make the playing field as level as it is ever possible to make it in motorsport.

So how would someone get started in Porsche Club racing? “I’d suggest buying a prepared racing car from someone, get out there and learn. Building a racing car from scratch can be expensive and even if you have the funds, you really need that experience to know what you want from the car to make the decisions on the components that you can alter,” explains Richard.

Indeed, while certain parts of the 91I can be changed for Porsche Club motorsport, the core elements must remain standard, principally those of engine power, transmission and gear ratios. Engines are power checked to ensure they remain within the specified limit of 300bhp plus 5%; cars must have a minimum race weight of 1,345kg with the driver



aboard; and bodywork must retain the original silhouette of the car. With these limitations, the casual observer must be wondering what makes the difference between pole position and the back row of the grid. This is where the series gets interesting, as becomes apparent in our chat with Richard.

There are, essentially, three main elements to enjoying a successful Porsche Club racing season. The first is preparation. "I cannot stress enough how important finding a good team to prepare the car is. I used various mechanics when I started out, but finding Ian was a revelation for me. By preparing the car for each and every outing to a high level of reliability, it takes a lot of the heartache out of it." So can you prepare and run the car yourself? "It's possible, but unless you are exceptionally mechanically minded, I wouldn't do it in Class One now. The level of car prep is really high and you need a professional race team for that. It looks expensive, but in the long term it isn't."

Over a discussion with Ian Gorham of CCR, the team charged with running Richard's car, it becomes apparent why. "We've been involved in Porsche Club

every year since 2004 and the current Class One is incredibly competitive." Indeed, just one second can cover the first eight cars on the grid at most events. This means that car preparation and squeezing every last drop of performance is more important than ever. Ian says, "The current drivers are really hard on the engines, as the race is full on to the chequered flag, with no easy final laps. No one drives to preserve the car now, so this means we have to build a car that performs as well on the last lap as the first one."

While engines are standard internally and have power limits, an awful lot of work goes into making the 3.4-litre unit as bulletproof as possible. Ian works closely with Hartech, who supply the base engine for the racing car. They enhance reliability with several permitted modifications aimed at preventing liners moving and also creating greater oil capacity. Additionally, Ian's team have a bespoke oil and coolant system, as they found the standard combined Porsche system just wasn't able to cope with racing. It's an expensive modification involving a 19-row oil cooler in the engine bay and a 2.5-litre Accusump system that would be unrealistic on a road car but

ensures that oil temperature and pressure remain constant throughout the race. Oil is changed after every race weekend. Not because it needs it, but to examine the contents in detail. Any tiny amounts of metal are clues of an impending problem, and if acted on early this can avoid expensive engine failures. The 996 3.4 race engines are generally fairly reliable, but under the stress of competition they really are operating at the absolute limit of what is possible. The tiniest error, missed gear or mechanical over rev can store up problems for the next outing.

The discussion on race car prep is a fascinating one and we could easily write many thousands of words on this subject. Ian's experience of both driving and preparing cars in Porsche Club is massive. "We had a count up recently and calculated that across the cars we've driven and prepared over the years, we've scored more than 10,000 points." This experience is highly valuable when it comes to racing car preparation, which is always a labour-intensive business. "It is possible for an individual to get out there with a car for around £25,000. You wouldn't win outright, but a driver with talent ➔



996.1 Carrera
1999

Engine
3,387cc
11.3:1

300bhp @ 6,800rpm
350Nm @ 4,600rpm
6 speed manual

Suspension
MacPherson strut with
coil springs and dampers

Multi link

Wheels & tyres
7x17-inch; 205/50ZR17

9x17-inch; 255/40ZR17

Dimensions
4,430mm
1,765mm
1,320kg

Performance
5.2 sec
174mph

Model
Year

Capacity
Compression
ratio

Maximum power
Maximum torque
Transmission

Front

Rear

Front

Rear

Length
Width
Weight

0-62mph
Top speed

996.1 race car
1999

Engine
3,387cc
11.3:1

300bhp @ 6,800rpm
350Nm @ 4,600rpm
6 speed manual; plate limited slip
differential

Suspension
Ohlins two way adjustable
dampers; Eibach springs; factory
anti roll bar

Multi link; Ohnlins two way
adjustable dampers; Eibach
springs; factory anti roll bar

Wheels & tyres
8.5x18-inch; 235/645.18 Pirelli
control racing slick
10x18-inch; 265/645.18 Pirelli
control racing slick

Dimensions
4,430mm
1,765mm
1,345kg (including driver)

Performance
5.0 sec
174mph



could be in the top ten,” says Ian. However, if you’re going racing, you’re probably wanting to win. And that means preparation.

Starting with a used road car, the team strip back to the bare shell. No seam welding is permitted, so adding stiffness to the body shell is done through the roll cage. These days, modern roll cages go far beyond simply protecting the driver – Ian’s team spend five days just fitting the Porsche 911 cage. “We fit it as tightly as possible into the car and reinforce it with gussets where permitted. It’s time-consuming, but the result is a very stiff body shell that is as safe as we can possibly make it.”

Since 2014, carbon composite panels have been permitted in some areas to reduce weight. Richard’s Porsche has composite doors, which save a massive 50kg. This may appear to break the ethos of the cars all having a minimum weight, but of course the same regulations don’t say where that weight needs to be. It’s a fair assumption that the top level cars with composite panels are probably below race weight. This gives them the luxury of adding that weight back as ballast where they feel is most effective, probably down in the floorpan, between the axles. On additional weight saving, Ian says, “We run four cars in Porsche Club. Two drivers are 80kg, one’s 95kg and another is 115kg. I won’t say which one is which!”

The second element for success is making the most of the things that can be altered, namely springs and dampers. “You could run with a few thousand pounds of cheap suspension, but you would struggle to get on the podium.” Richard’s 996 runs Ohlins two-way adjustable dampers. We had expected three-way dampers, but the Ohlins have a special ‘pop off’ valve system that allows the car to ride kerbs, managing without the added complexity. However, once again, Ian’s experience tells as the dampers have been specially modified to allow more droop, which allows them to employ rather thick Eibach spring setups, which they would rather we didn’t talk about here.

Set up is always important in motorsport, but the advent of the slick Pirelli tyre four years ago was a move that focused the whole Porsche Club grid even more closely onto suspension setup. The slick tyres are a control tyre supplied by Pirelli to all the cars, with a limit of one set of tyres per meeting to control costs. Getting what is essentially road car geometry to make a slick racing tyre work effectively is where most of the effort in suspension is focused today. The objective is quite simple: if everyone has the same amount of horsepower, you need to find ways to use that power in the most effective way. By carrying as much speed as possible, being able to absorb the kerbs without being airborne and having a setup that inspires driver confidence, significant chunks of time can be gained. To help setup with the introduction of slicks, Porsche Club GB allowed GT3 bottom suspension arms to give greater movement in castor and camber, which allowed the tyres to generate the heat needed to work.

Brakes must remain standard dimensions, but materials are free, though the team have found that the standard Porsche road car discs are actually the preferred choice, being more durable and resistant



“Anyone thinking they can simply buy a road-going 996, strip it, add the required safety devices and be out there will be sadly disappointed”

to warping than the best aftermarket discs. Rebuilt standard callipers are fitted with revised seals to withstand the heat and, of course, a racing pad is fitted. The gearbox must also remain the standard road car unit, with no changes to ratios allowed. Most cars run with a plate limited slip differential and a race clutch, but otherwise the gearshift is standard.

So this brings us to the only other permitted variable: the driver. That Nut Behind The Wheel is, of course, fully adjustable and probably the single biggest variable in the whole series, which is exactly how Porsche would like it. Richard comments, “After finding a great team to run with, the single biggest difference to my performance in the last two years has been by working with a driver coach.” Richard employs the services and feedback of a professional racing driver, the two working together to hone his race craft, car control skills and his ability to analyse the car setup to gain time. It is an often overlooked element in motorsport and yet all top level sportsmen have coaches, whether they are golfers, footballers or tennis players. Why should driving be any different?

So if you’re inspired to be involved in Porsche 911 racing, just how much would all of this cost? If you are starting from the very bottom, preparing yourself with an RAC MSA National B race licence, suitable helmet, overalls, HANS device and so forth will set you back around £2,500, plus an additional £580 entry fee for Class One. As for a suitable 911, it is possible to get started in Class One Porsche Club with a used 996 race car at around £25,000. This will give you a good entry level experience to progress from. Take

your maximum tyre allowance of a set for each race weekend and you will spend a further £8,000.

Realistically, however, most of the front running drivers are budgeting on a figure of around £60,000 for a car prepared to the standard of Richard’s, plus a further £45,000 for running costs and an all-important testing budget. Significant sums of money, for sure, but in comparison with other racing series of a similar level, it is actually good value. Remember, you are racing a 300 bhp Porsche 911, which around Brands Hatch Indy, for example, is only a few seconds away from the pole time of a BTCC Touring Car. Add in a great paddock atmosphere with two, 25-minute races, plus qualifying and a test day, and it is easy to see why Porsche Club has developed into such a thriving championship.

As Ian succinctly puts it, “As each season ends, some of the drivers say they may not be back next year. But every January, they are hanging around the workshop, getting fidgety and wanting to know when they can start testing.” For Porsche Club drivers, racing is indeed life, it’s just that the waiting around part has to be tolerated a little more than McQueen may have liked. **911**

Thanks

Thanks to Richard Higgins for showing Total 911 his race car. For sponsorship opportunities call +44 7769 170 619. Country Classics Racing prepare Richard’s car – for all Porsche race prep call Ian on +44 1892 722067. The road car was supplied by Matt Samuel of ZRS Engineering, experts in Porsche welding, metal fabrication, cages and exhausts. Call +44 7814 148 784.



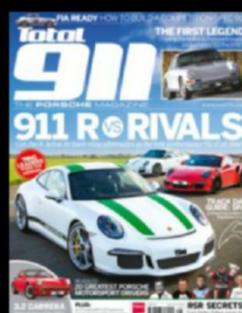
WANT MORE?

Go to GreatDigitalMags.com
and get great deals on brilliant
back issues & exclusive
special editions

INSTANT ACCESS TO BACK ISSUES

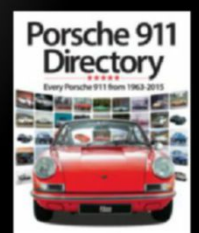
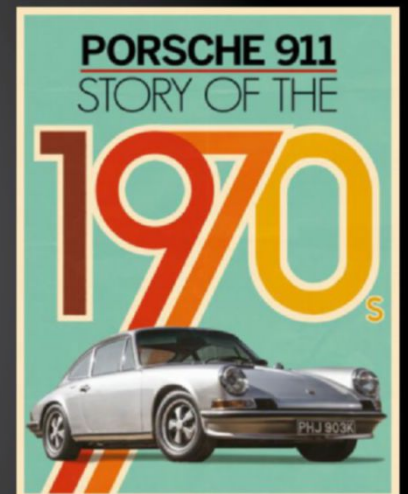
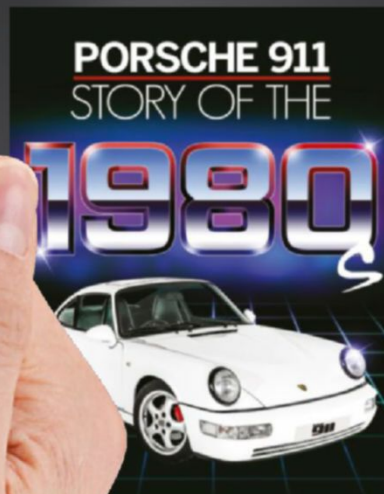
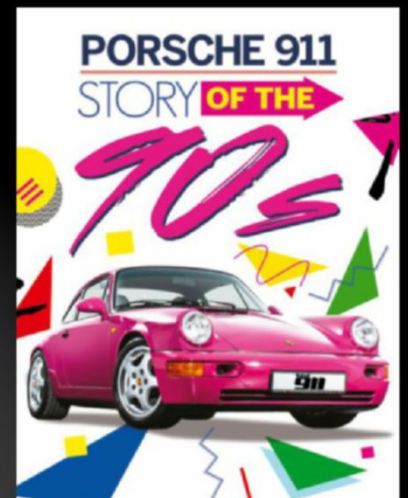
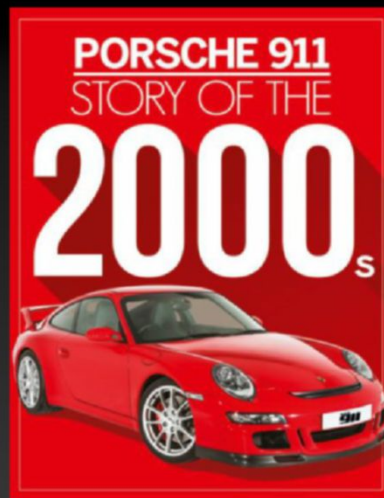


**PLUS SAVE
EVEN MORE
IF YOU
SUBSCRIBE**



EXCLUSIVE BOOKS & SPECIAL EDITIONS

★ GO TO GREATDIGITALMAGS.COM NOW ★



ALL AVAILABLE TODAY ON
GREATDIGITALMAGS.COM

Living the Legend

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



Gina Purcell
Oxford, UK

Model 911 SC
Year 1982
Acquired April 2014
Model 964 Carrera 4
Year 1989
Acquired September 2004



With Steffi the SC's restoration having been put on hold until November, there's been a change of priorities; Wolfi the C4 went back to Riviera Autobody for some paint tidying up and minor repairs. The front boot floor had previously received some repair work and a quick repaint nearly a decade ago (when Wolfi attempted to ingest a badger) but time and use had conspired to make it rusty and scruffy. After rust removal and repair, all of the ancillaries were removed and masked, and a thick, rubberised protection layer was sprayed down to seal the floor, with a layer of paint over. More sealant was applied around the panel joins for extra durability. Durability appeals to me in a fundamental way. The next job was the

broken passenger door check strap; the giveaway being two loud 'cracks' as the door was opened and closed. The driver's side check strap had the opposite problem, with no resistance left at all, so that also received attention. It's been four years since Riviera started Wolfi's restoration, and they offered to machine polish the paint in order to preserve the super-deep shine. Some of the 'outlaw' vinyl graphics had to be removed for this, but they may return. I can't believe Wolfi's resto was four years ago, but that's a blink of the eye compared to the near-13 years I've owned him. Long-term ownership of air-cooled 911s has become a natural state, and 27 years later the passion still burns, even though the VW Golf R will give my cars a thrashing. That doesn't matter any more though, as now it's all about the feel and the groove... and not the fury.

When I like something, it's generally for life. I've owned my hi-fi system, a Naim Audio/Rega Research combination, since 1990. My favourite music has been loved since teen years (Bach, Pat Metheny Group and Rush). My favourite architecture flows from the inspiration of Le Corbusier and Mies van der Rohe. The common threads of these 'likes' seem to be longevity, integrity and somehow, to me, all these disparate aesthetics merge indivisibly with the air-cooled Porsche 911 – that monument to permanence and Butzi's finest hour. On one hand, I was born to be an air-cooled Luddite, but on the other, I look to the far future where electric cars are the norm, with 'enthusiast classics' sharing the roads with them. It leaves me between a rock and a hard place.

It's a depressing thought that motoring will be changed forever



by people who don't care about us, the 'enthusiasts'. Look how capriciously the UK government has turned on diesel cars after promoting them so heavily! Next could be everyone's petrol classics! German lawmakers have stated an intention that all ICE car production there must cease by 2030, so that's only two model spans of petrol 911s left before auto-doomsday, with increasing amounts of unwanted, dead-end hybridisation heaped upon both. They should just go fully electric and let 'Mission-E' inspire the model range. But, what if the spirit of an old 911 could be made immortal? What if Herr Ruf were to make a future-proofed new 'old' 911? It would be electric powered, of course, employing the carbon chassis of his CTR 911 and sustained by next-gen glass/sodium solid-state batteries in that 70mm extended wheelbase. It wouldn't be cheap, but it'd outlive you and I and never need restoring!



Lee Sibley
Bournemouth, UK

 @lee_sibs

Model 996 Carrera 4S
Year 2002
Acquired April 2017



Last issue I promised to shed some light on the real-world differences between my old 996.2 Carrera 4 and latest 996 Carrera 4S purchase, as there are quite a few to be had. The first difference is the most noticeable, which for me is the C4S's wider track. Its Turbo chassis means the car has a wider 17mm front and 28mm rear track width than the narrow-bodied C4, which correlates most vividly to a better balance to the car on initial turn-in to a corner. The car feels so planted and so much more stable through all manner of turns, and the extra grip available from those wider tyres means I can in time learn to carry more speed into corners.

Stopping ability is also markedly improved in the 4S. Those Turbo-spec Big Red brake calipers pinch the pads together to scrub speed with more intent than the C4. Though the difference is noticeable, I suspect the gap could be even bigger than what is

presently displayed on my own car, so I will have the brake fluid changed to see if this improves performance.

However, the lavishing of this Turbo-spec onto the C4S is to the detriment of its weight, a 65-kilogram penalty over the C4 keenly felt under hard acceleration. It's not that the C4S feels sluggish per se, more that the C4 just seemed quicker off the mark. This would no doubt have been helped by a single-mass flywheel I had fitted to my C4, which helped give me razor-sharp throttle response.

Lastly but by no means least is the sound, and here the C4S asserts itself as a clear winner. It has an advantage over the C4 in being fitted with PSE, which gives a louder, more bassy bark, flipping to a guttural growl the moment the crank spins past 5,000rpm. There's even a beautiful crackle when letting off the gas in the mid range. So, the C4S not only blows the C4's acoustics out of the water (I had a throaty Milltek system on mine), I don't actually think there's a better sounding Carrera out there outside of a 991 with PSE.

Aside from putting miles on the car with a road trip through Wales, this month I've taken the C4S to Porsche Centre Bournemouth for a health check. I've mentioned before I think the results of these tests should be taken with a pinch of salt but it's nevertheless a good way to get a second opinion on what sort of project I've undertaken. The test brought up a couple of points for my attention, namely the brake performance, which I'll put right in the coming weeks.





Sean Parr
Harpenden, UK

@inveloveritas

Model 912
Year 1967
Acquired November 2014



A pretty quiet month for me and the 912 as I've been working away from home and more worryingly my wife has been in hospital pretty

seriously ill for a few weeks, so the 912 has played second fiddle to life.

We did however have a track day with the Living the Legend contributors with No Limits for some track tuition, which to be honest I was uncertain I could make with my wife so ill, but fortunately I did. I was reticent however as my nearly 50-year-old car was the oldest

expected by at least 30 years and I had never tracked it. I should not have had any concern whatsoever! As I have said before, I've had a tough couple of years with my Porsches, due not in a small part by my own stupidity in buying the 911 SC and expecting it to cost less and take less time than I actually thought that it would and I have also not had plain sailing with the 912. But, it was absolutely superb and again helped to cement the little car in my affections and a place in my garage for the foreseeable future.

The day was great and I'm sure you've read about it in a lot more detail elsewhere in **Total 911** but I found that, as someone who has been driving for nearly 35 years, it was a huge learning experience and yet again, I was utterly blown away by just how incredible this 912 is. The most staggering part of the day was hurtling along up to 70mph along a straight, then attempting a 90-degree left-hander, after my initial caution and a fantastic spin (which I enjoyed no end) I was taking the corner nearly flat without braking, just a fractional lift to unsettle the back end and bring it round – amazing! It was an absolute blast and the now very worn tyres are testament to just how much effort we were both making! The whole



day was brilliant, sure the acceleration is not up to the level of the Turbos (996 and 997) and 996 GT3 RS but I reckon I had just as much fun and the handling of that little monster four-pot 912 was absolutely incredible and just astonishing. The Koni Classics that I had fitted last year at Revival Cars are astonishingly good.

So, yet again, I'm not letting that little green out of my sight. And to say that, for an unadulterated car fan with the attention span of a two-year old when it comes to cars is very, very strong words! I mean, when my wife was in hospital, I was so worried about her that, well, I just had to buy another car... anyone want to buy a lovely Series 1 Peugeot 106 Rallye? What can I say? My name is Sean and I am a caraholic.



Rob Clarke
Bristol, UK

@rob911_ltl

@Rob996LTL

Model 996.1 Carrera 4
Year 1999
Acquired February 2014

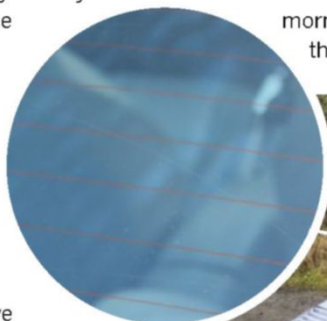


So this month the car has been running faultlessly, the new plugs and coil packs have brought a slightly crisper response which could

easily be my imagination, but amazingly after owning the car for three years my wife actually complimented the car saying that it had great throttle response, this was followed by her saying "Can we improve the response on the Macan?" The Macan is a Diesel S so there is a little lag before it kicks in, whereas the 996 is constant low down in the range, I am thinking maybe we should have got a petrol Macan, but hindsight is a wonderful thing! Since I am talking about the Macan, it did have to visit Bristol OPC to have some work done, but the guys there were as efficient as ever and all is well with it again. Only issue was that they spotted some scratches on the rear window, on closer inspection it was only the glass that was marked, no bodywork, so after some head scratching as to what

could have caused it I checked the ice scraper, this was found to have a sharp edge so that was dispatched to the bin, but we now have scratches. Upon inspecting my car it also has them, from when I have had to move my wife's car out the way to get mine out, so I must have used the same scraper on both cars on one of those cold winter mornings! I am hoping that my friendly detailer

will be able to do something on both cars. Meanwhile, I have now applied for a race licence and I will be competing at an event soon, not in my 996 though. I do enjoy watching motorsport and I have been support crew for a few friends who race, but it is my turn to drive. Trouble is getting a licence is the easy part, getting the car to the grid is the challenge and we only have four weeks! Hopefully more about this next month!





Joe Croser

Northamptonshire, UK

@jcx911

Model 997.2 Turbo
Year 2010
Acquired March 2016



For the love of 911s many owners invest in many different ways. Some invest time and energy washing and polishing – I admit

I do like to see a clean and shiny 911. Some invest great sums of money to restore and maintain a classic; breathing new life into old metal. And some throw all caution to the wind and track their car to within millimetres of the tyre's life; learning about the car and the driver's competency while enjoying a new sideways perspective. This past month I feel like I have experienced all three without enduring a financial whipping.

The month started with a PCGB Service clinic at Porsche Centre Cambridge. Our regional organiser Jon is a superstar for organising many friendly gatherings, with great support from the team at PC Cambridge. I didn't expect he'd find anything amiss and I wasn't too worried either as I have the Porsche Warranty protecting my wallet in the event of a discovery. As it was, the car was granted a very clean bill of health after the 20-30 minutes inspecting the underside. Nice to know all remains fine after 18 months of ownership.



It was then my turn to grab the keys for the PCGB Porsche 356, a beautiful example of a finely restored original. The Club keeps this car and passes it around to its regions for them to enjoy the opportunity to peddle it up the road. First impressions were good – it looked great outside and in, and it smelled fabulous inside. The sound of the engine firing was a treat but thereafter my impressions started to slide. The ride was primitive,

the acceleration was tame and the brakes were errant. As for handling, well it was okay.

It was a few more weeks of hectic work before I pulled my 997 out again to wash off the track dirt from my Car Limits day. Thankfully my snow foam of choice, Valet Pro Advanced Neutral Snow Foam, made very easy work of the task to leave my car fresh, shiny and ready to hit the road again.



Joel Newman

London, UK

Model 996 Turbo
Year 2003
Acquired April 2014



The Turbo continues to impress and is still running perfectly, even after last month's driver training that was spent mostly

sideways at considerable speed. More than this though I have newfound confidence in the car, because not only do I know the signs when I'm nearing the limit, I also now know what to expect when I breach it.

The truth is that on normal roads, in the wet or dry, I can remain confident that the car will not break loose with the PSM switched on, even with exaggerated and aggressive steering and throttle inputs. With the traction off, my training has also taught me another valuable lesson; to catch a slide or regain control of a shifting rear end, you need a considerable amount of space – far more than my *Top Gear*-fuelled mind would have led me to believe, so that button now remains firmly on when pressing on.

My new understanding of the car's limits has re-energised my love of driving her quickly, so last weekend myself and the other half took an excursion down to

the Cotswolds, a truly beautiful part of England to stretch her legs, and the car's!

Stunning 16th-century buildings and quaint towns were enjoyed as we sped from location to location, but as a Londoner I did find some of the more out-of-the-way single-lane country roads a tad frightening because when there's a good deal of camber and a variety of road surfaces, stopping abruptly is never quite as easy as getting up to speed.

It's lots of fun when you meet a tractor at 60mph, and my left ear is still aching from the screams of my passenger, who apparently doesn't appreciate playing 'chicken' with agricultural machinery.

I may have put nearly 500 miles on the clock, but I enjoyed almost every one. As a Porsche owner I would encourage each and every one of you to get out there and drive your cars, and drive them somewhere beautiful.





Dana Pawlicki
Maplewood, New Jersey

Model 993 Carrera
Year 1995
Acquired May 2007

Model 991 Carrera S
Year 2013
Acquired March 2013

Model 930 3.3
Year 1986
Acquired April 2014

Model 964 Carrera
Year 1994
Acquired June 2014

Model 930 Targa
Year 1988
Acquired April 2015



Last weekend I had the chance to attend the first Porsche Club of America concours event for the Northern New Jersey Region. Despite a

great deal of rain this spring, we got lucky with the weather and had a sunny event.

I always enjoy the first PCA event of the season, as it's a 'Welcome to the Club' event, which means there are more people/cars and they have a People's Choice category that is simply voted on by attendees without the rigour of competition. While I did not get there in time to enter (tough on a Sunday morning), it clearly encouraged more cars to be in the display field than usual.

There were some great cars, including another red 930 hardtop, a red 930 Cabriolet and a 1991 964 Turbo. When I arrived I felt a small group of people were looking at my son and I. At first I thought maybe it was they were amused with the five-year old crawling out of the backseat of the 930, but then a man came over and said "Hey, you're the **Total 911** guy!" I was very pleased they all seemed to enjoy my LTL articles! He had originally bought **Total 911** sporadically at Barnes & Noble, but had recently subscribed.



In other news, the 1986 930 is now at local specialist Protosport to have the rear main seal replaced, as well as a general tune-up and a few things such as new hood shock towers (these seem to need replacing on every Eighties or Nineties Porsche I buy.) I am also replacing the H2 headlight bulbs with brighter LED ones. I had done this last summer on my 1994 964 C4, and what a difference! Driving at night went from a candlelight dinner to spotlights at a Metallica show. My rear exhaust, an aftermarket unit from SSI (which I loved), was starting to rot after 30 years and 55,000 miles, as it is not made from

stainless steel, so I will be replacing that, along with the original blow-off valve. It was interesting, the proprietor Paul Freitas had also shared that the pipe between my turbo and the SSI exhaust was from a Honda Accord!

Finally, I attended the BMW Car Club of America monthly meeting at my friend's Eighties BMW specialist shop, Guten Parts, as I also have a 1987 E24 M6. That said, the one car I took a picture of that evening was this striking 1997.2 GT3 RS parked out front.

Next month, I should have my 930 back and plan to give a complete service review and test drive results!



Chris Wallbank
Leeds, UK

chris_wallbank
 @chrisjwallbank

Model 997.1 Carrera S
Year 2005
Acquired November 2012



Last month I had the chance to catch up with most of my fellow LTL contributors on a car control day, which I thought would be a

great chance to really get to grips with my 997 C2S in a controlled environment.

It was a long drive down to the location for me from Yorkshire to the airfield in Essex but it was definitely worth the journey as it taught me a lot about the unique handling characteristics of my C2S when encountering oversteer, understeer and under hard braking. Oversteer is something that I particularly wanted to learn more about as I've always wanted to have better car control in a 'sideways' moment!

It also gave me the chance to have a play with the PASM on and off, the exact same situations back to back, as I've never really used it much in the past, and I have to say I felt more confident controlling oversteer with the PASM on as the weight seemed to shift side to side too much with it in Normal mode.

Halfway through the day I had the chance to jump in with Joe Croser and

his immaculate example of a 1997 Turbo that you may have seen on last month's **Total 911** cover. I could definitely feel a difference with its four-wheel drive system in comparison to my C2S, it just felt a lot more stable and planted to the ground – I was also suitably impressed with Joe's capability to control the oversteer. I don't think that any of us stopped smiling and laughing all afternoon – all in all it was a great day out and I learnt a lot!





Greg James
Mercer Island, Washington

Model 3.2 Carrera
Year 1985
Acquired 2008
Model 993 Turbo
Year 1997
Acquired 2016



As most **Total 911** readers probably know, once in a while you run across an experience with a business that deserves a shout out.

I recently had one with a great Porsche dealership in the small town of Bend Oregon. I'm sure most international readers of this magazine (and even most US readers) would probably wonder where the heck Bend Oregon is – Bend is a relatively small town in central Oregon that just happens to have a Porsche/Audi dealership called Porsche of Bend (formerly known as Carrera Motors). Bend also might be the smallest standalone town in America to have its

own dealership. With a population of around 80,000, it sits just east of the Cascade mountains in central Oregon, and is home to a thriving tourist industry based around the Mt Bachelor ski resort. Why the shoutout? For spring break, I piled my girlfriend and our combined four kids into my Suburban for the six-hour drive from Seattle to Bend for a week of skiing. On the drive down I remembered from previous trips that the Santiam Pass route from Salem to Bend was a beautiful highway that followed a fast flowing alpine river valley. The pass itself culminates above tree line, and bisects the high peaks of the Cascade mountains before its long downhill run toward the high desert of Central Oregon. I also recalled that the road skiers take from Bend to Mt Bachelor was potentially worthy of a Great Roads piece, itself a curvy, modern 18-mile romp to the base of the 9,000 foot volcano. However, I had a problem: my 993 Turbo and 3.2 Carrera were 320 miles away, tucked into my garage in a suburb of Seattle. The Chevy Suburban, while a great ski vehicle and perfectly suited for a long road trip with kids, ski gear, clothes and other assorted vacation stuff, would not be the ideal car to photograph on the road for a Porsche magazine. So I called Porsche of Bend and talked to two of their salesmen, Jim Heinrich and Rob Weston. When I explained my dilemma, they invited me down for a visit and said they'd be more than happy to provide a car for photos. The dealership was undergoing

renovations, and the main showroom was not yet completed. However, Jim and Rob were great hosts, and gave me a wonderful tour of the facility. As mentioned earlier, Bend is a relatively small town. However, the selection of new cars in the old showroom was impressive, and to my delight, it also housed two 918s, a stunning 1969 restored 911L, and my dream car, a gorgeous white 993 RS that a local enthusiast had recently imported from Japan. Rob explained that the dealership was the top volume store in the US based on sales to population, and I would say that from personal observation, he's probably right. The small town of Bend was alive with Porsches, ranging from very early pre-1974 cars up to today's modern water-cooled 911s and SUVs.

As mentioned previously, Jim and Rob graciously offered to drive a new 911 out for some photos on the road, and I took them up on the offer. I had a good time taking shots of the car as it passed by on the 18-mile Bend to Mt Bachelor Highway. Unfortunately the weather was not very cooperative that week, and while the skiing was great, the light and road conditions did not allow for a lot of high quality photos overall. As I write this, I've been home for a few weeks, ski season is now over, and spring weather is starting to show on a regular basis. The 911s are about to enter into their summer driving regiment whereby they will get regular and predictable weekly romps on the local roads.



Richard Klevenhusen
Rio de Janeiro, Brazil

Model 930 3.3
Year 1979
Acquired May 2012

@richardkle



I bought my 1979 930 in May 2012 with 102,500 miles. It took me one year to be able to import it to Brazil, after all the bureaucracy,

shipping it to Brazil and customs clearance. Today, the car has 105,400 miles, that means I drove almost 3,000 miles in four years. My observation is that as the cars become classic, the annual driving average goes down, which makes the value of the car perpetuate even more. Classic cars are, in my point of view, a collector or investment item. I usually drive my car for specific events or a rare drive on the weekend and the cost of maintenance drops a lot. I practically only changed the oil or made small improvements in these four years. To be honest, I would like to live in a house where I could keep the car in the living room and admire it every day at dinner.





David Grover
Harpenden, UK

@propertypetrolheads

Model 991 Carrera S
Year 2014
Acquired March 2016

Model 997 Cup
Year 2014
Acquired December 2016



We are just a couple of weeks away now from rounds four, five and six of GT Cup with a large amount of rebuilding work required to be done

before the event at Brands Hatch on 20-21 May. Let me explain.

Two weeks ago we raced the GT Cup car for the first time at Donnington Circuit in rounds one, two and three of the 2017 season.

First trip out was the practice session where cars have free access to the track to test the vehicles and tweak anything needed to be ready for qualification. So some 30 minutes later, running under a partial yellow, I was back in the pits, the car was going well except occasionally it still wouldn't downshift, the same issue we had on track a few weeks back.

Later that morning we gridded up for two laps under the safety car to warm the tyres and got off to a clean rolling start. Later on in the race I was P3 in my class before the gearbox downshifts caused me to lose a place but eventually I completed race one, delighted, a little shattered but also very frustrated with the mechanical challenges we were having.

For race two I was in an optimistic mood. It wasn't long therefore before

I started to move up the field and was doing well. Then bang, the engine blew, it transpired, changing up whilst passing the pit lane and with an almighty clang of metallic parts I dipped the clutch and coasted to a safe place to sit the rest of the race out.

Once available I got a tow back to the garages but the damage was done. The team worked hard to begin to troubleshoot the issue and to remove parts looking for clues. This took a long time and for a while, as there was no immediate visual damage and no oil leaking out, I was optimistic. However we realised a blown piston had actually seized the engine and we later found when the car was back from the track that the damage was so substantial we now needed a new crankcase, crank, pistons and heads – basically a new engine fitted before the Brands weekend. We are currently in that rebuild phase with a substantial hit to the racing budget for 2017 as a consequence. I guess we have a refreshed engine for Brands but it should really have lasted all season before that work was needed.

The fault seems very rare and the Porsche teams that run these cars seem to have very few examples of failures like this, which in some ways is good but doesn't make it feel any better when large cheques are being written with little



value and complete lack of adrenaline-fuelled fun being had in return. But that is racing, the car is useless without a working engine so it had to be repaired to at least work.

Now the other problem we have worked through, although not yet found a perfect reliable solution to, is the gearbox downshift. Time spent on the data logger has now proven that when we first set out we are getting perfect shifts up and down the box. The system requires less than ten per cent throttle in order to enable a down shift and to start with we are getting that. After about 15-20 minutes use on track though we are getting over 12 per cent throttle.

So there are plenty of teething problems and ones that hopefully can be settled and sorted out more long term within the next few weeks and get us back running again.



Kyle Fortune
Warwickshire, UK

@kylefortune205

@Kyle_Fortune

Model 993 Carrera 2
Year 1994
Acquired December 2014



In a bid to give the new 911 GT3 the most exhaustive test possible I thought it'd be interesting to bring along my 993 to my UK drive

of Porsche's most hotly anticipated new model – not the manual, sadly, that came the following week on the launch proper, but the PDK. Even so it was revealing if, as suggested, not entirely fair, the 991 GT3 a 500hp monster in comparison.

There were some familial traits that remain obvious, but that's true of any 911 and, arguably, part of its enduring appeal. The GT3 delivers that intangible feel, and usability remains core to the 911's uniqueness and, oh hell, it makes for a nice picture, too.

At the GT3 launch proper I was at dinner with Andreas Preuninger, who I already know has a 993, which like mine is pre-VarioRam. He says they're the ones to have, saying Porsche's power figures for them were conservative, unlike the later VarioRam cars. He added they need driving, at least 100km regularly to help

keep the engine's internals clean – they don't like short, infrequent journeys. Duly noted, I'll endeavour to use mine more, or at least for longer trips.

His 993 has obviously been tweaked a bit, but it's heartwarming to know that the man that is responsible for Porsche's most engaging, immersive driver's cars holds the 993 in high-enough regard to have one as his own. It's not his only car, either: his latest acquisition is a

Dodge Ram pick-up truck, which is a bit of an unusual choice, but he needs something and it's got a V10 in it. It's a work in progress, the man responsible for the GT department's fastidious, constant evolution of its products was not about to leave the Ram alone. There are new cams, and it's being tidied up cosmetically, too – yellow with some bold stripes, I jest that perhaps this is a reaction to not being able to have a 911 R.





Tony McGuiness
San Diego, USA

@tonygt3rs
 @tonymcguinessgt3rs

Model 997.2 GT3 RS
Year 2011
Acquired February 2011
Model 991 GT3
Year 2015
Acquired December 2014



Anyone who attends cars and coffee events around the world is aware they can be negatively affected by the behaviour of just a

few people. Recent events and conduct of some owners at one of the cars and coffee events I attend led to the decision of putting the gathering on hiatus. It wasn't a decision that was taken lightly but nevertheless, it was one that I found was absolutely necessary in light of some of these events.

Unfortunately, some people turn up to these events with the intent of showing others how loud their engine is and how fast they can spin their rear wheels and leave a car park. In fairness, I haven't seen Porsche drivers at the events I attend behave badly.

Not only is this behaviour immature and irresponsible, it can be quite dangerous. One only has to search on YouTube to find examples of crashes at cars and coffee events. Interestingly, this is not something that occurs with any one particular age group.



A number of these events have been shut down now, either by the owners of property that are host to these gatherings as they don't want to be held liable for any injury or damage caused, or by law enforcement.

Hopefully common sense and simply 'having a word', reminding people that actions have consequences, will prevent the closure of these popular events that allow us to share great conversations about our legendary 911s.



Richard Higgins
Salisbury, UK

Model 996.1 Carrera 2
Year 1999
Acquired November 2015



NEW COLUMNIST

Welcome to my first Living the Legend column! As you will have seen on page 68, my 996 race car is a little different (okay, a lot different)

to the 996 Carreras you see on the road. After begging the Editor for ages, he's finally given me the privilege of being able to take you guys with me right through the Porsche Club Championship racing season, offering insight into what it's like to compete at a level of motorsport that's far more attainable than most!

Just after the aforementioned Road v Race Car 996 feature, I competed in my first races of 2017 at Brands Hatch. I felt good going into the new season: the car had had a fresh rebuild and new bodywork (ready and waiting for you sponsors! The Editor will put you in touch if you're interested) and I was ready to improve on last season. Qualifying went well: I was to start in fifth for the first race and third in the second of the two-race meeting (fastest time sets your position for the first race and second fastest time sets the second).

However, the first race brought good and bad news: the good news was I set

the second fastest lap time, the bad news was I screwed up my start, dropping to ninth, and had to work hard to catch up. I crossed the line sixth in a race that was full of action – it made for great television viewing. As for the second race, it was more of the same: tough battling in a class full of great drivers.

We then went to Oulton Park, which I don't know as well. I had two difficult races, battling a Cayman I couldn't get past, before Pete Morris' engine let go big time, putting oil on the track. Nevertheless I finished with a smile on my face, having had a great race weekend, which is what it's all about.





Confidence from every angle.

The new Direct Dialogue Bay at Porsche Centre Portsmouth.

Our new Direct Dialogue Bay enables you to inspect your Porsche from every perspective in the company of a Porsche-trained Technician. We also offer a complimentary geometry check with each Direct Dialogue Bay appointment. Call 02392 212 350 or email info@porscheportsmouth.co.uk to make your appointment.



PORSCHE

Porsche Centre Portsmouth
Lakeside Business Park,
Western Rd, Portsmouth,
Hampshire PO6 3PQ
Tel: 02392 212 350
www.porscheportsmouth.co.uk



PREMIER PORSCHE

Everything you need for your 911

Data file

Full specs, ratings and market values of every 911 GTS generation can be found beginning on page 86



Plus

■ Showroom

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

■ Servicing & tuning

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

■ Insurance & finance

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

Data file

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



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

General valuations

This reflects the general market trend for a model's used value compared to the previous financial quarter. The review for Q3 will be July 2017. The review for 2017 Q1 was April.



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 1964-67

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

Production numbers	9,250
Issue featured	123
Engine capacity	1,991cc
Compression ratio	9.0:1
Maximum power	132hp @ 6,100rpm
Maximum torque	149Nm @ 5,200rpm
0-62mph	8.3sec
Top speed	137mph
Length	4,163mm
Width	1,610mm
Weight	1,075kg
Wheels & tyres	F 4.5x15-inch; 165/80/R15 R 4.5x15-inch; 165/80/R15

(O & A series) ★★★★★ 911S 1967-68



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

Production numbers	4,015
Issue featured	148
Engine capacity	1,991cc
Compression ratio	9.8:1
Maximum power	162hp @ 6,600rpm
Maximum torque	179Nm @ 5,200rpm
0-62mph	8.0sec
Top speed	137mph
Length	4,163mm
Width	1,610mm
Weight	1,030kg
Wheels & tyres	F 4.5x15-inch; 165/80/R15 R 4.5x15-inch; 165/80/R15

(C & D series) ★★★★★ 911S 1969-71



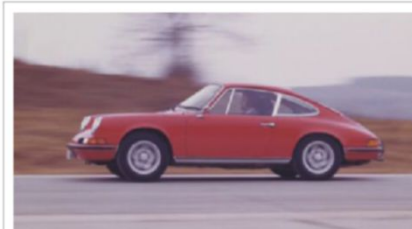
An upgrade in engine size gave the 911S 180bhp. Unlike the 911E, the S didn't gain improved low-down power and torque, so you had to keep the revs up for good power.

Production numbers	4,691
Issue featured	120
Engine capacity	2,195cc
Compression ratio	9.8:1
Maximum power	183hp @ 6,500rpm
Maximum torque	199Nm @ 5,200rpm
0-62mph	6.6sec
Top speed	145mph
Length	4,163mm
Width	1,610mm
Weight	1,020kg
Wheels & tyres	F 6x15-inch; 185HR R 6x15-inch; 185HR



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	127hp @ 5,800rpm
Maximum torque	169Nm @ 4,200rpm
0-62mph	7.0sec (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



(C & D series) ★★★★★ 911T 1973

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

Production numbers	16,933
Issue featured	127
Engine capacity	2,341cc
Compression ratio	7.5:1
Maximum power	132hp @ 5,600rpm
Maximum torque	197Nm @ 4,000rpm
0-62mph	7.6sec
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, H, I, J series) ★★★★★ Carrera 3.0 RS 1974



Updated version of the 1973 2.7 RS, complete with impact bumpers and Turbo-spec whaletail rear 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	233hp @ 6,200rpm
Maximum torque	275Nm @ 5,000rpm
0-62mph	5.3sec
Top speed	152mph
Length	4,135mm
Width	1,680mm
Weight	900kg
Wheels & tyres	F 8x15-inch; 215/60/R15 R 9x15-inch; 235/60/R15

930 3.3 1978-83



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 78-79 Cali cars)
Issue featured	116
Engine capacity	3,299cc
Compression ratio	7.0:1
Maximum power	304hp @ 5,500rpm
Maximum torque	412Nm @ 4,000rpm
0-62mph	5.4sec
Top speed	160mph
Length	4,291mm
Width	1,775mm
Weight	1,300kg
Wheels & tyres	F 7x15-inch; 205/55/R16 R 8x15-inch; 225/50/R16

911 SC 1978-83



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	127
Engine capacity	2,994cc
Compression ratio	8.5:1/8.6:1/9.8:1
Maximum power	183/191/207hp @ 5,500rpm
Maximum torque	265/265/267Nm
0-62mph	6.5sec
Top speed	141/146mph
Length	4,291mm
Width	1,626mm
Weight	1,160kg (1978)
Wheels & tyres	F 6x15-inch; 185/70/R15 R 7x15-inch; 215/60/R15

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	109
Engine capacity	2,994cc
Compression ratio	10.3:1
Maximum power	259hp @ 7,000rpm
Maximum torque	250Nm @ 6,500rpm
0-62mph	4.9sec
Top speed	153mph
Length	4,235mm
Width	1,775mm
Weight	940kg
Wheels & tyres	F 7x16-inch; 205/55/R16 R 8x16-inch; 225/50/R16

(A series) ★★★★★

911L 1967-68



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

Production numbers	1,603
Issue featured	138
Engine capacity	1,991cc
Compression ratio	9.0:1
Maximum power	132hp @ 6,200rpm
Maximum torque	173Nm @ 4,500rpm
0-62mph	8.4sec
Top speed	132mph
Length	4.163mm
Width	1.610mm
Weight	1,080kg
Wheels & tyres	F 5.5x15-inch; 185HR R 5.5x15-inch; 185HR

(A & B series) ★★★★★

911T 1967-69



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

Production numbers	6,318
Issue featured	127
Engine capacity	1,991cc
Compression ratio	8.6:1
Maximum power	112hp @ 5,800rpm
Maximum torque	156Nm @ 4,200rpm
0-62mph	8.8sec (est)
Top speed	124mph
Length	4.163mm
Width	1.610mm
Weight	1,020kg
Wheels & tyres	F 5.5x15-inch; 185HR R 5.5x15-inch; 185HR



(B series) ★★★★★

911E 1968-69

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

Production numbers	2,826
Issue featured	n/a
Engine capacity	1,991cc
Compression ratio	9.1:1
Maximum power	142hp @ 6,500rpm
Maximum torque	175Nm @ 4,500rpm
0-62mph	7.6sec
Top speed	130mph
Length	4.163mm
Width	1.610mm
Weight	1,020kg
Wheels & tyres	F 5.5x15-inch; 185HR R 5.5x15-inch; 185HR

(B series) ★★★★★

911S 1968-69



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

Production numbers	2,106
Issue featured	n/a
Engine capacity	1,991cc
Compression ratio	9.1:1
Maximum power	172hp @ 6,800rpm
Maximum torque	183Nm @ 5,500rpm
0-62mph	7.0sec (est)
Top speed	140mph
Length	4.163mm
Width	1.610mm
Weight	995kg
Wheels & tyres	F 6x15-inch; 185/70/R15 R 6x15-inch; 185/70/R15



(C & D series) ★★★★★

911E 1969-71

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

Production numbers	4,927
Issue featured	107
Engine capacity	2,185cc
Compression ratio	9.1:1
Maximum power	157hp @ 6,200rpm
Maximum torque	196Nm @ 4,500rpm
0-62mph	7.0sec
Top speed	137mph
Length	4.163mm
Width	1.610mm
Weight	1,020kg
Wheels & tyres	F 6x15-inch; 185HR R 6x15-inch; 185HR

(E series) ★★★★★

911E 1972



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

Production numbers	4,406
Issue featured	117
Engine capacity	2,341cc
Compression ratio	8.0:1
Maximum power	167hp @ 6,200rpm
Maximum torque	206Nm @ 4,500rpm
0-62mph	7.5sec
Top speed	137mph
Length	4.163mm
Width	1.610mm
Weight	1,077kg
Wheels & tyres	F 6x15-inch; 185HR R 6x15-inch; 185HR

(E series) ★★★★★

911T 1972



A lower compression ratio and the inclusion of Zenith 40 T1N triple-choke carburetors led to the relatively lower power output of 130bhp despite the new 2,341cc engine size.

Production numbers	16,933
Issue featured	107
Engine capacity	2,341cc
Compression ratio	7.5:1
Maximum power	132hp @ 5,600rpm
Maximum torque	197Nm @ 4,000rpm
0-62mph	7.6sec
Top speed	128mph
Length	4.163mm
Width	1.610mm
Weight	1,077kg
Wheels & tyres	F 5.5x15-inch; 165HR R 5.5x15-inch; 165HR

(E series) ★★★★★

911S 1972



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

Production numbers	5,054
Issue featured	120
Engine capacity	2,341cc
Compression ratio	8.5:1
Maximum power	193hp @ 6,500rpm
Maximum torque	211Nm @ 5,200rpm
0-62mph	6.6sec
Top speed	140mph
Length	4.163mm
Width	1.610mm
Weight	1,077kg
Wheels & tyres	F 6x15-inch; 185/70/R15 R 6x15-inch; 185/70/R15



(F series) ★★★★★

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	213hp @ 6,300rpm
Maximum torque	255Nm @ 5,100rpm
0-62mph	5.8sec
Top speed	152mph
Length	4.163mm
Width	1.610mm
Weight	975kg (Sport)
Wheels & tyres	F 6x15-inch; 185/70/R15 R 7x15-inch; 215/60/R15

(F series) ★★★★★

911E 1973



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

Production numbers	4,406
Issue featured	144
Engine capacity	2,341cc
Compression ratio	8.0:1
Maximum power	167hp @ 6,200rpm
Maximum torque	206Nm @ 4,500rpm
0-62mph	7.5sec
Top speed	137mph
Length	4.163mm
Width	1.610mm
Weight	1,077kg
Wheels & tyres	F 6x15-inch; 185HR R 6x15-inch; 185HR

(F series) ★★★★★

911S 1973



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

Production numbers	5,054
Issue featured	120
Engine capacity	2,341cc
Compression ratio	8.5:1
Maximum power	193hp @ 6,500rpm
Maximum torque	211Nm @ 5,200rpm
0-62mph	6.6sec
Top speed	140mph
Length	4.163mm
Width	1.610mm
Weight	1,075kg
Wheels & tyres	F 6x15-inch; 185/70/R15 R 6x15-inch; 185/70/R15

(G, H, I, J series) ★★★★★

911 1974-77



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

Production numbers	9,320
Issue featured	121
Engine capacity	2,687cc
Compression ratio	8.0:1
Maximum power	150hp @ 5,700rpm (165bhp from '76)
Maximum torque	239Nm @ 3,800rpm (4,000 from '76)
0-62mph	8.5sec
Top speed	130mph
Length	4.291mm
Width	1.610mm
Weight	1,075kg
Wheels & tyres	F&R 6x15-inch; 185VR

(G, H, I, J series) ★★★★★

911S 1974-77



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

Production numbers	17,124
Issue featured	n/a
Engine capacity	2,687cc
Compression ratio	8.5:1
Maximum power	175hp @ 5,800rpm
Maximum torque	235Nm @ 4,000rpm
0-62mph	7.0sec
Top speed	142mph
Length	4.291mm
Width	1.610mm
Weight	1,080kg
Wheels & tyres	F 6x15-inch; 185VR R 6x15-inch; 185VR



(G & H series) ★★★★★

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	213hp @ 6,300rpm
Maximum torque	255Nm @ 5,100rpm
0-62mph	6.3sec
Top speed	148mph
Length	4.291mm
Width	1.610mm
Weight	1,075kg
Wheels & tyres	F 6x15-inch; 185VR R 7x15-inch; 205VR

(I & J series) ★★★★★

911 Carrera 3.0 1976-77



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	200hp @ 6,000rpm
Maximum torque	255Nm @ 4,200rpm
0-62mph	6.3sec
Top speed	145mph
Length	4.291mm
Width	1.610mm
Weight	1,093kg
Wheels & tyres	F 6x15-inch; 185/70/R15 R 7x15-inch; 215/60/R15



★★★★★

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

Production numbers	2,850
Issue featured	144
Engine capacity	2,994cc
Compression ratio	6.5:1
Maximum power	264hp @ 5,500rpm
Maximum torque	343Nm @ 4,000rpm
0-62mph	5.5sec
Top speed	155mph
Length	4.291mm
Width	1.775mm
Weight	1,140kg
Wheels & tyres	F 6x15-inch; 185/70/R15 R 8x15-inch; 215/60/R15



★★★★★

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

Production numbers	11,135
Issue featured	144
Engine capacity	3,299cc
Compression ratio	7.0:1
Maximum power	304hp @ 5,500rpm
Maximum torque	432Nm @ 4,800rpm
0-62mph	5.4sec
Top speed	161mph
Length	4.291mm
Width	1.775mm
Weight	1,300kg (1,335kg from '86)
Wheels & tyres	F 7x16-inch; 205/55/VR16 R 8x16-inch; 225/50/VR16

★★★★★

Carrera 3.2 1984-89



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

Production numbers	70,044
Issue featured	148
Engine capacity	3,164cc
Compression ratio	10.3:1
Maximum power	234hp @ 5,900rpm
Maximum torque	284Nm @ 4,800rpm
0-62mph	5.6sec
Top speed	152mph
Length	4.291mm
Width	1.652mm
Weight	1,210kg
Wheels & tyres	F 7x15-inch; 195/65/VR15 R 8x15-inch; 215/60/VR15 (16" for '89)

★★★★★

930 SE 1986-89



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

Production numbers	50 (UK only)
Issue featured	146
Engine capacity	3,299cc
Compression ratio	7.0:1
Maximum power	335hp @ 5,500rpm
Maximum torque	432Nm @ 4,000rpm
0-62mph	4.6sec
Top speed	173mph
Length	4.291mm
Width	1.775mm
Weight	1,335kg
Wheels & tyres	F 7x16-inch; 205/55/VR16 R 9x16-inch; 245/45/VR16



★★★★★

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

Production numbers	337
Issue featured	142
Engine capacity	2,850cc
Compression ratio	8.3:1
Maximum power	456hp @ 5,500rpm
Maximum torque	500Nm @ 5,000rpm
0-60mph	3.9sec
Top speed	196mph
Length	4.260mm
Width	1.840mm
Weight	1,450kg
Wheels & tyres	F 8x17-inch; 235/45/ZR17 R 9x17-inch; 255/40/ZR17

★★★★★

Speedster 1989



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

Production numbers	2,274 (for both wide and narrow-bodied)
Issue featured	128
Engine capacity	3,164cc
Compression ratio	10.3:1
Maximum power	235hp @ 5,900rpm
Maximum torque	284Nm @ 4,800rpm
0-60mph	6.0sec
Top speed	148mph
Length	4.291mm
Width	1.775mm
Weight	1,220kg
Wheels & tyres	F 6x16-inch; 205/45/VR16 R 8x16-inch; 245/60/VR16

AUTOFARM

PURELY PORSCHE SINCE 1973



OVER 40 YEARS OF PURELY PORSCHE
Independent specialists for servicing, repair,
improvement, storage, sales and restoration



Best 911 Restoration Specialist
Best Independent Porsche Specialist For Servicing
Total 911 Awards 2015

workshop@autofarm.co.uk
www.autofarm.co.uk
01865 331234



ADVERTISE IN TOTAL 911 TODAY!

Want to advertise in the renowned
first choice for everything 911?

Call today on **01225 687463**.

Find out more about advertising with
Future on www.futureplc.com.



TOTAL
911



930 LE 1989

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

Production numbers	50
Issue featured	110
Engine capacity	3,299cc
Compression ratio	70:1
Maximum power	335hp @ 5,500rpm
Maximum torque	432Nm @ 4,000rpm
0-62mph	4.6sec
Top speed	173mph
Length	4,291mm
Width	1,775mm
Weight	1,339kg
Wheels & tyres	
F	7x16-inch; 205/55/VR16
R	9x16-inch; 245/45/VR16

3.2 Clubsport 1987-89



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

Production numbers	340
Issue featured	126
Engine capacity	3,164cc
Compression ratio	10.3:1
Maximum power	234hp @ 5,500rpm
Maximum torque	284Nm @ 4,800rpm
0-62mph	5.1sec
Top speed	152mph
Length	4,291mm
Width	1,650mm
Weight	1,160kg
Wheels & tyres	
F	7x16-inch; 205/55/VR16
R	7x16-inch; 205/55/VR16

964 Turbo S 1992-93



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

Production numbers	81
Issue featured	108
Engine capacity	3,299cc
Compression ratio	70:1
Maximum power	386hp @ 6,000rpm
Maximum torque	490Nm @ 4,800rpm
0-62mph	4.6sec
Top speed	180mph
Length	4,250mm
Width	1,775mm
Weight	1,290kg
Wheels & tyres	
F	8x18-inch; 225/40/ZR18
R	10x18-inch; 265/35/ZR18



(C & D series) 964 3.8 RS 1993

Identifiable by lightweight Turbo bodysheet, 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	304hp @ 6,500rpm
Maximum torque	359Nm @ 5,250rpm
0-62mph	4.9sec
Top speed	169mph
Length	4,250mm
Width	1,775mm
Weight	1,210kg
Wheels & tyres	
F	8x18-inch; 235/40/ZR18
R	11x18-inch; 285/35/ZR18



993 Carrera 4S 1995-96

The 4S was effectively a Carrera 4 with a Turbo wide bodysheet, 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	289hp @ 6,100rpm
Maximum torque	340Nm @ 5,250rpm
0-62mph	5.3sec
Top speed	168mph
Length	4,245mm
Width	1,795mm
Weight	1,520kg
Wheels & tyres	
F	8x18-inch; 225/40/ZR18
R	10x18-inch; 285/30/ZR18

993 Carrera RS 1995-96



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

Production numbers	1,014
Issue featured	119
Engine capacity	3,746cc
Compression ratio	11.5:1
Maximum power	304hp @ 6,000rpm
Maximum torque	359Nm @ 5,400rpm
0-62mph	5.0sec
Top speed	172mph
Length	4,245mm
Width	1,735mm
Weight	1,279kg
Wheels & tyres	
F	8x18-inch; 225/40/ZR18
R	10x18-inch; 285/35/ZR18

996 Carrera 4 1998-2001



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

Production numbers	22,054
Issue featured	111
Engine capacity	3,387cc
Compression ratio	11.3:1
Maximum power	304hp @ 6,800rpm
Maximum torque	350Nm @ 4,600rpm
0-62mph	5.2sec
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 GT3 1998-2000



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

Production numbers	1,858
Issue featured	117
Engine capacity	3,600cc
Compression ratio	11.7:1
Maximum power	369hp @ 7,200rpm
Maximum torque	370Nm @ 5,000rpm
0-62mph	4.8sec
Top speed	188mph
Length	4,430mm
Width	1,765mm
Weight	1,350kg
Wheels & tyres	
F	8x18-inch; 225/40/R18
R	10x18-inch; 285/30/R18

996 Turbo 2001-05



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	114
Engine capacity	3,600cc
Compression ratio	9.4:1
Maximum power	426hp @ 6,000rpm
Maximum torque	560Nm @ 2,700-4,600rpm
0-62mph	4.2sec
Top speed	189mph
Length	4,435mm
Width	1,830mm
Weight	1,540kg
Wheels & tyres	
F	8x18-inch; 225/40/R18
R	11x18-inch; 295/30/R18

★★★★★

964 Carrera 4 1989-93

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

Production numbers	13,353 (Coupe)
Issue featured	111
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	254hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.7sec
Top speed	162mph
Length	4,250mm
Width	1,652mm
Weight	1,450kg

Wheels & tyres
F 8x16-inch; 205/55/ZR16
R 8x16-inch; 225/50/ZR16

★★★★★

964 Carrera 2 1990-93

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

Production numbers	19,484
Issue featured	119
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	254hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.6sec
Top speed	162mph
Length	4,250mm
Width	1,652mm
Weight	1,350kg

Wheels & tyres
F 8x16-inch; 205/55/ZR16
R 8x16-inch; 225/50/ZR16

★★★★★

964 Turbo 1991-92

This used the revised 964 bodysell, 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	116
Engine capacity	3,299cc
Compression ratio	7.0:1
Maximum power	324hp @ 5,750rpm
Maximum torque	450Nm @ 4,500rpm
0-62mph	5.4sec
Top speed	168mph
Length	4,250mm
Width	1,775mm
Weight	1,470kg

Wheels & tyres
F 7x17-inch; 205/50/ZR17
R 9x17-inch; 255/40/ZR17

★★★★★

964 C4 Lightweight 1991

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

Production numbers	22
Issue featured	131
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	269hp @ 6,720rpm
Maximum torque	304Nm @ 6,720rpm
0-62mph	4.5sec
Top speed	125mph
Length	4,275mm
Width	1,652mm
Weight	1,100kg

Wheels & tyres
F 7x16-inch; 205/55/ZR16
R 9x16-inch; 245/55/ZR16

(C & D series) ★★★★★

964 RS 1991-92

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

Production numbers	2,405
Issue featured	131
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	264hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.4sec
Top speed	162mph
Length	4,250mm
Width	1,650mm
Weight	1,230kg (Sport)

Wheels & tyres
F 7x17-inch; 205/50/ZR17
R 9x17-inch; 255/40/ZR17

★★★★★

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	254hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.5sec
Top speed	161mph
Length	4,250mm
Width	1,652mm
Weight	1,340kg

Wheels & tyres
F 7x17-inch; 205/55/ZR17
R 9x17-inch; 255/40/ZR17

★★★★★

964 Turbo 3.6 1993-94

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	75:1
Maximum power	365hp @ 5,500rpm
Maximum torque	520Nm @ 4,200rpm
0-62mph	4.8sec
Top speed	174mph
Length	4,250mm
Width	1,755mm
Weight	1,470kg

Wheels & tyres
F 8x18-inch; 225/40/ZR18
R 10x18-inch; 265/30/ZR18

★★★★★

964 Anniversary 1993-94

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

Production numbers	911
Issue featured	112
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	254hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.7sec
Top speed	162mph
Length	4,250mm
Width	1,775mm
Weight	1,470kg

Wheels & tyres
F 7x17-inch; 205/50/ZR17
R 9x17-inch; 255/40/ZR17

★★★★★

964 RS America 1973

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	102
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	254hp @ 6,100rpm
Maximum torque	310Nm @ 4,800rpm
0-62mph	5.5sec
Top speed	164mph
Length	4,250mm
Width	1,650mm
Weight	1,340kg

Wheels & tyres
F 7x17-inch; 205/50/ZR17
R 9x17-inch; 255/40/ZR17

★★★★★

993 Carrera 1993-97

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	110
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	276hp @ 6,000rpm
Maximum torque	330Nm @ 5,000rpm
0-62mph	5.6sec
Top speed	168mph
Length	4,245mm
Width	1,735mm
Weight	1,370kg

Wheels & tyres
F 7x16-inch; 205/55/ZR16
R 9x16-inch; 245/45/ZR16

★★★★★

993 Carrera 4 1994-97

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

Production numbers	2,884 (Coupe)
Issue featured	111
Engine capacity	3,600cc
Compression ratio	11.3:1
Maximum power	276hp @ 6,000rpm
Maximum torque	330Nm @ 5,000rpm
0-62mph	5.5sec
Top speed	166mph
Length	4,245mm
Width	1,735mm
Weight	1,420kg

Wheels & tyres
F 7x16-inch; 205/55/ZR16
R 9x16-inch; 245/45/ZR16

★★★★★

993 GT2 1995-96

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

Production numbers	173
Issue featured	131
Engine capacity	3,600cc
Compression ratio	8.0:1
Maximum power	436hp @ 5,750rpm
Maximum torque	540Nm @ 4,500rpm
0-62mph	3.9sec
Top speed	189mph
Length	4,245mm
Width	1,855mm
Weight	1,290kg

Wheels & tyres
F 9x18-inch; 235/40/ZR18
R 11x18-inch; 285/35/ZR18

★★★★★

993 Turbo 1996-98

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

Production numbers	5,937
Issue featured	147
Engine capacity	3,600cc
Compression ratio	8.0:1
Maximum power	414hp @ 5,750rpm
Maximum torque	540Nm @ 4,500rpm
0-62mph	4.3sec
Top speed	180mph
Length	4,245mm
Width	1,795mm
Weight	1,500kg

Wheels & tyres
F 8x18-inch; 225/40/ZR18
R 10x18-inch; 285/30/ZR18

★★★★★

993 Carrera S 1997-98

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	289hp @ 6,100rpm
Maximum torque	340Nm @ 5,250rpm
0-62mph	5.4sec
Top speed	168mph
Length	4,245mm
Width	1,795mm
Weight	1,450kg

Wheels & tyres
F 8x18-inch; 225/40/ZR18
R 10x18-inch; 285/30/ZR18

★★★★★

993 Turbo S 1998

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

Production numbers	345
Issue featured	115
Engine capacity	3,600cc
Compression ratio	8.0:1
Maximum power	456hp @ 5,750rpm
Maximum torque	585Nm @ 4,800rpm
0-62mph	4.1sec
Top speed	186mph
Length	4,245mm
Width	1,795mm
Weight	1,583kg

Wheels & tyres
F 7x17-inch; 205/50/ZR17
R 10x18-inch; 285/30/ZR18

★★★★★

996 Carrera 1998-2001

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

Production numbers	56,733
Issue featured	117
Engine capacity	3,387cc
Compression ratio	11.3:1
Maximum power	304hp @ 6,800rpm
Maximum torque	350Nm @ 4,600rpm
0-62mph	5.2sec
Top speed	174mph
Length	4,430mm
Width	1,765mm
Weight	1,320kg

Wheels & tyres
F 7x16-inch; 205/55/ZR17
R 9x17-inch; 255/40/ZR17

★★★★★

996 Carrera 4S 2001-05

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	23,055
Issue featured	124
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	324hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.1sec
Top speed	174mph
Length	4,435mm
Width	1,830mm
Weight	1,495kg

Wheels & tyres
F 8x18-inch; 235/40/ZR18
R 11x18-inch; 295/30/ZR18

★★★★★

996 GT2 2001-03

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

Production numbers	1,287
Issue featured	127
Engine capacity	3,600cc
Compression ratio	9.4:1
Maximum power	468hp @ 5,700rpm
Maximum torque	620Nm @ 3,500-4,500rpm
0-62mph	4.1sec
Top speed	196mph
Length	4,450mm
Width	1,830mm
Weight	1,440kg

Wheels & tyres
F 8x18-inch; 235/40/ZR18
R 12x18-inch; 315/30/ZR18

★★★★★

Gen2 996 C2 2002-04

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

Production numbers	29,389
Issue featured	136
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	324hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.0sec
Top speed	177mph
Length	4,430mm
Width	1,770mm
Weight	1,370kg

Wheels & tyres
F 7x17-inch; 205/50/ZR17
R 9x17-inch; 255/40/ZR17

★★★★★

Gen2 996 C4 2002-04

Facelifted in line with rear-drive Carrera, though the all-wheel-drive version drives very much like its rear-drive 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	324hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.0sec
Top speed	177mph
Length	4,430mm
Width	1,770mm
Weight	1,430kg

Wheels & tyres
F 7x17-inch; 205/50/ZR17
R 9x17-inch; 255/40/ZR17

★★★★★

996 Anniversary 03-04

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

Production numbers	1,963
Issue featured	112
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	350hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	4.9sec
Top speed	175mph
Length	4,430mm
Width	1,770mm
Weight	1,370kg

Wheels & tyres
F 8x18-inch; 225/40/ZR18
R 10x18-inch; 285/30/ZR18

Sales debate

Is the 911T a good investment right now?



Pre-impact bumper 911s have always held plenty of appeal among admirers of the Neunelfer. Factor in the brisk performance of E and S models and it's easy to see why prices of those have remained strong, though de-tuned engines and high production numbers have kept T values in check. But might now be the time to tuck one away for the future? We put that question to the experts.

Alan Drayson of respected specialists, Canford Classics, is the first to tackle the issue, and he has another way of looking at the 911T: "It's true to say that, historically, the T has tended to be overlooked by buyers, but there's really no reason why that should be the case. It's certainly not a poor 911 – far from it – and you could easily argue that given where prices once were, and where they stand today, that it would have made for a tidy investment already. Having said that, despite the apparently obvious difference in values compared to an E or S, it's quite a tricky area because it is always going to come down to condition, and that remains the most important consideration."

Autofarm's Mikey Wastie is in agreement. "You need to be looking at a sound example above everything else. Finding one that ticks all the boxes when it comes to history and provenance is vital, and like all 911s, originality is key. Nice cars will always be a sound place to put your money, but the values being put on them by some owners is optimistic to say the least, so you need to be careful before taking the plunge."

"And there's another thing to consider here," says Alan, "Which is that the values of the 911T today just reflect their position in the market place in exactly the same way as they did when the cars were new. Back then, they suited the budget of buyers who wanted a 911, but couldn't quite stretch to an E or an S, and nothing has really changed in that respect. In my view the values between models will always remain relative, and there's another question worth considering; whether someone should buy a T and then spend a substantial chunk of money on it like they might with an E/S. This would require some considered thought. The focus should be on finding the right car to suit your needs, rather than solely thinking about future investment potential."

Does Wastie agree? "You need to think about what you want from the ownership experience so that you are buying a T for the right reasons. These are great cars in their own right, so take the time to find a good one and just enjoy it, and there's no reason why it shouldn't hold on to its value. Future investment shouldn't be the driving factor in your decision, though."

Talk of values and investment all too often muddy the ownership waters when it comes to classic 911s, but that needn't be the case with the 911T. This is one Neunelfer you should just buy to enjoy.

★★★★★

Gen2 996 GT3 2003-05



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

Production numbers	2,313
Issue featured	142
Engine capacity	3,600cc
Compression ratio	11.7:1
Maximum power	389hp @ 7,400rpm
Maximum torque	389Nm @ 5,000rpm
0-62mph	4.5sec
Top speed	190mph
Length	4,435mm
Width	1,770mm
Weight	1,380kg
Wheels & tyres	
F	8.5x18-inch; 235/40/R18
R	11x18-inch; 295/30/R18

★★★★★

996 GT3 RS 2004-05




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	116
Engine capacity	3,600cc
Compression ratio	11.7:1
Maximum power	389hp @ 7,400rpm
Maximum torque	389Nm @ 5,000rpm
0-62mph	4.4sec
Top speed	190mph
Length	4,435mm
Width	1,770mm
Weight	1,360kg
Wheels & tyres	
F	8.5x18-inch; 235/40/R18
R	11x18-inch; 295/30/R18

★★★★★

996 Turbo S 2004-2005



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

Production numbers	1,563
Issue featured	132
Engine capacity	3,600cc
Compression ratio	9.4:1
Maximum power	456hp @ 5,700rpm
Maximum torque	620Nm @ 3,500rpm
0-62mph	4.500rpm
Top speed	191mph
Length	4,291mm
Width	1,830mm
Weight	1,590kg
Wheels & tyres	
F	8x18-inch; 235/40/R18
R	11x18-inch; 295/30/R18

★★★★★

997 Carrera 4 2005-08




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

Production numbers	8,533
Issue featured	3
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	330hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.1sec
Top speed	174mph
Length	4,427mm
Width	1,852mm
Weight	1,450kg
Wheels & tyres	
F	8x18-inch; 235/40/R18
R	10x18-inch; 295/30/R18

★★★★★

997 Carrera 4S 2005-08



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

Production numbers	30,973
Issue featured	111
Engine capacity	3,824cc
Compression ratio	11.8:1
Maximum power	360hp @ 6,600rpm
Maximum torque	400Nm @ 4,600rpm
0-62mph	4.8sec
Top speed	179mph
Length	4,427mm
Width	1,808mm
Weight	1,475kg
Wheels & tyres	
F	8x19-inch; 235/35/R19
R	11x19-inch; 295/30/R19

★★★★★

997 Turbo 2005-10




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

Production numbers	19,201 (up to 2008)
Issue featured	107
Engine capacity	3,600cc
Compression ratio	9.8:1
Maximum power	487hp @ 6,000rpm
Maximum torque	620Nm @ 1,950rpm
0-62mph	5.000rpm
Top speed	3.9sec
Length	193mm
Width	4.450mm
Weight	1.852mm
Wheels & tyres	
F	8x19-inch; 235/35/R19
R	11x19-inch; 305/30/R19

★★★★★

997 GT2 2007-09



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	537hp @ 6,500rpm
Maximum torque	680Nm @ 2,200rpm
0-62mph	4.500rpm
Top speed	3.7sec
Length	204mm
Width	4.469mm
Weight	1.852mm
Wheels & tyres	
F	8x19-inch; 235/35/ZR19
R	12x19-inch; 325/30/ZR19

★★★★★

Gen2 997 C2 2008-12




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	4.9sec
Top speed	179mph
Length	4.435mm
Width	1.808mm
Weight	1.415kg
Wheels & tyres	
F	8x18-inch; 235/40/ZR18
R	10.5x18-inch; 265/40/ZR18

★★★★★

Gen2 997 C2 S 2008-12




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

Production numbers	15,000
Issue featured	61
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	385hp @ 6,500rpm
Maximum torque	420Nm @ 4,400rpm
0-62mph	4.7sec
Top speed	187mph
Length	4.435mm
Width	1.808mm
Weight	1.425kg
Wheels & tyres	
F	8x19-inch; 235/35/ZR19
R	11x19-inch; 305/30/ZR19

★★★★★

Gen2 997 Turbo 2009-13



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	116
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	500hp @ 6,000rpm
Maximum torque	650Nm @ 1,950rpm
0-62mph	3.4sec
Top speed	194mph
Length	4.450mm
Width	1.852mm
Weight	1.570kg
Wheels & tyres	
F	8.5x19-inch; 235/35/ZR19
R	11x19-inch; 305/30/ZR19

★★★★★

Gen2 997 GT3 RS 09-12



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

Production numbers	1,500
Issue featured	125
Engine capacity	3,800cc
Compression ratio	12.2:1
Maximum power	450hp @ 7,900rpm
Maximum torque	430Nm @ 6,750rpm
0-62mph	4.0sec
Top speed	192mph
Length	4.460mm
Width	1.852mm
Weight	1.370kg
Wheels & tyres	
F	9x19-inch; 245/35/ZR19
R	12x19-inch; 325/30/ZR19

★★★★★

997 Speedster 2010



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

Production numbers	356
Issue featured	128
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	408hp @ 7,300rpm
Maximum torque	420Nm @ 4,400rpm
0-62mph	5.600rpm
Top speed	4.4sec
Length	190mm
Width	4.440mm
Weight	1.852mm
Wheels & tyres	
F	8.5x19-inch; 235/35/ZR19
R	11x19-inch; 305/30/ZR19

RENNKIT

Dedicated to 996 & 997 Turbo and GT2 Enthusiasts



NEW 4.75 inch
997 Turbo eRam Kit

NO MORE HYDRAULICS!
eRam electric spoiler actuation kits

Building a network of Rennkit Preferred Shops
Contact Rennkit for more information

djcooper@rennkit.com

www.rennkit.com

Contact us
for a Total 911
Discount

Canton, MI - USA
+1 734 207 1599



Thinking of selling your Porsche?

Call us on 0117 992 4154 to arrange
a no obligation appraisal and valuation
of your car.



PORSCHE

Porsche Centre Bristol
The Paddock
Cribbs Causeway
Bristol BS10 7UH
info@porschebristol.co.uk
www.porschebristol.co.uk

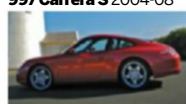


997 Carrera 2004-08

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

Production numbers	25,788
Issue featured	112
Engine capacity	3,596cc
Compression ratio	11.3:1
Maximum power	330hp @ 6,800rpm
Maximum torque	370Nm @ 4,250rpm
0-62mph	5.0sec
Top speed	177mph
Length	4,427mm
Width	1,808mm
Weight	1,395kg
Wheels & tyres	
F	8x18-inch; 235/40/R18
R	10x18-inch; 265/40/R18

997 Carrera S 2004-08



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

Production numbers	41,059
Issue featured	107
Engine capacity	3,824cc
Compression ratio	11.8:1
Maximum power	360hp @ 6,600rpm
Maximum torque	400Nm @ 4,600rpm
0-62mph	4.8sec
Top speed	182mph
Length	4,427mm
Width	1,808mm
Weight	1,420kg
Wheels & tyres	
F	8x19-inch; 235/35/R19
R	11x19-inch; 295/30/R19

997 GT3 2006-07



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

Production numbers	2,378
Issue featured	117
Engine capacity	3,600cc
Compression ratio	12.0:1
Maximum power	421hp @ 7,600rpm
Maximum torque	405Nm @ 5,500rpm
0-62mph	4.3sec
Top speed	192mph
Length	4,445mm
Width	1,808mm
Weight	1,395kg
Wheels & tyres	
F	8.5x19-inch; 235/35/R19
R	12x19-inch; 305/30/R19



997 GT3 RS 2006-07

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

Production numbers	1,106
Issue featured	110
Engine capacity	3,600cc
Compression ratio	12.0:1
Maximum power	421hp @ 7,600rpm
Maximum torque	405Nm @ 5,500rpm
0-62mph	4.2sec
Top speed	194mph
Length	4,460mm
Width	1,808mm
Weight	1,375kg
Wheels & tyres	
F	8.5x19-inch; 235/35/R19
R	12x19-inch; 305/30/R19



Gen2 997 C4S 2008-12

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	4.7sec
Top speed	185mph
Length	4,435mm
Width	1,852mm
Weight	1,480kg
Wheels & tyres	
F	8.5x19-inch; 235/35/ZR19
R	11x19-inch; 305/30/ZR19

Gen2 997 GT3 2009-12



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

Production numbers	2,200
Issue featured	117
Engine capacity	3,797cc
Compression ratio	12.2:1
Maximum power	435hp @ 7,900rpm
Maximum torque	430Nm @ 5,250rpm
0-62mph	4.1sec
Top speed	194mph
Length	4,460mm
Width	1,808mm
Weight	1,395kg
Wheels & tyres	
F	8.5x19-inch; 235/35/ZR19
R	12x19-inch; 305/30/ZR19

997 Sport Classic 2010



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

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



997 GT3 RS 4.0 2010

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

Production numbers	600
Issue featured	125
Engine capacity	3,996cc
Compression ratio	12.6:1
Maximum power	500hp @ 8,250rpm
Maximum torque	460Nm @ 5,750rpm
0-62mph	3.9sec
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



Porsche recommends Shell RACING

Higher servicing standards. Lower servicing costs.

All Porsche drivers can benefit from fixed price servicing by Porsche-trained Technicians at our Porsche Centres. Prices for 911 (997) models start from £395.00.* We guarantee workmanship, Porsche Genuine Parts, the latest diagnostic equipment and, crucially, complete peace of mind. For more information visit www.porsche.co.uk/service



*Participating Centres only. Fixed price service tariffs may be withdrawn or varied at any time. Prices for other models available from participating Centres.



997 918 Edition 2010

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

Production numbers	121
Issue featured	74
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	530hp @ 6,250-6,750rpm
Maximum torque	700Nm @ 2,100-7,000rpm
0-62mph	4.250sec
Top speed	193mph
Length	4,435mm
Width	1,852mm
Weight	1,585kg
Wheels & tyres	F 8.5x19-inch; 235/35/ZR19 R 11x19-inch; 305/30/ZR19

997 GT2 RS 2010-11



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	114
Engine capacity	3,600cc
Compression ratio	9.0:1
Maximum power	620hp @ 6,500rpm
Maximum torque	700Nm @ 2,500-5,500rpm
0-62mph	3.5sec
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

991.1 Carrera 4 2012-15



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	4.9sec
Top speed	177mph
Length	4,491mm
Width	1,852mm
Weight	1,430kg
Wheels & tyres	F 8.5x19-inch; 235/40/ZR19 R 11x19-inch; 305/35/ZR19



991.1 Carrera 4S 2012-15

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

Production numbers	Unknown
Issue featured	118
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	400hp @ 7,400rpm
Maximum torque	440Nm @ 5,600rpm
0-62mph	4.5sec
Top speed	185mph
Length	4,491mm
Width	1,852mm
Weight	1,445kg
Wheels & tyres	F 8.5x19-inch; 245/35/ZR20 R 11x20-inch; 305/30/ZR20

ADVERTISE IN TOTAL 911 TODAY!

Want to advertise in the renowned first choice for everything 911?

Call today on **01225 687463**.

Find out more about advertising with Future on www.futureplc.com.



991 GT3 RS 2015-

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	120 (UK)
Issue featured	136
Engine capacity	3,996cc
Compression ratio	12.9:1
Maximum power	500hp @ 8,250rpm
Maximum torque	460Nm @ 6,250rpm
0-62mph	3.3sec
Top speed	193mph
Length	4,545mm
Width	1,880mm
Weight	1,420kg
Wheels & tyres	F 9.5x20-inch; 265/35/ZR20 R 12.5x21-inch; 325/30/ZR21

991.2 Carrera 2015-



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

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



991 R 2016

991 GT3 RS engine mated to revised 6-speed manual gearbox. Features Carrera Cabriolet active rear wing with diffuser aiding downforce. Lightweight flywheel optional.

Production numbers	991
Issue featured	141
Engine capacity	3,996cc
Compression ratio	13.2:1
Maximum power	500hp @ 8,250rpm
Maximum torque	460Nm @ 6,250rpm
0-62mph	3.8sec
Top speed	201mph
Length	4,532mm
Width	1,852mm
Weight	1,370kg
Wheels & tyres	F 9x20-inch; 245/35/ZR20 R 12x20-inch; 305/30/ZR20

991.2 Carrera GTS 2017-



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	In production
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	1,450kg
Wheels & tyres	F 9x20-inch; 245/35/ZR20 R 12x20-inch; 305/30/ZR20

★★★★★

997 C2 GTS 2010-12

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

Production numbers	Unknown
Issue featured	118
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	408hp @ 7,300rpm
Maximum torque	420Nm @ 4,200-5,600rpm
0-62mph	4.6sec
Top speed	190mph
Length	4,435mm
Width	1,852mm
Weight	1,420kg
Wheels & tyres	F 8.5x19-inch; 235/35/19
	R 11x19-inch; 305/30/19

★★★★★

997 C4 GTS 2011-12

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

Production numbers	Unknown
Issue featured	125
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	408hp @ 7,300rpm
Maximum torque	420Nm @ 4,200-5,600rpm
0-62mph	4.6sec
Top speed	188mph
Length	4,435mm
Width	1,852mm
Weight	1,480kg
Wheels & tyres	F 8.5x19-inch; 235/35/19
	R 11x19-inch; 305/30/19

★★★★★

997 Turbo S 2011-13

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

Production numbers	2,000
Issue featured	123
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	330hp @ 6,250-6,750rpm
Maximum torque	700Nm @ 2,100-4,250rpm
0-62mph	3.3sec
Top speed	195mph
Length	4,435mm
Width	1,852mm
Weight	1,585kg
Wheels & tyres	F 8.5x19-inch; 235/35/19
	R 11x19-inch; 305/30/19

★★★★★

991.1 Carrera 2011-15

The first of the newest and latest Gen7 911, it takes styling hues 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	390Nm @ 5,600rpm
0-62mph	4.8sec
Top speed	179.8mph
Length	4,491mm
Width	1,808mm
Weight	1,380kg
Wheels & tyres	F 8.5x19-inch; 235/40/19
	R 11x19-inch; 285/35/19

★★★★★

991.1 Carrera S 2011-15

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	4.5sec
Top speed	188.9mph
Length	4,491mm
Width	1,808mm
Weight	1,395kg
Wheels & tyres	F 8.5x20-inch; 245/35/20
	R 11x20-inch; 295/30/20

★★★★★

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	Unknown
Issue featured	143
Engine capacity	3,800cc
Compression ratio	12.9:1
Maximum power	475hp @ 8,250rpm
Maximum torque	440Nm @ 6,250rpm
0-62mph	3.5sec
Top speed	196mph
Length	4,545mm
Width	1,852mm
Weight	1,430kg
Wheels & tyres	F 9x20-inch; 245/35/20
	R 11x20-inch; 305/30/20

★★★★★

991.1 Turbo 2013-15

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 @ 6,000-6,500rpm
Maximum torque	660Nm @ 1,950-5,000rpm
0-62mph	3.4sec
Top speed	195mph
Length	4,506mm
Width	1,880mm
Weight	1,595kg
Wheels & tyres	F 8.5x20-inch; 245/35/20
	R 11x20-inch; 305/30/20

★★★★★

991.1 Turbo S 2013-15

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 @ 6,500-6,750rpm
Maximum torque	700Nm @ 2,100-4,250rpm
0-62mph	3.1sec
Top speed	197mph
Length	4,506mm
Width	1,880mm
Weight	1,605kg
Wheels & tyres	F 8.5x20-inch; 245/35/20
	R 11x20-inch; 305/30/20

★★★★★

991 Anniversary 2013-14

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

Production numbers	1,963
Issue featured	112
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	400hp @ 7,400rpm
Maximum torque	440Nm @ 5,600rpm
0-62mph	4.5sec
Top speed	188mph
Length	4,491mm
Width	1,852mm
Weight	1,420kg
Wheels & tyres	F 9x20-inch; 245/35/20
	R 11x20-inch; 305/30/20

★★★★★

991.1 Carrera GTS 14-16

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	121
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	430hp @ 7,500rpm
Maximum torque	440Nm @ 5,750rpm
0-62mph	4.0sec
Top speed	190mph
Length	4,491mm
Width	1,852mm
Weight	1,425kg
Wheels & tyres	F 9x20-inch; 245/35/20
	R 11x20-inch; 305/30/20

★★★★★

991.1 C4 GTS 2014-2016

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

Production numbers	Unknown
Issue featured	125
Engine capacity	3,800cc
Compression ratio	12.5:1
Maximum power	430hp @ 7,500rpm
Maximum torque	440Nm @ 5,750rpm
0-62mph	4.4sec
Top speed	188mph
Length	4,491mm
Width	1,852mm
Weight	1,470kg
Wheels & tyres	F 9x20-inch; 245/35/20
	R 11x20-inch; 305/30/20

★★★★★

991.2 Carrera S 2015-

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

Production numbers	In production
Issue featured	132
Engine capacity	2,981cc
Compression ratio	10.0:1
Maximum power	420hp @ 6,500rpm
Maximum torque	500Nm @ 1,700-5,000rpm
0-62mph	3.9sec
Top speed	191mph
Length	4,499mm
Width	1,808mm
Weight	1,440kg
Wheels & tyres	F 8.5x20-inch; 245/35/20
	R 11x20-inch; 305/30/20

★★★★★

991.2 Carrera 4 2016-

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	In production
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; 235/40/19
	R 11x19-inch; 295/35/19

★★★★★

991.2 Carrera 4S 2016-

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	In production
Issue featured	137
Engine capacity	2,981cc
Compression ratio	10.0:1
Maximum power	420hp @ 6,500rpm
Maximum torque	500Nm @ 1,700-5,000rpm
0-62mph	3.8sec
Top speed	189mph
Length	4,499mm
Width	1,852mm
Weight	1,490kg
Wheels & tyres	F 8.5x20-inch; 245/35/20
	R 11x20-inch; 305/30/20

★★★★★

991.2 Turbo 2016-

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	In production
Issue featured	135
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	540hp @ 6,400rpm
Maximum torque	710Nm @ 2,250-4,000rpm
0-62mph	3.1sec
Top speed	199mph
Length	4,507mm
Width	1,880mm
Weight	1,595kg
Wheels & tyres	F 9x20-inch; 245/35/20
	R 11x20-inch; 305/30/20

★★★★★

991.2 Turbo S 2016-

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

Production numbers	In production
Issue featured	145
Engine capacity	3,800cc
Compression ratio	9.8:1
Maximum power	580hp @ 6,750rpm
Maximum torque	750Nm @ 2,250-4,000rpm
0-62mph	2.9sec
Top speed	205mph
Length	4,507mm
Width	1,880mm
Weight	1,600kg
Wheels & tyres	F 9x20-inch; 245/35/20
	R 11x20-inch; 305/30/20

★★★★★

991.2 Carrera 4 GTS 2017-

As 991.2 Carrera GTS but with PTM four-wheel drive electrically controlling drive between both axles (rear is always driven). Identifiable from outside by red strip across rumple.

Production numbers	In production
Issue featured	151
Engine capacity	4,000cc
Compression ratio	unknown
Maximum power	500hp @ 6,500rpm
Maximum torque	unknown
0-62mph	3.4sec
Top speed	198mph
Length	4,545mm
Width	1,852mm
Weight	1,430kg
Wheels & tyres	F 9x20-inch; 245/35/20
	R 12x20-inch; 305/30/20

★★★★★

991.2 GT3 2017-

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

Production numbers	222 (UK est)
Issue featured	150
Engine capacity	3,996cc
Compression ratio	13.3:1
Maximum power	500hp @ 8,250rpm
Maximum torque	460Nm @ 6,000rpm
0-62mph	3.9sec (manual)
Top speed	199mph
Length	4,562mm
Width	1,852mm
Weight	1,413kg (manual)
Wheels & tyres	F 9x20-inch; 245/35/20
	R 12x20-inch; 305/30/20

Coming soon:

991 GT2 RS

ELECTRIC 911

Written by **Ross Ringham** Photography by **Dan Bathie / Spacesuit Media**

INFLUX
POWERED BY ADRIAN FLUX

The sheep looked around suddenly and had every right to look baffled. Sheep don't generally expect to be stalked silently by a 1979 Porsche 911 Targa. Yet, here it was, the smooth, low-slung bonnet and iconic slightly oval headlight surrounds within pouncing distance of the bewildered sheep's woolly jumper.

With an air of bemusement and hurt feelings – cars usually have the decency to announce their arrival with clattering engines and smelly, belching tail pipes – the sheep shuffled to the side of the road and the gleaming silvery shape of the 1979 Porsche 911 Targa glided past. With little more than the crunch of the gravel surface and a soothing, spaceship-like whine to mark its passing, the sports car sped off into the Welsh hills, gathering speed without sound.

This part of Wales is well used to classic cars and sports cars of all shapes, sizes and ages. A convoy of early 20th century exotica had fumbled past just 20 minutes earlier, piloted by drivers who all looked roughly the same age as their cars but far more in need of full body-off restoration. The area is adjacent to where fire-breathing beasts compete at the annual British stage of the WRC series.

At first glance, Richard Morgan's Porsche is simply another example of a beautifully restored 911 Targa, with flawless paint, gleaming brightwork and supple, unmarked interior surfaces.

At second glance, it has something of a Singer vibe about it: LED headlights, sidelights hidden behind clear lenses in the bumper and a mechanical set-up formatted by the former rally driver with the sole intention of putting a smile on the face of its driver every day. This car has a virtually perfect 50:50 weight distribution, meaning more predictable handling and far more front-end response than these cars ever offered originally, as well as oodles more torque all the way through the rev range.

But this is no Singer. When Morgan pins his right foot to the floor to send the small-but-perfectly-formed

911 scampering away faster than a general election can be denied and then called, there is no familiar air-cooled rattle from the back of the car but merely that unearthly hum, as if someone has put Fuchs wheels on the Millennium Falcon.

This is no ordinary vintage machine. This 911 has been reborn as an electric car.

If you were to picture a typical classic car enthusiast, Richard Morgan of Electric Classic Cars wouldn't spring to mind. He's a former systems engineer with sharp sideburns and bright inquisitive eyes, who raced rally cars for a decade and who can't resist doing donuts in a quiet gravel carpark nestled in the Welsh hills. He has a thousand stories of terrifying exploits on rally stages or messing about in terrible cars as a teenager.

And now, Morgan converts classic cars to electric vehicles. His business is not even three years old, yet the 44-year-old (who looks 10 years younger than his age and who fizzles with teenage energy) has a full order book and is recruiting to scale up to meet demand.

"I was thinking about how to improve classic cars," Morgan says in a soft Welsh accent. He speaks with the self-assured logic which often marks out engineers and entrepreneurs. "You want to improve reliability, usability, torque and power. Then I realised that the ultimate destination is electric."

Morgan's approach is novel. Rather than building an entire custom electric drivetrain platform, from motor to differential, he simply replaces the internal combustion engine with electric motors. The donor car gets a full restoration inside and out while he's at it, down to the windscreen wiper motors. Leaving the car as near to original as possible solves all sorts of potential headaches with safety, crash tests and DVLA paperwork.

In the Porsche, two three-phase electric motors from HPEV rated to 100kW are mounted in a single aluminium outer casing and slung behind the car's rear axle, where the engine used to be. Some clever engineering mates the electric motors to the original

gearbox using the existing clutch – something of a surprise given that electric cars rarely need gearboxes, such is the torque on offer.

For Morgan, the action of changing gear is a critical part of the classic car experience and it does serve a functional purpose too. "The gearbox does help keep the motor in its optimum range and can cope with the additional torque," he says. He traces two power curves in the air. "Whereas with an internal combustion engine, torque starts off low against revs, rises and then drops off towards the top end, an electric motor starts off with maximum torque at nearly zero revs but then drops off a little as the revs increase."

In the Porsche, most day to day driving can be accomplished in third gear. Even in third, the way the little car takes off has to be experienced to be believed.

"Reverse is just a button which flips the direction the motor is running in – so you could drive at 80mph backwards if you really wanted," Morgan explains mischievously.

The batteries are stored under the bonnet at the front of the car and beneath a bolted-down cover. The additional weight is what has balanced out the car's distribution, making it a delight to drive. "The motors are still outside the rear axle, like the engine was, but having the batteries at the front gives the front tyres a lot more bite," Morgan says.

Climbing under the rear of the car is the only way to get a peek at the motors. It's a strangely unsettling experience, like peering under Darth Vader's cloak and finding a pair of waxed bikini-model legs, or biting into an Easter egg and finding a small nuclear bomb. There's the silver cylinder of the motor casing, the Curtis controllers and some bright orange cables – and not a lot else. It's at once business-like, clinical and beautiful.

The powertrain can be programmed to deliver different characteristics under different conditions. Pleasingly, the Porsche doesn't get all lab-coat complicated. Just two options are on offer: Eco and Power. These primarily alter the level of regenerative braking on offer, to extend the range of the batteries.



Even in Sport, a day's blast through the Welsh hills didn't see the "fuel gauge" (an aftermarket electronic readout on the dashboard) dip below halfway.

When it comes to batteries, Morgan has a shortlist of three types that he turns to. Each has a different shape and the shape of the project car dictates which he will use. Two of the three are the same as those used by Tesla, in the Roadster and Model S models. If it's good enough for Tesla...

The 91I boasts a total battery capacity of 54kWh, which is around double that of a Nissan Leaf. The batteries have a triple layer of safety built in, with fuses at cell, module and pack levels to avoid any possibility of problems. There are no complicated cooling systems either. "I've never had the slightest issue with battery temperature," says Morgan. That might be more of a statement about the Welsh weather, of course.

Despite installing enough batteries to give the Porsche a 200 mile range ("This does come down a bit if you're driving...enthusiastically," says Morgan), there is not a significant weight trade off in converting the car. "We took out around 300kg of engine, petrol tank, pumps, filters and so on," says Morgan. "We put in around 350kg of motors, controllers, cables and batteries."

That weight is distributed across the wheelbase, Morgan goes on, giving a more predictable, enjoyable driving experience. Off the line and in normal driving conditions, the additional torque introduced with the electric powertrain more than makes up for the additional weight: this Porsche does not hang around.

Richard Morgan's order book spans an eclectic range of vehicles. He's already completed two VW Beetles (one of which is his daily driver, complete with carbon wings and bumpers, bucket seats and a sub five-second zero-to-sixty sprint); next up are a mustard-yellow Range Rover, a black BMW CSL, an Aston Martin shrouded in secrecy, a Jaguar E-type and a pair of Fiat 500s. Who buys these niche creations?

"We've got three types of customers," Morgan says. "There are the young professionals who live in

the city, who want a small car to nip around in for short journeys." These are the customers that all the major OEM manufacturers are targeting; EVs qualify for congestion charge and tax exemptions, and are cost-effective to recharge. Their short journeys mean plenty of time for recharging too and don't trouble even the lower end of the mileage ranges on offer today.

"Then we have older clients," Morgan goes on. "These people love the look and feel of classic vehicles but want a hassle-free version which will start when they want it to and won't break down every weekend." Electric vehicles are famously simple when it comes to mechanical parts, requiring virtually zero maintenance. Morgan uses brushless motors to maximise this feature.

"Our third type of customer is the EV convert, the person who already has a Tesla and a Leaf and who wants something else, something a bit more unusual," says Morgan. "There's a pretty small range on offer at the moment, such as the Model S, the Leaf, the i3 and the Zoe. The Model S is expensive and is marketed at the luxury end of the market. When it comes to something cheaper and fun, there isn't really anything else available."

That is really Morgan's focus. As a previous rally driver and a bit of a car nut, he wants the cars to be fun to drive and he's not prepared to skimp on cost to deliver his vision. He takes a motorsport approach to getting each car set up. Nothing less than perfect will do, and he spends a lot of time test driving each vehicle to fine tune it before handing it on to the client. Just as much work goes into the brakes as into the motors. "It's all very well making the car much faster than it was before but it needs to be able to stop too," he laughs. Often, the original brakes are not up to the job, calling for modern replacements or parts taken from the period but elsewhere in the manufacturer's model line-up.

This attention to detail and innovation does not come cheap but nor are prices unrealistically high. "A

smaller car could cost around £18,000 to convert, while a more complex sports car might be nearer £40,000," Morgan explains. The price tag is fluid, however, as clients often request full restoration in addition to the fabrication work (all of which is carried out using local partners who make their living primarily in the rallying world) and new drivetrain components.

Is there a future for converting classic cars into electric vehicles? Morgan's full order book certainly suggests there is. He's in a very small club of businesses which offer this type of ground-up restoration, fabrication and fettling, the number of which worldwide can be counted on one hand.

Enquiries are flooding in from around the globe, demonstrating that the interest is there. In fact, although pricey, this movement towards converting vehicles to run on electric power could be the start of a new type of modified car culture, certainly until mainstream car makers figure out how to offer electric cars that excite car people, not merely environmentalists.

Battery lifespan has been one of the scary parts of EV ownership but that is not the case anymore. The expected life of the Tesla battery is tough to estimate, but it could be anywhere from 36,000 miles to 300,000 miles, depending on use and a host of other factors. It's certainly not discouraging sales of the Model S, of course.

Morgan's goal is quite clear: to continue to focus on quality and attention to detail. The 91I project took three months to complete. He is not interested in rushing out as many units as possible to bump up sales, nor is he interested in leaving the factory floor. In fact, the additional staff he is recruiting are to help mostly with areas of the business other than the build process, such as sales and marketing. "I want to stay hands on," he says. "This is what I love: getting my hands dirty, working on the cars."

And then he leans on the accelerator and the 91I glitters off into the distance at warp speed, leaving behind nothing more than that magical whirr in the Welsh sunshine.

New EBS website means...

Have a Parts List? Submit your Request and Get a Quote within 1 Hour
During normal business hours M-F 8-5 PST

EBS RACING
Porsche Parts Exclusively

Wish List My shopping cart: 0 MEMBER LOGIN
Cart total: \$0.00 REGISTER ACCOUNT

Live Customer Support 8A-5P PST ☎ (800)-462-3774
International ☎ (775)-673-1300

OEM PARTS BRANDS EXTERIOR ENGINE EXHAUST SUSPENSION Search

VEHICLE TYPE SELECT CATEGORY SELECT BRAND SEARCH BY VIN

Select Year Select Main Category Select Brand

Search

PORSCHE GIFT ITEMS

NEW Products

LOWER Prices

FREE Shipping

NO Sales Tax

2-Year Warranty



Join Team EBS Racing
at
www.ebsracing.com

Dealers and customers:
Subscribe to our newsletter to
see new product releases, tech
info, videos, photos and more.
Signing up is absolutely FREE!

Enter Your Contact Info

Your First Name ...

Your Email Address ...

SUBSCRIBE HERE

This subscribes you to our
newsletter

Join Team EBS Racing

Dealers and customers: join Team EBS Racing to receive our newsletter filled with new product releases, tech info, photos, videos and more. Sign up this month and receive a free pdf copy of the 2016 Porsche Cayman GT4 Technik Introduction.

Sign up at www.ebsracing.com.



EBSracing.com

email **ebsracing@aol.com**

toll-free **800-462-3774**

international **775-673-1300**

international fax **775-673-2088**

4068 S. McCarran Blvd. | Unit B | Reno, Nevada 89502



HEXAGON CLASSICS



PORSCHE 997 GEN II TARGA 4S MANUAL, 2009 RHD
Basalt with Carrera Red leather, 23,450 miles



PORSCHE 997 GT3 CLUBSPORT, 2010 RHD
Guards Red with black interior, 13,625 miles



PORSCHE 911 3.2 CARRERA TARGA SSE, 1986 RHD
Grand Prix White with black leather, 29,250 miles



PORSCHE 928 GTS, MANUAL, 1995 RHD
Metallic Blue with linen leather, 29,200 miles



PORSCHE 964 TURBO 3.6 X88, 1994 RHD
Guards Red with black leather, 58,800 miles



PORSCHE 996 TURBO CABRIOLET, 2004 RHD
Basalt with black leather, Tiptronic S, 32,600 miles

We are actively seeking similar cars to purchase - please contact Peter Smith Tel. +44 (0)7900 244744

Over 100 cars on display at our London showroom

● Please visit **www.hexagonclassics.com** to find out more ●

HEXAGON CLASSICS
since 1963

82-92 Great North Road London, N2 0NL
Main switchboard: 020 8348 5151

Call: Jonathan Franklin 07522 911911
or: Jonathan Ostroff 07801 629270

HENDON WAY MOTORS

 established 1952



2010 PORSCHE 997 GT3 RS 4L

FOR COLLECTORS OF MODERN ART



PORSCHE 993 C2 TARGA-TIPTRONIC - 1996



PORSCHE 991 C2S CABRIOLET - 15K MILES



PORSCHE 997 GEN II GT3 RS 4.0 - 2011



PORSCHE 964 CARRERA 4 COUPE - 1989

See all of our cars at www.hendonwaymotors.com

393 -395 Hendon Way London NW4 3LP tel +44(0)20 82028011 fax +44(0)20 82028013



Porsche Club
Great Britain



From £600 to 600 hp, we are here for you

Founded in 1961, our mission is to enhance the Porsche-owning experience of our 14,000 members. We do this by embracing all models of the marque, from the earliest 356 to the very latest 991 Gen2. Whether it is £600 or 600 hp, Porsche Club Great Britain is here for you.

Porsche Club GB benefits

Porsche Certificate of Authenticity
High quality monthly magazine
Comprehensive events calendar
Club insurance scheme
Members' discounts

Regions & Registers
Race Championship
Valuation service
Factory visits
Trackdays

Join Us

We are proud to be the only officially Porsche AG recognised Porsche Club in the UK and we would love to welcome you as a member.

To become a Porsche Club member visit www.porscheclubgb.com or call the Clubhouse on **01608 652 911**

porscheclubgb **@pcgb**

Patron: Dr Wolfgang Porsche





ORDER ONLINE
www.allzim.com

PARTS FOR ALL PORSCHEs • LOW PRICES • FAST SHIPPING



1804 RELIANCE PKWY. BEDFORD, TX 76021 USA



Fax: 001-817-545-2002
Phone: 001-817-267-4451



Sales: 01653 697722
Servicing: 01653 696181
www.specialistcarsltd.co.uk



Porsche 918 Weissach CS

- In Stock Now
- Very Low Mileage
- LHD



Porsche 911 Supersport

- In Stock Now
- Supersport Targa
- Guards Red



Porsche 964 Turbo

- In Stock Now
- Marine Blue
- High Spec



Porsche 993 C4S

- In Stock Now
- Very Rare Car
- Arctic Silver



Porsche 911 2.4T

- In Stock Now
- Slate Grey
- Fully Restored



Porsche 911 2.2T

- Left Hand Drive
- Pastel Blue
- One of Three



Porsche 993 C2

- In Stock Now
- Arena Red
- Low Mileage



Porsche 911 2.7

- MFI Targa
- 1 of 2 UK RHD's
- Magenta



Porsche 964 RS

- Lightweight
- Grand Prix White
- Low Mileage



Porsche 996 GT3 RS

- In Stock Now
- Right Hand Drive
- Low Mileage



Porsche 912 1.6

- In Stock Now
- Low Mileage
- LHD



Porsche 993 RSR

- In Stock Now
- Cup Homage
- Signal Orange



Porsche 993 RS Homage

- Clubsport
- Speed Yellow
- Very Special Car



Porsche 928 GTS

- In Stock Now
- Amazon Green
- Tiptronic



Porsche Cayman R

- In Stock Now
- Peridot Green
- Low Mileage

EuroCupGT.com

PERFORMANCE & STYLING

Carbon Fibre Exterior	Carbon Fibre Interior	Exhaust Systems	Interior Trim	LED Lights	Performance Brake Rotors	Steering & Suspension	Turbo Upgrades	Wheel Spacers & Accessories
--------------------------	--------------------------	--------------------	------------------	---------------	-----------------------------	--------------------------	-------------------	--------------------------------



82mm Throttle
Plenum Kits



996 / 997 Turbo
Intercooler Kits



Highflow
Induction Kits



Billet Re-Circ Valves
& Silicon Hoses

**Performance
Brake Kits**

**LED Light
Kits**

**Intake &
Induction Kits**

**Carbon
Fibre Parts**

**Performance
Exhausts**

EuroCupGT Product Showcase



DISTRIBUTORS / TUNING AGENTS

Please go to EuroCupGT.com for your local distributor and fitting agent. All EuroCupGT distributors are established tuners in their own right and can advise on upgrade options and the compatibility of items available for your vehicle.

WEBSITE & CONTACT

www.eurocupgt.com
enquiries@eurocupgt.com



PARAGON

The Natural Choice for Porsche

01825 830424



911 S 2.0

Silver Metallic • Black Half Leather Sport Seats • Manual Gearbox Matching Numbers • Professional Restoration • 1968 (F)

£174,995



911 GT3RS (997)

Orange • Black Nomex Lightweight Bucket Seats • Manual Gearbox Porsche Ceramic Composite Brakes 17,989 miles • 2007 (57)

£149,995



911 Carrera Sport Targa

Grand Prix White • Black Leather Sport Seats • Manual Gearbox • 16" Fuchs Wheels • Porsche Certificate Of Authenticity • 89,689 miles • 1988 (F)

£64,995



911 Turbo (997)

Basalt Black • Black Leather Seats Tiptronic S Gearbox • Satellite Navigation • Sport Chrono Pack Plus 58,363 miles • 2007 (57)

£54,995



911 Turbo (996)

Basalt Black • Black Leather Heated Seats • Tiptronic Gearbox • Satellite Navigation • BOSE Sound System 72,259 miles • 2004 (04)

£44,995



Cayenne GTS

Jet Black • Black Leather GTS Sport Seats • Tiptronic Gearbox • Touchscreen Satellite Navigation • 20" Cayenne Spyder Wheels • 50,196 miles • 2012 (62)

£42,995



Cayman S (981)

Basalt Black • Black Leather Sport Seats PDK Gearbox • Touchscreen Satellite Navigation • 19" Cayman 'S' Wheels 39,935 miles • 2013 (63)

£42,995



Cayman 2.7 (981)

Basalt Black • Black Leather Seats PDK Gearbox • 20" Sport Techno Cayman Wheels • Touchscreen Satellite Navigation • 25,683 miles • 2013 (13)

£37,995



Boxster (981)

Rhodium Silver • Black Leather Sport Seats • PDK Gearbox • 19" Boxster 'S' III Wheels • Sport Design Steering Wheel 16,514 miles • 2014 (63)

£33,995



Cayman S

Basalt Black • Black Leather Seats Manual Gearbox • 19" Carrera 'S' II Wheels • Touchscreen Satellite Navigation • 48,129 miles • 2011 (11)

£29,995



911 Carrera 4 S (996)

Seal Grey • Natural Black Leather Seats Manual Gearbox • 18" Turbo II Wheels Porsche Sound Pack • 79,523 miles 2003 (53)

£27,995



Boxster 2.9 (987 GEN II)

Racing Green • Black Leather Seats PDK Gearbox • 19" Sport Design Wheels Touchscreen Satellite Navigation • 25,697 miles • 2009 (09)

£24,995

At Paragon, we have superb in-house workshop and preparation facilities. Each car is supplied fully serviced with a new MOT and our 12-month/12,000-mile comprehensive parts and labour warranty.

See more of our current stock at paragongb.com

EVERY PART FOR every PORSCHE

Call our Sales Team on
+44 (0) 20 8500 8811

Visit our Online Catalogue at
www.design911.com

E-mail us on
sales@design911.com

DESIGN 911 Centre for Porsche

- LIGHTING & RUBBER SEALS
- SERVICE PARTS
- AIR COOLED ENGINE PARTS
- WHEEL & TYRES
- REPAIR & RESTORATION PARTS
- GEARBOX & DRIVE TRAIN PARTS
- SUSPENSION & EXHAUST
- PARTS DEPARTMENT
- WORLDWIDE SHIPPING



WAYS TO BUY



IN PERSON



PHONE



MOBILE SHOP



WWW



E-MAIL

5% OFF

use online code
TOTAL9119
at checkout

DESIGN911
CLASSIC CAR CENTRE

Telephone:
+44 (0) 20 8500 8811



Porsche 911T 2.4L 1972 Coupe
Manual Gearbox, LHD, Slate Grey
with Red leather interior.



Porsche 911T 2.2L 1970 Coupe
Manual Gearbox, LHD, Burgundy
Red with Black interior.



Porsche 911T 2.2L 1970 Coupe
Manual Gearbox, LHD, Irish Green
with Brown leatherette interior.



Porsche 911E 2.2L 1971 Targa
Manual Gearbox, LHD, Tangerine
Orange with Black interior.



Porsche 912 1966 Coupe
Manual Gearbox, LHD, Bahama
Yellow with Black interior.

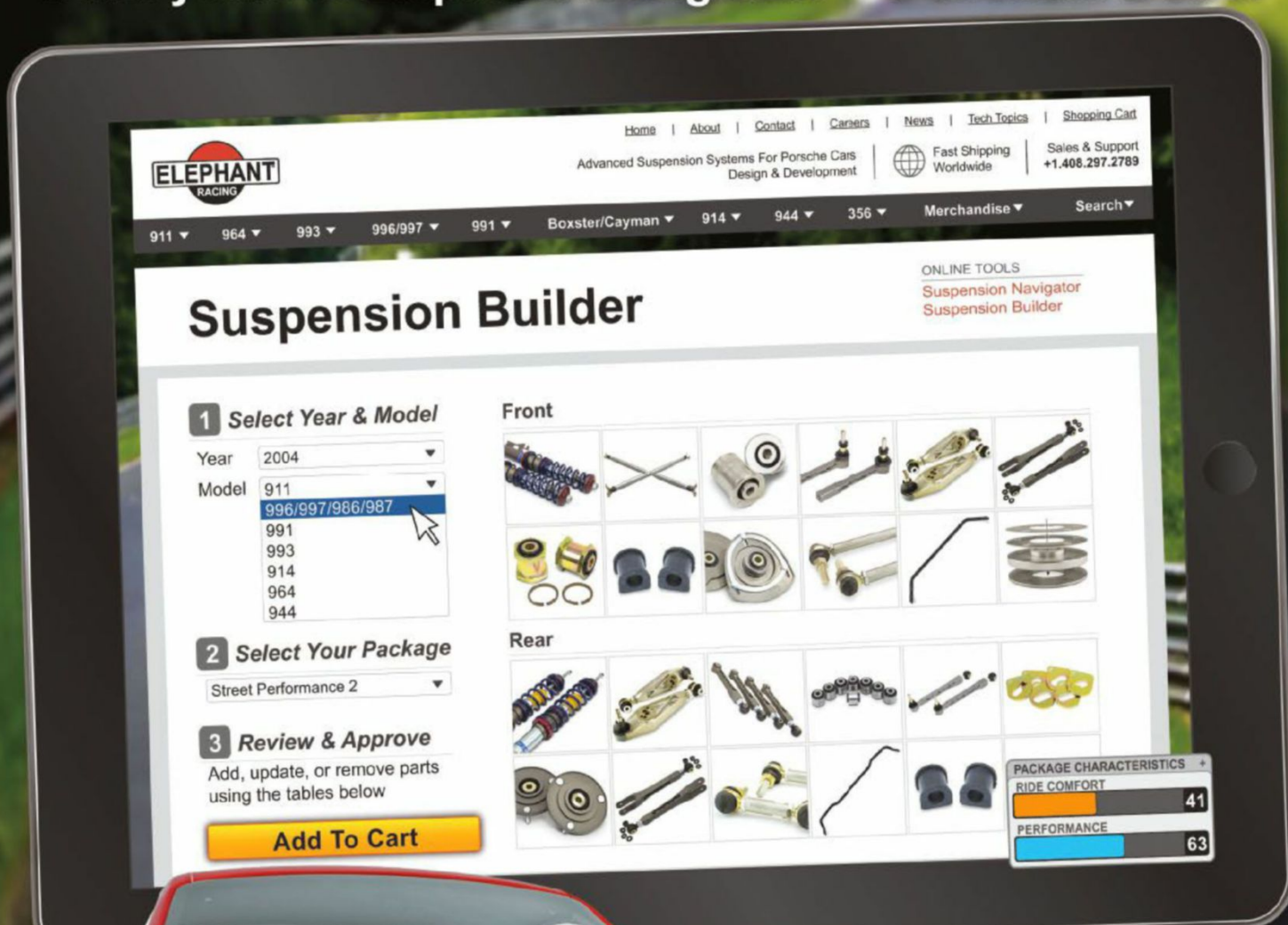
SEE OUR WEBSITE FOR A FULL LIST: WWW.DESIGN911.COM/CARS

Dansk
Official UK Distributor

51 TALLON ROAD • BRENTWOOD • ESSEX • CM13 1TG

Complete Suspension Packages

Build yours at ElephantRacing.com 3 clicks... Done!



+1 408.297.2789
ElephantRacing.com
Santa Clara, California, USA
Fast Worldwide Shipping





COMPLETE LINE OF HD AND STREET DUROMETER BUSHINGS



65-98 911 MAGNETIC PHONE MOUNT



BILLET ALUMINUM VALVE COVERS



ADJUSTABLE CONTROL ARMS

RENNLINE

Orders@Rennline.com
(802) 893-7366
Milton, VT, USA



DESIGN 911

UK Distributor
Sales@Design911.com
+44 (0) 208 500 8811



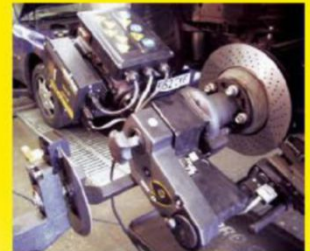
ENGINE REBUILDS - ALL MODELS
GENERAL REPAIRS & SERVICING



GEARBOX REBUILDS
ALL MODELS



AIR CONDITIONING



DISC RE-FACING



TYRE SUPPLY & FITTING
WHEEL ALIGNMENT



RGA
LONDON'S MAJOR PORSCHE SPECIALIST
UNITS 32-34 MILES ST, VAUXHALL SW8 1RY
WWW.RGAPORSCHELONDON.CO.UK

EMAIL BOB@RGAPORSCHE.CO.UK
ALL WORK TO THE HIGHEST STANDARD AND CARRIED OUT IN HOUSE
MON-FRI 7AM-7PM, SAT 9AM-6PM, SUN - CALL
TEL: 0207 793 1447 - ASK FOR BOB FOR BOOKING ADVICE



WHEEL BALANCING,
WHEEL STRAIGHTENING &
RE-FURBISHMENT



JIG REPAIRS



RESTORATION & RESPRAYS



DAMAGE REPAIR INCLUDING
FOR ALL INSURANCE COMPANIES



TORQUE TUBE OVERHAUL
924,944,968,928

TARETT

ENGINEERING
Competition Suspension Components

NEW!!! 981 & 991
SUSPENSION COMPONENTS



Swaybar and Drop Link Kits

- Fully Adjustable Roll Stiffness
- Balanced Handling
- Hollow 4130 Chromoly Material
- Adjustable Drop Links To Eliminate Preload



Monoballs and Camber Plates

- Increased Camber Adjustment Range
- Precision Teflon Lined Spherical Bearings
- Replaces Compliant Factory Rubber Bushings
- Quicker Steering Response For Better Handling



Control Arms

- Pro-Series, Cup-Series & GT3 LCA's
- Tie Rods & Toe Control Arms
- Increased Camber Adjustment
- Improved Feedback & Handling Stability



More 981 & 991 Products!

- Bolt In Roll Bars
- Brake Caliper Studs
- Competition Wheel Studs
- JRZ High Performance Coilover Kits



WWW.TARETT.COM

(858) 674-5573

SALES@TARETT.COM

Swift

REBEL

ELEPHANT

IPD

IN

JRZ

WEVO

RENNLINE

E.R.P.



WORLD

motorsports

Number one supplier of titanium lug nuts and bolts for Porsches.

- Largest Inventory of Porsche Titanium Wheel Nuts and Bolts
- Made to Porsche's Exact Seat Specifications for Premium Fit
- Extremely Lightweight and Strong
- Stay Looking New for a Lifetime
- Grade 5 (6AL4V) Titanium for Superior Strength
- Free Shipping when Ordered on our Website



Our Titanium Lugs are now approved for PCA club racing events.

Sales, Service and Installation. Custom Fabrication Services Available.

world-motorsports.com

2170 W. 190th Street Torrance, CA 90504 Phone: (310) 533-8900

HOME OF THE
WIND TUNNEL
Dyno

911 RENNSPORT



BUILDING HER DREAM

WHEN A WELL KNOWN NATIONAL PROPERTY DEVELOPER CAME TO US FOR HELP,
WE STOOD UP AND LISTENED.

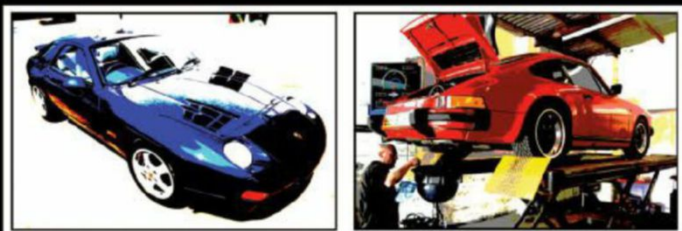
REQUIRING A CLASSIC PORSCHE FOR ONE OF HIS DAUGHTERS WE HAD TO MAKE
SOMETHING SPECIAL AND PERSONAL.

STARTING LIFE WITH A 1976 TARGA WE BUILT IT.

THE PERFECT EXAMPLE OF TEAM WORK THAT EXISTS BETWEEN RENNSPORT
AND ITS CUSTOMERS, THE REBUILD ENCOMPASSED SEVERAL VISITS BY THE OWNER
TO OUR WORKSHOPS.

WE CAN RESTORE/CONVERT YOUR CAR TO YOUR PERSONAL REQUIREMENTS.
COME AND TALK TO OUR EXPERIENCED TECHNICIANS IN OUR PURPOSE BUILT
ENGINEERING FACILITIES IN THE COTSWOLDS.

E: PAUL@911RENNSPORT.CO.UK T: 01608 651 337 AND 0750 1973 911
COTSWOLD BUSINESS VILLAGE, MORETON-IN-MARSH, GLOUCESTERSHIRE, GL56 0JQ
911RENNSPORT.CO.UK



- Servicing
- Repair
- MOT testing station
- Restoration
- Rebuild
- 4 wheel alignment



DEVON
PORSCHE

Tel: 01271 814144

www.brauntonengineering.co.uk



Gears, differentials, and components for racing



Limited Slip Differentials

- Billet 4340 Chromoly Body
- CNC machined
- Fully adjustable

Close Ratio Gearsets

- CNC Machined
- Shotpeened for longer life
- Latest F1 gear profiles



GUARD
Transmission LLC

Coming Soon!

- 991 Cup Car LSD
- 991 Cup Car Ring & Pinion

(970) 669-7144 www.guardtransmission.com

US. PAT. 8,992,089 B2 US. PAT. 9,416,697 B2

THE IMS SOLUTION IS NOW PROTECTED
BY TWO US PATENTS!



WHAT DO YOU KNOW ABOUT IMS BEARINGS?

- FACT 1** The M96 and M97 Engine is wet sump – the IMS is submerged in oil.
- FACT 2** Ceramic hybrid bearings only need 1cc of oil per minute.
- FACT 3** The dual row bearings used in the Single Row Pro and Classic Dual IMS Retrofit have load ratings equal to similarly sized roller bearings.
- FACT 4** The IMS Solution, US PATENT 8,992,089 B2, is the only permanent solution that backdates your IMS to work like in an aircooled flat 6 engine.
- FACT 5** With over 20,000 installations since 2008, the IMS Retrofit and Solution are trusted worldwide as the first and best.

EXCLUSIVE DISTRIBUTOR:

FAST FORWARD
AUTOMOTIVE

Burscheider Str. 75, D-51381 Leverkusen, Germany
Phone: + 49 2171 3416980 | info@fastforward-automotive.com



STRONGER AND COOLER.
RUN FASTER AND LAST LONGER.



✕ *CarBone* ✕

NEED A CUSTOM BADGE FOR YOUR PORSCHE CLUB?



CALL US: +48 429 422 115 OR OFFICE@CAR-BONE.PL
WWW.CAR-BONE.PL/SHOP



Some things in life are free...

...with spring just around the corner, why not take advantage of our special January and February offer
FREE Healthcheck, **FREE** Valuation and if booked with a service, a **FREE** MOT

Paul Stephens. Specialist in original and bespoke Porsche

Come and visit us at The London Classic Car Show, Feb 2017

Classic and Modern Sales
 Service and Performance Upgrades
 PS Autoart Restoration and
 Bespoke Builds

Sudbury Road
 Little Maplestead
 Halstead
 Essex, CO9 2SE

View our current stock at
paul-stephens.com

01440 714884 [f](#) [i](#) [t](#) [v](#)



PAUL STEPHENS
 EST 1994

ENGINE REBUILDS FROM £2,200 + VAT



ENGINE REPAIR SPECIALISTS

986 987 996 997 Cayman



CHECK OUT
OUR NEW ENGINE
RE-BUILD VIDEO
ON OUR WEBSITE

T: 01204 302809

E: auto@hartech.org

www.hartech.org

NORTHWAY PORSCHE LIMITED

INDEPENDENT PORSCHE SPECIALISTS

GRANGE PLACE, GRANGE LANE,
BEENHAM INDUSTRIAL AREA,
BATH ROAD, READING,
BERKSHIRE, RG7 5PT



Repairing and servicing of Porsches
for over 20 years

USED PORSCHE IN STOCK AND WANTED FOR
OUTRIGHT PURCHASE

TELEPHONE: 0118 9714333 MOBILE: 07831 424911
EMAIL: INFO@NORTHWAY.CO.UK WWW.NORTHWAY.CO.UK

9e

Nine Excellence
Porsche Independent Specialists



Servicing

- Servicing, Repairs & MOTs
- Engine & Transmission Rebuilds
- Restorations
- Pre-Purchase Inspections
- Detailing & Aftercare
- Alignment & Geo
- All Porsche Models Covered
- Fully Trained Porsche Technicians
- Fixed Price Servicing

Performance

- 9e Performance Packages
- 9e Performance Exhausts
- 9e Suspension & Brakes
- 9e Engine Builds
- 9e Custom Builds

Unit 3, Axiom Business Park,
41 Balcombe Road, Horley,
(Nr Gatwick) Surrey, RH6 7HF

www.nineexcellence.com
01293 226 911
service@nineexcellence.com

HILLCREST SPECIALIST CARS

SPECIALIST IN PORSCHE



Service, Repair and Sales by factory-trained technicians



www.hillcrestspecialistcars.com 01491 642911
Whitehouse Garage, High Street, Nettlebed, Henley on Thames RG9 5DB

PORSCHE RELATED CHERISHED REGISTRATION NUMBERS

CAB 911X	964 GC	991 PD
REG 911E	RSR 911K	911 RWS
S911 LER	RSR 911T	B911 RSR
POR 997T	RUF 911T	A993 XXX
POR 911K	911 SCR	P993 POR
1974 RS	911 TYR	D911 POR
993 G	911 FEG	911 HDL
993 POR	911 MSD	911 WVS
993 RUF	911 SHE	996 POR
X993 POR	CAR232A	TON 997X
VNZ 911	930 FF	TON 911S
964 MC	XXX 911C	4RSR

All on retention certificates for immediate transfer

TEL: 07730 007 694

EMAIL: erha300@aol.com

Choose by Model >

[Classic](#) [911](#) [964](#) [993](#) [996](#) [997](#) [991](#) [924](#) [944](#) [968](#) [928](#) [Boxster](#) [Cayman](#) [Cayenne](#) [Panamera](#)

WORLD LEADERS IN PARTS DIRECT

SPECIALIST

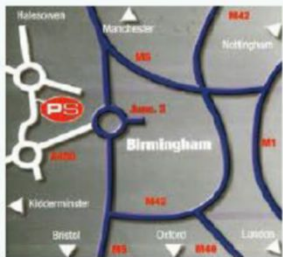
Web/Mail Order

Accessories & Gifts
 Body & Trim Parts
 Body Styling
 Books & DVDs
 Car Care & Touring
 Clothing & Shoes
 Interior Trim
 Mechanical Parts
 Motorsport Related
 Performance Parts
 Pre 74 Classics Parts
 Seats & Belts
 Sports Exhausts
 Steering Wheels
 Wheels & Accessories
 Zymol Products

Onsite Services

Porsche Car Sales
 Retail Shop
 Workshop Services

Map



Address

Unit 4 Block 2,
 Shenstone Trading Est,
 Halesowen, West Mids.
 B63 3XB. UK

Phone Number

0121 585 6088
 +44 (0) 121 585 6088

Opening Hours

Mon-Fri: 9-5:30pm
 Sat: 10-2pm

Vehicle Valuations



Pre & post purchase vehicle inspections, & insurance valuations on pre-bookings

£125+VAT

Service & Workshop



- Free MOT or brake fluid change with every major service
- Free collection & delivery service
- Courtesy car option on request

See Website for Menu Pricing

(All work is quoted prior to being undertaken)

Gen-2 997 Body Updates



- All G-1 to G-2 updates are undertaken at our premises
- Using all factory Porsche parts
- 20+ Custom options available
- See website for full menu!

Available from £1,500+VAT

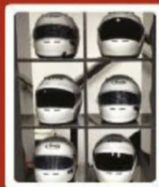
Advertise your car for sale



- Pre sale valuation & inspection at our workshop (where required)
- You decide how referrals are dealt with
- Interact with 80,000+ Porsche owners & enthusiasts through proven website visibility & interactive media
- £495+VAT, includes a minor service

No Commission!

Racewear & Helmet Deal!



Free Nomex underwear with any combination of Alpinestars, Adidas suits, and/or Arai helmets (or any two of the above combination).
 Fitting room available at our shop

Save over £100...

Website & Mail Order



- PayPal Express checkout
- Automatic page translation
- Immediate dispatch on all stock
- UK & Worldwide courier via UPS
- iPhone & Tablet compatible

All Parts for All Models

Specialist Car Insurance

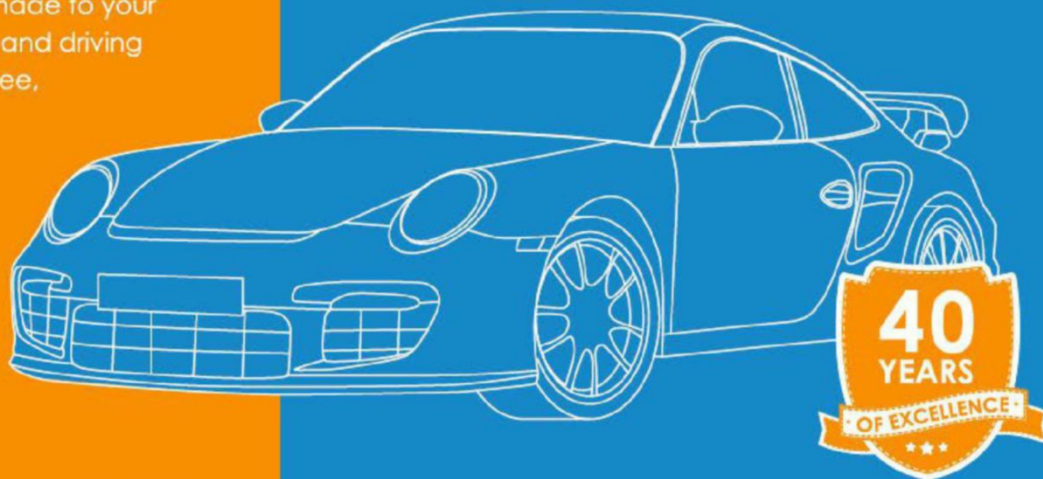
Adrian Flux know how much you love your 911, that's why we are dedicated to finding you a policy, tailor-made to your own personal requirements and driving history. Call us today for a free, no obligation quote.



0800 085 5000
adrianflux.co.uk

Authorised and regulated by the Financial Conduct Authority

YOUR PRIDE AND JOY



Benefits available can include:

- FREE Legal Cover
- Track Day Cover
- Agreed Value
- Club Member Discounts
- Modifications Cover
- Limited Mileage Discounts

WORRIED ABOUT EXPENSIVE PORSCHE REPAIR BILLS?

15
years
ONLINE

30
DAYS
MONEY
BACK
GUARANTEE

95%
POSITIVE
FEEDBACK

TRIPLE
AWARD
WINNING

Auto
EXPRESS
RECOMMENDED

If your **Porsche** goes wrong, you could be faced with wallet busting repair bills. Not to mention the hassle of dealing with the garage and being without your motor for days, or even weeks on end.

An award-winning car repair plan from Warrantywise gives you total peace of mind when your car goes bang! All of our plans include car hire, hotel & onwards travel expenses as well as recovery as standard. You can also take your car to any VAT registered garage in the UK or Europe for repairs!

Best of all its been designed by motoring consumer champion, **Quentin Willson**.

Quentin Willson
Designed by **Quentin Willson**



QUENTIN WILLSON'S VIDEO GUIDE

Watch as motoring expert, Quentin Willson, explains the benefits of a used car warranty.

Watch Quentin's Video Guide
www.warrantywise.co.uk/guide



Terms and conditions apply. Accurate at the time of printing.



Warrantywise

Simply the Best in the Business



Get a Quote Online

warrantywise.co.uk



Call us on Freephone

0800 678 1675

NEXT ISSUE

Issue 155 in shops and available for download from 12th July

STOP, POLICE!

It may seek to defy the laws of physics, but Porsche's 911 was also used to enforce the law of the land. Learn all about the history of 911s in the police



SUNRISE IN A 996 RENNSPORT

The 996 promised a new dawn for the Rennsport: Total 911 experiences it



MOBY DICK 935 UP CLOSE

One of the most extreme 935 iterations to grace a race track



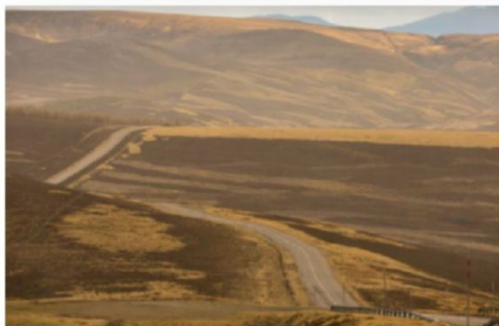
MILLIONTH 911 DRIVEN

The 911's landmark car is put through its paces on Scottish roads



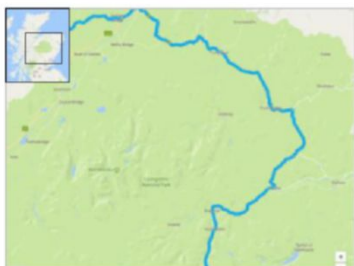
Old Military Road, Cairngorms, Scotland

Written by **Lee Sibley** Photography by **Daniel Pullen**



LOCATION: Cairngorms National Park, Scotland

COORDINATES: 57.197796, -3.244177



©2017 Google

TOTAL LENGTH OF DRIVE:

65 miles

POINTS OF INTEREST:

Lecht ski centre; Balmoral castle;
Glenshee ski centre

FOOD AND ACCOMMODATION:

Hilton Coylumbridge Hotel
+44 1479 810661
Grant Arms Hotel
+44 1479 872526
Tigh na Sgiath Country house hotel
+44 1479 851345

Heinously underrated, this true rollercoaster of a road cutting through the Cairngorms national park offers plenty to see and do

The Highlands' North Coast 500 route may be grabbing headlines as the ultimate driver's destination, but we think that's doing a disservice to a stretch of road approximately 90 minutes south in Cairngorms National Park.

Home to Balmoral castle, the A939 – better known as the Old Military Road – offers an aptly majestic jaunt through one of the UK's most spectacular landscapes.

We like to drive the road from north to south, turning off the A9 – a picturesque yet tedious trunk road riddled with average speed cameras – at Carrbridge. From here, head east along the A938 and then the A95 until you reach a right turn

signposted Tomintoul, A939. This brings you on to the Old Military Road. Its first section here is fast and flowing, carrying you south-east towards the mountains you'll now be seeing on the horizon.

On reaching Bridge of Brown, you'll be well into the good stuff, the A939 rising and falling then darting this way and that. It makes for a good driver workout, and you'll need handy pedal work too to get your 911 perfectly weighted through each twist and turn. The road narrows ever so slightly at times but in the main pertains to a stretch of tarmac inspiring the sports driver in you, its surface consistent throughout.

The viewpoint opens out by the time you get to Lecht ski resort, and

you'll be treated to a glorious sight of the road rolling over the hills as you head south past it. But caution is still required: despite the good visibility from here down to Ballater, there are a few off-camber corners that can catch out the unwary.

The Old Military Road's southern section is flatter by comparison, with long stretches cutting through the Cairngorms' foothills.

Don't be fooled though, as snow stakes still sit roadside for most of the route, leading to our next tip: take care in planning the timing of your trip, as the road is virtually impassable at certain points in winter. Visit in summertime though and you won't find many better, in the UK at least. **911**



Unlock the best roads on Earth with the Great Driving Roads app available on iTunes



Beverly Hills Car Club

Specialized dealer of classic European & American cars



1974 Porsche Carrera Coupe-stock-08283

The featured 1974 Porsche Carrera is available with matching numbers and comes in its original copper brown metallic with tan interior, which is a gorgeous color combination. It also comes with a Certificate of Authenticity. It is equipped with a manual transmission, power windows, sunroof, Fuchs wheels, rear duck tail and includes service records, the spare tire, jack and tool kit. Extremely collectible. Excellent original California car. Mechanically sound.

For \$69,500



1976 Porsche 930 Sunroof Coupe-stock-08123

The 1976 Porsche 930 Sunroof Coupe with 97,336 on the odometer and matching numbers in blue with tan interior. It comes equipped with a manual transmission, power windows, air conditioning, rear window wiper, sunroof and includes the spare tire. Excellent investment. Mechanically sound.

For \$93,500



1972 Porsche 911T Targa-stock-08278

The featured 1972 Porsche 911T Targa is available in silver with black interior and is equipped with a sportomatic transmission, air conditioning, Fuchs wheels and includes the jack, tool kit and spare tire. Very clean and presentable. An excellent original California car that has been in single ownership for over 30 years. Mechanically sound.

For \$62,500



1970 Porsche 911S Targa-stock-07647

1970 Porsche 911S Targa with matching numbers however the transmission has been replaced. Comes with a certificate of authenticity. Shown here in red with black interior. Originally very desirable color code #2310 tangerine. Comes equipped with a manual transmission, Fuchs wheels, aluminum deck lid and includes the spare tire. Extremely desirable and sought after. Same owner for many years. Mechanically sound.

For \$79,500



1972 Porsche 911E Sunroof Coupe-stock-07981

The specially featured 1972 Porsche 911E Sunroof Coupe is available with matching numbers in aspergine and a tan interior, which is a gorgeous color combination. It comes equipped with a manual transmission, electric sunroof, air conditioning, fog lights, one year only external oil filler door and includes the tool kit and spare tire. Previously owned by a PCA owner. Highly collectible.

For \$59,500



1972 Porsche 911E Coupe-stock-07539

1972 Porsche 911E Coupe in red with black interior. Comes equipped with a 5 speed manual transmission, OEM radio, one year only external oil filler door, cookie cutter wheels and includes the spare tire. Very presentable. Limited production. Same owner for many years and is mechanically sound.

For \$47,500



1973 Porsche 911T Targa-stock-08225

The featured 1973 Porsche 911T Targa is available with matching numbers in its original color. code #936 silver metallic with black interior. It comes with a manual transmission, Fuchs wheels and includes the spare tire and jack. Very clean and presentable. Mechanically sound.

For \$49,500



1973 Porsche 911T Targa-stock-08225

This featured 1973 Porsche 911T Targa comes in its original color. arena red metallic with tan interior. Clean CarFax. It is equipped with a 6-speed manual transmission, power windows, power steering, power seats, air conditioning, solid wheels and with original owner's handbook. Also included is the jack, spare tire and tool kit. Very clean and presentable. Last and most desirable year of the air cooled Porsches. Mechanically sound.

For \$49,500



1993 Porsche RS America-stock-08098

This striking 1993 Porsche RS America is available with matching numbers in its original special order color code #92E polar silver metallic with black interior. Comes equipped with a manual transmission, power windows, air conditioning, fire extinguisher and includes the spare tire and owners manual. Previously owned by a PCA owner. Mechanically sound.

For \$69,500



1982 Porsche 930 Turbo-stock-08044

1982 Porsche Turbo in yellow with yellow interior. Comes equipped with a manual transmission, 364 body kit, 3.3-liter engine, turbo, roll cage, MOMO bucket seats, Sparco steering wheel and many other performance modifications. Believed to be capable of a massive 730 horsepower. Featured on the cover of the March 1995 edition of European Car Magazine and comes with wall plaques displaying the magazine. Truly a remarkable machine and in the right hands could be capable of endless possibilities. Mechanically sound.

For \$54,500



1988 Porsche Carrera Targa-stock-08212

1988 Porsche Carrera Targa 42,166 on the odometer and matching numbers in its original color. code #700 black with black interior. Comes equipped with a manual transmission, air conditioning, power windows, power seats, Fuchs wheels and includes the spare tire and jack. Extremely clean and presentable. Collector quality. Mechanically sound.

For \$49,500



1997 Porsche 993 Targa-stock-08094

The featured 1997 Porsche 993 Targa comes in its original color. code #92U arctic silver with navy blue interior. Clean CarFax. It is equipped with a tiptronic transmission, power windows, power steering, power seats, air conditioning and includes the original owner's manual, window sticker, spare tire, jack and air compressor. Mechanically sound.

For \$39,950



1988 Porsche 930 Turbo Slalom Conversion-stock-08093

This 1988 Porsche 930 Turbo Slalom Conversion with matching numbers and 62,662 on the odometer is available in red with black interior. It comes equipped with a steel slat nose, 4 speed manual transmission, air conditioning, power windows, Fuchs wheels, rear window wiper and includes over \$50,000 in service records for engine work between 2012 and 2015 includes over \$60,000 in service records dating back to 1999. Very clean and presentable. Previously owned by a PCA owner. Mechanically sound.

For \$69,500

Looking for classic or luxury sports cars?
• We buy and pick up from any USA location • Worldwide shipping



Please check our website as we have cars being delivered daily

Alex Manos, BEVERLY HILLS CAR CLUB 4576 1/2 Worth St., Los Angeles, CA 90063
T: +1 (310) 975-0272 <http://www.BeverlyHillsCarClub.com> E: sales@beverlyhillscarclub.com





Made in Germany / www.fvd.net
Porsche® Tuning / Parts / Service

since 1984

Tuning | Parts | Service



Like us on Facebook
facebook.com/fvdbrombacher



Watch our YouTube™ Channel
youtube.com/fvdbrombacher



No matter if you need parts for your aircooled or watercooled, we have everything you need.
Simply visit us at www.fvd.net and discover why more enthusiasts choose to put our passion into their Porsche®

fvd Germany

phone: +49-7665-98990

fax: +49-7665-989920

www.fvd.net

fvd North America

phone: +1-954-571-2050

fax: +1-954-571-2060

www.fvd.net