



MAGNUS WALKER'S SPECTACULAR COLLECTION OF 3.0-LITRE 930s REVEALED

Total 911

THE PORSCHE MAGAZINE

HOMOLOGATION RS
Driven: the 960kg 2.7 RS that kick-started the Rennsport legacy



www.total911.com

RISE OF THE CARRERA 4

- Why the Carrera 4 is the all-conquering 911 after 25 years
- Evolution of 4WD technology examined 964-991



PLUS

- Harm Lagaaij interview
- New Nick Tandy column
- Technical data for every 911

997 GT3 GUIDE

Your **ultimate** buyers' resource for the 415bhp, 3.6-litre Mezger-engined marvel



Digital Edition

GreatDigitalMags.com

ISSUE 111

TURBO RIVAL

Can supercharging offer better performance than the 911's factory Turbo variant?



Porsche Fixed Price Maintenance. The quality you'd expect, a price you wouldn't.

Whether it's a new set of brake pads or a replacement clutch, rest assured that with our new fixed price tariffs for a range of maintenance jobs on selected Boxster and 911 models* it doesn't have to be a balancing act between quality and cost. Our Porsche accredited technicians are trained to the very highest standards and only use the precise tools and genuine parts required to do the job to the standard your car deserves.

Get the best of both worlds with fixed price maintenance from Porsche.

For more information visit www.porscheownerservices.co.uk



PORSCHE

Porsche Centre Aberdeen

0845 5202165
/aberdeen

Porsche Centre Belfast

0845 5202166
/belfast

Porsche Centre Bolton

0845 5202167
/bolton

Porsche Centre Bournemouth

0845 5202168
/bournemouth

Porsche Centre Bristol

0845 5202169
/bristol

Porsche Service Centre Byfleet

0845 5202198
/byfleet

Porsche Centre Cambridge

0845 5202170
/cambridge

Porsche Centre Cardiff

0845 5202171
/cardiff

Porsche Centre Chester

0845 5202172
/chester

Porsche Centre Colchester

0845 5202173
/colchester

Porsche Centre Dublin

00 353 1235 3375
www.porschedublin.ie

Porsche Centre East London

0845 5202174
/eastlondon

Porsche Centre Edinburgh

0845 5202176
/edinburgh

Porsche Centre Exeter

0845 5202177
/exeter

Porsche Centre Glasgow

0845 5202178
/glasgow

Porsche Centre Guildford

0845 5202179
/guildford

Porsche Centre Hatfield

0845 5202180
/hatfield

Porsche Centre Jersey

0845 5202175
/jersey

Porsche Centre Kendal

0845 5202181
/kendal

Porsche Centre Leeds

0845 5202182
/leeds

Porsche Centre Leicester

0845 5202183
/leicester

Porsche Centre Mid-Sussex

0845 5202185
/midsussex

Porsche Centre Newcastle

0845 5202186
/newcastle

Porsche Centre Nottingham

0845 5202187
/nottingham

Porsche Centre Portsmouth

0845 5202188
/portsmouth

Porsche Centre Reading

0845 5202189
/reading

Porsche Centre Sheffield

0845 5202190
/sheffield

Porsche Centre Silverstone

0845 5202191
/silverstone

Porsche Centre Solihull

0845 5202192
/solihull

Porsche Centre Sutton Coldfield

0845 5202193
/suttoncoldfield

Porsche Centre Swindon

0845 5202194
/swindon

Porsche Centre Tonbridge

0845 5202195
/tonbridge

Porsche Centre West London

0845 5202196
/westlondon

Porsche Centre Wilmslow

0845 5202197
/wilmslow

*Participating centres only. Fixed price maintenance tariffs apply to Boxster Type 986 (1996-2004) and selected 911 Type 996 (1998-2005) models only. Fixed price maintenance tariffs may be withdrawn or varied at any time. Contact participating centres for full details, terms and conditions.



Welcome



We're huge fans of the 991 Carrera 4. It lavishes the driver with intelligent traction technology, married to the exceptional performance that has long been a trademark of the Porsche 911.

Such an abundance of adhesion inspires thrilling, positive driving, and best of all, you'd be hard pressed to tell the four-wheel drive 991 apart from its rear-wheel drive brethren, unless pushing each car to its absolute limit.

And yet the Carrera 4 continues to live in the shadow of the Carrera 2. From the C4's outset in 964 form, just 13,353 all-wheel drive 911 Coupes were sold compared to 18,219 rear-drive examples, despite the C4 going on sale first. This trend

“I hope this issue underlines the merits of all-wheel drive and its significance to the 911 model lineup”

continues through the generations, with 23,127 993 C2 Coupes trumping the 4,775 C4 Coupe variants (excluding 'S' models). By the turn of water-cooling, 31,135 C2 Coupes were sold versus 12,643 C4s, although all-wheel drive did win the sales battle by the time the 996.2 generation came around.

Even after evolutions to four-wheel drive by the arrival of the previous-generation 997, just 35 per cent of Carrera (Coupe) sales had power going to both axles.

The traditional 911 setup is a proven populist choice, and for good reason. However, I hope this issue underlines the merits of all-wheel drive and its significance to the model lineup.

Away from the magazine, I recommend a visit to our new website, www.total911.com, as your ultimate day-to-day resource for Porsche news and lifestyle. Our new interactive great roads page is a particularly fun feature, where you can view our collection of exhilarating routes and even share your own. After all, the Porsche 911 is for driving, right?



Join the community

f Facebook
 /total911magazine

t Twitter
 @total911

911 www.total911.com
 Visit us for up-to-date news and debate





911 Opening Shot

With our photographer Ali Cusick hard at work documenting the 997.1 C4S, the owners of every other generation of Carrera 4 were afforded some downtime in which to discuss 25 years of power to both axles of the 911.

Photograph by **Maxie Islam**

Contents



14 25 YEARS OF CARRERA 4

“Porsche believed it was essential that the next 911 should have all-wheel drive”

For back issues, subscriptions
and other Total 911 products visit

www.imagineshop.co.uk

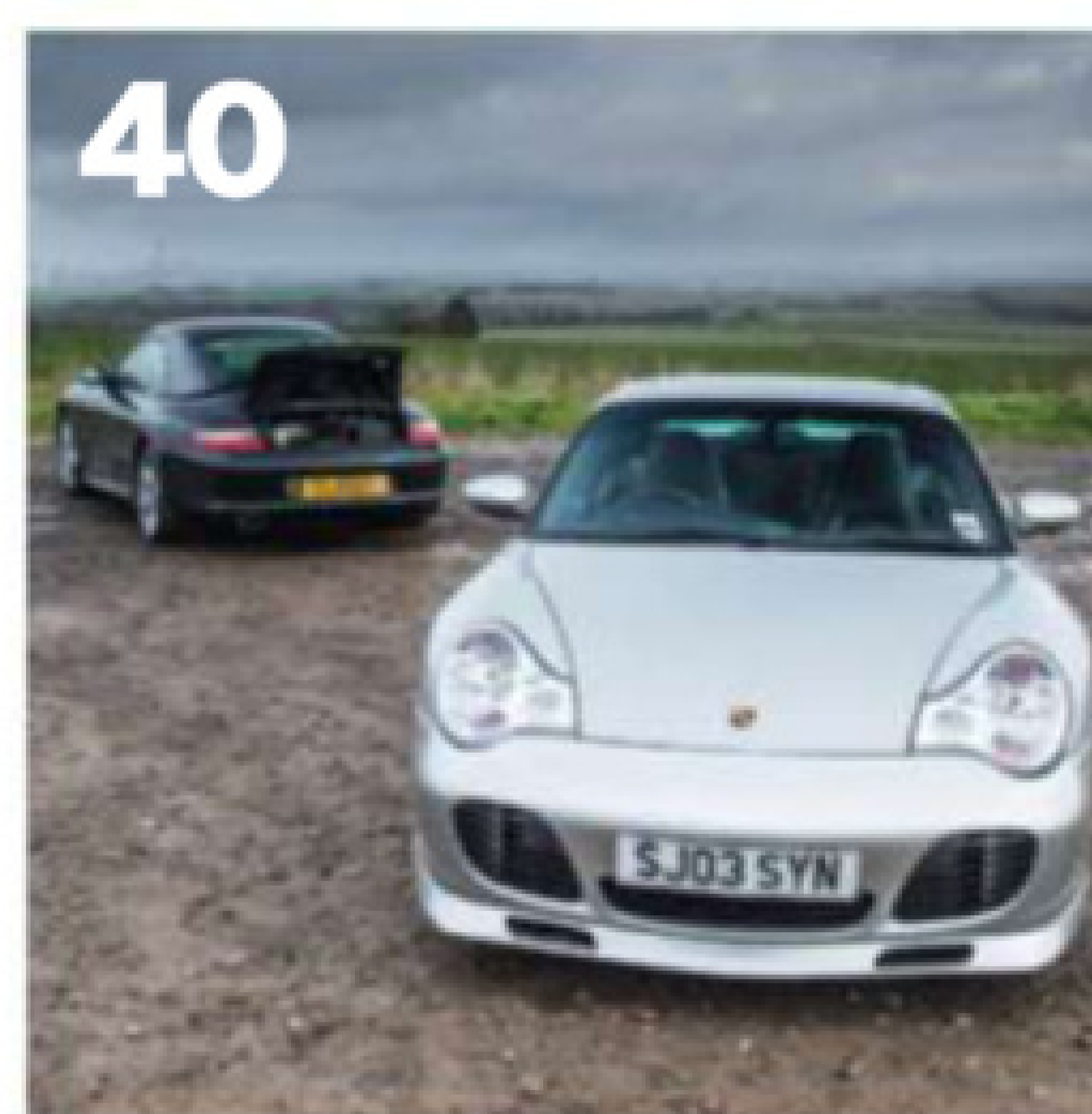


Essentials

- 08 **Update**
The latest news, product reviews
and motorsport
- 12 **Views**
The best of your letters, emails,
and tweets
- 38 **UK subscriptions**
Latest offers for UK fans of **Total 911**
- 76 **Living the Legend**
Comprehensive 911 updates from
your all-new Living the Legend section
- 81 **USA Subscriptions**
Our special offer for US readers
- 83 **Premier Porsche**
All you need for your Porsche lifestyle
- 113 **Coming soon**
What to look forward to next time
- 114 **Great roads**
With 22 hairpins and high altitudes,
this is a truly incredible Californian road



30



40



48

Features

- 14 **25 years of Carrera 4**
We gather every generation of 911
Carrera 4 to celebrate 25 years of
superior traction
- 30 **2.7 Carrera RSH**
Only 17 of these super-rare
homologation specials were made.
We get to drive one
- 40 **Turbo rival**
Turbocharging has long been
Porsche's forced induction method of
choice. Is there an alternative?
- 48 **911 Hero: Harm Lagaaij**
We sit down with one of the stylists
responsible for the first generation of
water-cooled 911s
- 54 **Ultimate guide: 997 GT3**
All you need to know for one of the
very best track-bred 911s
- 62 **930 3.0 extravagance**
We get up close with all five of Magnus
Walker's classic Turbos
- 70 **Monte Carlo
Rally history**
A history of the event in which the 911
made its competition debut
- 84 **Specialist Cars of Malton**
A look at the UK's answer to Canepa



54



62



70



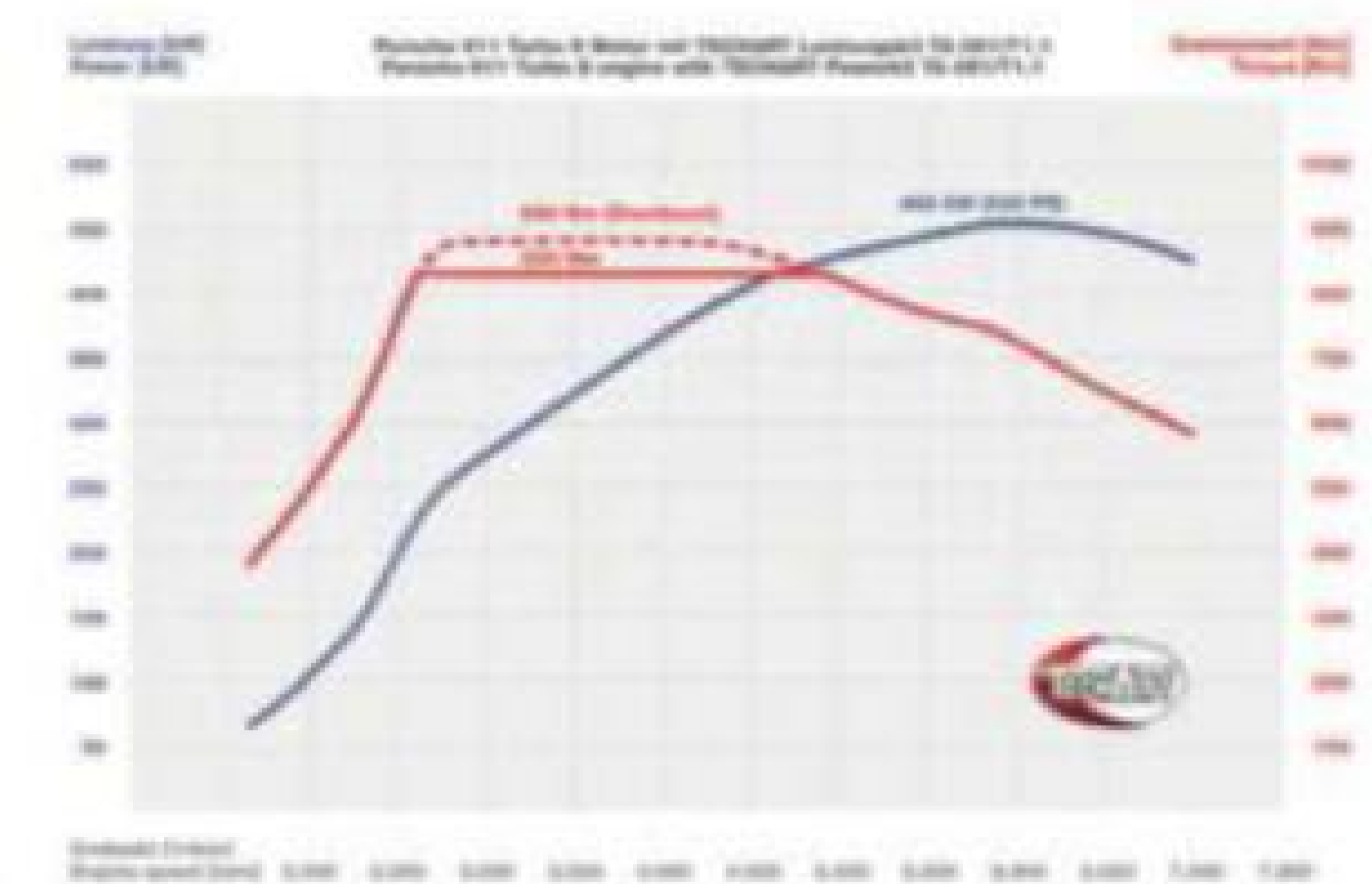
76



84

Update

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



TechArt announce 991 Turbo S Power Kit

Power Kit marks German modifier's first tuning package for 991 platform

Leonberg-based Porsche 911 modification expert TechArt has announced that it will provide a Power Kit for the current-generation 991 Turbo S. After revealing its 991 Turbo styling kit in November last year, the new Power Kit – codenamed 'Power Kit TA 091/T1.1' – marks the German tuners' return to mechanical modifications. The new TA 091/T1.1 Power Kit is the first tuning kit for the 991 range, with TechArt predominantly focusing its business around aesthetic styling kits for various Porsche models in recent years.

The Porsche 991 Turbo S boasts impressive performance figures as standard, with a 0-100kph time of 3.1 seconds in Sport Plus mode and a top speed of 318kph (197mph). However, thanks to a re-tuned engine management system, TechArt has managed to top these figures.

When in Sport or Sport Plus mode, the TechArt Power Kit (based on their intelligent Techtronic ECU)

provides an extra 60bhp boost to the Turbo S's already remarkable 560bhp total. Simply activated by the 'Sport' or 'Sport Plus' buttons on the car's centre console, this 620bhp is enough to push the Turbo S to a new top speed of 328kph (204mph), putting it on par with the 997 GT2 RS.

Furthermore, the Power Kit provides a 130Nm torque increase when the Sport or Sport Plus settings are selected. This leaves the TechArt-tuned 991 Turbo S with 830Nm in non-overboost mode and 880Nm with overboost activated. Making use of the excellent traction offered up by the Turbo S's PTM four-wheel-drive system, the TA 091/T1.1 Power Kit allows the 991 Turbo S to shoot from 0-100kph in 2.8 seconds, a ten per cent decrease in the industry-standard sprint time.

The Techtronic wiring harness that makes up the Power Kit package is designed for quick and easy installation. What's more, TechArt understands that

some customers may wish to de-install the system to improve residual values when it comes to resale. To this end, the Techtronic kit has also been designed with trouble-free de-installation in mind.

To improve peace of mind among Turbo S drivers considering this TechArt upgrade, the Power Kit has also been designed to not interfere with any of the OEM Porsche diagnostic or engine protection features. Coupled to this, TechArt provides a two-year limited warranty with the TA 091/T1.1 kit (as with all their new factory products) and, to further assuage customers' potential fears, an additional warranty on damages to the engine or gearbox internals.

The Geneva Motor Show (6-16 March) will see TechArt unveil the new Power Kit alongside further modifications for the 991 Turbo platform, including a new sport exhaust with acoustic valve system. For all the latest from Geneva, visit Total911.com.

What's on in 2013-14

October 2013 - March 2014

60 years of super sports cars
29 October 2013-14 March 2014
The Porsche Museum is marking 60 years of supercars, including a 911 GT1 Straßenversion.

March

Amelia Island Concours
6-9 March
The concours d'elegance will again display some of the finest cars in the world.



Geneva Motor Show
4-16 March
The 84th International Motor Show is sure to see a big Porsche presence.

April

New York Auto Show
18-27 April
Porsche North America will be in the Big Apple for 2014's third American motor show.

May

991 Targa arrival
May
The first new 911 Targas are expected to land in showrooms in time for summer.

June

Goodwood Festival of Speed
26-29 June
This year's theme is 'Addicted to Winning – The Unbeatable Champions of Motor Sport'.



991 Carrera Gen2 spied in cold weather testing

Porsche has been putting the Gen2 Porsche 991 Carrera through its paces during the car's latest test in Sweden. First seen back in December, the face-lifted 991 Carrera has now been spotted undergoing winter testing duties in Arjeplog in Sweden, the automotive industry's favourite destination for cold-climate evaluation.

Few details are known about the Gen2 991. However, the major changes seem to be centered around the rear of the car. The brake light clusters appear clearer, with larger red LEDs set inside. While the shape of the rear lights does not appear to have changed, the use of camouflage tape suggests that there could be a revision to their shape on the next generation of 911.

The rear bumper has also been tweaked, now featuring two horizontal exits vents either side of the rear wheels. While this could be a simple aerodynamic adjustment, it hints at a major cooling solution for a potentially altered drivetrain.

To see pictures of the face-lifted 991 Turbo spotted testing alongside the Gen2 Carrera, head over to Total911.com.

RPM Technik become HRE Wheels UK dealer

HRE Wheels are well known in the US, having been designing and building bespoke wheels for 30 years. Now, the wheels will be coming to the UK after announcing Porsche specialists RPM Technik as a new authorised dealer.

Before building a prototype, HRE stringently computer-test their designs to optimise each wheel's strength, weight and performance. After manufacturer and CNC machining, the wheels are completed in a range of finishes, including hand-polishing and

powder coating. HRE builds two types of wheels: three-piece forged/spun wheels, and their esteemed single-piece forged Monoblock rims. The latter are custom built to order, with the former available off the shelf.

All wheels are designed to take Porsche wheel bolt profiles, wheel centre caps, and match the exact Porsche offsets for each Porsche model, negating the need for spacers. For more information, phone RPM Technik on 01296 663824.



In brief



Cargraphic 991 Turbo exhaust

German tuning parts company Cargraphic has unveiled its new range of stainless steel performance exhaust systems for the Porsche 991 Turbo. As well as a standalone sport rear silencer, Cargraphic offers complete exhaust kits, featuring a silencer and catalytic converter.

Available with or without sound-enhancing flaps, the kits offer an extra 25bhp, and are available in 'TUV Sound' and 'Race Sound' configurations. Prices start from €1,495 (£1,225). Visit www.cargraphic.com, or contact UK importer Parr UK for more information.



Elephant Racing chassis reinforcements

Elephant Racing, the California-based Porsche parts experts, has released its new chassis reinforcement panels for 911, 912, and 930 models built between 1965 and 1989.

Designed to prevent metal fatigue around the springplates and front antiroll bar mounts, these laser-cut panels provide a weld-in stiffener to these vulnerable areas. Made from 18-gauge steel, the kits also include a stud-alignment tool for easier reassembly.

The antiroll reinforcement kit is priced at \$120 (£72), with the springplate panels costing \$160 (£96). For more information, head to www.elephantracing.com.



March

12 Hours of Sebring
12-15 March
The 62nd running is round two of the 2014 United SportsCar Championship.

FIA WEC Official Test
28-29 March
The Porsche 919 hybrid LMP1 will make its official debut in pre-season at Paul Ricard.

April

Tour Auto Optic 2000
7-12 April
The 2014 route for this classic rally will see competitors head from Paris to Marseille via Dijon.

FIA WEC Silverstone 6 Hours
18-20 April
Porsche are represented in LMP1 and GTE.

911 in Motorsport



Racing line: Nick Tandy

In his first column for Total 911, the Porsche works driver relives the emotions of winning at Daytona

It's a good time to be partnering with **Total 911**. The new-for-2014 Tudor United SportsCar Championship is increasing American interest in sports car racing, so the introduction of the first US factory effort from Porsche proved especially fruitful after our ideal start to the season at the 24 Hours of Daytona. Incredibly, the first time the entire Porsche North America Racing team all got together was at the Daytona 'Roar' test at the start of January. As a full factory effort, the CORE Autosport side of things had to integrate with the influx of technical support and staff from Weissach, a process vital to our success. Despite a few teething problems, it has been as smooth as could be expected, unlike the 'Roar Before the 24' test.

Although we set the benchmark GTLM time, we had a few reliability issues that curtailed our running. With Daytona placing a very large, very different load on the tyres and chassis, missing out on this track time could have severely affected our competitiveness but, thankfully, I was still able to qualify second in the #911 Porsche 911 RSR that I am incredibly lucky to share throughout 2014 with Richard Lietz. For Daytona, Patrick Pilet (another 2013 FIA WEC frontrunner) also joined us. Together

with the #912 car, Porsche certainly have one of the strongest driver line-ups on the entire grid.

During the race, the pace of all the cars in the GTLM class was incredibly close. There were many times when our competitors were faster than us, although during the night (a crucial period in any endurance race) we were the benchmark runners. In the end, though, it wasn't our speed that brought victory. As others dropped out, Porsche displayed its trademark reliability, allowing us to reach the chequered flag relatively unchallenged.

Although my win with Falken at Petit Le Mans last season was personally one of my best performances, winning the 24 Hours of Daytona is a huge deal, and something I've always wanted. Now, I'm a champion of Daytona, and it will stay with me for the rest of my life, as will the rather nice Rolex watch that I won!

The next round at Sebring will give a clearer indication of where Porsche stands in the competitive order. Hopefully we'll be up the front, as I will be gunning to become one of the first drivers to hold all three American endurance trophies (Daytona, Sebring and Petit Le Mans) at the same time. It would be an incredible achievement, and would certainly make a good story.



Barker wins at Bathurst

2013 Porsche Supercup racer Ben Barker has started the new season successfully by helping Grove Racing to Class B victory at the Bathurst 12 Hour endurance race. Partnered with 2014 Porsche International Scholarship winner Earl Bamber and team owner Stephen Grove, the 22-year-old Briton finished eighth overall in the team's 2011 Porsche 997 GT3 Cup.

With two and a half hours remaining, Barker took the class lead during his final stint before handing over to Bamber. The Kiwi then proceeded to set a blistering pace, finishing two laps ahead of nearest rivals Competition Motors, who had factory driver Patrick Long at the wheel of their 997 GT3 Cup car.

Meanwhile, Barker has been confirmed as the second of **Total 911s** all-new trio of motorsports columnists for the forthcoming racing season. Barker will be joining Nick Tandy and new Carrera Cup GB scholar Josh Webster as part of our all-star racing line-up, starting next issue.

Racing updates latest news and results from racing series around the globe

24-Hour Series

Supercup racer Christian Englehart helped Stadler Motorsport to Dubai 24 Hours victory with their 997 GT3R.

Porsche Carrera Cup GB

BTCC team Welch Motorsport has announced that it will join the 2014 championship with a single-car entry.

USCC

After missing the 24 Hours of Daytona, Team Falken are will give their customer 991 RSR its Tudor USCC debut at the Sebring 12 Hours.

Porsche lifestyle

Total 911 brings you some of the best office essentials from Porsche's own Driver's Selection



Porsche crest keyring £15

A good keyring always adds a touch of class to any set of car keys. This Porsche crest example, featuring the iconic crest on a genuine leather backer, is no exception. Available in red, black, cognac, yellow or black, they are the perfect understated accompaniment to your 911 keys. shop.porsche.com/uk

911 Carrera USB stick £35

This 4GB USB 2.0 memory stick is sure to stand out on your desk with its 991 Carrera shape and chromed finish. If that isn't enough though, the headlights flash when plugged into either your PC or Mac. It is also compatible with PCM systems that have the Universal Audio Interface option. shop.porsche.com/uk



Paper clips £10

Paperclips aren't the most glamorous office accessory, though they are vital. This set of 100 paperclips is shaped to resemble the body of the 911 and will make for an office favourite in holding your sheets of paper together. shop.porsche.com/uk

iPhone 5 case £60

If you own an iPhone, you will know how important protecting its glass screen is. Made of original Porsche leather, this case is the ideal partner for your Apple smartphone. Available in Cognac (as pictured), black, black with red stitching or Yachting blue, this superb cover is finished with a metal Porsche crest. shop.porsche.com/uk



Computer mouse £60

This beautiful gloss 'piano' black computer mouse captures the famous silhouette of the Porsche 911 with its graceful curves. Featuring an aluminium scroll wheel, this wireless mouse (complete with 2.4GHz USB dongle) has a 2,000dpi sensor, and is compatible with both PC and Mac operating systems. shop.porsche.com/uk



Office chair £4,000

Mounted on a five-caster base, this is an original Sports Plus seat, as featured in the current 991-type 911s. It features the obligatory height adjustment, along with an electrical backrest adjuster. The chair itself is finished in black leather, with a silver composite back. The Porsche crest on the head section confirms this as the ultimate office chair. shop.porsche.com/uk



Storemags.com

Views

Your letters, emails and tweets

Contact
Total 911

Facebook
+t911magazine

Twitter
@Total911

911
Email
editorial@total911.com

 @total911

Here's the best photos we've tweeted this month:

RT "@theplantster: My beautiful Drilled and vented #Porsche Brake Disc #Clock by @DaveClarkDesign



Win one of three '101 Projects for 996/997'

Modern 911s are getting increasingly difficult to work on yourself thanks to the myriad electronic devices, tight packaging and requirement of specialist tools. As a result, servicing is a task only undertaken by specialists.

However, with *101 Projects For Your Porsche 911 996 and 997 1998-2008*, you could soon be working on your own water-cooled 911, especially as Motorbooks are offering three **Total 911** readers the chance to win a copy.

Written by Porsche expert Wayne R Dempsey, *101 Projects For Your Porsche 911 996 And 997* aims to save you thousands of pounds in maintenance costs by walking you through some of the jobs that you can perform yourself.

The tutorials are created with the weekend mechanic in mind, with highly illustrated projects to maintain, modify and improve your water-cooled 911. From changing the engine oil to fitting sports suspension kits, the book not only shows you what to do, it also tells you what mistakes to avoid.

To be in with a chance of winning this useful book, worth £25, just answer the following question:

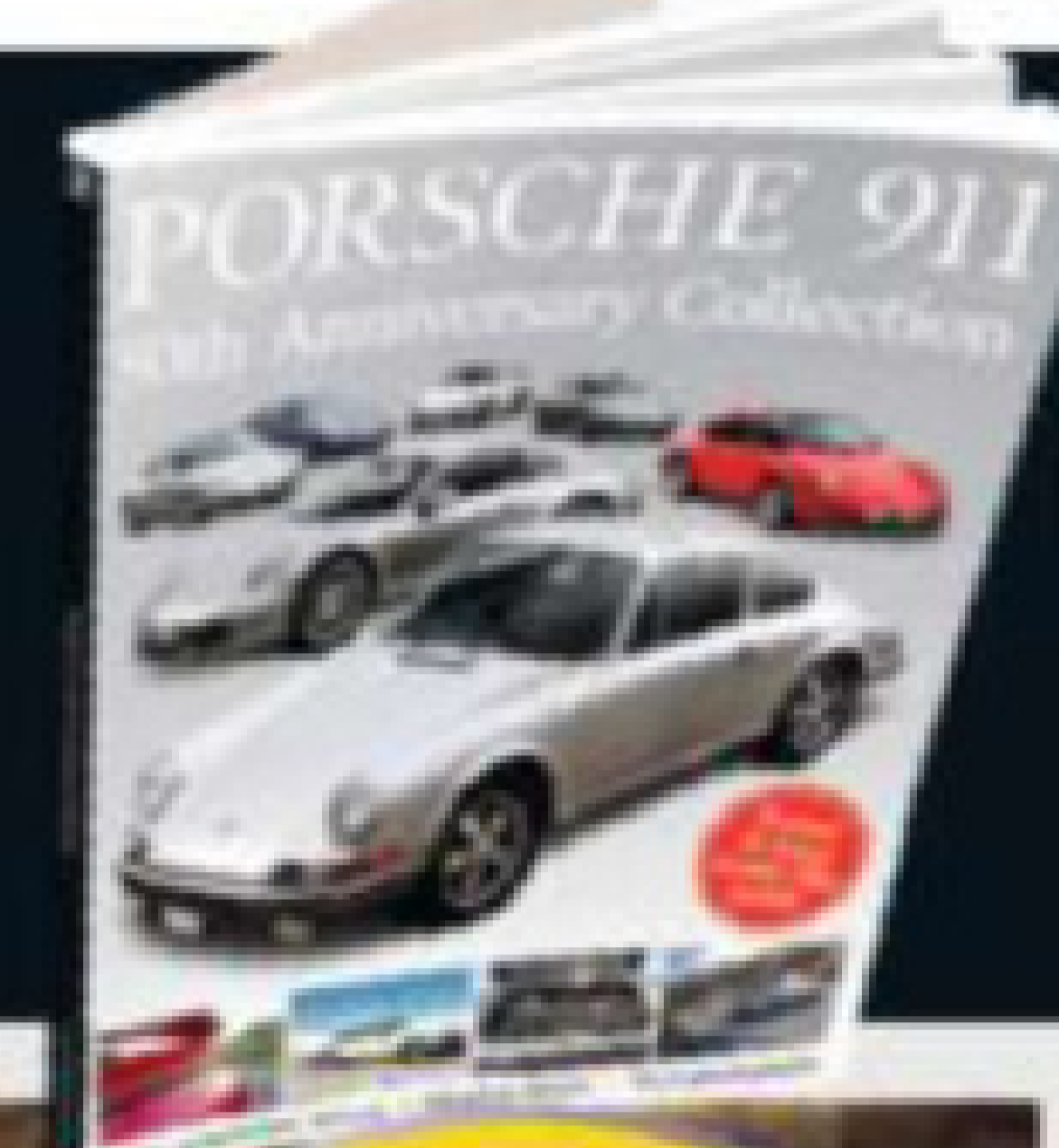
Who is the author of *101 Projects For Your Porsche 911?*

Send your answer, along with your name and address, via email to competitions@total911.com with '101 Projects Book' in the subject line before the closing date of 27 March 2014.

Congratulations to Steve Brookes, Simon Chester, and Todd Paul, winners of the Falken Motorsport yearbook competition from issue 109.

Letter of the month

Write or email in with your Porsche opinions and the author of the letter of the month will receive a complimentary copy of the special **Porsche 911 50th Anniversary Collection** bookazine!



The merits of the Carrera 4

Dear Sir,
Having recently purchased a 991 Carrera 4S, I felt compelled to write to you.

As you well know, when launched in 1989, the Carrera 4 (at that time on the 964 platform) was not particularly well received by Porsche purists. For this reason, some people choose to disregard the Carrera 4 when it comes to choosing a 911. They feel that, through the addition of drive to the front wheels, it lacks that idiosyncratic 911 character.

However, having had the time to put some serious miles on my new car, I can categorically state that if you weren't told, the 991 C4 platform doesn't feel like a four-wheel drive car

at all. Getting hard on the throttle on the exit of corners still gives the car a propensity to wag its tail around like a true 911. For me this is excellent, as I benefit from the improved traction of an all-wheel drive system while maintaining the fun of a rear-drive car.

Some may argue that this lulls people into a false sense of security, but any 911 demands respect. Turbos have been four-wheel drive for generations, but people know you still need to treat them right.

Another stick used to beat the C4 with is the extra weight the four-wheel drive (and its extra differential) brings, but again, the front end of my 991 is perfectly balanced. I know I'm biased, but the steering feel (to me) is superb,

despite the much-maligned electric power assist, which is another element that people needlessly criticise.

At the end of the day, my C4 is perfect for me, and puts a smile on my face whenever I take it out. Maybe people should get out in their 911s more often rather than picking at the choices of others. We're all in the 911 family together, after all.

Regards,

Lawrence Webb, via email

A credible viewpoint here, Lawrence, and one that forms the crux of our cover feature this month. The 991 Carrera 4S is a fantastically balanced car – you'll have great fun with it in all weather!



One hour to go at #Daytona and Pilet takes the wheel of the GTLM class-leading works 911 (pic from @UnitedSportsCar)

There's something unusual about the engine on one of the 911s we're driving today. Can you spot what it is?



Our 991 C4S: the red line of identity.



Total 911

THE PORSCHE MAGAZINE

Imagine Publishing Ltd
Richmond House,
33 Richmond Hill
Bournemouth,
Dorset, BH2 6EZ
☎ +44 (0) 1202 586200
www.imagine-publishing.co.uk
www.total911.com
www.greatdigitalmags.com

Magazine team

Editor Lee Sibley
lee.sibley@imagine-publishing.co.uk
☎ 01202 586291

Staff Writer Josh Barnett

Designer Steven Mumby

Sub Editor Steve Wright

In-house Photographer James Sheppard

Senior Art Editor Helen Harris

Head of Publishing Aaron Asadi

Head of Design Ross Andrews

Contributors
Ray Chandler, Kris Clewell, Ali Cusick, Kieron Fennelly, Antony Fraser, Maxie Islam, Ben James, Theodora Lecrinier, Richard Klevenhausen, Tony McGuinness, Joel Newman, Chris Randall, Sean Parr, Porsche AG, Ben Przekop, Gina Purcell, Phil Steinhardt, Johnny Tipler, Magnus Walker, Chris Wallbank

Cover image

Ali Cusick

Advertising

Digital or printed media packs are available on request

Advertising Director Matthew Balch
☎ 01202 586437
matthew.balch@imagine-publishing.co.uk

Head of Sales Hang Deretz
☎ 01202 586442
hang.deretz@imagine-publishing.co.uk

Account Manager Gary Pearce
☎ 01202 586412
gary.pearce@imagine-publishing.co.uk

International

Total 911 is available for licensing. Contact the International department to discuss partnership opportunities

Head of International Licensing Cathy Blackman
☎ +44 (0) 1202 586401
licensing@imagine-publishing.co.uk

Subscriptions

Head of Subscriptions Gill Lambert
email 911subs@servicehelpline.co.uk
UK: ☎ 0844 249 0463

Overseas: ☎ +44 1795 414 886
13 Issue subscription UK – £52.65
13 Issue subscription Europe – £60.00
13 Issue subscription ROW – £70.00

Circulation

Head of Circulation Darren Pearce
☎ 01202 586200

Production

Production Director Jane Hawkins
☎ 01202 586200

Founders

Group Managing Director

Damian Butt

Group Finance & Commercial Director

Steven Boyd

Printing & Distribution

Printed by **Wyndeham Heron Ltd**, Bentalls Complex, Colchester Road, Heybridge, Maldon, CM9 4NW. Tel: 01621 877777

Distributed in the UK & Eire by: **Seymour Distribution**, 2 East Poultry Avenue, London, EC1A 9PT. Tel 0207 429 4000

Distributed in Australia by: **Gordon & Gotch Corporate Centre**, 26 Rodborough Road, Frenchs Forest, NSW 2086. Tel + 61 2 9972 8800

Distributed in the Rest of the World by: **Marketforce**, Blue Fin Building, 110 Southwark Street, London, SE1 0SU. Tel 0203 148 8105

Disclaimer

The publisher cannot accept responsibility for any unsolicited material lost or damaged in the post. Total 911 is independent of Porsche AG. All text and layout is the copyright of Imagine Publishing Ltd. Nothing in this magazine may be reproduced in whole or part without the written permission of the publisher. All copyrights are recognised and used specifically for the purpose of criticism and review. Although the magazine has endeavoured to ensure all information is correct at time of print, prices and availability may change. This magazine is fully independent and not affiliated in any way with the companies mentioned herein.

If you submit material to Imagine Publishing, you automatically grant Imagine Publishing an irrevocable, perpetual, royalty-free license to use the images across its entire portfolio and to deliver the material to existing and future clients, including but not limited to international licensees for reproduction in international, licensed editions of Imagine products. Any material you submit is sent at your risk and, although every care is taken, neither Imagine Publishing nor its employees, agents or subcontractors shall be liable for the loss or damage.



© Imagine Publishing Ltd 2014
ISSN 1746-6130



991 GT3 RS waiting

Dear Sir,
Reading the 997 GT3 RS head-to-head feature in the last issue got me thinking. For the Gen2 997, the GT3 RS was released in the same year (2009) as its 'vanilla' GT3 brother. However, with this year's Geneva Motor Show marking exactly 12 months since the 991 GT3 was unveiled, Zuffenhausen has been unusually quiet regarding a Rennsport version of the latest 911.

Therefore, I've turned to speculating with myself as to what the 991 GT3 RS will feature. Traditionally, the RSs have used the same cubic capacity as the standard GT3.

However, with the popularity of the 4.0-litre RS, could we see the 4.0-litre engine in the back? The only problem with this is that the GT3 no longer uses the Mezger engine, in which case could it feature a 4.0-litre powerplant?

I think that PDK and rear-wheel steering will remain, as the RS



needs to be faster than the GT3. Without these aids, the car would lose weight, but I imagine it would be slower to drive. However, because the 991 GT3 is proving to be capable as an everyday car, the 991 GT3 RS is likely to be the most hardcore water-cooled RS yet. What do you think?

Best regards,

Steve Yateley, via email

We expect a 991 RS this year. Talk suggested we could find out at Geneva, but that's gone quiet as the factory looks towards the new motorsport season. Regardless, we look forward to Porsche trying to better the GT3!



Turbo triumph

Dear Sir,
Referencing your article on the Turbo trek to Paris in issue 109, I wonder if you had the paddle shifters on the car and what you thought of them? You gave some good insight on the PDK, but I don't remember anything about the paddle shifters. Any thoughts on those on the Turbo? Love your publication by the way, always look forward to each new issue.

Kind regards,

Josh Durham, via email

Paddle shifters were indeed fitted to our Turbo as standard equipment, Josh. The paddles have a great feel and are beautifully weighted when changing gears with your fingertips. Crucially, the paddles are mounted to the wheel, meaning they're in easy reach regardless of wheel position, as opposed to being stationary mounted on the column. My advice is to stay clear of the optional multi-function wheel, which has 'click' paddles for your thumbs rather than more natural 'pull' levers for fingers.



Forgotten 3.2 Clubsport

Dear Sir,

It's a small point, but can I ask why the 3.2-litre Clubsport isn't marked as 'Ultra Rare' in your Data File? There were only 53 right-hand-drive models delivered in the UK (of which I own one), so it must be one of the rarest of all 911s?

Great magazine by the way – have just taken out a subscription.

Kind regards,

Huw Banister, via email

Great to hear you're a 3.2 Clubsport owner – they're extremely underrated cars. There are many rare 911s (of which the Clubsport is one) that we currently feel are not given enough of the limelight in the section, so I expect you'll be pleased when we make some changes shortly. Keep an eye out.



25 YEARS OF CARRERA 4

Of the Porsche 911's 50 years of existence, the all-wheel drive variant can now lay claim to being in production for half of that illustrious lifetime. Total 911 charts the successful evolution of the 'other' 911: the Carrera 4

Written by **Kieron Fennelly** and **Lee Sibley** Photography by **Alisdair Cusick**



First appearing on a production 911 in 1989, all-wheel drive was far from a new concept at Zuffenhausen. During World War II, Dr Ferdinand Porsche had designed Type 87, a version of the famous military runabout, the Kübelwagen, with a driven front axle, a sort of German version of the Willys Jeep. But for sports car production and racing, all-wheel drive seemed irrelevant.

Ten years later, the question arose again. Ferry Porsche had been impressed by the 4x4 prototypes his nephew Ferdinand Piëch was building at Audi, and asked Ernst Fuhrmann to look at integral transmission for the 911. However, Fuhrmann had decided there would be no further development of the 911, and did not act on Ferry's instruction. Almost a year was lost before Ferry Porsche realised that no progress had been made, and Fuhrmann left the company shortly afterwards. Meanwhile, all-wheel drive was growing in significance: the Audi Quattro was enthusiastically received, providing a terrific boost to the brand, and Porsche's Technical director Helmuth Bott

observed that Porsche could not escape the 4x4 era. Under CEO Peter Schutz, who recognised the 911's importance and reinstated it, Porsche became more confident and believed it was essential that the next 911 should have all-wheel drive, which would be implemented on the new 964.

The big surprise when the extensively re-engineered but conservatively styled 964 was launched in 1988 was that it was available initially only in four-wheel drive. However, this transmission was not the sophisticated system that had been painstakingly developed for the 959: for cost reasons, the 964 'Carrera 4' had to make do with a simpler mechanism, which had been used

successfully in the rally 953. This consisted of a centre differential that apportioned torque between front and rear differentials, with a default setting of 31 per cent front versus 69 per cent rear. ABS wheel sensors linked to the ECU intervened to transfer more torque to the front or rear if loss of traction was felt in one of the axles.

Unfortunately, what had worked well in propelling the 953 across the desert was less successful on smooth tarmac. The system Porsche had developed for the 964 was designed to both minimise understeer and reduce the 911's tendency for the rear to break away at the limit. Although the Carrera 4, as Porsche called the new 911, was more

stable and reassuring to drive fast, its propensity to numbing understeer when driven hard seemed out of character in a Porsche, and disappointed keen drivers for who the C4 lacked the agility of the more challenging Carrera 2, a model introduced – to their relief – a year later. Other criticisms of the four-wheel-drive 911 involved the additional weight (100 kilograms) and transmission losses, which meant the 1,450 kilogram, 250bhp 964 could offer only a marginal performance improvement over the 200 kilogram-lighter 231bhp 3.2.

As the first all-wheel-drive 911, the 964 Carrera 4 was the first model of the new-era 911, and a bold statement of its future evolution and longevity. ➔



4WD: a technological timeline

1989

The first all-wheel-drive 911 was introduced in the form of the 964 Carrera 4. 31 per cent of drive was sent to the front axle and 69 per cent to the back. The driver had manual override to electronically lock up front and rear-wheel drive.

1994

The 993 Carrera 4 was introduced with an improved active four-wheel drive system. Heavy centre-diff was replaced with a viscous coupling at the front transaxle, saving 50 kilograms over the 964 system. ABD aided traction to the rear wheels.

1999

The 996 Carrera 4 moved the viscous coupling forward, letting a Tiptronic gearbox be mounted in front of the engine for the first time in all-wheel drive. PSM was added with electronic throttle control, though the C2 still used a traditional throttle cable.

2005

The Gen1 997 was produced, offering revisions to an updated four-wheel drive Porsche Stability Management, including electronic brake prefill and brake assist. Aesthetic changes for the Carrera 4 were introduced, including the use of a Turbo shell.

2007

The electronic multi-plate clutch distributed power to front and rear axles instead of the viscous centre differential on the new facelifted 997 for a quicker transfer of power. Porsche Traction Management was also utilised for the first time on a Carrera.

2012

The 991 Carrera 4 was put into production, complete with the most advanced all-wheel drive system Porsche had implemented on a production 911. Transmission included PTM from the 997.2. Porsche Torque Vectoring came as standard on 4S.



The 964 heralded the dawn of a new era for the 911, with AWD ensuring increased usability in all weather conditions







CARRERA 4: THE SPECIALIST'S VIEW

“Going right back to the 964, the rear-drive 911 had more feel and feedback, with the systems used by the early 911s being very agricultural, effectively making the car feel like all-wheel drive. However, modern computer technology has given the car a more two-wheel drive feel. The four-wheel drive cars are also very pretty now, melding a naturally aspirated engine to the Turbo body, but without the larger rear wing and side vents. Later Carrera 4s drive brilliantly, and are just as much fun in the wet as they are in the dry.”

Jamie Tyler, Paragon Porsche



“The 964 Carrera 4 was a bold statement of the 911’s future evolution and longevity”

|  | 964 Carrera 4 (1989-93) | Model Year | 993 Carrera 4 (1994-97) |  |
|---|---|---|--|---|
|  | 3,600cc 11.3:1 250bhp @ 6,100rpm 310Nm @ 4,800rpm Six-speed manual; four-wheel drive | Engine Capacity Compression ratio Maximum power Maximum torque Transmission | 3,600cc 11.3:1 285bhp @ 6,100rpm 340Nm @ 5,250rpm Six-speed manual; four-wheel drive |  |
|  | Suspension Front Independent; lower wishbones; MacPherson struts with coil springs; gas-filled double action shocks; antiroll bar Rear Independent; MacPherson struts with coil springs; gas-filled double action shocks; antiroll bar | Suspension Front Independent; light alloy lower wishbone; MacPherson struts with coil springs; gas-filled double action shock absorber; antiroll bar Rear Light alloy multi wishbone; progressive coil springs; gas-filled double action shock absorbers; antiroll bar | |  |
| | 6x16-inch alloys; 205/55/ZR16 tyres 8x16-inch alloys; 225/50/ZR16 tyres | Wheels & tyres Front Rear | 7x16-inch alloys; 205/55/ZR16 tyres 9x16-inch alloys; 245/45/ZR16 tyres | |
| | 4,250mm 1,652mm 1,450kg | Dimensions Length Width Weight | 4,245mm 1,735mm 1,370kg | |
| | 5.7 secs 162mph | Performance 0-62mph Top speed | 5.6 secs 166mph | |

“The 993 Carrera 4 silenced the critics with a completely redesigned transmission”





The 993 led the way for AWD in the 911 throughout the 90s, before production of the PSM-clad 996

The 993 represented something of a last-chance saloon for Porsche, as despite being largely re-engineered, the 964 had still lagged behind its competitors in terms of comfort and refinement, and to some critics looked out of date right from its launch. The 993 was an interim model that trialed much of the suspension and running gear that Porsche would introduce with the 996, while using a subtly but masterfully restyled 'traditional' 911 shell and a smoother, more refined evolution of the air-cooled flat six.

The four-wheel drive edition tellingly came a year after the C2 launch, silencing critics with a completely redesigned transmission. Porsche had abandoned the heavy centre differential, instead employing a viscous coupling at the front axle to connect to the torque tube from the rear, originally developed by Briton Harry Ferguson and now made by GKN. Instead of the roughly two thirds/one third torque split, the coupling sent virtually all the power to the rear axle unless a rear wheel started spinning, in which case a maximum of 40 per cent of the torque would be diverted to the front axle.

To ensure this worked, the rear axle had a 25 per cent locking factor under load and 40 per cent on overrun, as well as Porsche's development of the ABS principle, ABD. Automatic Brake Differential is effectively traction control of the rear wheels by automatic application of the brake on the side where the sensors detect the wheel is starting to spin.

The 993's all-wheel-drive system involved minimal transmission losses and a weight penalty of only 50 kilograms, meaning performance compared with the C2 was barely affected. More important was the handling: road testers were unanimous that the C4 handled with the agility of the C2, but its additional traction made it faster coming out of bends and more sure-footed in very wet or slippery conditions.

The 993 Carrera 4 showed at the second attempt that Porsche could produce a competent all-wheel-drive 911. Finally, Zuffenhausen had got it right.

The 996 was, of course, a turning point in Porsche's history. More important even than the 986 that was launched a year earlier, the 996 appalled Porsche die-hards. The wider enthusiast population was heartened, however, realising that the company couldn't go on pulling rabbits out of hats like it had for years with the original 911, and had brilliantly found a way to translate the 911 ethos into a 21st Century sports car instead. Admittedly, it was not a perfect accomplishment, and the water-cooled 24-valve flat six, an entirely new venture for Porsche, had engineering design flaws, some





of which were never totally eradicated. But if you wanted perpetuity for the sports car icon that was the 911, the 996 successfully encompassed all the traditional 911 values.

The chance to build an entirely new body enabled Porsche to re-engineer the 911 after years of having to compromise with a design dating back to the early Sixties. A far stiffer shell with a resultant positive effect on handling and refinement was just one of many advances. Under the skin, the new 911 used much of the technology that had been successfully implemented on the 993, notably the rear suspension architecture and, when the Carrera 4 version was presented in October 1998, the transmission. This differed from the 993's in having the viscous coupling as part of the front differential, leaving space on the transaxle to mount a Tiptronic gearbox for those buyers who wished to

specify an auto-box. This was a refinement that was not previously available for the four-wheel drive 911. Placing this component at the front of the car also improved weight distribution and left vital space in the transmission tunnel for coolant pipes between the engine and prow-mounted radiators.

The 996 generation would also introduce a more sophisticated level of electronics: the 996 Carrera 4 showcased Porsche Stability Management (PSM), a joint venture by Porsche and Bosch which brought together the familiar functions of ABS and traction control with electronic stability enhancement. PSM used data from the various wheel sensors to compare the 996's actual path with the driver's input, and used momentary application of individual brakes to return the car as far as possible to the desired trajectory. This made the 996 C4 less prone to understeer or oversteer

than its 993 C4 predecessor. Although PSM would only intervene in fairly extreme situations, unlike most manufacturers Porsche still gave the driver the option of disabling it.

The 996 C4 had a fractionally wider front body than the rear-drive car, which was necessary to accommodate the front axle hub carriers. Its engine capacity was increased to 3.6 litres in 2001, but Porsche announced no significant changes to the four-wheel-drive transmission.







The 996 Carrera 4 yet again proved to be an important technological advancement in the drivability and safety of the Porsche 911, thanks largely to the inception of PSM. The 1999 Carrera 4 was Porsche's first instance of using PSM on the 911 range before introducing the technology to all models worldwide from 2002. By then, the introduction of the generously specced 996 C4S would help to ensure that an all-wheel drive 911 outsold its rear-drive iteration for the first time.

By 2005, a new generation of 911 had gone into production. Essentially a thorough reskin, the attractively restyled 997 recalled much of the admired 993, incorporating numerous detail improvements. Essentially, the all-wheel-drive version, introduced a year after the rear-drive 997, used the same system as the 996 Carrera 4. However, the new all-wheel drive 911 featured inch-wider rear rims than the two-wheel drive car and noticeably wider wings to accommodate them. This, Porsche claimed, was to enhance grip and endow the Carrera 4 with "more sporty handling," but





| | 996.1 Carrera 4 (1998-2001) | Model Year | 996.2 C4S (2002-05) | |
|--|--|--|--|--|
| | 3,387cc 11.3:1 300bhp @ 6,800rpm 350Nm @ 4,600rpm Six-speed manual; four-wheel drive | Engine Capacity Compression ratio Maximum power Maximum torque Transmission | 3,596cc 11.3:1 320bhp @ 6,800rpm 370Nm @ 4,250rpm Six-speed manual; four-wheel drive | |
| | Suspension Front Independent; light alloy wishbones; MacPherson struts with coil springs; gas-filled double action shock absorbers; antiroll bar Rear Independent; multi-wishbone; progressive coil springs; gas-filled single tube shock absorbers; antiroll bar | Suspension Front Rear | Independent; light alloy wishbones; MacPherson struts with coil springs; gas-filled double action shock absorbers; antiroll bar Independent; multi-wishbone; progressive coil springs; gas-filled single-tube shock absorbers; antiroll bar | |
| | Wheels & tyres Front 7x17-inch alloys; 205/50/ZR17 tyres Rear 9x17-inch alloys; 255/40/ZR17 tyres | Wheels & tyres Front Rear | 8x18-inch alloys; 225/40/ZR18 tyres 11x18-inch alloys; 295/30/ZR18 tyres | |
| | Dimensions Length 4,430mm Width 1,765mm Weight 1,320kg | Dimensions Length Width Weight | 4,435mm 1,830mm 1,495kg | |
| | Performance 0-62mph 5.2 secs Top speed 174mph | Performance 0-62mph Top speed | 5.0 secs 175mph | |

|  | 997.1 Carrera 4S (2005-2008) | Model Year | 997.2 Carrera 4S (2008-2012) |  | |
|---|--|--|--|---|-------------------------------|
|  | 3,824cc 11.8:1 355bhp @ 6,600rpm 400Nm @ 4,600rpm Six-speed manual; four-wheel drive | Engine Capacity Compression ratio Maximum power Maximum torque Transmission | 3,800cc 12.5:1 385bhp @ 6,500rpm 420Nm @ 4,400rpm Six-speed manual; four-wheel drive |  | |
|  | Independent; wishbones; semi-trailing arms; MacPherson struts with coil springs; gas filled double-action shock absorbers; antiroll bar Independent; multi-wishbone, progressive coil springs; gas-filled single-tube shock absorbers; antiroll bar | Suspension Front Rear | Independent; wishbones; semi-trailing arms; MacPherson struts with coil springs; gas-filled double-tube shock absorbers; antiroll bar Independent; multi-wishbone; progressive coil springs; gas-filled single-tube shock absorbers; antiroll bar |  | |
| 8x19-inch alloys; 235/35/ZR19 tyres 11x19-inch alloys; 305/30/ZR19 tyres | Wheels & tyres Front Rear | 8x19-inch alloys; 235/35/ZR19 tyres 11x19-inch alloys; 305/30/ZR19 tyres | 4,427mm 1,852mm 1,550kg | Dimensions Length Width Weight | 4,435mm 1,852mm 1,555kg |
| 4.8 sec 179mph | Performance 0-62mph Top speed | 4.7 sec 185mph | | | |



Thanks

Thanks to Santa Pod raceway, Northamptonshire, for hosting the photoshoot. Featuring a magnificent quarter-mile strip and a busy, high-octane agenda of motoring events for all the family throughout the year, visit the website at www.santapod.co.uk to find out more.

Thanks also to the members of the 911UK forum and Maxie Islam in particular for helping to make the photoshoot possible. For more information and to join the forum, visit the website at www.911UK.com.



The facelifted 997 brought about far more than aesthetical changes: power from the new DFI engine was sent to both axles via new PTM technology

the 911's road holding was by now so good that you might suspect the marketing department of being behind what looked more like a styling move than a purely engineering decision. This theory was born out by the 997 Targa that was launched in 2006: the most 'lifestyle' of the 911 range was available only in four-wheel drive, which meant that it was distinguished not just by its Targa profile and roof panel, but also by those striking and increasingly popular wider rear wings. Almost two decades after the launch of original Carrera 4, the four-wheel drive 911 now had an identity that was quite distinct from the two-wheel-drive models, even outselling it in some markets.

In 2008, Porsche introduced the long-awaited successor to the original water-cooled M97 engine. Heralding the arrival of the Gen2 997, the new direct-injection unit was introduced on the 911, and Porsche took the opportunity to extend its electronically controlled PTM transmission from the Turbo to include the Carrera range. Here, the viscous coupling was replaced by a multi-plate clutch that was originally developed for the

959. This new 'Porsche Traction Management' utilises a differential for each axle, with the front powered by a connecting propshaft from the rear. The mechanism appropriated electro-magnets rather than the hydraulics once used on the 959 to work the clutch. Operation was achieved by a microprocessor that assessed data from sensors monitoring road speed, steering angle, throttle position, lateral acceleration and wheel rotation. Reacting within a tenth of a second to supply or withdraw torque from the front axle, the main improvement for the driver of the new multi-plate clutch was an improved throttle reaction time

compared with the previous viscous coupling arrangement on the axle. The system could even preload, meaning traction was readily available.

The 997-generation Carrera 4 heralded the greatest advancement yet in terms of quick and active all-wheel drive intelligence. The new clutch's greater sensitivity was said to eliminate unwanted wheelspin on the intermittently wet, gravelly or slippery surfaces that were typically encountered on mountain roads, for example. In the dry, only an owner who was adept at circuit driving could now identify whether they were piloting a two-wheel or four-wheel drive 911. ↻

CARRERA 4: THE RACER'S VIEW

"As the owner of a 991 Carrera 4S with PDK, I'm surprised by how much of a rear-wheel drive car it feels like, especially when you're actually pushing it on acceleration. It's the best of everything, and that's why Porsche build a four-wheel drive sports car. It can cope with snow and adverse conditions, yet still behaves like a proper Porsche. I've never got it to understeer. I don't drive fast on the road, though. With the amount of grip you've got, if you do drive fast and start sliding [the front end] you're normally about to have a crash."

Nick Tandy, Porsche works driver





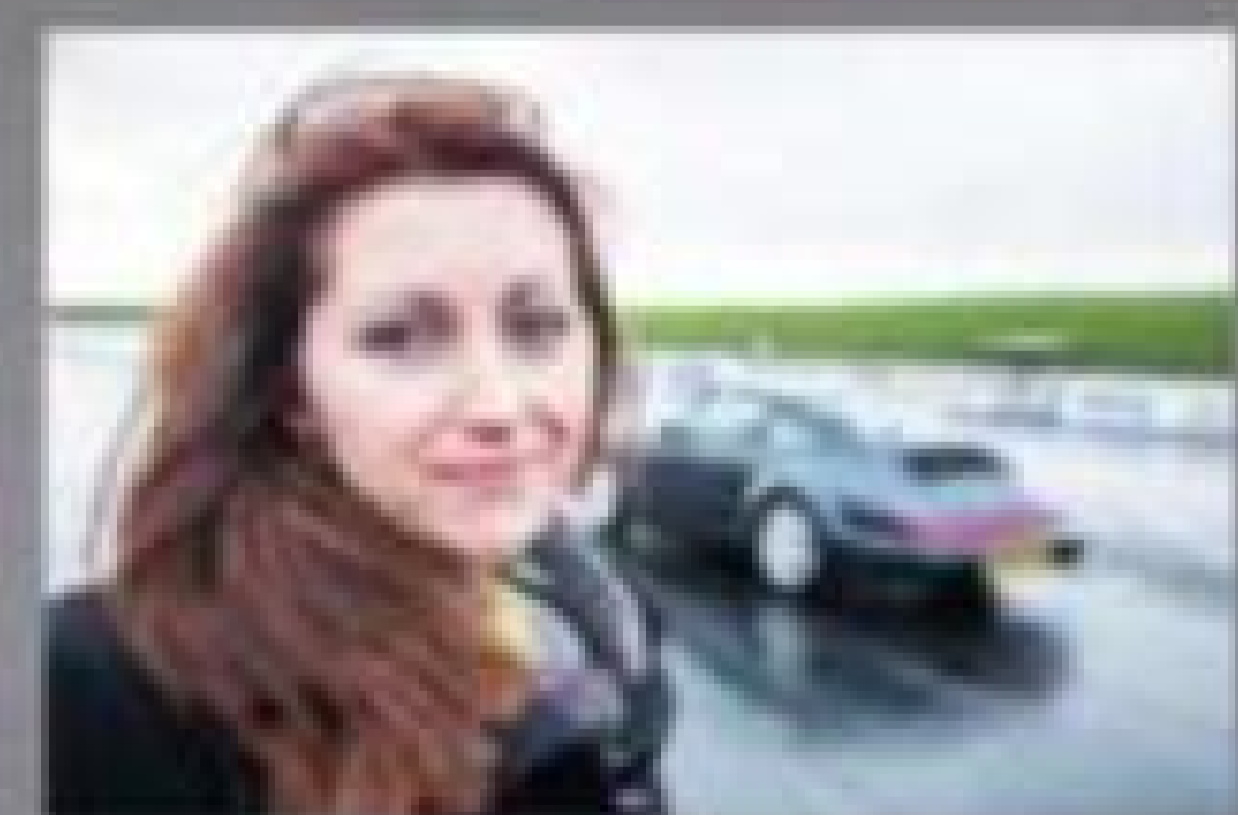
TIM JOSYLIN
993 C4

"I think if set up properly then all-wheel drive offers the best of both worlds. You forget it's four-wheel drive even when pressing on unless, of course, you really need it. When the power is transferred to the front this leads to some interesting handling, as you can start to swing the back out, only to have the front wheels suddenly pull you out of it, which can take some time to get used to! Out of the box it understeers when compared to the C2, but nothing like the earlier 964 C4, with a very different four-wheel-drive system. I fixed this with a complete suspension refresh and had it set up to specifically handle like a C2. Now, I would defy anybody to know it's four-wheel drive when driving it in normal conditions. That said, it's not a car I would want to drive every day, where it would quickly become tiring."



LEA CHURCHILL
996.1 C4

"I was looking for a 996-generation Porsche 911 and saw the advert for a 996 Carrera 4 in Zenith blue. Once I'd test-driven and checked the low mileage and full Porsche service history, I was smitten. I had no real preference between the C2 and C4, but after listening to a friend telling me the stories about his C2 with its wayward rear end, I am glad to have the C4. I find it easy to work on, and I enjoy driving in the knowledge that it has PSM (Porsche Stability Management) for extra reassurance in sticky moments. However, it is still a sports car underneath – just turn the Traction Control off if you want the extra edge!"



JEMMA HARRIS
964 C4

"I've owned rear-wheel drive cars in the past, but with this being my first 911 and their reputation for being tail-happy, I decided a C4 would make for a good place to start. The advantage the C4 has is that with the right tyres it truly is an all-weather car. Besides, I was only interested in a manual, which is the only transmission available for the 964 Carrera 4."



EDITOR'S VIEW
991 C4S

"The Carrera 4 is often sneered at by purists, but I challenge those that readily dismiss the all-wheel drive 911 to drive the car in 991 form. Here, they will see that the Carrera 4 makes for nothing less than a beautifully assured drive, where traction can be found in such abundance that it will inspire confidence in the driver to execute corners with greater commitment, pushing the performance of the 911 into echelons where it was built to shine. Make no mistake though: although driver aids, including Porsche Torque Vectoring (standard spec in 'S' form) enable the C4 to hold superb poise and balance on turn in, those with a laissez-faire attitude behind the wheel can still be found out. What this is, then, is a well-executed and engaging experience led by the driver, buoyed by a confidence from the all-wheel drive's superior handling."



RICHARD HARRYMAN 996.2 C4S

"I've had a few reasonable performance cars in my time. The main theme was front-engined, rear-wheel drive, so why the 996 Carrera 4S? When I bought the car, I had intended to use it every day and in all weathers. I also wanted my wife to drive it, and the reassurance of four-wheel drive was more of a placebo than a requirement. I will say this though: the car instils confidence. The amount of power you can feed in through a corner is phenomenal, so I wonder if I would be as brave in a two-wheel drive version, had it existed. Above all, this still feels like a rear-wheel drive car, which is absolutely crucial to me."

MAXIE ISLAM



997.1 C4S

"Previously to my four-wheel drive 997, I had a rear-wheel drive 996, my first ever Porsche. I didn't know how to drive it properly, especially when negotiating roundabouts. In a rear-wheel drive 911, you will feel the pendulum effect more than in four-wheel drive. It's harder to control the rear-wheel drive car in order to drive it quickly. This is a challenge that many 911 drivers will welcome, especially those in GT variants. Many will say that AWD takes the fun out of driving, and to a degree they're right. However, personally I enjoy entering a fast, sweeping bend, knowing that my back end won't step out like it might in a rear-wheel drive car, especially on a damp surface."

SANTA POD



JONATHAN POTT 997.2 C4S

"I have previously owned both rear-wheel and four-wheel drive cars, so in choosing a 911 I was keen to experience something different with the four-wheel drive of a Carrera 4. I'm delighted by the C4S – it's well put together and has handling capabilities that are well beyond me. For example, coming back from Goodwood recently in some horrid weather conditions, I really appreciated the added security that the four-wheel drive brings and decided that had I been travelling back in my TVR Cerbera then I would probably have been taking things a lot more carefully, or I would have had a close experience with a hedge! Aside from its additional handling capabilities over a Carrera 2S, this is the best-looking 911 in my eyes, with the red stripe across the back."



| | | |
|---------------------------|---|--|
| Model | 991 Carrera 4S |  |
| Year | (2013-) | |
| Engine | 3,800cc |  |
| Capacity | 12.5:1 | |
| Compression ratio | 400bhp @ 7,400rpm | |
| Maximum power | 440Nm @ 5,600rpm | |
| Maximum torque | Seven-speed manual/ seven-speed PDK; four-wheel drive |  |
| Transmission | | |
| Suspension | | |
| Front | Independent MacPherson struts; coil springs | |
| Rear | Independent multi-link; coil springs | |
| Wheels & tyres | | |
| Front | 8.5x20-inch Sport Techno alloys; 245/35/ZR20 tyres | |
| Rear | 11x20-inch Sport Techno alloys; 295/30/ZR20 tyres | |
| Dimensions | | |
| Length | 4,491mm | |
| Width | 1,852mm | |
| Weight | 1,450kg | |
| Performance | | |
| 0-62mph | 4.5 secs | |
| Top speed | 185mph | |

The Carrera 4's latest iteration comes in 991 guise and uses an evolution of the previous transmission with a seven-speed manual or Porsche Doppelkupplung gearbox under the command of PTM, which has been tuned to minimise losses among other things by reducing the drag of the transmission when the car is coasting to improve fuel economy. A new addition to four-wheel drive technology on the 991 is Porsche Torque Vectoring (PTV), which helps transfer power from side to side on the rear axle. PTV also slows the inner wheel when entering a corner, aiding traction on turn-in. Porsche claims the latest edition of PTM is one of the lightest and highest-performing all-wheel drive systems on the market. On the five-pod instrument panel inside, the driver can see the live changes in torque distribution via the torque distribution indicator screen, providing the greatest direct interaction between car and driver yet. As with the 997.2 Carrera 4, those who utilise 'Sport' or 'Sport Plus' options will notice PSM tolerating far more manual input from the driver before intervening.

The complexity to the 991's four-wheel drive technology means it's the most advanced system to grace the Porsche 911, a far cry from the humble beginnings of the 964, with neat yet intrusive differential adjustment dials. Perhaps the underlying engineering marvel behind the Carrera 4 is that unless you take the car to its limit in





“Porsche claims the latest PTM is one of the
highest-performing
 all-wheel drive **systems** on the market”

Turbo

It was the 911 Turbo that established Porsche's 'widowmaker' reputation. 40 years ago, the sudden arrival of boost mid corner caught many a driver unawares. But the kick of the turbocharger was such a novelty in those days that Porsche was almost able to trade on this reputation. By the Eighties, though, four-wheel drive, which could limit handling excesses, was increasingly important and a selling point, as Audi's Quattros were proving. When the 964 was planned in 1984, the range envisaged was two and four-wheel-drive naturally aspirated models and a 4x4 Turbo, the 965. Development delays with the 959 and problems compounded by lack of resources meant that the 965 Turbo never saw the light of day. The eventual Turbo 964 model was simply a blown two-wheel drive 964, initially marketed with the previous 3.3-litre Turbo engine. Porsche knew, however, that its Turbo had become an expensive dinosaur, and a much more sophisticated model was required for the Turbo to survive commercially.

The 993 Turbo was the start of the move towards a refined and marketable Porsche GT. Two turbochargers moderated boost and four-wheel drive using the viscous coupling system brought a discreet revolution in the 911 Turbo's handling. From then, all 911 Turbos would be four-wheel drive. The advent of the 996 Turbo in 2001 advanced the concept in a huge leap, the new shell allowing refinements like proper ventilation and air conditioning, as well more space and comfort. Moreover, the Tiptronic transmission option widened the 911 Turbo's appeal.

The 997 Turbo refined the genre further. It introduced PTM as already noted, and Porsche's variable vane technology modulated Turbo boost, which was thrillingly present but now entirely manageable. The latest 911 Turbo 997's 525bhp meant it almost matched the performance of the twice-as-expensive Carrera GT. Combined with the accessibility of that performance, the success of the 997T was one factor in the early demise of the Carrera GT.

The 991 Turbo, which is the first 911 Turbo to be offered without a manual gearbox option, moves the technical bar still higher, allying PTM with Porsche's torque vectoring here in PTV Plus form. Control of the front differential is now electro-hydraulic, which Porsche says enables faster and more precise control of the coupling. The result is more dynamic and accurate control of torque to the front axle, with concomitant benefits in traction and vehicle dynamics. Some idea of the work Porsche expects its PTV Plus to be performing is illustrated by the fact that the component now has its own cooling radiator.



unfavourable conditions, it's hard to differentiate its character from that of the extremely able rear-driven Carrera 2 counterpart.

In a landmark 25th year of four-wheel drive in Zuffenhausen's darling sports car, the 991 Carrera 4 represents the zenith of its evolution to all-wheel capabilities. An impressive array of technology constantly monitors the car's immediate environment, now altering components where necessary to maintain maximum possible surface adhesion quicker than the time it takes a driver to accordingly react. As a result, the 911 has never been more safe while still adhering to the exhilarating persona that the sports car is famed for. We at **Total 911** look forward to discovering just what Porsche can do with the platform over the next 25 years of evolution. **911**



The 991 C4 is the most advanced AWD 911 yet, while still retaining the character of a rear-drive variant

“Only an owner adept at circuit driving could now identify whether he was piloting a **two-wheel** or **four-wheel-drive 911**”



LA DISMANTLER

**SPECIALIZING IN
USED PORSCHE PARTS**

Leading supplier of used OEM
911, Boxster & Cayman
Engines, Wheels, Seats, Electronics,
Chassis, Transmissions, Brakes and more.



We strive to make your experience fast and friendly.

Promo code **TOTAL2014**
free t-shirt with any order!

9819 Glenoaks Blvd.
Sun Valley, CA 91352

sales@ladismantler.com

ladismantler.com

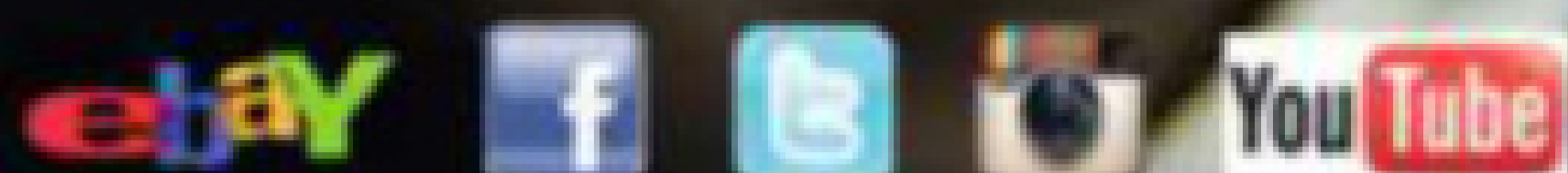
(001-1) 818 767-7243

We Ship Worldwide!

As seen on:



Find us on:



THE UNKNOWN *RS*

It sports the hallmarks of the 2.7-litre Carrera RS, but this orange sorcerer is a super-rare RSH, one of only 17 examples to leave the Zuffenhausen factory

Written by **Johnny Tipler** Photography by **Antony Fraser**





“Like the RS Sport,
the RSH was also bereft
of non-essentials”



The girls from the Cambridge University rowing club, here on Putney Embankment for a dawn race down the Thames, lower their boat into the water. Lean and slender, their eight's shell is constructed from carbon fibre, and is the lightest, fleetest vessel of its kind. We landlubbers are also here with a racer that's equally spartan: a 2.7-litre Carrera RSH.

We're all familiar with the Rennsport suffix, but the 'H' in this codicil stands for homologation, meaning it's one of just 17 RSs constructed from lightweight panels, and possesses even fewer creature comforts than the RS Sport version in order to fulfil the FIA's statutory requirements for homologation as a competition car. Pared to the bone, it's even lighter than the RS Sport, and better still, few have really heard of this oh-so special 2.7-litre RS, let alone seen one.

The Porsche racing department's on-track expertise in the late Sixties and early Seventies focused on the 908 and 917 prototypes, but when new WSC regulations made the 917 redundant in 1972, Porsche selected the FIA's production-based Groups 4 and 5 categories within the 1973 GT Championship as arenas to pitch the 911 into. Up to this point, our favourite Coupe had raced at international level as the 911R, T/R and S/T, but while these variants ran chiefly in the GT/GTS class, Porsche's new tack meant getting the incoming RS homologated – that's to say, certified as complying with the more stringent Group 4 regulations. It also required a minimum of 500

units to be built during the course of a year, since the racecar had to be based on the production model. The original RSH was deployed on Stuttgart's municipal scales, where it weighed in at a certified 960 kilograms (2,117 pounds), and a further 16 cars were assembled to the same minimal weight during the RS's two-phase build programme. When the initial RS production run was snapped up in the wake of the 1972 Paris Salon – each tagged at a lofty Dm33,000 (£14,000) – a further 500 units were approved for production, with a further Dm1,000 (£425) added to the price. And in '72, that was serious money. The final production figure for the 2.7-litre Carrera RS was 1,580 units, comprising the 17 RSH homologation specials, 1,308 of the more civilised M472 Touring version, 200 bleaker-specced M471 RS Sports – differentiating cars intended for fast touring, as opposed to potential competition work – plus 55 that represented the ultimate example of the model, the M491-designated 2.8-litre RSR.

The differences in weight are quite striking: in Touring guise, the RS weighs 1,075 kilograms (2,370 pounds), and in lightweight trim it's 100 kilograms lighter at 975 kilograms (2,150 pounds), thanks to thinner gauge steel for the roof and door panels, plus thinner Belgian-made Glaverbel glass. Like the RS Sport, the RSH is also bereft of non-essentials like underseal, sound insulation, rear seats, carpeting, the clock and glove box lid, while door liners are flat cards with pull-straps and no storage bins or map pockets. Even the front bonnet and engine lid latches are left out. Yet the RSH is

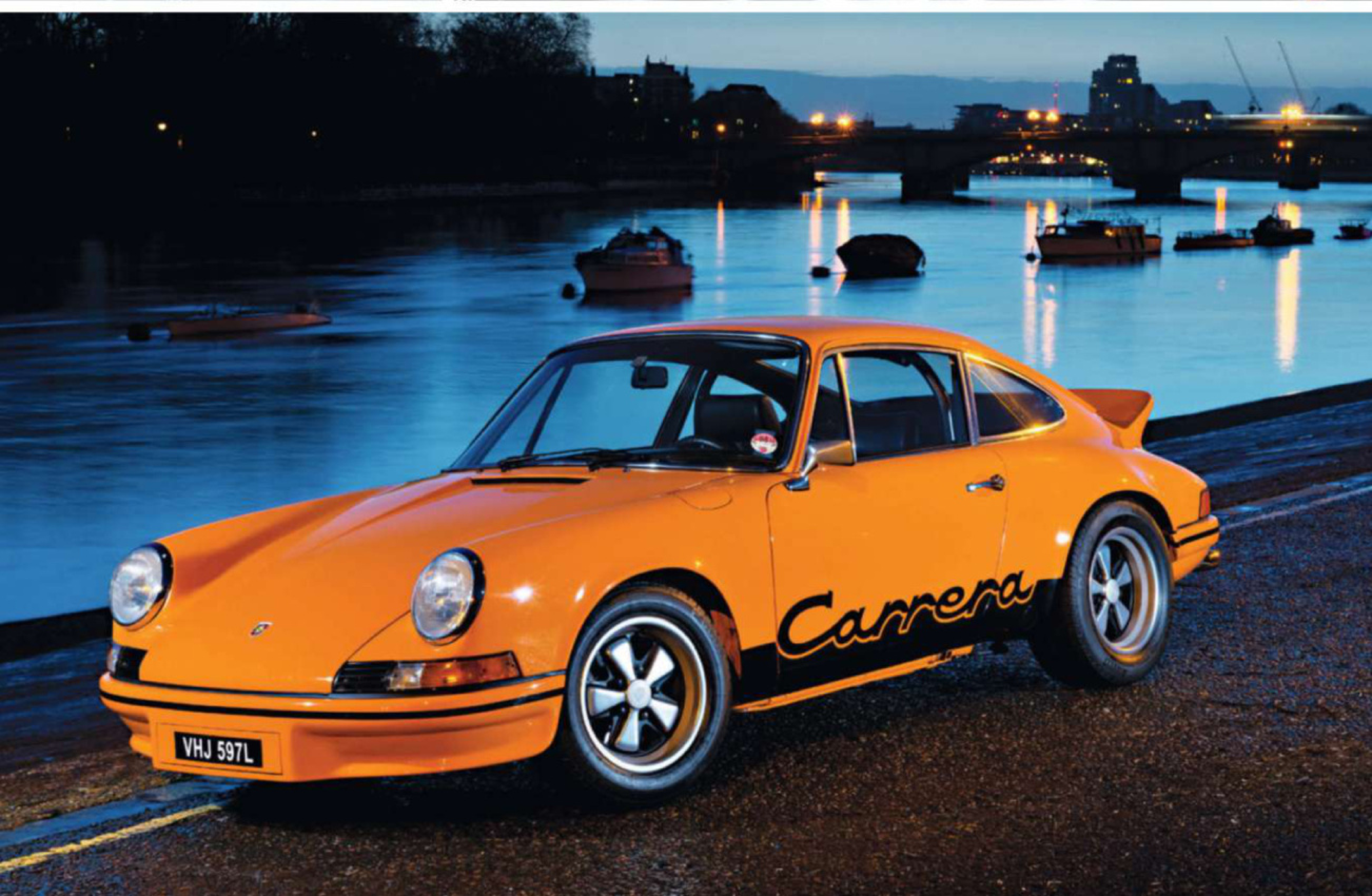
15 kilograms lighter than the Sport, and further omissions on those 17 homologation cars include door caps, a luggage compartment carpet, glove box door, passenger seat, both sun visors, coat hooks, tools and hydraulic bonnet props. They run on 15x6-inch Fuchs all round, shod with 185/70/15 tubeless tyres on the front and 215/60/15 tubed tyres on the rear, and the steering box cover is in plywood. It's equally possible that some of the 17 RSHs were 'upgraded' to RS Sport or even RS Touring standard depending on customer whims, though changes in spec were rife even in the factory, with few cars being exactly alike. Among the RS legends is the one that claims some factory race cars were fabricated entirely in lightweight panels, and that later RSs came with regular 911S panels because all the thin-gauge ones had been used up. Indeed, with the Gen2 RSs, normal-thickness Sekurit glass took over from the less substantial Glaverbel panes.

The VIN numbers of all 17 RSHs are documented, and most have a period racing history. Two were elevated to 2.8-litre RSR spec by the factory (numbers 02/17 and 03/17), but the other 15 stayed in their original RSH form. There are ten white cars, two light yellow, two Viper green, two light ivory and just one in Signal orange, which just happens to be our feature car.

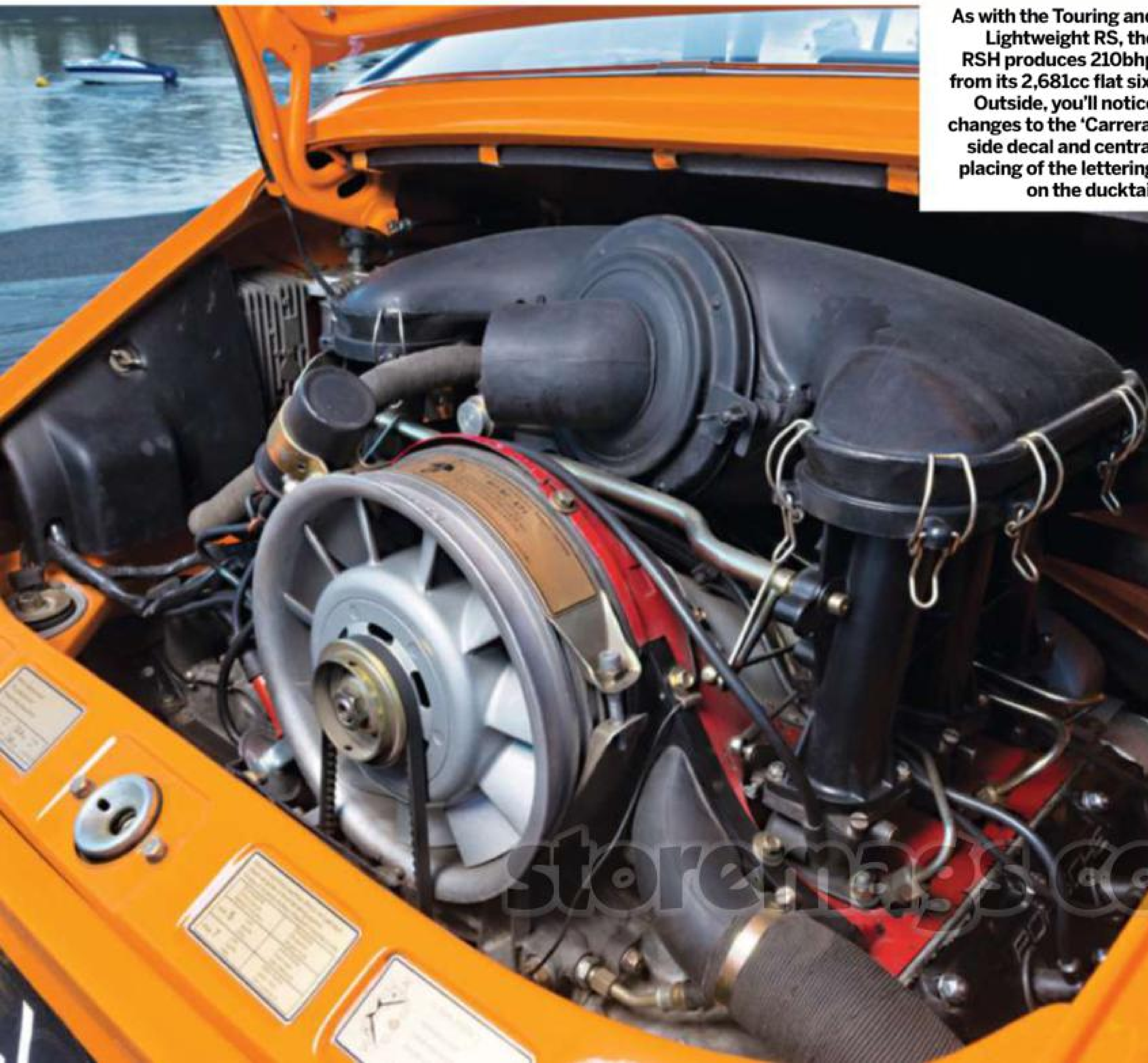
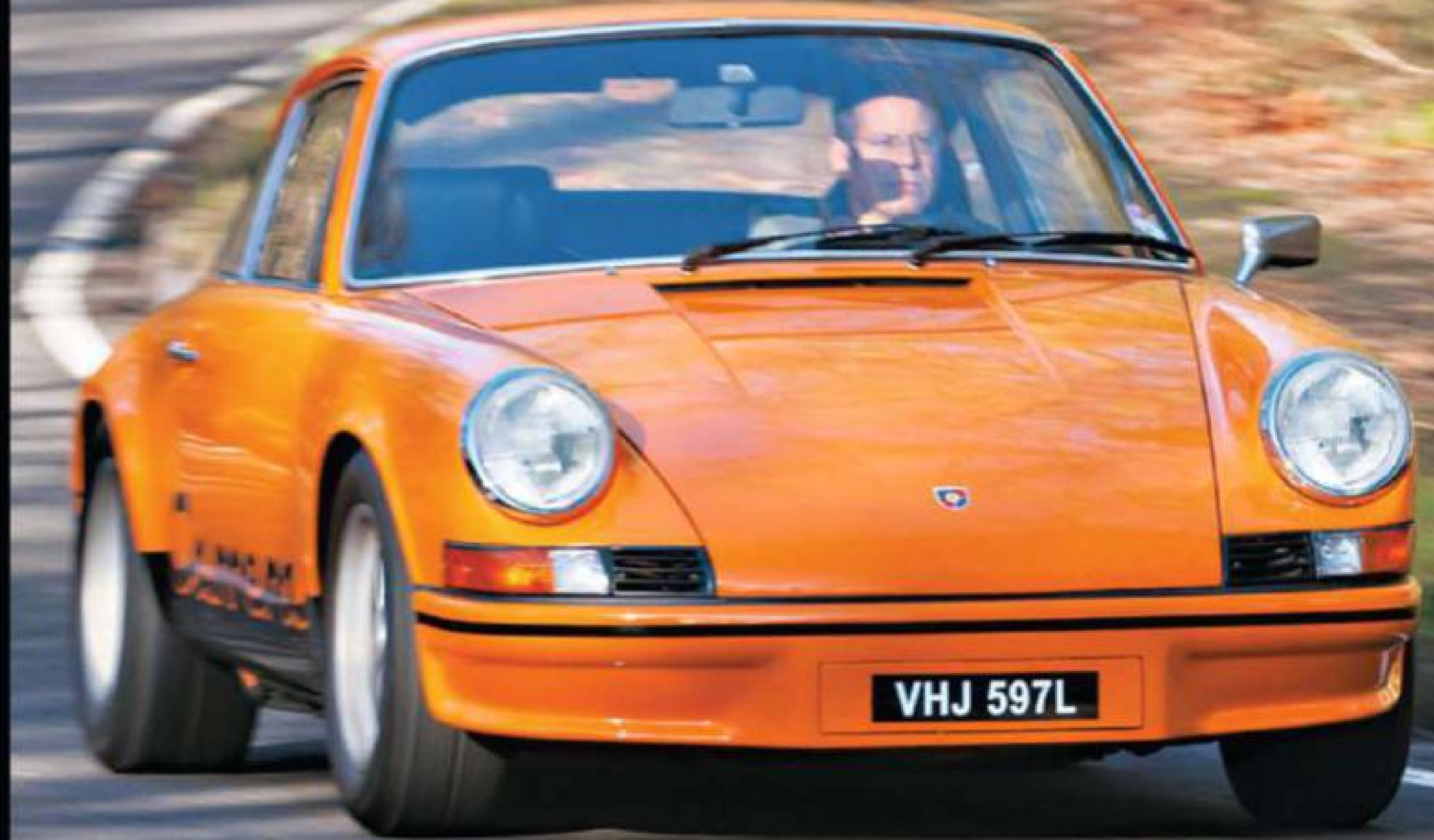
It belongs to London-based intercontinental art dealer and classic 911 connoisseur Kenny Schachter, an ebullient New Yorker who once displayed a pair of 2.4s in his Hoxton Square-based Rove Gallery, and now keeps the RSH, his pride and joy, in his Fulham office. “I was born a Porsche fanatic,”



Everything about the RSH is pared back, including the sound insulation, rear seats, carpets, clock and even the glove box lid

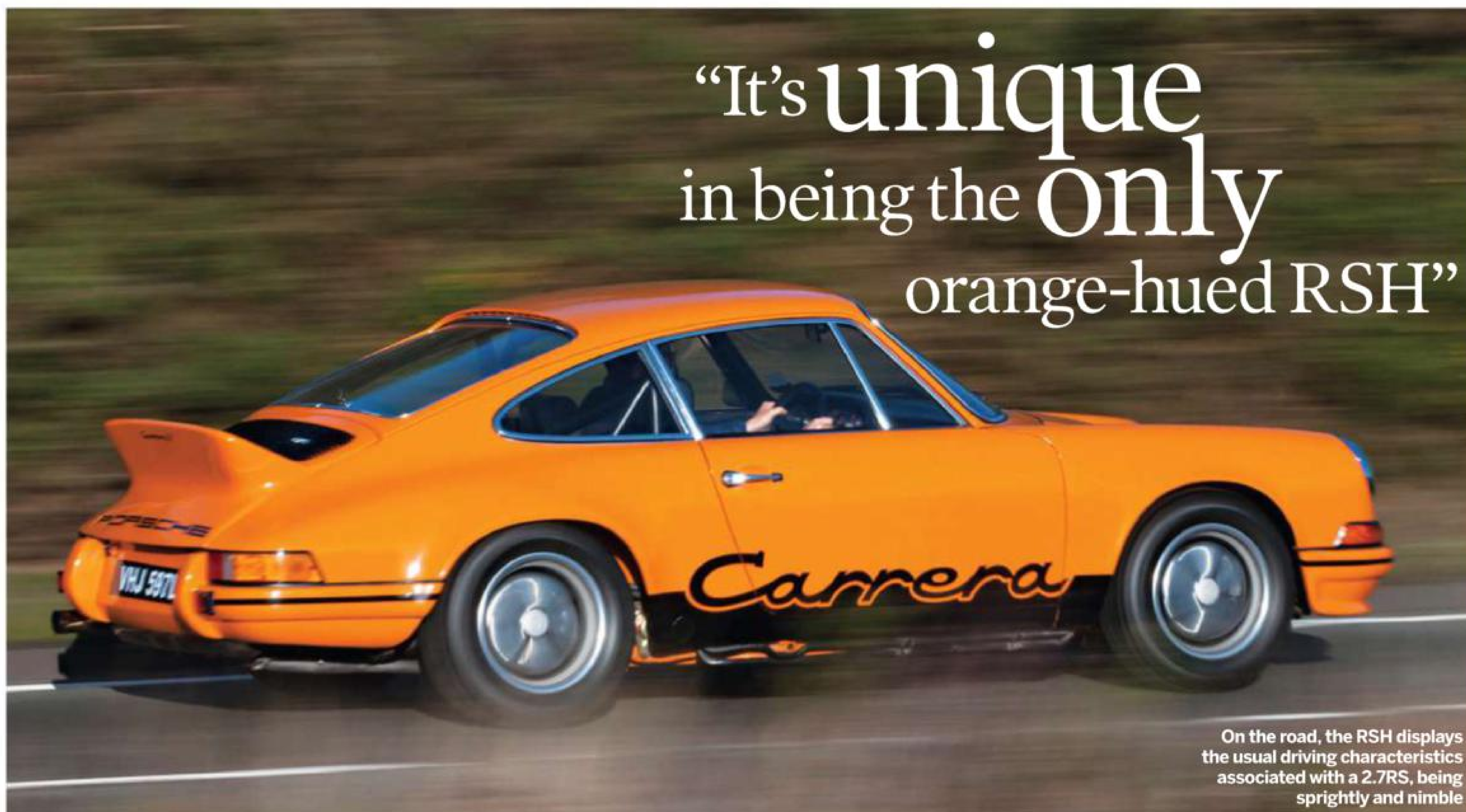


| Model Year | 2.7 Carrera RSH (1972) |
|---------------------------------|---|
| Engine Capacity | 2,687cc |
| Compression ratio | 8.5:1 |
| Maximum power | 210bhp @ 6,300rpm |
| Maximum torque | 255Nm @ 5,100rpm |
| Transmission | 915/08 five-speed |
| Engine modifications | Nikasil-coated aluminium cylinders |
| Suspension Front | Independent; torsion bars; Bilstein dampers; 18mm antiroll bar |
| Rear | Semi-trailing arms; torsion bars; Bilstein dampers; 19mm antiroll bar |
| Wheels & tyres Front | 6x15-inch Fuchs alloys, Pirelli CN36 185/70/VR15 |
| Rear | 7x15-inch Fuchs alloys, Pirelli CN36 215/60/VR15 |
| Dimensions Length | 4,147mm |
| Width | 1,610mm |
| Weight | 960kg |
| Performance 0-62mph | 5.8 secs |
| Top speed | 152mph |



As with the Touring and Lightweight RS, the RSH produces 210bhp from its 2,681cc flat six. Outside, you'll notice changes to the 'Carrera' side decal and central placing of the lettering on the ducktail





On the road, the RSH displays the usual driving characteristics associated with a 2.7RS, being sprightly and nimble

he laughs. "I was hooked when I was about 13, when the first 930 Turbo came out." Kenny bought the 2.7-litre RSH number 14 in Monaco in 2012, and although he has no plans to compete with it, it's still very much a high-days-and-holidays car; Kenny's not one to mollycoddle his 911s. Its homologation number is 14/17, VIN number 1429, chassis number 9113601429, engine number 663 1397. It's unique in being the only orange-hued RSH, and Kenny concedes that the bodywork has had a little TLC, though nothing major: "It's an all-original panel car, and somebody has cleaned it up a bit, because it ran in long-distance rallies and had quite an aggressive racing life for a while, but it's pretty much what it would have looked like in period."

The Carrera logos on the car's flanks are prototype graphics, reflecting the rawness of the project, and that Porsche was still feeling its way with the inception of the model in 1972. "I believe that's the sticker they used for prototype cars before they settled on the one that's on the production cars," says Kenny. You won't find any reference to the RSH in Jürgen Barth's authoritative tomes. In fact, Kenny is slightly cynical about the 'homologation' tag: "I think the RSH label was stuck on by Konradsheim in his RS book (the author also owned RSH number 17) because they were basically just stripped-out cars, and then it all becomes about rarity and marketing; it's not any better or worse than any other of these great cars."

RSH number 14 was delivered new to Porsche's Frankfurt main dealer Otto Glöckler Sportwagen

GmbH, the business founded by early Fifties Porsche racer and specials builder Walter Glöckler. The race history of RSH 14 lasted just three years, but included at least two important international events. The Glöckler dealership sold it in June 1973 to Frenchman Jacques Diebolt (now 85-years old), and he immediately entered it for the Tour de France for himself and J-P Vast-Coulon. The pair also did the Rallye Route du Nord and Rallye Jeanne d'Arc in the same year, and the 7ème Rallye de Lozère in 1974. Then, RSH 14 was sold to Belgian Bernard Mordacq and, amazingly, he and co-pilot Jean-Luc Bret won the 1975 24-Heures de Ypres, a round of the European Rally Championship, which was almost certainly this particular RSH's finest hour.

From 1980 to 1990 it belonged to Philippe Derouen, and was treated to a light restoration in 1992 when it passed on to Kenny's source in Monte Carlo. "I had never heard of the RSH before it came to my attention," muses Kenny, "but that's what I love about cars - which they share with art - that it's a constant educational process and you are always learning more about the cars and their history, and that adds a nice dimension to it."

In terms of art, Kenny deals in everything from Picasso to Christopher Wool, and rattles off a name-check of some of the young generation of up-and-coming art stars he rubs shoulders with, such as Eddie Peake, Alex Israel, Wade Guyton, Sterling Ruby, Tauba Auerbach and the more established Rudolf Stingel. "And especially

Sarah Lucas," he goes. "I love her work, and she is wildly undervalued!"

The art business also ensures Kenny has strong views about the car market. "The most expensive cars sold at auctions tend to be Ferraris, and there is not one Ferrari that really defines the Seventies; right now, the 250GTO holds the record for the most expensive car ever sold, but when you think of the Seventies, the 911 is really the most iconic model, and I feel that Porsches are very much under-appreciated and under-valued in relation to Ferrari, because they are much more ➔



2.7 Carrera RS production figures

- 1,308 units M472 Touring
- 200 units M471 RS Sport (lightweight)
- 17 units RSH homologation special
- 55 units M491 2.8-litre RSR racecars

Total: 1,580 units



usable, tractable and reliable, and they can be used very easily on a daily basis. But as people that were in their teens in the Seventies come into money, I think the 911 will be more sought after, partly because the RSR defines that era due to its racing history in endurance events like Le Mans and the Targa Florio.”

Cars are for driving as far as Kenny's concerned, and he's critical of hoarders. “The money thing makes RSs alluring to investors, but it almost ruins the relationship when things become too precious. In a way, that very much parallels the art world, because when paintings get so expensive, people lose sight of what they are looking at, and the herd mentality takes over; people are no longer interested in the image, the value becomes the essence of the thing, and that's depressing.”

Given his discerning eye, it's no surprise that Kenny also views the 911 as a work of art, having owned as many as 30 of them: “I love classic 911s, and they come and go. I also have a 3.2-litre 1988 Targa now; they are such a joy and so easy to live with, and they function so well. For me it's mostly

about the shape; it's the most simplistic, elegant and effective design. The lines of the car are pure and perfect, and it's such a small car; perfect for a city, it's such a small footprint, so it's absolutely the most exquisite thing. I always come to it as a piece of industrial design first and foremost, and I don't think there is anything parallel in the motor industry, it's so evocative, and the wild colours of Porsche are so fabulous. I don't really consider it in the traditional notion of it being a car: for me, it's somewhere between a painting, a sculpture and a piece of furniture. When you're driving a car you don't actually see it, and then when you park it you leave it behind, but for me it's such a visual experience, so that's why it lives in my office: so I can absolutely adore it.”

Our towpath eulogy is interrupted as more and more crews arrive to heft their pencil-thin craft into the black waters. It's around 7.30am, and a rosy-fingered dawn is beginning to silhouette Putney Bridge, but it's amazing how many scullers are already gliding by. Mostly girls, too: their dedication (insomnia?) almost matches our own.

Post-rush hour, and we're done here. We fire up the 911s – his and mine – for the dash out of the suburbs to clearer country roads. Our assignation is consummated in Surrey's sunny lanes. The RSH is a trifle noisier than other 2.7-litre RSs I've driven, shrill blare from the revvy flat-six penetrating the undressed cabin, but its on-road behaviour is just the same: it's sprightly, with delicate steering, a light touch guiding the gearstick from notch to notch. It's compliant, nifty, and plays no tricks as I tip it through the bends, and it's nimble and unfazed over the undulating blacktop cambers, perched on its narrow tyres and serving up rushes of speed whenever pressed. It oozes attitude at a standstill, but on the move it really comes alive. It's a saucy seductress at every level, this orange squasher.

Kenny feels the same: “It's the greatest car I have ever had, for sure. It's not technically different from the other ones, but it is the essence of the 911 in its most drivable and usable form, and I feel lucky to have one.” Considering the car's exceptional exclusivity and tag as the unknown RS, we can only agree. **911**

The Glöckler Porsche

Our 2.7-litre RSH was delivered to the Otto Glöckler GmbH dealership in Frankfurt in 1973, but the firm's antecedents with sporting Porsches go way back. A successful bike racer, Walter Glöckler's (1908-88) dealership took on the VW and Porsche concessions after World War II, and in 1950 his workshop manager Hermann Ramelow built a mid-engined special for Glöckler to race, powered by the new 1.0-litre Porsche flat-four motor and fuelled with alcohol to give 62bhp. Rear suspension aped the Porsche 356 roadster, and the tubular ladder-frame chassis featured a central driving position, clad with lightweight aluminum bodywork fabricated by Frankfurt coach-builders CH Weidenhausen and looking somewhat like a 356 Spyder with full belly-pan and fared-in back end. Glöckler won the 1950

German 1,100cc sports car championship with it, prompting collaboration with Porsche, which included supplying its latest engines and badging the Glöckler as a Porsche. Glöckler won again in 1951, breaking 1.5-litre speed and distance records at Montlhéry, Paris, when the car was fitted with an aerodynamic roof, while his brother Helm raced it successfully in 1952.

A second Glöckler-Porsche was raced extensively in the USA by importer Max Hoffman, and a third car with a 1.5-litre flat four and modified rear suspension came out in 1952, recently restored in the USA. But although an inspiration for Porsche, Glöckler was sidelined when a year later, the Zuffenhausen factory began building its own 550 Spyder, casting the die for an unsurpassed line-up of prototypes and sport racers.



StoreMags

RESTORATION



Design INC.

World leaders in classic Porsche® Automobile panels



Want the best for your classic?
Work with the best in the industry.



Save time and money on your restoration.
Watch our Free YouTube "How To..." Video Series Now!

<http://goo.gl/fUI59>



24 Hayes Avenue, Guelph ON • TEL: 519-836-3555 • FAX: 519-836-3577
www.Restoration-Design.com

Total 911 SUBSCRIPTION VOUCHER

THE PORSCHE MAGAZINE

YES I would like to subscribe to Total 911
YOUR DETAILS

Title _____ First name _____
 Surname _____
 Address _____

 Postcode _____ Country _____
 Telephone number _____
 Mobile number _____
 Email address _____
 Please complete your email address to receive news and special offers from us

DIRECT DEBIT PAYMENT

UK Direct Debit Payment
 I will pay only £13.50 for 6 issues (saving 50%*)

| | | | | | |
|---|--|--|--|--|--|
|  | | Instruction to your Bank or Building Society to pay by Direct Debit | |  | |
| <small>Please fill in the form and send it to: Total 911 Subscriptions Dept, 800 Guillat Avenue, Kent Science Park, Sittingbourne ME9 8GU</small> | | | | | |
| <small>Name and full postal address of your Bank or Building Society</small> To: The Manager _____ Bank/Building Society _____ Address _____ _____ Postcode _____ | | <small>Originator's Identification Number</small> 5 0 1 8 8 4 | | | |
| <small>Name(s) of account holder(s)</small> _____ <small>Branch sort code</small> _____ <small>Bank/Building Society account number</small> _____ | | <small>Reference Number</small> _____ <small>Instructions to your Bank or Building Society</small> 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. Signature(s) _____ Date _____ | | | |
| <small>Banks and Building Societies may not accept Direct Debit instructions for some types of account</small> | | | | | |

PAYMENT DETAILS

YOUR EXCLUSIVE READER PRICE, ONE YEAR (13 ISSUES)

UK: £52.65 (Save 10%) **Europe: £60.00**
 World: £70.00

Cheque

I enclose a cheque for £ _____
 (made payable to Imagine Publishing Ltd)

Credit/Debit Card

Visa MasterCard Amex Maestro
 Card number _____ Expiry date _____

Issue number (if Maestro)

Signed _____

Date _____

Code: PAL141Q

Please tick if you do not wish to receive any promotional material from Imagine Publishing Ltd by post by telephone via 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 via email . Terms & conditions: Pricing will revert to our standard offer of £18.90 every 6 issues on the third payment made. Subscribers can cancel this subscription at any time. New subscriptions will start from the next available issue. Offer code PAL141Q must be quoted to receive this special subscription price. Details of the direct debit guarantee are available on request. Offer expires 30th June 2014. Imagine Publishing reserves the right to limit this type of offer to one per household.

I would like my subscription to start from issue: _____

Return this order form to:

Total 911 Subscriptions Department, 800 Guillat Avenue, Kent Science Park, Sittingbourne, ME9 8GU or email it to 911subs@servicehelpline.co.uk

You will be able to view your subscription details online at www.imaginesubs.co.uk

HURRY ORDER NOW



ANNUAL COLLECTION OF 3.0-LITRE 930s REVEALED
 HOMOLOGATION RS
 Driven: the 960kg 2.7 RS that kick-started the Rennsport legacy

911
 THE PORSCHE MAGAZINE www.total911.com

RISE OF THE CARRERA 4
 • Why the Carrera 4 is the all-conquering 911 after 25 years
 • Evolution of 4WD technology examined 964-991

997 GT3 GUIDE
 Your ultimate buyers' resource for the 415bhp, 3.6-litre Mezger-engined marvel

TURBO RIVAL
 Can supercharging offer better performance than the 911's factory Turbo variant?

PLUS
 Harv Lapin interview
 New Nürburgring
 Technical data for every 911

FANTASTIC SUBSCRIBER OFFER

Start a Direct Debit today and for just £13.50 get the next six issues – saving over £27 a year

- Pay only £2.25 for every future issue – a 50% saving on the store price
- Free UK delivery to your door
- Never miss an issue
- Money-back guarantee

US READERS

Get the next 13 issues for \$78 and SAVE 40% – that's just \$6 an issue. Dial toll-free on 1-800-428-3003 or subscribe online at www.imsnews.com/total911 and quote code IMST141Q



Subscribe to Total 911



GO DIGITAL!

GREAT DIGITAL SUBSCRIPTION OFFERS AVAILABLE AT:

IMAGINESUBS.CO.UK
FOR ANDROID, MAC, PC,
IPHONE & IPAD

and save 50%

THREE EASY WAYS TO SUBSCRIBE

1. Online

www.imaginesubs.co.uk/t9e

And enter PAL141Q

2. Telephone

0844 249 0463

And quote PAL141Q

3. Post or email

Please complete and post the form to
Total 911 Subscriptions Department
800 Guillat Avenue
Kent Science Park
Sittingbourne
ME9 8GU



Or alternatively, you can scan and email the form to
911subs@servicehelpline.co.uk





TURBO RIVAL

Traditionally, Porsche has opted for turbocharging when it comes to providing its flat-six engines with forced induction. But could there be an aftermarket alternative?

Written by **Josh Barnett** Photography by **Alisdair Cusick**

Each iteration of the 911's iconic five-dial cluster has seen the rev counter mounted centrally because, in Zuffenhausen's eyes, it's not about speed; it's about the emotions and sensations you experience while driving.

Of course, the engine plays a large role in getting your 911 there, and since 1974 Porsche has been using two distinctly different styles of propulsion: natural aspiration and turbocharging.

Ignoring the fact that you can run internal combustion engines either rich or lean, the ideal air-to-fuel ratio for a petrol engine is 14.7:1. This is known as a stoichiometric ratio, providing chemically perfect combustion in which all the fuel is burnt after being ignited by the spark plug. Because of this, it follows that the more air you can induct into the cylinders, the more fuel you inject, resulting in a larger 'bang' and more power.

In a standard naturally aspirated engine, air is drawn into the cylinder thanks to the vacuum created by the piston's downward movement in the induction phase, providing the cylinder with air that is never greater than atmospheric pressure. At high altitudes or on hot days, less air reaches the cylinder due to the lower air density, so it requires less fuel to maintain an adequate air-fuel mixture. As a result, power output is reduced.

One way to overcome this is to increase the volume of the engine, allowing more air into the cylinders. However, this is not an efficient solution, which is where turbocharging steps in. Rather than expand the volume of the cylinders, a turbocharger increases the density of the air entering them.

Bolted to the exhaust manifold, the flow of exhaust gases spin the turbine at colossal speeds. Connected to the turbine via a shaft is an air compressor, located between the air filter and

intake manifold. This acts as a centrifugal pump, sucking air in at its centre before spitting it out at a higher velocity (and, as such, a higher pressure).

As this air is at a higher pressure, it is also at a higher temperature. Therefore, before it enters the cylinders, it is cooled through an intercooler. This returns the air to its true boost pressure by increasing its density. The greater air density allows more fuel to be mixed in, in the process creating a larger bang during combustion.

When people talk of a turbocharger's boost level, they mean the extra pressure of the air that is forced into the engine's cylinders. Atmospheric pressure at sea level is 1.014 bar (14.7psi), meaning a turbocharger running 0.5 bar of boost provides nearly 50 per cent more air than a naturally aspirated powerplant of the same capacity. The gains in power aren't as high, but power gains are normally between 30 and 40 per cent. ➔



“It’s not about speed; it’s about the
emotions and **sensations**
 you experience while driving”



| | 996 Carrera (2003) | Model Year | 996 Turbo (2003) | |
|--|---|---|---|--|
| | 3,596cc with Vortech V-3 Si supercharger and air-to- water intercooler 446bhp @ 6,826rpm 466Nm @ 6,788rpm | Engine Capacity Maximum power Maximum torque | 3,600cc 420bhp @ 6,000rpm 560Nm @ 2,700 to 4,600rpm | |
| | Independent; MacPherson strut with coil springs Independent; multi-link with coil springs | Suspension Front Rear | Independent; MacPherson struts Independent; multi-link with coil springs | |
| | 8x18-inch alloys; 225/40/R18 tyres 11x18-inch alloys; 285/30/R18 tyres | Wheels & tyres Front Rear | 8x18-inch alloys; 225/40/R18 tyres 11x18-inch alloys; 295/30/R18 tyres | |
| | 996 Turbo 330mm discs 996 Turbo 330mm discs | Brakes Front Rear | factory 330mm discs factory 330mm discs | |
| | 4,430mm 1,765mm 1,425kg | Dimensions Length Width Weight | 4,435mm 1,830mm 1,540kg | |
| | Not tested Not tested | Performance 0-62mph Top speed | 4.2 secs 189mph | |



Porsche started exploiting these gains in 1972 with their 917/10 Can-Am racer. Fitted with a 4.5-litre twin-turbocharged flat 12, the season started with the car turning out around 850bhp. Just two years later, this technology had filtered down to the 911 with the introduction of the Turbo.

Piloting a 911 Turbo in 996 guise, starting up introduces that famous flat-six sound, albeit muted by the twin turbochargers. Pulling away leads the engine note to overcome the turbo whistle, and you'd be forgiven for thinking you were driving a standard Carrera until you look in one of the wing mirrors to be greeted by a large intercooler intake.

At low speeds, the engine is sedate. Below 2,500rpm the digital boost gauge fails to pick up a reading, as the engine is almost solely reliant on atmospheric pressure to fill its cylinders. It's manageable, but I know it has more to give.

Progressing onto some gently twisting A-roads, there is a chance to stretch the engine's proverbial legs. The last Turbo I drove was the 991 Turbo S, leading me to expect a similarly immediate kick in the kidneys. Instead, I am greeted by an almost silent pause as the turbochargers attempt to catch up with my liberal third-gear throttle application.

Without Variable Turbine Geometry and the other electronic wizardry bestowed upon the 991, the 996's initial acceleration in the lower gears feels lethargic. However, after a few tenths of a second the turbines have spooled up and the boost level snaps to 0.5 bar as the rev counter passes 4,000.

Now I get the famous 911 Turbo thrust, as it feels like my body stays still and the whole car tries to race passed my physical location. The seat is firmly implanted in my back, and I quickly reach for fourth gear. If speed limits allowed, I have no doubt that fifth gear would be coming over the horizon in a matter of moments but, alas, I am forced to back off.

On the motorway, the Turbo comes into its own, highlighting its place as Porsche's long-distance conqueror. Contrasting the seeming lack of immediate torque on the country roads in fifth and sixth gears, the Turbo's ability to get up and go is impressive. What's more, it does so with less of the drama than in lower gears. Mashing the accelerator brings an increase in speed. The faster you go, the quicker it seems to pick up velocity as the boost increases, forcing more air into the cylinders.

While the 911 Turbo excels on these roads, for me the delay in power delivery in second, third and

fourth gears means the 996 Turbo's engine fails to truly excite. Its turbo lag isn't as characterful as a 930, nor is it non-existent. Instead, it simply stunts my enjoyment of the car's acceleration.

Turbo lag is a product of a turbocharger's power source. As it needs an adequate flow of exhaust gas, the turbine that drives the air compressor only starts to come 'on boost' once the engine's crank speed reaches a certain level. This takes time, manifesting as a delay before the air is forced into cylinders at a greater-than-atmospheric pressure.

Large turbochargers are particularly prone to lag, as their mass requires more effort to accelerate. Therefore, many manufacturers twin-charge their engines, like Porsche's 996. However, while some engines have two turbos mounted in series to reduce drag, the 3.6-litre unit in the 996 has turbochargers in series, so both operate at the same time. This means that while there is less lag than a large single turbocharger, there is still some delay in power delivery. If this puts you off, there is an alternative forced-induction method that does away with this predicament: supercharging.

A supercharger is designed to do the same job as a turbocharger in forcing air into the cylinders



at a pressure greater than atmospheric, thereby improving the engine's volumetric efficiency. However, the mechanics behind it are different. While high-velocity exhaust gas drives a turbocharger's turbine, a supercharger is driven by the engine's crankshaft via a pulley. The result is a device that doesn't have the lag of a turbocharger, as drive to a supercharger's air compressor is instantaneous. With two different styles of 'blower' available, though, there are some differences.

Colin Belton, founder of Ninemeister and an expert on supercharging Porsche engines, explains the difference: "There's the positive displacement blower, which is like a pump that is either at the same capacity as the engine or larger," he explains. "You need about 40-50bhp to drive a positive displacement blower running flat out, though.

"With this type of blower, because it pushes air into the engine (spinning at a near-constant speed), you get a very flat torque curve. As power is just a function of torque, you end up with a straight-line graph that keeps going up the more you rev the engine, until heat, friction and windage take effect."

Belton concludes that a positive displacement supercharger will, because of its flat torque

curve, produce an engine that drives like a "big, fat V8 right the way through the rev band." This increased torque, coupled with the responsiveness of a blower, sounds appealing. However, the 996 Carrera 2 Cabriolet that I am about to start up isn't fitted with a positive displacement supercharger. Instead, this 2003 'sleeper' houses something a bit more modern.

Connected to the 3.6-litre engine of this 911 is a centrifugal supercharger. While still belt-driven by the engine, centrifugal superchargers operate in a similar way to a turbocharger, as Belton explains. "At low rpm, they don't boost a lot. Boost and rpm is almost a linear relationship: at 1,000rpm we got 1psi of boost, at 2,000rpm we got 2psi. This continued all the way up to 7,000rpm," says Colin, referring to Ninemeister's 968 supercharger kit.

As the speed of a centrifugal turbine increases with the engine speed, it 'fills in' the torque curve. As standard naturally aspirated engines speed up they often struggle to breathe, reducing their volumetric efficiency. By increasing the boost pressure, a centrifugal blower can make up for the lack of induction pressure at high rpm. So what does it feel like on the road? ➔



The thrills at high speeds in the 911 Turbo have long proved popular with enthusiasts...



...however, the supercharged 911 benefits from an abundance of torque low down the rev range



At idle, the idiosyncratic whine of the supercharger is evident. Gently brush the throttle, and below 2,000rpm you know this is no standard Gen2 996 Carrera 2. With a near-instantaneous response, the car's acceleration is effortless. The 996 'Supercharged' can pick up speed without you really noticing. As Colin explained, supercharged engines tend to be smoother, and this is certainly the case here.

The car's owner, Vinny Canakiah, describes the accelerative capacity as akin to take-off in a passenger jet, and he's not far off. Despite the boost being linked to the engine speed, low-down torque is abundant, and it only gets better in the mid-range.

While the initial acceleration outstrips the Turbo, the supercharged 996 doesn't feel as fast. With the dyno sheet suggesting it has more power at the crank than the standard 996 Turbo (446bhp versus 420bhp), I think the difference is psychological. The kick provided by the Turbo 'on boost' tricks you into feeling acceleration, while the supercharged 911 is more sedate. In reality, they are probably both as fast, but the Turbo is more exciting.

A lack of supercharger whistle in the higher end reduces the drama further. Above 2,000rpm, the raspy engine overthrows any whine from the blower, with the 3,000rpm mark starting a full-bore whole from the Carrera's flat six. While it's more pleasing that the timbre of the Turbo is muted – achieved by covering the key feature of the car's powerplant – the sound lacks something.

I can see the merits of the supercharger, though. While the Turbo excels at continent-munching highway miles, the abundance of instant low-down torque means this 996 Carrera offers the potential for some lower-speed thrills. Vinny usually drives it in central London and, with the boost feeling apparent as low as 30-50mph, you don't have to break any speed limits to enjoy the forced-induction push. For the city streets, it provides the ideal legal high where, in a similar environment, the Turbo would feel lethargic.

Both cars have their merits. However, while a 996 Carrera could be bought and supercharged for less than the cost of a 996 Turbo, Belton wouldn't go down that path. "Just buy a Turbo," he states. "You're getting a fully factory-built conversion with factory reliability." His reasons are cast from experience. While the 996 Turbo was designed to include intercoolers, converting cars to supercharged induction presents a problem: how do you package an effective intercooler? Without this, the charge entering the cylinders can get too hot, leading to power loss at high speeds and negating the purpose of a supercharger. What's more, because it is driven off the engine, a supercharger can place greater load on the connecting rods and piston rings, leading to increased wear.

While I respect those who supercharge their 911, I wouldn't want to own one myself. But then again, I wouldn't want a Turbo either. In any case, what would the world be without variety? **911**

Installing a supercharger to a 911

If you are searching for more performance from your 996 Carrera, supercharging is not as complex as you might think, as Chris Stewart (founder of Regal Autosport) explains. "If you're thorough then you should be fine," Stewart says. If you choose Regal Autosport to fit your supercharger, thorough is what you'll get.

"Everything comes off the back of the car: the bumper, the lights," explains Chris. "There's a bracket where the normal air box goes; the supercharger sits in its place. To the side of that, the 'charger blows through a water cooler." To aid with cooling the charged air, the VF Engineering kit includes a GT2 radiator to fit at the front of the car. In partnership with a Bosch water pump, cooled water is pumped to the reservoir tanks before heading to the intercooler.

Costing £8,545 for the kit and fitment, Regal Autosport can do the physical installation in around ten hours. However, before the kit is even ordered, Stewart's company do an engine health check (including dyno test and compression checks) to make sure the supercharger is being fitted to a healthy engine. "It's just prudent to do it," explains Chris.

Once the kit is fitted, Regal don't stop until the last bolt is done up. "We normally have the car in for about a week," says Stewart. "We run it on the dyno, then road test it, as well as do some hot and cold starts to make sure it idles nicely. It requires a complete recalibration of the engine control unit thanks to the different injectors and MAF curve." The gearbox also plays a part, as manual and Tiptronic cars require different ECU tunes.

However, once done, the car is noticeably different. And if you want to return to stock at a later date, the absence of modifications to mounting points and engine internals means the process is relatively uncomplicated.

"low-down torque is abundant with the supercharger"

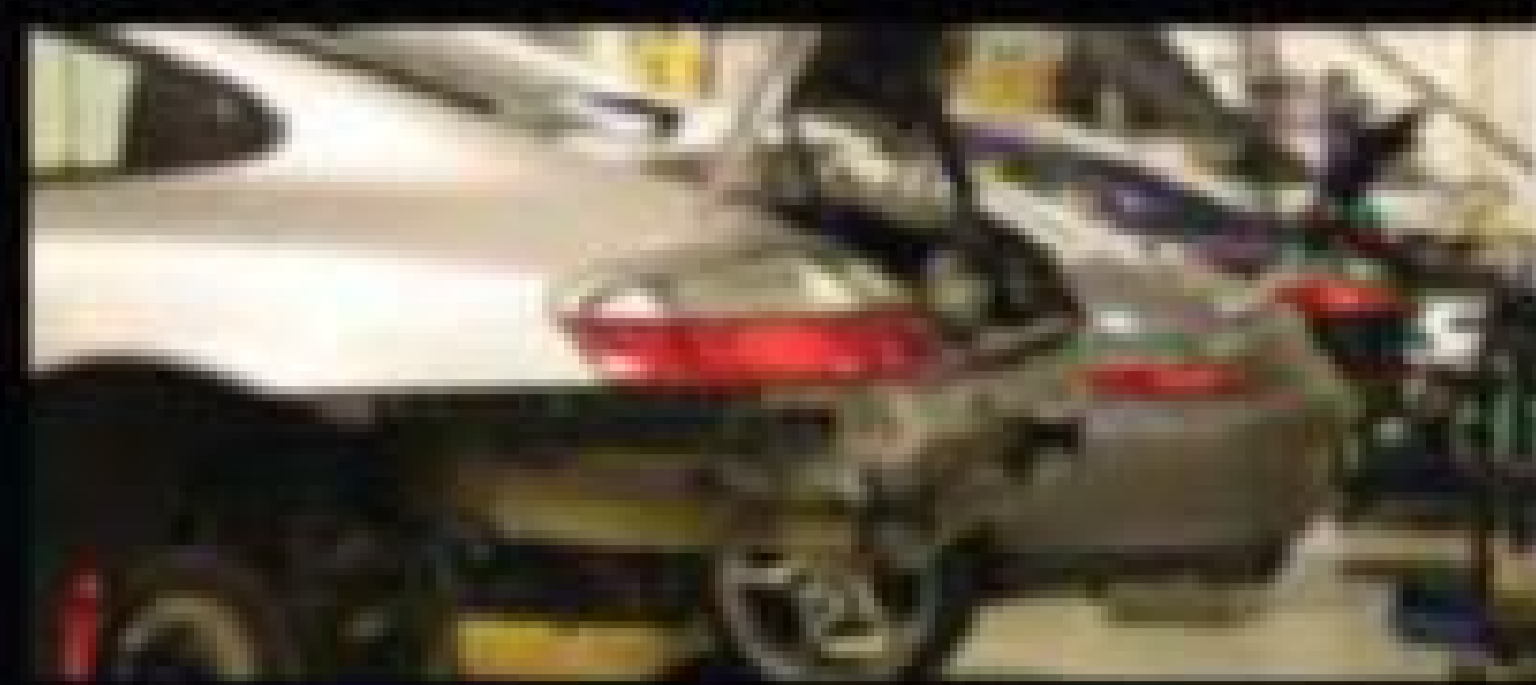
Thanks

Thanks to specialist independent Porsche dealer RSJ Sports Cars for supplying the immaculate 996 Turbo with factory aerokit. For more information on RSJs current stock list of exemplary water-cooled 911s, visit the website www.rsjsportscars.co.uk or call 01753 553 969.





// TUNING
// MODIFICATION
// UPGRADES



// EXPERIENCE
// SERVICING
// REPAIR



// CLASSICS
// RESTORATION
// SALES



// KNOWLEDGE
// FACILITIES
// VALUE



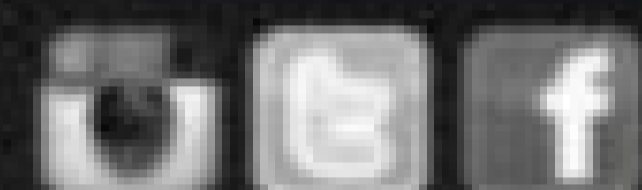
THE COMPLETE SERVICE

With nearly 30 years experience, Parr is the UK's leading Porsche specialist.

Porsche service work remains the core business for Parr and we offer the best possible service to our valued customers. Not only are we unrivalled in our Porsche knowledge and expertise but we offer excellent value – if in the unlikely event you are quoted a lower fixed price for your Porsche we will match the price on receipt of a written quote.

PARR Specialists In Porsche
5 The Faraday Centre, Faraday Road, Crawley,
West Sussex RH10 9PX
+44 (0) 1293 537 911 // PARR-UK.COM

UK DISTRIBUTOR FOR:
cargraphic
Thomas Schwarz GmbH



churchill™

80% off car insurance

If you have 8 years or more
No Claim Discount

Visit **churchill.com**
to get a quote
or call **0800 404 8256**



Applies to new customers for the first year. Subject to minimum premiums.
89% of customers would have achieved this between May – Oct. 2012. Excludes N.I.
Underwritten by U K Insurance Limited.

storemags.com



Harm Lagaaij

Total 911 talks to the esteemed design chief who oversaw the 911's transition to water-cooling, the vast expansion of Porsche's range at large, and even laid the foundations of today's Type 991

Written by **Kieron Fennelly**
Photography by **Porsche AG**



According to Harm Lagaaij, when people asked him what he wanted to be as a child, he always responded with "a car designer."

To this, grown ups would smile, because in the Fifties small boys always wanted to be train drivers,

inventors, or car designers. But Lagaaij achieved his dream, and his exceptional CV encompasses a styling career that took him from Ghia to Porsche, Ford, BMW and then finally back to Porsche. There, as chief of design for 15 momentous years, he presided over the biggest changes in the company's history.

Harm, you were born in the Netherlands in 1946, but spent much of your childhood abroad...

My father worked for the company that became Royal Dutch Shell, and we moved around the globe. I did most of my schooling in English in places as far apart as Argentina and Brunei, but I went back to the Netherlands – to Driebergen – to study automotive technology and economics. At the time, there was no such thing as automotive design as an academic discipline. Design was engineering-led, so I virtually taught myself, and afterwards I managed to get a kind of apprenticeship at Ghia in Turin.

ESSENTIAL FACTS

- Lagaaij designed the world's first monocoque kart.
- Tony Lapine used to refer to him affectionately as 'Harmless Guy'.
- He was the first Porsche manager to face the Vorstand and tell them that the styling of the 911 would have to change.
- The sliding roof of the 993 Targa was a design Lagaaij had originally conceived for the 924.
- On trips to the US, Lagaaij raced high-profile customer cars like the Brumos IMSA 964 Turbo, an activity that then-Porsche president Wendelin Wiedeking would not have allowed in Europe.
- The Panamericana was Lagaaij's idea, reviving a Porsche tradition of creating a special car for Ferry Porsche's landmark (in this case 80th) birthdays.

Was your interest just aesthetic, or were you into cars like a lot of young men?

Oh yes. In my teens I was racing motorcycles I'd modified, and I styled the fairings too. I built karts, and moved on to cars after that.

When did you join Porsche, and what was the attraction?

I came to Weissach in 1971. Porsche design was

getting a reputation under Tony Lapine, who had been recruited from Opel, which was seen as the design Mecca in the late Sixties.

A lot of my early involvement was with the 924. In those days designers could work on exteriors and interiors without specialising, and I produced designs for both cockpit components and body panels. My first 911 project was the G series model, which had the impact bumpers demanded by the US market. I also worked on the racing version, the Carrera RSR.

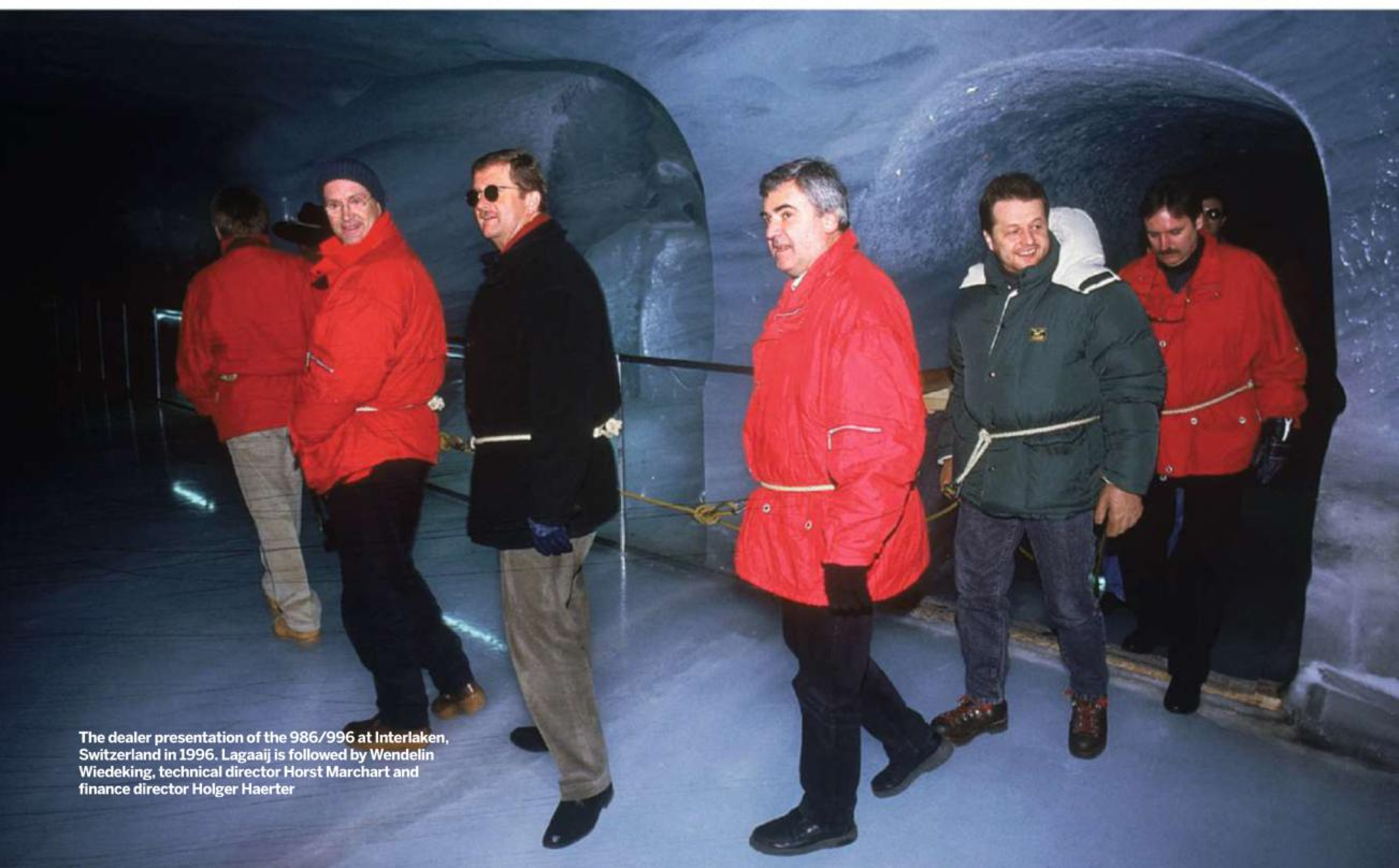
Tony Lapine was your boss. What did you think of him?

Lapine was a very special character, quite irrepensible. He recognised talent whatever your background was, though he was never a stylist designer in the sense I was – he came from the generation where style still grew from engineering, but what he did do was assist stylists in achieving their vision. He had a great education in his time at General Motors in Detroit – one of his projects was the 1961 Chevrolet Corvette – and one of his strengths was to be able to modify and change a styling package. He was a remarkable individual, but could be deeply cynical and difficult. 🌀





The styling team at Weissach with the prototype 924 in 1973



The dealer presentation of the 986/996 at Interlaken, Switzerland in 1996. Lagaij is followed by Wendelin Wiedeking, technical director Horst Marchart and finance director Holger Haerter



Lagaaij (kneeling) brought Pinky Lai to Porsche, whose design for the Type 996 911 was put into production

You left Porsche in 1977 to go to Ford in Cologne. Why did you move on after only six years?

I was 31, and Ford operated on a completely different scale from Porsche: it had separate teams for each model and a disciplined design management process. By 1985 I'd worked on all of Ford's European line-up, and had my own advanced design team.

Yet you moved on to BMW?

I got a call from Ulrich Bez, who I'd known at Porsche when I first worked there. He was now running BMW Technik, Munich's special projects division. BMW Technik was a great opportunity to do some blue sky design thinking, but quite a challenge. In the beginning we had just an empty building but they gave us free reign and a lot of ideas came out of that studio. My own baby was the BMW Z1.

Was it then that you returned to Porsche?

Yes, it was very hard decision. I had a good job at BMW, and from what I'd heard, prospects at Porsche weren't good. But they had appointed Bez as technical director and he offered me the chance to be design director.

Was Porsche as bad as you'd been led to believe?

Yes it was. I arrived in September 1989. Lapine had been gone a year, and there was nothing on the stocks. What I found were three virtually unrelated designs: the 944, the 928 and the 911. The first task was to create a 'family look' and redraw the 944 as

the 968, a quick job which faired the headlamps nearer to those of the 928 and foreshadowed the 993. The 993 was the main project: we started work on that the moment the 964 C2 was launched.

What was your opinion of the 964?

I was shocked: it was old fashioned and uncomfortable. The trouble was that Porsche was being loved to death by the purists who kept buying the cars. The 911 was going to have to change, but it would be a difficult balancing act because it was such an authority. In terms of its image it was so close to the actual product, and Porsche had been very clever to keep it like that.

How did you update it without affecting its image?

There was a job to be done, and I like to do things properly. I'm a moderniser; for me, past design is by definition inferior. So it was with the faired headlamps and smoothed wings of the new 993. There was some internal resistance to that, and Ferry Porsche was not pleased, but I justified the change by telling the board that the 911 had to be recognisable by features other than its headlights and frontal aspect. This was a foretaste of the bigger changes to come. The other project, which started concurrently, was the Panamericana concept.

What was the thinking behind the Panamericana?

It was a pure concept, but certain UK journalists

misinterpreted this. Our intention was to show that Porsche was alive and kicking and had spirit, but they thought the Panamericana foreshadowed a new 911. It was an exercise: we made it for the 1990 Frankfurt Show, where otherwise Porsche would have had nothing new on the stand (the stop-gap 3.3-litre 964 Turbo had already been revealed at Geneva in March that year), and this styling exercise was an important morale builder for us.

And the 993 when it came?

It was well received by the press and Porsche fans: they said, "That's the kind of Porsche we are looking for; better, but not a lot better," and initially it sold quite well, but it had too much carryover and wasn't enough to keep the factory alive. It was still expensive to build, and there were a list of changes we wanted to make: the roofline, the gutters, flush windscreen wipers and a new interior that the budget wouldn't allow. It only had a life of barely five years, but it made Porsche profitable again while we prepared the 986/996.

How radical a move was the shared platform idea?

Porsche was just a small company, yet nothing like this had been attempted before in automotive history, and this is something I've researched. It's a real challenge to design two models from one platform sharing everything from the B pillar forward, yet still differentiating them: you have to have double the



Lagaaij oversaw key changes to the operation of design at Porsche, in what was a critical time for the manufacturer

number of designers and modellers, start from more proposals than with a single model, and you need twice the amount of space. Wendelin Wiedeking's cost ceilings were extreme – we had to rethink everything. Take the headlamps, a brilliant concept in scratch-proof poly carbonate, a real breakthrough design – complete modules with five different functions that could be fitted on the line in less than a minute. But we couldn't find anybody to make them. Companies didn't want to deal with Porsche then, while today they're queuing up. Eventually, Bosch made the units for us, but they had no experience in this type of headlight, and it was very hard to get them right. Things got desperate: I almost wanted to give up.

The lights and frontal similarities between the 996 and the Boxster, not to mention some of the materials used in the interior, came in for a lot of criticism.

Those lights worked perfectly, and cost relatively little to make. People complained about the fried egg look, and so I used to say that the canteen must be doing very well, because we sold over 200,000 cars with that design. What people forget is that Porsche had no money. We had to generate profits from the original 986/996 to be able to confer more separate identities on them with the facelift and differentiate them completely with the 987/997, which we did. Automotive design is a 15-20 year cycle, and this was all part of the plan. We simply had to make those cost savings on the first cars.

What changes did you have to make in the way design was organised at Porsche?

I completely remodelled and expanded the office at Weissach. I made separate teams for the interior and exterior, and introduced detailers to focus on the minutiae of component design and material. I also hired talented designers from other companies, like Pinky Lai from BMW, who joined Grant Larson, Tony Hatter and Steve Murkett, stylists associated with the 993, the 996 and Boxster. But automotive design is the product of teamwork; it's one of the most complicated processes in the world.

At Porsche, we were the masters of putting the right amount of surface tension in the design philosophy. Designers everywhere recognise this now.

How involved were you in the Carrera GT?

I led the styling team. We used Porsche's Advanced Design Studio at Huntington Beach, California, because away from Weissach we could work with a much freer hand. We had a clean sheet, and no obligation to tie it to the 911 or the Boxster; just create a supercar. With no radiator to identify a Porsche, the design, as I say, was all in how we treated the surfaces. Today, we can see it was probably the last analogue super car, with minimal electronic safeguards and manual transmission. The Carrera GT is an outstanding car, and I'm very proud of it. When we presented it, its emotional appeal was immense. It was a superb statement of what Porsche was about, and it made good profits.

How do you view the direction Porsche has gone in since you left?

Absolutely the right one. Porsche has to have these new models and extend its appeal to a wider range of buyers.

You left Porsche ten years ago. What have you been doing since then?

I have a Supermoto trials bike, which I've ridden all around Corsica – 5,500 kilometres of roads and thousands of bends, and all the passes in the Alps. I've always done historic racing. I'd rather race a modern car like a GT3 – it has better brakes and handling, and doesn't break down – but historic racing suits my budget. Over a number of years, I restored a CanAm Shadow from 1969, which got me an invitation to the Goodwood Festival of Speed in 2010. You've seen my workshop here: I keep busy.

What was your opinion of the recent 50 years of the 911 celebrations?

I was very disappointed that Porsche seemed to forget everything we did between the coming of the 993 and the launch of the 997. That was the revolution that saved Porsche – it was my generation, those of us who were there in the Nineties especially, that modernised Porsche, yet kept the tradition intact. But our contribution was almost completely overlooked, and I'm not the only one who feels very unhappy about this. **911**



NINEMEISTER

Service that's
above and beyond

Call +44 (0)1925 242342

Ninemeister, Units 21 - 26, Bank Quay Trading Estate, Warrington, Cheshire WA1 1PU www.ninemeister.com | ask@ninemeister.com | www.cloud9m.com

PORSCHE CENTRE APPROVED BODY REPAIRER

Fastlane's paint and body service starts from the moment you contact us and ends when we return your car, looking like new. Contact Fastlane and we'll do the rest. 'For your peace of mind' all Porsche repairs come with a unique **Fastlane 20 year guarantee**.

PORSCHE CENTRE BODY REPAIRER FOR
Porsche Centre Hatfield
Porsche Centre West London



FASTLANE

PAINT AND BODY

St. Albans Centre

Soothouse Spring, Valley Road Ind. Estate, St. Albans, AL3 6PF T: 01727 852 147

www.fastlanepab.co.uk

Storemags

997.1 GT3

The rear bi-plane wing with 'Gurney flap' was mildly adjustable, despite appearing to be fixed in position



“
IF TURBOCHARGED
PERFORMANCE DIDN'T
APPEAL, PORSCHE HAD
AN ANSWER IN THE
FORM OF THE GT3
”

Five-stud, 19-inch wheels came on the 997.1 GT3. Centre-locking items were used on the facelift

The 996 generation introduced buyers to the GT3 tag, but how did its successor stack up? Total 911 turns the spotlight on the first 997 version introduced in 2006

Written by **Chris Randall** Photography by **Phil Steinhardt**

First 997 GT3 had bigger air intakes while new front spoiler was deeper than ever before

A new vent ahead of the luggage compartment fed air to the radiator and dispelled air over the top of the car, aiding downforce

| | |
|---------------------------|--|
| Model | 997.1 GT3 |
| Year | (2006) |
| Engine | |
| Capacity | 3,600cc air-cooled flat six |
| Compression ratio | 12.0:1 |
| Maximum power | 415bhp@7,600rpm |
| Maximum torque | 405Nm@5,500rpm |
| Maximum torque | Six-speed manual; rear wheel drive |
| Suspension | |
| Front | MacPherson strut; coil springs; antiroll bar |
| Rear | Multi-link; telescopic dampers; coil springs; antiroll bar |
| Wheels & tyres | |
| Front | 8.5x19-inch alloys; 235/35/ZR19 tyres |
| Rear | 12x19-inch alloys; 305/30/ZR19 tyres |
| Dimensions | |
| Length | 4,445mm |
| Width | 1,808mm |
| Weight | 1,395kg |
| Performance | |
| 0-62mph | 4.3 secs |
| Top speed | 192mph |



There's no doubt that buyers after the cream of 911s were spoilt for choice when it came to the 997 generation, a range that encompassed the mighty Turbo and the seriously focused GT2 that somehow managed to push more than 500bhp through its overworked back wheels. But if turbocharging didn't appeal when it came to performance then Porsche had an answer in the form of the GT3. The name tag was first seen back in 1999 when it adorned the rump of the 996, a car that would qualify – appropriately enough – for the GT3 endurance racing category. So successful was the formula that the 2006 Geneva Show saw the launch of the latest 997 variant that arrived in the UK in August that year.

Wedged beneath the new bi-plane rear wing was a 3.6-litre motor that had been carried over relatively unchanged from its 996 installation, although power had increased from 381bhp to 415bhp at a howling 7,600rpm, with torque up by 20Nm to a peak of 405Nm. Output was slightly

over 115bhp per litre, and the rev limit was also raised, action not being curtailed, until 8,400rpm was showing on the tachometer. Essentially, the engine was the water-cooled bottom end from the 996, but topped with the latest cylinder head design, featuring four valves per cylinder and 'Variocam' variable valve timing on both inlet camshafts.

Using rotary-type adjusters to tweak the timing according to load and engine speed and controlled by the Bosch Motronic ME7.8 management system, it improved driveability as well as contributing to those hugely impressive headline figures. The engine featured lightweight pistons with titanium con-rods along with specially lightened tappets and hydraulic adjusters, and there were revisions to the lubrication system. The latter was a dry sump arrangement that featured two pumps in the cylinder head, driven from the exhaust camshafts, and two pumps in the crankcase, while an oil/water heat exchanger helped keep temperatures under control. Rounding off the revisions were resonance valves in the inlet plenums (dual units linked by

three separate pipes), larger exhaust tracts for better gas flow, and a lightweight sports exhaust system with two catalytic converters that now exited via centrally mounted pipes.

Driving through a dual-mass flywheel, power was fed to the rear wheels and a limited-slip differential via a six-speed manual gearbox that featured a cable-operated change and a shorter throw to the gearshift. First gear apart, all the other ratios had been shortened for greater straight-line punch, and things were beefed up with steel baulk rings for third to fifth gear and a heat exchanger for the transmission fluid. What this all amounted to were some very impressive performance figures, the GT3 claiming to stop the clock at 4.3 seconds for the 0-62mph sprint and passing 100mph in 8.7 seconds on the way to a 193mph maximum speed. Porsche also added a traction control system for the first time, albeit one that could be switched off by those who had taken their bravery pill. ➔

GT3 TIMELINE

1999

Porsche introduce the first GT3 with the 996 generation. Substantially lighter than the Carrera, 1,890 'Gen1' cars are built.

2003

The Gen2 996 facelift version arrives, boasting a revised rear spoiler, 381bhp and optional ceramic brakes.

2006

Once again it's a Geneva Show launch for the 997 GT3. Power is raised to 415bhp helped by the addition of VarioCam.

2009

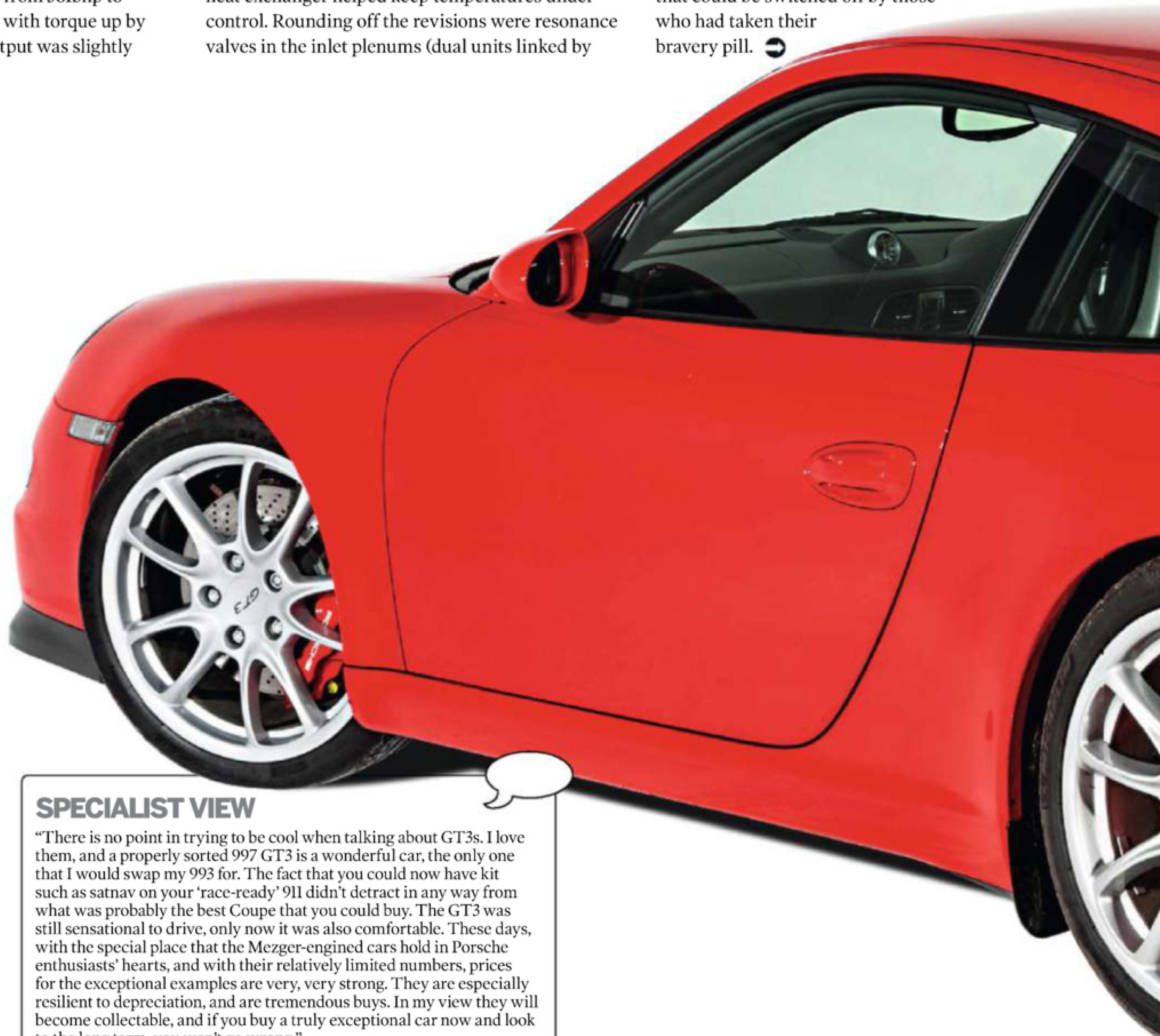
In Gen2 form, a power hike produces 435bhp, with revised spoilers and better brakes. The lighter RS variant saves 25kg.

2010

Porsche introduces a 997 GT3 RS with nigh-on 500bhp from a 4.0-litre engine and a 0-60 time below four seconds.

2013

The latest 991 gets the GT3 treatment, with power upped to 475bhp from the 3.8-litre DFI engine with PDK.



SPECIALIST VIEW

"There is no point in trying to be cool when talking about GT3s. I love them, and a properly sorted 997 GT3 is a wonderful car, the only one that I would swap my 993 for. The fact that you could now have kit such as satnav on your 'race-ready' 911 didn't detract in any way from what was probably the best Coupe that you could buy. The GT3 was still sensational to drive, only now it was also comfortable. These days, with the special place that the Mezger-engined cars hold in Porsche enthusiasts' hearts, and with their relatively limited numbers, prices for the exceptional examples are very, very strong. They are especially resilient to depreciation, and are tremendous buys. In my view they will become collectable, and if you buy a truly exceptional car now and look to the long term, you won't go wrong."

Jason Shepherd, Paragon Porsche



A variety of gills in the rear of the GT3 helped dissipate heat from the high-revving, dry-sump Mezger engine



“

THE CABIN OF A 997 WAS ALREADY A FINE PLACE TO BE, WITH EXCELLENT BUILD AND MATERIAL QUALITY, SO PORSCHE SAW LITTLE REASON TO MESS WITH THE RECIPE WHEN IT CAME TO THE GT3

”

As you might expect, Porsche altered the exterior, starting at the front, where you'd find a redesigned bumper with bigger intakes and a deeper front spoiler. Feeding air to an additional central radiator was a new vent just ahead of the luggage compartment lid that then expelled the air over the car to provide added downforce.

Balancing the aero package was the previously mentioned bi-plane rear wing that featured a rubber 'Gurney flap' on the lower section, along with a degree of adjustability despite appearing fixed, while vents in the engine lid helped remove hot air from the engine bay via the rear apron. The bodyshell itself featured improvements to the crash structure compared to the 996, and there was greater use of super high-strength steels and tailored blanks and a larger proportion of

lightweight alloy, with the doors and front bonnet in aluminium. With a claimed curb weight of 1,395 kilograms, it amounted to a power/weight ratio of 297bhp per ton. No wonder it was quick.

The cabin of a 997 was already a fine place to be, with excellent build and material quality, so Porsche saw little reason to mess with the recipe when it came to the GT3. Climate control and a decent stereo were standard along with lightweight, race-derived seats, and most interiors were smothered in Alcantara and leather. Safety was top notch too, with a full complement of airbags, while the dials featured GT3 logos, yellow needles and a change-up light. Where things departed from standard was the chance to equip the car with all the accoutrements needed for an assault on the Nordschleife, the no-cost 'Clubsport' package including a rear roll



The addition of PASM to the factory spec list wasn't the interior's only impressive new feature. PCM with satnav was ideal for finding your way home, the Sport Chrono package great for lap timing, and a blend of leather and Alcantara in Comfort guise ensured the GT3 retained as much class as it did purpose. Note that manual gear shifter, too: with PDK-only on 991 GT3 variants, the transmission alone has assured the 997 GT3 of its long-term desirability



GT3 RS



Porsche wasn't going to pass up the opportunity to add the latest GT3 to the rich heritage of RS models. Introduced in autumn 2006, it was now based on the wider C4 bodyshell, adding 44mm across the hips, but it had also lost 20kg in the process thanks to the use of carbon fibre for the seats and rear wing, and a plastic rear window. Power remained the same, the engine now sporting a single-mass

flywheel, and there was a scant 0.1 sec reduction in the 0-62mph time. Porsche claimed the same top speed, although in reality the wider bodywork and more aggressive rear wing would have reduced it a little. It didn't matter though, as the roll cage and six-point harnesses were standard for the full race effect. And the price? A mildly eye-watering £94,000.



GT3s with the Comfort pack had the rear seats deleted, as shown here, while the Clubsport pack went a step further, with a full rear roll cage fitted in place. Sports seats were optional for Comfort GT3s, but a required option for Clubsport variants



BUYING TIPS

Offering epic performance and real track ability, a 997 GT3 is a special machine, but it needs to be treated like one.

- **History:** Buying from a recognised specialist or Porsche-approved seller is advisable for peace of mind. At the very least, get it inspected if you decide to buy privately.
- **Bodywork:** Accept nothing less than perfect when it comes to the body and paintwork. It's worth making sure it hasn't visited a gravel trap or two.
- **Engines:** Essentially bulletproof as long as the maintenance record is unimpeachable. Anything neglected should be avoided at all costs.
- **Gearbox:** Any issues caused by track abuse will be costly, so make sure there are no nasty noises. Clutch replacement is labour intensive too, so watch for signs of slippage.
- **Suspension:** Not known to be problematic, but hard use will take its toll on bushes and joints. It's also worth checking to see if the various settings have been needlessly fiddled with.

cage, six-point safety harness, fire extinguisher and wiring for a battery master switch. The CS option was only available in conjunction with the lightweight carbon bucket seats based on those fitted to the Carrera GT, weighing ten kilograms each and covered in flame-retardant fabric.

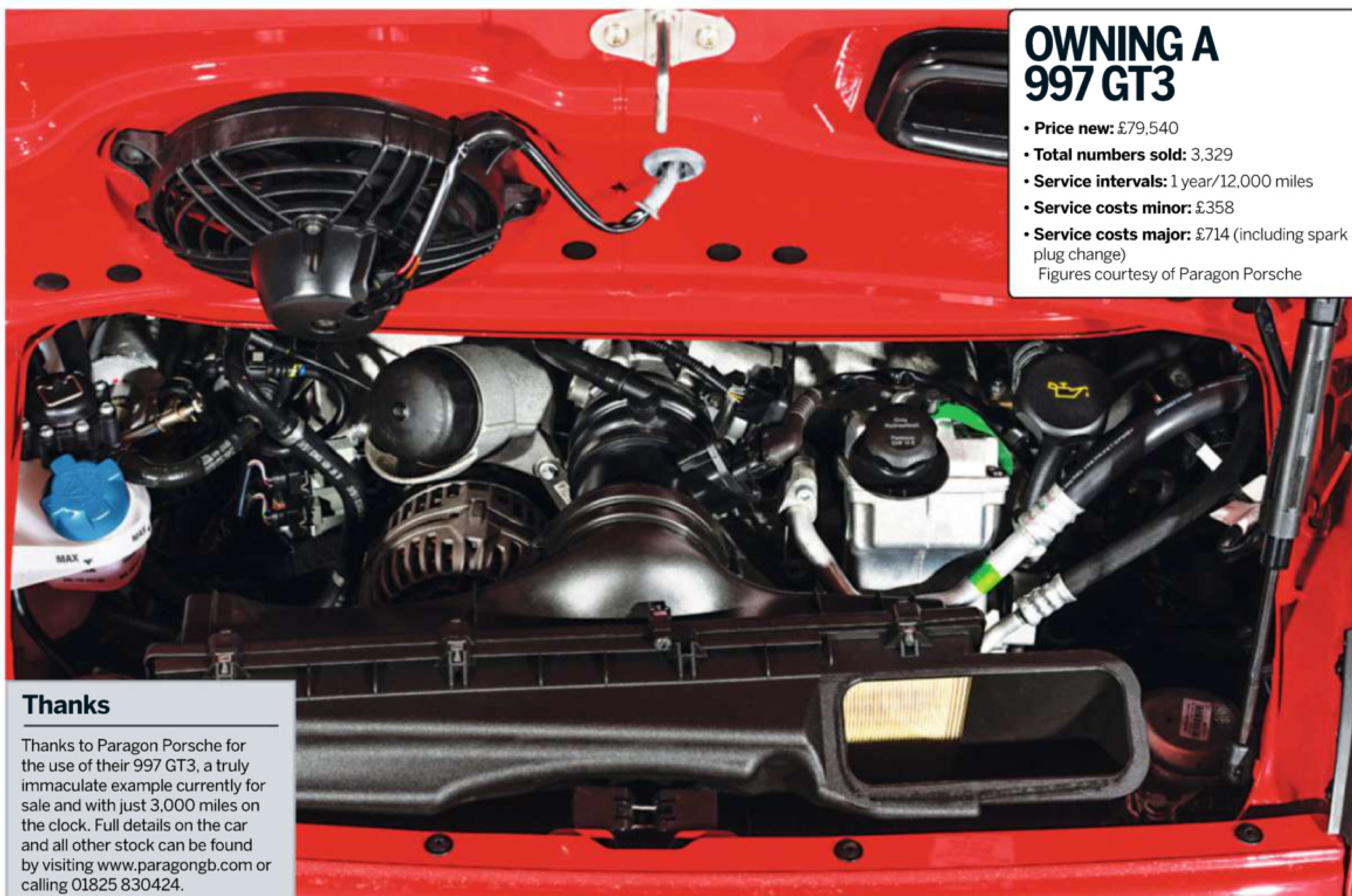
There was no need to be too minimalist when equipping a GT3, with plenty of opportunity to offset the weight savings by raiding the options list. Niceties like bi-xenon lights, electric seats, carbon interior garnishes, an upgraded sound system and tyre pressure monitoring were just a tick of a pen away, as were some particularly lurid exterior hues. Another popular choice was the Porsche Communications Management system, which provided satellite navigation, a high-resolution colour screen and phone prep – necessary if you wanted Sport Chrono Plus, which gave added lap-timing and data storage capability (basic Sport Chrono was effectively little more than a dash-mounted stopwatch).

The fettling didn't stop there, and there were major changes to the suspension compared to 'regular' 997s. Approximately 30mm lower all-round than a Carrera, up front was still the familiar MacPherson strut arrangement, but with rose joints and a range of adjustability that included the ability to tweak camber, ride height and toe angle. If you were after the perfect setup, the GT3 could certainly oblige. Propping up the rear was the subframe-mounted multi-link arrangement that Porsche named 'Lightweight-Stable-Agile' (LSA), first seen on the 993 and still pinning down the rear end. Steel bearings on the front strut mounts and an absence of rubber in the rear subframe mountings helped eliminate movement between suspension and the body for better wheel control.

More interesting still was the use of 'Porsche Active Suspension Management' as standard, in essence a system of continually adjustable dampers. A button on the centre console allowed the driver the pick of 'Normal' or 'Sport' modes depending on preference or road surface, although the harder setting was reckoned to be a bit extreme for anything other than a smooth circuit, while a variety of sensors monitored body movement during cornering, acceleration and braking.

The ECU then adjusted the valving of individual dampers to keep things even. The merits of such a system are still debated, but there is no doubting the effectiveness of the system in reducing body deflection. The stoppers received attention too, the GT3 getting 350mm vented and cross-drilled steel discs as standard squeezed by six-piston Monoblock alloy calipers at the front and four-piston items at the rear, backed by ABS. But for maximum stopping power it was the optional Porsche Ceramic Composite Brake (PCCB) setup

“
THERE WAS NO
NEED TO BE TOO
MINIMALIST WHEN
EQUIPPING A GT3, AND
THERE WERE PLENTY
OF OPTIONS TO OFFSET
THE WEIGHT SAVINGS
”



OWNING A 997 GT3

- **Price new:** £79,540
 - **Total numbers sold:** 3,329
 - **Service intervals:** 1 year/12,000 miles
 - **Service costs minor:** £358
 - **Service costs major:** £714 (including spark plug change)
- Figures courtesy of Paragon Porsche

Thanks

Thanks to Paragon Porsche for the use of their 997 GT3, a truly immaculate example currently for sale and with just 3,000 miles on the clock. Full details on the car and all other stock can be found by visiting www.paragongb.com or calling 01825 830424.

that many buyers coveted, with larger 380mm front discs, yellow calipers instead of red and a claimed 50 per cent weight reduction over the steel items. Like other 997s, the GT3 was fitted with variable-ratio steering with hydraulic assistance, and there were new one-piece, 19-inch wheels wrapped with tyres of a special tread design and compound.

It's a tasty spec, but what's important here is the true purpose of the 997 GT3. It substituted the sledgehammer performance of the Turbo and GT2 for an altogether more subtle blend of road and track ability, and rightly has a reputation for being one of the most thrilling 911s. **911**

"I'VE GOT ONE"

"I've owned my 997.1 GT3 since February 2011. I was immediately excited when I first set my eyes on the 'for sale' advertisement, which revealed a generous spec: finished in rare Cobalt Blue with PCCB, carbon Cup seats, and an RS-spec rear roll cage.

The first test drive was a little intimidating, but in the end the full Porsche history pushed me into the seat and I bought it.

It's a great car for track use and driving all day. After a stint on track I just put my racing helmet in the boot and drive home with the air conditioning on, so it really is the perfect package. Every time I climb into the GT3, I get excited: you know the drive ahead is going to be fun."

Chris Stewart, Southampton



-40 YEARS OF TURBO-

930 3.0

EXTRAVAGANCE

A historically important 930, an original low-mileage 911 Turbo and a Euro-spec hot rod. It can only be Magnus Walker's Turbo collection...

Written by **Josh Barnett** Photography by **Andrew Tipping**

Magnus Walker is enthralled by the pre-impact bumper era of the Porsche 911, having set himself the target of acquiring a 911 from each model year from 1964-73. However, as his 'Turbo Fever' video from last October highlighted, the self-styled Urban Outlaw also has a place in his heart for the 3.0-litre 930s from the mid-Seventies. As a man for whom 911 collecting is a vocation rather than a hobby, the fact that Magnus possesses more than a solitary early 930 isn't surprising. However, the extent of his Turbo fever is such that his Los Angeles workshop is home to an incredible quintet of original 911 Turbos. Why, then, was one not enough?

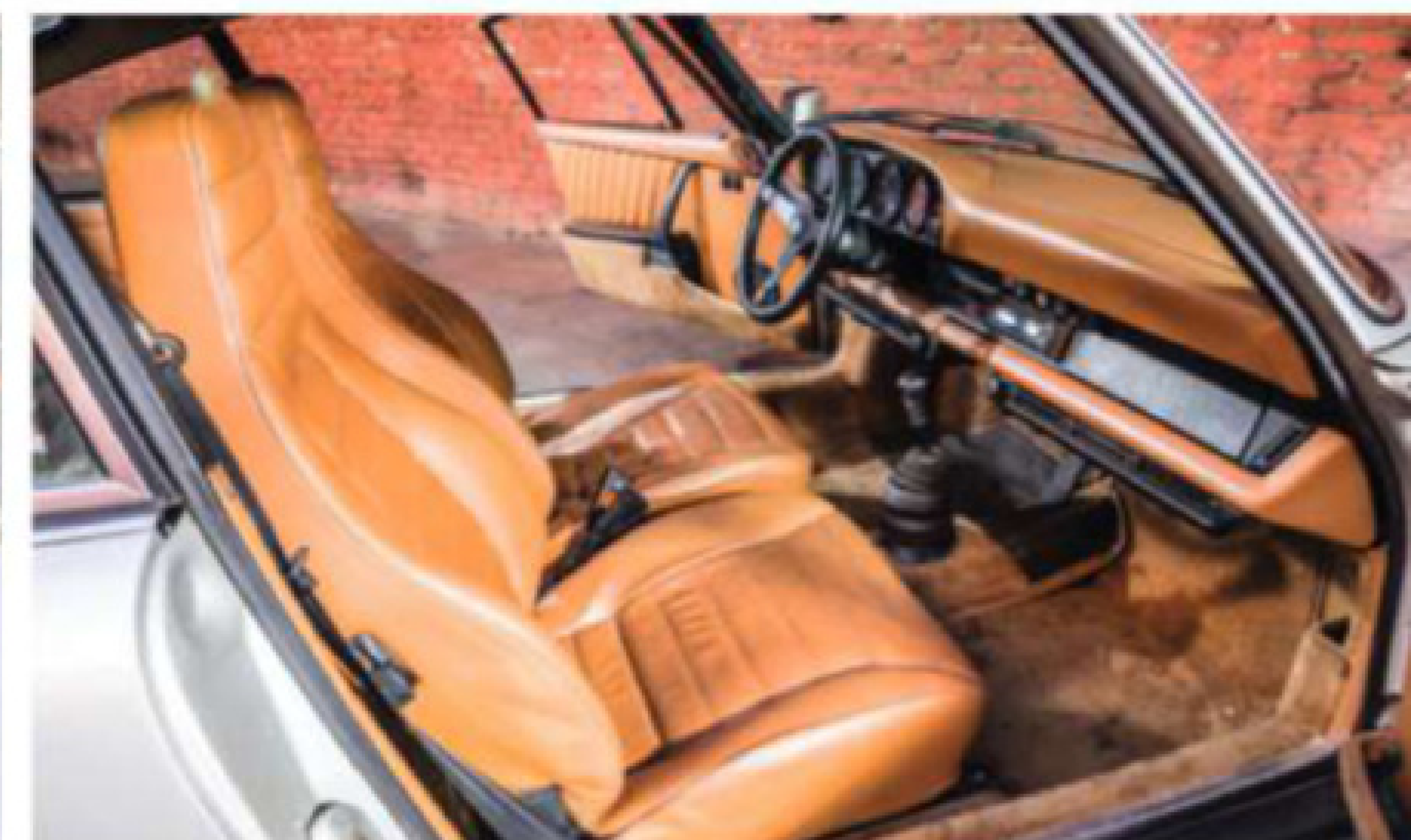
"Well, one is never enough; I often joke about that," Magnus laconically admits. "I'm a goal-orientated guy when it comes to Porsches, so my Turbo goal was not really to have five; it was to have three, one from every year from '75, '76 and '77 – the beginning of the Turbo era; the 3.0-litre, non-intercooled cars.

"The path is never a direct one when it comes to me and Porsche acquisitions, as I ended up finding three '76s within about a year." Of course, he could have turned down two of the cars, but Magnus, a man with an incredible passion for all things Zuffenhausen, begs to differ: "I have the space, so I tend to say 'Yes' more often than I say 'No'," he explains, as if anyone else would do the same. 🌀





Leaving the factory on 11 November 1975, this 1976 model year US-spec 930, featuring its original tan leather interior, was the first Turbo sold in the US



"That was how I ended up with the three '76s, each one roughly the same, but slightly different."

On top of the three 1976 model-year 930s, Magnus also ended up with two Turbo examples from 1977. The only car that remains to be found for the Urban Outlaw is a 1975 Porsche 911 Turbo from the first year of production. "I've been offered a couple, but they're really pricey and I'm not generally a guy who spends top dollar on the cars I own."

While space in his lock-up just east of downtown Los Angeles is obviously not proving to be a stymie to his Turbo-collecting hobby, a man as extraordinary as Magnus surely needs similarly remarkable 911s to hoard? Thankfully, his five 930s provide ample interest, especially the silver example from 1976.

The car was introduced to Magnus by long-time friend and club racer Marty Mehterian (the man who does the suspension setups on the Urban Outlaw's cars). Marty, a man with similar enthusiasm for Turbos, had worked on this specific car for two of the previous owners over the space of 20 years, pointing Magnus in its direction when he learnt of his quest to own three 3.0-litre 930s.

"80 per cent of the cars I own are never advertised. I put a feeler out there, somebody knows someone who's thinking of selling, and it

just becomes a delicate balance of feeling the guy out until he's ready to sell," Magnus says, offering a fascinating glimpse into the world of a serial collector. The acquisition of this silver 1976 Turbo followed a similar trajectory, eventually falling into Magnus' hands from the third owner. As a life-long California car, the provenance is already

interesting. However, things were about to get even more incredible.

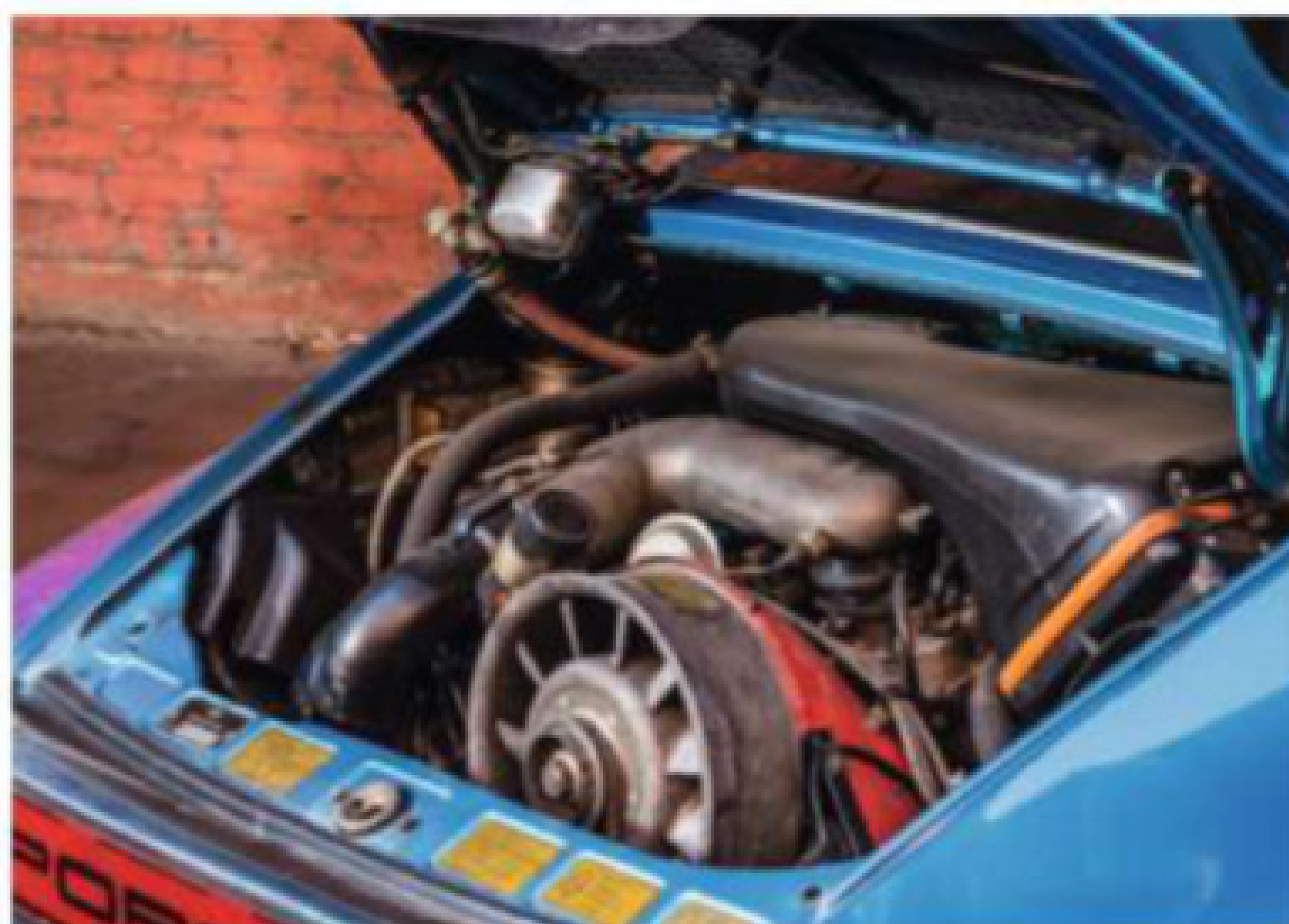
Ending in '15', the VIN number immediately set alarm bells ringing in Magnus' head. "I'd known for a long time that it was a really early car and, over the past few years, car numbers 11 and 14 have surfaced. But from what I've gathered, the



Finding 3.0-litre 930s is nearly impossible in the UK. In the USA, however, original Turbos are plentiful if you know where to look



The only Euro-spec Turbo in the collection, this 1976 930 is a 'Special Wishes' car finished in Minerva blue with a white interior. Magnus added the gold Group 4 rims



first four cars – 11 through 14 – were essentially demonstrators. Not pre-production cars, but trade show cars that were never sold.” The excitement in Magnus’ voice is noticeably increasing. “So car number 15 was the first US-production Turbo ever sold.” I told you it was remarkable, and it doesn’t stop there.

Before embarking on a visit to Stuttgart last September, Magnus was “95 per cent sure what this car was.” However, an incredible confirmation of the car’s history was provided during a visit to the Porsche Museum. After providing the car’s VIN number to Porsche’s resident historian, who promptly confirmed Magnus’ thoughts by producing the handwritten build sheet of every US-spec Turbo built in 1976 (including the car’s incredibly rare Kardex), a large crowd was beginning to form. “It was a little bit hard to fully focus on it, even though I was super-excited, so I called him up and went back the next day,” explains Magnus.

24 hours later, Magnus found himself in the archive record room opposite the old Werks 1 building in Zuffenhausen, where he was able to peruse the car’s extensive history in detail, all while sitting in Ferry Porsche’s old office chair. “The historian said, ‘It doesn’t really fit in, it’s a different look. You can sit in it if you want.’ In the damp

“80 per cent of the cars I own are never advertised... it’s a balance of feeling the guy out until he’s ready to sell”

record room, the handwritten build sheet, which unfolded to around four feet long, stated that the car spent a little longer in the factory than normal in order to rectify a transmission problem between first and second gear, eventually leaving on 11 November 1975.

With its confirmed history explained, Magnus divulges an urban myth that surrounds the car. “My buddy Marty always told me the car was ordered by Robert Redford, who never took delivery.” At SEMA last year, Magnus was approached by a man who saw a silver 911 Turbo with tan interior pull up at a petrol station in Utah in 1976. The driver? Actor Robert Redford.

Like many of the 911s in his collection, Magnus has lowered the car, putting it on wider Fuchs alloys fitted with “sticky Hoosier tyres”, and swapped out the original steering wheel for a dished MOMO example. He has undertaken similar modifications on the other two 1976 930s in his collection, the most eye-catching of which is the Minerva blue

Euro-spec car that made a fleeting appearance in issue 100 of **Total 911**, guest edited by none other than the man himself.

“It’s a ‘Special Wishes’ colour combo of Minerva blue with a factory-fitted white leather interior and sunroof-delete,” Magnus says. Coupled with its aggressive stance (a result of the lowering package fitted to the majority of the Urban Outlaw’s cars) and the gorgeous Group 4 Campagnolo replica wheels, it’s unsurprising to hear that this is the Turbo that garners the most attention: “It’s like a Subaru WRC colour combo with the gold and blue,” he enthuses. As a Euro-spec example it is also technically the only ‘Turbo’ in the line-up, with the US production 3.0-litre cars being marketed as the Turbo Carrera when it was introduced across the Atlantic in 1976. Thanks to its European heritage (it was originally delivered in Switzerland), the car’s throttle feels slightly more responsive, which according to Magnus is a result of a different cam profile. 🏁



Riding on lowered springs, wider Hoosier tyres and gloss black Fuchs rims, this 1976 Turbo Carrera is mechanically standard underneath the deck lid



“Not one of them drives the same. They’re all pushing 40 years old, so you don’t know what has been tweaked or changed”

While the Minerva blue car may grab people’s attention, the final 1976 Turbo Carrera, another car to have undergone Magnus’s basic modifying package, is equally likely to make you stop and stare. Painted in black with a similarly shaded leather interior, Magnus has finished this car with gloss black Fuchs-style wheels, lending it an incredibly menacing aesthetic. Magnus describes it as “Darth Vader stealth” with a “semi-Batmobile-esque vibe to it.”

If the ‘triple black’ ’76 looks like it could pass through the shadows undetected, it certainly won’t escape the ears of those within its immediate vicinity. This is due to the aftermarket exhaust system that was fitted by one of the previous owners. Featuring quad tailpipes (evoking the look of the 930 LE we featured in the last issue) “that one is a little more rumbling and throaty,” according to Magnus. “It has a little more of an aggressive bark”.

These little differences between what are, ostensibly, very similar cars is what has led Magnus

to love every one of his five Turbos. To him, variety truly is the spice of life. “Not one of them drives the same,” he explains, referring to all 1976 examples. “They’re all pushing 40 years old, so you don’t know what has been tweaked and changed.” It’s a refreshingly laissez-faire attitude to car ownership that is unlikely to land on British shores anytime soon. “Essentially they are the same car, but the sensory driving experience is slightly different.”

If modifying such classic examples may seem sacrilegious to you (even if the changes made by Magnus are relatively tame by his standards) then the Ice green Metallic 1977 930 is a joy for originality purists to behold.

Parked next to its lowered ’76 brethren, this particular Turbo Carrera looks positively lofty thanks to its original spring lengths. Still fitted with its factory 16-inch Fuchs, the contrast is stark, especially in the Urban Outlaw’s eyes. “We’re so used to seeing cars slammed today that you forget that when these cars were delivered from the



With just over 41,000 original miles on the clock, this 1977 911 Turbo Carrera is in completely stock spec, right down to the US-spec 'sugar scoop' headlights



factory they weren't actually like that." His voice isn't surprised at the aesthetic juxtaposition; more revelling in the variety that he adores so much.

Bought in July 2013, this was (as is now becoming a familiar story) another Turbo bought without an advert. Instead, the Ice Green Metallic Turbo was brought to Magnus' attention after posting about his 930 hunt on Facebook. Through the powers of social media, he was pointed in the direction of a small, independent Porsche repair shop in Pennsylvania, over 2,500 miles east of California. It had been for sale for over a year, although Magnus believes it was "obviously not very well marketed, with no one interested in it."

After viewing just "three or four photos" of it, a deal was done, with Magnus collecting the car in time for a road trip to the Monterey Historics meeting at Laguna Seca. The car had hardly been driven for around four years, completing just a handful of miles. Therefore, Magnus was more than a little surprised when, after just driving around the block a couple of times, the car passed California's notoriously stringent smog test. Now ready for the open roads, it was quickly put through its paces with a 1,000-mile road trip within Magnus' first two weeks of ownership.

Normally, mileage (along with fuel consumption) is something Magnus doesn't worry about.

However, with the 1977 Ice green 911 Turbo, the odometer on the matching numbers car was of particular interest. "The guy I bought it from, he was the second owner. He bought it in 1982 when it had 10,000 miles on it. He only put 29,000 miles on it in 30-odd years.

"I've never been a matching-numbers, originality guy; the toolkit never really mattered to me, as those things don't add to performance," Magnus elucidates. However, not only did this car include the original toolkit and jack, inside the toolkit were the original latex gloves, still inside their original packaging.

Yet more surprises waited inside the car, adding to its reasonably unmolested and authentic history. "That car has a build date of 4 April, or 6 April, 1977. In the ash tray there was a dollar bill folded up," Magnus explains, the excitement in his voice reaching fever pitch. "It was dated 1977! The original owner put a dollar bill in that car, and 36 years later it was still there." It's certainly one way of ensuring you buy a non-smoker's 911.

With such authenticity to be found in every bolt, Magnus has no plans to modify this car. "The avocado leather and green plaid interior probably doesn't sound good, but in person it works really well." And while the US-spec 'sugar scoop' headlights attract some less-than-admiring

| | |
|---------------------------|--|
| Model | 930 3.0 |
| Year | (1975-77) |
| Engine Capacity | 2,994cc |
| Maximum power | 245bhp @ 5,500rpm – US 260bhp @ 5,500rpm – Europe |
| Maximum torque | 343Nm @ 4,000rpm |
| Suspension | |
| Front | Independent wishbones; MacPherson strut; torsion bars; hydraulic dampers |
| Rear | Independent semi-trailing arms; transverse torsion bars; hydraulic dampers |
| Wheels & tyres | |
| Front | 7x15-inch Fuchs, 205/50/15 tyres |
| Rear | 8x15-inch Fuchs, 225/50/15 tyres |
| Brakes | |
| Front | 282mm ventilated discs |
| Rear | 290mm ventilated discs |
| Dimensions | |
| Length | 4,291mm |
| Width | 1,775mm |
| Weight | 1,195kg |
| Performance | |
| 0-62mph | 5.5 secs |
| Top speed | 155mph |

glances, they add to the car's originality, even if they potentially spoil the flowing lines of the 911's extended front wings. "That's the way it left the factory," Magnus succinctly concludes.

Although, as Magnus has explained, each car enjoys its own distinctive personality, all five 930s offer a markedly different proposition to his naturally aspirated builds when experienced from behind the steering wheel. ➔



This 1977 3.0-litre 930 is the latest US-spec car bought by Magnus. It's another black-on-black car, with Magnus simply switching the original steering wheel for a MOMO example



While the obvious source of this difference would be the turbo lag, Magnus points his finger at the gearbox. "First gear is 45-50mph, second gear is maybe 85-90 (if you pull to the redline), third gear is 120, and fourth is 120 and above," he explains. "In all my other cars I'd be in third or fourth gear [constantly changing]. In the Turbo it was just, 'Don't bother shifting.'"

Because of this, getting the most out of the Turbos can at times prove to be a challenging yet rewarding adventure. Thanks to the long gear ratios, keeping the turbo spooled and the power on tap is difficult to manage, with Magnus claiming that "they're not necessarily a great canyon hot rod, but they're a great cruiser," as evidenced by

his long haul in the Ice green car soon after its acquisition.

With his "light, responsive" 911s, such as his favoured #277, providing such thrills, what is it that draws Magnus to the more refined but sometimes sluggish, 930? "The car I fell in love with as a ten-year-old when I went to the Earls Court Motor Show in 1977 was a Turbo. That was the poster car." His enthusiasm is infectious.

Some of you may have noticed that I have neglected to elaborate on the fifth 930, a 1977 Turbo Carrera in black with original black Fuchs. This is Magnus' latest Turbo buy and, with four others to play, hasn't had much attention yet. Despite this, it is still an interesting purchase with matching

numbers. With just a few trips around the block and a few "little issues" to fix, the Turbo's 40th anniversary year has never provided a better time in which to take his latest purchase out for a traditional blast.

Even with the minor modifications, Magnus' Turbo collection is predominantly bone stock. For a man who has made his name by taking classic 911s and tuning them for the canyon roads that engulf California, this may seem odd. But despair not. While this quintet hasn't been earmarked for extensive surgery, the Urban Outlaw does want to produce a 934-inspired car from a 930 base car. However, that will have to wait for another day. For now, let's just revel in his Turbo fever. **911**

911 Turbo in America

Released in 1975, the 3.0-litre 930 didn't hit US shores until the following year after being tuned to meet US emissions laws, which were becoming increasingly stringent. The result was a car that, compared to the 260bhp Euro specification car, 'only' turned out 245bhp, a still-healthy increase of 35bhp over the revered 1973 2.7-litre Carrera RS (a car which, incidentally, didn't see the US at all).

While the 911 Turbo was revamped in 1978 with a 3.3-litre engine, intercooler and 917-derived brakes, the 3.3-litre 930 was only available for sale in the USA until 1980. Tighter emissions controls, a spate of accident-related lawsuits as the result of the car's difficult handling,

and Porsche's plan to replace the 930 with the increasingly popular 928 ultimately led to the Turbo's disappearance from the Land of the Free.

Three years later, the car was back until the 930's global swansong in 1989, albeit down-tuned once again to 265bhp (compared to the 300bhp produced by the Euro-spec 3.3-litre powerplant).

In a similar vein to 911 culture in Europe, American 911 fans can sometimes be ascribed to certain cliques within the Porsche community. "Like anything, there are little cliques within the Porsche clique," explains Walker. "This is a blanket statement, but early car guys aren't necessarily

Turbo guys, just like guys who have got new cars aren't necessarily old car guys, although obviously there are guys who have early cars and late cars. Turbo guys seem to have their own clique; they're an acquired taste."

Turbo culture seems to be growing, potentially fuelled by the upcoming wave of 40th anniversary retrospectives. "There's a following of Turbo fanatics here, and that seems to be growing," Magnus explains. He pinpoints the 3.0-litre 930 as the model that is garnering the most interest: "The aesthetic look of the tail makes it a little more stylish than the later Turbo tail with the intercooler." It's just as well he has five, then.



NX30

Discover life's hidden moments.

Samsung SMART CAMERA **NX30**

- 20.3 MP APS-C CMOS Sensor
- Hybrid AF with Phase Detection
- 1/8000sec Shutter Speed
- 2,359K dots Tilttable EVF
- 3.0" Super AMOLED Swivel Display
- Tag & Go (NFC/Wi-Fi)



MONTE CARLO A HISTORY OF THE RALLY

40 years ago, three wins on the Monte Carlo Rally secured the 911's reputation. Now, more classics than ever tackle the retrospective event

Written by **Johnny Tipler** Photography by **Johnny Tipler, Theodora Lecrinier** and **Porsche AG**





(From left to right) Herbert Linge, Henschke von Hanstein, Peter Falk and Eugen Borhinger depart for the Rally in January 1965

The Monte Carlo Rally has always been a big deal. Prince Albert I of Monaco launched the first rally in 1911, and its exotic setting in the seaside principality still endows the event with an aura of superiority and mystique over all other international rallies. It is run with tenacious independence by the Automobile Club de Monaco, and for the past 17 years the frontline FIA rally (since 1973 a round of the WRC) has been shadowed a fortnight later by the Historic Monte, using mostly the same stages and transit sections.

The retro rally regularly attracts over 300 entrants, comprising a cross section of cars built between 1955 and 1980 – and 911s are the most common model, with a smattering of 356s, 914s and 924s. Each year celebrates an anniversary, with 2014 reprising Mini-Cooper's success in 1964, so there's an unprecedented 27 of them running this year. Historical Porsche triumphs were marked in 2008

when Vic Elford and David Stone were reunited with a Signal orange 911T and reprised their 1968 victory, with Bjorn Waldegård and Lars Helmer emulating their 1969 win in '09 and another pair of Swedish heroes, Åke Andersson and Hans Sylvan, in the 911 hotseats in 2011.

Like most current classic rallies, the Historic Monte is a regularity event, with swinging penalties for speeding on the special stages: arrive at the checkpoint ahead of your allotted time, and you plummet down the running order. Back when Vic and Bjorn were in their prime, regularities didn't exist at this level, so when confronted with a strict regularity schedule on the classic rally, each handled it in different ways. Vic and David said 'to hell with it', and drove the rally like they did in the Sixties – flat-out – while Bjorn, Lars, Åke and Hans struggled to abide by the regularities, bemused by the apparently random allocation of penalties. Vic confided that he had a private wager with his old

pal and sparring partner Gérard Larrousse to see who could rack up the most penalties, the French ace having driven the Historic in '07 in an Alpine-Renault A110. Gérard won this unofficial bet on account of there being a great deal of snow in the Alpine stages in '08, which meant Vic's times were on the button on those regularities thanks to his skilled driving in those conditions, instead of being wildly ahead of schedule, as he was on dry tarmac.

It wasn't simply a matter of driving ability that brought success: drivers of Vic's calibre relied heavily on pace notes, shouted to them via helmet microphones and headsets. Pace notes weren't just the 'tulips' symbols in the official route book; they were the result of diligent reconnaissance and practicing hard on the stages in the weeks running up to the event, driving them at the time of day or night they'd be covered on the actual event. In the Alpine stages they'd also receive up-to-the-minute ice notes, garnered on the relevant stages



The first works 911 in 1965, left and centre, confirm a deep history with the Monte Carlo rally. Vic Elford and David Stone win the rally for Porsche for the first time in 1968, right



Jean-Pierre Nicolas and Vincent Laverne in their 3.0-litre 911 SC at the 1978 Monte Carlo Rally, in which they finished first overall

by 'retired' experienced rally crews as near as possible to the cars coming through and handed to the navigators at service halts and check points. Depending on what the ice notes predicted, crews would then choose the best studded tyre option.

The Monte format has always featured a long 'concentration leg', the run down to Monaco from one of six start cities, ranging from Marrakech, Warsaw, Glasgow, Oslo, Turin and Stockholm to Reims, Barcelona and Monaco itself, which remain on the itinerary. After assembling in Monte Carlo, the entire pack is dispatched at one-minute intervals to Valence in the Drôme department of south-central France for the 'classification legs', the special stages up in the harsh Ardèche hills and forests. The 'common legs' sweep the retinue back to Monaco, and on the last evening there's the 'final leg' up to the lofty Cols above the principality.

While crews are careful to heed the regulations, they tend to have more fun on the transit sections that link the stages and service halts. Thus, when driving the rally route, it always pays to have an eye on the mirror to see when fast-moving competitors are closing in, and naturally give them plenty of room to pass. The weather always plays a hand: I've stood out in blizzards taking photos in the Ardèche (at the aptly named St Bonnet-le-Froid stage!) and the Vaucluse, and slithered at midnight among the loonies on the Col de Turini. It's poured in Valence, and been summertime-mild in Monaco, which means taking a varied sartorial kit, from thermals to casuals.

Porsches have always been rallied, and the

Porsche's Monte winners

1968

1st: Vic Elford/David Stone
Porsche 911T 2.0

2nd: Pauli Toivonen/M Tiukkanen
Porsche 911S 2.0

1969

1st: Björn Waldegård/Lars Helmer
Porsche 911S 2.0

2nd: Gérard Larrousse/Jean-Claude Perramond
Porsche 911S 2.0

1970

1st: Björn Waldegård/Lars Helmer
Porsche 911S 2.3

2nd: Gérard Larrousse/Maurice Gélín
Porsche 911S 2.3

4th: Åke Andersson/Bo Thorselius
Porsche 911S 2.3

1978

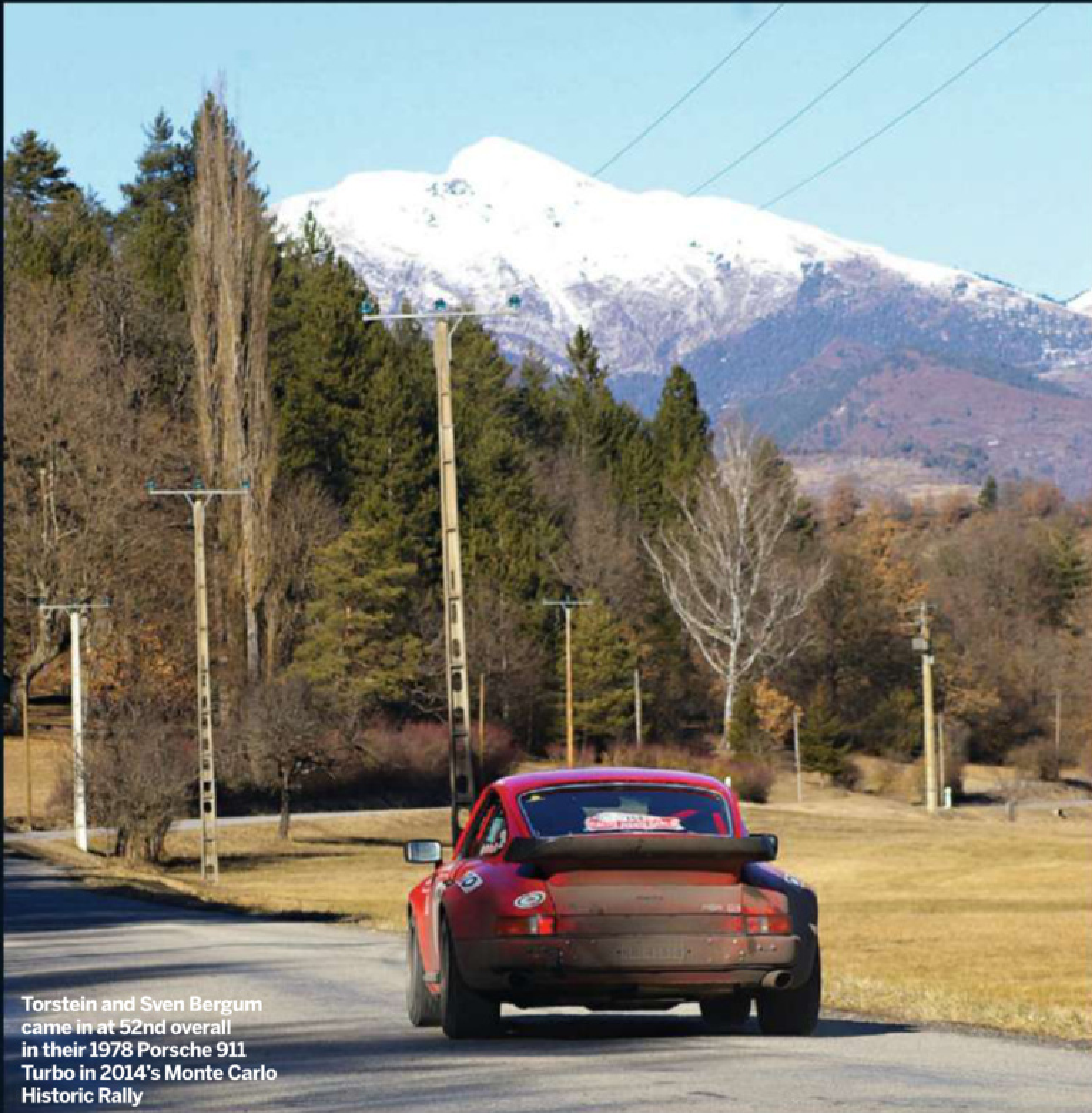
1st: Jean-Pierre Nicolas/Vincent Laverne
Porsche 911 Carrera 3.0



Waldegard and Helmer en route to 1970 WRC success

marque's first major international successes were scored in the mid-Sixties. In 1965, the 904 GTS of Eugen Böhringer and Rolf Wütherich (he who survived James Dean's fatal accident) came second, while Herbert Linge and Peter Falk braved thick snow in their 2.0-litre 911 to finish fifth overall and win their class. As far as the factory competition effort was concerned, though, endurance racing took primacy, but in 1967 head of the experimental department Ferdinand Piëch got the go-ahead to pull the stops out and really go racing. High placings and a win in the Lyon-Charbonnières rally earned Vic and David the '67 European Rally title, and their tally almost included the Monte until the final minutes.

In '68 they pulled off Porsche's first win in the principality, in spite of arch-rival Gérard Larrousse leading much of the event until his Alpine A110 crashed out on Turini. An unexpected thaw just before the rally got underway aided the 911s and Alpines, plus there was no handicapping system to fetter engine size and power output. Thus, the assorted Saabs, Minis, Alfas, Citroëns, BMWs, Dafs and NSUs didn't really come close. It was on the final stage that Vic pulled off the victory, making up a deficit of over half a minute on Larrousse and taking the lead. Soon after that, Larrousse crashed for no good reason, and police quickly arrested youths suspected of shovelling snow onto hairpins to catch out drivers and cause even wilder mayhem. But Vic had the rally won by then, and having tasted the Monegasque champers, he promptly jettied over to Florida and won the Daytona 24



Torstein and Sven Bergum came in at 52nd overall in their 1978 Porsche 911 Turbo in 2014's Monte Carlo Historic Rally



Hours in a 907. A couple of months later he won the Targa Florio too.

Porsche dominated the 1969 Monte as well, with Swedes Björn Waldegård and Lars Helmer winning in a 2.0-litre 911S prepared by Scania Varbis, the Swedish concessionaires, with Larrousse and Jean-Claude Perramond coming second in a works 911S. Once again, a sudden thaw disposed of a lot of the snow, though night frost made things tricky, and Vic and David crashed out, hitting a tree.

For 1970, Björn and Lars had the latest lightweight 235bhp 2,247cc 911 S/T at their disposal, featuring aluminium and fibreglass panels, winning not only the Monte again, but the Swedish Rally too. The event was a success for Porsche: Larrousse and Maurice Gélín came second in another works 911 S/T, while Åke Andersson and Bo Thorselius were fourth in the third works 911 S/T. There were no controversies of the kind Monte was susceptible to – in '68 the organisers forbade any advertising whatsoever, and teams were reduced to masking even the labels on the seat belts to avoid disqualification. It hadn't been that long (1966) since the three works Mini-Coopers and a works Cortina, having filled the first four places, were ousted for running non-dipping double-filament lightbulbs.

The 911's next Monte triumph came eight years later in 1978. No works cars were entered, though the goalposts had shifted and the Renault R5 Gordini was in the ascendancy along with the Lancia Stratos and Fiat 131 Abarth, crewed by the likes of Walter Röhrl. But victory went to the talented privateer (and former Alpine-Renault driver) Jean-Pierre Nicolas with Vincent Laverne, piloting a 3.0-litre 911 SC entered by the Alméras Brothers' team and plastered with Gitanes logos. Nicolas, who is often on the Historic event, mastered the unusually snowy conditions when other crews – the Italian cars in particular – struggled with Pirellis that were studded on one side only, plus studs popping out of the treads. Coincidentally, Porsche had just won the Car of the Year award (for the 928), collected a week earlier in Monaco from Prince Rainier by CEO Ernst Fuhrmann. However, that was the end of official works participation in rallying, though the factory cooperated with the Rothmans-Prodrive squad's SC RSs and masterminded the Paris-Dakar operations.

Does history repeat itself? Fast-forward to the 2014 Monte Carlo Historic Rally, and there were 911s in second and third places, with five in the top ten. The winner was an old pro, José Lareppe

in his Opel Kadett GTE, who had won twice already in 2010 and 2012. But Petter Granerud and Stein Roed came second in their 911 SC, with Jean-Michel Coll and Marc Dedieu third in their 3.0-litre Carrera, which made for a 911 celebration. Another Norwegian crew, Tore Johannessen and Anita Sørsto, were eighth in their 2.2-litre S, with fellow countrymen Bjorn Aaserud and Lasse Hansen 17th in their 2.7-litre S. How were these entrants so good? The fact is, they get so much practice back home driving in snow and ice that the modest quantities in the Monte presented little challenge. Their main hardship is trekking the 2,500 kilometres from Oslo and Stockholm (that's roughly 1,000 kilometres more than for the Glasgow starters) down to the Alpine foothills town of Die in the Vercors for the start of the concentration legs – tightly timed regularity stages on backroads – followed by similar sections in the Ardèche heading out of Valence.

We followed the SC of Mauritz Lange and Hans Sylvan. It's a former Rothmans Prodrive team back-up car, initially hampered by a misfire caused by blocked carburettors (which mechanic Peter Bergqvist cleaned in his Valence hotel bedroom at 3am) and an excursion into a ditch on the



Among a plethora of classic 911s competing in the 2014 rally, Sebastien Oriot and Patrick Lorente at the Col de Perty stage at Monte Carlo in their 1966 Porsche 912



penultimate run down to Monaco that broke the clutch cable mechanism, rapidly rectified at La Turbie time-check. You could smell the attitude, though. Mauritz owns three classic 911s, including the one lent to Waldegård and Hëlmer in 2010, and considers regularity time trials to be insipid, while navigator Sylvan is a veteran of big-time Seventies WRC rallies, co-driving stars like Ove Andersson and Stig Blomqvist, but finds modern regularity administration baffling.

A mild winter meant the Ardèche stages were bereft of snow and ice this year, levelling the playing field for all competitors, including stars from the past like works 911 pilot Andersson, now helming a Mercedes fin-tail with Anna Sylvan, and a bevy of French aces-of-old like Jean Ragnotti, Alain Serpaggi and Michel Leclère aboard cheeky R8 Gordinis. The shock to the system hit on Col d'Echarasson, the gateway to the Alps. The host gathered on Monaco harbourside, a phony prelude to the final leg up on 'Turini', the fabled mountain-top pass that's the focus for a couple of stages winding around incessant single-track lanes punctuated every 50 metres by tight hairpins.

"If you saw it in daylight you wouldn't dare drive it that fast," quips Mauritz. "If you went off you'd

roll all the way down to Monaco!" Halfway up we met cows in the road, and up at the top the road was edged with ploughed snow banks two metres high, with rough, frozen slush coating the road surface. It wasn't quite as crazy this year, with fewer beer-fuelled campers and just a few braziers and fireworks, but the action was just as fast and furious as the cars rattled over the ice, lights swishing this way and that as they hurtled by. It dropped to minus four degrees celsius, and by 1am we called it a night. Easing downhill, our own 964 became embroiled on a live stage. We hugged the outside of a hairpin to let a couple of cars by, then gunned it. The 964 rose to the occasion as we hurtled pell-mell through the white-walled slalom down the rest of the stage to the sanctuary of Lucéram.

There were 257 finishers out of 309 starters; most dropouts were due to mechanical breakdown rather than crashes, a reflection on the largely clement weather. At noon the results were posted, and we shared the joy with our Scandinavian chums in the Tip Top bar. They'll be back next year, and so will we. Porsche has always enjoyed a successful competitive history with the Monte Carlo rally. There are bound to be more wins in store for the 911, and we want to be in on the act. **911**



Vic Elford on winning the Monte Carlo

'Quick Vic' Elford put the 911 on the map as a race and rally car in the mid-Sixties. Here, he recalls his techniques for tackling the Monte...

How important were your pace notes?

They were without doubt the best in rallying at that time. I could drive flat-out in any conditions, over any terrain relying totally on my pace notes.

Did you spend hours poring over maps?

No. We knew where we were going, so the important thing was to get there and make the pace notes. You'll be surprised to know for the general run-in sections the answer is still no. I have a photographic memory for roads.

Did you mind the long drive down to Monaco?

It was a bit of a drag. But I found that starting from Warsaw had advantages, like evenings at the bar with Paddy Hopkirk, drinking shots of ice-cold vodka while we ate caviar! We had open roads, no effective speed limit, no traffic and lots of time for real meals until we entered Germany.

You were in at the start of Porsche's rally programme. Was its potential evident?

Porsche didn't have a rally department until 1967, and their budget only let them pay me for one rally at a time. Huschke von Hanstein gave me a 911 for the Monte, and after two weeks the 911 held no secrets: it was better than any car I'd driven.

Did you relish the ice and snow?

I loved it. I had been to Sweden a couple of times to learn, but my first real learning was when at Ford doing some tyre testing in the Chartreuse for Monte Carlo. Bo Ljungfeldt was there driving a Ford Falcon, and at one point I rode with him to see how it was done. The 911 was without doubt the best-ever two-wheel-drive car on ice and snow.

What was the most difficult part of the Monte?

Overtaking people, as there was no seeding. Once we had a special stage climb up Mont Ventoux, and I was catching a car in front. There was snow on the road and minor banks on each side, and David was saying "We're going to lose time getting by." I responded "No; either he gets out of the way or we both go over the edge!" Well, he did, and we didn't!

What's your take on today's Regularity events?

They're not for me, but I was happy to do the 2008 event. We covered much of the traditional routes and stages, and since I had no pretensions about winning, I could enjoy the roads and driving, as well as interact with people and fans, who haven't changed since I was there 40 years ago. **911**

Living the Legend

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



Center Gravity let you watch the whole process, instilling great confidence in their craftsmanship

**2005
996.2 GT3**



Ben James
Kent, UK

Date acquired:
March 2012

On the way to Center Gravity to get the car checked over, we got off to a bad start. After having to divert around part of the M25, the engine light lit up. We tried switching the car off for a few minutes before restarting it. No luck.

When we arrived we were 90 minutes late. At this point you'd usually go and test-drive the car, but we couldn't due to the engine issues, so Chris got the diagnostics machine. It showed a couple of cylinders misfiring, so we decided to order six new coil packs as a preventative measure.

Onto the suspension, Chris first drove the car onto his new damper testing equipment. The scale ranges from 0.00 to 0.30, the latter being full health. To our surprise, all four dampers came out at 0.30, meaning they were performing very well.

The next task was to ascertain the car's geometry. As soon as it went on the ramps, Chris' assistant technician Pete commented on how much toe-in the nearside rear wheel

had. In fact, it had lost almost half its usable tread in just 1,000 miles!

Once the geometry equipment was attached, we looked at the geometry settings, which were all over the place, the rear wheel alone running over 1.5 degrees of toe in. It was a shock, since the car had been aligned two months previously.

With the baseline test done, the general health of the car was checked over. As it turned out, the rear lower control arm bushes were delaminating, and one of the engine mounts had leaked, causing the right-hand exhaust to hang slightly lower.

Jayne (Chris' other half) brought us an estimate with the options for replacing the control arms and mounts, namely standard OEM items or aftermarket components. After much discussion, we plumped for RSS rear lower control arms (already having RSS on the front) and engine mounts.

Once the LCAs and engine mounts were fitted, Chris and Pete checked the nuts, bolts and fittings under the car. They also

replaced the components that were loose after being removed and replaced a few times, like the camber alignment bolts.

A problem we discovered a few weeks ago was a screeching noise that occurred on right-hand corners, as well as knocking. It turned out that the off-side rear locking ring had ridden half-way up the coilover, meaning it was able to 'twist' from its original position, moving the antiroll bar drop link to a different angle. The knocking was the drop link banging into the drive shaft when the coilover rotated, and the screeching was the same drop link being held onto the drive shaft, both components being ground through by each other.

Pete was also struggling to loosen the toe alignment bolts. Ultimately, it took over three times the specified torque to undo them. This is typical of a car where the alignment bolts are seized – remember, it was aligned just two months ago.

It is now re-aligned for a road car that is used for occasional trackdays. We settled

2011 997 GT3 RS



Tony McGuinness
San Diego, USA

Date acquired:
February 2011

On the last Saturday of every month from 6-9am, 911 owners gather at a local shopping centre for the Cars and Coffee event to admire and chat about the legend we all adore.

This month there was row after row of 911s, comprising a dazzling array of generations and colours. Included were a 964 Carrera 4, a 997 Turbo, a silver 997 Carrera GTS, a 997 Carrera S, 996 and 997 Carrera S Cabriolets and a track car in Gulf Porsche colours.

I met the owners of three particularly fascinating 911s: a red 1981 911 SC that had been recently purchased as a daily driver;

a 1974 black Carrera with gold decals and just 44,000 original miles; and an 1977 Ice Green Metallic 930 Turbo Carrera. It wears a 'California Historical Vehicle' license plate, acknowledging it as being of historical significance. Its owner Tony considers himself a 'caretaker' of this car, and won't modify or change it in any way.

This gathering allows the owners of Porsche's iconic supercar to share stories, ideas and their love for this extraordinary sports car. Yes, there are other exotics and American muscle cars, but at the end of the day it really is all about Porsche's legend, the 911. After all, nothing else matters.



After a full geometry setup, the remaining parts of the GT3s chassis were checked

for 2.1 degrees of negative camber on the front, two on the rear, standard toe, eight degrees of castor and antiroll bar settings at 3/5 on the front and 2/4 on the rear.

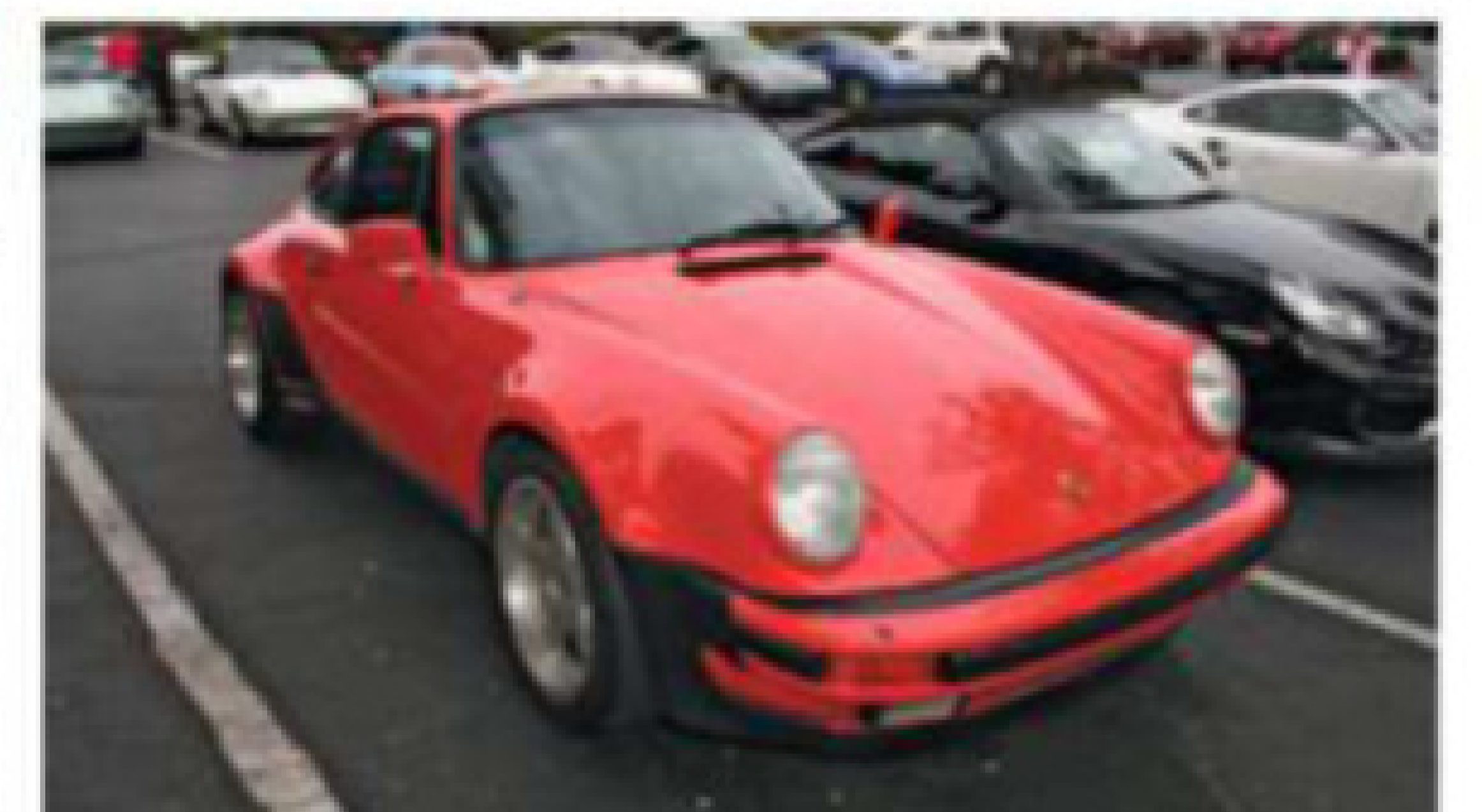
With this done, we had a pair of Alcon front discs fitted, complemented with new brake ducts: GT3 RS ducts on the front and GT2 ducts for the rear, and the splitter bolted onto the front bumper. Lastly, the six new coils were fitted, leaving the engine running smoothly.

There are specialists out there who will do a good job. Unfortunately, this didn't happen at the one we previously went to, despite their great online reputation.

Center Gravity, on the other hand, never fails to live up to its reputation, and being so involved in the process of transforming your car's chassis is always a great experience. You're encouraged to watch every part of the process while they explain what they're doing, which instils great confidence. For this reason, it's worth paying a visit to CG – and it's a 300-mile round trip for us!



Cars and Coffee: a Mecca for Porsche enthusiasts



1982 SC Targa



Sean Parr
Harpenden, UK
Date acquired:
November 2013



Many years ago, I said to my parents, "I'm going to own a Porsche by the time I'm 30." Ultimately, I was 48.

I saw the ad and called my mate Vic, who was particularly knowledgeable about cars, and asked if he would drive me to look at it. Despite my worries, it was everything I'd hoped for: a 1982 Porsche 911 SC Targa in Ziegelrot Metallic, with the big Turbo tea-tray wing and some polished Fuchs.

On the outside, there was nothing wrong. The interior, at first glance, was also fine, but further inspection revealed that the driver's seat had a nasty tear at the back of the seat base, the seat pads in the back were destroyed, and the seatbelts were frayed.

The biggest concern was that the driver's interior door handle was broken, along with the trigger for the driver's door. The passenger door lock was different to the other side, and the heating unit and windscreen washer pump was in a box in the boot. After a bit of haggling with money transfer and arranging tax, it was mine! I headed home to start fiddling around with all the bits that would make my car perfect.

The colour looks different in certain lights, living up to its German name of Kiln, or Brick red. There are a bunch of jobs on the go, with many more to follow. My journey of Porsche ownership has got off to an exciting start!

1999 996 Carrera 4



Joel Newman
London, UK

Date acquired:
December 2011

With winter drawing to a close, it was time to deal with the little things I've neglected through these bitter months.

First up was removing the Martini Mohawk wrap. Despite enjoying the look, it was only ever temporary, and I'd had my fill in the attention-whoring stakes. It came off without incident, leaving behind paintwork that required only a quick wash and wipe.

For over a year I have been running ultra-lightweight 18-inch OZ Alleggerita wheels that I can't speak highly enough about, but I wanted to get away from the black-on-black look and return to the 'Turbo' wheels.

I had forgotten the condition I'd left them in; they'd lost a fair few battles with the curb, and all four tyres were below the tread limit. If they were to be replaced, I may as well refurb the wheels. A Google search later and I had found a wheel refurbishing specialist two roads away from me, a one-man operation owned by Jay, a car fan and wheel nut. At just £45 per wheel to remove the damage, repaint and lacquer, I'd stumbled on a bargain.

In the meantime I hunted for a fresh set of tyres. Having been to Germany last year to write about Continental's premium tyre development for this very magazine, I decided to see what 'N' rated (Porsche-approved) tyres they had, and discovered some good deals on the Continental ContactSport2 at my local Kwik Fit.

The next day, the wheels were ready. Wheel Solutions had removed all the damage, before a repaint and lacquer, this time in original Porsche silver. The results, as you can see, are perfect; they really set the car off.

Kwik Fit duly fitted my ContactSport2s, which so far I've been impressed with. Grip in



A wheel refurb and new tyres were part of a busy month for Joel's 996



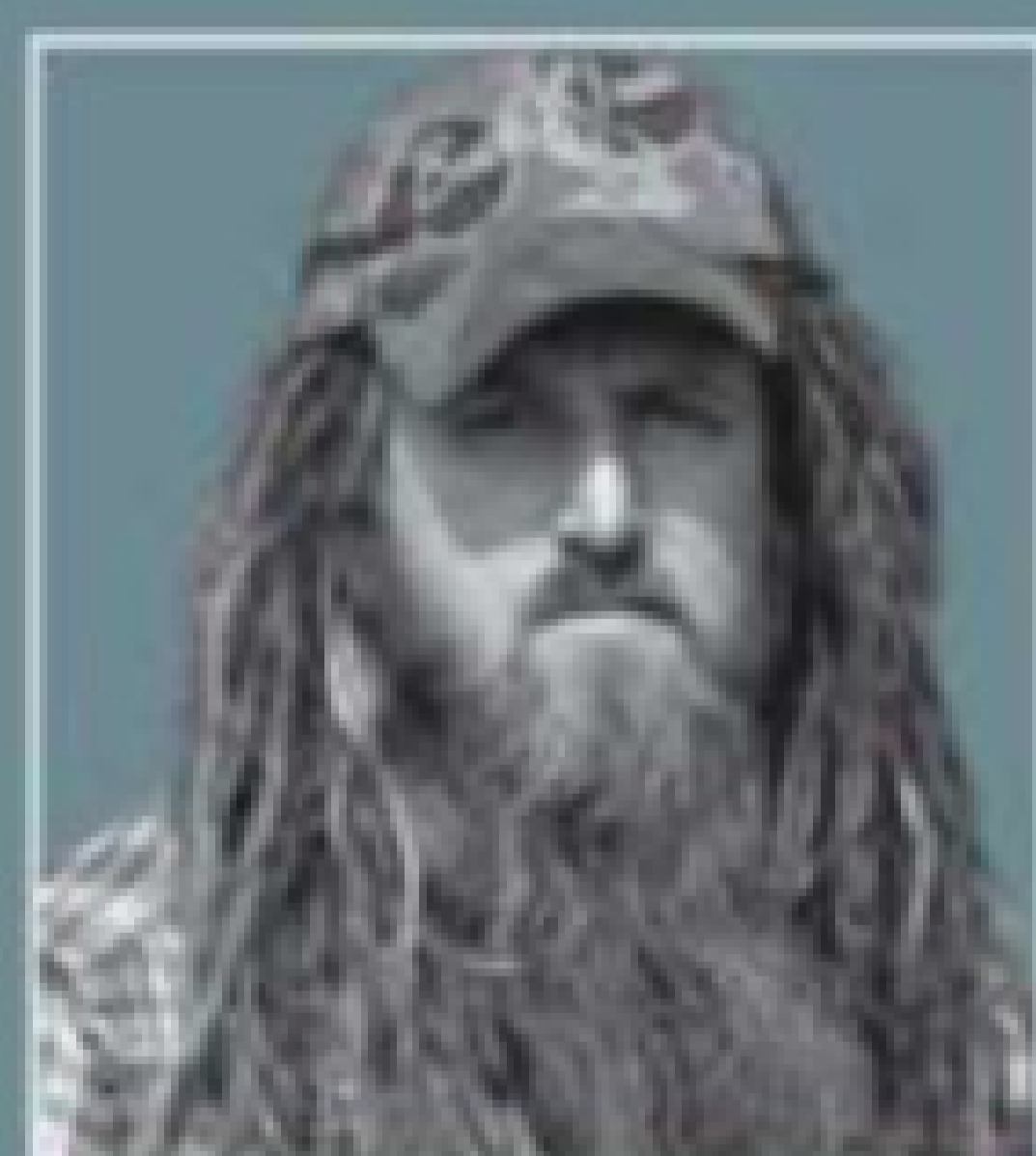
both dry and wet is excellent, braking is good and there's lots of feedback. They aren't the quietest tyres I've run, but when you have a QuickSilver Exhaust you can probably guess that silence isn't my priority.

After this, it was time to address the niggles, starting with reconditioning the faded black plastic trim on the bottom edge of the front windscreen and around my wing mirrors. This was done with a product from car care specialists Dodo Juice called Tyromania. It's really a tyre dressing, but is great for exterior plastics and rubber. For two minutes work it has really made a real difference to the finish.

The interior was also in for some TLC. This time I opted for some tyre and trim dressing from Dodo Juice's Basics of Bling range, and a few wipes were all that was required to add a satin finish to the interior plastics.

I then turned to the red leather seats. Since buying the car I have never cleaned them properly, so I got hold of a Leather Care Kit from ValetPRO. The process is simple; squirt and brush seat by seat, then wipe off with a micro fibre cloth. To apply the protector you just brush the surface and leave to dry – a quick wipe is needed in future. So that's that. The niggles have been dealt with, and I think I've earned a cuppa!

1978 911 SC



Magnus Walker
Los Angeles, USA

Date acquired:
November 2013

It appears I have caught SC fever. Having just acquired two G body cars – '78 and '79 models – these represent the newest Porsches I have owned to date. The SC has long been regarded as a bulletproof 911, and I am intrigued to discover what it's all about.

I have been searching for a quick-fix project, one that doesn't lead me too far down the Porsche slippery restoration slope, and that I could be driving in a short amount of time.

Both are former track cars with quite a few suspension goodies bolted on. As they also possessed considerable track time, history, character and patina, they seemed like the perfect starting point. As seems to be the case with most cars I see, I started

to make changes right away, and the '78 SC was no different.

Over the past year I have received thousands of emails, often asking the same question: what is an ideal first Porsche? Naturally, there is no right answer, so with this car I decided to attempt to build a 'first-time' Porsche of sorts. My goal is to construct a hot rod with personality and character that is comfortable on either road or track. Ideally, it will be like an SC version of my favourite car: #277.

I have noticed in the past how usable SCs are. On a few occasions I have been outran by a well-driven 3.0-litre torquey SC, something my long-bonnet cars lack.

I look forward to experiencing this for myself sometime soon.





This month, Total 911 took to the strip at Santa Pod, UK



2006 997.1 Carrera 4S



Maxie Islam
Stevenage, UK

Date acquired:
August 2010

This month I headed to Santa Pod in Northamptonshire for the 911 Carrera 4 shoot for **Total 911**, having organised a gathering of every C4 genre from the 911uk.com forum.

We made for a fine crew, with a 964, 993, 996.1, 996.2, 997.1, 997.2 and 991. **Total 911** editor Lee and photographer Ali arrived shortly after and began co-ordinating us, starting with a number of static shots. We then did some slow-moving shots, which involved Ali sitting in the back of his BMW 1-series with the tailgate open, DSLR to hand, with Lee driving and photographs being taken. Thankfully, the yellow double lines along the length of the strip in the

middle of the track made things easier in terms of navigation.

Afterwards, shots of each car were taken, including the interiors, engine compartments and owners. With dark clouds looming, the backdrops of the photos I personally took were indeed arresting. There's a selection of these on the 911uk forum if you would like to look.

It was another wonderful collaboration with **Total 911**, and everyone from 911uk enjoyed it. On that note, I would like to thank Jemma (964), Tim (993), Lea (996.1), Richard (996.2), Jonathan (997.2) and Lee (991) for contributing to this photoshoot and being the substance of my entry in this issue.

1989 964 Carrera 4



Gina Purcell
Oxford, UK

Date acquired:
September 2004



Saga's 911 from *The Bridge* has developed its own cult following

In the UK, there has been a cultural phenomenon unfolding on TV screens, the second wave of a Viking invasion known as Nordic Noir.

What has that got to do with **Total 911**? Well, you may have picked up on *The Bridge*, a joint Danish/Swedish police show. The Copenhagen Police is represented by Martin Rohde (Kim Bodnia), and from the Swedish side, Saga Norén (Sofia Helin).

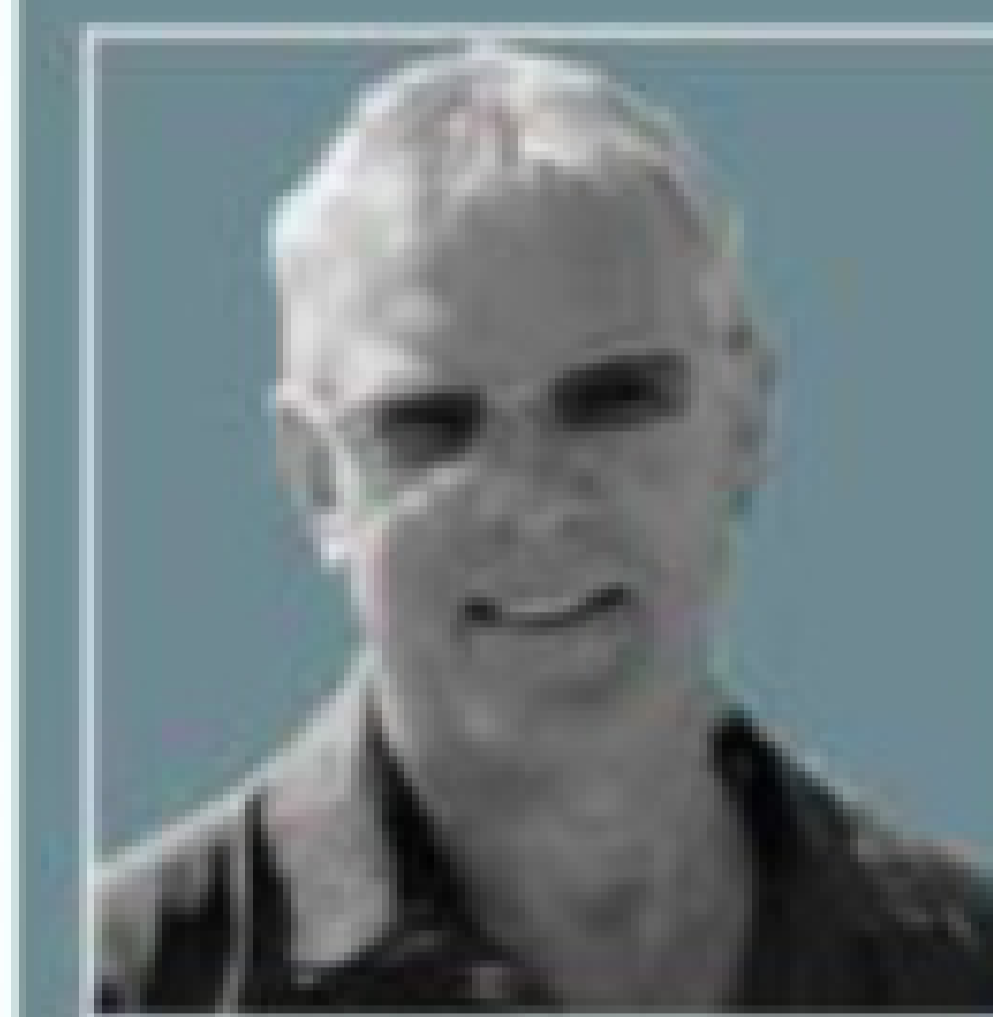
While you won't get excited about Martin's bashed-up people carrier, you can't fail to notice Saga in her 1977 Porsche 911S. Even the press here are beginning to pick up on the mini-myth surrounding Saga's 911.

The Nordicana Show – a festival of all things Nordic – was in London in February, and the stars of *The Bridge* were there, together with their Stuttgart co-star. The 911S looks immaculate on screen, but it has been in the wars. Even so, it carries the aura that many well-used Porsches do; one that whispers, "I may look a bit ratty, but give me more hard work to do. I can handle it!"

As it turns out, actress Helin has a love/hate relationship with the car – she likes its looks, but can't get on with the gearshift. She'll get more practice at driving, as a third season is in production, so perhaps she would prefer a 3.2-litre G50 instead?



Problems with the boost pressure required further investigation



2003 996 Turbo

Ray Chandler
Surrey, UK

Date acquired:
August 2011

While I was at a local Porsche independent due to a small brake caliper problem, I was asked if I was aware that the car was badly down on boost pressure.

The first stop was a visual inspection of the wastegate actuator rods. When they move they either feed more exhaust gas into the spinning turbocharger or divert it into the exhaust system, thus lowering the boost pressure and engine power. As I discovered, all was fine there.

Next was the N75 valve, which controls the movement of the device that physically moves the wastegate actuator, followed by the Mass Air Sensor (MAF), which determines how much air is flowing into the engine. As it turned out, both of these were fine.

So what else could be wrong? The DME (Digitale Motronic Elektronik) is the engine management's multi-processor computer, which measures both the ambient air pressure and temperature entering the engine, as well as the amount of fuel to be injected in relation to the driver's throttle pedal demands, depending on temperature, humidity and fuel quality.

I found quite a few articles on the effects of using 95 RON (Research Octane Number) in a 911TT, most of them pointing to a loss of power. Could it be that simple? We tried to find out by running the tank down as far as we could and filling up on 98 RON.

It worked; the boost hits an overboost pressure of 0.7 bar, and on some damp days 0.8. Now, it's noticeable that I get more mileage from a tank of 98 RON fuel than the cheaper stuff. Lesson learnt.



Ben's passion for track driving hasn't dulled

2007 997.1 GT3



Ben Przekop
Georgia, USA

Date acquired:
July 2012

The first time I drove on a race track, I was hooked. This was in 2003 shortly after I had purchased my first Porsche, a 996 Cabriolet, and I took the one-day 'Porsche Driving Experience' school (now the 'Porsche Sport Driving School') at Barber Motorsports Park near Birmingham, Alabama.

At the time I told my wife that next to our wedding day and the births of our two children, it was the happiest day of my life. I had entered another world, another dimension of existence, one in which the only things that mattered were total concentration, precision and maximum speed. Over the following decade I progressed through Porsche Club autocrosses to Driver's Ed (DE) weekends, and from novice to expert DE

driver and eventually Nationally Certified Instructor. I drove a succession of Porsches on track at Barber, Talladega and Road Atlanta, from Boxsters and Caymans to 997 S and eventually 997 GT3. As I begin my 11th year of on-track driving, I plan to expand my horizons to include as many tracks as my vacation days and budget will allow. In December I added Roebbling Road near Savannah to my CV, and Virginia International Raceway and Road America are on my target list for this summer.

If you have never experienced driving your Porsche at its limits, you really owe it to yourself to join a local Porsche club and try a few autocrosses. Or better yet, enrol in a driving school run by Porsche in your region. But don't say I didn't warn you: this is totally addictive!



Cast rockers can be a weak point in some Porsches



1972 911T Kris Clewell Minneapolis, USA

Date acquired:
February 2012

The drift felt good. My arms were crossed and the big port 3.0-litre sounded great. The tachometer hovered at 6,500-7,000rpm. Then the M&K RSR muffler screamed, and in a moment it changed for the worst. The changeover happened in an instant. I was shocked.

Fear took over. How far can I drive it? What did I do? What could it be? The car was clearly misfiring. I worried not only about mechanical damage, but also damage from unspent fuel washing out whatever cylinder was dead. Shaking, I coasted into a nearby parking lot. The unspent adrenaline made me feel ill, and the old adage, "Don't build what you can't afford to break" popped into my head. I called a tow service and waited in the car. I started it and ran around back to listen. Yep, it was definitely broken.

Like any internal failure, it's hard to know what's wrong without pulling things apart. That night I pulled a valve cover, and a rocker arm fell out, broken in half. Earlier engines had forged rocker arms, which are lighter, and the choice for high-performance valve trains. Unfortunately, their strength can cause damage in the case of valve float. If the valve hits the rocker arm and it doesn't break, this can lead to piston, cylinder or head damage, or worse.

In 1968, Porsche highlighted cast rockers as a designed weak point, with my 3.0-litre 1978 SC engine falling into the latter category. The spring seat was hammered, and the retainer was shattered in half. I had a decision to make. Rebuild the head and replace the rocker, or do everything... **911**



2005 997 Carrera S



Chris Wallbank
Leeds, UK

Date acquired:
November 2012

This month has been quiet, but other Porsche-related activities have kept me entertained, notably a visit to one of my friends to see his latest track creation.

Since purchase it has undergone an RS track-inspired conversion, most of the work being carried out by Porsche specialists Strasse of Leeds.

Another highlight was a visit to Leeds Porsche Centre to see one of the first 991 GT3s in the country. It looks amazing from

every angle, and has more road presence than its 997 predecessor. It would be my perfect track car, but the price means I can probably only ever dream of owning one. Nonetheless, my 997S will do for the time being!



1979 930 3.3 Richard Klevenhusen Rio de Janeiro, Brazil



Richard Klevenhusen
Rio de Janeiro, Brazil

Date acquired:
December 2012

Since I got my 930 last year, I have had some very interesting moments with it.

It's very common for people to stop me to take photos. I find it interesting to observe the enchantment this car, even 40 years after its release, awakens in people of all generations.

Recently, I was sitting on the beach, watching my car in the distance, when a boy asked his mother to photograph him next to my car. I saw myself in this kid, not to mention his passion for the car.

There's a chance that many of you have at some point in your lives also been 'chopped' by this passion. Where it comes from I don't know, but it definitely exists.

CALLING ALL USA READERS

Pay just \$6 an issue

If you are reading **Total 911** in the USA, we've got a special offer just for you!
Take out a subscription today and pay just **\$78 for 13 issues** – that's a saving of **40%** on the in-store price



Offer also available to
Canadian residents

SAVE 40%
On the shop price
Get the next 13 issues
for just \$78



TOLL FREE

1-800-428-3003

QUOTE CODE IMST141Q



ORDER ONLINE

www.imsnews.com/total911

ENTER CODE IMST141Q

Total 911's magazine subscriptions are now handled in North America by IMS News.
Call at local rates, in your hours and pay in US dollars.

KW competition



"The technology has convinced me."

OLAF MANTHEY

CEO Manthey Racing, 5-times overall winner
24h race Nürburgring

BECAUSE ON THE
NORDSCHLEIFE, THE
RIGHT SUSPENSION
IS THE KEY

FOR EVERY DEMAND THE **PERFECT SUSPENSION.**

KW automotive UK Ltd
Telephone: 0870 990 7536
Telefax: 0845 021 2548
eMail: info@KWautomotive.co.uk



www.KWautomotive.co.uk

911 PREMIER PORSCHE

“Introduced in the 1984 model year, the 3.2-litre Carrera was the perfect way to remind the world that the 911 was here to stay”

Everything you need for your 911

ALL 911 SPECS INSIDE
Full details of every Porsche 911 since 1963 can be found in our data file beginning on **page 88**



Find what you're looking for

Our Premier Porsche section mixes 911-related facts and information with advertisements from top Porsche suppliers around the world. To help you navigate through the section, we've colour-coded the tabs below.

COMPANY PROFILE 84



DATA FILE 88



ALSO INSIDE >>>

SHOWROOM 96

SERVICING & TUNING 99

INSURANCE & FINANCE 110

PORSCHE LIFESTYLE 111

SPECIALIST CARS OF MALTON

From humble beginnings, this seeker and seller of rare 911s has grown into a truly international business

Written by **Josh Barnett** Photography by **Chris Wallbank**





Specialist Cars has expanded from a one-man business to one encompassing 15 employees across three separate sites



There aren't too many businesses around that can arrange arrival by helicopter if necessary and, of those that can, I'd bargain that only a tiny proportion are luxury car specialists. Specialist Cars of Malton is one such company who offers this service. However, this is not the most extraordinary thing about the North Yorkshire Porsche 911 specialists. Instead, it is just one of the things that helps John Hawkins' business stand out from the crowd while providing the personal touch that has made it such a hit with rare 911 collectors.

Started over 35 years ago, Specialist Cars' foundation is certainly unassuming, and it didn't begin with a 911; it started with a 944 S2. "I sold it to my mum," founder and managing director Hawkins explains. "Then I bought it back off her and sold it to a guy in town. He had it for 30 years." While dealing with your kin for your first trade is unusual, the popularity of that 944 with his first real customer convinced John that a business could be made viable.

Like many Porsche 911 specialists, they are drawn predominantly to Zuffenhausen's iconic sports car through its versatility. While Specialists Cars are able to find any rare automobile, "there is nothing like a 911," according to Hawkins. "We could go down to Silverstone, thrash it around the track,

come back, wash it off, go shopping, and everything still works. Ferraris and Lamborghinis look nice, but there is nothing like a Porsche."

After starting out with just John, Specialist Cars initially hired just a single set of extra hands to help out. Now, there are 15 full-time employees, including six fully trained technicians, spread across three separate sites on the same industrial park. The three locations house a servicing and maintenance department, a paint and body shop, and the showroom respectively. By keeping everything that the customer could want in-house, Specialist Cars are able to control the quality of their stock and work. It is for this reason that John doesn't see any major expansion of the business in the future. "If you grow too much you would lose control of the quality," he explains. Also, all the company's customers are known on first-name terms. Expansion could see Specialist Cars lose its personable nature, something vital to the business's success.

Hawkins' business could be described as a European Canepa (if you don't understand the comparison, check out the company profile from last issue). In a similar vein to the American rare car hunters, it is the showroom that provides Specialist Cars with its most high-profile side. Like Canepa, Specialist Cars specialises in tracking down rare

and unusual Porsche 911s. If you look at their stock list, you can see that they are particularly successful in this endeavour.

Funnily enough, rare 911s are so plentiful at Specialist Cars' Malton showroom that they almost cease to be rare, their reputation ensuring that "some really cool stuff" passes through their doors. "At the moment we've got a 3.0-litre, right-hand-drive RS," Hawkins says with a slight air of nonchalance. "They only made six right-hand-drive cars, and we've restored two of them."

Currently, the sales side of the business is predominantly focused on air-cooled cars as, in John's words, "at the moment, the market is air-cooled barmy." This means that 3.2-litre Carreras are becoming regular fixtures on the Specialist Cars' classifieds. Later 964 and 993 variants are also proving incredibly popular, with demand outstripping supply. Recently, three 964s were sold within 48 hours of them coming on the market. It's the reason why Specialist Cars' advertising strategy is geared around finding rather than selling cars.

John personally sources much of the stock (around 80 per cent is owned by the company). As a truly international business, 911s are hunted around the globe, with cars coming from the likes of Singapore, Switzerland and South Africa. On top of this, select customers with ultra-rare examples



The philosophy of Specialist Cars is centred around providing an unparalleled and unrivalled level of dedication towards customer service



“It is the showroom that provides Specialist Cars of Malton with its most high-profile side”

sometimes sell their wares through Specialist Cars, making use of their extensive and loyal clientele.

Many of the cars are currently being sold to South East Asia, where the company is currently enjoying a “very good reputation.” It is this that led a South African buyer to provide Specialist Cars with a significant six-figure sum for a 964 RS he had never seen. “He [the buyer] had never seen me from Adam,” Hawkins says, almost incredulously. Turning business-like, he explains, “all that is done on your reputation. We’re very respectful of that.”

This reputation has led to 15 Carrera GTs changing hands through Specialist Cars (that’s an average of 1.5 per year since the car was released). On top of this, there have been six 959s through the business’ doors, including chassis number one, a Sport model that sold for “about \$1,000,000 a couple of years ago. It would be worth a lot more now.”

As well as the glamorous sales, Specialist Cars also offers an extensive restoration service. A

popular service, especially among the company’s Chinese customers, is a full rebuild, where everything is stripped and refurbished. “We paint everything, [including] underneath the car, back to factory standard,” Hawkins explains. “All the suspension is sent away to be refurbished and repainted. Then we powdercoat all the brackets and everything. Then we reanodise all the nuts and bolts before putting it back together.”

The quality of work from Specialist Cars’ technicians is testament to their training. While many modern mechanics rely on diagnostic tools, Hawkins’ technicians are well versed in traditional maintenance. “I was in the workshop looking for something,” John says, “and one of the technicians was tuning the carburettor with a pipe in his ear.” This sort of expertise led to one technician being sent to Hong Kong to service a customer’s collection, including a 964 RS, 993 Turbo and 993 RS, as well as “a couple of earlier cars.”

Company profile

- **Owner:** John Hawkins
- **Founded:** 1984
- **Location:** Malton, North Yorkshire, UK
- **Most unusual 911:** A 911 Junior. Built for children, it was signed off officially by Porsche and features a little Honda engine in the back.
- **Rarest 911 encountered:** Two of six 1974 3.0-litre 911 Carrera RSs, as well as some 993 GT2s.
- **Most bizarre part exchange:** Sold a Hummer H1 to the CEO of Kurt Geiger UK in exchange for a VW Camper Van, VW Beetle, a Porsche Cayenne and six pairs of shoes.

Contact

- **Website:** www.specialistcarsltd.co.uk
- **Telephone:** 0844 7000 997



With some customers having upwards of 25 cars in their collection, such a service is not unheard of at Specialist Cars. This dedication to their customers – the ability to go above and beyond what others can provide – is what has turned John Hawkins’ first 944 S2 into a 911 collector’s dream. **911**

HENDON WAY MOTORS

porsche ferrari and classic car retailers since 1952

www.hendonwaymotors.com

THIS IS YOUR GALLERY
for collectors of modern art

Hendon Way Motors was established in 1952, and is now one of Europe's leading Ferrari and Porsche specialists. Please visit our website at www.hwm.biz for more information on the company and our stock.

PORSCHE 997 - TURBO, GT2, C2S

2012 - 991 C2S PDK COUPE (GUARDS RED) 14,000 Miles

3.8L, Black Leather Interior, PDK Gearbox, Paddle Shift, PSM, PASM, PCM, Sat Nav, BOSE Sound System, Sports Chrono Pack, Sports Exhausts, Adaptive Sports Seats, Embossed Leather Headrests And Wheel Crests Fitted, Porsche Vehicle Tracking System, Bi-Xenon Headlights, Suede Headlining, 20" Alloy Wheels, Porsche Warranty.

2008 - 997 GT2 CLUB SPORT (GUARDS RED) 11,000 Miles

Carbon Interior Pack, Black Leather And Alcantara Interior, Original Rollcage Fitted, Alcantara Roof Lining, PASM, PCM, Sat Nav, Sports Chrono Pack, Xenon Headlights, Ceramic Brakes With Yellow Callipers, 19" GT2 Alloy Wheels With Michelin Super Cup Tyres, Full Porsche Service History And 2 Sets Of Keys, Outstanding Condition.

2009 - 997 TURBO CABRIOLET MAN (BASALT BLACK) 27,000 Miles

Full Black Leather Interior, PSM, PCM, Sat Nav, BOSE-CD Changer, White Dials, Sports Exhaust, Chrono Package Plus, Multi Function Steering Wheel, Xenon Headlights, 19" Gen II Turbo Alloys, Full Porsche Service History.

2008 - 997 TURBO CAB TIP S (MACADAMIA BROWN) 34,000 Miles

Macadamia Metallic, Sand Beige Full Leather Interior, Sport Chrono Pack, PCCB Porsche Ceramic Composite Brakes, BOSE Sound System, PSM, PASM, PCM, Sat Nav, Porsche VTS System, Xenon Headlights, 19" Turbo Alloy Wheels, Only 2 Previous Owners, Full Porsche Service History, Recent Major Service.

2009/58 - 997 C2S COUPE PDK (GEN II) (MIDNIGHT BLUE) 32,000 Miles

Full Grey Leather Interior, PDK Gearbox, Sports Chrono Plus, BOSE Sound System, Sports Mode, PSM, PASM, PCM, Sat Nav, White Dials, 19" Turbo S Alloy Wheels, Xenon Headlights, Full Porsche Service History.

2006 - 997 C2S CABRIOLET TIP (SILVER) 22,000 Miles

Full Metropole Blue Leather Interior, PSM, PASM, PCM, Sat Nav, White Dials, 19" Carrera S Alloy Wheels, Xenon Headlights, Original Wind Deflector, Full Porsche Service History.

2006/55 - 997 C2S COUPE TIP (ARCTIC SILVER) 33,000 Miles

Black Leather Interior, PSM, PCM, Sat Nav, BOSE Sound System, CD Changer, Multi Function Steering Wheel, White Dials, Sports Exhaust, Climate Control, Xenon Headlights, Sunroof, 19" Carrera S Alloy Wheels, Full Porsche Service History.

2005/54 - 997 C2S COUPE TIP (ARCTIC SILVER) 59,000 Miles

Grey Leather Interior, PSM, PCM, Telephone, Computer, BOSE Sound System, CD Changer, Sunroof, 19" Carrera S Alloy Wheels, Rear Park Assist, Full Service History.

PORSCHE 996 - GT2, GT3, TURBO, C2

2003 - 996 GT2 (BASALT BLACK) 20,000 Miles

Full Black Leather Interior, Electric Windows, Climate Control, Rear Roll Cage, Porsche Radio With CD Player, 18" GT3 Alloy Wheels, Full Service History (Just Been Serviced).

2004 - 996 GT3 (ATLAS GREY) 30,000 Miles

Comfort Specification, Full Black Leather Interior, Porsche Crested Sport Bucket Seats, Guards Red Seat Belt, Porsche CD Player And Radio, 18" GT3 Alloy Wheels With Coloured Crested Wheel Centres, On-Board Computer, Only 2 Owners From New, Recently Fitted Tyres, Full Porsche Service History.

2004 - 996 TURBO CABRIOLET TIP (BASALT BLACK) 53,000 Miles

Full Black Leather Interior, PSM, PCM, Sat Nav, Cruise Control, BOSE Sound System, Climate Control, Xenon Headlights, 19" 997 Turbo Diamond Cut Alloy Wheels, New Tyres All Around, Full Porsche Service History.

2004 - 996 TURBO CABRIOLET TIP (BASALT BLACK) 67,000 Miles

Full Black Leather Interior, PSM, PCM, Sat Nav, Cruise Control, BOSE Sound System, Climate Control, 19" 997 Turbo Diamond Cut Alloy Wheels, Xenon Headlights, New Tyres All Around, Full Porsche Service History.

2004 - 996 TURBO COUPE TIP S (ATLAS GREY) 53,000 Miles

Full Black Leather Interior, PSM, PCM, Sat Nav With Full Set Of DVDs For Europe, BOSE Sound System, Cruise Control, Rear Parking Sensors, 18" Turbo Alloys With A Set Of New Tyres, Full Porsche Service History.

2003 - 996 TURBO COUPE MANUAL (BASALT BLACK) 45,000 Miles

Black Leather Interior, PSM, PCM, Sat Nav, Telephone, On-Board Computer, Bose Sound System, CD Changer, Cruise Control, Sports Seats, Heated Seats, Alcantara Headlining, Sunroof, Xenon Headlights, Rear Wiper, Rain Sensor, Full Porsche Service History.

2002 - 996 TURBO COUPE MANUAL (MERIDIEN SILVER) 44,000 Miles

Mid Grey Leather Interior, PCM, PSM, Sat Nav, Telephone Module, BOSE Sound System, Sunroof, White Dials, Computer Climate Control, Xenon Headlights, 18" Turbo Alloy Wheels, Official Porsche Centre Service History.

1999 - 996 C2 CABRIOLET MANUAL (BASALT BLACK) 63,000 Miles

Black Leather Interior, PSM, Electric Windows/Mirror, Climate Control, Hard Top, Full Service History, Low Number Of Keepers, Many More Extras.

PORSCHE 993 - TURBO, C2, TARGA, CARRERA

1998 - 993 TURBO "S" COUPE MANUAL (SPEED YELLOW) 60,000 Miles

Black Leather/Carbon Fibre Interior, Litronic Lights, Sports Seats, Electric Seats, Electric Mirrors, Yellow Dials, Porsche Radio and Single CD Changer, Yellow Seat Belts, Sunroof, Rear Wiper, Yellow Callipers, 18" Turbo S Alloy Wheels, Full Service History.

1995 - 993 TURBO COUPE MANUAL (ARENA RED) 31,000 Miles

Grey Leather Interior, Wood Package, Electric Sunroof, Sports Seats, Cruise Control, Uprated Becker CD Player, Bluetooth, Speakers, Sat Nav, 18" Turbo Alloy Wheels, Official Porsche Centre Service History.

1996 - 993 C2 TARGA TIP 'VARIORAM' (TURQUOISE) 83,000 Miles

Marble Grey Leather Interior, Electric Glass Targa Roof, Electric Seats, Electric Mirrors, Porsche Stereo, Air Conditioning, Rear Wiper, On-Board Computer, 17" Targa Alloy Wheels, Full Specialist Service History.

1996 - 993 C2 COUPE TIP (ARENA RED) 73,000 Miles

Black Leather Interior, Part Electric Sports Seats, Sony Radio Player, Sunroof, Climate Control, 17" Alloy Wheels, Full Main Dealer And Porsche Specialist Service History.

1994 - 993 CARRERA COUPE TIP (BLACK METALLIC) 73,000 Miles

Black Leather Interior, Kenwood CD Player And Radio, Sunroof, Rear Wiper, Electric Windows/ Mirror, Factory Fitted Alarm System, 17" Alloy Wheels, Full Main Dealer And Porsche Specialist Service History.

1994 - 993 C2 COUPE TIP (BLACK) 92,000 Miles

Black Leather Interior, Uprated Becker Radio System, 17" Alloy Wheels, Central Locking With Immobiliser, Full Service History, Extremely Comprehensive Service History. (Spare Key, Old MOTs And Tax Discs, Original Manuals, etc)

1994 - 993 C2 COUPE TIP (BLACK) 99,000 Miles

Marble Grey Leather Interior, Sunroof, Becker Radio, Electric Seats, 17" Alloy Wheels, Full Porsche And Specialist Service History (Just Been Serviced).

1987 - 930 TURBO COUPE MAN (BLACK METALLIC) 140,000 Miles

Deep Plum Leather Interior, 3.3L Engine, KKK27 Turbo, Alcantara Headliner, Full Climate Control, Upgraded High End Sound System, Upgraded Bi-Xenon Lights, Original 16" Fuchs Alloys With New Continental N1 Tyres, Full Service History With Invoices And Photographs Documenting The Full Restoration. Concours Condition Throughout.

1989 - 911 CARRERA 3.2 CABRIOLET (G50 GEARBOX) 124,000 Miles

Iris Blue Metallic, Full Beige Interior, Manual Gearbox, Matching Numbers Example, Matching Dark Blue Hood, Fully Electric Softtop, Period Correct Fuchs Alloy Wheels, Comprehensive Service History, 10 Years With The Same Owner.

1984 - 911 3.2 COUPE SPORT (BLUE METALLIC) 72,000 Miles

Black Leather Interior, Manual, Sunroof, Electric Mirror/Window, Factory Fitted Air Conditioning, Factory Fitted Alarm System, Fully Documented Service History, Rust Free, Accident Free And Finance Free.

PORSCHE BOXSTER S

2006 - BOXSTER (987) 2.7L TIP (BASALT BLACK) 30,000 Miles

Full Black Leather Interior, PSM, BOSE Sound System, CD Changer, Full Leather Seats With Electric Adjustment And Heating, Xenon Headlights, 19" Carrera S Alloy Wheels, Full Official Porsche Service History, Two Previous Owners Only.

PORSCHE PANAMERA

2010 - PANAMERA 4 TIP (CARBON GREY) 25,000 Miles

4.5L V8 Engine, BOSE Sound System, Sat Nav, PCM Unit, Active Suspension, Parking Sensors Front and Rear, Heated Seats, Multi Function Steering Wheel, Xenon Headlights, 22" Alloy Wheels With New Tyres, Foldable Tow Hook, Very Good Service History, One Previous Keeper.

FERRARI - MODELS FROM 1967 +

2006 - F430 SPIDER V8 MANUAL (TITANIUM SILVER) 28,000 Miles

6 Speed Manual, Titanium Silver Exterior, Rosso Leather Interior, Carbon Fibre Trim, Ferrari Stereo With A Telephone Module, Manettino With Sports And Track Settings, Climate Control, Ferrari Crested Headrests. Full Ferrari Service History.

2005 - FERRARI F430 SPIDER V8 MAN (NERO BLACK) 18,000 Miles

Crema Leather Daytona Seats With Black Stitching, Ferrari Becker CD Player And Radio, Electric Seats, Carbon Pack, Climate Control, New Ball Joints All Round, 19" Ferrari F430 Alloy Wheels, Full Ferrari Service History, Just Been Serviced.

2003 - 360 SPIDER F1 (GRIGIO SILVER) 28,000 Miles

Black Leather Interior, F1 Gear Box, ASR, Challenge Grill, Climate Control, CD Changer, 19" Ferrari Alloy Wheels, Full Ferrari Service History, Two Previous Keepers.

1998 - 550 MARANELLO COUPE MANUAL (SILVER) 53,000 Miles

Navy Leather Interior, Sat Nav With DVD, ASR Sports Mode, Electric Seats, Upgraded Radio And 6 CD Changer, Climate Control, Ferrari Service History.

1996 - F355 SPIDER MANUAL (GIALLO MODENA) 28,000 Miles

Giallo Modena Yellow, Full Nero Black Interior, Optional Sports Mode, Electric Seats, Electric Hood, Tonnau Cover, Air Conditioning, 18" Ferrari 355 Alloys, Full Service History, Recently Serviced, This Car Has Been Known To Us For A Period Of 5 Years.

1973 - DAYTONA 365 GTB/4 RHD (ROSSO RED) 38,000 Miles

Black/Red Leather Interior Red Carpets, Climate Control, "Ferrari Classiche", Full Continuous History, Superb Provenance, 3 Owners From New.

1967 - 275 GTB/4 MANUAL LHD (ARGENTO SILVER) 59,000 Miles

Full Black Leather Interior, Detailed Restoration History, Original Build Sheets, Sales Invoice, Tool Kit, Wallet, Hand Books, Numerous Concourse And Awards Winner, Engine Rebuilt By Ferrari In Johannesburg 26,000 KMS Ago, Comprehensive Photos Showing The Repair And Work Done By Ferrari, Exceptional Condition Throughout.

CLASSICS - AC, PORSCHE, JAGUAR, BENTLEY, PGO, LAMBORGHINI, MERCEDES

1991 - AC COBRA LIGHTWEIGHT (BLACK METALLIC) 5,000 Miles

1 Of 26 RHD Lightweight, Black Leather, Black Metallic Coachwork With White Stripes Full Black Leather Interior, Absolutely Stunning Condition, Very Rare With Approximately Only 26 Vehicles Manufactured.

1964 - PORSCHE 356 SUPER 90 COUPE LHD (SIGNAL RED)

1600cc Signal Red Coachwork, Soft Beige Leather Interior, Left Hand Drive, 4 Speed Manual, Recent Restoration To Concours Standard, Eligible For Many European Events.

1962 - JAGUAR 3.8 MARK II AUTOMATIC LHD (BLACK) 16,478 Miles

Automatic Black Coachwork, Red Leather Interior, Power Assisted Steering, Wire Wheels, Recent Restoration To Virtually Concours Standard.

1936 - BENTLEY 4 1/4 PILLARLESS COUPE (MIDNIGHT BLUE)

Grey Leather Gurney Nutting Coachwork, 1 Owner In 40 Years, Extensive History, A True Classic Completely Original Throughout And Has Been Exhibited At Luois Vuitton Concours D'Elegance In Paris 2003. Sunroof Produced By Gurney Nutting, Chassis Completely Original Throughout.

1935 - BENTLEY DERBY 3.8L SALOON

A True Classic, Completely Original Throughout and With a Very Well Documented History, Saloon, 3792cc, Petrol, 2-Axle Rigid Body, Chassis Frame no: B51EJ, Engine no: P3BP, Date Of First Registration: 30.08.1935, Had A Bare Chassis Restoration, Rebuilt To The Highest Standard. The Restoration Took Over 5 Years.

2010 - PGO BUGGY - 500 RCN PGO BUGRACER (White) 700 Miles

Original PGO Buggy, Powered by a 500 cc Motorbike Engine, Steel Tube Frame, Right Hand Drive, Road Legal, LCD Dashboard, Locking Differential, Hand Brake Reverse.

2008/57 - LAMBORGHINI GALLARDO SPYDER (BLACK) 21,000 Miles

Interior In Nero Leather With Yellow Stitching, 19" Lamborghini Crested Alloys With Yellow Callipers, Satellite Navigation, Fully Electric Seats With Lamborghini Crests And Yellow Piping, Tracker Fitted, Bi-Xenon Lights, Full Official Lamborghini Service History, Recently Serviced, New Lamborghini Continental Tyres Fitted, An Immaculate Example.

2007 - MERCEDES CLS320 CDI (SILVER METALLIC) 59,000 Miles

Full Black Leather Interior, Diesel V6, Tiptronic (Automatic Gearbox), Sat Nav, CD Changer, Multi Function Steering Wheel, Cruise Control, Full Climate Control, ESP, Xenon Headlights, 17" Alloy Wheels With Good Tyres, Full Service History, Spare Key, All Original Manuals Present.

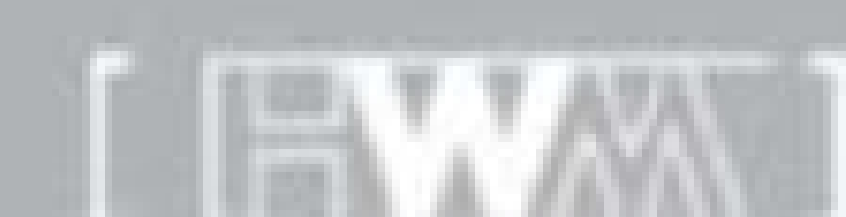
Storemags

393-395 Hendon Way London NW4 3LP

tel +44 (0)20 8202 8011 fax +44 (0)20 8202 8013 email hwm@btconnect.com

www.hendonwaymotors.com

established 1952



911 PREMIER PORSCHE

Data file

Definitive facts and figures for every 911 model from 1963 – present

Welcome to the Total 911 data file, the definitive verdict to assist you in the world of 911s. All data here has been compiled, where possible, from Porsche's own figures. The cars are organised in rows according to release date beginning with the very first model, the 901 in 1963, right up to today's latest 991. Many models were available in Coupe, Targa and Cabriolet forms, with the option of automatic transmission. Data here has been provided from the Coupe variants unless stated.

Ratings: ★★★★★

Each model is rated according to performance, handling, appearance and desirability. Do you agree? Tell us your thoughts: editorial@total911.com.

- ULTRA RARE** You'll be lucky to see one on the road.
- GREAT VALUE** Provides a generous dose of 911 for your money.
- INTRO 911** An ideal first 911 – affordable and largely trouble-free.

Sales debate: Why are 964 C4 prices matching C2s?



After its release in 1989, many Porsche purists took umbrage with the 964 Carrera 4's accentuated understeer. When the Carrera 2 version was released a year later, the C4 was relegated to minor status. However, in the last 12 months, the general rise in 964 prices has seen Carrera 2 and Carrera 4 values reach comparable levels. Total 911 spoke to Paragon's Jamie Tyler, an expert in the Porsche 911 market and a 964 C2 owner, to see what has caused the C4's revival.

"I think it's just because there is a shortage of good used 964s out there," Tyler explains. "On one popular classifieds site recently, there were only three or four Carrera 2 Coupes available so, because there is a

shortage, people are going for a 4 just so they can have a 964."

With good 964 examples proving difficult to find, there are a few areas that buyers are advised to look out for. "They are at the stage where corrosion can be an issue and the early ones were prone to oil leaks," Jamie says. However, with the originally maligned four-wheel-drive system, "there isn't a lot that tends to go wrong."

According to Tyler, the 964 price rise has seen values reach around £25,000 for a car with around 60-70,000 miles. Like many 911s, Targas and Cabriolets are less desirable but, with Tyler indicating that values seem to still be on the rise, it appears that potential 964 owners need to jump onto the ladder quickly.

911 2.0-litre **ULTRA RARE** (O series) 1963-67



The 911 that started it all off exactly 50 years ago when the prototype appeared in 1963, this is the car that set the style for all 911s to follow. Developed to eventually replace the 356, the 911 was an all-new design that was undoubtedly a better all-round drive than its predecessor.

Capacity: 1,991cc
Compression ratio: 9.8:1
Maximum power: 130bhp @ 6,100rpm
Maximum torque: 149Nm @ 5,200rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x4.5J, 165HR (15x5.5J, 185HR from 1967); Rear: 15x4.5J, 165HR
Length: 4,163mm
Width: 1,610mm
Weight: 1,075kg
0-60mph: 7.9 sec
Top speed: 152mph

RATING:
★★★★★

911S (O and A series) 1966-68



Porsche soon started off something that would continue to be popular throughout the 911's history: producing more powerful variants. The first of these was the 911S (for Super), which had a higher compression engine and twin Weber 40IDS carburettors.

Capacity: 1,991cc
Compression ratio: 9.8:1
Maximum power: 160bhp @ 6,800rpm
Maximum torque: 180Nm @ 5,200rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x4.5J, 165HR (15x5.5J, 185HR from 1967); Rear: 15x4.5J, 165HR
Length: 4,163mm
Width: 1,610mm
Weight: 1,075kg
0-60mph: 7.9 sec
Top speed: 152mph

RATING:
★★★★★

911E (C & D series) 1969-71



The C series saw an increase in engine capacity to 2,195cc. Other minor improvements made to the engine included revised cylinder heads, larger valves and stronger connecting rods. In 1970 the D series cars had hot-zinc coated undersides and other minor changes.

Capacity: 2,195cc
Compression ratio: 9.1:1
Maximum power: 155bhp @ 6,200rpm
Maximum torque: 191Nm @ 4,500rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x6J, 185VR; Rear: 15x6J, 185VR
Length: 4,163mm
Width: 1,610mm
Weight: 1,020kg
0-60mph: 7.5 sec
Top speed: 137mph

RATING:
★★★★★

911S (C & D series) 1969-71



An upgrade in engine size from 1,991cc to 2,195 gave the 911S a useful 10bhp hike in power to 180bhp. Unlike the 911E, though, the S didn't gain such an improvement in low-down power and torque, so you had to keep the revs up to get the full benefit of the extra horsepower.

Capacity: 2,195cc
Compression ratio: 9.8:1
Maximum power: 180bhp @ 6,500rpm
Maximum torque: 199Nm @ 5,200rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x6J, 185HR; Rear: 15x6J, 185HR
Length: 4,163mm
Width: 1,610mm
Weight: 1,020kg
0-60mph: 6.6 sec
Top speed: 155mph

RATING:
★★★★★

911S (F series) 1973



For the F series, the 190bhp 911S followed the same upgrades as the 911E, the most significant being the deletion of the external oil-filler flap in the right-hand rear wing. It also adopted black trim around the front and rear lights and black front quarter grilles.

Capacity: 2,341cc
Compression ratio: 8.5:1
Maximum power: 190bhp @ 6,500rpm
Maximum torque: 216Nm @ 5,200rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x6J, 185VR; Rear: 15x6J, 185VR
Length: 4,163mm
Width: 1,610mm
Weight: 1,050kg
0-60mph: 6.6 sec
Top speed: 144mph

RATING:
★★★★★

911T (F series) 1973



US-bound F series 911Ts were the first 911s to have Bosch K-Jetronic fuel injection. This was fundamentally mechanical with some electronic sensors. It gave precise injections of fuel as required, in the process keeping emissions down and improving economy.

Capacity: 2,341cc
Compression ratio: 8.0:1
Maximum power: 165bhp @ 6,200rpm
Maximum torque: 206Nm @ 4,500rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x6J, 185VR; Rear: 15x6J, 185VR
Length: 4,163mm
Width: 1,610mm
Weight: 1,050kg
0-60mph: 7.0 sec (est)
Top speed: 140mph (est)

RATING:
★★★★★

911 Carrera (G & H series) 1974-75



From 1974, Porsche used the Carrera name on its range-topping 911. The 911 Carrera used essentially the same 2.7-litre, 210bhp engine as the previous year's RS for all markets except the USA. In 1975 it was available with an optional new whaletail spoiler.

Capacity: 2,687cc
Compression ratio: 8.5:1
Maximum power: 210bhp @ 6,300rpm
Maximum torque: 255Nm @ 5,100rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x6J, 185VR; Rear: 15x7J, 215VR
Length: 4,291mm
Width: 1,610mm
Weight: 1,075kg
0-60mph: 6.1 sec
Top speed: 149mph

RATING:
★★★★★

911 Carrera 3.0 (I & J series) 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, which was essentially that from the 911 Turbo. This engine, with the addition of some minor changes, continued to power the 911 until 1989.

Capacity: 2,994cc
Compression ratio: 8.5:1
Maximum power: 200bhp @ 6,000rpm
Maximum torque: 255Nm @ 4,200rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x6J; Rear: 15x7J, 215VR
Length: 4,291mm
Width: 1,610mm
Weight: 1,093kg
0-62mph: 6.3 sec
Top speed: 145mph

RATING:
★★★★★

911L**(A series)**
1967-68

In 1967, the 911 received its first update with the A-series. This coincided with an expansion to the range: the standard car became known as the 911L (Lux) and

sat alongside the high-performance 911S and the entry-level 911T.

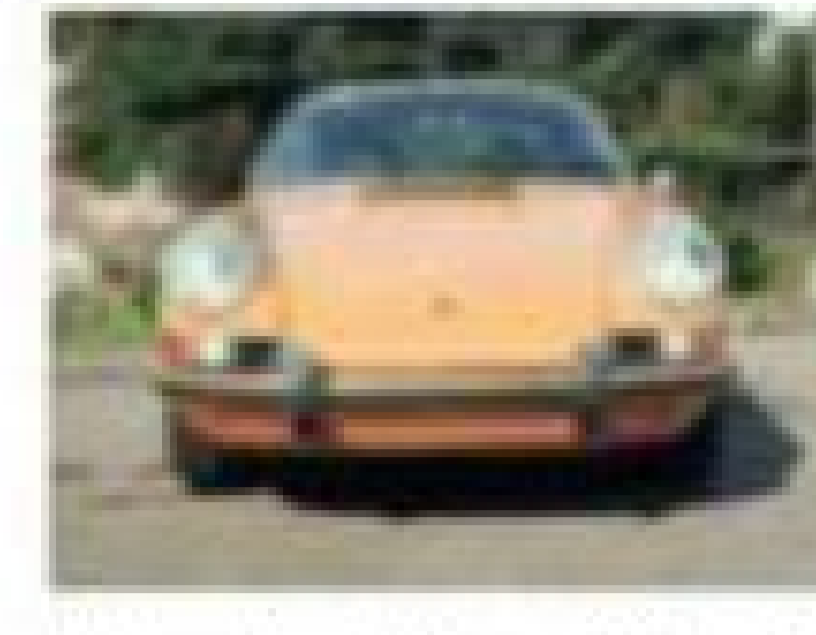
Capacity: 1,991cc
Compression ratio: 9.0:1
Maximum power: 130bhp @ 6,100rpm
Maximum torque: 173Nm @ 4,200rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x5.5J, 185HR; Rear: 15x5.5J, 185HR
Length: 4,163mm
Width: 1,610mm
Weight: 1,075kg
0-60mph: 8.4 sec
Top speed: 132mph

RATING:
★★★★★**911T****(A & B series)**
1967-68

The entry-level 911T had a 110bhp engine that, to save money, used cast-iron cylinder heads (as opposed to the Biral aluminium/iron items which gave more efficient cooling)

and carburetors instead of fuel injection. The interior specification was similar to that of the 912.

Capacity: 1,991cc
Compression ratio: 8.6:1
Maximum power: 110bhp @ 5,800rpm
Maximum torque: 156Nm @ 4,200rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x5.5J, 165HR; Rear: 15x5.5J, 165HR
Length: 4,163mm
Width: 1,610mm
Weight: 1,020kg
0-60mph: 8.8 sec (est)
Top speed: 124mph

RATING:
★★★★★**911E****(B series)**
1968-69

In 1968 the 911 received its first significant update, enabling it to evolve into what is known as the B series. Central to the new model line-up was the 911E, which replaced the 911L as the

'standard' car. The 'E' stood for 'Einspritz', which is German for injection.

Capacity: 1,991cc
Compression ratio: 9.1:1
Maximum power: 140bhp @ 6,500rpm
Maximum torque: 175Nm @ 4,500rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x6J, 185VR; Rear: 15x6J, 185VR
Length: 4,163mm
Width: 1,610mm
Weight: 1,020kg
0-60mph: 7.6 sec
Top speed: 130mph

RATING:
★★★★★**911S****(B series)**
1968-69

The 911S was updated to B series specification in line with the 911E. Like the E, the more sporty S gained a fuel injection, boosting power to a useful 170bhp. To help cope with the

extra demands this put on the engine, an additional oil cooler was fitted in the front right-hand wing.

Capacity: 1,991cc
Compression ratio: 9.9:1
Maximum power: 170bhp @ 6,800rpm
Maximum torque: 183Nm @ 5,500rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x6J, 185HR; Rear: 15x6J, 185HR
Length: 4,163mm
Width: 1,610mm
Weight: 995kg
0-60mph: 6.6 sec
Top speed: 155mph

RATING:
★★★★★**911T****(C & D series)**
1969-71

When the 911E and 911S increased their engine capacity to 2.2 litres, their little brother followed suit. Like the 911E, the torque curve was now flatter, in the process making the car

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

Capacity: 2,195cc
Compression ratio: 8.6:1
Maximum power: 125bhp @ 5,800rpm
Maximum torque: 177Nm @ 4,200rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x5.5J, 165HR; Rear: 15x5.5J, 165HR
Length: 4,163mm
Width: 1,610mm
Weight: 1,020kg
0-60mph: 7.0 sec (est)
Top speed: 123mph

RATING:
★★★★★**911E****(E series)**
1972

An increase in engine capacity to 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 a stronger unit, making it better suited to the extra power.

Capacity: 2,341cc
Compression ratio: 8.0:1
Maximum power: 165bhp @ 6,200rpm
Maximum torque: 206Nm @ 4,500rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x6J, 185VR; Rear: 15x6J, 185VR
Length: 4,163mm
Width: 1,610mm
Weight: 1,050kg
0-60mph: 7.5 sec
Top speed: 137mph

RATING:
★★★★★**911T****(E series)**
1972

The entry-level 911T received a boost in engine size to 2,341cc in 1972 to compensate for its increased power. However, a lower compression ratio and the inclusion of Zenith 40 TIN

triple-choke carburetors led to the relatively lower power output of 130bhp.

Capacity: 2,341cc
Compression ratio: 7.5:1
Maximum power: 130bhp @ 6,200rpm
Maximum torque: 196Nm @ 4,000rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x5.5J, 165VR; Rear: 15x5.5J, 165VR
Length: 4,163mm
Width: 1,610mm
Weight: 1,050kg
0-60mph: 7.6 sec
Top speed: 128mph

RATING:
★★★★★**911E****(F series)**
1973

After a number of incidents in which people filled E series 911s with petrol via the external oil-filler, the filler returned to under the engine compartment lid. The 911E

was fitted with a new type of ATS cast-aluminium wheels and had the front spoiler of the 911S.

Capacity: 2,341cc
Compression ratio: 7.5:1
Maximum power: 130bhp @ 6,200rpm
Maximum torque: 196Nm @ 4,000rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x5.5J, 165VR; Rear: 15x5.5J, 165VR
Length: 4,163mm
Width: 1,610mm
Weight: 1,050kg
0-60mph: 7.6 sec (est)
Top speed: 140mph (est)

RATING:
★★★★★**911****(G, H, I, J series)**
1974-77

For 1974, the entry-level car was badged '911' and fitted with a 2.7-litre engine. Bumpers were added to conform to US regulations, and from 1976 all 911s were hot-dip

coated and fitted with 'elephant ear' mirrors.

Capacity: 2,687cc
Compression ratio: 8.0:1
Maximum power: 150bhp @ 5,700rpm (165bhp @ 5,800 from 1,976)
Maximum torque: 235Nm @ 3,800rpm (235Nm @ 4,000rpm from '76)
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x6J; Rear: 15x6J, 185VR
Length: 4,291mm
Width: 1,610mm
Weight: 1,075kg
0-60mph: 8.5 sec
Top speed: 130mph

RATING:
★★★★★**911S****(G, H, I, J series)**
1974-77

For 1974, Porsche realigned its model line-up, and the 911S was no longer the range-topping car, but rather a mid-range model comparable to the previous 911E. It had the

same body changes as the base model, and came as standard with 15-inch ATS 'cookie cutter' wheels.

Capacity: 2,687cc
Compression ratio: 8.5:1
Maximum power: 175bhp @ 5,800rpm
Maximum torque: 235Nm @ 4,000rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x6J, 185VR; Rear: 15x6J, 185VR
Length: 4,291mm
Width: 1,610mm
Weight: 1,075kg
0-60mph: 7.0 sec
Top speed: 142mph

RATING:
★★★★★**ULTRA-RARE MODEL****ULTRA RARE****1972-73 Carrera 2.7 RS**

The RS had a 2,681cc engine that developed 210bhp. The body was lightened and fitted with flared rear arches and an optional ducktail spoiler. The RS Sport was an ultra-light model, while the Touring car retained some creature comforts.

Capacity: 2,681cc
Compression ratio: 8.5:1
Maximum power: 210bhp @ 6,300rpm
Maximum torque: 255Nm @ 5,100rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x6J, 185VR; Rear: 15x7J, 215VR
Length: 4,163mm
Width: 1,610mm
Weight: 975kg (Sport)
0-60mph: 5.6 sec
Top speed: 153mph

RATING:
★★★★★**930 3.0**

1975-77



Fitted with a KKK turbocharger, this was the world's first production car to be turbocharged. Flared arches and a whaletail spoiler created a look that would

become legendary. Brakes weren't good on early Turbos, and the four-speed gearbox was standard.

Capacity: 2,994cc
Compression ratio: 6.5:1
Maximum power: 260bhp @ 5,500rpm
Maximum torque: 343Nm @ 4,000rpm
Brakes: Front: 282mm discs; Rear: 290mm discs
Wheels & tyres: Front: 15x7J, 185/70VR; Rear: 15x8J, 215/60VR
Length: 4,291mm
Width: 1,610mm
Weight: 1,140kg (1,195kg '76)
0-62mph: 5.3 sec
Top speed: 155mph

RATING:
★★★★★**930 3.3**

1978-83



A larger engine led to an extra 40bhp of power, and an intercooler on top of the engine led to the adoption of a new 'teatray' spoiler. The brakes were upgraded

with 917 racecar-based items, larger discs and four-piston calipers.

Capacity: 3,299cc
Compression ratio: 7.0:1
Maximum power: 300bhp @ 5,500rpm
Maximum torque: 343Nm @ 4,000rpm
Brakes: Front: 304mm discs; Rear: 309mm discs
Wheels & tyres: Front: 15x7J, 185/70VR; Rear: 15x8J, 215/60VR
Length: 4,491mm
Width: 1,775mm
Weight: 1,300kg
0-62mph: 5.0 sec
Top speed: 160mph

RATING:
★★★★★**911 SC****INTRO 911**

1978-83



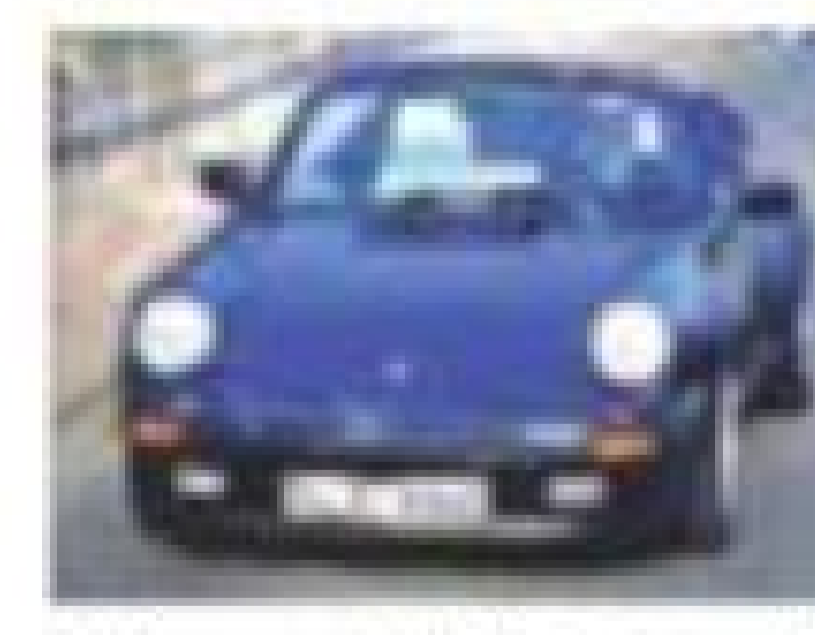
From 1978, the SC was the only normally aspirated 911. It was a development of the Carrera 3.0, but the engine produced less power to suit all markets. A Sport option

allowed for the inclusion of front and rear spoilers, 16-inch Fuchs alloy wheels, sports seats and dampers.

Capacity: 2,994cc
Compression ratio: 8.5:1/8.6:1/9.8:1
Maximum power: 180/188/204bhp @ 5,500rpm
Maximum torque: 265/265/267Nm @ 4,300rpm
Brakes: Front: 287mm discs; Rear: 295mm discs
Wheels & tyres: Front: 15x6J, 185/70VR; Rear: 15x7J, 215/60VR (16-inch optional)
Length: 4,291mm
Width: 1,626mm
Weight: 1,160kg (1978 Coupe)
0-62mph: 6.5 sec
Top speed: 141mph

RATING:
★★★★★**930 3.3**

1984-89



A revised engine added more power and torque in 1984, while in 1987 Motronic engine management improved efficiency and emissions when the car returned to the

US market. Perforated brake discs later appeared in 1988, while a five-speed gearbox arrived in 1989.

Capacity: 3,299cc
Compression ratio: 7.0:1
Maximum power: 300bhp @ 5,500rpm
Maximum torque: 432Nm @ 4,000rpm
Brakes: Front: 304mm discs; Rear: 309mm discs
Wheels & tyres: Front: 16x7J, 205/55VR; Rear: 16x9J, 245/45VR
Length: 4,491mm
Width: 1,775mm
Weight: 1,335kg
0-62mph: 4.8 sec
Top speed: 173mph

RATING:
★★★★★

Over 40 Years of Purely Porsche



Independent specialist for servicing, repair, improvement and restoration of all Porsches

T: 01865 331234 E: sales@autofarm.co.uk W: www.autofarm.co.uk

HP MOTORSPORT SPECIALISTS IN EVERYTHING PORSCHE

HP Motorsports are an Essex/East London based company specialising solely in Porsche cars. We have all diagnostics to cater for later models as well as early test equipment for 924, 944, 968 and 928's.

We offer full engine/gearbox rebuilds for all models from air cooled (our favourite) up to 997 as well as servicing and routine maintenance. Having worked on all sorts of Porsches since 1983 we bring many years of experience to our customers.



- Full Engine Rebuilds
- Gearbox Rebuilds
- Porsche Servicing
- Routine Maintenance
- Fixed Price Servicing
- Brake Replacement
- Clutch Replacement
- All Electrical Repairs
- Air Conditioning Repairs
- Pre-MOT Checks

COME SEE US AT:

HP Motorsports, Unit 1, Bracken Industrial Estate, 185 Forest Road, Essex IG6 3HX

Tel: 020 8500 2510
www.hpmotorsport.co.uk

Carrera 3.2 **INTRO 911** 1984-89



The Carrera 3.2 had almost the same galvanised body as the SC. The engine was claimed by Porsche to be 80 per cent new, and was the first production 911 motor to feature an ECU to control the ignition and fuel systems. The Getrag G50 gearbox appeared in 1987.

Capacity: 3,164cc
Compression ratio: 10.3:1
Maximum power: 231bhp @ 5,900rpm
Maximum torque: 284Nm @ 4,800rpm
Brakes: Front: 304mm discs; Rear: 309mm discs.
Wheels & tyres: Front: 15x7J, 195/65VR; Rear: 15x8J, 215/60VR (16 inches for 1989)
Length: 4,291mm
Width: 1,650mm
Weight: 1,210kg
0-62mph: 5.6 sec
Top speed: 148mph

RATING:
★★★★★

930 LE **ULTRA RARE** 1989



Essentially an SE without a slantnose front, the LE had the same engine, front spoiler, sill extensions and rear air intakes. The fully specced interior and 'Limited Edition' status meant the LE was initially thought by many to be the last ever 911 Turbo. Of course, that wasn't the case...

Capacity: 3,299cc
Compression ratio: 7.0:1
Maximum power: 330bhp @ 5,500rpm
Maximum torque: 432Nm @ 4,000rpm
Brakes: Front: 304mm discs; Rear: 309mm discs
Wheels & tyres: Front: 16x7J, 205/55VR; Rear: 16x9J, 245/45VR
Length: 4,491mm
Width: 1,775mm
Weight: 1,335kg
0-62mph: 4.6 sec
Top speed: 173mph

RATING:
★★★★★

964 Carrera 2 1990-93



Not everyone wanted four-wheel drive. Reflecting this attitude, the rear-drive Carrera 2 offered an emphatically more traditional 911 experience and was 100kg lighter, but

looked identical to the Carrera 4. Tiptronic automatic transmission was a new option.

Capacity: 3,600cc
Compression ratio: 10.3:1
Maximum power: 250bhp @ 6,100rpm
Maximum torque: 310Nm @ 4,800rpm
Brakes: Front: 298mm discs; Rear: 299mm discs
Wheels & tyres: Front: 16x6J, 205/55ZR16; Rear: 16x8J, 225/50ZR16 (17-inch rims optional)
Length: 4,250mm
Width: 1,650mm
Weight: 1,350kg
0-62mph: 5.5 sec
Top speed: 164mph

RATING:
★★★★★

964 Turbo 1990-92



This used the revised 964 body shell, extended arches and 'teatray' spoiler. The engine was essentially the 3.3-litre unit from the previous model, but updated to give more power.

Brakes were ABS-equipped. 17-inch Cup wheels were a new design, as were the 'teardrop' door mirrors.

Capacity: 3,299cc
Compression ratio: 7.0:1
Maximum power: 320bhp @ 5,750rpm
Maximum torque: 450Nm @ 4,500rpm
Brakes: Front: 322mm discs; Rear: 299mm discs
Wheels & tyres: Front: 17x7J, 205/50ZR17; Rear: 17x9J, 255/45ZR17
Length: 4,250mm
Width: 1,775mm
Weight: 1,470kg
0-62mph: 5.0 sec
Top speed: 169mph

RATING:
★★★★★

964 Turbo 3.6 1993-94



The Turbo received an engine based on the 3.6-litre 964 unit, albeit one that had been modified. Distinctive 18-inch split-rim Speedline wheels covered the big-red brake calipers. Suspension was lowered by 20mm (not in the US) and a front strut-brace was fitted.

Capacity: 3,600cc
Compression ratio: 7.5:1
Maximum power: 360bhp @ 5,500rpm
Maximum torque: 520Nm @ 4,200rpm
Brakes: Front: 322mm discs; Rear: 299mm discs.
Wheels & tyres: Front: 18x8J with 225/40ZR18 tyres; Rear: 18x10J with 265/35ZR18 tyres
Length: 4,250mm
Width: 1,775mm
Weight: 1,470kg
0-62mph: 4.8 sec
Top speed: 174mph

RATING:
★★★★★

964 3.8 RS 1993



Identified by a lightweight Turbo bodysell, large rear spoiler and 18-inch Speedline wheels. Power came from a new 3.8-litre unit with hot-film air sensor and twin exhaust. Suspension was RS-derived, while brakes were a mix of RS and Turbo 3.6 items.

Capacity: 3,746cc
Compression ratio: 11.6:1
Maximum power: 300bhp @ 6,500rpm
Maximum torque: 359Nm @ 5,250rpm
Brakes: Front: 322mm discs; Rear: 299mm discs.
Wheels & tyres: Front: 18x9J, 235/40ZR; Rear: 18x11J, 285/35ZR
Length: 4,250mm
Width: 1,775mm
Weight: 1,210kg
0-62mph: 4.9 sec
Top speed: 169mph

RATING:
★★★★★

993 Turbo 1996-98



The Turbo was fitted with two KKK turbochargers in order to reduce lag. Also, the power went to all four wheels using the Carrera 4's transmission system. Brakes

were distinctive 'big reds' under hollow-spoked 18-inch wheels.

Capacity: 3,600cc
Compression ratio: 8.0:1
Maximum power: 408bhp @ 5,750rpm
Maximum torque: 540Nm @ 4,500rpm
Brakes: Front: 322mm discs; Rear: 322mm discs
Wheels & tyres: Front: 18x8J, 225/40ZR18; Rear: 18x10J, 285/30ZR18
Length: 4,245mm
Width: 1,795mm
Weight: 1,500kg
0-62mph: 4.3 sec
Top speed: 180mph

RATING:
★★★★★

993 GT2 1995-96



Basically a 911 Turbo, but with reduced equipment. It also included rear-wheel-drive, making it a better track car. The massive front and rear spoilers and bolt-on wheel-arch extensions give it a distinctive appearance.

Capacity: 3,600cc
Compression ratio: 8.0:1
Maximum power: 430bhp @ 5,750rpm
Maximum torque: 540Nm @ 4,500rpm
Brakes: Front: 322mm discs; Rear: 322mm discs
Wheels & tyres: Front: 18x9J, 235/40ZR18; Rear: 18x11J, 285/35ZR18
Length: 4,245mm
Width: 1,855mm
Weight: 1,290kg
0-62mph: 3.9 sec
Top speed: 189mph

RATING:
★★★★★

930 SE 1986-89**ULTRA RARE**

Slantnosed and based on that of the 935 racecars, with pop-up headlamps. The front spoiler was made deeper in order to accommodate the extra oil cooler, while intakes in the rear wings fed air to the brakes. The larger turbocharger and four-outlet exhaust gave 30bhp of extra power.

Capacity: 3,299cc
Compression ratio: 7.0:1
Maximum power: 330bhp @ 5,500rpm
Maximum torque: 432Nm @ 4,000rpm
Brakes: Front: 304mm discs; Rear: 309mm discs
Wheels & tyres: Front: 16x7J, 205/55VR; Rear: 16x9J, 245/45VR
Length: 4,491mm
Width: 1,775mm
Weight: 1,335kg
0-62mph: 4.6 sec
Top speed: 173mph

RATING:
★★★★★**3.2 Clubsport** 1987-89

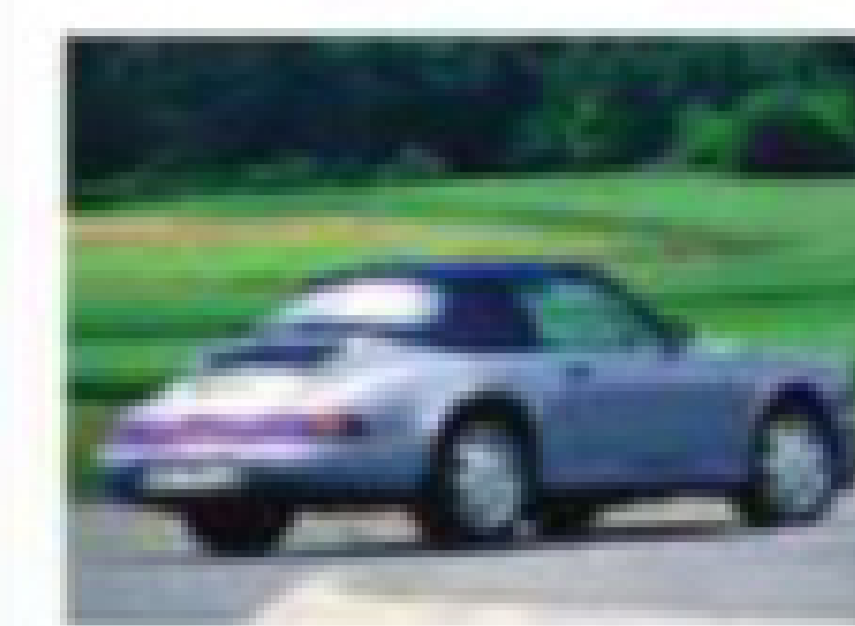
Removing the 'luxuries' from the Carrera 3.2 sliced around 40kg off the car's weight. Revised engine management gave a higher rev limit of 6,840rpm, but Porsche never claimed there was any increase in power. Suspension uprated and limited-slip differential standard.

Capacity: 3,164cc
Compression ratio: 10.3:1
Maximum power: 231bhp @ 5,900rpm
Maximum torque: 284Nm @ 4,800rpm
Brakes: Front: 304mm discs; Rear: 309mm discs
Wheels & tyres: Front: 15x6J, 195/65VR; Rear: 15x7J, 215/60VR
Length: 4,291mm
Width: 1,650mm
Weight: 1,170kg
0-60mph: 5.1 sec
Top speed: 151mph

RATING:
★★★★★**Speedster** 1989

Essentially a Carrera 3.2 with a chopped, more steeply raked windscreen and hood and stripped-out interior. Most had wide Turbo bodies. Porsche insisted that the simple hood was not designed to be 100 per cent watertight. 2,065 examples of this model were built.

Capacity: 3,164cc
Compression ratio: 10.3:1
Maximum power: 231bhp @ 5,900rpm
Maximum torque: 284Nm @ 4,800rpm
Brakes: Front: 304mm discs; Rear: 309mm discs
Wheels & tyres: Front: 15x7J, 195/65VR; Rear: 15x8J, 215/60VR
Length: 4,291mm
Width: 1,650mm
Weight: 1,210kg
0-60mph: 5.6 sec
Top speed: 148mph

RATING:
★★★★★**964 Carrera 4** 1989-93

Heavily revised bodywork, deformable bumpers over coil-spring suspension and four-wheel-drive marked this radical overhaul of the 911, which Porsche claimed was 87 per cent new. The 3.6-litre engine featured two spark plugs per cylinder and ceramic exhaust port liners.

Capacity: 3,600cc
Compression ratio: 10.3:1
Maximum power: 250bhp @ 6,100rpm
Maximum torque: 310Nm @ 4,800rpm
Brakes: Front: 298mm discs; Rear: 299mm discs
Wheels & tyres: Front: 16x6J, 205/55ZR16; Rear: 16x8J, 225/50ZR16 (17-inch rims optional)
Length: 4,250mm
Width: 1,650mm
Weight: 1,450kg
0-62mph: 5.7 sec
Top speed: 162mph

RATING:
★★★★★**964 RS** 1991-92

Around 120kg was lost by deleting 'luxuries' and fitting magnesium Cup wheels. Power was boosted by 10bhp and fed through a flywheel and uprated clutch. Suspension

was lowered by 40mm and uprated, as were the brakes. Sport and Touring versions were also offered.

Capacity: 3,600cc
Compression ratio: 10.3:1
Maximum power: 260bhp @ 6,100rpm
Maximum torque: 310Nm @ 4,800rpm
Brakes: Front: 322mm discs; Rear: 299mm discs
Wheels & tyres: Front: 17x7.5J, 205/50ZR17; Rear: 17x9J, 255/40ZR17
Length: 4,250mm
Width: 1,650mm
Weight: 1,230kg (Sport)
0-62mph: 5.2 sec
Top speed: 162mph

RATING:
★★★★★**964 C2 Speedster** 1993-94

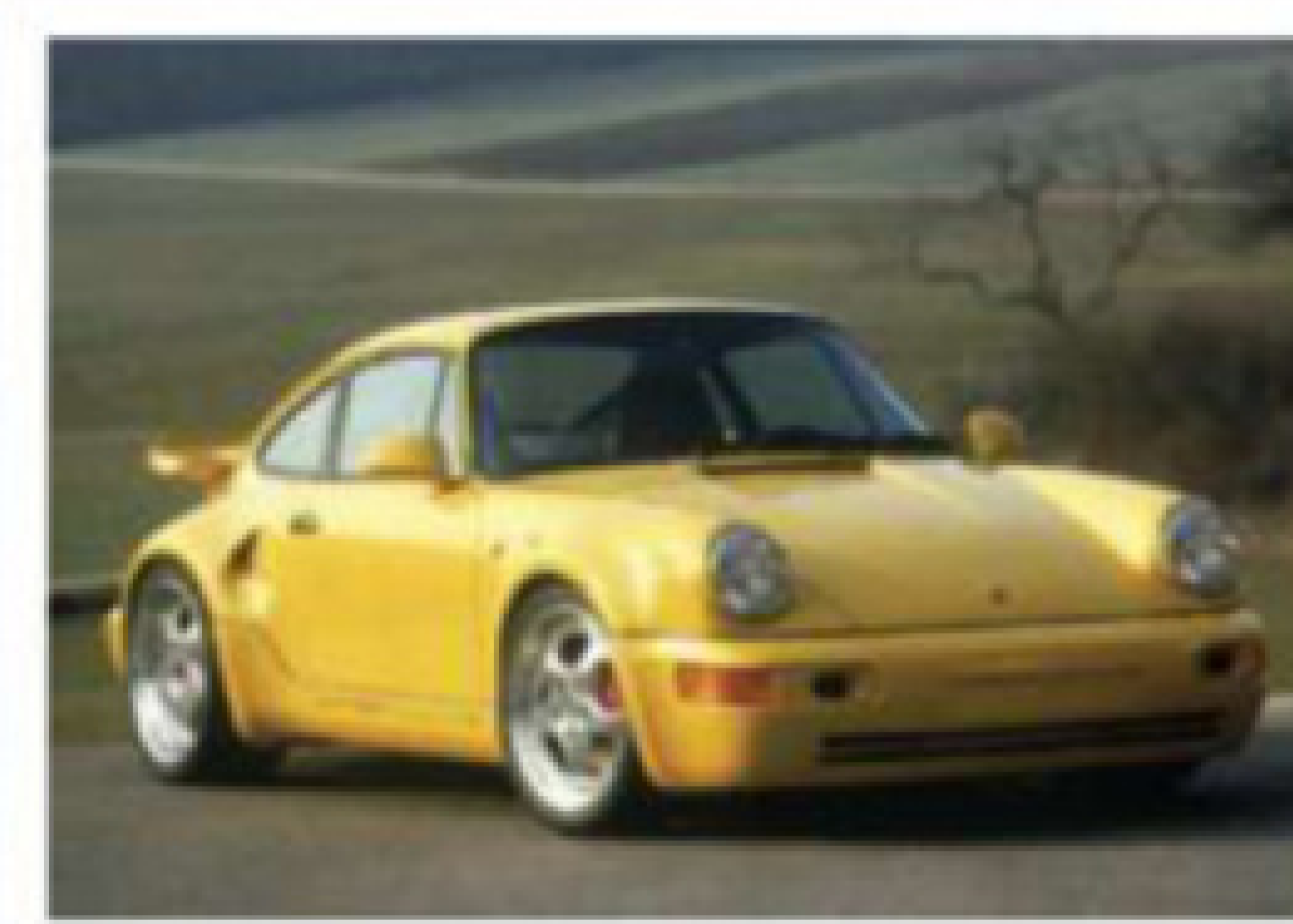
This combined the 964 bodysell with the hood and windscreen of the Carrera 3.2 Speedster plus the RS interior. It is thought that Porsche planned to build around 3,000, but only 936 were made, many in bright colours such as yellow or red with colour-coded wheels.

Capacity: 3,600cc
Compression ratio: 10.3:1
Maximum power: 250bhp @ 6,100rpm
Maximum torque: 310Nm @ 4,800rpm
Brakes: Front: 298mm discs; Rear: 299mm discs
Wheels & tyres: Front: 16x6J, 205/55ZR16; Rear: 16x8J, 225/50ZR16 (17-inch rims optional)
Length: 4,250mm
Width: 1,650mm
Weight: 1,340kg
0-62mph: 5.5 sec
Top speed: 164mph

RATING:
★★★★★**ULTRA RARE MODEL****ULTRA RARE****1992-93 964 Turbo S**

Essentially a 911 Turbo, but with 180kg of weight saved. Intakes in the rear arches funnelled air to the brakes, while the engine power was boosted by 61bhp thanks to the larger turbocharger, bigger valves and revised engine management, with the suspension uprated as per the RS. Just 80 examples were built.

Capacity: 3,299cc
Compression ratio: 7.0:1
Maximum power: 381bhp @ 6,000rpm
Maximum torque: 490Nm @ 4,800rpm
Brakes: Front: 322mm discs; Rear: 299mm discs
Wheels & tyres: Front: 18x8J, 235/40ZR18; Rear: 18x10J, 265/35ZR18
Length: 4,250mm
Width: 1,775mm
Weight: 1,290kg
0-62mph: 4.6 sec
Top speed: 180mph

RATING:
★★★★★**993 Carrera** 1993-97

Restyled bodywork had swept-back headlamps, curvaceous wings and blended-in bumpers. The engine was revised with hydraulic tappets and hot-film air flow sensor,

plus VarioRam from 1996. All-new multilink rear suspension gave improved handling.

Capacity: 3,600cc
Compression ratio: 11.3:1
Maximum power: 272bhp @ 6,000rpm
Maximum torque: 330Nm @ 5,000rpm
Brakes: Front: 304mm discs; Rear: 299mm discs
Wheels & tyres: Front: 16x7J, 205/55ZR16; Rear: 16x9J, 245/45ZR16 (17-inch rims optional)
Length: 4,245mm
Width: 1,735mm
Weight: 1,370kg (Coupe)
0-62mph: 5.6 sec
Top speed: 168mph

RATING:
★★★★★**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 the driving experience a more rear-drive-esque feel. Automatic Brake Differential (ABD) compensated for wheelspin.

Capacity: 3,600cc
Compression ratio: 11.3:1
Maximum power: 272bhp @ 6,000rpm
Maximum torque: 330Nm @ 5,000rpm
Brakes: Front: 304mm discs; Rear: 299mm discs
Wheels & tyres: Front: 16x7J, 205/55ZR16; Rear: 16x9J, 245/45ZR16 (17-inch rims optional)
Length: 4,245mm
Width: 1,735mm
Weight: 1,420kg
0-62mph: 5.8 sec
Top speed: 166mph

RATING:
★★★★★**993 Carrera RS** 1995-96

Had a lightweight body as per RS tradition, but teamed with a 3.8-litre engine. VarioRam intake system and remapped ECU to create 200bhp, fed to the rear wheels only, with suspension and brakes all uprated. It is recognisable by the fixed rear whaletail and large front spoiler.

Capacity: 3,746cc
Compression ratio: 11.5:1
Maximum power: 300bhp @ 6,000rpm
Maximum torque: 355Nm @ 5,400rpm
Brakes: Front: 322mm discs; Rear: 299mm discs
Wheels & tyres: Front: 18x8J, 225/40ZR18; Rear: 18x10J, 265/35ZR18
Length: 4,245mm
Width: 1,735mm
Weight: 1,279kg
0-62mph: 5.0 sec
Top speed: 172mph

RATING:
★★★★★**993 Carrera 4S** 1995-96

The 4S was effectively a Carrera 4 with a Turbo wide bodysell (albeit lacking a fixed rear spoiler). It also boasted Turbo brakes and suspension, and the 18-inch wheels were aesthetically similar to the equivalent Turbo items.

Capacity: 3,600cc
Compression ratio: 11.3:1
Maximum power: 285bhp @ 6,100rpm
Maximum torque: 340Nm @ 5,250rpm
Brakes: Front: 322mm discs; Rear: 322mm discs
Wheels & tyres: Front: 18x8J, 225/40ZR18; Rear: 18x10J, 285/30ZR18
Length: 4,245mm
Width: 1,795mm
Weight: 1,520kg
0-62mph: 5.3 sec
Top speed: 168mph

RATING:
★★★★★**993 Carrera S** 1997-98

The features that come with the Carrera S are similar to the Carrera 4S's, only in rear-wheel-drive. Sought after for its superb handling and looks, the split engine cover lid and wide body give it a distinctive appearance.

Capacity: 3,600cc
Compression ratio: 11.3:1
Maximum power: 285bhp @ 6,100rpm
Maximum torque: 340Nm @ 5,250rpm
Brakes: Front: 322mm discs; Rear: 322mm discs
Wheels & tyres: Front: 18x8J, 225/40ZR18; Rear: 18x10J, 285/30ZR18
Length: 4,245mm
Width: 1,795mm
Weight: 1,450kg
0-62mph: 5.4 sec
Top speed: 168mph

RATING:
★★★★★**993 Turbo S** 1998

The 993 Turbo S was a fitting final hurrah to 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 as Tiptronic had not been developed to manage the abundance of torque.

Capacity: 3,600cc
Compression ratio: 8.0:1
Maximum power: 450bhp @ 5,750rpm
Maximum torque: 585Nm @ 4,500rpm
Brakes: Front: 320mm discs; Rear: 322mm discs
Wheels & tyres: Front: 18x8J, 225/40/18; Rear: 18x10J, 285/30/18
Length: 4,245mm
Width: 1,795mm
Weight: 1,583kg
0-62mph: 4.1 sec
Top speed: 186mph

RATING:
★★★★★**996 Carrera** 1998-2001**INTRO 911**

An all-new 911 with larger, restyled bodywork and a 3.4-litre water-cooled engine. The interior was redesigned in order to enable better ergonomic efficiency and allow

for more room. The Carrera was a rear-wheel-drive, entry-level model, ideal for first-time Porsche drivers.

Capacity: 3,387cc
Compression ratio: 11.3:1
Maximum power: 300bhp @ 6,800rpm
Maximum torque: 350Nm @ 4,600rpm
Brakes: Front: 318mm discs; Rear: 299mm discs
Wheels & tyres: Front: 17x7J, 205/50ZR17; Rear: 17x9J, 255/40ZR17 (18-inch rims optional)
Length: 4,430mm
Width: 1,765mm
Weight: 1,320kg
0-62mph: 5.2 sec
Top speed: 174mph

RATING:
★★★★★**996 Carrera 4** 1998-2001

Four-wheel-drive transmission fed only five per cent of power to front in normal driving, increasing to up to 40 per cent when required. Porsche Stability Management

combined traction control, anti-slip control and Automatic Braking Differential.

Capacity: 3,387cc
Compression ratio: 11.3:1
Maximum power: 300bhp @ 6,800rpm
Maximum torque: 350Nm @ 4,600rpm
Brakes: Front: 318mm discs; Rear: 299mm discs
Wheels & tyres: Front: 17x7J, 205/50ZR17; Rear: 17x9J, 255/40ZR17 (18-inch rims optional)
Length: 4,430mm
Width: 1,765mm
Weight: 1,375kg
0-62mph: 5.2 sec
Top speed: 174mph

RATING:
★★★★★

911 technology explained



VarioRam

Upon its launch in 1995, critics marvelled at the new VarioRam technology. Total 911 explains the mechanics behind Porsche's variable induction

Porsche's VarioRam induction system was designed to improve low to mid-range torque by optimising airflow at different rpms. Introduced on the 993 Carrera RS's M64/20 engine in 1995, the technology was rolled out onto the standard 993 Carrera range when the 1996 M64/21 engine was introduced.

The previous M64/05 engine made use of a single throttle body and a resonance chamber tuned to make use of Helmholtz Resonance (where pressure pulses caused by the opening and closing of the intake valves cause air to be bounced off the walls of the resonance chamber and forced into the combustion chamber).

VarioRam adds a second upper throttle body that flows through to a central plenum. From this central plenum, six vacuum-operated induction runners are mounted.

Below 5,000rpm, the ECU electronically triggers these six runners (one for each cylinder), extending them to nearly twice their normal length and using rubber seals to cut off the primary throttle

body and resonance chamber. The resulting increase in runner length makes use of the Venturi effect – by reducing the cross-sectional area, the speed of the airflow is increased. The augmented air velocity aids cylinder charging while lowering the optimal rpm for resonance induction. By improving low-range airflow, VarioRam engines enjoy around 20 per cent more torque at 5,000rpm than non-VarioRam units.

Once the engine reaches 5,000rpm and the throttle is more than 50 per cent open, the induction runners are retracted to their normal length. The primary throttle body is reengaged, and one of the connecting tunnels between the two banks of the resonance chambers is opened via a vacuum-operated valve. Above 5,800rpm, the second connecting tunnel is opened, again through the use of a valve.

These final two stages operate in the same way as non-VarioRam engines, using the resonance chamber to improve the volumetric efficiency of the engine at high rpm.

Head to head: 993 RS vs 997 GT3 RS



Both have 3.8-litre engines, manual gearboxes and, most importantly, two letters on the back: 'RS'. However, these two Riviera blue 'Rennsport' 911s differ in one crucial aspect.

Released in 1995, the 993 Carrera RS's engine is arguably the pinnacle of Porsche's naturally aspirated air-cooled development. Turning out 300bhp and weighing 1,279 kilograms, this 993 can hit 60mph from standstill in five seconds. Its combination of air-cooling and low weight has marked it out as the purist's 911.

By contrast, the 997 GT3 RS's water-cooled powerplant is the epitome of modern 911 technology. With 450bhp on tap and a weight of just 1,370 kilograms, the latest Porsche to bear the legendary RS tag is arguably a racing car for the road. However, despite their differences, this ultimate RS pairing share many of the same traits.

To find out which RS triumphed in our head-to-head test, pick up a copy of issue 106 from imagineshop.co.uk, or download it from greatdigitalmags.com.

996 GT3

1998-2000



Commonly called the Gen1 GT3, this was a lightweight 996 with a 3.6-litre engine driving the rear wheels. Suspension was lowered by 30mm and brakes updated.

Available in Clubsport and Comfort guises, 1,890 were built, of which 103 were right-hand-drive.

Capacity: 3,600cc
Compression ratio: 11.7:1
Maximum power: 360bhp @ 6,300rpm
Maximum torque: 370Nm @ 5,100rpm
Brakes: Front: 330mm discs; Rear: 330mm discs
Wheels & tyres: Front: 18x8J, 225/40ZR18; Rear: 18x10J, 285/30ZR18
Length: 4,430mm
Width: 1,765mm
Weight: 1,350kg
0-62mph: 4.8 sec
Top speed: 188mph

RATING:
★★★★★

996 Turbo

2000-05



Distinguished by wide rear arches, air intakes and a deep front spoiler, plus part-fixed, part-retractable rear spoiler. The 3.6-litre engine is different to the naturally aspirated 996 unit and fitted with twin KKK K17 turbochargers and VarioCam Plus. PSM is standard.

Capacity: 3,600cc
Compression ratio: 9.4:1
Maximum power: 420bhp @ 6,000rpm
Maximum torque: 560Nm @ 2,700 to 4,600rpm
Brakes: Front: 330mm discs; Rear: 330mm discs
Wheels & tyres: Front: 18x8J, 225/40ZR18; Rear: 18x11J, 295/30ZR18
Length: 4,435mm
Width: 1,830mm
Weight: 1,540kg
0-62mph: 4.2 sec
Top speed: 189mph

RATING:
★★★★★

996 GT2

2001-03



A lightweight, Turbo-bodied 996 with updated turbocharged engine that produced 460bhp and drove the rear wheels. The suspension was updated,

while brakes had ceramic discs. Revised ECU later gave extra 21bhp and came with PCCB as standard.

Capacity: 3,600cc
Compression ratio: 9.4:1
Maximum power: 462bhp @ 5,700rpm
Maximum torque: 620Nm @ 3,500 to 4,500rpm
Brakes: Front: 350mm discs; Rear: 350mm discs
Wheels & tyres: Front: 18x8.5J, 235/40ZR18; Rear: 18x12J, 315/30ZR18
Length: 4,435mm
Width: 1,830mm
Weight: 1,440kg
0-62mph: 4.1 sec
Top speed: 195mph

RATING:
★★★★★

Gen2 996 C2

2001-04



Face-lifted with Turbo-style headlamps and revised front and rear bumpers. Fitted with the more powerful 3.6-litre engine, VarioCam Plus and other refinements, Manual and Tiptronic transmission was also improved on. Moreover, the cabin received minor updates.

Capacity: 3,596cc
Compression ratio: 11.3:1
Maximum power: 320bhp @ 6,800rpm
Maximum torque: 370Nm @ 4,250rpm
Brakes: Front: 318mm discs; Rear: 299mm discs
Wheels & tyres: Front: 17x7J, 205/50ZR17; Rear: 17x9J, 255/40ZR17 (18-inch rims optional)
Length: 4,430mm
Width: 1,765mm
Weight: 1,345kg
0-62mph: 5.0 sec
Top speed: 178mph

RATING:
★★★★★

996 GT3 RS

2004-05



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

GT3. Moreover, it also came with PCCB included as standard. White with side inscriptions in blue or red.

Capacity: 3,600cc
Compression ratio: 11.7:1
Maximum power: 381bhp @ 7,400rpm
Maximum torque: 385Nm @ 3,500 to 5,000rpm
Brakes: Six piston calipers front, four piston rear
Wheels & tyres: Front: 18x8.5J, 235/40ZR18; Rear: 18x11J, 295/30ZR18
Length: 4,435mm
Width: 1,770mm
Weight: 1,360kg
0-62mph: 4.4 sec
Top speed: 190mph

RATING:
★★★★★

996 Turbo S

2004-05



A 911 Turbo with the previously optional 30bhp power upgrade, consisting of larger turbochargers, updated intercoolers and revised ECU. The ceramic brakes were standard, and 18-inch alloys finished in GT Metallic Silver paint, in addition to the highly specced interior.

Capacity: 3,600cc
Compression ratio: 9.4:1
Maximum power: 450bhp @ 5,000rpm
Maximum torque: 620Nm @ 3,500 to 4,400rpm
Brakes: Front: 350mm discs; Rear: 350mm discs
Wheels & tyres: Front: 18x8J, 225/40ZR18; Rear: 18x11J, 295/30ZR18
Length: 4,435mm
Width: 1,830mm
Weight: 1,590kg
0-62mph: 4.1 sec
Top speed: 191mph

RATING:
★★★★★

997 Carrera 4

2005-08



The Carrera 4 was much like the 997 Carrera, but with drive to all four wheels via a multi-disc viscous coupling that transferred between five and 40 per cent of traction to the front wheels. It was 44mm wider at the rear than the Carrera in order to allow for wider wheels.

Capacity: 3,596cc
Compression ratio: 11.8:1
Maximum power: 325bhp @ 6,800rpm
Maximum torque: 370Nm @ 4,250rpm
Brakes: Front: 318mm discs; Rear: 299mm discs
Wheels & tyres: Front: 18x8J, 235/40ZR18; Rear: 18x11J, 295/35ZR18
Length: 4,427mm
Width: 1,852mm
Weight: 1,495kg
0-62mph: 5.1 sec
Top speed: 174mph

RATING:
★★★★★

997 Carrera 4S

2005-08



The same 3.8-litre, 355bhp engine as the Carrera S, but coupled with the four-wheel-drive system on the Carrera 4. It also had 44mm wider rear arches to compensate for the 11-inch wider wheels and helped give a more aggressive look.

Capacity: 3,824cc
Compression ratio: 11.8:1
Maximum power: 355bhp @ 6,800rpm
Maximum torque: 400Nm @ 4,250rpm
Brakes: Front: 330mm discs; Rear: 330mm discs
Wheels & tyres: Front: 19x8J, 235/35ZR19; Rear: 19x11J, 295/30ZR19
Length: 4,427mm
Width: 1,852mm
Weight: 1,550kg
0-62mph: 4.8 sec
Top speed: 179mph

RATING:
★★★★★

GREAT VALUE GREAT

2001-2005 996 Carrera 4S

Basically a Carrera 4 with the Turbo bodyshell, without rear air intakes, and with a full-width rear reflector panel. The suspension and brakes were similar to the Turbo, while wheels were 18-inch items. The interior spec was higher than that of conventional Carrera 4.

Capacity: 3,596cc
Compression ratio: 11.3:1
Maximum power: 320bhp @ 6,800rpm
Maximum torque: 370Nm @ 4,250rpm
Brakes: Front: 330mm discs; Rear: 330mm discs
Wheels & tyres: Front: 18x8J, 225/40ZR18; Rear: 18x11J, 295/30ZR18
Length: 4,435mm
Width: 1,830mm
Weight: 1,495kg
0-62mph: 5.0 sec
Top speed: 175mph

RATING:
★★★★★

Gen2 996 C4

2001-04



Face-lifted in line with the rear-drive Carrera, this was the four-wheel-drive incarnation of the aforementioned earlier model. For most people who have experienced it, it drove

a lot like the Carrera and, indeed, there is very little to choose from between them.

Capacity: 3,596cc
Compression ratio: 11.3:1
Maximum power: 320bhp @ 6,800rpm
Maximum torque: 370Nm @ 4,250rpm
Brakes: Front: 318mm discs; Rear: 299mm discs
Wheels & tyres: Front: 17x7J, 205/50ZR17; Rear: 17x9J, 255/40ZR17 (18-inch rims optional)
Length: 4,430mm
Width: 1,765mm
Weight: 1,405kg
0-62mph: 5.3 sec
Top speed: 175mph

RATING:
★★★★★

Gen2 996 GT3

2003-05



Also known as the GT3 Gen2, it was based on the facelifted 996 Carrera, but with new spoilers. The 3.6-litre engine produced 381bhp. Suspension was lowered and

uprated, and ceramic brakes optional. The interior was full-spec unless you opted for the Clubsport.

Capacity: 3,600cc
Compression ratio: 11.7:1
Maximum power: 381bhp @ 7,400rpm
Maximum torque: 385Nm @ 5,000rpm
Brakes: Front: 350mm discs; Rear: 330mm discs
Wheels & tyres: Front: 18x8.5J, 235/40ZR18; Rear: 18x11J, 295/30ZR18
Length: 4,435mm
Width: 1,770mm
Weight: 1,380kg
0-62mph: 4.5 sec
Top speed: 190mph

RATING:
★★★★★

997 Carrera

2004-08



Fully revised 911 with 993-influenced bodywork and a new interior. The 3.6-litre engine was like the 996, but refined for more power. Additionally, twin exhaust

tailpipes were coupled with rear-wheel drive via six-speed Tiptronic transmission.

Capacity: 3,596cc
Compression ratio: 11.8:1
Maximum power: 325bhp @ 6,800rpm
Maximum torque: 370Nm @ 4,250rpm
Brakes: Front: 318mm discs; Rear: 299mm discs
Wheels & tyres: Front: 18x8J, 235/40ZR18; Rear: 18x10J, 265/40ZR18
Length: 4,427mm
Width: 1,808mm
Weight: 1,395kg
0-62mph: 5.0 sec
Top speed: 177mph

RATING:
★★★★★

997 Carrera S

2004-08



As per the 997 Carrera, but with the more powerful 3.8-litre engine and PASM. 19-inch wheels came as standard, with larger 330mm ventilated discs. It had Quad

exhaust tailpipes, and was available as rear-wheel-drive only.

Capacity: 3,824cc
Compression ratio: 11.8:1
Maximum power: 355bhp @ 6,800rpm
Maximum torque: 400Nm @ 4,600rpm
Brakes: Front: 330mm discs; Rear: 330mm discs
Wheels & tyres: Front: 18x8J, 235/40ZR18; Rear: 18x10J, 265/40ZR18
Length: 4,427mm
Width: 1,808mm
Weight: 1,495kg
0-62mph: 4.7 sec
Top speed: 182mph

RATING:
★★★★★

997 Turbo

2005-10



Similar to the 997 Carrera 4S body, but with extra intakes at the front and sides. It essentially had the 996 Turbo engine, but with all-new twin turbos, Variable Turbine

Geometry (VTG) that effectively gave the best of both small and large turbochargers.

Capacity: 3,600cc
Compression ratio: 9.0:1
Maximum power: 480bhp @ 6,000rpm
Maximum torque: 620Nm @ 2,100-4,000rpm
Brakes: Front: 350mm discs; Rear: 350mm discs
Wheels & tyres: Front: 8.5Jx19, 235/35/ZR19; Rear: 11Jx19, 305/30/ZR19
Length: 4,450mm
Width: 1,852mm
Weight: 1,585kg
0-62mph: 3.9 sec
Top speed: 193mph

RATING:
★★★★★

997 GT3

2006-07



Track-focused car based on narrow-bodied Carrera and with reworked 996 GT3 engine. PASM was standard, but reworked to suit the sporting traits. Revs to

8,400rpm, 200rpm higher than 996 GT3. VarioCam was used on the 997 GT3 to improve torque.

Capacity: 3,600cc
Compression ratio: 12.0:1
Maximum power: 415bhp @ 7,600rpm
Maximum torque: 405Nm @ 5,500rpm
Brakes: Front: 380mm discs; Rear: 340mm discs
Wheels & tyres: Front: 19x8.5J, 235/35ZR19; Rear: 19x12J, 305/30ZR19
Length: 4,445mm
Width: 1,808mm
Weight: 1,395kg
0-62mph: 4.3 sec
Top speed: 192mph

RATING:
★★★★★BRAUNTON
ENGINEERING

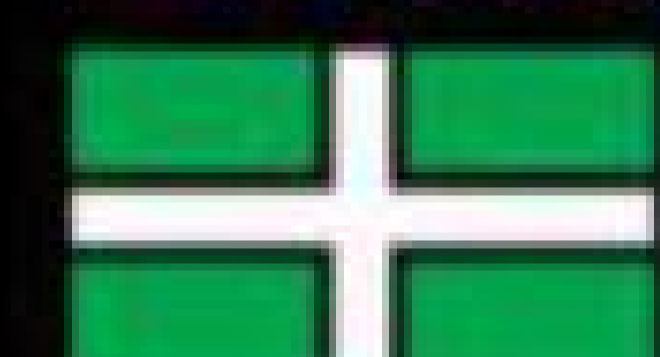
- Servicing
- Restoration
- Repair
- Rebuild
- MOT testing station
- 4 wheel alignment



www.braunttonengineering.co.uk

01271 814144

Porsche Specialist

DEVON
EX33 2JP

Porsche

TORQUE
Porsche Specialist

We carry out a full range of Porsche servicing and Porsche repair projects on all popular and classic models including diagnostics and body repair work. Based in Uxbridge and serving the entire West London area, Porsche Torque are able to undertake all types of mechanical, cosmetic and restoration work to your complete satisfaction.

Fully equipped Porsche workshop
Bodywork and restorations
Diagnostics and Porsche tuning
Free estimates

Engine & gearbox rebuild specialists
Collection & delivery service
Pop in for a free mechanical assessment
Audio & alarm fitting

50 YEARS COMBINED EXPERIENCE FROM EX OPC MASTER TECHNICIANS (AFN, HATFIELD)



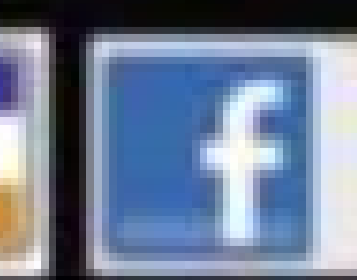
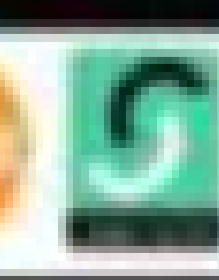
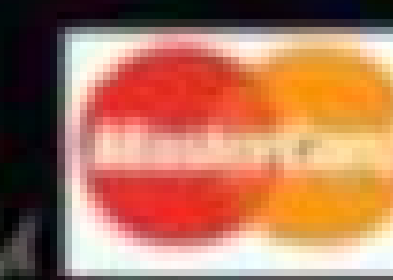
01895 814446 / 07507 623997

www.porschespecialistsheathrow.co.uk

Unit C2, Arun Buildings, Arundel Road, Uxbridge. UB8 2RP

Mobil 1
SERVICE CENTRE

all major credit cards are accepted

Find us on
Facebook



At JMG we are dedicated to helping you get the best experience from your Porsche.

We service, diagnose, repair and improve Porsche Vehicles in our **South of England** workshops.

JMG Porsche are a family-run business built on a foundation of three generations of Porsche experience stretching back to the early 1970s.

JMG Porsche
98 Cobham Road,
Ferndown Ind Est.
Wimborne
Dorset
BH21 7RE

Tel: 01202 488800 or 07000 996911

Email: service@jmggarage.co.uk
mailorder@jmggarage.co.uk

www.jmggarage.co.uk



PCGB Team Championship & Class 1 Winners 2013



ENGINE REPAIR SPECIALISTS

986 987 996 997 Cayman



EXCHANGE CYLINDER BLOCKS AVAILABLE NOW!

T: 01204 302809

E: auto@hartech.org

www.hartech.org

997 GT3 RS

2006-07



The RS was similar to GT3, but with the inclusion of the wider rear bodyshell of the Carrera S. 20kg of weight was saved from the original model thanks to carbon fibre engine

cover and rear wing and plastic rear window, not to mention the relatively lightweight interior.

Capacity: 3,600cc
Compression ratio: 12.0:1
Maximum power: 415bhp @ 7,600rpm
Maximum torque: 405Nm @ 5,500rpm
Brakes: Front: 380mm discs; Rear: 340mm discs
Wheels & tyres: Front: 19x8.5J, 235/35ZR19; Rear: 19x12J, 305/30ZR19
Length: 4,445mm
Width: 1,852mm
Weight: 1,375kg
0-62mph: 4.2 sec
Top speed: 187mph

RATING:
★★★★★

997 GT2

2007-08



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

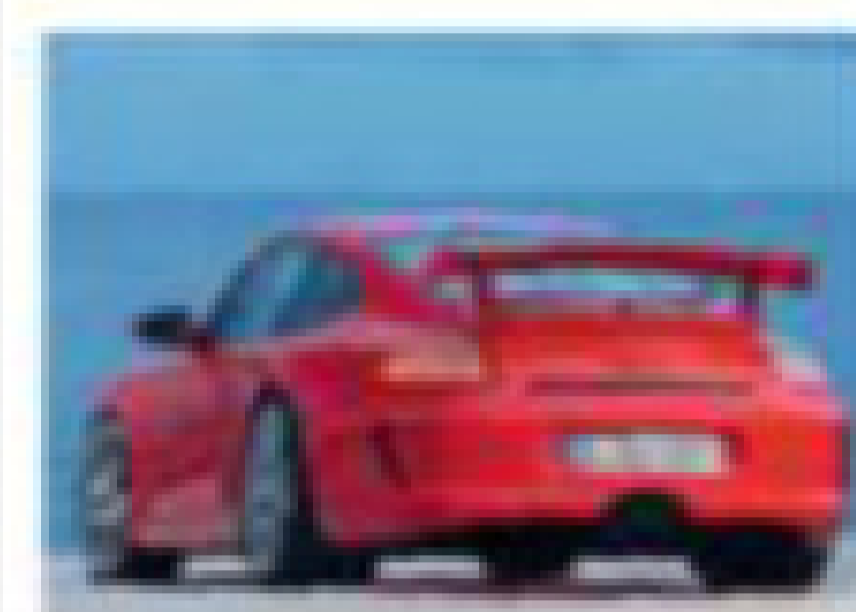
523bhp. Porsche Stability Management and Porsche Active Suspension Management used.

Capacity: 3,600cc
Compression ratio: 9.0:1
Maximum power: 530bhp @ 6,500rpm
Maximum torque: 680Nm @ 2,200-4,500rpm
Brakes: Front: 380mm discs; Rear: 350mm discs
Wheels & tyres: Front: 8.5Jx19, 235/35/ZR19; Rear: 11Jx19, 305/30/ZR19
Length: 4,469mm
Width: 1,852mm
Weight: 1,440kg
0-62mph: 3.7 sec
Top speed: 204mph

RATING:
★★★★★

Gen2 997 GT3

2009-2012



This was updated as per the Carrera, but with a unique front spoiler and rear wing, revised PASM, centre-lock wheels and better brakes. An already great car made better.

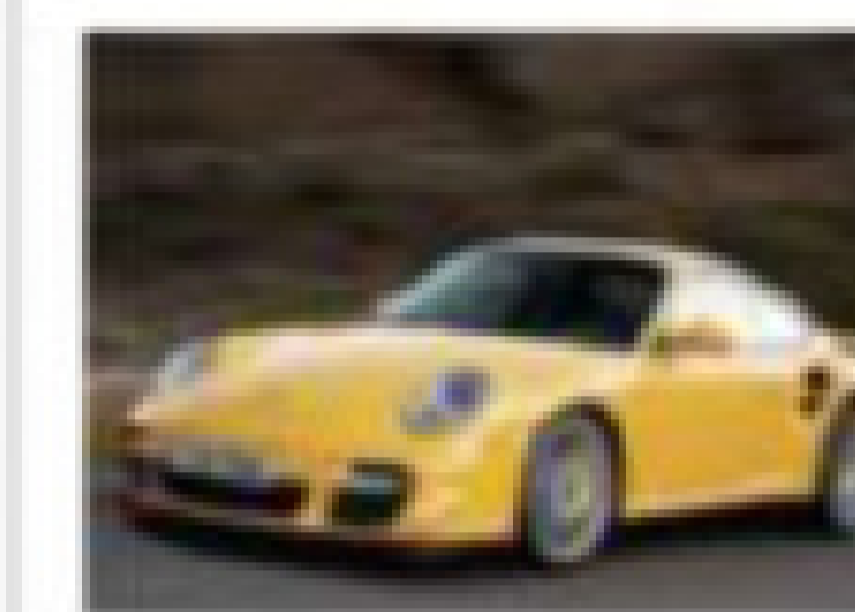
Problems with rear hubs led to a recall for model year 2010 GT3s.

Capacity: 3,800cc
Compression ratio: 12.2:1
Maximum power: 435bhp @ 7,900rpm
Maximum torque: 430Nm @ 3250rpm
Brakes: Front: 380mm discs; Rear: 350mm discs
Wheels & tyres: Front: 8.5x19J 235/35 ZR19 Rear: 12x19J 305/30 ZR19
Length: 4,460mm
Width: 1,808mm
Weight: 1,395kg
0-62mph: 4.1sec
Top speed: 194mph

RATING:
★★★★★

Gen2 997 Turbo

2009-13



Basically the same as the original 997 Turbo, but with new LED taillights and driver lights up front. Features larger tailpipes, plus a larger 3.8-litre engine with direct

fuel injection. PDK transmission is optional. Fuel consumption cut by 16 per cent.

Capacity: 3,800cc
Compression ratio: 9.8:1
Maximum power: 500bhp @ 6,000rpm
Maximum torque: 650Nm @ 1,950-5,000rpm
Brakes: Front: 350mm discs; Rear: 350mm discs
Wheels & tyres: Front: 8.5Jx19, 235/35/ZR19; Rear: 11Jx19, 305/30/ZR19
Length: 4,450mm
Width: 1,852mm
Weight: 1,570kg
0-62mph: 3.4 sec
Top speed: 194mph

RATING:
★★★★★

997 C4 GTS

2010-



As Carrera 2 997 GTS but slightly heavier with four-wheel drive. In either C2 or C4 form, the 997 GTS represented a great saving over optioning up a 997 Carrera counterpart.

Capacity: 3,800cc
Compression ratio: 12.5:1
Maximum power: 402bhp @ 7,300rpm
Maximum torque: 420Nm @ 4,200 - 5,600rpm
Brakes: Front: 330mm discs; rear: 330mm discs
Wheels & tyres: Front: 8.5Jx19, 235/35/ZR19; Rear: 11Jx19, 305/30/ZR19
Length: 4,435mm
Width: 1,852mm
Weight: 1,555kg
0-62mph: 4.6 sec
Top speed: 188mph

RATING:
★★★★★

997 GT2 RS

2010-



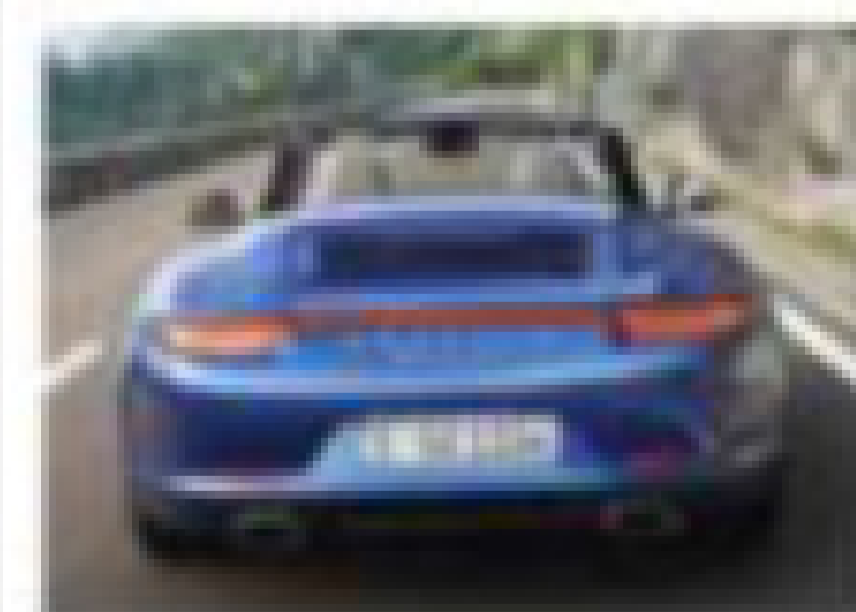
The GT2 went back to its roots, with an RS-style lightweight body and interior, plus extra power (620bhp). Instantly recognisable over standard GT2 thanks to lashings of carbon fibre on bonnet, air intake and mirrors.

Capacity: 3,600cc
Compression ratio: 9.0:1
Maximum power: 620bhp @ 6,500rpm
Maximum torque: 700Nm @ 2,500 - 5,500rpm
Brakes: Front: 380mm discs; Rear: 350mm discs
Wheels & tyres: Front: 9Jx19, 245/35ZR19; Rear: 12Jx19, 325/30ZR19
Length: 4,460mm
Width: 1,852mm
Weight: 1,370kg
0-62mph: 3.5 sec
Top speed: 205mph

RATING:
★★★★★

991 Carrera 4

2012-



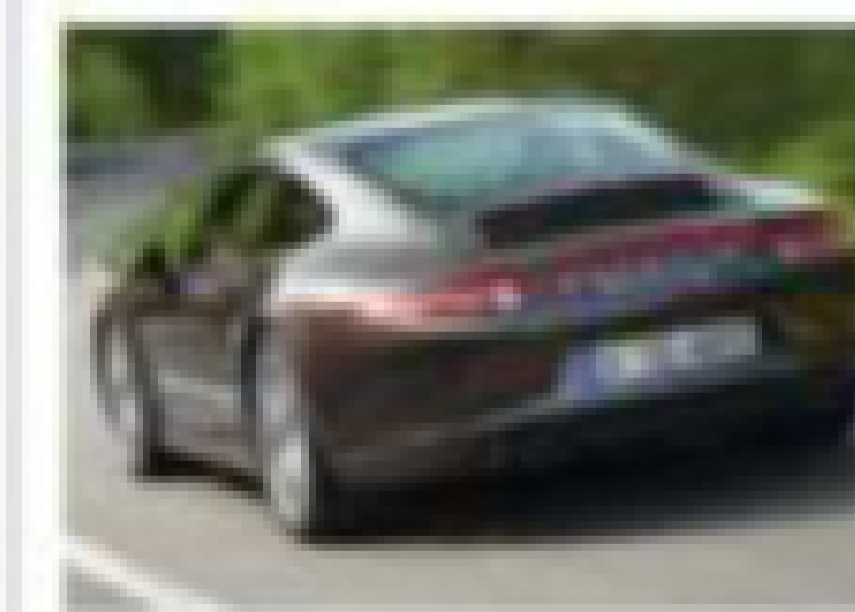
This model enjoys a wider body, with rear fenders pulled out by 22mm on each side. A major telltale sign that tells it apart from the Carrera 2 is the connecting rear tail light that comes as standard. Also features a torque distribution indicator, which keeps you informed on where the car is distributing torque.

Capacity: 3,436cc
Compression ratio: 12.5:1
Maximum power: 350bhp @ 7,400rpm
Maximum torque: 390Nm @ 5,600rpm
Wheels & tyres: 8.5Jx19 235/40 ZR 19 Rear: 11Jx19 295/35 ZR 19
Length: 4,491mm
Width: 1,852mm
Weight: 1,450kg
0-62mph: 4.9sec
Top speed: 177mph

RATING:
★★★★★

991 Carrera 4S

2012-



Has the same wider body styling as the Carrera 4, with a rear connecting tail light coupled to 3.8-litre 400bhp flat six engine. Also features six-piston brake calipers at front as opposed to four. Seven speed manual or PDK gearbox option available. Bigger wheels than C4 and 15kg heavier.

Capacity: 3,800cc
Compression ratio: 12.5:1
Maximum power: 400bhp @ 7,400rpm
Maximum torque: 440Nm @ 5,600rpm
Wheels & tyres: Front: 8.5Jx20, 245/35 ZR 20; Rear: 11Jx20, 305/30 ZR 20
Length: 4,491mm
Width: 1,852mm
Weight: 1,450kg
0-62mph: 4.5sec
Top speed: 185mph

RATING:
★★★★★

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) and

direct-fuel injection to give much-improved economy. Seven-speed PDK transmission was a new option.

Capacity: 3,614cc
Compression ratio: 12.5:1
Maximum power: 345bhp @ 6,500rpm
Maximum torque: 390Nm @ 4,400rpm
Brakes: Front: 330mm discs; Rear: 330mm discs
Wheels & tyres: Front: 18x8J, 235/40ZR18; Rear: 18x10.5J, 265/40ZR18
Length: 4,435mm
Width: 1,808mm
Weight: 1,490kg
0-62mph: 4.9 sec
Top speed: 180mph

RATING:
 ★★★★★

Gen2 997 C2 S

2008-12



Revised as per the Carrera, but with larger 3.8-litre engine – again using fewer components and Direct Fuel Injection. The engine stroke was reduced from 82.8mm to 77.5mm, while

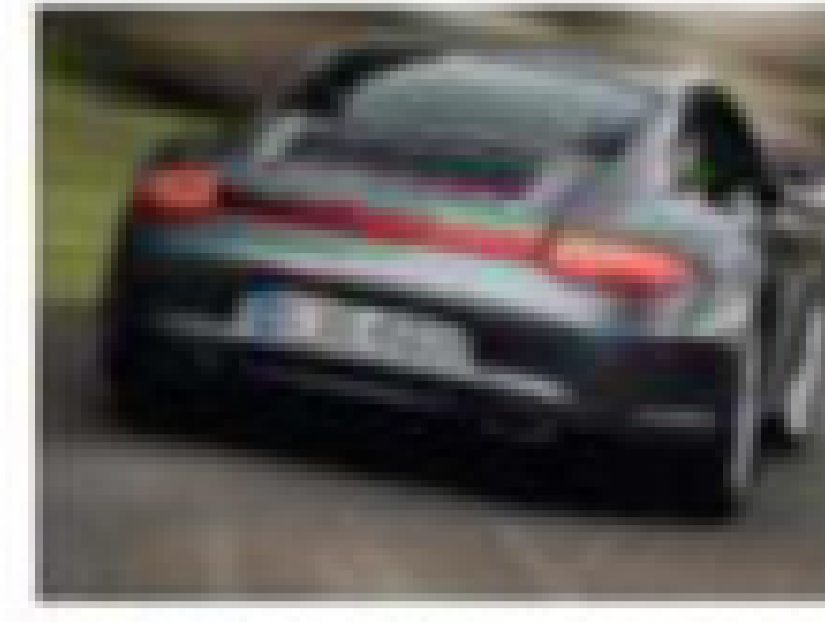
the bore went up by 3mm to 102mm, in the process reducing the capacity to exactly 3,800cc.

Capacity: 3,800cc
Compression ratio: 12.5:1
Maximum power: 385bhp @ 6,500rpm
Maximum torque: 420Nm @ 4,400rpm
Brakes: Front: 330mm discs; Rear: 330mm discs
Wheels & tyres: Front: 19x8J, 235/35ZR19; Rear: 19x11J, 295/30ZR19
Length: 4,435mm
Width: 1,808mm
Weight: 1,500kg
0-62mph: 4.7 sec
Top speed: 188mph

RATING:
 ★★★★★

Gen2 997 C4

2008-12



There were numerous engine and body changes as per the Carrera, but with a wider rear end plus the welcome return of the full-width rear reflector, situated between the light

clusters. The new all-wheel drive was appropriated from the 997 Turbo.

Capacity: 3,614cc
Compression ratio: 12.5:1
Maximum power: 345bhp @ 6,500rpm
Maximum torque: 390Nm @ 4,400rpm
Brakes: Front: 330mm discs; Rear: 330mm discs
Wheels & tyres: Front: 18x8J, 235/40ZR18; Rear: 18x10.5J, 265/40ZR18
Length: 4,435mm
Width: 1,852mm
Weight: 1,545kg
0-62mph: 5.0 sec
Top speed: 176mph

RATING:
 ★★★★★

Gen2 997 C4S

2008-12



The bodywork was as per the Carrera 4, but with the larger 3.8-litre engine. Utilised the 997 Turbo's four-wheel-drive, and Porsche Traction Management. Viscous

coupling gives way to electromagnetically controlled multi-plate clutch.

Capacity: 3,800cc
Compression ratio: 12.5:1
Maximum power: 385bhp @ 6,500rpm
Maximum torque: 420Nm @ 4,400rpm
Brakes: Front: 330mm discs; Rear: 330mm discs
Wheels & tyres: Front: 19x8J, 235/30ZR19; Rear: 19x11J, 295/30ZR19
Length: 4,435mm
Width: 1,852mm
Weight: 1,555kg
0-62mph: 4.7 sec
Top speed: 185mph

RATING:
 ★★★★★

Gen2 997 GT3 RS

2009-



Has wider front arches and a larger spoiler. Dynamic engine mounts and PASM are standard. Air con is optional, with no door handles, wheel brace or sound proofing. Had

the lap record for road models at the Nürburgring.

Capacity: 3,800cc
Compression ratio: 12.2:1
Maximum power: 450bhp @ 7,900rpm
Maximum torque: 430Nm @ 6,750rpm
Brakes: Front: 380mm discs; Rear: 380mm discs
Wheels & tyres: Front: 9Jx19, 245/35ZR19; Rear: 12Jx19, 325/30ZR19
Length: 4,460mm
Width: 1,852mm
Weight: 1,370kg
0-62mph: 4.0sec
Top speed: 192mph

RATING:
 ★★★★★

997 Turbo S

2011-13



As standard 997 Turbo, but with face-lifted body, more power (530bhp) and higher levels of standard equipment, including PCCB, centrelock wheels and ceramic brakes to go with

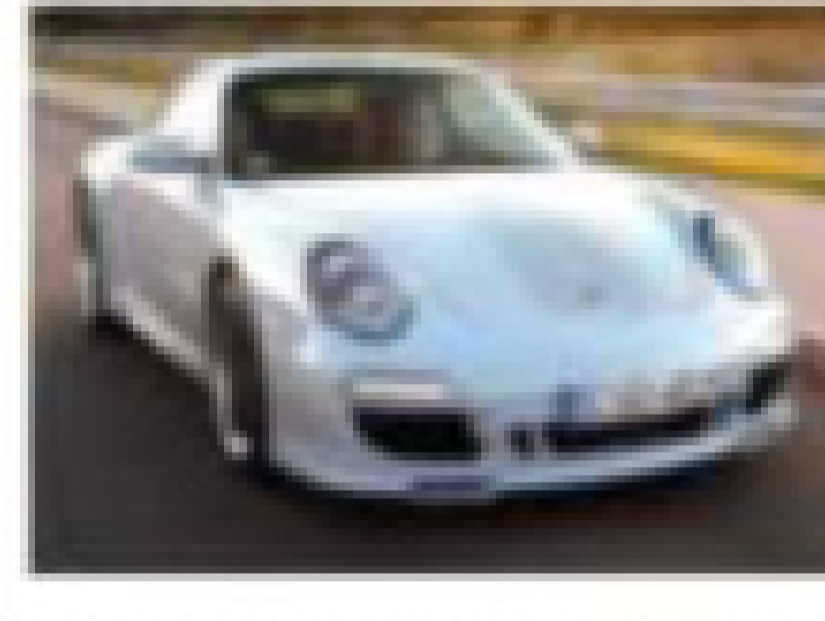
unique two-tone interior and Sport Chrono Plus.

Capacity: 3,800cc
Compression ratio: 9.8:1
Maximum power: 530bhp @ 6,250 - 6,750rpm
Maximum torque: 700Nm @ 2,100 - 4,250rpm
Brakes: Front: 380mm discs; Rear: 350mm discs
Wheels & tyres: Front: 8.5Jx19, 235/35ZR19; Rear: 11Jx19 on 305/30ZR19
Length: 4,435mm
Width: 1,852mm
Weight: 1,585kg
0-62mph: 3.3sec
Top speed: 195mph

RATING:
 ★★★★★

997 Sport Classic

2010



Based on a 3.8-litre, rear wheel-drive Carrera S, but with 44mm wider rear arches. Several instances of retro styling including iconic ducktail spoiler and large Fuchs wheels.

Only 250 examples have been sold worldwide.

Capacity: 3,800cc
Compression ratio: 12.5:1
Maximum power: 408bhp @ 7,300rpm
Maximum torque: 420Nm @ 4,200 - 5,600rpm
Brakes: Front: 350mm discs; Rear: 350mm discs
Wheels & tyres: Front: 19x8.5J, 235; Rear: 19x11J, 305
Length: 4,435mm
Width: 1,852mm
Weight: 1,425kg
0-62mph: 4.1sec
Top speed: 194mph

RATING:
 ★★★★★

997 C2 GTS

2010-



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

PASM, sports exhaust and centre-locking alloys.

Capacity: 3,800cc
Compression ratio: 12.5:1
Maximum power: 402bhp @ 7,300rpm
Maximum torque: 420Nm @ 4,200 - 5,600rpm
Brakes: Front: 330mm discs; Rear: 330mm discs
Wheels & tyres: Front: 8.5x19, 235/35/19; Rear: 11x19, 305/30/19
Length: 4,435mm
Width: 1,852mm
Weight: 1,420kg
0-60mph: 4.6 sec
Top speed: 190mph

RATING:
 ★★★★★

ULTRA RARE MODEL

ULTRA RARE

2010 997 GT3 RS 4.0

The pinnacle of 997 ownership, just 600 units were produced. The engine was upgraded and aerodynamically tweaked, too, with angle of rear wing increased and dive planes on either side of the front nose. A future collectors' gem.

Capacity: 3,996cc
Compression ratio: 12.6:1
Maximum power: 493bhp @ 8,250rpm
Maximum torque: 460Nm @ 5,750rpm
Brakes: Front: 380mm discs; Rear: 380mm discs
Wheels & tyres: Front: 9Jx19, 245/35ZR19; Rear: 12Jx19, 325/30ZR19
Length: 4,460mm
Width: 1,852mm
Weight: 1,360kg
0-62mph: 3.5 sec
Top speed: 193mph

RATING:
 ★★★★★

**991 Carrera**

2011-



The first 911 of the newest and latest seventh generation, the Carrera features a 350bhp 3.4-litre engine and takes styling cues from the 993. Completely redesigned

chassis, with lengthened wheelbase reducing overhang of engine weight. Panamera-esque interior.

Capacity: 3,436cc
Compression ratio: 12.5:1
Maximum power: 350bhp @ 7,400rpm
Maximum torque: 390Nm @ 5,600rpm
Brakes: Front: 330mm discs; Rear: 330mm discs
Wheels & tyres: Front: 8.5Jx19, 235/40ZR19; Rear: 11Jx19, 285/35ZR19
Length: 4,491mm
Width: 1,808mm
Weight: 1,380kg
0-62mph: 4.8sec
Top speed: 179.6mph

RATING:
 ★★★★★

991 Carrera S

2011-



Same as Carrera, including seven-speed manual box, but utilising 400bhp from a bigger 3.8-litre engine. Slightly larger front brakes than the standard Carrera (10mm bigger discs),

with MacPherson front axle and multi-link suspension at the rear. Distinctive 'S' badging on rear decklid.

Capacity: 3,800cc
Compression ratio: 12.5:1
Maximum power: 400bhp @ 7,400rpm
Maximum torque: 440Nm @ 5,600rpm
Brakes: Front: 340mm discs; Rear: 330mm discs
Wheels & tyres: Front: 8.5Jx20, 245/35ZR20; Rear: 8.5Jx20, 245/35ZR20
Length: 4,491mm
Width: 1,808mm
Weight: 1,395kg
0-62mph: 4.5sec
Top speed: 188.9mph

RATING:
 ★★★★★

991 GT3

2013-



Electric power steering and wide body shell from 991 Carrera 4 was used for the first time here. PDK transmission only, no manual option. Mezger engine from previous

GT3s replaced with revamped version of direct injection 991 Carrera S engine. First models now in the hands of customers.

Capacity: 3,800cc
Compression ratio: 12.9:1
Maximum power: 475hp @ 8,250rpm
Maximum torque: 440Nm @ 6,250rpm
Wheels & tyres: Front: 9Jx20, 245/35ZR20; Rear: 12Jx20, 305/30ZR20
Length: 4,545mm
Width: 1,852mm
Weight: 1,430kg
0-62mph: 3.5sec
Top speed: 196mph

RATING:
 ★★★★★

991 Turbo

2013-



The new Turbo marks the introduction of electric and rear axle steering, plus PDK-only transmission to forced induction 991 models. With a 100mm longer wheelbase

than the 997 Turbo and rear fenders being 28mm wider than even the 991 Carrera 4, this is the longest and widest Turbo model yet.

Capacity: 3,800cc
Compression ratio: 9.8:1
Maximum power: 520hp @ 6,000 - 6,500rpm
Maximum torque: 660Nm @ 1,950 - 5,000rpm
Wheels & tyres: Front: 8.5x20-inch, 245/35/ZR20; Rear: 11x20-inch, 305/30/ZR20
Length: 4,506mm
Width: 1,880mm
Weight: 1,595kg
0-62mph: 3.4sec
Top speed: 195mph

RATING:
 ★★★★★

991 Turbo S

2013-



Same dimensions as 991 Turbo, but with a tweaked map to provide an extra 40hp. Turbo S also benefits from usual Turbo options as standard including centre lock

wheels and PCCB, with Porsche Dynamic Chassis Control (PDCC) offered standard for the first time. PTM is all new on both Turbo and Turbo S.

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

RATING:
 ★★★★★

991 GT2

2014-



RATING:
 UNKNOWN

PAUL STEPHENS

Classic, Bespoke and Performance Porsche Specialist for 20 years

WANTED

AIR COOLED, RARE and COMPETITION PORSCHE

01440 714 884

www.paul-stephens.com

email@paul-stephens.com



Car illustrated for sale



RSJ SPORTS CARS

Specialising in Porsche Cars www.rsjsportscars.com



997 "4S" Gen 3 3.8 PDK (2009 - 09)
Silver with Black Leather, Sat Nav 21k miles
.....£47,000



997 "2S" Gen 2 3.8 PDK (2009 - 09)
Silver with Black Leather, Sat Nav,
36k miles.....£45,000



997 "2S" Gen 2 3.8 (2009 - 09)
Basalt Black with Stone Grey Leather, Sat
Nav, 23k miles.....£42,000



997 "2S" Gen 2 Cab 3.8 PDK
(2008 - 08) Aqua Blue with Ocean Blue
Leather, Sat Nav, 46k miles.....£42,000



997 Turbo 3.6 Tip (2008 - 08)
Basalt Black with Black Leather, Sat Nav,
36k miles.....£48,000



997 Turbo 3.6 Tip (2006 - 06)
Basalt Black with Stone Grey Leather, Sat
Nav, 44k miles.....£42,000



997 Turbo 3.6 (2006 - 06)
Cobalt Blue with Black Leather, Sat Nav,
44k miles.....£42,000



997 Turbo 3.6 (2006 - 06)
Basalt Black with Black Leather, Sat Nav,
55k miles.....£41,000



997 "4S" Targa 3.8 "X51" (2007 - 07)
Meteor Grey with Stone Leather, Sat Nav,
49k miles.....£39,000



997 "4S" 3.8 Tip (2008 - 08)
Basalt Black with Black Leather, Sat Nav,
35k miles.....£38,000



997 "4S" Cab 3.8 Tip (2007 - 07)
Basalt Black with Black Leather, Sat Nav,
46k miles.....£35,000



997 "2S" 3.8 Tip (2007 - 07)
Silver with Red Leather, Sat Nav, 30k miles
.....£35,000



997 "2S" 3.8 (2008 - 08)
Basalt Black with Stone Grey Leather, Sat
Nav, 43k miles.....£35,000



997 "4S" 3.8 Tip (2007 - 07)
Meteor Grey with Black Leather, Sat Nav
45k miles.....£34,000



997 "2S" 3.8 Tip (2007 - 07)
Basalt Black with Black Leather, Sat Nav,
35k miles.....£34,000



997 "4S" 3.8 (2006 - 06)
Basalt Black with Black Leather, Sat Nav,
33k miles.....£32,000

SERVICE DEPT

All Porsches
serviced from 924s
to 997s.

All work performed
by factory trained
technicians using
Mobil oil and
Porsche PIWIS
diagnostics

**ALL CARS SOLD WITH
1 YEAR IN-HOUSE
RSJ WARRANTY**

STS HOUSE,
BRISTOL WAY,
SLOUGH,
BERKSHIRE,
SL1 3QA

T: 01753 553 969

PORSCHE WANTED (2003 TO 2010)



Yorkshire Classic Porsche

Yorkshire's No.1 choice for classic to modern Porsche

Please call us on **08434 996 911**



www.yorkshireclassicporsche.co.uk

Leeds Road, Collingham, nr Wetherby, West Yorkshire LS22 5AA



Hillcrest
Specialist Cars

SPECIALIST IN PORSCHE

Whitehouse Garage, High Street, Nettlebed,
Henley on Thames RG9 5DB
Service, Repair and Sales
by factory-trained technicians



www.hillcrestspecialistcars.com
01491 642911

Read anything good lately?

Shop for quality magazines, books and DVDs from Imagine Publishing



imagineshop.co.uk

| | |
|-----------|-----------|
| MAGAZINES | BOOKS |
| DVDS | DOWNLOADS |



PARAGON

The Natural Choice for Porsche Service



Fixed Price Porsche Servicing
On Site Tyre Fitting & MOT Testing
The Latest Diagnostic Tools
Laser Wheel Alignment
Engine & Gearbox Rebuilds
Free Courtesy Car Service
Complete Bodywork Repair Service
Wheel Refurbishment
Part & Full Porsche Restoration
Performance Enhancements

01825 830424

service@paragon.gb.com

www.paragongb.com

SPECIALIST CARS OF MALTON LTD

APPROVED MOTOR CARS

WANTED

356 Speedster
2.7 RS
2.8 RS
3.0 RS
3.2 Speedster
959
964 RS
964 Turbo
964 Cup Car
964 Speedster

993 Carrera 2
993 Carrera 4
993 Carrera S
993 Carrera 4S
993 Turbo
993 GT2
993 GT2 Evo
993 RS
993 Cup Car
GT1

996 GT3
996 GT3 RS
996 Cup Car
996 RSR
996 GT3R
997 Cup Car
997 GT3
997 GT3 RS
Carrera GT
Le Mans cars

**Any other interesting or rare Porsches
RHD OR LHD**

Telephone: **0844 7000 997 • 0844 7000 993 • 07794 911 911 (after hours)** Fax: **0844 7000 959**

Visit our award winning site – www.specialistcarsltd.co.uk

22 York Road Business Park, Malton YO17 6AX

Part of Specialist Car Group of companies

The Natural Choice for Porsche



356A Coupe (4-Speed)
Fashion Grey • Red Leather Seats • 15" Wheels with Chrome Hubcaps • Original Right Hand Drive UK Supplied • 1959
£109,995



911 Turbo (1997, Tiptronic S)
Meteor Grey • Black Leather Seats • Satellite Navigation • 19" Turbo Wheels • 32,101 miles 2008 (08)
£52,995



911 Carrera 2 S (1997, GEN II, 6-Speed)
Arctic Silver • Black Leather Heated & Ventilated Seats • Touchscreen Satellite Navigation • 19" Carrera S II Wheels • 32,224 miles • 2009 (09)
£44,995



911 Turbo (1997, 6-Speed)
Arctic Silver • Black Leather Seats • Sport Chrono Pack Plus • Satellite Navigation • Sports Exhaust 35,687 miles • 2007 (56)
£44,995



911 Carrera 4 S (1997, Tiptronic S)
Basalt Black • Black Leather Seats • Satellite Navigation • 19" Turbo Wheels • 30,437 miles 2007 (07)
£34,995



911 Carrera 2 S (1997, Tiptronic S)
Aerokit • Basalt Black • Black Leather Seats 19" Sport Design Wheels • Satellite Navigation 41,296 miles • 2006 (06)
£32,995



Cayman S Sport (6-Speed)
Orange • Black Leather Sport Seats • No. 254 of 700 Built • Sports Exhaust • 19" Sport Design Wheels • 38,569 miles • 2009 (09)
£28,995



911 Turbo (1996, 6-Speed)
Arctic Silver • Black Leather Sport Seats • Electric Sunroof • Porsche Sound Pack • 18" Turbo II Wheels 91,786 miles • 2001 (Y)
£24,995



Boxster S (1987, GEN II, 6-Speed)
Meteor Grey • Black Full Leather • 18" Boxster S II Wheels • BOSE Sound System • 46,059 miles 2009 (59)
£24,995



Boxster 2.9 (1987, GEN II, 6-Speed)
Basalt Black • Black Leather Seats • 19" Carrera 'S' II Wheels • BOSE Sound System • 33,256 miles 2009 (09)
£22,995



Boxster S (1987, 6-Speed)
Atlas Grey • Black Leather Seats • 19" Sport Design Wheels • Satellite Navigation • 51,551 miles 2006 (06)
£18,995



Boxster 2.7 (1987, 5-Speed)
Midnight Blue • Blue Leather Seats • Automatic Climate Control • 17" Boxster Wheels 52,606 miles • 2006 (06)
£14,995

The Natural Choice for Porsche Service, Repairs & Upgrades



Why Choose Paragon Service?

We've been offering expert Porsche Service since 1993 and our vastly experienced technicians provide real value without compromise.

With transparent fixed pricing, clear communication, free courtesy cars and free local collection and delivery, we are the natural choice for Porsche service.



Our Capabilities & Experience

With a full range of facilities onsite including MOT testing and a tyre bay, we have everything for your Porsche under one roof.

We have 'Dealer level' diagnostic equipment and special tools, and our Porsche trained technicians have vast experience across all models and ages of Porsche.



Beyond the Conventional

We offer a wide range of enhanced services ranging from engine and gearbox rebuilds, performance tuning, upgrades and modifications through to track day preparation and support - even race car building.

With a hugely successful racing heritage our technicians are expert in laser four wheel alignment and corner weighting. We can offer settings from standard road to fast track.



The Natural Choice

We have thrived because of our focus on building long term relationships with our customers.

Our ability to offer independent advice and high quality parts choices sets us apart - as does our commitment to offering value and exemplary customer service.

The next time your Porsche needs attention, call us on 01825 830424 - we will be delighted to help you.

At Paragon, we have superb in-house service and preparation facilities, and each car is supplied with a new MOT, a 12-month/12,000-mile comprehensive parts and labour warranty, and we also include the next due service.

See more of our current stock at www.paragongb.com 01825 830424

PARAGON GB LTD FIVE ASHES EAST SUSSEX TN20 6HY



FINLAY GORHAM

PORSCHE SPECIALISTS

Established 1972

sales | service | aftersales

SHOWROOM



2006 997 CARRERA 4S CABRIOLET WIDEBODIED £26,995

Basalt Black metallic with Black Leather interior 71,000 miles

| | | | |
|-----------------|----------------|-----------------|---------------|
| Tiptronic | SatNav & Phone | Litronic Lights | Home Light |
| Blather Leather | BOSE Upgrade | Rear Park | 19" Carrera S |
| Heated Seats | Cruise Control | Assist | Alloys |



2003 996 CARRERA 4 CABRIOLET MANUAL £15,495

Basalt Black metallic with Grey Leather interior 70,000 miles

| | | | |
|----------------------|---------------------------|--------------------------|----------------------------|
| Heated Comfort Seats | Porsche logo increased in | AirCon & Climate Control | Part Carbon Fibre interior |
| PSM | Headrests | CDR-23 Stereo | 18" GT3 Alloys |



1999 CARRERA 4 TIPTRONIC £14,990

Zenith Blue metallic with Black Leather interior 117,000 miles

| | | | |
|------------------|--------------------------|--------------------|--------------------|
| Comfort Seats | AirCon & Climate Control | PSM | Rear Wiper |
| Onboard Computer | Alpine Radio | Heated Rear Screen | 18" Carrera Alloys |



2006 997 CARRERA C2 MANUAL COUPE £19,995

Basalt Black metallic with Black Leather interior 91,000 miles

| | | | |
|--------------------------|----------------|------------|----------------|
| Heated Seats | SatNav & Phone | PSM | 19" Multispoke |
| AirCon & Climate Control | Module | Home Light | Porsche Design |
| 6 Speed | Multichanger | Alloys | |



2004 996 CARRERA C4S WIDE BODIED COUPE £15,495

Basalt Black metallic with Black Leather interior 98,000 miles

| | | | |
|--------------------------|----------------------|----------------|-----------|
| Tiptronic | CDR-23 Stereo | PSM | 18" Turbo |
| AirCon & Climate Control | Chrome Interior Pack | Cruise Control | Monoblock |
| Memory Seats | Alloys | | |



2005 BOXSTER S 3.2 MANUAL £12,495

Seal Grey metallic with Metropole Blue Leather interior 73,000 miles

| | | | |
|--------------------------|---------------|------------------|-------------------------|
| 6 Speed Manual | SatNav Module | Onboard Computer | One touch close windows |
| AirCon & Climate Control | Multichanger | Blue Hood | PSM |
| 18" Alloys | | | |



2002 996 C4S TIPTRONIC COUPE £18,995

Basalt Black metallic with Black Leather interior 46,000 miles

| | | | |
|---------------------|---------------------------|--------------------------|------------------|
| Heated Seats | Porsche logo increased in | AirCon & Climate Control | Rear Park Assist |
| Parrot Phone Module | Headrests | PSM | 18" Alloys |



2001 996 CARRERA 2 TIPTRONIC COUPE £13,995

Rainforest Green metallic with Beige interior 56,000 miles

| | | | |
|-------------------------------------|------------------|---------------|----------------|
| Soft ruffled Savanna Beige interior | Comfort Seats | CDR-22 Stereo | 18" GT3 Alloys |
| AirCon & Climate Control | Electric Sunroof | | |



2005 BOXSTER 3.2 MANUAL £12,495

Silver metallic with Metropole Blue Leather interior 77,000 miles

| | | | |
|----------------------|------------------|--------------------------|------------|
| 2 Owners | Onboard Computer | AirCon & Climate Control | Home Light |
| 6 Speed Manual | Memory Seats | CDR24 Stereo | PSM |
| 18" Boxster S Alloys | | | |

We always consider part exchange - please ask.



All our vehicles have Full Service History, MOT and a minimum of 6 months warranty.

Viewing by appointment only | Telephone: 01284 827427 | Mobile: 07831 444100 | www.finlaygorham.com



Nine Excellence
Porsche Performance Specialists



Home Of The 9e Porsche Cars

- 9e Performance Packages
- 9e Performance Exhausts
- 9e Suspension & Brakes
- 9e Engine Builds
- 9e Custom Builds

Contact us for more details

Unit 3, Axiom Business Park,
41 Balcombe Road, Horley,
(Nr Gatwick) Surrey, RH6 7HF

www.nineexcellence.com
01293 226 911
service@nineexcellence.com

Gears, differentials, and components for racing

WEEKEND TRACK TOY OR PROFESSIONAL RACECAR, WE'VE GOT THE GEARBOX COMPONENTS TO GET YOU TO THE CHECKERED FLAG.

New Product!

Guard Transmission is pleased to present our new LSD for PDK and 991 applications. Available exclusively through BGB Motorsports!



BGB Motorsports
Grand Am CTSCC
GS Class driver's champion.



Guard Transmission LLC
(303) 530-1094 www.guardtransmission.com

SERVICING & TUNING





SPORTS AND CLASSIC LTD

North West Porsche Specialist

SPECIALISING IN ALL THINGS PORSCHE IN THE NORTH WEST



- MOT Service
- Pre-purchase inspections
- Cayenne repair specialist
- Porsche trained technicians
- Water and air cooled engine rebuilds
- Menu priced servicing
- BMW courtesy cars available
- Performance upgrades all models
- Full dealer level diagnostics
- Air-conditioning repair/services
- Porsche gearbox repair specialist
- Maintenance & service plan available



SPORTS AND CLASSIC INTERMEDIATE SHAFT BEARING KIT FOR DOUBLE ROW VERSION

- Hunter 4 wheel alignment equipment
- Suspension upgrades to all Porsche models
- Digital corner weight scales
- Re-furbished suspension components for 996/986 models
- Race/track suspension parts for GT3 cars available
- SIM card drawer repairs to PCM units
- Prop-shaft drive couplings for 996/997 C4/Turbo models
- Re-furbished prop-shafts for Cayenne models
- 996/997 engine rebuilds/repairs
- 996 headlight lens restoration service



We specialise in the servicing and repairs of all Porsche cars from early 911s to Cayennes. We have a fully equipped workshop with the latest in diagnostic equipment and are fully trained to work on even the latest models.

Why settle for any less?

Email: info@sportsandclassic.com Tel: 01565 621 311 Mobile: 07833 911911
Unit B, Longridge Trading Estate, Mobberley Rd, Knutsford, Cheshire WA16 8PR

www.sportsandclassic.com

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



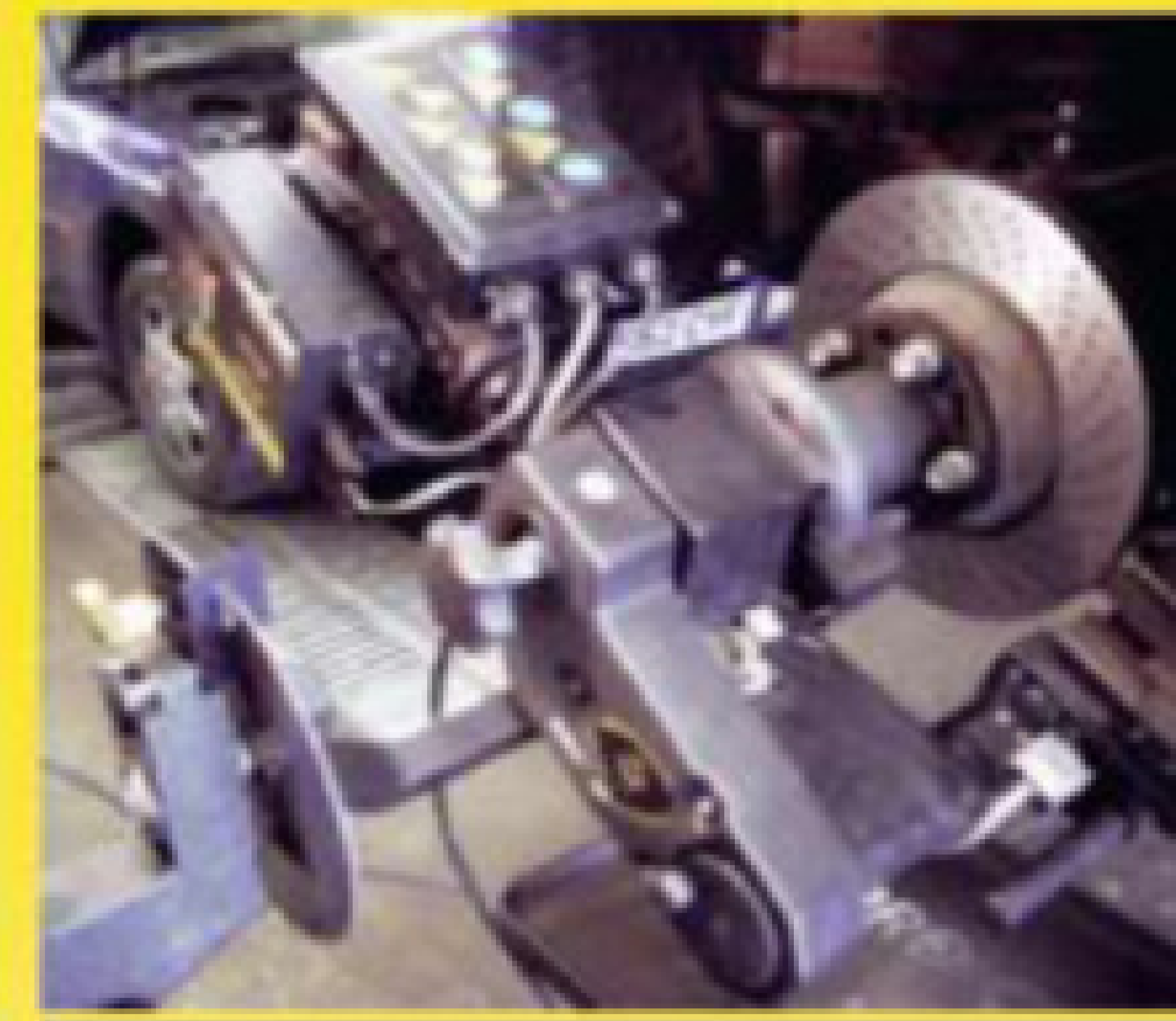
ENGINE REBUILDS - ALL MODELS
GENERAL REPAIRS & SERVICING



GEARBOX REBUILDS
ALL MODELS



AIR CONDITIONING



DISC RE-FACING



TYRE SUPPLY & FITTING
WHEEL ALIGNMENT



WHEEL BALANCING,
WHEEL STRAIGHTENING &
RE-FURBISHMENT

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



JIG REPAIRS



RESTORATION & RESPRAYS



DAMAGE REPAIR INCLUDING
FOR ALL INSURANCE COMPANIES



TORQUE TUBE OVERHAUL
924,944,968,928

call now 0121 5577911

www.ramusporsche.com

independent centre for

RAMUS PORSCHE

Porsche Advanced Fault Diagnosis
High Definition Digital Imaging Wheel Alignment

Performance Exhaust Upgrades
Brake Upgrades inc. Ceramics

Alloy Wheels and Tyre Fitting
Suspension Package Upgrades

Full Body Repair Shop
Chassis Alignment Centre



Fixed Price Menu Servicing for all Models

PERFORMANCE STYLING SERVICE PARTS

We're on the same team.

If we were not in the parts business we would be someone else's customer.

When we're not selling Porsche parts we're working on and driving our own Porsches.

- 996 daily driver
- Boxster street/track car
- 964 Euro RS conversion street/track car
- 1973 911 RS conversion with 3.6 engine
- 944 Turbo track car
- 944 race car
- 944 street car
- 1973 911 restoration
- 924 Turbo restoration
- 914 driver

Join Team EBS Racing at ebsracing.com.

Receive our monthly newsletter, Team EBS Racing Nurburgring decals, and a free 200-page Porsche Tool Catalog PDF.

**EBS
RACING**
PORSCHE PARTS EXCLUSIVELY

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

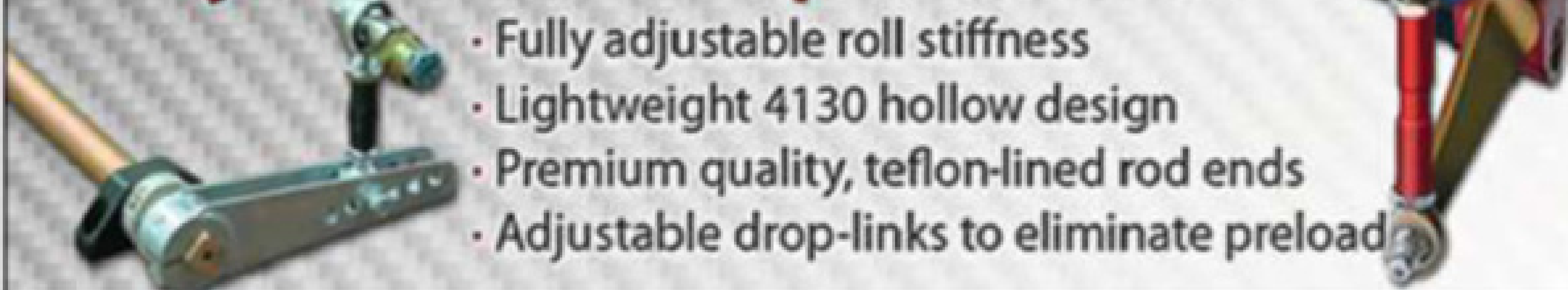
storemags.com



TARETT
ENGINEERING
Competition Suspension Components

Competition Suspension Components for your Porsche

Swaybar and Drop Link Kits



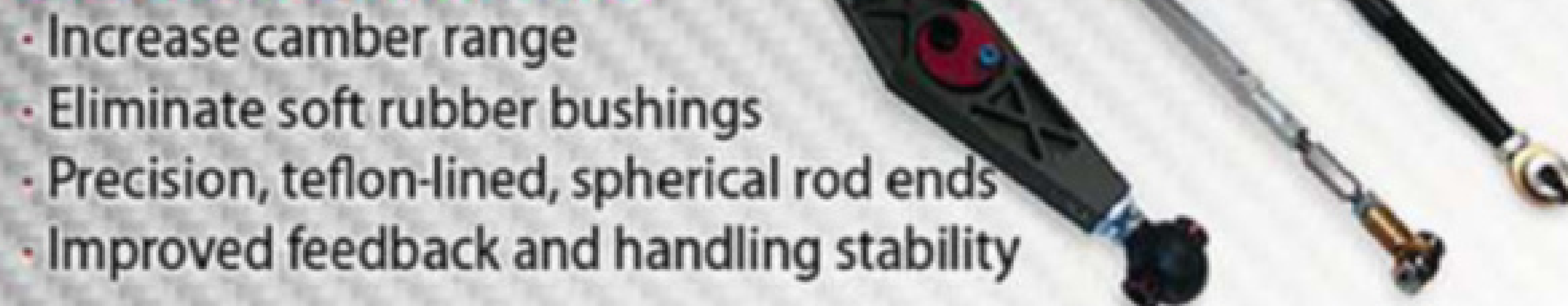
- Fully adjustable roll stiffness
- Lightweight 4130 hollow design
- Premium quality, teflon-lined rod ends
- Adjustable drop-links to eliminate preload

Monoballs and Camber Plates



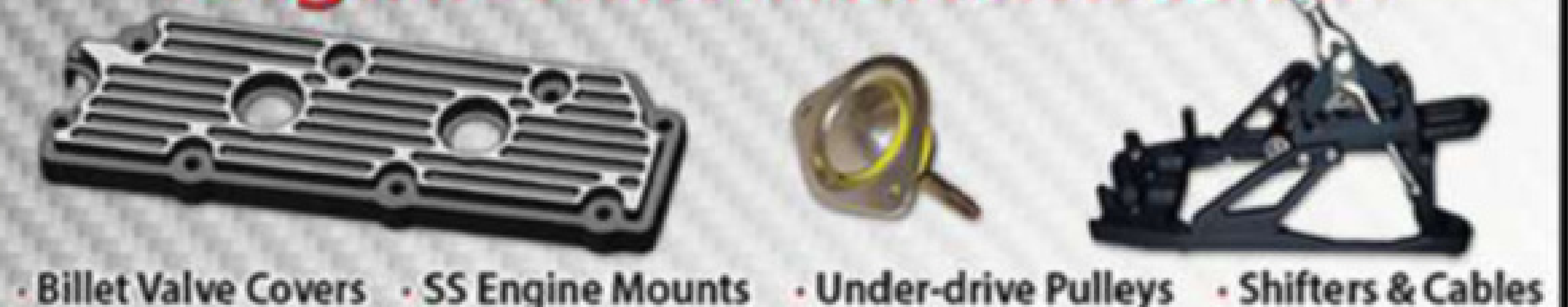
- Increased camber adjustment range
- Precision, teflon-lined, spherical bearings
- Replaces compliant, factory, rubber bushings
- Quicker steering response for better handling

Control Arms



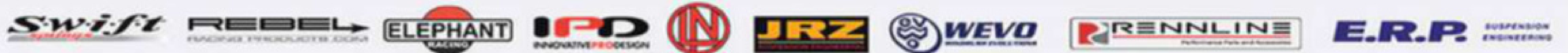
- Increase camber range
- Eliminate soft rubber bushings
- Precision, teflon-lined, spherical rod ends
- Improved feedback and handling stability

Engine and Transmission



- Billet Valve Covers
- SS Engine Mounts
- Under-drive Pulleys
- Shifters & Cables

13000 Danielson St., Unit K Poway CA 92064 (858) 674-5573 www.tarett.com



**Performance Parts
for
PORSCHE**



fast forward automotive provides a programme comprising of engine components and technical solutions to increase the vehicle performance for all Porsche models from 1955 to today.



New in our online shop:
Piston Rings, Con Rods, Pistons, Cylinder Liners, Cylinders,
Cam Shafts, Engine Bearings, Piston Pins, Crank Shafts from
LN Engineering, Nickies and fast forward automotive.

FAST FORWARD **AUTOMOTIVE**

fast forward automotive KG | Burscheid, Germany | info@fastforward-automotive.com | www.fastforward-automotive.com

Suspension Science, Made Easy.

www.ElephantRacing.com

- High tech suspension systems
- Elephant Racing engineered, in Silicon Valley
- Restoration to full-race
- Easy to configure packages at ElephantRacing.com

The science of suspension is daunting. So many options and complex interactions. Choose complementing parts balanced as a system and your suspension will sing. Choose the wrong mix and the song falls flat.

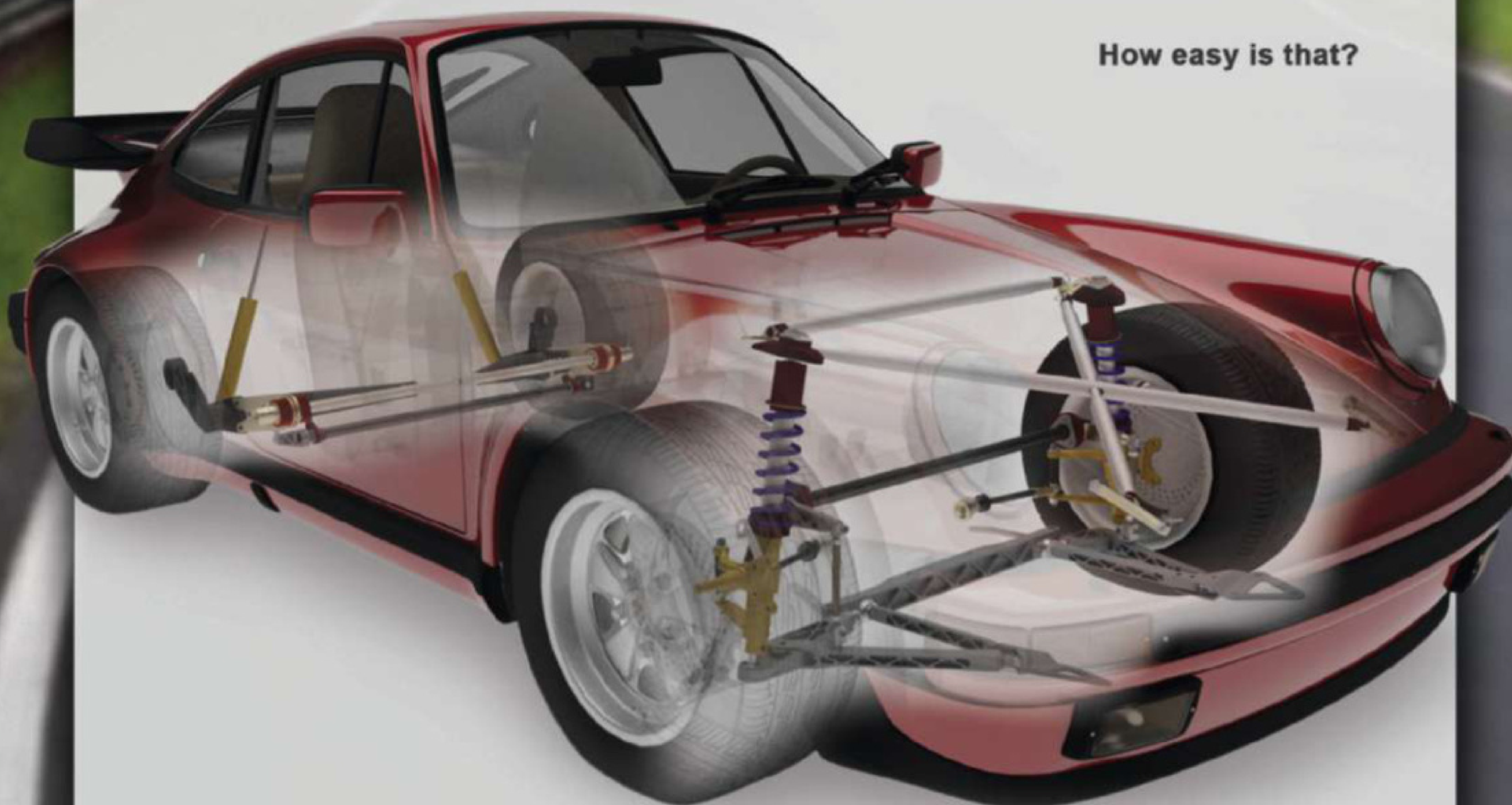
We are performance-obsessed Silicon Valley engineers who live for this challenge. We've done the hard work so you don't have to.

Using sophisticated development tools, modern materials, and innovation we've re-engineered every component of the suspension. We make it work as a balanced system. Better, faster, smarter.

Best of all, we make it easy.

We have packages to meet your objective - from restoration to full-race. Online tools let you choose and customize your suspension at www.ElephantRacing.com. Or call and we'll customize a solution for you.

How easy is that?



+1 408.297.2789

www.ElephantRacing.com

Santa Clara, California

Fast Worldwide Shipping, Low Rates.



EVERY PART FOR every PORSCHE

Call our Sales Team on
+44 (0) 20 8500 8811

OR
Visit our Online Catalogue at
www.design911.com

PARTS FOR:
356, 944, 928, 968, 964, 993,
912 & 911's from 1965 to 2012

NOT ONLY PARTS, BUT ALSO:

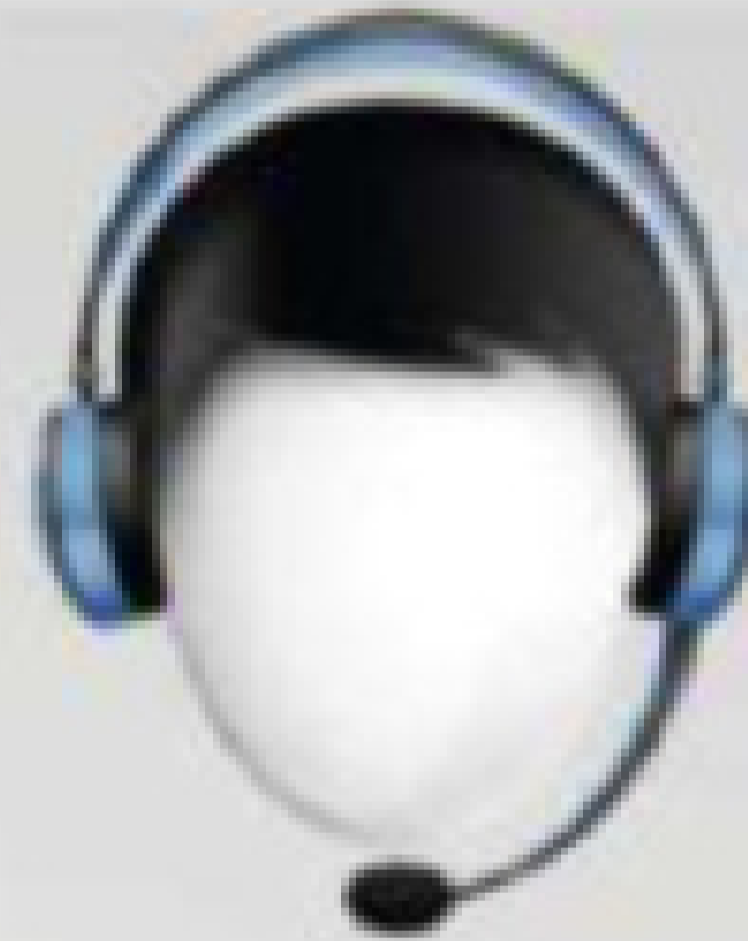
- BODY SHOP & FITTING FACILITIES
- SERVICE & FITTING CENTRE
- BODY STYLING & CONVERSIONS
- WHEEL & TYRE FITTING
- DAMAGE REPAIR & RESTORATION
- ENGINE & GEARBOX REBUILDS
- SUSPENSION & EXHAUST UPGRADES
- PARTS DEPARTMENT
- WORLDWIDE DELIVERIES
- PERFORMANCE UPGRADES



WAYS TO BUY



IN PERSON



PHONE



MOBILE SHOP



WWW



E-MAIL



**EASY TO USE
RIGHT PRODUCTS
AT THE RIGHT PRICE**

WWW.DESIGN911.COM



UNIT 5 • BRACKEN INDUSTRIAL ESTATE
185 FOREST ROAD • HAINAULT • ESSEX IG6 3HX

DESIGN 911
Centre for Porsche

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

INDEPENDENT SPECIALIST RETAIL CENTRE



EuroCupGT "Best 911 of 2010"



2011 German Carrera Cup Champions



WORKSHOP SERVICES

- Porsche trained
- Free vehicle diagnostics
- Specialist independent servicing does not affect your manufacturer warranty
- Full menu pricing of all Porsche models (e.g. Boxster/911 10,000 Service £199+VAT)



INTERIOR & BODY STYLING

- Carbon fibre trim
- Mesh grills
- 997 Aero & Gen2 LED & DRL updates
- Aero/GT3 kits
- Full fitting service
- Alloy wheels & tyres
- Competitive pricing
- Exhausts & tailpipes
- Spoilers & skirts



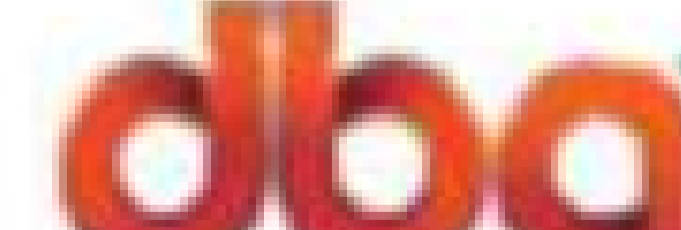
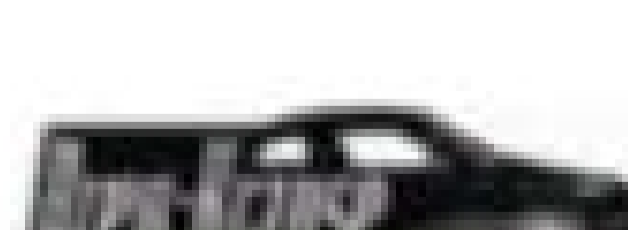
PERFORMANCE & TUNING

- Free fitting on complete exhaust systems
- EuroCup GT Tuning & Remapping
- Track day & Fast road Preparation
- Suspension, geometry & wheel alignments
- Carbon intake kits & Cold air intakes



WEBSITE & MAIL ORDER

- All parts for all models, 1965 to Present Day
- **15,000 lines** including Famous Name Brands
- Secure Online Payment Systems
- All UK Deliveries now **£9.99 Inclusive!**
- Worldwide shipping with favourable rates



StoreMags.com



Independent Garage Services

Independent Garage Services is an independent garage specialising in VW, Audi Group, Chrysler Jeep and Porsche. Based in Southampton, we undertake all aspects of maintenance.

Porsche Servicing – With the acquisition of the latest Porsche diagnostic equipment, we can offer menu servicing to factory specifications. Whether you own the latest 911 Turbo, Boxster or Cayenne, we offer a real alternative to main dealers. With considerable experience gained from racing our 996 GT3 in endurance racing we are comprehensively equipped to cater for all.

With little choice in the Southampton area and main dealers over an hour away, give Jim a ring today to discuss your requirements and find out how competitive we can be.

For more details on the services we offer and our pricing range – please visit our website.

www.independentgarageservices.co.uk

**Unit 5, Stanstead Road, Boyatt Wood Industrial Estate, Eastleigh, Southampton, SO50 4RZ
Tel: 02380 629606 Fax: 02380 629329**



ORDER ONLINE
www.allzim.com

PARTS FOR ALL PORSCHEs • LOW PRICES • FAST SHIPPING

1804 RELIANCE PKWY. BEDFORD, TX 76021 USA

FedEx UNITED STATES POSTAL SERVICE
Fax: 001-817-545-2002
Phone: 001-817-267-4451

Nine Excellence
Independent Porsche Specialist

- Servicing, repairs & MOTs
- Engine & transmission rebuilds
- Complete restorations including bodywork & interior
- 9e Packages, exhausts, suspension & performance upgrades
- Pre-purchase inspections
- Detailing & aftercare
- Tyre fitting & Wheel refurb
- Alignment & Geo
- Fully trained Porsche technicians
- All Porsche models covered
- Fixed price servicing with genuine Porsche parts
- Collection & Delivery service
- Comfortable reception area with WiFi & refreshments

Unit 3, Axiom Business Park,
41 Balcombe Road, Horley,
(Nr Gatwick) Surrey, RH6 7HF

www.nineexcellence.com
01293 226 911
service@nineexcellence.com

LEATHERCARE RENOVATIONS

Connolly Leather

Trained & Approved
Professional Leather
Upholstery Renovation
Specialists.

- Leather upholstery to car & aircraft seating, suites & contract seating refinished using genuine tannery lacquers.
- Professional DIY kits made to order.
- Genuine Connolly Hide Care Cream, professional leather cleaner & care products available from www.leathercaredirect.com

from this

to this

Tel: 01925 851621

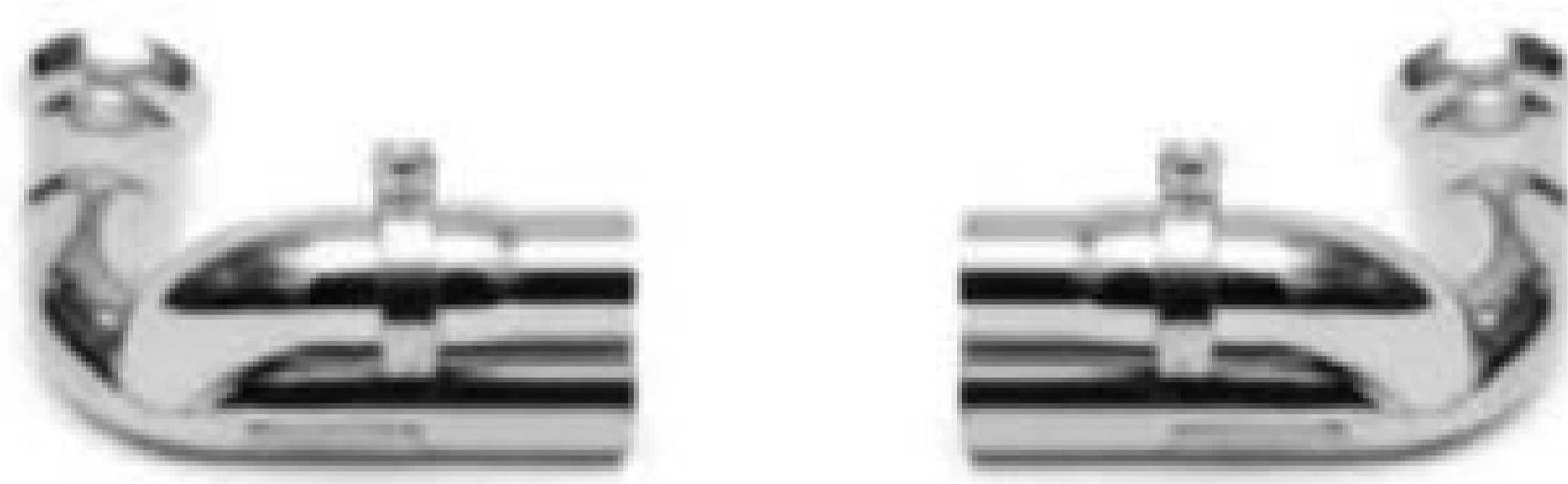
www.leathercaredirect.com

Unit 2 & 3 Aston Court, Kingsland Grange, Warrington, Cheshire WA1 4SG
Fax: 01925 456331

MENTION PROMO CODE
TTL911109
FOR SPECIAL SAVINGS



Center Muffler Bypass



Side Muffler Bypass



Sport Headers



Carbon Fiber Competition Intake



FABSPEED
MOTORSPORT
EXOTIC CAR PERFORMANCE SPECIALISTS

THE WORLD'S BEST EXHAUST SYSTEMS & INTAKE UPGRADES

For over 20 years, Fabspeed Motorsport has been engineering and producing the highest-quality performance exhaust and intake systems for the Porsche 911.

Fabspeed's unique Performance Packages provide proven performance increases; resulting in the ultimate 911. Performance Packages are now available for the GT3 and GT3RS, along with most other Porsche models.

- HIGH PERFORMANCE MUFFLERS & TIPS
- SPORT CATALYTIC CONVERTERS
- MUFFLER-BYPASS PIPES
- SPORT/RACE HEADERS
- ECU TUNING SOFTWARE
- COMPETITION AIR INTAKE SYSTEMS
- CARBON FIBER ACCESSORIES

Product videos and dyno results available at www.fabspeed.com!

Storemags.com

WWW.FABSPEED.COM

1.215.646.4945

INFO@FABSPEED.COM

Porsche motorInsurance

New & exclusive scheme
at reduced rates
guaranteed!

10%* discount for
**Porsche Club
Members**

With every New Policy
20% off your next service at
AUTO 2000
PORSCHE SPECIALISTS



mayfaironline
insurance & mortgage consultants

**Performance
INSURANCE**

www.mayfaironline.co.uk

Tel: 08444 935 716

* Subject to terms & conditions. Calls may be monitored for training purposes.

A member of Mayfair Insurance & Mortgage Consultants Limited

Mon-Thurs: 9am-7pm,

Fri: 9am-5.30pm - Sat: 9am-1pm



Specialist Car Insurance

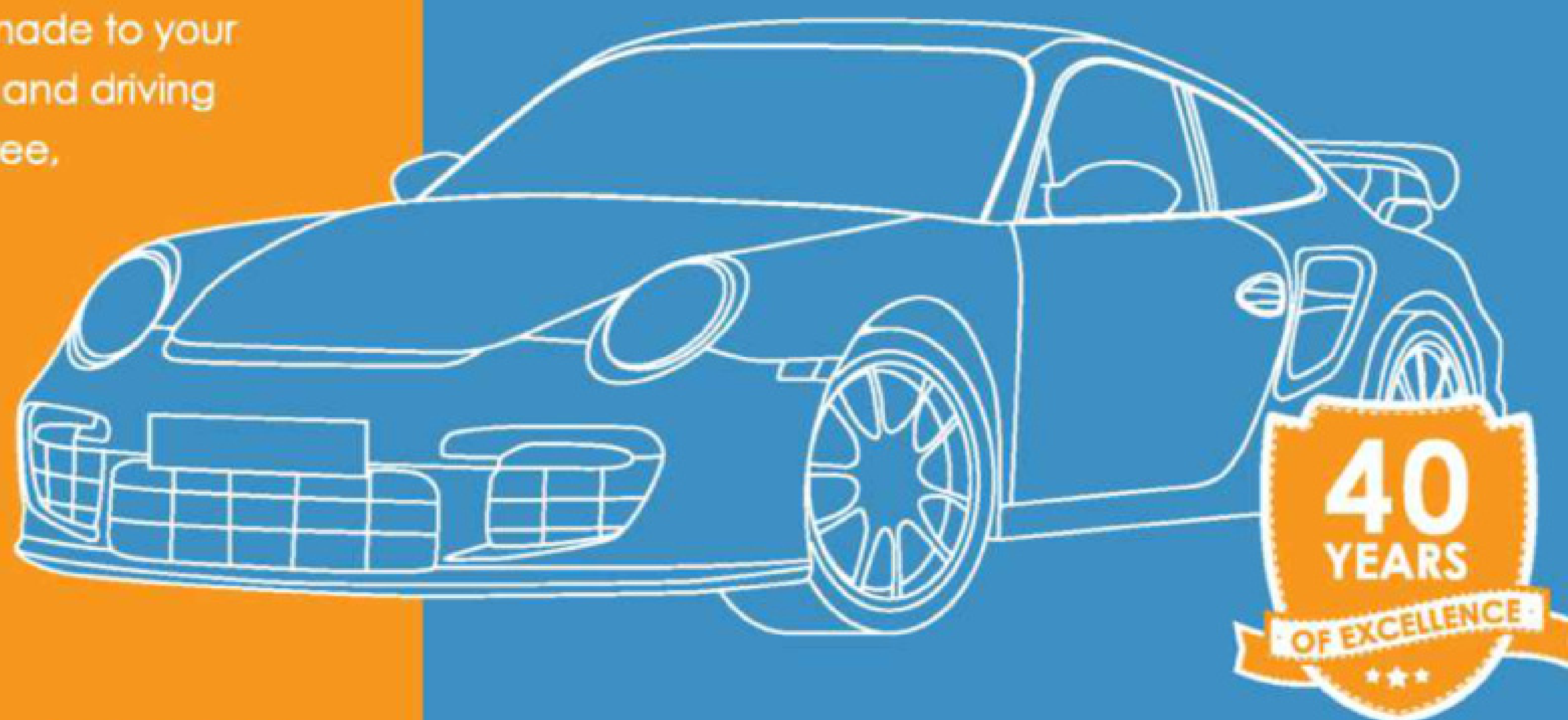
Adrian Flux know how much you love your 911, that's why we are dedicated to finding you a policy, tailor-made to your own personal requirements and driving history. Call us today for a free, no obligation quote.



0800 081 8989
adrianflux.co.uk

Authorised and regulated by the Financial Conduct Authority

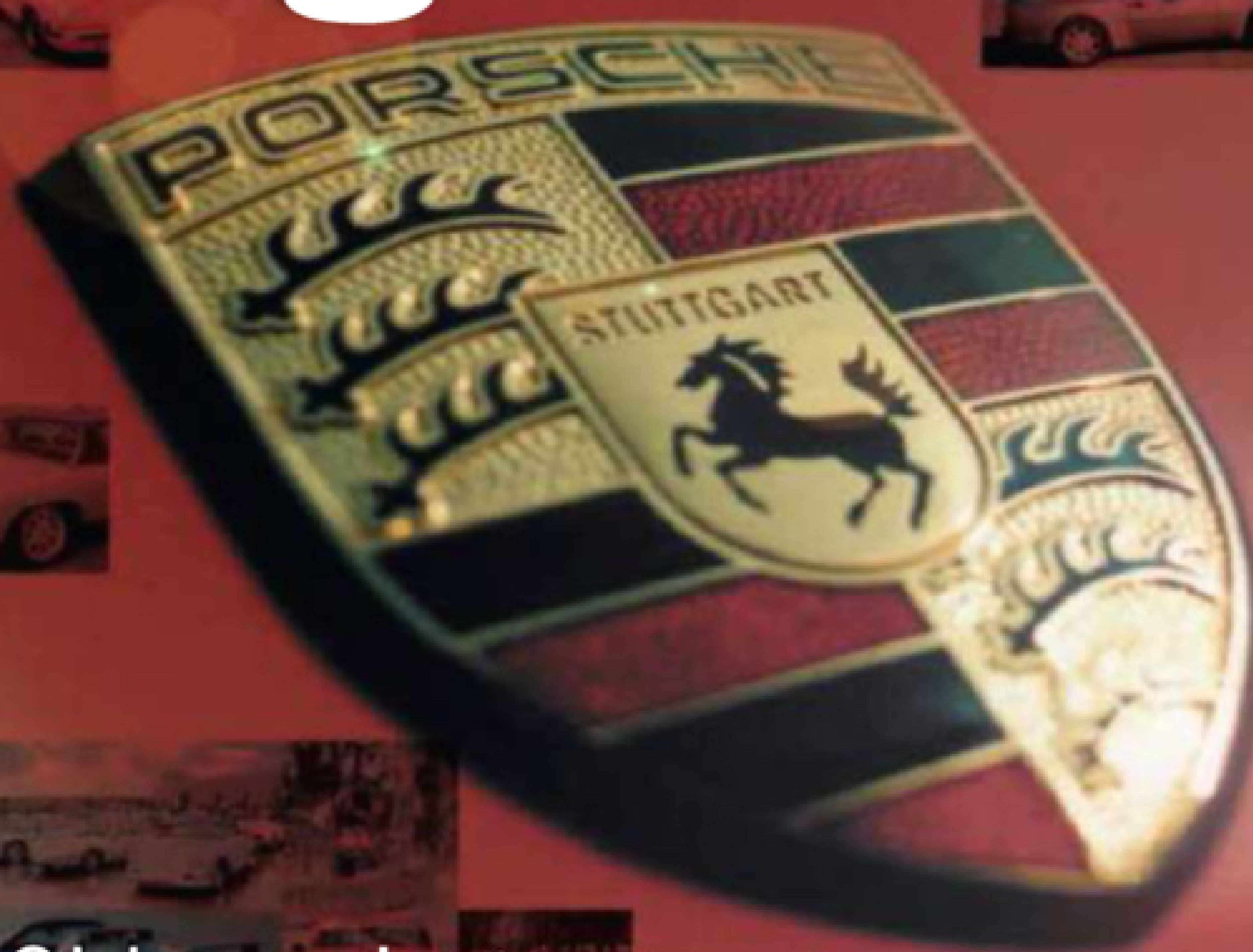
YOUR PRIDE AND JOY



Benefits available include:

- FREE Legal Cover
- Track Day Cover
- Agreed Value
- Club Member Discounts
- Modifications Cover
- Limited Mileage Discounts

One badge...one Club



From £600 to 600bhp, whatever you own – we're here for you

The Benefits

Flagship Magazine • International, National and Regional Club Events • Registers
Factory Visits • Motorsport Division (inc. Track Days) • Cars and Parts For Sale
Technical Support • Member Discounts • Club Shop • Website and Forum

Join Us

The ONLY officially recognised Porsche Club in the UK - with approx 13,000 members

Membership from £60 pa*



Porsche Club
Great Britain



* Individual UK Resident's Membership (plus initial £10 joining fee).
Porsche ownership not required! Prices correct at time of going to press.

Tel: 01608 652911 (8.30am - 5pm) www.porscheclubgb.com

World of Animals

The new magazine from the makers of **HOW IT WORKS**

Order your copy today at imaginesubs.co.uk

| | |
|------------------------|---------------------------------|
| <p>Stunning photos</p> | <p>100s of facts</p> |
| <p>Your favourites</p> | <p>Incredible illustrations</p> |
| <p>Amazing stories</p> | <p>Creature cutaways</p> |

SQUIRRELS • DESERT SCORPION • MONKEYS • MOA **NEW**

World of Animals

From the makers of **HOW IT WORKS**

MODERN-DAY DINOSAURS
THE PREHISTORIC CREATURES THAT EVOLUTION FORGOT

THE WORLD'S BIGGEST ANIMALS

PLUS OSPREY CHICKENS BLACK ANTS DRAGONFLIES HUMMINGBIRD

50 FACTS ABOUT PENGUINS
SECRETS OF THE PLANET'S FAVOURITE BIRD REVEALED

INSIDE AN ANT COLONY
DISCOVER HOW THESE COMPLEX STRUCTURES ARE BUILT

FOLLOWING NEMO
The strange life cycle of a colourful creature

MEET THE MEERKAT
Amazing info on Africa's best lookout.

PANDAS UNCOVERED
WHAT YOU DIDN'T KNOW ABOUT THE MOST ICONIC ENDANGERED ANIMAL

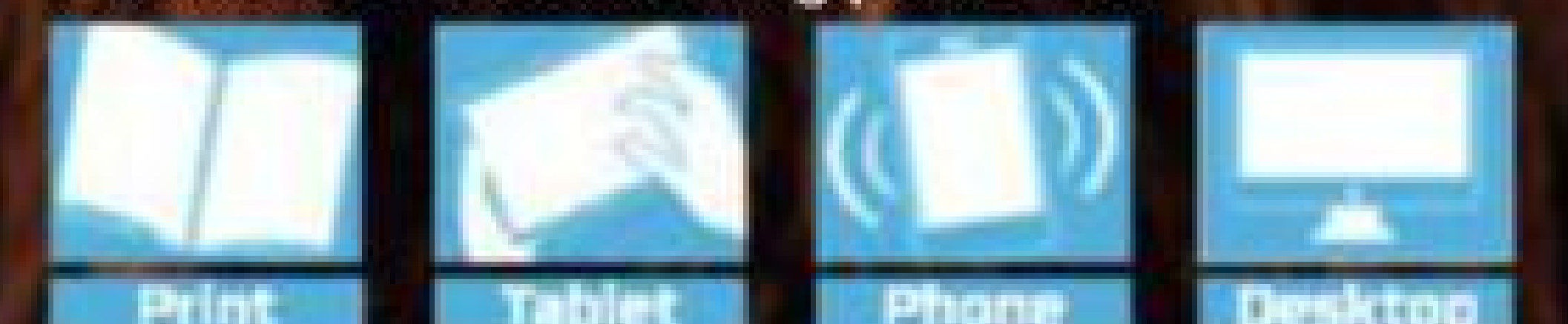
ip No. 004 £3.99 04 >
9 772053 772009

On sale 20 February
Available from all good newsagents and supermarkets

facebook.com/worldofanimalsmag twitter.com/@WorldAnimalsMag

www.animalanswers.co.uk

Available on the following platforms



NEXT ISSUE

In **Total 911** the world's only magazine dedicated to the iconic Porsche 911

991 GT3

First customer deliveries of the most anticipated 991 to date have been made, so why should you trade in your 'Mezger' 997 for the new arrival?



911 30, 40 & 50TH ANNIS

Just how special are the 964, 996 and 991 special edition anniversary models?



HOW TO SELL YOUR 911

You want to upgrade, but how do you do it: private sale, part exchange, or sale or return?



THE 2.7 TURBO

Up close to the first Porsche 911 Turbo presented to none other than Louise Piëch



NICK TANDY INTERVIEW

The new **Total 911** columnist reveals the demands of being a Porsche works driver

Issue 112 is available to buy and download from 27 March

Palomar Mountain Road, CA, USA

Written and photographed by **Tony McGuinness**



WHAT'S YOUR ROAD?
Upload your own great road via total911.com or let us know via Twitter: @Total911 and have your say



Essential info

LOCATION: San Diego County, CA, USA
LATITUDE: 33 21 21 N 116 51 50 W



LENGTH OF DRIVE:
31 miles

POINTS OF INTEREST:
Palomar Observatory
35899 Canfield Road
Palomar Mountain
CA 92060-0200

www.astro.caltech.edu/palomar
FOOD AND ACCOMMODATION:
Mothers Kitchen Restaurant
www.motherskitchenpalomar.com;
Pala Casino Spa Resort
www.palacasinom.com

Nestled atop the Palomar mountain range in San Diego County is this great, high-altitude driving road, dubbed 'the road to the stars'

Nestled on top of the Palomar mountain range in north San Diego County is the Palomar Observatory. The journey towards this magnificent research facility is exceptionally twisty, with no less than 20 consecutive hairpin turns.

From Temecula, this 31-mile drive is one of the most fascinating and compelling roads in southern California. Taking you past four native American reservations, a Spanish mission and several resort casinos, it literally slithers up the mountain. The road can be best enjoyed by exiting Interstate 15 at Temecula Parkway (Highway 79 South). Shortly after, turn right on Pechanga Parkway.

As you leave Riverside County, the road narrows and twists. Pechanga Parkway changes its name to Pala Road, and with the name change comes different scenery, with orange groves and vineyards on both sides of the road. Proceeding through the Pala Indian Reservation, you quickly come to Highway 76. Turning left will take you to Palomar Observatory, with a sharp right stopping you at the Pala casino. Further on is the Mission San Antonio de Pala, the only historic mission facility that still serves a mission native American tribe.

Continuing along the highway, through Pauma Valley and the La Jolla Indian Reservation, Highway 76 turns into South Grade Road and takes you directly to the summit. This stretch is

only seven miles long, yet represents some of the most electrifying driving you will ever experience.

You begin to steadily climb 4,000 feet, with mountains gliding past. The final leg of the journey propels you past the Palomar Mountain general store and the tiny, quaint post office. Be sure to stop at Mother's Kitchen restaurant with their astronomical portions before you finish the drive.

Rising up above the pine trees at 5,617 feet, the enormous observatory dome is striking. Take some time to enjoy the facility and learn how it provides a window to the galaxy.

This road to the stars undoubtedly lives up to its nickname: quite simply, the road to Palomar takes you and your 911 out of this world. **911**

StoreMags.com



**One seat. Five wheels.
Porsche Driver's Selection Masterpieces.**

Porsche Masterpieces are limited edition items designed and made with a no compromise approach to both development and quality. Whether it is an original 911 GT3 Cup spoiler that's remodelled as wall shelving, or a Porsche 911 Sports Plus seat that is transformed into one of the most commanding seats in the house.

Re-engineering unique parts from our vehicles for a different purpose. By Porsche.

Discover more at www.porsche.co.uk/shop or visit your local Porsche Centre.



PORSCHE



*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