The world's biggest Porsche magazine

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LE MANS 924 RESTORED



Can the 997 GT3 RS challenge its sensational current counterpart? There's only one way to find out...

ROIO HBY

718 Cayman **First** Drive

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Is Porsche's entry-level coupé still a thrilling driver's car?



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Ignition



Simon Jackson Editor y@retro_jackson

e've brought together two giants of the Porsche world this month: the 997 GT3 RS and its latest counterpart, the 991 GT3 RS. The 997 is often cited as being the last 'analogue' 911, and it's easy to see why when you directly compare it with the modern incarnation of the same car in the latest RS. On paper the two would seem to be far apart in terms of performance and general ability but, as is so often the case, on the road it's a whole different story. I recently wrote that the 997 GT3 RS is tricky to enjoy on modern roads, and in the past I've also scribed that the 991 version is in some ways too fast for the road. I stand by those two statements, but that doesn't diminish my appreciation for either car, which in the right hands and in the right environment represent pure Porsche pleasure. Contributor Andrew Frankel enjoyed both on deserted UK roads and delivers us a verdict about which he prefers in this issue (p20), but which, I wonder, would you take home?

Andrew has also been busy at the wheel of the latest 718 Cayman this month. Broadly speaking we knew what to expect from Porsche's latest entry-level coupé as, on paper at least, its specification matches that of its roadster equivalent, the 718 Boxster. As with those two RS 911s, though, reality can be very different to theory. The 718 Boxster came in for some criticism and arguably the Cayman is a more important car for Porsche as it has always appealed to the genuine Porsche enthusiast, arguably more so than the Boxster. You can read our verdict on page 88.

Elsewhere in this issue you'll find a rare former Le Mans 924 that has recently emerged from a full restoration by Porsche GB. The car has been reborn in celebration of 40 years of transaxle Porsches, and rather than merely detail what's been done we've spoken with those directly involved in its rebuild, which includes some of the UK's finest Porsche specialist craftsmen and women, p72.

Le Mans is an evocative subject for automotive people, its highs and lows are unparalleled. This year Porsche's race story is likely to be known by you, but our race recap this month also highlights other astonishing Porsche stories from the great race, some touch-and-go results and near misses, p64.



Contributor



Andrew Frankel

One of the industry's most respected senior automotive journalists, Andrew writes for Motor Sport, Autocar and the national newspapers.

This month: Andrew recalls Porsche's history of close calls at Le Mans, and delivers an important verdict on how the new 718 Cayman drives.



Martyn Morgan-Jones

A respected automotive book author and regular writer for a wealth of classic car publications, Martyn's abiding passion is historic motorsport.

This month: Mart delves into the stunning restoration of a former Le Mans 924 competition car, recently restored by Porsche GB.



Philip Raby

Magazine editor turned Porsche dealer and expert consultant, Phil has been writing about Porsches for 20 years and driving them for even longer!

This month: Phil looks at whether or not the UK's vote to leave the European Union has affected the value of second-hand Porsches.

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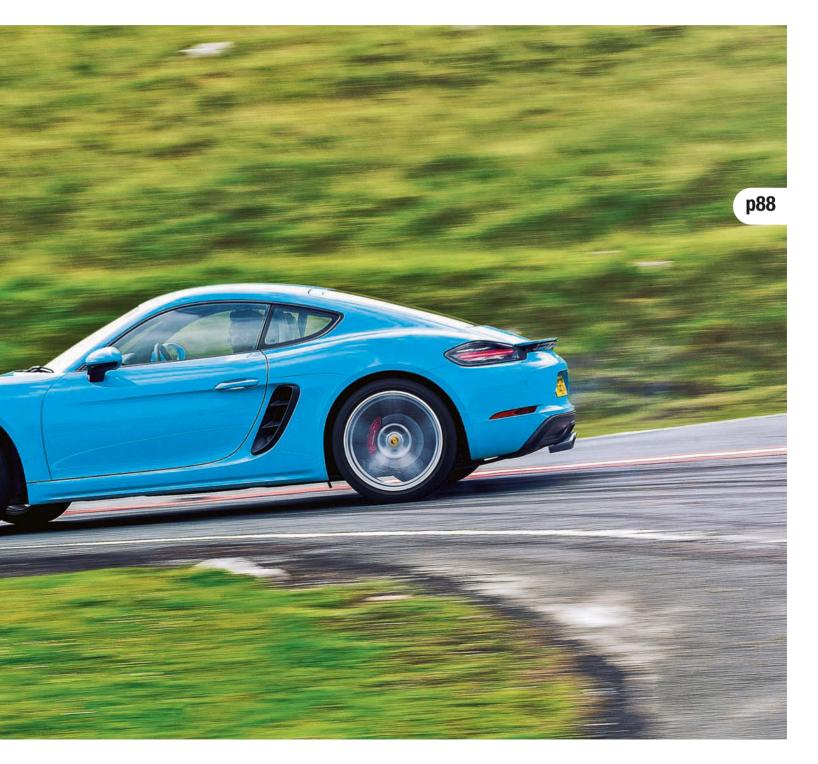
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Features

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 034 911 Targa 4S First UK Drive Could the second-generation 991 Targa 4S be the model that gains the most from the 911's switch to downsized turbo power? We tested it on UK roads to find out.
- 038 Porsche Panamera: The Development Story (Part Two) We examine how the fourth Porsche model range was launched, its face-lift of 2013, and the build-up to the arrival of the second-generation version.
- 044 New Panamera The all-new Panamera shares some of its architecture, particularly its MSB platform, with other VAG group cars. It also debuts advanced technology, new design language and superior levels of luxury for the Porsche brand.
- **052** *GT Porsche* Track Evening The 2016 *GT Porsche* Track Evening at Brands Hatch in Kent brought out a typically diverse mix of Porsche machinery, despite wet conditions...
- **056** 911 vs 912 Both of these meticulously restored 1969 Porsches, a 911S and a 912, have been reborn in impressive fashion thanks to a South African aircraft technician. Which, we wonder, is the more appealing?
- 064 Le Mans History Porsche's 18th victory at Le Mans 2016 was the closest of close calls but, as Andrew Frankel recalls, it's by no means the first time Porsche has been involved in a thrilling finish at La Sarthe...
- 072 Le Mans 924 GTP Porsche's classic car restoration arm, Porsche Classic Centre Partners, has restored a 924 GTP that last turned a wheel in anger 35 years ago. We hear from those with first-hand involvement in the project...
- 080 Kremer Racing 911 RSR Built for road- and race-use, the 3.0 Carrera RS in RSR guise was the mainstay of the European GT Championship in the mid-1970s. We take a look at a Kremer creation restored to original specification.
- 088 718 Cayman First Drive Andrew Frankel drives a manual 718 Cayman S on Welsh mountain roads...





the news

911 CARRERA S ENDURANCE RACING EDITION REVEALED The latest offering from Porsche Exclusive pays homage to Porsche's WEC campaign...



The 911 Carrera S Endurance Racing Edition is the latest car to be designed and manufactured by Porsche Exclusive, which is dedicated to providing personalised vehicles for Porsche customers.

A variety of fresh styling touches have been made to set the car aside from its standard Carrera S counterpart. The exterior livery is inspired in part by Porsche's WEC cars. Buyers can choose from three colours; white, Guards red and black, each of which comes with contrasting decals on the side of the car. Additional sporting cues are achieved through high-gloss black accents on the wheels, mirror housings, LED headlights and rear badging.

On the inside, Porsche Exclusive has made a number of design tweaks. These include carbon interior trim and illuminated door sill guards with '911 Carrera S Endurance Racing Edition' motifs, red seat belts and the Porsche crest embossed on the head restraints. A '12 o'clock marking' on the steering wheel and 'Porsche Intelligent Performance' embossed on the centre armrest further underline the motorsport theme.

The Endurance Racing Edition's changes over the standard Carrera S are more than just skin deep though. It gets Porsche Dynamic Chassis Control (PDCC), Porsche Active Suspension Management (PASM), the Sports chassis (dropping ride height by -20mm) and the Sports Chrono package. Rear axle steering is shared with the GT3 and RS models and power is delivered by the S's 420hp 3.0-litre flat-six, piped through a sports exhaust system. The seven-speed manual 'box comes as standard, with the PDK unit available as an option. In terms of performance, the Endurance Racing Edition posts identical figures to the normal Carrera S.

The 911 Carrera S Endurance Racing Edition is priced at £107,216.







Based on the 991 Turbo S, TECHART has revealed its GTstreet R...



Five years ago TECHART presented its GTstreet RS, based on the 997 GT2 RS. Now it has updated the concept with the arrival of a new GTstreet R. Based on the 991 Turbo S, TECHART's creation is said to set a new benchmark in sports cars.

The GTstreet generation of 911 has been in existence since the 996 Turbo and 996 GT2, TECHART's first incarnations of the concept revealed in 2001. TECHART says that the GTstreet theme stands for a symbiosis mixing daily usage with distinctive design and increased performance. The end result is a highly individual street-legal car, a race car for the road if you will, suitable for everyday use.

TECHART is currently finalising the specification of the car during camouflaged prototype tests, but from what we can already see the new GTstreet R looks pretty impressive. Its launch is planned for late 2016.

the news





Formed in partnership with father and son team Richard and Mark Sekula, founders of TheCarSpy.Net, RUF will now benefit from a UK office through which customers can do business.

TheCarSpy.Net is one of the UK's most respected brokerage businesses for sourcing luxury vehicles, supercars and hypercars, so the Sekula family certainly know their Porsches.

RUF Automobile should need little introduction, it has been manufacturing Porsche-based sports cars for more than 40 years, and it has developed a reputation for producing powerful super-fast creations that are unrivalled both in terms of performance and build quality. The current range consists of the RTR, RGT, Turbo Florio, CTR3 Clubsport and 3800S. Each is capable of exceeding 200mph.

RUF offers a complete bespoke service for Porsche owners be it modification or restoration, using the full range of highly qualified engineering skills and resources at its factory in Pfaffenhausen, Germany.

Co-director of RUF Automobile UK Mark Sekula said: "Having known RUF and the RUF family for many years we are very familiar with the engineering principles and ethos of the company.

"Knowing what RUF is capable of producing, we are very excited to be a part of its expanding international presence. The UK has tremendous potential for RUF cars and it will be our task to establish a sound base for both pre- and post-sales support for customers in this country. We feel that now is the perfect time for us to satisfy the needs of the high-performance and luxury sector based on our own current market experience here in the UK."

The new UK office becomes part of the RUF international network that includes the USA, Canada, Singapore, Japan, China, Thailand, Taiwan and Chile.

Visit www.rufautomobile.co.uk for more information.



CANFORD CLASSICS AUGUST OPEN DAY

Porsche specialist Canford Classics in Dorset is holding its annual open morning at the end of this month...

Porsche specialist Canford Classics is holding its annual open morning on Saturday 27 August. It is the perfect opportunity to take a tour of the premises and to meet the team behind the Canford Classics name. There will be complimentary bacon rolls from local supplier, Kingsbere Kitchen, and delicious coffee from its neighbour, The Beanpress Company. Of course, importantly, there will also be plenty of stunning Porsches to peruse, too, from those in the works to completed projects, and local cars of interest. The event takes place between 9am and 1pm at Canford Classics' premises in Winterborne Kingston, Blandford Forum, Dorset – and if you're quick you might be able to reserve yourself your car a display space (email dominique@canfordclassics.co.uk). Canford Classics has been turning out stunning Porsches of late, some of which have appeared in these pages, so we highly recommend that you pay a visit to see what all the fuss is about. Visit www.canfordclassics.co.uk for more information.





356 Speedster (LHD)

Signal Red • Black Leather Sport Seats 4-Speed Manual Gearbox • Matching Numbers • Full Rotisserie Restoration 1956

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911 SC Targa

Rosewood Metallic • Brown Pasha Seats Manual Gearbox • 15" Cookie Cutter Wheels • One Owner From New 23,091 miles • 1981 (W)

£76,995



911 Carrera 4 S (997)

Carrara White · Black Leather Seats Manual Gearbox • 19" Sport Design Wheels • Touchscreen Satellite Navigation • 38,258 miles • 2009 (09) £46,995



911 Carrera RS (993 LHD)

Grand Prix White • Black/Grey Dual Tone Leather Bucket Seats · Manual Gearbox 18" Split Rim Wheels • 58,240 km (36,400 miles) • 1995 (N) £229.995



911 Turbo S (996)

Basalt Black • Black Leather Seats Manual Gearbox • Porsche Ceramic Composite Brakes · Satellite Navigation 63,132 miles • 2005 (54)

£64,995



911 Carrera 2 (997)

Meteor Grey · Black Leather Seats PDK Gearbox • 19" Carrera 'S' II Wheels Touchscreen Satellite Navigation 12,171 miles • 2009 (09) £44,995



911 GT3 RS

.let Black • Black Nomex Bucket Seats Manual Gearbox • Satellite Navigation Porsche Ceramic Composite Brakes 22,012 miles • 2008 (57)

£149.995



Cayman S (981)

Basalt Black • Black Leather Seats PDK Gearbox • 20" Sport Techno Wheels Touchscreen Satellite Navigation 5,511 miles • 2015 (15)

£52,995



911 Carrera 2 S (997)

Basalt Black • Black Leather Seats Manual Gearbox • 19" Sport Design Wheels • Touchscreen Satellite Navigation • 44,249 miles • 2009 (59) £42,995





911 GT2 (996)

Arctic Silver • Black Leather Bucket Seats Manual Gearbox • Porsche Ceramic Composite Brakes · Rear Roll Cage 48,992 miles • 2002 (02)

£119,995



Cayenne 4.2 Diesel

Basalt Black • Black Leather Seats 21" Cayenne Sport Edition Wheels Touchscreen Satellite Navigation 20,132 miles • 2013 (63)





911 Carrera 4 S (996)

Arctic Silver • Black Leather Sport Seats Manual Gearbox • 18" Turbo II Wheels BOSE Sound System • 96,978 miles 2002 (51)

£21,995

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JASMINE PORSCHALINK'S North West Porsche Fest



Jasmine PorschaLink enjoyed glorious weather for its seventh annual Open Evening. The independent Porsche specialist, based in Lancashire, swung its doors open to 200 Porsches and over 260 of their owners and friends back in May. The now well-established event boasted a fantastic line-up of models from a 1958 356 to a Cayman GT4 and a brand-new 2016 991 GT3 RS.

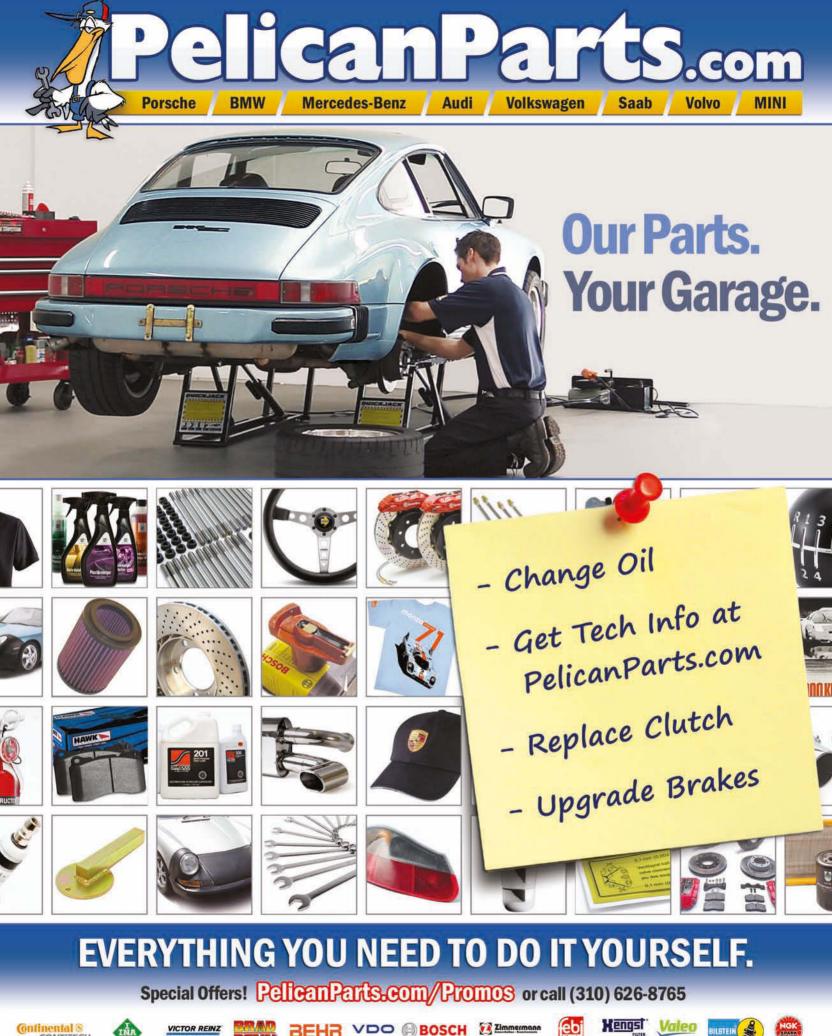
A gaming rig provided by Black Bear Computers with a *Top Gear*-style leaderboard challenge proved popular, so too did a pop-up bar serving the 'Jasmine Cocktail' provided by Michael and Carlo of Cocktail Couture. And, adding a touch of class to the evening, were some mellow saxophone tunes playing in the background. A technical display by Jasmine's knowledgeable team enabled Porsche owners to quiz the Nelson-based staff on the subject of Porsche.

Both local customers and those from further afield supported the event, as well as the local regional Independent Porsche Club and Porsche Club Great Britain clans, who enjoyed a hot supper and complimentary refreshments (the red wine proved particularly popular).

A charity auction and raffle offered both Porsche and non-Porsche prizes, some kindly donated by Porsche Centre Leeds and Euro Car Parts. In total the event raised nearly £1000, divided equally between two worthy charities; North West Blood Bikes and the local East Lancashire Pendleside Hospice. For further details on Jasmine Porschalink. UK, visit www.jasmine-porschalink.co.uk.







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CONTITECH





motorsport Month PORSCHE WINS AT NÜRBURGRING

Porsche scored its third LMP1 victory this season for the Porsche 919 Hybrid at the Nürburgring, where reigning world champions Timo Bernhard, Brendon Hartley and Mark Webber clinched the win...

WORLD ENDURANCE CHAMPIONSHIP Round Four: Six Hours of Nürburgring

Following the disappointment of Le Mans, the No.1 919 Hybrid got off to a good start in Germany moving from second to third spot by overtaking the number No.8 Audi. With Bernhard at the wheel it could not, however, find a way past the leading No.7 Audi until the first round of pit stops. Here the car moved into the lead but under Hartley's watch it was overtaken by the Audi duo and once more relegated to third spot. The car's next stop was an early one so the team could rectify a loss of tyre pressure. Here Webber took over and subsequently overtook the leading Audi for P1. After a period of switching between first and second spots, Bernhard eventually took the No.1 car over the line to clinch victory.

For car No.2 it was Neel Jani who started, maintaining fourth spot at the beginning before a slide saw him go off the track during an attempted overtake for third. With Marc Lieb behind the wheel the No.2 919 Hybrid inherited the lead when the sister Porsche and the Audi duo pitted, but later into the race Lieb made contact with one of the GT 911s causing him to pit for a new nose cone section. He also picked up a drive-through penalty for the same incident, which dropped the car back to third spot. Later Jani took over a battle with the two Audis. It proved thrilling but it was an unscheduled stop for repairs, ordered by race control, that relegated the car to P4 come the final flag.

After an exciting six-hour race, Porsche extended its lead in the manufacturers' standings, and Dumas, Jani and Lieb continue to lead the drivers' world championship. Webber said: "I'm very happy for Porsche winning its home race. It was an exceptional performance against strong competition. This is the day of the mechanics of car number one who had some tough times recently and it is good points for the constructors' championship. We had completely different track conditions in the race than we saw before and I was very happy with the performance."





RACE RESULT 6 HOURS OF NÜRBURGRING (GER):

- 1. Bernhard/Hartley/Webber (DE/NZ/AU) Porsche 919 Hybrid, 194 laps
- Di Grassi/Duval/Jarvis, Audi R18, 194 laps
 Fässler/Lotterer , Audi R18, 194 laps
 Füssler/Lotterer , Audi R18, 194 laps
 Dumas/Jani/Lieb,
- Porsche 919 Hybrid, 194 laps

DRIVERS' WORLD CHAMPIONSHIP AFTER FOUR OUT OF NINE ROUNDS

- Dumas/Jani/Lieb, Porsche, 106 points
 Jarvis/Duval/di Grassi, Audi, 73 points
 Kobayashi/Sarrazin/Conway, Toyota, 62 points

MANUFACTURERS' WORLD CHAMPIONSHIP

- 1. Porsche 164
- 2. Audi 129
- 3. Toyota 97







motorsport month

PORSCHE TAKES IMSA PAIN

Porsche continued its tricky season in the GTLM class of the North American IMSA series during three further rounds...

Round five of the IMSA series at Watkins Glen was nothing to write home about for Porsche. The factory 911 RSR pairing finished the six-hour race in ninth and tenth. Both the No.911 and No.912 entries struggled for speed in qualifying, and although they found some race pace on the day the team called it a 'difficult weekend'. Patrick Pilet (No.911) said: "That was very probably my toughest race in the USA." Programme manager, Steffen Höllwarth, summarised the event: "The gap to the top was big already in qualifying. Although we improved in the race, we didn't manage to close that gap. Still, a big compliment to the team and the drivers who did their very best under difficult circumstances."

After five of 11 races the Porsche drivers now sat fourth and eighth in the drivers' standings, Porsche trailed Chevrolet by seven points in the manufacturers' battle, in the teams' standings the Corvettes, Fords and BMWs all led Porsche with its highest entry, the No.912 car, occupying fourth spot. Round six saw the field move to Bowmanville in Canada. On the ultra-fast race track Earl Bamber and Frédéric Makowiecki had fought their way up to second place, however, in the final phase of the race they were unable to defend this position and ultimately finished sixth in the GTLM class.

Team-mates Patrick Pilet and Nick Tandy didn't fare so well. A mistake in the pits was compounded by a drive through penalty, meaning they finished eighth. Despite the poor result, Tandy was upbeat about the race: "Today we tried various tyre strategies. Okay, it didn't pay off but we still gained important insights for the next races. Hopefully we can then fight amongst the frontrunners again."

This relegated Porsche to third in the manufacturer's standings, four points behind Ford and 11 points behind leaders Chevrolet.

The IMSA circus moved on for round seven at Lime Rock. In practice and qualifying both 911 RSRs had struggled for outright pace at the Connecticut circuit, but the team were confident that they'd found some race pace. Patrick Pilet and Nick Tandy were however struck with a fuel supply problem, which ended any hopes for a tidy weekend for the No.911 car which crossed the line in sixth spot. Tandy said: "When I took over the 911 RSR from Patrick we were running eight laps down. There was nothing else to do than to try to get through the heavy traffic unscathed and bring home important championship points. We succeeded in doing this."

In the sister car things were even worse. The No.912 entry of Earl Bamber and Frédéric Makowiecki were on the hunt for second place but an accident halted any further progress. They ended up being classified as eighth. Bamber described what occurred: "The accident happened when I tried to overtake the BMW in front of me. I was already beside him on the inside when he also pulled to the inside and left me no room. We touched and I hit the tyre wall quite hard."

Steffen Höllwarth commented: "This is obviously a disappointing result. We only have a fortnight until the next race in Elkhart Lake. Despite everything, we'll take the progress that we made here with us to Road America. Then hopefully we'll be rewarded there for all the hard work the team has put in."

Points Standings (GTLM Drivers)

 Millner/Gavin 	Corvette	228
2. Briscoe/Westbrook	Ford GT	218
3. Auberlen/Werner	BMW	197
6. Bamber/Makowiecki	Porsche	190

Porsche

179

8. Pilet/Tandy Teams

1. Corvette Racing #4 2. Ford Chip Ganassi Racing #67	228 218
3. Corvette Racing #3	197
6. Porsche North America #912	190
8. Porsche North America #911	179

Manufacturers

1. Chevrolet	227
2. Ford	217
3. Porsche	209



IMSA SPORTSCAR CHAMPIONSHIP ROUNDS FIVE, SIX & SEVEN WATKINS GLEN, BOWMANVILLE & LIMEROCK



MÜLLER MOVES INTO LEAD

The Porsche Supercup supported the Formula One package in Austria, the UK and Hungary with typically exciting 911 racing...







Changeable conditions greeted the Porsche Mobil 1 Supercup field at Austria's Red Bull Ring creating a turbulent race with no shortage of incidents. Matteo Cairoli, who had posted pole position on Saturday, lined-up next to Mathieu Jaminet on the front row with Porsche Junior, Sven Müller, starting on the second row. Throughout the morning rain showers persisted, but as the cars got into position on the grid, blue skies greeted them. Several drivers had opted for wet tyres thinking the rain would continue, but as it became obvious that the dry conditions were there to stay hose teams caught out hurried to change to slicks.

As the race got underway Müller and Jaminet immediately overtook Cairoli on the right and left to occupy the first two positions. Swiss driver Jeffrey Schmidt also managed to squeeze past the Italian to make up the top three spots. Just like the previous round in Monaco, safety car periods were fairly regular as drivers were caught out by the drying track. On three separate occasions the field was bunched together as cars had to be pulled out of the gravel, putting pressure on Müller throughout the 16 laps. Keeping a cool and composed head meant that by the chequered flag, the trio who had made the most of the start crossed the line as they had after the first lap.

At Silverstone, Müller stormed to victory in front of a crowd of over 100,000 fans, while chaotic weather with sudden downpours turned the race into a thriller. Reigning Rookie champion Tom Sharp headed up a group of seven wild card entries from the Carrera Cup GB with a solid seventh place. As the 30 competitors lined-up to drive to the grid, rain began to fall, which soon became a deluge. At the last moment, the race was declared wet and teams allowed to switch from dry to wet tyres on the grid. The safety car was deployed and led the field for two laps in heavy rain before the green flag fell. Jaminet initially gapped the pack, followed by Müller who had overtaken Cairoli on lap five. Müller managed to close the gap to the leader and a hard-fought battle ensued. With conditions rapidly drying and wet weather tyres struggling for traction, Müller was finally able to make his way past Jaminet on lap eight, sealing victory in the process.

Leading the charge for the domestic Carrera Cup drivers was Sharp. He moved up to fifth place from eighth; he then got past Josh Webster for fourth and quickly moved onto the tail of Cairoli, challenging for a podium. Webster went on to take the honours as the top-placed British driver in an excellent fourth, reigning Carrera Cup GB champion Dan Cammish placed ninth.

At the Hungaroring Sven Müller took his third win of the 2016 season in Budapest, moving him into the lead of the hotly contested Porsche one-make series. In front of the Formula One glitterati, 24-yearold Porsche Junior, Müller, beat pole sitter Robert Lukas off the line to take the lead in glorious 26°C heat. Typical of the Hungaroring, a crash in the first corner off the start saw four 911s wiped-out causing a safety car period for five laps. Once the green flags were flying Müller pulled away and made the race his own. "I had no answer to Sven today," commented Lukas. "He managed to pull away after the safety car phase. I didn't get any pressure behind so I'm thrilled that I could bring home a relatively stress-free podium result." With Lukas clinching second spot, the final podium place went to Michael Ammermüller, who had started the race in fourth spot.

Further back in the pack, Porsche Junior, Mathieu Jaminet, had posted the fastest time in qualifying but during scrutineering his 911's ride height was discovered to be too high, and his times subsequently deleted. Jaminet was then at fault for the pile-up at turn one on the first lap, but despite this he still sits in second spot behind Müller in the championship. In third place sits fellow Porsche Junior, Matteo Cairoli, who finished seventh in an equally frustrating Hungarian race. Cairoli lost three places at the start and ended up embroiled in a hard fought battle with Porsche Junior colleague, Dennis Olsen. Olsen filled in for Christian Engelhart during the weekend, who was prevented from competing due to a conflict of schedules.

Müller was delighted to win this, the fifth of ten races in the series. "I'm absolutely thrilled with this victory," he said. "It was not easy with the long safety car phase right at the beginning of the race. But on the last lap I even managed to turn the fastest lap. That was a great weekend."

Points Standings

1. Sven Müller	83
2. Mathieu Jaminet	66
3. Matteo Cairoli	65

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Can the 997 GT3 RS really hold a candle to its ferocious replacement, the 991 GT3 RS? We found a few deserted UK roads to resolve the matter...

ROIO HBY

Story: Andrew Frankel Photography: James Lipman



RFI5 XLG

-

September 2016 21

t Porsche, they are known by their numberplates. The younger car is 'XLG', the older a

more affectionate 'Hebe'. They are referred to in reverential terms, and loaned out to the likes of me only for very good reasons indeed. Like the two keepers of the formula for Coca-Cola, they are rarely if ever seen in public together. So the

The new GT3 RS is a monster, one of few cars on the road capable of making its predecessor seem restrained

ROIC

5.5

997 vs 991 GT3 RS

chance to drive the two 911 GT3 RSs, one after the other, on the world class roads of the West Coast of Scotland was not to be missed. But this was more than a fun day out, there was a serious question here: how much progress has been made in the five years that separates the two and has it all been in the right direction?

For all they share in being the most extreme driving machines Porsche produced in their respective eras, it is how they differ that first draws your focus. Hebe, the older 997generation car, is the last era of 911 to use the renown 'Mezger' race engine, a motor known not only for its ability to provide huge power from a diminutive capacity, but also being near enough unbreakable with it, at least in 3.8-litre form.

XLG comes with an all-new engine, larger by a couple of hundred cc and boasting an even higher specific output: 123hp per litre, versus 117hp for Hebe. It spins even faster too, all the way to 8800rpm, 300rpm further around the clock than the older RS. Of course the new car has those same 'refinements' that separate all 991 generation 911s from their 997 forebears (a far longer wheelbase, electric power steering and hybrid steel and aluminium architecture) but the

new RS also has four-wheel steering and, of course, a PDK two paddle transmission.

More fundamental still is that Porsche changed the design brief for the RS between the two generations. The new RS is not the old RS plus six years of knowledge but a different kind of car. For while the 997-based RS was required to sit squarely across both road and track disciplines, the 991-derived RS can afford to be more circuitfocussed now that it sits at one end of a three-car range, with the road-oriented 911 R at the other end and the standard GT3 in the middle.

Indeed the new GT3 RS is a monster, one of





997 GT3 RS (GEN 2)

PRICE WHEN NEW: £104,891
PRICE NOW: £170,000
0-62MPH: 3.9-sec
TOP SPEED: 193mph
WEIGHT: 1370kg
ENGINE LAYOUT: Six-cyl, longitudinal, 3797cc
INSTALLATION: Rear, rear-wheel drive
POWER: 444hp at 7900rpm
TORQUE: 317lb ft at 6750rpm
POWER TO WEIGHT: 324hp per tonne
SPECIFIC OUTPUT: 117hp/litre
COMPRESSION RATIO: 12.2:1
GEARBOX: Six-speed manual
LENGTH: 4460mm
WIDTH: 1852mm
HEIGHT: 1280mm
WHEELBASE: 2355mm
FRONT SUSPENSION: MacPherson struts, coil
springs, anti-roll bar
REAR SUSPENSION: Multi-link rear axle, coil
springs, anti-roll bar
BRAKES: 380mm ventilated discs (f),
350mm ventilated discs (r)
WHEELS: 9.0J x19in (f), 12.0J x 19 (r), cast alloy
TYRES: 245/35 ZR 19 (f), 325/30 ZR 19 (r)

The 997 talks to you, an extraordinary dialogue conveyed through that suede-rimmed wheel to your fingertips

few cars on the road capable of making its predecessor seem restrained. It looks that way because while all GT3s (and RSs in particular) have sought downforce to make sure it's not just rubber that's clamping the car to the road at speed, the new GT3 RS turns that desire for aerodynamic grip into the obsession that befits its new role. But what good will that do here in Scotland? Anyone driving sufficiently fast on public roads for downforce to make the difference between sticking to the road and flying into the scenery probably shouldn't be driving. So it's time to find out.

Some things Porsche gets right whatever the generation: it doesn't matter which RS you're sitting in, you can be sure of its perfect driving position, excellent visibility ahead and to the side (but not behind), clear dials, ideal pedal weights and a steering wheel spared the fuss and clutter you find on other fast sports cars.

Slot the selector back in Drive, squeeze the throttle and depart. Now that there is a manual 911 R, the fact the GT3 RS has paddles alone suddenly doesn't seem quite the mistake it once did: more than any other road-legal 911 since the original 911 R, this is a 911 configured to extract a lap time, and like it or not, paddles save whole tenths of a second every time you change gear.

Of course, it is mesmerisingly fast too, at the

top end in the lower gears just a step beyond what is familiar and comfortable even to drivers of conventionally fast cars. But because it revs so high and because its gears are widely spaced, it is the relentless nature of the power delivery that lives longest in the mind. On roads like these you could remove the two highest and two lowest gears and not materially affect your progress at all. And yet, if only for brief periods of time and, admittedly only on the deserted roads you get in this part of the world, you can use the performance, take the engine to the limit of what it is able to provide. But you will never do the same to the chassis.

Car testers like to talk in terms of push and slide, of applying opposite lock and balancing the car on both the throttle and the edge of oblivion through some quick curve. Not in the new GT3 RS on the public road. It doesn't over or understeer, it just steers. You decide where you want it to go, you point it in that direction and there it will go. So distant are its limits on the road that it actually makes it a very easy car to drive, despite its Turbo-specification width. Even so, you need to find another way to make it properly enjoyable.

This comes easily enough: find a long corner and its child's play to subject yourself to lateral loadings most cars couldn't manage longitudinally or, put a simpler way, cornering harder than they can brake. You can savour the accuracy of the steering by seeing how precisely the car will adhere to your chosen line and you can goggle at the suspension's ability to eliminate float, heave and wallow, pretty much regardless of surface or camber changes. And the ride? Well it's good enough not to dislodge your dental work, so in the context of a car such as this, it is probably good enough.

What, then, can the six-year-old 997 GT3 RS possibly have to counter such an onslaught of technology and befuddling ability? Well, given how much larger the 991 is, as well as wider and with the additional weight of a bigger engine, PDK transmission and that rear-wheel steering system, you'd expect the old car to be much lighter. But it's not: no one should sniff at a 50kg weight saving, but it's very little more than how much weight you add every time you fill the tank with fuel. Fact is that however impressively low the 997's 1370kg kerb weight might be, the 1420kg of the 991 represents a far more fastidious approach to saving every imaginable gramme.

The 997 does feel smaller around you however, and older. The ergonomics have moved on a generation and there's just a simple suede wheel in front of you, compared to the smart and shiny helm offered by the later car, and

1

ROIO HBY

991 GT3 RS (GEN 1)

RFI5 XLG

PRICE: £131,296
PRICE SECOND-HAND: From £215,000
0-62MPH: 3.3sec
TOP SPEED: 193mph
WEIGHT: 1420kg
ENGINE LAYOUT: Six-cyl, longitudinal, 3996cc,
INSTALLATION: Rear, rear-wheel drive
POWER: 493hp at 8250rpm
TORQUE: 339lb ft at 6250rpm
POWER TO WEIGHT: 347hp per tonne
SPECIFIC OUTPUT: 123hp/litre
COMPRESSION RATIO: 12.9:1
GEARBOX: Seven-speed PDK

LENGTH: 4546mm
WIDTH: 1880mm
HEIGHT: 1291mm
WHEELBASE: 2457mm
FRONT SUSPENSION: MacPherson struts,
coil springs, anti-roll bar
REAR SUSPENSION: Multi-link rear axle,
coil springs, anti-roll bar
BRAKES: 380mm ventilated discs (f),
380mm ventilated discs (r)
WHEELS: 9.5J x20in (f), 12.5J x 21 (r),
cast alloy
TYRES: 265/35 ZR 20 (f), 325/30 ZR 21 (r)

found originally in the 918 Spyder.

When you fire it up, the 997 engine sounds different to the 991's, but not as different as you might expect given they don't have so much as a plastic clip in common. Despite its smaller capacity, the older engine actually has a wider bore than the 991's, offset by a substantially shorter stroke, so you'd expect that of the two it would be the older engine that was more inclined to rev. Not so. The newer engine is not just stronger in the mid-range, offering more torque at lower revs, it goes harder for longer up top too.

That said, the gap in performance between them is nothing like as large in real life as the figures suggest. For while it is true that the later GT3 RS needs only 3.3-seconds to reach 62mph from rest compared to 3.9-seconds, that says more about the traction and gear shifting advantages of the younger car than any lack of real acceleration. According to a well-known weekly car magazine that ran independent figures on both cars, that 0.6-seconds has not grown one tenth wider by 100mph and even at 150mph, the old car is just 1.3-seconds behind its descendant: next-to-nothing in other words. Six years old it may be, but this is still a ferociously fast car, capable of outrunning almost anything else on the road.

But there is something else here, a far more significant and easy to detect difference between Porsche's two most recent takes on the GT3 RS theme. Yes the new car puts on a show for the driver that he or she is unlikely ever to forget and while the old car cannot come close to approaching it in some regards, what it does do is invite you up onto the stage and ask you to take part. There is an intimacy about driving the old GT3 RS that, despite its brilliance, is missing from its offspring.

Essentially there are two reasons for it, and neither has anything to do with weight. First and fundamentally, there is that 10cm difference in wheelbase. That is a huge amount of additional space to add between the wheels and the negative effects that result – mainly a loss of agility – are precisely what Porsche engineered the rear-wheel steering system to mitigate. And mitigate it does, eliminate it does not. The older car simply feels more nimble even if, ultimately, it is unable to negotiate a corner quite so quickly.

There is nothing Porsche could do about the

There is an intimacy about driving the old GT3 RS that, despite its brilliance, is missing from its offspring

second factor, which is the difference between the impressive electrically power assisted steering of the current GT3 RS and hydraulically assisted steering of its forebear. The 997 talks to you, a constant, extraordinary dialogue conveyed through that suede-rimmed wheel to your fingertips and it's a language you understand at once. Whatever else these cars should or should not do, they must first and foremost put you in touch with the road, and while both do it brilliantly, of the two the older car is better.

Then again, this is perhaps not a fair comparison. As previously discussed the new GT3 RS has a much more track focussed-brief and out here on the roads those things it does far better than the old car cannot really be savoured. And having on previous occasions driven both on the track, I can report that there is another level the new RS can take you to, a challenge it issues to you as a driver quite beyond its parent. The point is the 991 GT3 RS is not a particularly easy car to drive extremely fast, and on the track I regard that as a positive thing. It keeps you on your toes, makes you try harder to be a better driver and when you do feel you are getting on top of it, it provides a sense of achievement not even the 997 GT3 RS can offer.

I have wondered about these last two paragraphs ever since I wrote the first. The cardinal sin of any story like this is not to know how it's going to end before it begins, and I know you want me to tell you which one of these two outstanding Porsches I prefer. And I have an answer you will regard as a complete cop out: on the track the new 991 GT3 RS is the more rewarding car because it asks more of you as a driver and therefore gives more back in return. On the road it's the 997 GT3 RS because you're never going to be truly on the limit here so for this discipline the more immediate, more intimate environment it offers is preferable.

But that's not quite good enough, is it? That's a 'horses for courses' conclusion which while representing precisely what I believe, doesn't provide you, with the answer to the one question everyone who's ever started a comparison test wants to read. Which one wins? The decision is tough but it must be made. So for me and just because I would enjoy more of what it does best more of the time, it's the 997. Though frankly, I'd feel blessed to have either \bigcirc



Picking a victor here is not an easy task, for both of these RS cars are simply fantastic 911s





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Author of 25 Porsche books, Peter has been involved with the brand for 35 years

On its 20th birthday, Peter Morgan remembers the launch of the original Boxster concept in the UK and considers the value of an early car today.

t's a stunning fact that the Boxster is 20 years old this year. It only seems like yesterday that I and hundreds of others went to two preview events for the concept car back in 1993. Those shows, at the Design Museum in central London and at Porsche GB's then-new HQ in Reading (with proceedings introduced by BBC newsreader Selina Scott as I recall), really powered up everybody. This was the first glimpse of the new ideas that were emerging from the internal revolution overtaking Porsche in the early 1990s. It wasn't a happy time for many insiders, but the Boxster study had the effect of lifting the veil of gloom that was risking the company's future. The concept car was beautiful and carried so much styling detail that to say it was a work of art is no understatement. It even had little prop bladed fans behind tortoise shell trimmed vent grilles!

When the Boxster launched in late 1996 as the new Type 986, it had physically grown - a disappointing result of compliance with safety regulations - but it was still a peach. Aside from the gorgeous styling, the appeal was underscored with a brandnew 2.5-litre flat-six - a proper sixcylinder for an entry level Porsche. Demand was instant. Within one year. Porsche decided the Boxster needed its own factory and this was subcontracted to the Finnish auto industry contractor Valmet. By 1999, Boxsters were rolling out of the pertly named Uuisikaupunki and for the first time, a Porsche vehicle identification number didn't carry an 'S' (for Stuttgart) at the 11th digit. In fact, there were some who suggested that Boxsters with the 'U' in the VIN were better made than the home-grown originals. That story probably originated in the Porsche marketing department, but there was no question the new two-seat roadster was one of the finest cars Porsche had ever produced. And most importantly it sold like hot cakes.

In terms of its contribution to the balance sheet, the Boxster saved Porsche (with perhaps a little help from the 993). It was an instant classic lauded for its perfect blend of everyday driving manners and sports car good looks. Very few models in what was later referred to as the 'new generation' of Porsches would claim such instant classic status.

By comparison with the 3.4-litre 996, the 986 was a better driving package. The latter tried to please too many people and had lost its way in terms of the philosophy of the 911. The later '00-'02, 2.7-litre Boxsters were a more refined driving experience, while the 3.2-litre S was introduced at the same time as the 2.7. With 252hp, the S was a quick as you needed for an everyday sports car.

It was an instant classic lauded for its blend of everyday driving manners and good looks I had a 2.5-litre in the late '90s for three years and followed it with a 3.2litre Boxster S. They were amazingly easy to live with as both daily commuters and they had that essential kerb appeal. The Achilles' heel was the wretched plastic rear window. The roof opening/closing procedure (so as not to kink the clear plastic) was a pain, but the cars were as hardwired an everyday sports car as you could imagine. That made them perfect for the indulgence of just driving for pleasure.

So, fast forward to today's used Porsche marketplace and I predict a pre-2002 986 Boxster could be a Cinderella classic-in-waiting. Because values went straight down from new, an early 1997-'99 car in top condition can be had for less than £6k. The problem is that of the many, many cars sold, most went to uncaring homes – missing services, often never cleaned and seeing lifestyles that resulted in torn roofs and scruffy interiors. Today, if you get a big problem example, you might as well offer it to a scrapper.

One example I've seen recently

sums up the problem. It was a 2001 986 S with a Tiptronic gearbox. Not an obvious choice, but this Tip had kept its body out of harm's way and had just 33k miles. Nevertheless, it wasn't a straightforward purchase at over £7k. Big bills can fast erode the value of these older examples. This one had a casual service history, which is always a cause for concern on the watercooled cars, perished tyres and a roof that didn't close properly. It also needed an air-con rebuild. In all, with at least £2500 needing to be spent it wasn't a simple buy unless the seller really relaxed the price. Add to this the inevitable wear and tear running costs of replacing brakes, the plastic window and even corrosion in the long, rigid brake pipe that runs underneath and somebody's first Porsche ownership experience could be very disappointing. It also underlines that those high mileage Boxsters advertised at £4-5k need even greater care.

That timeless body shape may still have an instant 'wow!' factor, but the passing of years also demands great care to find the right car \bigcirc





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Single seater ace turned Carrera Cup GB driver, Dino is enjoying his second season racing Porsches

Racing a Porsche in front of his home crowd at the British Grand Prix in Porsche Supercup has got Dino Zamparelli fired up for the remainder of his season...

ast month was fairly busy. It all started at Croft in the Carrera Cup GB championship, when I had a successful weekend with two poles, two wins and two fastest laps. We closed the gap to the championship leader, Dan Cammish, to just three points and I suppose more importantly, we put on a good show in front of some key sponsors and clients.

The result was the launching pad for my entry into the Porsche Supercup race at Silverstone in support of the Formula One British Grand Prix as a 'wild card' entry. Clearview Homes and Simpson and Partners wanted to entertain key clients, so a deal was put in place to race in a one-off livery for the weekend. There were two parts to this weekend; one was the racing and one was the hospitality and entertainment. We had a great time entertaining around 20 guests during the F1 weekend. I am a member of the British Racing Drivers' Club (BRDC), which is an amazing honour and privilege. That means I'm able to access some exclusive locations and viewing points during the weekend for my sponsors and partners. It was a full-on weekend in a hosting respect, but it was fun and it's a great chance to give insights and talks to genuinely interested business people who have a passion for succeeding and improving.

On the racing front, unfortunately things did not pan out the way I had hoped. Following a good round at Silverstone in the Carrera Cup GB series in April, I felt we could be challenging for the top five in Supercup. European racing is nothing new for me, having raced in the GP3 single seater series in 2013 and 2014. GP3 also supports the F1 package, as does the Porsche Supercup. Therefore it was good to see some familiar faces and old team members floating around. Silverstone F1 weekend is special; the fans are all motor racing nuts, and let's be honest, after a lot of bad press for the UK recently, I think the British GP (and Wimbledon for that matter) brought some dignity and respect back to the country. It was a great weekend, and I was able to watch the F1 after my race. My only gripe is why they didn't start the race sooner, five laps under safety car was too much – these drivers are supposedly the best in the world, let them prove it...

The racing for me, however, was not so special. I was in my usual 911 GT3 cup car, but I just didn't gel with it. We struggled with balance from the off as there were some factors and elements on the car that were different to when it is running in Carrera Cup GB spec. After messing up qualifying I started 11th, so I was looking for a strong recovery drive in Sunday's race. However, heavy rain fall at the start of the race put paid to my chances as we went the wrong way with our wet setup. As a consequence, I was a sitting duck from about lap four onwards, and I was getting overtaken at all angles – I was ready to go home and just about managed to bring the car home in 15th. Nonetheless, we learned a great deal that weekend and it was an awesome experience to be back racing in front of over 100,000 fans! No doubt we've gained valuable information and experience for when we race in another Supercup event in the future

I thanked my guests and clients from Clearview Homes and Simpson and Partners, but as soon as I was on my way home attentions turned back to the Porsche Carrera Cup GB Championship. I was keen to get back into the GB-spec 911 again and get my flow back, we had a test day a couple of weeks after the British Grand Prix weekend where the car felt good. I felt strong again and had regathered my momentum. Action will have resumed at Snetterton by the time you read this, but right now I feel ready to get back into action and to go and fight for that title... \bigcirc

We learned a great deal that weekend and it was an awesome experience to be back racing in front of over 100,000 fans!



The views of the author are not necessarily shared by the magazine.



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moni

The Panamera deserves your attention, for it is both a capable and exciting Porsche, says Simon Jackson...

'he Panamera is a divisive Porsche. At its launch in 2009 its styling proved to be an acquired taste, and as with every model outside of the 911 range, there were those who refused to view it as a 'proper' Porsche. In my experience, though, anyone with an overpoweringly negative attitude towards the Panamera has typically spent little or no time with it and I think they should give it a chance. Personally speaking I wouldn't ordinarily chalk myself up as a fan of large saloon cars and as a result I too was once a little dubious about the Panamera. But spend any meaningful time with one and you'll struggle not to be impressed by its capabilities. If you can get past its distinct design language that is...

second

by Simon Jackson

With the advent of the all-new Panamera revealed recently, Porsche has taken steps to address the car's aesthetics and arguably it looks far prettier now. But more importantly the new model also pioneers some interesting technological advances that we're sure to see filtering down to other Porsche models in the future.

One of the most striking changes is the use of digital displays; the car's cabin is such a technological step-up that it even has its own Porsche terminology now: 'Porsche Advanced Cockpit'. The dash cluster is now largely digital, save for the one remaining analogue gauge - the rev counter. Touch-screen displays feature throughout the interior, and there are a bunch of new background systems, some of which should be future-proof to aiding autonomous functions later on. There are also significant gains in terms of luxury, ergonomics, and fit and finish too. It's likely that these advancements will filter down to 911s and the rest of the Porsche range soon.

It's clear, then, that the Panamera has a big part to play in the overall Porsche family picture, and that it will break new technological and design ground going forward. It looks likely that we'll be witnessing the arrival of new models based on the Panamera soon too, thanks to the fact that it shares its MSB platform with other cars in the VAG stable, chiefly with the likes of Bentley. A 'shooting brake' and possibly a coupé is rumoured, and with that MSB architecture underneath it, the creation of either sub-model is no longer as cost-prohibitive as it would've been in the past. The double edged sword is that any parts sharing with other brands, even within the parent company, is likely to fuel the fire of contention for those searching for a reason to call the Panamera out for not being a 'proper Porsche'. Regardless, it looks as though the model is here to stay.

There are those who will snub any Porsche that is not a 911, but while years ago it was relatively easy to build an argument against the front- or midengined Porsches, today all of the firm's offerings, no matter their shape, size or colour, are great cars - like most motors from the majority of manufacturers these days. That makes listening to the minority of Porsche people who continue to moan about offerings like the Panamera or Cayenne ever more tiresome, for their line of reasoning holds little, if no, water. If you're a Panamera sceptic then try to spend some time in one with an open mind, I'm confident you'll be surprised if you're anything

like me, and let's not forget, I didn't count myself as a fan before I gained some regular seat time.

All this, of course, is not to deny you an opinion which sides against Porsche's luxury saloon, or indeed any car that removes the firm that bit more from its original mission statement. There is an debate to be had there. But remember, Porsche puts as much time and effort into cars like the Panamera as it does the 911, and in business terms it is largely these 'non-911' cash cows, such as the Macan, that ensure the financial security of the company. In short, being a Porsche fan in the modern world should not solely be limited to 911 fandom... \bigcirc



Listening to people who continue to moan about offerings like the Panamera or Cayenne is ever more tiresome, for their line of reasoning holds little water

Simon has worked across several automotive publications over the past decade

Good Form

Could the second-generation 991 Targa 4S be the model that gains the most from the 911's switch to downsized turbo power? We tested it on UK roads to find out.

Story: Simon Jackson Photography: Porsche

t the risk of making a sweeping generalisation, it's likely that you'll either love or loathe the concept of the contemporary 911 Targa. If your feet are firmly rooted in the latter camp then

whatever I'm about to say is unlikely to change your viewpoint but if you appreciate both the aesthetic form and functionality of the new wave Targa model, and I for one most certainly do, there's good news here. Why? Because this second-generation variant of the 991 Targa is quite possibly the very best one yet. And what's more, it may well be the biggest beneficiary of the 911's switch to turbocharged 3.0-litre engines.

That the Targa 4S is the heaviest of the 911s currently available with the newly-developed 2981cc flat-six engine is not in dispute; in fact, there's no getting away from it. At 1600kg in PDK form the car is almost a full 100kg heavier than its Carrera 4S Coupé counterpart. That's roughly the equivalent of a newborn African elephant (90kg) – seriously, we looked it up. But, despite the increased mass this is a 911 that benefits hugely from the driveability of its new torquey power unit which by its very nature provides useable punch in each and every gear and therefore offers useable power through a far wider part of the rev range. Drive a Targa of the past back-to-back with a 911 Carrera Coupé of the same iteration and you'll notice the difference immediately; happily though, today that unavoidable dilution of the 911's engine performance and lithe handling has become lessened in this new Targa.



That is an observation that you might not agree with based solely on a paper analysis, though, for this 4S books in at 420hp, just 20hp more than its predecessor, yet it's the 369lb ft torque served from low down at 1700rpm right through to 5000rpm that works as its trump card. The latest car's 0-60mph time of 4.0-seconds flat (with PDK and in Sport Plus mode) is a statistic that far better illustrates what this model can now do as it fires up through its seven-speed PDK 'box. That time is a whole bunch of tenths of a second quicker than that which the first-generation version car could manage, too. Admittedly there are quicker 911s, of that we can be confident, but finally it's possible to say that the Targa S no longer carries the drastic poison chalice of form over function that it once did. Indeed, this variant of 911 gains enough to ensure it is a candidate for the largest beneficiary of the seismic swap to turbo power, which might just serve to open the idea of a 911 Targa up to a larger market of potential Porsche purchasers. For those for whom the Targa's styling is the predominantly appealing factor here, again more good news as Porsche has merely tweaked, not revolutionised, the car's exterior aesthetics. Roofless 911 driving does not get much more chic (or practical) than this. Indeed the Targa continues to make the 911 Convertible look largely redundant, for it offers a 'best of both worlds' – somewhere between a Coupé and Convertible. Yes, there's still a delay as the complex *Transformers*-style glasshouse lifts and



911 TARGA 4S



retracts, and there remains a restraint on vehicle speed while this conversion occurs, but perhaps that's a little pain worth taking in the name of ultimate style? The marginal loss in performance here over the Coupé does ensure making progress whilst pushing on is slightly more difficult than may be the case in its Coupé cousin. That said, this new Targa feels supremely planted on the road, and when worked and balanced correctly it can still offer the true 911



sports car experience, even if that baby elephant up top sometimes diminishes the driver's enjoyment if he or she should be attempting to extract the final few tenths. With the clever electronic roof open, it's true that you'll likely miss the naturally aspirated soundtrack that used to ring out around the old model, but you'll gladly sacrifice that for the effective way this engine works in harmony with the rest of the car. Besides it actually sounds pretty good for a turbo unit, albeit different to the Porsches of old and aided in part on this car by the inclusion the optional Sports exhaust system (£1773).

As you might have guessed, the subtle exterior revisions leave little to comment on here; the outside of this car wasn't broken to begin with, and so Porsche has not felt the need to fix it (this car proudly wears flattering Sapphire Blue Metallic paint (\pm 801) with a black hood, although blue, brown, and red hoods are also available). Inside, as you'd expect, come all the toys associated with a new 911, such as the revised PCM system, and this particular car has a few extras, too: GT Sport steering wheel (\pm 186); electric Sports seats Plus (\pm 312); and the brushed aluminium package which is part of the Porsche Exclusive range (\pm 515).

One thing remains true of the 911 Targa: it garners attention. So if turning heads isn't your bag then don't consider it. For the first time, though, this model is less of an out-and-out style statement and less of a compromise designed merely to draw eyes, too. Rather it now better falls in line with the true premise of a performance-orientated Porsche. Chances are that most real Porsche 'drivers' out there will not consider this car for they'll have their minds already made up about it, but if they stay openminded they might find a modern Targa 911 that is far more agreeable than has been typical in the past. Make a sweeping generalisation about the 991 Targa at your peril O



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F # 1



In the final part of our look into the Panamera story, we examine how the fourth Porsche model range was launched, its face-lift of 2013, and the build-up to the arrival of the all-new second generation version. Story: Kieron Fennelly Photography: Various

REIIWRL

n autumn 2008 internet spyshots illustrated what were seemingly undisguised Panameras and it was apparent the launch of Porsche's new car was imminent. Significantly Porsche chose Shanghai to reveal its new model, a clear indication of the clientele it was seeking. It was Wiedeking who had persuaded the supervisory board that a Porsche SUV would open new markets for the company in territories where mass car travel was a relatively new phenomenon. The presentation of the Panamera in the Far East demonstrated the next stage in this strategy (and Shanghai would again host the launch of the face-lifted Panameras in 2013).

The range as originally presented in April 2009

comprised a 3.6 V6 base model and a 4.8 V8 S. Like the 911 these were also available with four-wheel drive. Similarly the V8 also powered the Turbo and Turbo S variants where all-wheel drive was standard. A V6 diesel completed the range, a model aimed specifically at European buyers. Default transmission was Porsche's PDK, except for the diesel which, like its Cayenne sister, retained the eight-speed Tiptronic engineered specifically for the Audi-sourced engine.

Porsche's attempt to extend the 911's styling to its four-door was stylistically ambitious and the consensus was that if the front with its classically raised wings worked, the line of the rear was less successful. On the other hand, the new Panamera was clearly a Porsche and the spacious passenger cabin was matched by a considerable boot with a lifting tailgate. Reaction to the Panamera's dynamics was as positive as Porsche might have hoped. In Europe, the 911-fixated specialist Porsche press afforded the new Panamera rather perfunctory coverage, as it had with the Cayenne. You had to turn to generalist car magazines to get a proper assessment which did not simply repeat Zuffenhausen's press releases. Here correspondents, some of whom had been distinctly sceptical, found themselves more than impressed by the big new Porsche. *Autocar*, usually reliable for its considered analysis, was typical in its measured enthusiasm:



PART TWO Porsche Panamera The Development Story

"One of the Panamera's defining features is that it moves and sounds like a Porsche rather than conforming to the conventions of the luxury car market. The end result is that, because of its inherent size and weight, the model tends to work better as more power is injected into it."

The performance-orientated *Autocar* testers thought the naturally aspirated 3.6 V6 petrol engine, which they admitted was free-rewing, did not stimulate the driver enough and the 240hp diesel inspired them even less. *Auto Motor & Sport*, though, awarded the base 3.6 two-wheel drive Panamera five stars, recording 0-100km in 6.4secs, adding that if this was not quick enough the V8-powered S would take a second off this figure. The German magazine also commended the precision of the Panamera's steering and handling.

At the other end of the spectrum, there was no argument about the Turbo and Turbo S which offered colossal performance, a 0-60mph time of under four seconds and top speeds approaching 190mph. This was true 911 turbo stuff and testers remarked that such power fully justified the standard-fit four-wheel drive which they felt unnecessary on the other models and blunted enjoyment of the Panamera's fine handling.

If 500hp was not so exceptional in the Oberklasse, it was indeed that handling which made the Panamera stand out. A heavy car, 1800kg in its base form, and 1931mm wide, it seemed to shrink around the driver, the accurate and nicely weighed steering making it a surprisingly easy car to hustle on challenging blacktop. Cornering with almost no roll, the big Porsche displayed phenomenal grip, although at the highest cornering speeds the sensitive driver would be aware that much decision-making within the chassis was taking place without their input. "The systems themselves – PASM, Porsche's Torque Vectoring and Dynamic Chassis Control – are not overly intrusive," said *Autocar*, "and they are broadly welcome for the combination of dynamic agility and electro-mechanical safety net that they provide."

Only the Panamera's sheer dimensions would inhibit the driver on narrow twisting roads and the chassis felt

way ahead of anything a sane driver might attempt with a car of this size. The classic ergonomics of the 911 played a big role here with Porsche habitués immediately finding themselves at home in the driver's seat. *Auto Motor & Sport* liked the driving position, adding the Panamera was like the muscular big brother of the Porsche sports cars. There was praise, too, for the rest of the cabin, in particular the slightly inward orientation of the rear seats, which endowed them with exceptional forward visibility. Levels of refinement were thought class-leading and showed the effectiveness of

Bramery Turt

RX64 NXH

Porsche's developmental benchmarking. In 2011 a petrol-electric hybrid joined the Panamera range. Using an Audi-derived supercharged 3.0-litre V6, shared with the Cayenne Hybrid, the nickel-metal hydride battery/petrol-powered Panamera Hybrid claimed the lowest CO₂ emissions in its class, at 159mg – crucially below the 160mg step-up in tax. Like the V6 diesel, this power unit was mated to an eight-speed Tiptronic rather than Porsche's own Doppelkupplung. The company announced a 0-62mph time of six seconds and a 168mph top speed for the Hybrid which came in top specification with the Turbo's 19-inch wheels and air suspension and was distinguished by its lime green brake callipers. The Panamera range was completed in 2012 by the advent of the GTS, a full-specification, naturally aspirated V8, another derivative of Porsche's new GTS sub-brand which had already enjoyed success with the 911 GTS. While retaining its limousine qualities, the Panamera GTS with its GT3-like Alcantara cabin fittings was clearly intended to be the sportiest Panamera, though it was available only in four-wheel drive and with air suspension: testers trying the GTS on the Ascari circuit in southern Spain commented on the incongruity of a two-ton executive saloon that could negotiate a track so competently. The GTS's faster steering ratio undoubtedly contributed an agility and level of involvement absent in the more powerful Turbos.

Mechanical changes were few. The biggest was the E-Hybrid which exchanged its nickel-metal hydride batteries for a lithium-ion unit which allowed plug-in charging as well as permitting a range of 20km on battery only, compared to 2km with the previous technology. The dead weight of the floor-mounted 180kg battery still resulted in a feeling of inertia, though, which most magazines thought hobbled the eco-Panamera with a less-than-Porsche level of spriteliness. Also, real world economy was no better than the diesel, which cost 20% less. Nevertheless, eco-sceptic journalists were surprised to note that by 2014 the Hybrid accounted for 20% of UK sales, rather justifying Porsche's decision to enter this market. Most non-hybrid sales in Europe were the diesel version. In the UK, which was fairly typical, the remaining 80% was split 60% diesel and 20% petrol.

Other changes of note were that the V8 engine was dropped for the S, replaced by a new twinturbocharged 3.0-litre V6. *Auto Motor & Sport* noted appreciatively that this new engine was developed from Porsche's V8 and not another VW Group import. Turbocharging gave the S almost half as much torque again as the base 3.6 V6 and *Car* magazine rated the agility of the V6 420hp S model over both the 4x4 GTS and the Turbo Panameras. The naturally aspirated V8 lived on only in the sporting GTS.

Porsche also addressed the shortcomings of its diesel. In its original Audi A7 incarnation the engine was fitted with twin-turbochargers. Space in the Panamera allowed the fitting of only one turbocharger which meant a slightly anaemic 240hp output. The face-lift gave Weissach the opportunity to work on the interface between the engine and the transmission, including lowering of the first four ratios. Together with the substitution of a larger, water-cooled blower, the output of 306hp resulted in an engine rather happier to rev. Testers also commented on the new engine's improved soundtrack.

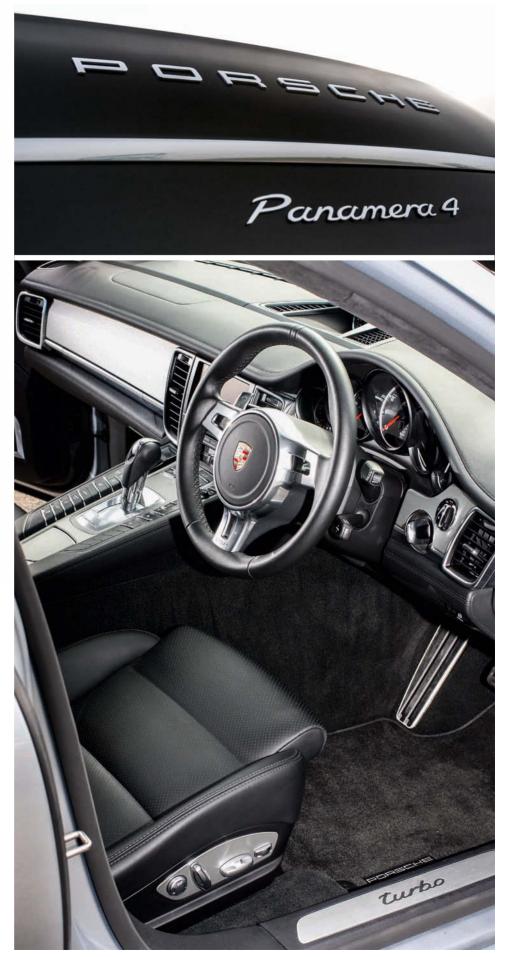


The real achievement has been to break into the chasse gardée of Mercedes, BMW and Audi

The styling changes were conservative and mainly concerned the back of the Panamera. The rear panel was redrawn to resemble what was becoming the corporate Porsche-look already applied to the 991 and the 981. For the Panamera this also involved relocating the numberplate to the lower valance and introducing new light clusters. Other changes included revised headlights and larger air intakes at the front, and a tightening of lateral swage lines. Critics considered the subtle face-lift did not address the general awkwardness of the design because the rear still looked too heavy but acknowledged the detail improvements. The face-lift left the muchpraised interior virtually unchanged.

Ahead of the launch of the all-new second generation Panamera this year Porsche only revealed that the new Panamera would: embody the experience gained with the first version; be lighter, like the 991, thanks to greater use of aluminium and phased steels; and offer improved fuel consumption. But the company also hinted that the second generation would be fractionally longer and wider than its predecessor with shorter overhangs – much in the way the 981 evolved over the 987. A significant part of the 2016 programme is the exterior redesign which is aimed at improving the current model's

Panamera Development





polarising looks. Design chief Michael Mauer told journalists at the 2014 Paris Motor Show that the styling would "continue to divide opinion but will be more attractive". There are more styling cues from the 991 and the hatchback has a steeper rake angle.

A radical re-engineering of the Panamera has also occured, much more than the re-skin which turned the 996 into the 997. There is an entirely new range of V6 and V8 engines. Diesel and Hybrid models, using similar powertrains to the equivalent Cayenne models (as before), will also follow. Porsche will not officially be drawn on whether two-door or open Panameras will emerge but bearing in mind the Modular Standard Platform (MSB) is shared with Bentley, the strengthening for a convertible variant is likely to have been included in the structure. Indeed Porsche's ability to produce such models may eventually hinge on whether, given all its other production commitments, it has enough engineering capacity to build them.

By the end of 2015, Porsche had built over 160,000 first generation Panameras. The final number will probably reach 170,000 when production is tallied this year. China has become the largest market, taking 9250 of the 24,800 Panameras built in 2014, against 6115 shipped to the US. This is important as it has helped anchor Porsche in emerging markets. The real achievement of the first Panamera has been to successfully break into the chasse gardée of Mercedes, BMW and Audi with a controversial but dynamic alternative. Porsche knew the Panamera had no prospect of repeating the Cayenne's success (650,000 units sold in a decade). The Oberklasse presented much stiffer opposition, both technically and in terms of customer loyalty to the existing participants, yet it has failed to resist the Panamera. Of course, everything is relative: a Mercedes S Class outsells the big Porsche five to one, but as a commercial strategy alone it has worked and Porsche now has secured a significant presence in this profitable sector. And on the more subjective matter of styling, to judge from the increasingly gaudy designs emerging from its Stuttgart neighbour in particular, the second generation Panamera may not be viewed as especially controversial.

Former Porsche GB CEO, the outgoing Andy Goss, attended a club gathering soon after his appointment in 1999. It was a brave move: the die-hards were still smouldering over the demise of the air-cooled 911 and now they had learned with horror that Porsche was planning to build an SUV. Goss addressed their hostility directly: "These days, macro economic trends are taking manufacturers away from their core activity and markets but Porsche has to – and will, I am sure – retain its traditional purity." It must be said that even more than the Cayenne, Porsche's Panamera has achieved exactly that \odot





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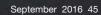
PLATFORM GAMES

The all-new Panamera shares some of its architecture, particularly its MSB platform, with other VAG group cars. It also debuts advanced technology, new design language and superior levels of luxury for the Porsche brand.

Story: Simon Jackson Photography: Porsche

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all it purism or elitism if you will, but Porsche people are generally very particular about the origin of their cars, and perhaps rightly so. Over the years it's no exaggeration to say that any car sharing parts, or a genesis, with others within their Volkswagen Audi Group (VAG) parent stable have often struggled to be accepted as bona fide Porsches. In most cases this was a battle fought for pretty unjust reasons by vehicles that were exceptionally good in their own right, yet a fight against the tide of opinion they endured nonetheless. It is then through gritted teeth and from behind the safety of the living room sofa that we present to you the all-new 'secondgeneration' Panamera. It's a Porsche that shares certain commonalities with other VAG offerings, namely those wearing Bentley badges. But wait,

before you turn the page in utter disgust, there are a few good reasons why now, in the modern era, this inter brand cross-pollination is a positive thing – even for a Porsche.

The first, and biggest, factor here is the all-new Panamera's MSB platform. Platform sharing is commonplace in car construction these days but far from presenting compromises, the beauty of this approach is that it opens up new possibilities. Cost and resource sharing between cars sharing platforms creates efficiencies that benefit each brand, affording a wider number of models to be based on any one platform. These MSB underpinnings will indeed be shared between VAG's brands, most notably by Bentley for its new Continental GT and Flying Spur, but that's only half the story. The MSB platform was developed by Porsche itself, so a cast-off or compromise it most certainly is not. What's more its architecture allows for greater flexibility affording not only the creation of both two- and four-wheel drive Panamera saloons with ease (although at launch only all-wheel drive variants will be available), but it opens up the possibility of further models joining the family further down the line.

It is now almost certain that the 'shooting brake' Sport Turismo estate concept debuted at the Paris Motor Show in 2012 will become a reality as a direct result of the MSB platform. So too a long wheelbase 'executive' version of the Panamera, and there's even talk of coupé and convertible versions too. As a direct result of platform sharing we'll gain a Panamera skeleton developed by Porsche, and a host of model variants based upon it whose creation would otherwise have been entirely cost prohibitive.





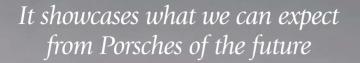
News just in: platform sharing is good.

For now, though, the all-new Panamera, and it really is 'all-new', arrives with a saloon silhouette familiar from the first generation version released in 2009. Yet even with that new platform aside, the changes under the skin are numerous. Three new bi-turbo engines debut in the Panamera: a 2.9-litre V6 petrol; a 4.0-litre V8 petrol; and a 4.2-litre V8 diesel. Notably Porsche has moved the position of the turbochargers to the centre of the engine's 'V' configuration; it says situating them between the two cylinder banks improves responsiveness. The 422hp 4.2-litre V8 diesel engine isn't actually 'new' as such. Earlier this year we saw it in Audi's SQ7, and it is also destined for the new Cayenne, which is expected next year; however, Porsche is sure to claim to have tailored it before considering its use. It's a very clever engine this V8 diesel producing a colossal 627lb ft torque from as low down as 1000rpm to 3250rpm. Two Variable Turbine Geometry (VTG) turbochargers operate sequentially in the traditional fashion, eliminating low down lag entirely and helping to propel the car to 62mph in 4.3 seconds (with Sport Chrono). This diesel engine, which staggeringly can also return 42mpg, appears in the 4S Diesel, marking the first time a diesel Panamera has been available with all-wheel drive. And with a top speed of a 177mph it's also

the world's fastest diesel production car. However, if you prefer petrol power then there's also a 440hp 2.9-litre V6 bi-turbo engine which uses twin-scroll turbos and is a revised and more powerful version of the V6 that went before it, boasting 406lb ft between 1750 and 5500rpm (0-62mph in 4.2-seconds with Sport Chrono). Lastly, the now downsized petrol bi-turbo V8 in the Panamera Turbo remains an impressive unit and the most powerful option here. The new aluminium-block 4.0-litre mill is also fed by two sequential twin-scroll turbochargers (the second operates solely above 2700rpm) and produces 550hp and 568lb ft torque from 1960rpm to 4500rpm. That's around a 30hp and 95lb ft torque increase over its forebear, which translates to a 0-62mph time of just 3.6 seconds in Sport Chrono trim. It's the first Porsche to feature adaptive cylinder control, too, which shuts down four of the engine's eight cylinders under partial load to reduce fuel consumption by up to 30%.

With the new second-generation Panamera also comes a newly developed evolution of Porsche's popular PDK automatic gearbox. The new eightspeed ZF unit is both quicker and more efficient (and features an extra gear) than its forebear, and word has it that Porsche's engineers are viewing it as the first major evolution of the slick PDK system in its history. With it come other revised systems: the Panamera's Active and air suspension systems have been improved with new technology (including a 60% larger air chamber); PASM, PDCC Sport and PTV naturally make an appearance; and tweaks to Porsche's divisive electro-mechanical steering system have also been made, too, with lessons learnt from the 911. Porsche has spent time honing the new car's chassis control systems. What is termed a '4D' system analyses the car's attitude on the road via computer and reacts accordingly to actively stabilise roll. The concept has appeared on Bentley's Bentayga and has since been employed on Audi vehicles, too. More parts sharing but arguably for the better. It utilises a 48-volt motorised system to electronically control the anti-roll bars to keep the car as upright as possible during cornering, equating to faster apex speeds. Perhaps more importantly, the new Panamera is also available with the option of a rear-wheel steering system for the first time, too. Typically associated with the 911 Turbo and GT3 RS this aids both high speed cornering and low speed manoeuvrability. All these improvements to chassis dynamics are good news if you want to make progress in a new Panamera. All told we hear the shell is lighter and around 30% stiffer than the outgoing first-generation car.

As you can see, there really is a lot going on





under the largely aluminium skin here (the bonnet, boot, roof and wheel arches are alloy), but that's not to say that Porsche has chosen to ignore making improvements to the exterior and interior of its new car at the same time. As you would expect there's a typically Porsche look to the new Panamera, yet there has also been a conscience effort to move it closer to the 911 in overall appearance. The styling of the firstgeneration car was divisive to say the least but Porsche has kept the bulk of its aesthetic, which was first debuted in 2009 and subsequently revised in 2013. This new version is longer by 34mm, wider by 6mm, and 5mm taller yet a rearward sloping roofline has seen the rear passenger section of the cabin lowered by 20mm. It certainly serves to alter the car visually but that's arguably more to do with its increased wheelbase, up 30mm, which has lengthened its proportions. The front wheels now sit further forward and there's an increased rear overhang. In conjunction with revised front-end styling and striking contours down the flanks, the car's overall stance is noticeably more athletic. In-keeping with the latest family look, the new Panamera gets Porsche's distinctive four-point LED headlights, while out back the narrow light strip and 3D clusters across the rump and the feel of the various elements at work seem to mix 911 with 718 Boxster and Cayman influences. The trademark retractable rear spoiler (now with two settings: eco and aero) is larger on both models, part of the new car's 'active' aerodynamics. The

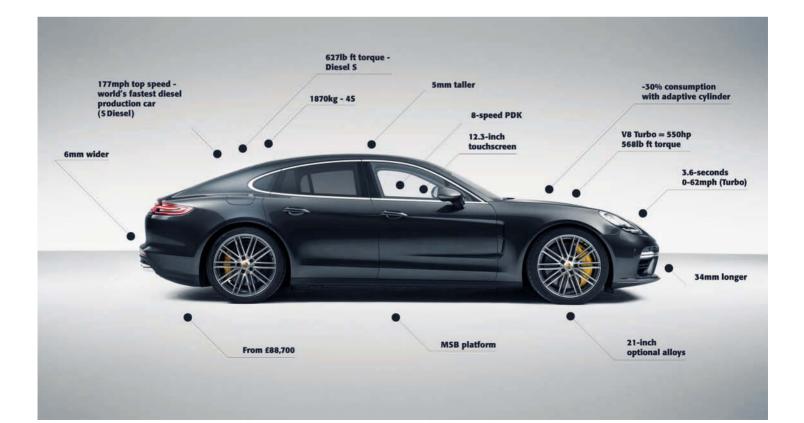


wheel arches will accommodate either 19-inch (4S) or 20-inch (Turbo) wheels as standard, but can also house optional 21-inch rolling stock with ease. In case you enjoy a game of spot the difference, the 4S and 4S Diesel feature round tailpipes, the Turbo trapezoid shape affairs.

Whatever your viewpoint on the Panamera, its trump card was always its interior. Here Porsche has always sought to blend sports car chic with premium luxury and comprehensively nailed it with the first incarnation. The same can be said of this new car's inners which advance the story further, so much so that the new cabin has its own terminology: the 'Porsche Advanced Cockpit'. There has been a clear effort to move the game on inside with 918 Spyder influences. Naturally the Panamera falls in line with both the second-generation 991 and the new 718 cars in terms of aesthetics, technology and ergonomics, but it is also sumptuous and practical, too. There's a far greater use of digital displays than in the past, reminiscent of Audi's 'virtual cockpit' used in the new TT and R8. Only the rev counter remains as a traditional analogue dial in the new Panamera; the rest of the gauges in the driver's line of sight are digital. Down by the gear selector sits a 12-inch touchscreen high-resolution PCM display, the latest evolution of the system features all the functions you'd expect, and its slick glass finish blends seamlessly into the rest of the console like a smartphone. New systems include voice control, while the driver and passenger can individually tailor their side of the display as they see fit. In the back of the car things are equally plush. The two rear passengers also benefit from a similar control panel enabling them to alter functions such as the four-zone climate system. New technological advents also include a night vision assistance system which uses thermal imaging to detect body heat from people and animals in a bid to alert drivers ahead of any hazards. Along similar lines, Porsche's new Innodrive system integrates with the car's (online) sat nav system to ensure the optimum acceleration and deceleration rates are utilised, including gear selections, in effect warning a driver of upcoming twists and turns. The system will be familiar to Audi drivers. Together with the facility to use autonomous braking technology and lane keep assistance, the new Panamera takes Porsche closer than ever to full autonomous driving functionality. The new car actually makes provisions for this with its future-proof FlexRay systems - the ultra fast communications advent designed to govern the on-board automotive computing required for full autonomous driving.

If anything it is this sizeable step-up in both technology and interior ergonomics, design and quality that sets the all-new Panamera apart from its forebear. Yes, this car follows an established pathway pioneered by its predecessor but it also showcases exactly what we can expect from Porsches of the future in terms of technology and design language. On the subject of the future, it will come as little surprise to learn that we expect further models to join the new Panamera range going forward, including rear-wheel drive variants. Amongst those expected at a later date is likely to be a V6 diesel and a new GTS variant (we'd wager that Porsche will not use forced induction on this model), a Turbo S, and also a plug-in hybrid model – possibly two. Rumours of both a petrol and diesel Panamera Hybrid have been circulating, and it would shock us little to see Porsche experimenting with the premise of hybrid cars further ahead of revealing a sports coupé sporting the technology sometime in the future – 911 Hybrid anyone? Expect whatever hybrid models that do emerge to be both more powerful and more economical than anything we've seen before.

The all-new Panamera might borrow some elements of its genetic makeup from here, and sport technological advents from there, but it is without doubt a true Porsche, and one that has been agonisingly honed and perfected to showcase the ultimate in Stuttgart luxury. There will undoubtedly be those who will snub it for the duration of its existence regardless of how impressive it might be, for it is not a 911, but those people would be missing out on a car that is surely a worthy flag bearer for some of the ideologies that have made modern Porsches so famous. With this latest variant of Panamera we have been treated not only to the most technologically advanced and luxurious Porsche yet, but also to a car that genuinely deserves to wear that famous golden crest. We await the opportunity to drive the car in a forthcoming issue, but we're confident that it's unlikely to disappoint... O







GOOD COMPANY

Goodwood Festival of Speed may have evolved over the years but it remains the best place to see some utterly fantastic historic racing cars...

Story: Simon Jackson Photography: Porsche

ar from the relaxed garden gathering of gentlemen racers in rare historic cars that it once was, today the annual Goodwood Festival of Speed (FoS) has evolved into a gargantuan automotive event. Despite its popularity and the inevitable alteration to the relaxed atmosphere that once made it so special (over 60,000 people now attending will do that), it remains unique. Indeed it's the best place in the world to see, hear and feel some of the finest competition cars to turn a wheel in anger. Naturally many of those machines are Porsches, and thanks to heavy investment and support by Porsche, FoS is a paradise for Porsche people. This year was another cracker, seeing a brace of classic and modern Porsches taking to Lord March's 1.16-mile long driveway, and away from the hillclimb offering Goodwood's usual gentrified entertainment.

Porsche endurance racing icons (some wheeled out of the Porsche Museum in Stuttgart for the occasion) were in action. A 906, the Targa

Florio-winning icon, was driven up the hill by Rudi Lins, Brian Redman drove (and crashed) a 917 at FoS this year too - blame a flash flood for that. Emanuele Pirro piloted a 908/3, and 2016/17 Porsche GB Scholar, Charlie Eastwood, got behind the wheel of a 935 'Baby' - the 1.4litre racer of 1977. Eastwood also tackled the Modern GT Racers category of the timed shootout in his 911 GT3 Cup car, clinching the second fastest time overall in Saturday's wet qualifying session. Eastwood eventually posted the fifth fastest time overall with a 51.34 second run. Reigning Carrera Cup GB Rookie champion Tom Sharp drove the 911 GT1-98, the realisation of a childhood dream, but the Carrera Cup GB action was not strictly limited to the Hill. In a Goodwood first, 2016 contenders Sharp, John McCullagh and Dan McKay provided a unique and fast, Porsche Motorsport VIP taxi service straight into the heart of the Festival - and we can testify first-hand that it was quite the ride!

But FoS wasn't just about Porsche racing cars, there were some stunning road cars there too. Ahead of its global reveal, Patrick Dempsey drove the all-new Panamera up the hill, Porsche claimed the car was a prototype but save some duck tape over a few key areas, this was showroom ready. The new 911 R also made an appearance. This was a weekend that endured a mixed bag of inclement weather but it served to prove once more that every year a little corner of the Sussex countryside is *the* place to be during one unique weekend in June O



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PAIN DANCE

The 2016 *GT Porsche* track evening at Brands Hatch in Kent brought out a typically diverse mix of Porsche machinery, despite the wet conditions...

Story: Ben White Photography: Simon Jackson









GTP Track Evening



ate June saw the annual running of the *GT Porsche* track evening at the famous Brands Hatch Indy circuit. Over 30 Porsches representing almost all of the marque's performance-focussed models gathered in warm, relatively bright conditions at the Kent track, along with several familiar faces.

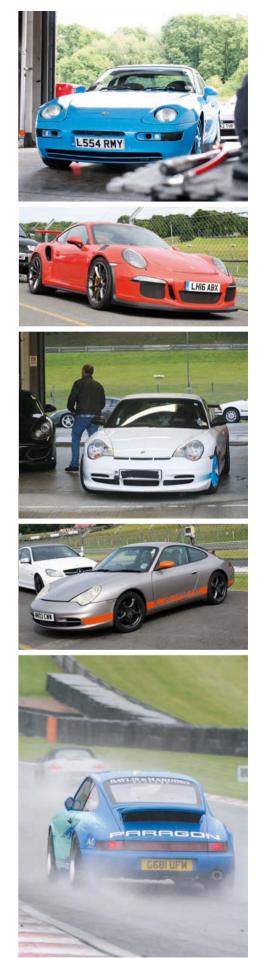
Prior to the 4:30pm briefing, we took the chance to have a look around the paddock where we saw a variety of old and new cars – enough to whet the appetite for the 5:30pm start time. Among the cars attending were three Cayman GT4s including Richard Draper's Sapphire blue car and Neil Plumpton's Carrera white example. Boxsters were well-represented in 986 and 987 form and numerous 911s from 1971 to the present day graced Brands' staging area. Transaxle models were out in force including a brace of 968s and 944s – even a nearly-new Panamera Turbo lined up for some track time.

As ever with MSV events, the briefing was clear and well-delivered, however it didn't escape anyone's attention that as it was going on the sky was turning an ever deepening shade of grey. So it was that as the sighting laps began, the rain came too – lightly at first, but quickly increasing in intensity. By the time the pack was ready to start putting in some fast laps track conditions had become tricky – not helped by an oil slick laid down by an engine failure at an earlier track session. Initial laps were taken carefully as everyone felt their way around, testing grip levels for areas of standing water. But it wasn't long before the pace stepped up.

Throughout the open pit lane session there were some fantastic driving skills on display with the cars being driven as hard as Porsche intended. Paragon Porsche's Mark Sumpter got the hips wiggling on his race-prepared 964 several times and it was really entertaining to see just how far the playing field was levelled by the poor conditions, with well-driven Boxsters and Caymans easily keeping pace with some much more powerful machinery. It was particularly good to see so much respect within the pack; despite ever worsening conditions incidents were thankfully few and far between, and even then they were far from serious.

While the rain never really let off, there was a great spirit within the pits as cars came in and went out. Marshalling was its usual high standard and as an overall event, we at *GT Porsche* couldn't really have hoped for better – save for some drier conditions. Thank you to everyone who came along – whether driving or spectating. It was great to catch up with so many of you and we look forward to seeing you at a *GT Porsche* track event soon (p18). For a full gallery from the evening, visit our website: www.gtpurelyporsche.com \circ

Contact: www.msvtrackdays.com





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This month we look at four air-cooled 911s including a 911 SC, a Carrera 3.0 Sportomatic, a 3.2 Carrera, and a 930 Turbo to see how they each get on at auction...

1983 911SC

Auction House: Brightwells Classic Vehicle Auctions Auction: Classic & Vintage Cars and Motorcycles Location: Leominster, UK Date: 13 July 2016 Estimate: £19,500-£22,500

This 'last-of-the-line' SC benefits from all the upgrades that were made to the model before it was superseded by the 3.2 Carrera later that year. With four owners from new, the first of whom kept it until 2006, the car has been in the current vendor's ownership since 2011. It has covered 217,860 miles but was restored ten years ago. The restoration included an engine rebuild, a repaint in its original Guards red and retrimmed black leather interior. The car has covered 2100 miles since 2006 and was last MoT'd in 2012 prior to a fresh ticket being issued before the auction. And now here's the bad part: the car's history, including details of its restoration work, have gone missing... Regardless this looked like a good car, and at £17,200 a bargain, too.



1985 911 3.2 Carrera

Auction House: H&H Classics Auction: Chateau Impney Location: Chateau Impney, UK Date: 10 July 2016 Estimate: £22,000-£28,000

This iconic Guards red 3.2 Carrera was the subject of a 'glass-out' restoration in 2015, and boasts a beautifully contrasting black leather interior with red piping on the seats. Acquired by the current lady vendor in June 2014, the car has covered 192,900 miles and was offered with a generous history file including 18 expired

MoT certificates. Its restoration work included the rear quarter panels, kidney bowls, door shuts, sills, and two new OE front wings, it was then treated to a full repaint. With a considerable history file including numerous bills and invoices, this car was described by the vendor as being in 'good-to-excellent condition'. It came under the hammer with an estimate of between

£22,000-£28,000, achieving £21,280 on the day.

1975 911 Carrera 3.0 Sportomatic

auction

watch

Auction House: H&H Classics Auction: Chateau Impney Location: Chateau Impney, UK Date: 10 July 2016 Estimate: £38,000-£45,000



This Metallic Ice green 911 Sportomatic, trimmed in a fetching green and blue tartan fabric, was delivered new to Porsche Cars GB in Isleworth and first registered on 5 September 1975. A partial restoration and bare metal respray was undertaken some years ago, and it was offered complete with an £8067 bill dated as recently as February last year from Norfolk Premier Coachworks. The car's specification includes a retrofitted air conditioning system and, taking everything into account, the vendor presently classes the Coupe's bodywork, paintwork, interior trim, flat-six engine and gearbox as all being in 'excellent' order. This 911 has had nine previous owners and covered 117,809-miles from new.

1987 Porsche 930 Turbo

Auction House: Anglia Car Auctions Auction: Saturday 18 June Location: Norfolk, UK Date: 18 June 2016 Estimate: £58,000-£64,000





Believe it not this 930 Turbo was purchased by the current vendor when it was just 18 months old in the 1980s when it had covered just 1800 miles. The car was used as his regular daily driver whilst working in the city during the era of big hair and yuppie culture, of which the 930 was an icon. The 911 was retained upon the vendor's retirement and subsequent move to the country where it became occasional transport, and today it has covered a low 83,000 miles in total. The car was offered for sale with its complete history file and was said to be in rust-free condition. Both sets of keys, a period Motorola car phone and every tax disc from 1989 to 2013 came with the car, along with a current MoT.

FLIGHT PATH

Both of these meticulously restored 1969 Porsches, a 911S and a 912, have been reborn in impressive fashion thanks to a South African aircraft technician. Which, we wonder, is the more appealing?

> Story: Johann Venter Photography: Mahomed Abdulla

ooking at these two cars it's hard to believe that owner, Johann Pienaar, only acquired his first Porsche in December 1996. Perhaps it's even more difficult to

believe that the 911S you see before you was that very car, albeit it was in a rather more dilapidated state to how it stands today. South African Johann's first foray into Porsche ownership it might have been, but it was most definitely not his first restoration project. Johann trained as an aviation instrument technician and progressed to become a flight engineer. If he was not flying he was rallying. Realising that he needed to spend more time at home with his family but still desperate to satisfy his compulsion for cars, he decided to restore a 1964 Lancia Flavia Coupé. But before the restoration on the Lancia was complete Johann had rescued an Alfa 1300GT Junior, and at this point his wife interjected, stating that he must only restore cars that would appreciate in value after his hard work. Johann initially considered restoring Ferraris but found that the parts were very hard to come by and rather expensive. During his regular visits to Europe he found Porsche parts for older models widely available and less expensive. And so it came to pass that Johann became the owner of a grey 911S long-hood B-Series, that was originally Tangerine and (as the bare-metal restoration would reveal) several other colours in-between.



Although Johann had acquired the 911S he did not restore it immediately as he was still busy with the aforementioned Alfa, and before he could get started on the 911S he had also bought a 912. "I wasn't specifically looking for a 912 but I didn't have one," he recalls. "It also fulfilled my other requirements at the time, in that it was a long-hood pre-1973 car. By then 912s had already become very scarce. I estimate that there are approximately 20 original 912s left in South Africa, most were converted to six-cylinder cars."

The second of Johann's paring is the 911S you see here. By his own admission, when Johann acquired his car he had absolutely no idea what he had stumbled across. The (then grey) 140k-mile 911S stood waiting until 2005 for its restoration to begin. "It looked fine from a distance. I didn't really know what I was looking for or at. All I knew is that it was a Porsche," Johann laughs. "Only when I bought the 912 in 1999 while finishing the Alfa, did I acquire *The Used 911 Story* by Peter Zimmermann. It was written for guys exactly like me. It tells you where and what to look for: engine, transmission, chassis, where to detect rust, how to decipher the various numbers etc. It helped tremendously with the other Porsches that I bought as I knew what to look out for. The S was definitely the worst Porsche I'd bought. It needed the most work. Fortunately I have got a hell of a good panel

beater. It was no easy task, though. The S was the most difficult and time-consuming restoration. I stripped the car down to bare metal and lightly sandblasted the surface rust areas.

"I like to buy all the parts before I begin any restoration, so I started buying the bits in April '97. By the time I started the restoration I had everything: door panels, sills, and a complete nose section." It sounds like an expensive exercise, doesn't it?

"I was flying freighters for South African Airways (SAA) at the time," Johann continues. "I preferred flying cargo as I could store the parts in the hold and would get a full week off, in which time I could work on the cars. Flying for







SAA was a big help in terms of getting the parts. I bought plenty from the Porsche dealership in Wiesbaden in Germany. Most of the trim for the interior is from Franz-Josef Döpper in Germany. I also sourced some stuff in England.

"The S was originally Tangerine but so was the 912, so my wife decided on Viper green. I did all of the work, to the last bolt. I try to get as close to the original spec as possible and even improve where I can."

When Johann got the S it had been retrofitted with a '67-specification 2.0-litre motor but it was not turning over so he sourced a '69 911E block from Pomona Porsche, six-miles from where he lives. "The throttle bodies were rebuilt and enlarged to suit the bigger capacity engine," Johann explains. "I replaced the 911E cams with 911S



cams and upgraded the pistons and sleeves. There is not much difference between the 911E and the 911S motor." Johann also carried out some preventative maintenance during the restoration. "I replaced the valve guides and valves as I know this to be one of the weaknesses on these Porsches," he says. "I performed some upgrades, too, all of which Porsche did on later models. The timing-chain tensioners are from an '84, 3.2-litre motor and they were changed from mechanical to hydraulic, while the tie-rod ends are from a 930 Turbo. Purists may say it is not original. I say I don't care, you're buying security. All my Porsches have been upgraded with hydraulic tensioners, 930 Turbo tie-rod ends and fitted with Bilstein shocks. Matching numbers are good but you don't feel the difference when you are driving the car."

We wonder if Johann feels the restoration of

the 912 was any easier than that performed on the 911? "By the time I bought the 912 the restoration had been started, the car stripped and an attempt had been made to repaint it. It had been resprayed very badly, with overspray on the suspension and undercarriage. Either do it properly or don't do it at all! The body had not been stripped to bare metal, the corrosion had not been cut out, it was simply flatted and repainted. Worst of all, the damage to the body had just been plastered in with body filler.

"I refer to the 912 as my 'box car' as most of the parts were in boxes, including the body panels that had been removed, so I had to go back and forth a few times to get all the parts. After I'd got them all I did a thorough inventory and found that there were still a few things missing. I consulted Dr. B. Johnson's *The 911* and 912 Porsche: A Restorer's Guide to Authenticity. It was really helpful.

"This car is identical to the early 911s, down to the wiring harness, so I followed the same procedure as with all my Porsche restorations. The car was already in pieces, nevertheless I stripped it down to the last nut and bolt. I then removed the paint and sent it to the panel shop to straighten out the old knocks and dents and to fit the new panels which I supplied.

"I turned to tried-and-trusted Franz-Josef Döpper in Germany for the basket weave vinyl, which is as close to the original as possible. With a stroke of luck, I managed to source the last three pre-1973 dashboards from the Porsche dealership in Wiesbaden, one of which was fitted to the 912." That explains why the dash doesn't even have a wrinkle. But we wonder how Johann got the clocks to look like new? "I have South African Airways to thank for that as I started off as



an aviation instrument technician. It was meticulous work that required perfection. I used to open the clocks to check that all was in working order, repair them if I could, and clean them up. Where necessary I replaced the glass and bezels with replacements from Palo Alto in Los Angeles California. This was my first Porsche restoration, although it was the second Porsche I had bought. It took four years but I was very thorough. I replaced every bearing and all the rubbers, inside and out, including the suspension bushes. I rebuilt the transmission, all the syncrorings were replaced, as well as the dog teeth on the first and second gears. I fitted a big-bore kit from EBS Racing in the States, which increased the capacity to 1820cc, which gives it a lot more torque. Most of my parts these days I source from EBS. Its prices are very reasonable and the service is excellent, the guys there always go the extra mile to make sure you get what you want, and I've never had a problem with returns."

Time then to find out if these two Porsches drive as well as they look. As I hover around the 911S trying to soak in all the details I notice that Johann has carried out another upgrade by fitting cross-drilled discs from a '76 Carrera. And that the S is secured to the road by 195/65 R15 Pirelli







rubber all-round, as he could not find the correct size or make locally. From every angle this S looks brand-new. I wasn't around in 1969 but I honestly wonder if it looked this good when it rolled off the production line? Step inside and you are transported back to a time when the world was less regulated, where design trumped safety. These early 911s are a display of elegant sophistication, the delicate pillars give rise to a glasshouse cabin decked-out in basketweave vinyl. Once in the driver's seat, you are faced with a somewhat large four-spoke steering wheel and the ubiquitous five-dial instrument cluster. Start the engine and keep the revs up as the S has no choke; instead there's a hand-operated throttle next to the handbrake. That distinctive air-cooled engine sound brought about by the large fan and cylinder cooling fins is immediately apparent. Push the gearshift left and down to engage first, while keeping up the revs to prevent a stall, and release the clutch. The gear throws are a tad long but the revs are free-flowing and it does not take much to keep it in the 5500rpm sweet spot.

The initial howl from the engine develops into a wind and by the time you hit the optimum revs it goes quiet. Keep going and by 7200rpm you are pulled out of it, as the rev-limiter kicks in. By



"I try to get as close to the original spec as possible and even improve where I can"

modern standards these tyres are rather skinny but they bite well into the Tarmac. Those crossdrilled discs also come into their own on tighter bends. The ZF rack-and-pinion setup is virtually perfect. It is light, sharp and direct, offering great feedback. There is a cohesiveness to this car. It has a responsive engine, is extremely agile, driveable, and has a compliant ride that is in no way harsh. The 911S is evocative of a different era. It is a car that you connect with directly and that allows you to be part of the driving experience. Driving the 911S is an experience of the senses. It is a true paragon of German engineering.

Next it's the turn of the 912. This one wears its 1960s Tangerine hue rather well. Indeed, this Porsche pops from every angle. The proportions are perfect. Step inside and you'll find the familiar Porsche basketweave vinyl trim. Standard for the '69 model year is the five-gauge instrument cluster, all present and accounted for. There is a period-correct radio and the floormounted pedals are exactly where they should be. It is a spartan yet well-laid-out and functional cockpit. These cars are austere by modern standards, devoid of climate control, park assist, electric parking brake, adaptive cruise control and an 'alphabet soup' of driving aids. Shut the door and there is that well-known 'clunk', typical of air-cooled Porsches. As this is a '69 model, it is fitted with the dog-leg five-speed transmission. Start the engine and it sounds more like a VW than a Porsche while idling, but that is where the similarities end. I find the seating position to be rather high. The engine revs freely and quickly climbs to beyond 5000rpm. I am amazed at how easy it is to keep it beyond 5000rpm - the power band is quite linear. As Johann says, "it revs like a Singer sewing machine". Gear throws are long but precise and the 912 holds well through the S-bends we are navigating. It definitely is much lighter than the 911S, by 350 pounds. And because the engine is so far back in the engine bay, plus the fact that the wheelbase has been extended, there is no fear in tackling hairpins. You can almost drive this Porsche with complete reckless abandon, even on these skinny 165/80

SR15 Michelin tyres. But you soon come back down to earth when you realise how rare it is, especially in South Africa, and what it would cost to replace it. This is truly a peppy little Porsche, and in a way more so than the 911S.

Recently Johann sold the 911S to classic car enthusiast, Murray Blumberg, to make way for the restoration of a 1983 Targa and a 930 Turbo. And happily Murray is on hand to give us a view of his purchase: "The first generation 911s have become very sought-after, very scarce, and hard to come by. The 911S in my opinion is one of the most desirable of its generation. I was extremely lucky to find a car that has been restored to this superb standard. I am an absolute perfectionist when it comes to classic cars, nothing but the very best will do. I don't believe that I could have bought this car in 1969 from Germany in a better condition. This car is like brand-new. It truly is as if it came back through a time warp." O

THANKS Ron Silke





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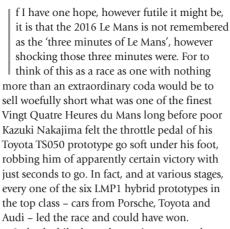




To Finish First, First You Must Finish

Porsche's 18th victory at Le Mans 2016 was the closest of close calls but, as Andrew Frankel recalls, it's by no means the first time Porsche has been involved in a thrilling finish at La Sarthe...

Story: Andrew Frankel Photography: Various



Indeed while those three minutes were the most memorable moments of an uncommonly memorable race, so they substantially spoiled it too. The truth is that this was Toyota's race, it was its to win and, as it turned out, its to lose too. Yes, the edge its best prototype had over the Neel Jani, Romain Dumas and Marc Lieb's Porsche 919 was tiny, but even the tiniest of edges will confer a meaningful advantage once multiplied by 24 hours. In this case it amounted to around half a minute with 15 minutes to go. Then the Porsche pitted for fuel and tyres, tacit acknowledgement if ever there were that this time the race it had won last year was and would remain just beyond its grasp. In short, Toyota had done the better job. And then Nakajima's world caved in and Porsche was there to gratefully scoop up an unprecedented 18th victory in the world's greatest race.

They booed Porsche on the podium, they

being a small but irritatingly noisy element of idiots abroad. Would they have had Lieb park his Porsche behind the stricken Toyota so as to let its sister car win the race? For that is what would have been required. The harsh truth is that this is motor racing and while you must always play by the rules and hopefully understand and observe the spirit of those rules too, every single team is there to win and if that means taking advantage of a rival's catastrophic misfortune, you do not flinch for an instant. Because if you do, you're not racing. And if you're not racing you have no business being in a motor race. Not only was there nothing else Porsche could have done, there was nothing else it should have done either. This was not the Le Mans 23 hours, 57 minutes and a few seconds, it was the Le Mans 24 hours, and when that time was up, Porsche was in the lead. And for now at least, there I will leave the last three minutes of this unforgettable race.

It is, after all, not as if Porsche has not been robbed of this race in the past. Usually of course, Porsche doesn't win Le Mans, it steam-rollers the place. Dare I say it here but the closest I ever came to being turned off by the race was when the only question was which 956 or 962 would win - at least until that sad and now happily concluded era when only a diesel car could win.

The first time Porsche could have won Le Mans on merit by having the fastest car, rather than trusting to the misfortunes of others, was in 1968. New rules restricting prototypes to 3.0-litres and production-based cars to 5.0-litres had clipped the wings of the Ford GT40 which





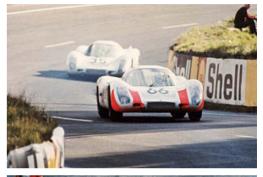


~ Mobil

Porsche at Le Mans



Below: 1968 was the first year, thanks to rule changes, that Porsche could've won Le Mans, but with the 908 (No.66 seen here) it was not to be. The advent of the 917 that followed changed everything though... Bottom: 1977 was not the walkover for Porsche that history might suggest...







This is motor racing. Every team is there to win. If that means taking advantage of a rival's misfortune, you do not flinch



had won the previous two years only with 7.0-litre motors under their engine covers. Ferrari, winners of the six Le Mans prior to that, walked off in a huff. For the light and slippery 908s, lining up first, second and third on the grid, it should have been a walkover. But it wasn't: unusually for Porsche, it dropped the ball in the cars' preparation and while all were fast enough to win, none were sufficiently reliable to stop Ford claiming its hat-trick.

The following year was different. In the 917 Porsche had a race car unlike any other and had it lasted it would have smashed every record there was. But 21 hours in and with an unassailable lead, the car of Richard Attwood and Vic Elford succumbed to transmission failure. Even that should not have affected the final result because the 908 was now properly developed and still faster than the now antediluvian GT40. But as any student of the history of this race will recall, it came down to a straight fight between Hans Herrmann in the 908, a 41-year-old with one eye on retirement and, in the Ford, Jacky Ickx, a 24-year-old hotshot with one Grand Prix win already to his name in a factory Formula One Ferrari and who would go on to win this race an unprecedented six times. I have no doubt that had it been Ickx in the 908 and Herrmann in the GT40, Porsche would have won its first Le Mans a year sooner than it actually did. In the event it came down to a few yards and what remains the closest nonstaged Le Mans finish in history. And it was Ickx and the Ford that crossed the line first.

We all know Porsche won its first Le Mans with the now-perfected 917 in 1970, so let's spool forward to another Le Mans Porsche really had no business winning at all. The history books recall 1977 as a Porsche walkover, the winning 936 finishing 11 laps - the best part of 100 miles - clear of the field. Which, while true, just goes to show how misleading statistics can nevertheless be. The big competition in 1977 were three Alpine-Renaults against just two 936s, one of which was languishing back in 41st place after just an hour of racing, the other soon after to retire altogether. The situation appeared unrecoverable. Step forward one J.Ickx Esq, now a Porsche employee kicking his heels in the pits after the retirement of his car. It's against the rules now, but back then you could chop and change team members, so Porsche simply called in the 936 of Jurgen Barth and Hurley Haywood, installed Ickx behind the wheel and told him to drive like never before. The fact the car was nine laps of a very long circuit off the lead didn't deter him at all. He drove half the rest of the race himself, Barth and Haywood divvying up the remainder between themselves. They were sixth by dusk and fourth by midnight, which was as far as the Porsche was realistically going to get without outside assistance. Which it duly received when, one after the other, all the Alpines retired. By dawn Porsche was leading.



Left: Ickx and Bell in a Group C 956 fought a good fight in 1983, Bell describes it as one of the best drives of his career Below: The last hurrah of the 962 set up another thrilling Le Mans racing tale. Porsche brought three cars to race the TWR Jaguars with, Stuck proved to be his usually impressive self...





That should have been that. Except the toll of being driven like a getaway car for 20 hours eventually told. With less than an hour remaining, Barth came into the pits with smoke pouring from the engine. An overstressed piston had collapsed and welded itself to its cylinder bore. Such was its lead, the car could have been driven over the line on its starter motor and still won were it not for the inconvenient fact the rules stipulated it must do the last lap entirely under its own power. All the engineers could do was remove that cylinder's spark plug so at least no compression would be required and try to fire it up on five cylinders. And, being a Porsche and despite having been thrashed almost literally to death for an entire weekend, somehow it started, limped around the last lap, won Le Mans and promptly expired.

There was nothing lucky or hard-fought about Porsche's win in 1983, the second of its Group C era. Of the first ten cars to finish, nine were Porsche 956s with just a single Sauber down in ninth place to spoil the party. That weekend, Porsche annihilated the opposition like no other race team before or since. So what part can it play in this tale of unlikely Porsche near-hits and misses at Le Mans? Well, this tale is not about the car that won, but that which came second. The car belonged to the sports car dream team of Ickx and Derek Bell, deliberately driving without a third driver because whoever it was would almost by definition be the weakest link in the chain. To make the point, Ickx qualified four seconds a lap faster than any other car, and to put that into some kind of perspective, the gap between first and sixth on the grid for this year's Le Mans was just three seconds. But by the end of the first lap it was last, Ickx having to spin the car down the escape road at Mulsanne after tangling with a private 956 driven by Jan Lammers.

So the Brit and Belgian threw caution to the wind and drove flat-out. It took 14 hours but as dawn rose on Sunday morning, they led once more. Job done? Not even close. Minutes later Bell coasted to a halt at the side of the road with a dead engine. Derek is the first to tell you he is not in the least mechanically minded but had been briefed on what to do in this situation. Somehow he got the engine cover off at the side of the track - usually a three-man job - fixed the car, got the cover back on and rejoined the race. But with most of the race gone, they weren't merely at the back of the field, they were four entire laps off the lead. Still they did not give up, even though they knew the attempt was now futile. With 15 minutes to go and despite shot



Above: Mark Webber must wonder what he needs to do in order to win at Le Mans. But as history recalls, he's not the only Porsche Works driver to endure testing times at the great race...



brakes, Bell finally unlapped himself for the last time, but still 3min 30sec off the lead. They had done their best, but it was not to be. Or was it? With one lap remaining, a steady stream of steam was seen coming from the leading 956. Inside, Al Holbert looked at the water temperature gauge and confirmed what he already knew to be true: his engine was cooked. He reduced speed as much as he dared, Bell closing all the while, crossing the line just 65 seconds ahead of his team-mate, whereupon his engine seized solid. Ask Derek Bell today which of his five wins was his best drive at Le Mans and he'll say none of them and nominate instead the race where he and Ickx fought literally from the first lap to the last only to come second.

So now to the other end of the 956/962's career, to 1988 and Porsche's final attempt to win Le Mans as a Works team with its now aged Group C warrior. An aluminium car in a carbon fibre era, it really should have had no business at all even competing against the TWR Jaguars of

which there were five in the race. Porsche brought just three 962s, two old cars and one brand-new, very special car with which it hoped for one last hurrah.

That it qualified on pole was no great surprise: it had no fuel limit and a qualifying engine boosted to 880hp. That it proved so competitive in the race was less easy to predict. But with Bell and Hans Stuck at the helm the win still looked possible, at least until its third driver, Klaus Ludwig, stayed out a lap too long and brought it back to the pits on the starter motor, its fuel tank dry. They lost two laps. Cue time for another extraordinary fight back as the three drivers fought like tigers to get back on to terms with the quickest Jaguar, getting back at least on to the same lap by dawn. But they were hampered by the relentless pace and fine dry weather: Group C rules mandated only a certain amount of fuel could be used, and if the Porsche went fast enough to catch the Jag, it would run out.

Then came the rain and a sight none who was

there would forget: while others dived into the pits for wet weather tyres, Stuck stayed out on slicks, fuel consumption no longer a problem on the damp track. Sideways everywhere and sometimes on the grass, he scythed into the Jag's lead. And had the weather lasted, he'd have taken it. But it dried out, enabling Jaguar to claim its first Le Mans win in 31 years, less that one-minute ahead of the Porsche after 24 hours of racing.

There have been more extraordinary stories of Porsches at Le Mans in the intervening years – the Dauer 962 winning in 1994 when its essential design was already a dozen years old, and the victories in '96 and '97 with a car that started life as a Jaguar and, in '97 at least, raced against Porsche's will. But these do not fall within the ambit of this tale. The next time Porsche would be involved in a last-minute, last-lap, will-it-or-won't-it, winner-takes-all battle to the flag came in 2016 and those that were there will never forget what they saw. I know, I was one of them \odot



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Racing Forward

DUNLO

Porsche's classic car restoration arm, Porsche Classic Centre Partners, has collaboratively restored a 924 Carrera GTP that last turned a wheel in anger 35 years ago. We hear from those with first-hand involvement in the project...

Story: Martyn Morgan-Jones Photography: James Lipman

orsche had amassed an enviable record of wins at Le Mans come the end of the 1970s. However, for a variety of reasons, its agenda for 1980 was somewhat

different and the company entered three 'Porsche System' 924s in the very competitive Prototype class. They were to be driven by teams from Germany, USA and Great Britain. Furthermore, following a suggestion from Porsche GB (to raise media interest), cars were to be raced under their national colours. Chassis 924 002, the British entry, was to be driven by a talented trio: Derek Bell, Tony Dron and Andy Rouse. However, when one of the American drivers was involved in a road accident, rendering him unfit to race, Bell switched place.

Thanks to Norbert Singer, and his exceptionally talented team at Weissach, the 924 GTP was every inch a race car. The chassis was honed to perfection. And, with an engine that produced 320hp, it could nudge 180mph. Nonetheless, there were mixed feelings as to how well the cars would fare. As it transpired, fate, or rather the weather, dealt the team a very good hand. The start was probably the wettest ever experienced during the race's history. And, it was the wet conditions, particularly during the final hours, that worked in the team's favour. Sublimely balanced yet relatively-underpowered, the GTPs shone. Having qualified 34th, 44th and 46th, by Sunday breakfast time, they'd climbed to sixth, seventh and eighth. When the flag fell, the German car, driven by Jürgen Barth and Manfred Schurti, crossed the line in sixth place, just behind Barbour, Redman and Fitzpatrick's Porsche 935 K3. Due to valve issues, Dron and



Rouse finished 12th, with the similarly-afflicted American car 13th. Not quite the sidebar results that some people expected. Very nearly headline material in fact. All-in-all quite remarkable, and a fitting testament to the 924 GTP's abilities, and that of the team and the drivers.

Tony Dron recalls it well: "I'd spent three years in Formula Ford and, later, a season in F3, plus I had lots of saloon and sports car experience. I'd won the inaugural Porsche 924 Championship in 1978 and, with Frank Sytner, the BMW County Championship for Nottingham in 1979. "There was plenty of endurance racing too, mostly with Andy Rouse, but never at Le Mans. In 1980, Mike Cotton, Porsche's PR officer, rang to ask if I'd drive a 924 GTP at Le Mans. Understandably, I said yes. And, I must admit, I was pretty fired up at the prospect.

"The car was fabulous. Undoubtedly the besthandling car I've ever driven and extremely good in the wet. I did a three-hour 58-minute session on the Sunday morning and, for one 40-minute part of that, our 924 was circulating with Jacky Ickx in the Martini-sponsored Porsche 908/80. I'd pass him on the wet sections and he'd pass me on the dry ones. This was despite the fact that our car was then running on three cylinders. We'd been given assurances that fuelling problems experienced in testing had been resolved. But they hadn't. During the 18th hour, a valve burnt out. The car kept running, but huge chunks of time were being lost when accelerating away from each corner. Had this not happened, I calculated we'd have finished fourth overall.

"It was a great experience and I have huge affection for the car today. Seeing it at the



Porsche Experience Centre, and seeing what a fabulous and sympathetic restoration the guys have done, was impressive."

Co-pilot Andy Rouse remains equally enthused today: "In 1978 I competed in the inaugural Porsche 924 Championship. My car was down on power for the first three races and when I stripped the engine to investigate, I discovered that the exhaust manifold had a huge casting flaw that was blocking the flow. Once I'd remedied this, and blueprinted the engine, it was right on the pace. I eventually finished second overall to Tony [Dron].

"My performances in the 924 Championship undoubtedly helped, as I was asked to race the 924 GTP at Le Mans in 1980. Mike Cotton did a great deal of work to ensure Tony and I got the drive. It was a huge privilege to be asked and then to be asked back the following year to drive the same car, albeit slightly modified, with Manfred Schurti. The GTP was a delight to drive. Beautifully balanced, especially in the wet. It just needed more power really. It could have coped with twice as much!

"Due to the horrendous rain at Le Mans in 1980, the early hours were fraught though. We'd qualified some way back and I remember driving flat-out along the Mulsanne Straight, surrounded by other cars, in impenetrable spray. The only way I could figure out where my location was, was by looking at the treetops. If a gap appeared, then it was a corner! Thankfully, the situation improved as the cars became spread out.

"I do remember that the engineering side of the team was first-rate, but everything else was not quite so focused. Tony, Derek and I shared a two-berth caravan in the paddock, and had to dry our race suits on the heaters. When we needed food and drink, we had to walk to the local supermarket!

"It was a great experience though. Had we not been sidelined by the valve issues, we'd have finished much further up the field. The car kept running though, and I remember feeling great pleasure – and great relief as the car crossed the finish line."

The Dron/Rouse 924 GTP 002 remains the only Porsche factory-owned race car ever to compete under a British flag, and it was officially retired in 1982. In December 2015, to celebrate the 40th anniversary of the Porsche 924 in 2016, Porsche Cars Great Britain took the decision to restore this car to its former glory. Stephen Pottinger – Porsche Body Repair and Roadside



Assistance service manager was an integral part of the restoration story: "Jonathan Mannell, whose idea it was to restore GTP 924 002, has been the driving force behind this project. Without his enthusiasm, ambition, and his contacts with the Porsche Museum, it would never have happened.

"In fact, a project like this has never been done before and we are hugely grateful to the Porsche Museum, and Johannes Wuest, manager of Historic Motorsport for Porsche, for letting us have the GTP, for helping facilitate its restoration and for placing their trust in us.

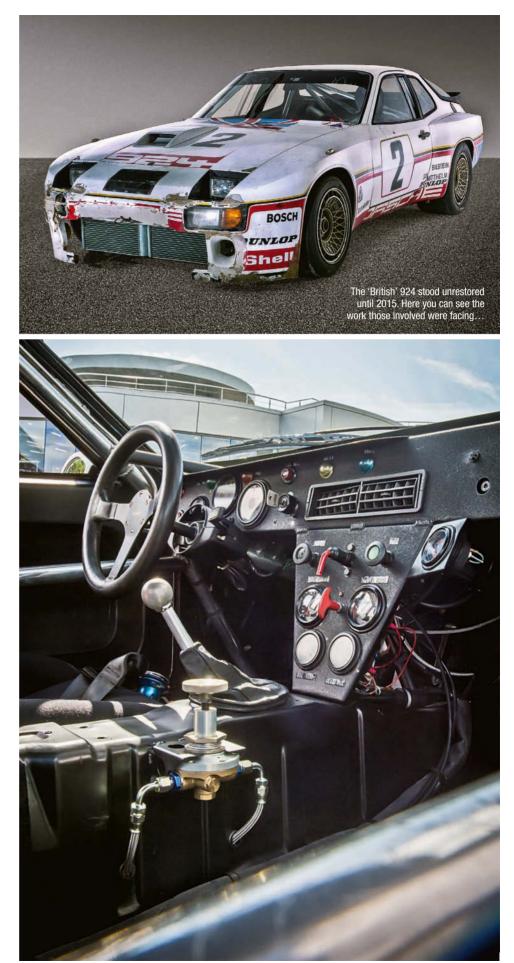
"For our part, we made a promise to the museum, and to Johannes, that not only would we restore the car to the most exacting of standards, we would also restore it sympathetically, giving it the essence of 1980. Which, I'm sure everyone will agree, is what has been achieved.

"The project was made all the more difficult because of the six-month timescale – a project such as this would typically take two years. Nevertheless, everyone dug deep and there was huge support. Not only from the Classic Porsche network, the classic technicians and apprentices, but from outside agencies too. Some of the parts we simply couldn't get. But Britain has a wonderful cottage industry of specialists and they worked their magic and produced the parts we needed to the highest quality. The co-operation we received was astonishing. What's more, the project became so collaborative, we all felt like being part of the same family.

"I've been involved in restoration work and have restored many vehicles over a 25-year period. Some of those vehicles fought me all the way. But, and this might seem an odd thing to say, the GTP seemed to want to be restored. There were many moments when we met huge problems, only to have a stroke of luck. These instances not only moved the project forward, but helped with morale. True, this has been a very challenging project but it's also been an exceptionally rewarding one. We are all very proud of what has been achieved."

Porsche Centres up and down the country were involved with the restoration process, and each recalled it fondly. John Bradshaw, managing director of Road and Race Restorations, said: "Last October Jonathan Mannell, manager of Owner Services at Porsche GB, phoned to inform me of the company's plans to restore the car. It was to be a collaborative project, utilising the skills and facilities provided by the recently-established Porsche Classic Partner Centres. He also wanted Road and Race on board.

"We're a Porsche Recommended Body Repairer and Jonathan was well aware of our extensive experience with race cars and network of contacts in the motorsports industry. Race cars have been my passion for as long as I can remember and I was thrilled to have this opportunity.



"In November, I travelled to Stuttgart with Jonathan and Stephen Pottinger to view the GTP. After Le Mans, it was raced a few times and used for development, which explains the front bodywork, engine, and other changes.

"Later that month we collected the car, taking it to Leeds where, together with key staff from the Classic Partner Centres, it was stripped. I was put in charge of disseminating the various parts. We'd tackle the bodywork/interior, Leeds the plumbing and wiring, Hatfield the drivetrain, Swindon the engine and Glasgow the suspension, brakes and wheels.

"One of my responsibilities was sourcing parts, and finding specialists who could fabricate the parts that simply couldn't be found, or were beyond saving. Thankfully, we managed to salvage the magnesium callipers by welding them and then machining them to look like they did originally. The most noticeable damage was to the front GRP bodywork, the 'clamshell'. As well as being in an awful condition, it had been greatly altered.

"As there was no way the clamshell could be reinstated to original condition, we started from scratch. The only reference materials were had were period photographs. These were analysed in minute detail before plans were scaled and drawn to the correct size. From these we fabricated an aluminium buck, took a mould, and made a new front end.

"The GRP panels, as well as having yellowed with age, had been laid up using a different weave to that used today. Fortunately, one of my trade contacts was able to supply a matching weave. It was also able to colour the resin to age it. So, when the front end was grafted on, it became an 'invisible' repair.

"There were other bodywork repairs required too. To avoid adding weight through using filler, we gently manipulated the sections into shape. Interestingly, the GRP doors had flaws evident from the original moulds. To maintain these tangible links with the car's past, we left some in place! To pare weight, Porsche applied a thin coat of primer and top coat. We too applied a thin coat of primer and a thin coat of Glasurit solid white.

"One of the hardest jobs, apart from designing and fabricating the fuel cell from scratch (Premier made the superb quality inner bag tank), was aligning the GRP panels. Everything had to line up, with no free play, otherwise the graphics would go awry. Andy Bell, who made the stickers, managed to perfectly replicate the original designs, shapes, colours and fonts. The all-important Union Jack was painstakingly traced onto the bodywork, masked and painted.

"Being a collaborative project, the car was in and out of our workshops. It went to Swindon for engine work. Then came back, before returning to Swindon for engine ancillaries etc. Leeds had it for the wiring loom, plumbing and pedal box, and the technicians from Porsche Glasgow came to us and fitted the suspension. I was very involved throughout, but the brunt of



Road and Race's 'hands-on' involvement was down to Owen Thomas. He was fantastic and tackled everything from moulds to metalwork.

"In fact, we all got stuck in. That's the remarkable thing. It really was a collective endeavour. Porsche has to be applauded for embracing the marque's classic heritage, and for facilitating such a project. The end result is a car that looks like it did at scrutineering in 1980. It's a huge credit to all involved, their dedication and workmanship."

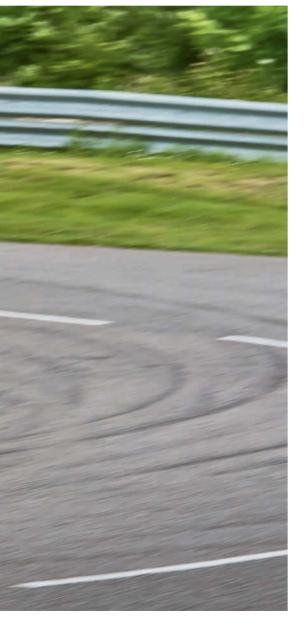
Mike Murphy, centre principal of Porsche Classic Partner Centre Hatfield, said: "Porsche Centre Hatfield is delighted to have been involved in this unique Classic Porsche restoration opportunity. Our involvement with the GTP was the drivetrain. Knowing how much hard work the transaxle had done, we fully expected it to need attention. When stripped, however, there was some oxidisation but no real wear evident. Nevertheless, it was cleaned, overhauled, set to factory tolerances and refitted. Although we were confident everything had been done properly, it was still a relief when Tony Dron was able to select first gear and drive away smoothly on his demonstration lap at the Porsche Experience Centre reveal!

"We feel privileged to have been involved. This project was a positive and ambitious move on the part of Jonathan Mannell, whose vision it was. Not only is this GTP a very special car, it's also the first car from Porsche's museum that hasn't been restored in-house. It's been a wonderful experience for all."

Kevin Allen, senior technician at Porsche Classic Partner Centre Swindon, said: "By January, the engine rebuild was underway. Parts had been machined and crack tested etc, and I was well into the reassembly. Then the Porsche Museum received an email from Dalibor Nerad, a well-known Czech 924 collector and restorer. He'd read about the project on the internet and mentioned he'd a 1980-specification engine but was looking for a 1982 engine like ours. Would we be interested in a swap?

"John Bradshaw and Steve Pottinger subsequently drove to a former soviet air base, deep inside Czechoslovakia, where they met up with Dalibor. Not only was the engine period-correct, it was actually the missing engine, stamped 924 002 on the plenum chamber! I later travelled to Stuttgart with John and Steve and met with Dalibor. He gave us the original engine, in bits, and a radiator, and received the fully-machined, almost-completed, '82 engine in exchange.

"Obtaining the original engine was a huge stroke of luck. Even so, many parts such as the intercooler were missing, and had to be fabricated. There was no ignition system either. And, because this engine used a completely different arrangement, the oil and water plumbing had to be redone. I had to get the correct schematic and used this, as well as an engine photo in Roy Smith's book on 924 Carreras, for reference. The turbo was fine,





924 CARRERA GTP

ENGINE: 1984cc four-cylinder, in-line engine, water-cooled with turbocharging and charge-air intercooler, mechanical Bosch/Kugelfischer fuel injection and dry sump,

TRANSMISSION: Reinforced five-speed 924 gearbox, single-plate, dry clutch (Fichtel and Sachs) with sintered lining

BRAKES: Inner-vented, dual circuit disc brake system from 917 with centre-lock wheels, adjustable brake balance

CHASSIS: Independent wheel suspensions, wishbones and McPherson struts in front, steel semi-trailing arms at rear, progressive coil springs, Bilstein gas pressure shock absorbers

BODYWORK: Lightened production body with fender extensions and front spoiler as well as doors and engine lid of plastic, Plexiglass window

WEIGHT: 930kg

PERFORMANCE:

Power: 320hp @ 7000rpm Torque: 282lb ft @ 4500rpm

Top speed: 180 mph



but had new seals fitted as a precaution. For longevity, because of the high boost, I had oilways machined in the small ends. There were lots of last-minute issues; including finding a correct timing belt. It's unique to the GTP. Thankfully, Dalibor, spotted one at the Porsche Museum. We received it just a few days before the reveal."

Classic technician at Porsche Classic Partner Centre Leeds, Andy Wexham, said: "We sourced new aluminium piping and made up numerous braided hoses, fittings and brackets too. I also spent a week at Swindon with Kevin Allen. We had the engine in and out about a dozen times. Fortunately, the car was minus the front clamshell which eased things a little.

"Most instruments were missing. Being an older design, 60mm in diameter, finding replacements was problematic. To replace the all-important rev counter, I sourced a modern one and sent it to James Reap. He made a periodlooking faceplate. The rev counter was then sent to Hans Peters in Holland to be calibrated. Nothing was straightforward!

"We kept the original switches as they were found to be working perfectly. The original dyno tape labels were also retained. We made replacements, but they looked too new. Interestingly, the indicator stalk was very short. Talking to Tony and Andy, we learnt that they kept knocking it, activating the indicators. Worried about the potential for a serious accident if other drivers thought they were moving over (which they weren't), they had it sawn in half during a pit-stop!"

Classic technician, Paul Fawcett, said: "We removed the loom and tested everything. A few connectors had broken pins, and the wrapping was brittle in places, but the loom was in excellent condition overall. We made the repairs



and reinstalled it. We even reused the fuel pumps. They were checked and serviced of course. They had been inactive for over 30-years. But as soon as they were powered up, all three sprang into life and the flow rate was just incredible. Andy and I also helped install the drivetrain. The engineering was astonishing."

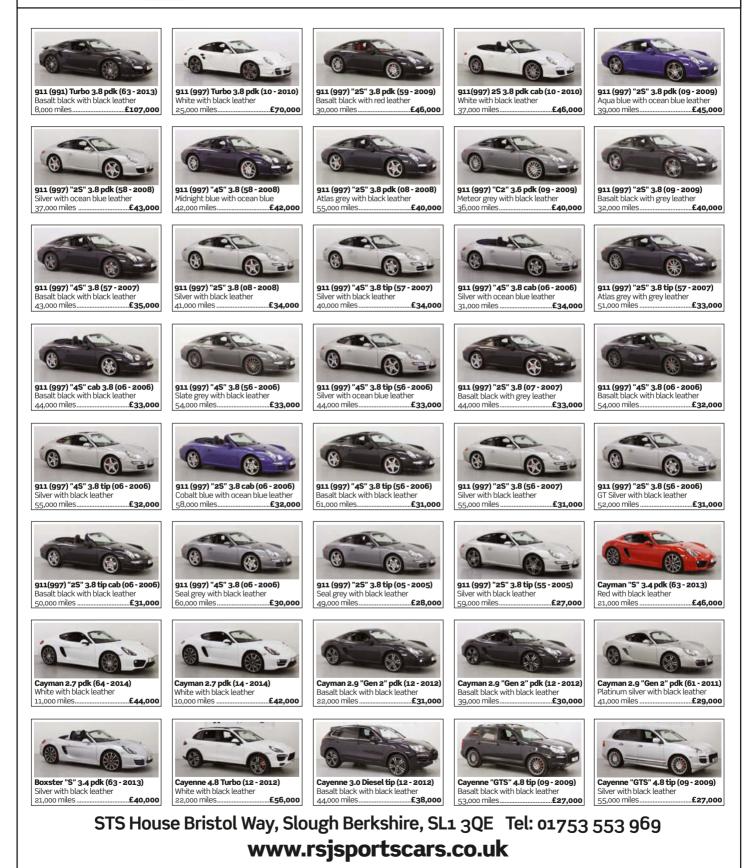
Paul Farrell, centre principal at Porsche Classic Partner Centre Glasgow, said: "We became a Porsche Classic Partner Centre early in 2016, around the time that Jonathan rang to outline his plans for the GTP and ask if we'd take responsibility for the steering, suspension and brakes. The work was undertaken by classic technician, Andy Lyon, and apprentice Shaun Coyle. They travelled to Leeds and were part of the strip-down. The parts were then delivered to us - they were so beautifully engineered and such high quality there was very little wear evident. Even so, we stripped everything, including the wishbones and crossmembers. Then every item was checked, cleaned, overhauled, repainted, and reassembled. Andy and Sean subsequently travelled to Leeds to refit the components.

"Interestingly, when we came to restore the steering wheel, we noticed that the padding on the rim had a chunk missing. Tape had been used to cover the exposed metal. We were in two minds whether to replicate this. But, in the end, we returned it to factory-original condition.

Paul summarises this project beautifully in his final comments: "The co-operation we experienced was terrific. Everyone worked well together and got on so well too. It's been a very rewarding and positive experience. Shaun was particularly thrilled to have chatted with Derek Bell when he recently visited. And I'm lucky enough to have seen this car in period, during testing at Silverstone. So, to be involved now, then to be with the finished article at the Porsche Experience Centre and see and hear it run with Tony at the wheel, has been rather emotional." \odot



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PORSCHES WANTED (2003 TO 2014)

Built for road and race use, the 3.0 Carrera RS in RSR guise was the mainstay of the European GT Championship in the mid-1970s. We drive a Kremer creation restored to original specification. Story: Johnny Tipler Photography: Antony Fraser

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PING

he boundaries are blurred. A scion of the sainted 2.7 RS it may be, but the 3.0 Carrera RS belongs to a genre of Porsche where the margins separating street cars and racing cars are not clear. This particular RS began life as a road car, a 1975 US-spec 911S according to its chassis number, but was turned into an RSR by the master of the dark arts, Kremer Racing.

We've come to Lippstadt, north Germany, to visit an old friend, Dirk Sadlowski who owns PS Automobile. He's promised us a treat from his company's collection of road- and race-going Porsches. "The 3.0-litre Carrera RS is the race version of the 2.7 RS," affirms Dirk. He knows of what he speaks, having raced one himself in historics until he destroyed his car and almost himself in an almighty crash at Spa's Eau Rouge a few years back. "Suspension-, brakes- and engine-wise, it's a real race car, yet it's very much underrated because for one reason or another it isn't up there in the iconic stratosphere of the RS ducktail. But it's built for purpose, so it is a better car than the 2.7 RS. And it is so different to drive, even though it's not much faster. A 3.0-litre RS is a good, driveable street car, and it



"I absolutely love the look of the 3.0-litre RS. It has a purposeful stance and it's very rare too"

is more track-biased than a 2.7 RS." Okay, so that's a broad enough definition to kick off with.

Even though it doesn't have the monumental status of the 2.7 RS, the 3.0 Carrera RS is the very first example of the G-programme body styling, and it is much rarer than the 2.7 RS, with just 109 units built in both RS (road trim) and RSR (race trim) by Porsche's Weissach competitions department, comprising 56 RS road-going cars and 53 RSR race cars. However, it was common practice to rebuild a crashed 911 into an RSR and go racing, as Dirk confirms: "Race teams like Kremer bought damaged cars because they could get them cheap and base its RSR conversions on them. Many RSRs started off as regular production cars and got converted later.

"I absolutely love the look of the 3.0-litre RS," avers Dirk. "It has a purposeful stance with those wide wheel arches and Whaletail wing. It conveys stamina, and it's very rare too."

As the first Porsche to flaunt the new short bonnet and impact bumper styling introduced in 1974, the 3.0 Carrera RS was a quantum leap over the 2.7 RS with its mild wheel arch flares and ducktail spoiler. The 3.0 Carrera RS's pumped-up bodyshell was typified by the bulging wheel arch extensions, lighter gauge steel, thinner glass and minimal sound-deadening, plus new front bonnet and engine lid, which soon enough sported a horizontal whaletail wing instead of the ducktail. The beautifully integrated front air dam and valence was different from the series production cars with its broad rectangular frontal opening for the oil cooler and paired brake cooling ducts on either side.

Two types of whaletail were available: a smaller one equipped with protective rubber lip for road use, and for racing the bigger IROC style wing with its additional cooling vent was fitted, protruding way beyond the rear of the car's bodywork. The Fuchs rims on this particular car are shod with Kumho Ecsta V700 245/45 R16s on the front and 265/45 R16s on the back.

It also looks good for a spot of track work, and Dirk reveals an intriguing episode in its history: "Its chassis number is 9115200011, so it's the 11th one built. The very early '75 models were actually built in '74 so this car was probably built by the end of 1974, and its racing pass was issued in 1976." Bought subsequently by Cologne-based Kremer Racing as a road car, it was prepped in its race shop as an RSR, and its race logbook (Wagenpass) shows it was entered for two events in 1976; the Eifelrennen on the Nürburgring Nordschleife on 2 May and the Nürnburg 300km at Nuremburg's Norisring road circuit on 29 June.

"In those days Kremer Porsche was the only company in Germany building Porsche race cars outside the factory," says Dirk, "and although it was not an official dealership it was allowed to carry the Porsche name." The fuzzy black-andwhite photos in the Wagenpass illustrate that the car was turned into an extreme example of an RSR, painted a dark colour, with broader wheel arches, cooling ducts, BBS split-rim wheels, a deep front apron and a splitter. It also bears Erwin Kremer's signature, but by this time Kremer Racing was running turbocharged 934s in international events like these, and the available chassis numbers quoted in the race reports tell us that our 3.0 RS wasn't one of these 930-based cars anyway. So it must have been loaned to another team such as Franz Konrad or Edgar Dören who was also listed in 3.0 RSRs rather than 934s. Unfortunately Erwin Kremer is not around anymore to tell us the details.

Dirk has his own take on the history: "The last owner handed it over for restoration in our bodyshop, and we did all the bodywork and I noticed it has a very early chassis number, and that tells me that it's actually an American style



During its restoration by PS Automobile, the team uncovered more of this car's interesting history...

car – not an IROC race car as that would make it a proper factory race car, and this car didn't start life as a race car; it was later converted by Kremer, but we don't know exactly when that was." The Wagenpass and the events it competed in are dated 1976, when the game had ratcheted up a notch and Kremer was running 934 turbos – it had even built its first 935 K1 in '76. So the question is, why would it need to turn an RS into an RSR at that point in time and not create another 934? Sadly so we may never find out.

Aspects of the race mods and a more extensive competition history than is documented became apparent as Dirk's team carried out the restoration. "We came across all the little bits and pieces the company had done to it to reinforce the body. The wheel arches were made wider and then cut off again, it still had a lot of mounting points for bracing and aerodynamic add-ons, and holes and welding spots for the cage, and actually when it came to us it was in a very worn out condition. Our job at the time was to just to restore the body, nothing more."

Evidently the owner then had a change of heart, and the engine was rebuilt as a correct 3.0 RS twin-spark unit on high butterflies, small distributor housing and clear-coated engine







This 911 did not start life as a race car but by 1976 it was competing as a Kremer RSR according to its historical Wagenpass documents (above) signed by Erwin Kremer himself





shroud, producing 310hp on the dyno – the project had turned into a thorough renovation. "The early 917 brakes were on there at the time, though it's running Turbo brakes now, and it didn't have the RS's and RSR's shortened steel trailing arms, it had Turbo trailing arms, which are made of aluminium instead of steel."

Now it's back to standard 3.0-litre Carrera RS spec: "The 3.0-litre Carrera RS wings and wheel arches were fabricated in steel, and the front lid was the only fibreglass panel. Actually it left the factory in steel, but the company changed it to fibreglass to go racing. The rear spoiler is also fibreglass with a rubber boundary. It's got the racing fuel cell, the dry-sump oil tank, twinspark engine, the RS 3.0-litre bumpers front and back, correct RS wheel arches, the lightweight interior, RS steering wheel, roll-cage; the only thing that's more modern now is the seats. The original seats in the RS 3.0-litre were like the 2.7 RS lightweight seats, but they usually left the small co-driver seat in and installed a big driver's



Kremer Racing RSR



"You can race it, you can rally it, you can have a ball on an empty road..."

seat. All the cars racing in period used the 935 'lollypop' seats with the rounded headrest. I might fit the original 917 brakes again, but the car is better than new now, it's perfect."

Having driven the restored car briefly, the owner decided it wasn't for him any longer. "He had planned to race it," declares Dirk, "but he tested it once and then decided not to, and instead offered it to me. He showed me the title and for the first time I saw that it had an original racing Wagenpass from 1976 signed by Erwin Kremer and I had it verified – it is an original Wagenpass with this particular chassis number."

Fair enough; anything that's been touched by the hand of Kremer is up there with the archangels, and now it's back to what it would have looked like when it was built. "We had been tasked with putting it back to a 3.0-litre RS, because the owner had wanted to use it for rallying as well as track racing, and the RSR is too wide for rallying or street use. It's got too much camber, it's too extreme and it's a pain in the backside, even in Tarmac rallies. I tried it once in Spain and I had a hard time to corner it. There were also a lot of hillclimbs in this rally and it was tough, though I did finish."

Dirk draws a comparison between the 3.0 RS and the 3.0 RSR: "The RSR is circuit-racing specification; you have unbelievable camber, and half the time one or other of the front wheels claws the air when you corner, and going down the straight it's ducking and diving, especially when you change gear. You've got to ride it all the time, it's like an aerobatic aeroplane: that won't fly in a stable way and the car won't drive in a stable way, it's tough. However, the 3.0-litre RS (and the 2.8 RS) is still of a size and dimension where you can use it for different things; you can race it, you can rally it, you can have a ball on an empty road. The RSR, the 934 turbo and the 935 are trick cars, pure race cars."

This car works on all levels, aesthetically, historically and behaviourally. I quiz Dirk about values. He's asking \notin 250,000 for the car: "It's

worth at least double that, because it was a Kremer car. It's only done two races, and it's beautifully restored, but it really depends what people are willing to pay for it. If they want a great history this would do it, and it would be perfect to race with the big boys in historics, and you could get entries with no problem because it is a period car, it has the correct paperwork, and all of that makes a bargain in my opinion. A genuine factory-built RSR could cost over €2m so, bearing that in mind, I don't mind keeping it!"

Dirk is a businessman through and through, so although he can afford to indulge himself, everything is for sale, and when he receives the right offer, this one will undoubtedly leave the showroom. As far as we are concerned, it's too hard-edged, too violent for anything short of racing or rallying – it's too special for track days and too uncompromising as everyday transport like a normal 911. What it is, though, is an aesthetic triumph, a monument to a truly heroic era \bigcirc





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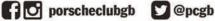
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718 Cayman

To Hide

Andrew Frankel drives a manual 718 Cayman S on Welsh mountain roads. If the introduction of a four-cylinder turbocharged engine has caused Porsche's popular coupé to lose its edge, out here there will be no way to disguise it...

Story: Andrew Frankel Photography: Richard Pardon guess this is one that really counts. For, while Porsche SUVs may be bought by those who need an SUV, 911s as a business tool and Boxsters by those who like to be seen, there really is only one reason to buy a Cayman: because you just love to drive. I've always thought that, always thought 'proper person passing' every time I've seen one drive by. In over a decade of spotting them on the road, I've never seen a Cayman being driven badly. Every person I know who has one or has had one has been a genuine

-

ROI6 FXC

enthusiast. And I know at least three likeminded coves who've promised themselves a Cayman of some description as a retirement present. One of them is writing these words. So more than any other car it makes, it is crucial that Porsche does nothing to interfere with that critical car-to-driver interface, nothing that might spoil that immense sense of well-being

718 Cayman

and belonging we all get when we drive a Cayman, that feeling that, when they were designing it, they were thinking of you. So what, then, were they thinking when they threw away the fabled flat-six and replaced it with a turbocharged four-cylinder motor that not only sounds less good compared to the six, but doesn't even sound that great compared to some other sweeter four-cylinder motors out there, some produced by the same VW Group?

I've said it before but it bears repeating: this is not a move Porsche wanted to make. However grimly its engineers might grit their teeth and trot out the well-rehearsed patter about additional power and additional torque where it's needed most, these were not the prime motivators behind the move. Instead the need to drive down VW's corporate emissions and fuel consumption provided the imperative and Porsche was expected to do its fair share of the work or, depending upon whom you talk to, rather more than its fair share. Whether you think the results are worth a 3.5mpg improvement in fuel consumption for this manual 718 Cayman S (plus the commensurate fall in CO2 and therefore tax liability) is hardly the point: for Porsche there was no decision to be made.

So here it is, the new Porsche 718 Cayman, resplendent in £1595 of Miami Blue optional paintwork plus such effective refinements as PASM active suspension management, Sport Chrono with the mode switch, a limited-slip differential and torque vectoring plus a free third pedal in the footwell. Having now driven both S and standard versions of the 718 Boxster, I concluded I preferred the sound of the less powerful car with the smaller engine though, as with this Cayman, both came with sports exhausts. And I suspect the same is likely to be true here: actually I think I like the sound of the engine in the Cayman even less than I did in the Boxster because at certain speeds near idle there's a hum through the structure I don't remember in the open car. To be fair it sounds purposeful, and

unmistakeably the work of a flat formation engine, but it doesn't sound good. Not to me at least. And now I'm going to stop obsessing about the noise because space is tight and there's much more we need to talk about.

One way the 718 Cayman has been surreptitiously improved is that it has fallen into line with conventional coupé and convertible thinking and now costs less rather than more than the equivalent Boxster. And, yes, to do that Porsche has had to remove the in-built power advantage Caymans have always had, but when there's still another 25hp under your foot than there was in the equivalent previous Cayman, I don't think we can be too sniffy about that. What this means (thanks also to the fact that Caymans and Boxsters also have identical kerb weights) is that it doesn't matter whether the number you look at refers to acceleration, top speed, fuel consumption or CO2 output, Porsche's mid-engined sports cars mirror each other exactly, whether they are open or closed.

If you want an idea of the performance gain over the previous generation, it's easiest to think of the standard 718 Cayman now possessing the performance that until now would have required a Cayman S - indeed their 0-62mph times are identical. So if you were happy with the performance of your Cayman S, you might well be better suited to a Cayman now especially if, as it proved with the Boxster, the smaller engine is sweeter here as it is there. If on the other hand you want to go very fast, be advised that the 718 Cayman S is only a couple of tenths slower to 62mph than the Cayman GT4 or, if you fit a PDK paddle shift, even a couple of tenths quicker. In other words, it is a very quick car, more than capable with 2.5-litres and fourcylinders of matching the acceleration of the 3.0litre, six-cylinder and similarly turbocharged standard 911. And while you may or may not quibble with the noise it makes (of course my view on this subject is entirely subjective, is of no greater value than anyone else's and is not shared by at least a few of my colleagues who've experienced the engine), you will struggle to deny its effectiveness.

The power is important, but nothing like as important as the delivery mechanism, which is right there and ready to supply almost regardless of the revs on the clock. All by itself this makes driving a 718 Cayman a radically different experience to any previous example of the breed and, I would say, mostly in a good way. It is true the anticipation is gone - no longer is there any sense of drama building as you hunt around for the right gear to give you the right revs to make your highly tuned normally aspirated flat-six perform, because it just takes off the moment you prod the pedal. But so too does it transform what this car can do: if its performance seems improved on paper, on the road it's in a different class. It would be interesting indeed to record and compare some genuine overtaking times to see how much longer it would take an old

There's more grip than you'll use on a public road, super accurate steering and immense traction...

718 CAYMAN S

ENGINE: 2497cc, flat-four DFI turbocharged, mid-mounted,
VarioCam Plus, VTG
TRANSMISSION: Six-speed manual, rear-wheel drive
BRAKES: 330mm (front) and 299mm (rear) brake discs,
four-piston aluminium monoblock callipers
CHASSIS: MacPherson struts front and rear, PSM
WEIGHT: 1355kg
PERFORMANCE:
Power: 350hp @ 6500rpm
Torque: 310 lb ft @ 1900-4500rpm
Top Speed: 177mph
0-62mph: 4.6-seconds
Fuel Consumption: 34.9mpg (combined)
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Cayman S to squirt past a line of traffic compared to this car: I imagine the results would be quite illuminating and probably somewhat startling. There is no turbo-lag and one of Porsche's more admirable achievements with the engine has been to elongate its power band from the point below 2000rpm where maximum torque is developed far past the point at 6500rpm where maximum power is produced. You may not extract any greater urge beyond this point but what there remains is undiminished up to around 7400rpm, or long after the old sixcylinder engine had given its best.

Another notable benefit of the engine already discovered with the Boxster is that the car no longer feels needlessly over-geared; indeed so wellmatched to each ratio in the slick six-speed manual gearbox does the engine feel, you'd be forgiven for thinking this was the engine for which the gearbox was designed in the first place. But enough of this straight line stuff, for no one ever bought a Cayman for that ability alone. So join me on a Welsh mountain road with the stiffer springs, thicker roll bars, wider wheels and quicker steering fitted as standard to this generation of Cayman, not to mention all the optional goodies already outlined. The result is a car you don't treat like a normal street machine. It's so responsive, so honed and attuned to your wishes, in your brain it becomes a specialist piece of highly tuned engineering, not that far at all from the pedestal upon which the Cayman GT4 has been lofted. In this regard there really is no point in comparing it to an Audi TTS or BMW Z4 because, to be honest, the Cayman is playing a completely different game.

It would be interesting to drive one without the locking diff, suspension and torque vectoring (PTV) to see how different the handling is but if, as seems likely, it is degraded to any degree then the additional £1800 would be more than worth it. Fully tricked up, this is an astonishing way in which to progress from one point to the next. There's more grip than you'll use on a public road, super accurate steering and immense traction, but even combined these do not come close to describing why the 718 Cayman S is such a magical device on the right road.

Its secret is that it knows precisely the balance that needs striking between the natural imperative to ensure its ride height is maintained no matter what, and the more subtle but no less important and contrary requirement to let the body move, to make sure its ride quality is worthy of mention. The key to the Cayman is the way it finds the sweet spot between these two apparently diametrically opposed interests. It flows and it breathes with the road so you feel every crest and every dip, without letting the car ever feel unsettled by them. For a mainstream product from a mainstream company, its damping is exemplary, its steering as good an electrically assisted system as you'll find in the world today.

Could all this not have been said about the previous generation of Cayman? I am sure that much of it was, but as each new generation of car appears so we must raise our expectations of what they should be able to deliver; and to my mind there is no doubt at all that, on the road at least, this 718 Cayman is a still finer handling car than any previous example of the breed.

So here's the deal. To me what the new engine takes away in terms of aural pleasure is almost offset by what it brings in additional power, making sense of the gearing and making it easier to exploit the chassis. But not quite: on balance I'd rather have the flat-six back. But no qualification is needed when describing the improvements made to an already stellar chassis. And the simple truth is that even with the four-cylinder engine, this Cayman is a better car to drive than the old Cayman; and, as discussed at the start of this story, above all that is what any new Cayman must be. Job done \circ

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gt porsche retrospective





e got our first drive of the hottest ever Boxster 12 months ago: the 981 Spyder. Of the roofless GT4, we said: "In the Spyder you can feel the car surge forward like no other Boxster before". Equally we were enthusing

about the 911 Targa GTS and Cayenne GTS, our SUV test car was painted a fantastic shade of Peridot green. We also investigated Tuthill Porsche's ongoing love affair with the Safari Rally in East Africa, and drove an early 928.

Celebrating 20 years of Porsche Tequipment we took a Porsche push bike on a jaunt through the Surrey hills with a 911 GTS, looking back at two decades of official Porsche lifestyle accessories in the process.





ur cover feature brought together a Carrera GT and a road-legal 962 Le Mans racer and quite the pairing they were. We said: "The 962 looks every inch the race car it pays homage to."

Also in this issue we pitched the 987 Boxster Spyder against the Cayman R. Jethro Bovingdon declared: "This is the best Cayman I've ever driven and it makes even the Spyder feel a bit sloppy."

Further into the issue we united a bunch of 911s of different generations, got behind the wheel of a 924S, put tyre manufacturer Michelin's range through its paces and spent 24-hours in the 'Green Hell' for the 2011 Nürburgring 24 hour race.

TEN YEARS AGO SEPT 2006

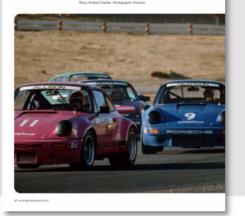


Ay before his days on *Top Gear*, Chris Harris was a regular contributor to *GT Porsche*, and ten years ago in that very role he got behind the wheel of two 959s: a competition rally car and a road car.

We also got to grips with the (then) new 997 Turbo, finding: "The 997 Turbo is one of the most astonishing cars we have driven." Quite a claim... the fire-themed photoshoot must have got us a bit hot under the collar!

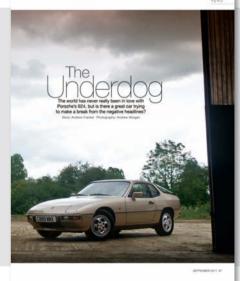
We also went for a spin in the 2.7-litre Cayman for the first time in this issue, got under the skin of the Powerkitted 997, took a look at a stunning 993 RS, and we even found time to drive up the hill at Goodwood's Festival of Speed.

R.O.C Stars The inaugural season of the International Race of Champions in 1973-74 not only boasted some top notch driver talent, it also featured some rather special Porsche 911s...









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long-term fleet

Our *Long-Term* team explain the trials and tribulations of running a Porsche in the real world ...





long-term Fleet

1978 911 SC

he 911 has always been more than a just sports car; it has an amazing duality of character and purpose that manufacturers still strive for

today. I've enjoyed the sports car side of the SC every time it's come out of the garage, but it was time to exploit some of its GT car credentials with a 1200mile round trip to Le Mans Classic.

Having been freshly serviced the prep was pretty much done bar a quick check of tyre pressures, oil level and a general final poke around the engine bay to make sure there were no leaks. With a clean bill of health I loaded up my gear for the weekend (I was camping, not exactly glamorous, but needs must) and filled it to the brim with 98 RON. After no more than a couple of hours sleep I left my house at 1.30am on the Thursday morning, the plan being to get to Folkestone to catch the 6.20am Euro Tunnel and collect a friend in convoy on the way. Overnighting the drive south saw England dispatched with no traffic or drama and we arrived with time to spare for a quick coffee at the station and a leg stretch around the car park. There were already plenty of interesting cars massing ready to make the trip across which was a good taster of the atmosphere this event was all about.

Once in Calais and off the train, now with a couple more friends in tow, we'd planned to take the A28 to Rouen and then pick up the D438 from there to make the drive down more interesting. We passed through Rouen and some *en route* internet browsing pointed us to the little village of Bernay for lunch. Some fantastic hospitality and delicious food later we were back on the road and hunting for a fuel stop for the cars. Having found a place somewhere in the sticks the other cars filled up while I engaged in some poor French to confirm they only sold 95 RON and not 98. Brilliantly, though, the 911 was proving surprisingly frugal and the big fuel tank meant I was able to carry on and fill up later. While the others filled up I stuck my head around the barn-come-



workshop next door and enjoyed some more loosely-French conversation with a gentleman who was restoring a couple of Citroen DSs. *Très bien*.

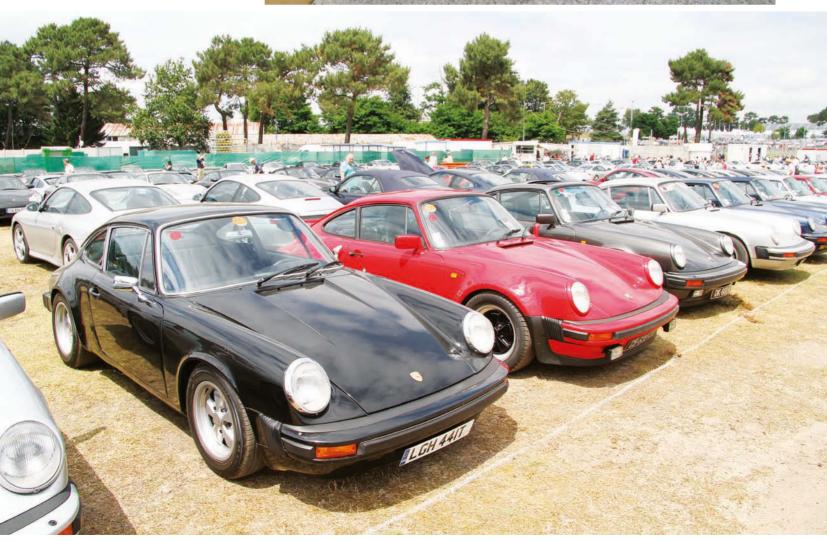
Back on the road and away from the autoroutes the SC continued to drive like a dream. Even in the 30-degree heat it was keeping its cool (which is more than can be said for the driver: black car and no air-con had me turning to liquid in my halfvinyl seat) and covering the distance with ease. The roads and scenery had



long-term fleet



Rob enjoyed his jaunt to Le Mans Classic, so much so that he's already looking at other European road trip options for the future...



been fantastic: fast and flowing, broken up by little villages. We reached Le Mans at about 5pm and hit lots of traffic, breaking up our group. I was lost and couldn't find the others so headed straight for the circuit which all turned out rather well. On arriving at the gate I had my club sticker in the window so was ushered through into the circuit. It was still being set up and was eerily quiet, which gave me a brilliant opportunity to have a look around, get my bearings for the weekend and take some cheeky pics of the SC outside the Porsche Centre.

For the most part the SC sat in the campsite with the odd run to the local shops to stock-up on *vin, fromage, pain* and, erm, *le sun cream.* On the Saturday, however, I gave it a wash and headed over to the Porsche Club France stand. Driving into the circuit through the buzzing crowds was amazing. Picking my way through the masses I was held up by a procession of GT40s before being greeted by a club member and directed to the 930 parking area. It was brilliant to be part of such a huge display and to talk to so many enthusiastic fans and owners of the marque. This really was a gathering of the faithful and an absolute must for any Porsche fan.

The gates to the event closed on Sunday but we stayed the night for a last beer before de-camping and making a move Monday morning. We had the 15:50 train to catch so opted for autoroutes the whole way back to take some time out of the journey.

With the car loaded and checked over we made a move, blasting back, only stopping to grab some lunch, more *vin* for friends and family, and fuel. There were huge groups of others leaving on the Monday, too, so as we made our way we'd pass (and be passed) by other interesting cars making the drive back a bit of a rolling car show. The last leg from Calais was smooth sailing and England greeted us with rain and stationary traffic on the M25. With that out of the way and a final fuel stop it was full speed ahead all the way back to the Midlands.

So, 1200 miles in a 38-year-old 911 SC completed. How was it? Epic. It's made for this sort of thing and it revelled in the opportunity to stretch its legs: it was fast, comfortable and totally reliable. Issues? Not really, just a couple of niggles: the oil level gauge stopped working and pinned itself to full. On investigation it was just a loose connector on the sender. The only slight drama was the inner bush on the steering column failing as I got on the train home from Calais meaning the column had about 20mm free-play vertically. It's a common issue as it turns out, but an easy and inexpensive fix (which I'll cover next month). And that was it. What a car! So now I've got the Euro road trip bug and I know the car is more than up to the job I'm already looking for the next adventure – Spa six-hours in September anyone?





long-term Fleet

2005 987 BOXSTER S

s you will have read last month in Jack and Martin's reports, we were up in the Scottish Highlands again. I am slow in reporting my part in this due to wanting to do a proper Boxster intro last month. Most of my [non-car] friends can't understand the driving trips. You drive 400 miles on roads to go driving, on roads? There are a couple of things to that. First, the 987, much as I am sure the respective 911s would, dispensed with the trip to the north with ease; for what these cars are capable of in terms of handling, performance and engagement, I feel that there really ought to be more of a penalty, somewhere in the package. Second, the roads we head for are a world apart from my simple lowlander friends' understanding of that word. But then, frankly, the more people that don't make the journey, the quieter it

is. To that end: burn after reading.

I had only a minor disappointment with the Boxster, on the motorway section, namely the limited range of the tank; I am getting 300 miles if I behave... so there were many stops along the way and I entered the viscous coffee cycle of stopping for fuel, buying a coffee, then needing a comfort break. Buying more petrol and coffee... and so on.

With a whole day to get up to the start point us Englanders had chance for a bit of a detour north of Glasgow. A rather stunning day it was too, so I felt a bit of a tool driving around in a convertible with the roof up... but at least there was working air-con. I would be more inclined to try and sort the roof quicker if there were something resembling a summer cresting the horizon.

It was day two heading up into the Highlands that the fun really began,

above Fort William when the roads get bigger and emptier. The weather was less kind, though, with some rain to keep us company. It made me very grateful that I had fitted new tyres not more than a few hundred miles back, swapping out the old Contis for Michelin PS2s.

I am not sure how long the tyres are going to last but, my god, they work well. The grip in the dry is impressive but when the water comes down they really impress. They can be learned on far more than I would have expected, and provided feedback that let me know exactly where I was with the grip levels. Not once did I see the flicker of the orange light on the dash to tell me the car was stepping in to save me from something embarrassing.

On last year's trip I was hampered slightly by the front shocks. I didn't realise what it was at the time but the fronts were very worn and one blew out days after I got home. The result was the car did not settle properly in the corners and felt very disconcerting on uneven surfaces. This year it felt great although there is some of the floaty sensation coming from the rear. It's not enough to spoil the experience, though. I do have the car booked in with Northway to have the rears replaced in a couple of weeks – at 90,000 miles I should have probably replaced them when I did the fronts. Oh well.

We made good progress and were not too many miles from our hotel by early afternoon. With some time to kill we took the opportunity to take a lap of Skye. Aside from a camper van that ignored all of the signs to let quicker vehicles pass it was a great run. We mustered at a fuel station; they are a common sight on our trips, as you can imagine.

Setting off on the final run to the





Matt's epic road trip in Scotland was enjoyable, apart from some brake issues on the Boxster



hotel for the first night's

accommodation, I made it out of Portree, when I heard a very worrying grinding, metallic noise coming from the rear of the car. I pulled in to the side of the road as soon as I could. A quick push on the throttle, I watched the tacho rise but the noise was absent, so that ruled out engine woes. I must have looked calm because, as my friends arrived they waved and drove on, assuming I'd pulled in to let them pass; the tribulations of playing the tortoise! Colin, a chap in a GT3 that we'd met by chance earlier that day, did not know my reputation and therefore stopped. As I drove back and forth a little Colin confirmed that the noise was coming from the offside rear. I got under the car and checked the driveshafts and CV joints. All were in order, as were the brakes, as I did wonder if there was a stone in there somewhere. I decided to wait for a recovery service so, with some persuasion, I sent Colin on his way. I called the (free with my bank account) RAC service. It's incredible. I was asked where I needed to be recovered to if the car was not fixable. I said Wrightune in Wallingford. Okay. I did ask if she realised what cover I had and the distance I was from Oxfordshire. No problem. Within halfan-hour a recovery vehicle arrived and took the car back to Portree, to the RAC garage there. A mechanic was still working, so he popped the wheel off and then the brake disc. It transpired that the parking brake had come apart.

The mangled springs were removed and I was able to get back under way. I only had the nearside parking brake working but it would be enough. Having driven lots of old cars I am used to touch and go parking brakes. The upside of all this: I set off early evening and the roads were incredibly clear. Once on the mainland I had an amazing run back to the hotel, arguably my best run of the weekend. It's a close call between that and following Chris in his C63 AMG up to Ulapoool the following morning. I arrived at the hotel in time for supper and found a large rock to add some additional braking. As you will have gathered from Jack and Martin's reports last month, it was a great trip, saved, for me, by the RAC chaps in Portree, thank you, sirs!







long-term fleet

1981 911 SC

f I was guilty of one thing last month it was mechanical hubris. You see, after the SC failed its MoT I was confident, with just a couple of light bulbs and the parking brake to fix, that it would be easy to do myself, despite my dislike of all things parking brake related.

To start, the indicator light was easy enough... sort of. The bulb bayonet had corroded and wouldn't remove from the housing. Ultimately I broke the glass and compressed the metal before removing it entirely. I cleaned the contact points, fitted the new bulb and I was a guick win ahead. The second bulb was the one for the numberplate. The problem was a poor earth cable. I managed to find something to route it to, and it was working again. Second win. Finally I made some adjustments to the brake shoes and handbrake cable and it gave the impression of doing as good a job as it ever had in my stewardship.

A few days later and I popped the

SC in for the retest. It failed again. The indicator was fine, but the numberplate light had stopped working again and the parking brake was not up to standard. I discussed the brake with one of the chaps at the test centre, MOTest in Reading, and he said it can be a tricky one to sort as holding the car on a hill, which was my test, will not necessarily indicate that the parking brake is fully operational, as only one side may be functioning.

Without taking the rear discs off to check, I determined that as my random tinkering was unable to fix the parking brake it must need new shoes, so I ordered some Pagid items from ECP.

The following Saturday, after a lazy morning, I finally got the SC up in the air and had a proper investigation. There was also the lamp to fix, but that would be the smaller job. I jacked up the car from underneath the engine, and then popped a couple of axle stands under it, leaving the jack in place; working on the slightly uneven drive I wanted to be super careful that the car was not going to move.

Getting to the brake shoes meant removing the wheel, callipers, and discs. The rear callipers on the SC are a real pain to get on and off as the bottom bolt needs a 19mm socket but access is really tight, too tight for my ratchet spanner and the socket set. Thankfully I had an older, smaller socket set that just fitted, with some patient manoeuvring. The disc just took a couple of screws to remove. When the discs do come off it is a good time to give them a bit of a clean. I could see right away that there was a good deal of meat left on the brake shoes but that the contact patches had worn at both ends. I think they may have been adjusted badly.

Removing the shoes themselves is a job I hate almost as much as refitting them. It requires stretching springs and with just needle nosed pliers for the job, it was not easy. I am

always slightly concerned that one is going to ping into my face. I wound the adjuster down as far as possible before starting. There may be a knack, but I just started on the adjuster side and worked across. It seemed to work. When the old shoes were out I gave the general area a bit of a clean up, if somewhat half-heartedly. Assembly wasn't too bad, other than the standard spring struggle. I did have a slight problem as one of the shoes had not seated correctly in the trigger mechanism; this can be seen by pushing it in and making sure both halves move, although the rear of the mechanism is hard to see.

The instructions say to remove the (redundant) automatic air shenanigans from around the handbrake lever and look through an access hole to make sure that two markers line up. I found it easier to adjust the cable at the brake end, with the disc off, and tighten to the point just before the trigger mechanism moves. After that's



done the disc went back on and I adjusted the shoes until they were touching the inside of it, making it hard to rotate, and then backed off four clicks. The wheels went back on and I was set.

The numberplate light negative wire that I'd attached previously was not working. I needed to do some rewiring. I stripped my earlier 'fix' out, got some new wire and took it up to a wire on the other side and into the foglight. Once I was satisfied that was working I dropped the car and tested the brake on the hill. It engaged far more positively and I was hopeful I'd fixed it.

The following morning, I headed into Reading to take the SC back to MOTest and hopefully to victory. A nervy 45 minutes later and the 911 was fully road-legal again! That was my third trip there. The first was a full MOT and fail. The second a partial retest and fail. And then, due to timing, a full retest. I was only charged when it passed, so if you have an old car you work on yourself it's a great option.

The one thing that I did take away from all of this is, much as I enjoy driving my cars, I really like working on them – especially outside with a cold drink and a little transistor radio (actually a retro DAB thing, but I like the imagery). Whether it's slinging the spanners, fixing something small or giving it a proper clean, I enjoy it. With everything that's been happening of late I'm really glad I made the time. Besides, I need to DIY some jobs to save some money for the very big ones.









Matt's SC required some work to its brakes in order to make an MoT pass possible. Good job he enjoys getting his hands dirty, then...



long-term fleet

2009 CAYENNE DIESEL

s someone who sells and writes about Porsches, I'm often asked what Porsche I drive. Now. I have owned countless over the years, starting with a humble 924 and followed by various 911s. However, for the last few years the family wagon was a BMW 525d Touring (and very good it was too). And my wife insists on driving an Audi TT 2.0-litre. So to have to admit I didn't, in fact, have a Porsche was a bit awkward but perhaps not as difficult as answering the other inevitable question: 'So, what's your favourite Porsche?' Usually the last one I've driven, is my stock reply. Still, the problem has now sorted itself out as I am now the

proud owner of a 2009 Cayenne Diesel which I initially only bought to take on a week's skiing holiday. I've done this before – bought a car for skiing and then sold it afterwards, as I much prefer driving to the French Alps than faffing around with flying.

The Cayenne is a superb longdistance cruiser and family/luggage transporter and, this time, Mrs Raby took quite a shine to the car on our way too and from the chalet. So much so that, on our return, she commandeered it for a work trip to Cornwall in preference to her nippy little TT (and has done so several times since, leaving me looking like a hairdresser). What's more, our two teenagers also love the Cayenne (although our 19-year-old daughter can't be insured to drive it), so it wasn't long before the decision was made to adopt it as our personal transport and my trusty BMW estate was sent packing.

And I have to say, I'm delighted. I have long been a fan of the Cayenne, right back to the early days of the model when I remember taking one off-roading along the Ridgeway in Oxfordshire. For me, the Cayenne is, in many ways, all the car you'll ever need. It's a credible off-roader, an estate car, a well-appointed luxury car, a capacious load-carrying estate and, yes, a sports car you can hurl around corners (press that Sport button and prepare to grin). If you can only have one car in your life, it has to be a Cayenne.

This example came from a friend of a friend and I was attracted to it because it had just one caring owner from new (he had a valeter around weekly to pamper it) and a full main dealer service history. It's also finished in Meteor Grey Metallic which looks smart without being flashy, while Porsche Exclusive Side Skirts add interest, as do the 20-inch Cayenne Sport Techno wheels. Options include active suspension, front and rear parking sensors and an electrically retractable towbar. The latter will be useful for towing boats and attaching a bike rack to indulge my two hobbies. Finally, a spare set of wheels with winter tyres was ideal for our ski trip. As was



the diesel engine which returns 30mpg.

Inside, the grey Alcantara trimmed seats wouldn't have been my first choice but the pale shade gives a cheerier cockpit than black would have done. In an ideal world, I'd have liked a leather-trimmed dash rather than the standard plastic but you can't be too choosy with a secondhand car. On the plus side, the PCM 3 sat-nav and entertainment system boasts a touchscreen, Bluetooth phone connectivity and iPod link, plus Bose. The seats, meanwhile, have a memory function (which is AWOL at the moment) and are heated, as is the steering wheel. The latter is a bit irritating, though, as it comes on automatically in cold weather whether I want it to or not. It

always remind me of being in Spain a few years back driving the then-new 997 Turbo with a similarly equipped (but not automatic) steering wheel that could easily be switch on by mistake. "Urgh, it's like a leathercovered sex toy," exclaimed the photographer I was working with.

Moving swiftly on, I had new brake pads fitted by my trusty Porsche specialist, AW Motor Sport, who otherwise gave the Cayenne a clean bill of health. That, though, didn't last. As soon as the warm spring weather arrived the air-conditioning failed. A quick investigation found that the massive condenser unit had corroded, causing the gas to leak out. The whole front end of the car had to come off to replace it. Annoyingly, the main heater fan also gave up the ghost – maybe because it was having to work overtime to make up for the lack of air-con. Interestingly, we couldn't source a replacement from our local Porsche Centre at Portsmouth but, just down the coast in Bournemouth, they had plenty in stock, claiming they fitted at least one a week.

One other little job I did at this point was fit a 'Cayenne' badge at the rear. The car was spec'd as 'debadged' when new but the general consensus was that a badge was needed to break up the vast expense of grey tailgate. Some careful measuring was needed to ensure the badge was mounted correctly and the result is, I think, a success.

The rear wiper obviously felt it had been shoved out of the spotlight, though, as it stopped working soon after the badge was fitted. That, and the none-working seat memory function is a job for the next instalment. Watch this space...

Philip Raby 2009 Cayenne Diesel





long-term fleet



1994 968 SPORT

t feels like no sooner had I got the 968 back home from its Scottish adventure than it's gone again. I'd thought I'd just enjoy it for the summer before addressing its many niggling issues and just a couple of major ones, but there's no space for it in my shed at the moment and driving fast cars on local roads that become plagued by tourists and cyclists at this time of year is an often frustrating experience. So I'll pedal about in my 1958 Citroen 2CV and 1965 Fiat 500 while the Porsche is being prepped.

The major items are cosmetic: replace the trim around the rear screen – the original was vandalised while the car was with its former owner; repair the rodent damage to the seats; refurb the wheels; and refit and repaint the nearside front wing – which was the only panel that needed replacing after the car's one and only accident almost 20 years ago. Other outstanding matters are largely service items resulting from years of very little use. The clutch and brakes need bleeding, the tracking needs doing, there's a small oil weep from the filter housing, and so on.

But the real issue is where you stop. I know of someone who threw £40,000 at a 944 because he wanted a perfect car, but I can't afford to do that to the 968 and, actually, I wouldn't want to because I'd be too frightened to use the car thereafter. Whatever



else, I want to use the 968 when it comes back and should I decide to sell it one day, for it to go to someone who'll want to enjoy it that way too.

As for where the work should be done, at least for the mechanical stuff, I decided to take it the Porsche Centre in Swindon, the closest of just four dealerships in the UK designated as Classic Partners by Porsche, with specially trained staff dedicating to the service, repair and restoration of old Porsches. I know there are plenty of superb private companies I could have gone to but the car has only been tended to by Porsche since I got it. I like the idea of only Porsche parts being used and am mindful of the fact it will look good in the service history if we ever decide to part company.

So far all that's happened is the car's been up on ramps where all previous suspicions about the car's real rather than cosmetic condition were confirmed. The jacking points and sills always go first on these and they are "incredibly good" according to workshop manager Duncan Ince who will be looking after it. There is some superficial surface corrosion in a couple of places but nothing a wire brush and some sealant won't solve. It appears to need no actual structural work of any kind, which is an enormous weight off my mind. Even the brake pipes and fuel lines are fine, despite being original. Ince says that whoever serviced it all these years was

not only obsessive in their attention to detail but knows these cars very well. All I know about him is that he used to work on McLaren F1s.

So the plan is simply to make sure the car looks as good on the outside as it is underneath. I will have to buy it some new tyres because it's got newish Dunlops on the front and oldish Toyos on the back and I hate tyres mismatched in age and type. I also know Porsche has just approved a load of brand-new tyres from various manufacturers designed to look like the originals but made with modern rubber and technology. And I will probably be unable to resist a brand-new set of Porsche N-marked rubber for the car.

What I don't yet know is how much

this will all cost. I am waiting for Porsche Swindon to price up a menu of work that has to be done, that which really should be done and work that doesn't need doing at all, but which I'd just quite like to be done. Only then will I know just how close to my ideal 968 I'm going to get back.





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by Philip Raby

A specialist Porsche dealer and consultant, Philip has been driving and writing about Porsches for over 20 years... @RabyPorsche

BREXIT

Philip Raby looks at what, if anything, is happening to Porsche values in a post-Brexit world...

n the morning of 24 June, the United Kingdom woke up to the surprising news that it had voted itself, by a small majority, out of the European Union. A process that's become known as Brexit. Is this a brave new beginning for the UK or the beginning of the end? Well, this isn't the time or the place to discuss the pros and cons of the result, but suffice it to say, it has certainly left the UK's political and economic systems in a muddle; with major figures in the campaign resigning and the value of sterling plummeting.

Within hours of the result being announced, a blogger desperate for web traffic claimed that Porsche values were dropping. A statement that was dismissed, if only because of the swiftness in which it was made. A few weeks after the news, though, what really is happening to classic Porsche values? Oddly, most dealers I've spoken with have actually seen an increase in enquiries for classic and modern - Porsches since the referendum has taken place. It's almost as if people were waiting to see what happened before committing to a purchase and, now it's all over, they're happy to move on. Remember, over 17-million people voted to come out of the EU, which is just over half of the number of voters, so it could be argued that equates to over half the UK's Porsche-loving

population who are now very excited about the future and are eager to buy Porsches. Conversely, the other half weren't enamoured by the result and could be tightening their purse strings. Who knows, but what I can say is that it remains business as usual in the classic Porsche world.

I do think, though, that we are going to see a steadying of prices in the coming months. I've been surprised at how much classic Porsche values have risen in the first six months of 2016, on top of the huge increases in 2015. That said, there have been some people asking silly money for not particularly nice cars and it's time that changed. Good Porsches will always sell for a sensible price but maybe now prices will stop going up, for a while at least. And that's not a bad thing.

Yes, we are in a state of uncertainty, which could continue for some years, but the underlying UK economy is still in rude health and people still have jobs and are earning money; even the stock exchange is rallying after the initial shock. Furthermore, interest rates remain at an all-time low so there's no incentive for people to keep money in the bank. Sure, there have been hints that rates may have to rise slightly but they'll still be very low compared to, say, in the 1990s. A classic Porsche is a much more appealing place to put your money than keeping it in a savings









the market place____

Yes, we are in a state of uncertainty, but the underlying UK economy is still in rude health

MALTO



account where it's earning one percent or so interest.

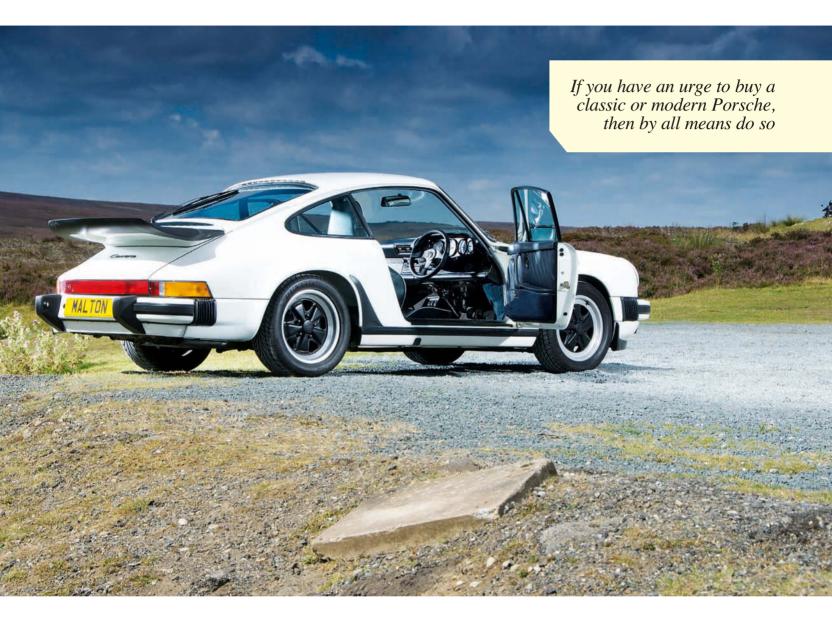
Furthermore, people who buy Porsches do so because they want to. They may be long-time enthusiasts who have owned Porsches in the past, or they could be first-time buyers who are finally in a position to indulge their lifelong dream. Whatever, they are not likely to be put off their desires by a little thing like the county leaving the EU – Porsche ownership is far too important for that. It's been pointed out that the

devaluation of the pound since Brexit has made left-hand drive Porsches in this country attractive to overseas buyers. That is very true but – and it's a big but – there aren't actually many lefthookers in the UK. Go back a good few years to the start of the 21st century and people here were buying left-hand drive cars as a cheap way into Porsche ownership. Indeed, I remember braving a stormy North Sea back in 2001 to bring back a lovely Forest green 964 Carrera 4 from Germany. It cost me – wait for it – the equivalent of £11,000.

Fast forward a few years, and the exchange rate changed and buyers on the Continent – in particular in Germany and Holland – realised that there was a good supply of left-hand drive Porsches in the UK which had been well cared for, and they started buying them back in large numbers. This led to the bizarre situation where, for a while, left-hookers were more expensive than right-hand drive Porsches in the UK. Annoyingly, I'd passed on my green 964 before this happened, but I did hear that a subsequent owner sold it back to Germany and made a tidy profit. Today, then, left-hand drive Porsches in this country are few and far between but, if



the market place____





you do have one, now could be a good time to put it on the market.

For the rest with right-hand drive, UK-market Porsches, there's nothing to worry about. There's a lot of debate about whether or not Brexit will actually happen and, if it does, how much difference it will make to our lives. Whatever happens, it will be years before we see any action, so in the meantime, let's just get on with our lives. If you have an urge to buy a classic or modern Porsche, then by all means do so. On the other hand, if you are ready to sell your Porsche, then put it on the market at a sensible price and, if it's a decent example, you'll be able to shift it \odot



all you need to know...



Bodyshells

Jesse Crosse looks at the integrated nature of Porsche body structures...

he integrity of a bodyshell and what it is made of has as much more to do with how a car goes and handles than exciting bits like the engine or

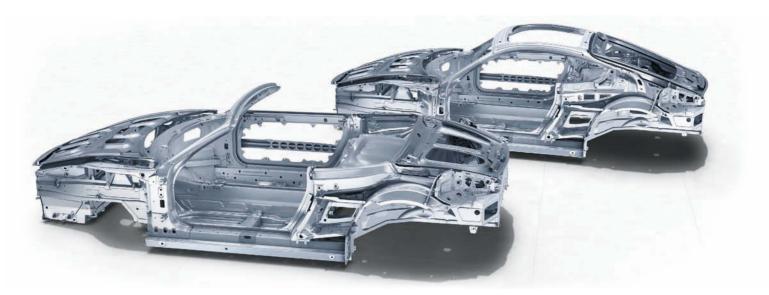
suspension system. Like the Engine of suspension system. Like the Lancia Lambda of 1922, Porsche bodyshells are of a unitary construction, which means the chassis and bodyshell are integrated. Up until the post war period, the use of a separate chassis frame, or 'ladder' chassis with a body dropped on top, persisted. So separate were the two that coachbuilders would offer variants of a basic car by building a special body to sit on top of the, sometimes standard, chassis and running gear.

Porsches, though, have always been of a unitary construction, but where Porsche production cars were once all made from common mild steel they are now manufactured using an exotic blend of mild steel, steel alloys and aluminium. Body structures are much more than something to attach all the other bits to and for keeping the occupants dry and warm. Torsional stiffness (how much the body twists) plays a vital role in how well the car handles. If the body twists, bends or deflects, rather than the suspension moving, then springs and dampers are not able to do their job properly.

The result can be less precise steering, reduced grip, and handling that's not as sharp as it could be. It also means that the opportunity for engineers to accurately nail down the characteristics of a car's handling is diminished. A stiff bodyshell is equally crucial to noise vibration and harshness (NVH) helping to resist the transmission of noise and vibration from the road and powertrain. Finally, the materials used in body structures are a major contributing factor to weight, and weight has a direct influence on performance, handling, road holding, fuel consumption and CO₂ emissions.

Using a high strength steel for body panels makes it possible to reduce the thickness of the steel compared to a conventional material, significantly reducing weight without compromising strength or NVH properties. Deep drawn steels are those where the depth of a shape pressed into a 'blank' sheet of steel is greater than the width or diameter. Tailor welded blanks (TWB), used in virtually all cars now, are sheets of different grade steel buttwelded together (edge to edge) to create a steel sheet with a different property or thickness on one side, compared to the other. TWBs are often used in components like B-pillars, where the area holding the door hinge is thicker than the rest for strength, while the remainder can be thinner to reduce weight.

Most modern cars, including Porsches, are constructed using hybrid structures of steel, high strength alloy steels, aluminium alloys and plastic. Some have cast magnesium components in the structure, too. Steel alloys are not a mixture of steel and aluminium as the two cannot be blended together or 'alloyed' but, strictly speaking, any steel is an alloy because it consists of more than one component, namely iron and carbon. Adding carbon turns softer iron into much stronger steel but so-called alloy



steels contain other materials as well to give different properties.

Molybdenum and vanadium are common examples used in tools like spanners and medium strength vanadium steel was used way back in automotive history, notably in the Model T Ford. So steels can be alloyed to give different properties depending on the constituents. Some are developed to resist corrosion, others to be strong and malleable or extremely hard to resist wear. Much the same applies with aluminium alloys, there are horses for courses, different blends each with a different levels of malleability and hardness.

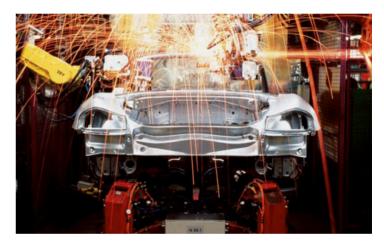
Choosing the right material for body panels is a tricky business. The exterior design of the car has an effect on and is affected by, the choice of material. Swage lines, compound curves and the radii of corners and edges are all affected by the choice of material and how radically it can be shaped without cracking when a panel is pressed. This is especially true of aluminium alloy, the properties of which are quite different to steel when it comes to forming, with designers and engineers working closely on that stage of development to get the right result.

Because Porsche cars range from SUVs to mid-engine, two-seaters, the construction and way materials are deployed and used across the range vary significantly. Where a Cayenne is predominantly built from a variety of steels, Porsche sports car bodyshells are now constructed mainly from aluminium. The Cayman and Boxster switched to 'intelligent lightweight construction' in 2013 and the 911 when the 997 gave way to the 991.

The 991 front, centre section and rear is aluminium with steel components used in crucial areas. The lower A-pillar and roof crossmembers are made from high-strength steel alloys. Ultra-high-strength boron-alloy steel is used in the inner roof frame and B-pillar to form an integral safety cage. It's a bit like having a motorsports-type roll-cage fitted except you can't see it.

Joining steel with aluminium is not without its challenges. You can't weld the two together for a start, as one is ferrous and the other non-ferrous. So in common with other manufacturers using 'aluminium intensive' construction, the two are joined using glue and rivets. The glue is a special structural adhesive and phenomenally strong. It also helps to prevent electrolytic action between the two materials which, if touching, would trigger corrosion.

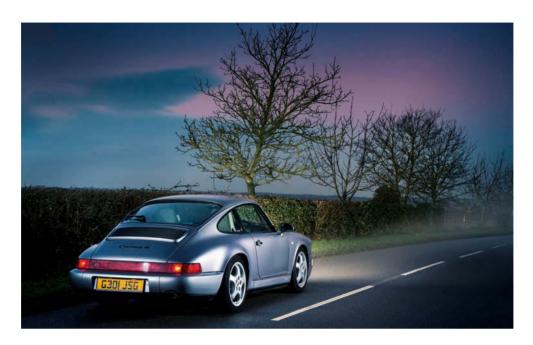
The way cars are constructed will continue to evolve and the need to shed weight means, at the very least, all premium cars will soon be made predominantly of aluminium if not composite materials. Though it might seem like a logical next step, carbon fibre is not that sustainable at the moment as, unlike aluminium, it cannot be recycled back to its initial, resin-free state for reuse in the same way. It is also energy intensive to make and ferociously expensive for higher volume cars, so hybrid steel and aluminium alloy construction is likely to remain the status quo for a few years yet at least O



Choosing the right material for body panels is a tricky business...



tech guide



Fitting LED Headlamps Jesse Crosse looks at fitting LED headlamps

to your older Porsche...

wning a classic car, especially a classic air-cooled Porsche, is one of the most thrilling and fulfilling things a petrolhead can do, even it is sometimes frustrating. Rolling that 911 SC, 3.2 Carrera or 944 Turbo out of the garage on a Sunday morning, just for the hell of it, is hard to beat. But there are downsides of course. They can be expensive to fix, thirsty, oh, and if you are driving at night, the original H4 headlamps can be, well, dismal.

One way around that is to fit one of the LED headlamp bulb conversions which are starting to appear on the aftermarket and are readily available on your favourite auction site. LEDs, or light emitting diodes, are part of a lighting revolution around the home, but also in the automotive sector. All premium cars are moving over to LEDs and as we saw in last month's issue, there are many benefits and virtually no disadvantages.

Apart from emitting an extremely bright light, the colour temperature of LEDs can be chosen by manufacturers to look far more like daylight than incandescent bulbs. Colour temperature refers to the colour of the light rather than the thermal temperature, something keen photographers will be aware of. The lower the colour temperature the warmer the light and the higher it is, the cooler it will appear. At the high end, the light looks close to daylight. A warm lamp would be rated at around 2700K (Kelvins), and a halogen at 4000K. 6000K is a cool daylight temperature and this is where the best automotive LED headlamp bulbs fit.

As well as the potential to produce generous quantities of light compared to conventional halogen lamps, LEDs have another benefit which is particularly desirable on an old car – they consume less energy than incandescent bulbs. An automotive LED headlamp unit can be rated at 30W where an H4 halogen unit would be 60W, or 100W to 120W when a competition bulb is fitted. These more powerful bulbs are okay as long as the electrical system is up to scratch but the extra heat they generate will take its toll on reflectors. On the downside, LEDs emit no heat at the business end, but behind the diodes at the rear of the bulbs they do get hot and so they are fitted with heatsinks. These can take the form of aluminium fins or flexible metal braiding depending on the manufacturer. They also have electrical units integral with the lead which can be bulky and will need packing when the bulbs are fitted. That might not be simple on an older 911 for example.

Most aftermarket LEDs we've looked at preclude the use of the usual rubber sealing gator that fits over the back of an H4 bulb. This keeps water out of the headlamp in older cars where the rear of the headlamp is exposed to the inside of the front wings. At the very least, some ingenuity would be required to overcome that and they may not be legal in Germany should you be contemplating a trip to the Nürburgring. Having said that, a pair of these will only cost £20-£35, so if you're up for a small DIY project, it could be worth a go.

A more certain solution is to buy an LED system ready-made. So far that

appears to be confined to the Lumetechnik system (above) produced by RPM and distributed by Design 911. The systems include either internals to convert existing headlights or complete headlamps which come with either clear or the earlier style textured lenses. All include triple LED bulbs lifed at 30,000 hours and are a straight swap for the originals. There are no additional bulky electrical units to accommodate, they are TÜV approved, E-marked and available in LHD or RHD form making them legal throughout Europe. These plug-and-play systems are available for all air-cooled Porsches up to and including the 964.

The only restriction is that the internal kits cannot be used to replace the later self-levelling option on the 964; a full kit is needed for that. The prices reflect the quality of the system and the fact that they have European homologation and cost between £855 for the internal upgrade and up to £1449 for a full kit. The improvement to the night driving experience, though, especially on a long road trip, should make them worth every penny \bigcirc



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1:43 MINICHAMPS 935

How much? £50 Where from? www.racingmodels.com

The Jolly Club Porsche 935 was driven to second place at the Daytona 24 Hours in 1977 by Carlo Facetti, Martino Finotto and Romeo Camathias. This 1:43 scale version of the car by Minichamps is supplied in a showcase. Add code POR010 to your shopping cart during checkout to receive a ten percent discount exclusive to *GT Porsche* readers.

911 'PUCK' HORN BUTTON

How much? £250 Where from? www.karmannkonnection.com

These high quality 911 'Puck' horn buttons fit 1965 to 1968 911 and 912 models. Made in the UK by Karmann Konnection, they come complete with fixings and an original equipment quality horn cuff, so they are ready to fit. Karmann Konnection says it has sold these all over the world and received superb feedback. We're also told that all orders of these receive a free Karmann Konnection keyring.



A FLAT 6 LOVE AFFAIR BOOK

How much? \$150 Where from? www.bartkuykens.com

JOUY QUB

This 336-page black and white book, A Flat 6 Love Affair, is limited to just 911 (numbered and signed) copies and comes from author and photographer Bart Kuykens. Containing forewords by the likes of *GT Porsche* contributor Johnny Tipler, and Bob Tilton, it artistically captures the cars and characters associated with the Porsche community. Johnny Tipler describes it as: "a gothic Porsche photo album par excellence."







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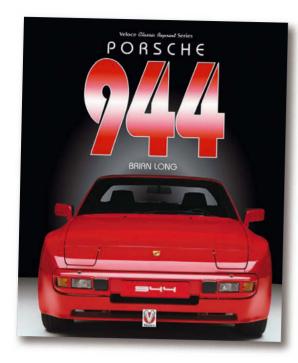
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944 BOOK How much? £35 Where from? www.veloce.co.uk

This 192-page book by Brian Long is back in print and presents the definitive history of the 944. Introduced in time for the 1982 model year to fill the gap between the 924 and 928, the 944 quickly became the fastestselling Porsche of all time. Production ended in mid-1991. An essential companion for any 944 buff we're sure, note down ISBN: 978-1-845849-76-4.

1:43 ABARTH 356 CARRERA

How much? £15 Where from? www.racingmodels.com

The 1959 Porsche Abarth 356 Carrera was a beautiful car, as this 1:43 scale model shows. This model is supplied in a Racing Models showcase for display purposes, and is a bargain at just £15. Add code POR010 to your shopping cart during checkout to receive a ten percent discount exclusive to *GT Porsche* readers.



1:43 SPARK

How much? £46 Where from? www.racingmodels.com

The 'Novestille' Porsche 910 was driven at Le Mans in 1972 by Louis Cosson and Jean-Louis Ravenel. Sadly the team retired in the 16th hour following a wheel bearing failure but their efforts live on with this detailed 1:43 scale Spark model. Add code POR010 to your shopping cart during checkout to receive a ten percent discount exclusive to *GT Porsche* readers.

PORSCHE T-SHIRTS

How much? From £30 Where from? shop.porsche.com

From the official Porsche Driver's Selection come these 100% cotton T-shirts. The (white) Porsche fan T-shirt has a motif based on an original promotional poster from 1989 (£30). The other offering here is a limited edition collector's T-shirt (No.5) called the 'Porsche Racing Collection 917 Salzburg' (£34). Both are unisex designs and they are available online or from your nearest OPC.

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THINKWARE X550 DASH CAM

How much? From £169 Where from? www.thinkware.com



Unlike other dash cams on the market the X550, from Korean brand THINKWARE, has been optimised for use at night, using time-lapse photography to record for up to two days while a car is parked. Full 1080 HD quality, the camera also features a 2.7-inch LCD screen, Sony CMOS Image Sensor, and a Safety Camera Alert function providing current information on static and mobile speed traps.

Through its imaging technology, the X550's night vision affords up to ten times more brightness during night recording over a typical dash cam. The time-lapse photography feature also records continuously while a car is parked and is not, like other products on the market, reliant on motion detection to activate its recording mode – it can save far more footage, too. What's more the X550 can provide Lane Departure Warning System, Front Vehicle Departure Warning and Front Collision Warning System safety alerts.



911 /912 REAR SEAT PANELS

How much? £168 (each) Where from? www.karmannkonnection.com

Karmann Konnection is exclusively able to supply these new left- and righthand side rear seat panels for the 911 and 912 from 1965 to 1972. Karmann Konnection spotted a need for these repair sections having noted that not all cars required the large rear seat (which it also sells), these new items cover the seat area. It's worth noting that all online orders receive a Karmann Konnection T-shirt free of charge.

1:43 SPARK 924 CARRERA GTR

How much? £46 Where from? www.racingmodels.com

Here we have the 924 Carrera GTR as tested at Paul Ricard in 1980. This Spark model replicates the car faithfully and comes with a neat showcase. Add code POR010 to your shopping cart during checkout to receive a ten percent discount exclusive to *GT Porsche* readers.





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914 & 914-6 BOOK

How much? £37.50 Where from? www.veloce.co.uk

As its title suggests, 914 & 914-6 The Definite History of The Road & Competition Cars covers exactly what you'd expect it to. Following a period out of print, the book is now available once more and contains the history of the 914 from its early days onwards. Some 208 pages mean it's a decent size, too. You'll need ISBN: 978-1-845849-78-8.



PORSCHE

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1:43 PREMIUM X CARRERA RSR

How much? £46 Where from? www.racingmodels.com

This 1:43 scale model by Premium X depicts the Brumos 911 Carrera RSR driven to tenth place in the 1977 Daytona 24-hour race by Peter Gregg and James Busby. Add code POR010 to your shopping cart during checkout to receive a ten percent discount exclusive to GT Porsche readers.





GT4 'STAGE 2' SUSPENSION KIT

How much? \$795 (Offset Toe Rod Kit), \$1,290 (DSC Sport V2 controller) Where from? www.tpcracing.com

American specialist TPC Racing has developed this Stage 2 suspension kit for the Cayman GT4, said to eliminate any inherent understeer. TPC Racing determined that the rear toe link was causing the issue from the factory, and its ensuing toe deflection, so it has developed this kit: the Offset Toe Rod Kit.

Replacing the factory rear toe links, the kit features a unique offset bush design, and once paired with TPC Racing's own alignment specs, it is said to reduce toe deflection by 50% at 25mm of travel on both rebound and compression. The result sees increased cornering stability under load. In conjunction with the TPC Racing DSC Sport V2 controller, this 'Stage 2' Suspension package for the GT4 corrects the car's toe curve, softens its rear dampers (using the controller) allowing for increased grip on exit.



911 PRINTS

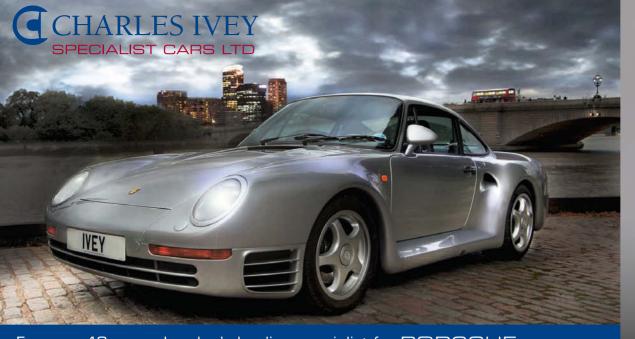
How much? From \$45 Where from? www.unique-limited.com

We've showcased some of Unique-Limited's print offerings before but the Czech firm has lots of tasteful artwork to interest Porsche fans. These 911 posters are the newest part of its Porsche Collection, covering seven colourful variants of Carrera RS. Printed on beige rough 180g/m2 grade paper, they measure 50x70cm and come supplied without a frame.









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356

Dimensions: Wheelbase (mm): 2100 - Length (mm): between 3850 (1950) and 4010 (1959). Width (mm): 1660

1948 to 1949: Gmünd Coupés:- the 356's predecessor was first produced in July 1948. The aluminiumbodied Gmünd Coupés used virtually all VW mechanicals from a four-speed gearbox to torsion bar suspension, and, of course, the Beetle-derived 40hp flat-four engine complete with twin Solex downdraught carburettors and 7.0:1 compression ratio. Drum brakes were fitted all-round. 1950: 'Pre-A' 356:- Following the move to Stuttgart, the 356's integral body was made of steel and the design given a higher waistline than Gmünd Coupés, with the distinctive V-shaped roof to accommodate its split-screen. The 1.1-litre engine now produced 40hp and, along with the other engines offered after 1952, was mated with Porsche's own four-speed gearbox. 1951: 1300cc and 1500cc (60hp) engines introduced. 1952: Split-screen front windscreen replaced with single piece window; bumpers mounted higher and further forward from body; rectangular rear taillights replaced with circular items. 1500cc engine loses 5hp but is more refined and was the first engine to feature the 'Alfinger' crankshaft. 1500 S (70hp) engine introduced. Fully synchronised gearbox fitted across the range. 1955: 356A:- New engines and suspension altered. New curved 'V-screen' does away with the need to split the screen, vinyl replaces cloth inside. New dash, combined ignition/starter. New gearbox in 1957. Four Cam Carreras launched at the 1955 Frankfurt Motor Show, these engines were directly derived from racing technology, with GTdenoted models aimed specifically at motorsport. They were dry sumped, had reduced compression ratios and revved much higher. The bodies around them were lightweight, making them very potent on the road for their day. 1959: 356B:- 90hp 1600 introduced for Super 90 which gets 'compensating rear springs' to improve handling. Changes to bumper position, headlamps and numerous interior details. 1961: Larger rear window and engine cover with twin air intakes introduced, electric sliding roof optional; 1600 S engine gets four-ring pistons, S-90 gets modified flywheel. 130hp Carrera 2 announced (introduced in 1962), featuring Porsche-designed disc brakes. 1963: 356C:- Reworked engines, clutch from Super fitted to 75 and 95hp models, disc brakes introduced all-round, rear compensating spring special order only, no external changes but there was a rethink of the interior details. 1964: Porsche takes control of Reutter and 356 C introduced, Roadster dropped from the line-up.

MODEL	MODEL	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED
	YEAR		CC		(lb ft)		(mph)
Gmünd Coupés	1948 to '50	605	1086	35-40	50	23.0	80
'Pre-A' 356							
1100	1950 to '54	745	1086	40	51	23.5	87
1300	1951 to '54	810	1286	44	59	22.0	90
1300A	1954	830	1286	44	51	22.0	90
1300S	1953 to '54	830	1290	60	64	17.0	99
1500	1951 to '52	830	1488	60	75	15.5	105
1500	1953 to '55	830	1488	55	77	16.5	96
1500S	1952 to '55	830	1488	70	80	13.5	108
356A							
1300	1955 to '57	860	1290	44	60	22.0	90
1300S	1955 to '57	900	1290	60	65	17.0	99
1500GS Carrera	1955 to '58	835	1498	100	88	12.0	124
1600	1955 to '59	835	1582	60	81	16.5	99
1600S	1955 to '59	835	1582	75	86	14.5	108
1600GS Carrera	1958 to '59	835	1587	105	89	11.0	124
356B							
1600	1959 to '63	905	1582	60	81	16.5	96
1600S	1959 to '62	925	1582	75	86	15.0	108
1600S	1960 to '63	925	1582	90	89	13.5	112
1600S	1961 to '63	935	1582	75	86	15.0	108
1600GS Carrera C		890	1588	115	99	10.5	124
Carrera 2	1962 to '64	890	1966	155	144	9.0	124
356C							
1600C	1963 to '65	935	1582	75	89	14	109
1600SC	1963 to '65	935	1582	95	90	13	116
2000GS	1962 to '64	935	1966	130	119	9.0	124

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911 (1964 - 1989)

(Zero) 0-Series - 1963 to 1966; '64 to '66 Model Year - Wheelbase (mm); 2211 Lenath/Width (mm): 4163/1610 - Significant developments: 911 (very briefly 901) first shown at 1963 Frankfurt Motorshow, went on sale in 1964 with six-cylinder 2.0-litre engine. Targa announced in 1965 and goes on sale 12 months later. Weighs 50 kilos more than coupé

MODEL	MODEL YEAR	WEIGHT(kg)	ENGINE (cc)	Нр	TORQUE (lb ft)	0-60*	MPH
901	1963	1080	1991	130	119	8.5*	131
911	1964	1040	1991	130	120	8.3*	130
911	1965 to '67	1080	1991	130	128	8.3*	130

A-Series - 1966 to 1968: 1967 Model Year - Significant developments: 160hp 911S introduced, as are 5.5-in tyres. 911L had vented discs taken from 911S. Four-speed Sportmatic introduced in 1967. All models available as Targa, glass window replaces plastic item from 1968.

MODEL	TRACK (f/r mm)	WEIGHT	ENGINE CC	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
911L	1353/1321	1075	1991	130	130	10.6*	131
911T	1353/1321	1080	1991	110	116	8.3	124
911	1353/1321	1080	1991	130	128	9.1	130
911S	1353/1321	1080	1991	160	132	8.0*	137

A-Series – 1967 to 1969: 1968/69 Model Year – Significant developments: Wheelbase extended by 57mm to enhance handling, single battery replaced with twin 35amp alternatives in front luggage compartment to keep front end more securely planted and enhance handling. S and E both have mechanical Bosch fuel injection. 911T introduced. 'E' model replaces 'L'

MODEL	TRACK	WEIGHT	ENGINE	Hp	TORQUE	0-62	TOP SPEED
	(f/r mm)	kg	CC		(lb ft)	0-60*	(mph)
911T	1353/1321	1075	1991	110	115	8.3	124
911E	1353/1321	1020	1991	140	129	8.4	134
911S	1353/1321	995	1991	170	135	8.0*	137

C-Series - 1969 to 1970: 1970 Model Year - Significant developments: Increase in bore from 80 to 84mm raises engine capacity to 2.2-litres. Aluminium crankcase replaces magnesium alloy item. 225mm clutch introduced. Sportmatic no longer an option on 911S. Front upper strut attachment points moved forward 14mm.

D-Series - 1970 to 1971: 1971 Model Year - Significant developments: PVC-coated, galvanised underfloor areas introduced. Tweaks to injection and janition required to meet new EU emission laws

MODEL	TRACK	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED
	(f/r mm)	kg	CC		(lb ft)	0-60*	(mph)
911T	1362/1343	1020	2195	125	131	9.5	127
911E	1372/1354	1020	2195	155	141	7.6*	137
911S	1372/1354	1020	2195	180	147	7.0	138

E-Series - 1971 to 1972: 1972 Model Year - Significant developments: Engine stroke increased to 70.4mm giving 2.4-litre capacity. Compression ratio dropped to allow use of regular petrol. Gearbox uprated to cope with increased torque. External oil filler cap located between door and rear wheel. All models supplied with Fuchs wheels.

F-Series - 1972 to 1973: 1973 Model Year - Wheelbase (mm): 2271 Length/Width (mm): 4127 (RS 4147)/1610 - Significant developments: External oil filler removed due to customer confusion at the petrol pumps. Chin spoiler introduced on S to reduce front end lift (option on T and E) and greater variance in standard wheels. 2.7 Carrera RS is first to be fitted with duck-tail rear wing.

MODEL	TRACK	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED
	(f/r mm)	kg	CC		(lb ft)	0-60*	(mph)
911T	1360/1342	1050	2341	130	144	8.1	127
911E	1372/1354	1050	2341	165	151	7.9	138
911S	1372/1354	1050	2341	190	158	6.6	144
Carrera RS	1372/1394	975	2687	210	188	5.8	152

G-Series – 1973 to 1974: 1974 Model Year – Wheelbase (mm): 2271 Lenath/Width (mm): 4291/1610 (Carrera 1652) – Significant developments: Shock absorbing bumpers introduced as a result of US legislation. Range-topping Carrera model came with 'black look' trim and 210hp. H-Series - 1974 to 1975: 1975 Model Year - Significant developments: Turbo introduced early '75 with four-speed gearbox and higher spec. Duck-tail replaced by whale-tail on Carrera models. Silver Anniversary model launched, 1063 sold.

MODEL:	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Нр	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
	()	0			1 . 7		
911	1360/1342	1075	2687	150	173	7.9*	131
911 S	1360/1342	1075	2687	175	188	6.1*	142
911 Carrera	1372/1354	1120	2687	210	188	6.3	150
930 Turbo	1432/1500	1140	2993	260	253	6.0*	155

I-Series - 1975 to 1976: 1976MY - Significant developments: Bodies now zinc-coated, galvanised steel. Bosch K-Jetronic fitted to all models. Sportmatic now only three-speed, not four.

J-Series - 1976 to 1977:1977MY - Wheelbase (mm): 2271, Length/Width (mm): 4291 (Turbo 4318)/1610 (Carrera 3.0 1652, Turbo 1829) – Significant developments: Sportmatic cars get brake servo assistance. 'Black-look' trim standard on Targas.

MODEL	TRACK	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED
	(f/r mm)	kg	CC		(lb ft)	0-60*	(mph)
911	1360/1342	1120	2687	165	176	7.8	135
Carrera 3.0	1372/1354	1075	2994	200	188	6.3	150
930 Turbo	1432/1500	1195	2993	260	253	6.0*	155



911: 1963 - 1989

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Not content with blowing the minds of its faithful customers with its first RS road car, Porsche unveiled its concept for a new, more powerful, luxury-orientated version of the 911 at the 1974 Paris Motor Show – the 911 Turbo. With a 3.0-litre flat-six motor and a single KKK

With a 3.0-litre flat-six motor and a single KKK turbocharger the new model produced 260hp delivered to the rear wheels via a four-speed manual gearbox. With a 0-62mph time of just 5.5 seconds and a 155mph maximum speed it was the fastest, most powerful Porsche road car to date, and its arrival coincided with the oil crisis. With its flared rear-wheel arches, deeper front and whale-tail rear spoiler it was far from subtle, but Porsche's customers loved it and nearly 3000 were built. In 1978 it gained a bigger, 3.3-litre engine and more power (now 300hp), could crack 160mph and would continue in production until 1989. Porsche also offered as a 911 Turbo Cabriolet and Targa model from 1987-88, as well as the 330hp 'slant-nose' coupé from 1983 through to 1989. And if you wanted the show without the go you could order Turbo-look Coupés, Cabriolets, Targas and Speedsters. Has there ever been a more blatant example of the excesses of the '80s?



During the 1980s Porsche hit upon a winning formula for its rear-engined sports cars, despite the best attempts by various management boards to try and kill it off. As engine capacity rose from 2.2-, through 2.4-, 2.7-, 3.0- and finally 3.2-litres, so did the power and performance of the numerous models and variants introduced. The first 911 Cabriolet arrived on the scene in 1983, and before this a whole of host models had come and gone: the 2.45 became the Carrera in 1974 with 2.7-litres and 210hp, and the 3.0 Carrera in '76 with 200hp (US emissions laws had strangled the flat-six a bit). The 3.0 SC arrived in 1978 with a feeble 180hp but redeemed itself in 1981 with the new 3.0 SC arriving with 204hp. In 1984 Porsche delivered its latest 911: the 3.2 Carrera. With 231hp, a 6.1 second 0-62mph and a 151mph maximum speed the 911 was back on track. In 1987 the somewhat wayward 915 transmission was replaced with a slick Getrag G50 'box and this generation 911 saw out its final years able to hold its head high and compete with the more youthful opposition.

K and L-Series (the SC) – 1977 to 1979: '78 to '79MY – Significant developments: Super Carrera combined old 911 and Carrera with 3.0-litre engine, all had servo-assisted brakes. Turbo 3.3-litre engine equipped with intercooler and tea-tray spoiler replaces whale-tail. SC (New A-Series) - 1979 to 1980: 1980MY - Significant developments: Revised ignition and camshaft timing results in 188hp SC model. Turbo gets twin-exit exhaust.

TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Нр	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
1369/1379	1210	2994	188	188	7.0	141
1432/1500	1300	3299	300	304	5.1*	162
	(f/r mm) 1369/1379	(f/r mm) kg 1369/1379 1210	(f/r mm) kg cc 1369/1379 1210 2994	(f/r mm) kg cc 1369/1379 1210 2994 188	(f/r mm) kg cc (lb ft) 1369/1379 1210 2994 188 188	(f/r mm) kg cc (lb ft) 0-60* 1369/1379 1210 2994 188 188 7.0

SC (New B-Series) - 1980 to 1981: 1981MY - Significant developments: First year of 17-digit international chassis number. SC now runs on 98RON fuel. SC (New C-Series) - 1981 to 1982: 1982MY -Significant developments: Limited edition 'Ferry Porsche' model goes on sale. Tea-tray spoiler option available for SC. SC (New D-Series) - 1982 to 1983: 1983MY - Significant developments: Cabrio , d fallouin a

MODEL	TRACK	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED	
	(f/r mm)	kg	CC		(lb ft)	0-60*	(mph)	
911 SC	1369/1379	1210	2994	204	189	5.7*	146	
930 Turbo	1432/1500	1300	3299	300	304	5.1*	162	

Carrera (New E-Series) - 1983 to 1984: 1984MY - Wheelbase (mm): 2271 Length/Width (mm): 4291 (Turbo 4318)/1610 (Turbo) Significant developments: Carrera replaces SC. Engine capacity climbs to 3164cc, Digital Motor Electronic engine management introduced as was the engine oil-fed chain tensioner. Turbo-look option ads 50 kilos and increases drag.

MODEL	TRACK	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED	
	(f/r mm)	kg	CC		(lb ft)	0-60*	(mph)	
911 Carrera	1398/1405	1210	3164	231	209	5.6*	152	
911 SC RS	1398/1405	960	2994	255	184	5.0	159	
930 Turbo	1432/1500	1300	3299	300	319	5.1*	162	

Carrera New F-Series - 1984 to 1985: 1985MY - Significant developments: Carrera available with catalytic converter. Four-spoke steering wheel standard. Carrera New G-Series - 1985 to 1986: 1986MY Significant developments: Sport seats now a no-cost option. Turbo-look track 1434mm front/1526mm rear. MODEL TRACK WFIGHT FNGINF Hp TOROUF 0-62 TOP SPEED

	(f/r mm)	kg	CC		(lb ft)	0-60*	(mph)	
911 Carrera	1398/1405	1210	3164	231	209	5.6*	152	
930 Turbo	1432/1500	1300	3299	300	319	5.1*	162	

Carrera New H-Series - 1986 to 1987: 1987MY - Significant developments: Targa and Cabrio models available with Turbo engine. Slant-nose becomes an option. 915 transmission replaced by Getrag-built G50. Power hood standard on Cabrio. Carrera New J-Series - 1987 to 1988: 1988MY - Significant developments: Celebration anniversary model available. Club Sport model weighed 50 kilos less, blueprinted engine pushed power to around 241hp. Carrera New K-Series - 1988 to 1989: 1989MY - Significant developments: 16-inch wheels now standard. Speedster introduced and available with either Turbo-look or flat-nose bodies

MODEL	TRACK	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED	
	(f/r mm)	kg	CC		(lb ft)	0-60*	(mph)	
911 Carrera	1398/1405	1210	3164	231	209	5.6*	152	
Club Sport	1398/1405	1160	3164	231	209	5.6*	156	
930 Turbo	1434/1526	1300	3299	300	319	5.1*	162	

964 (1989 - 1993)

1988 to 1989: 1989MY – Wheelbase (mm): 2271 Length/Width (mm): 4250/1651 – Significant developments: Launched in January 1989 with a new flat-six engine, suspension, brakes and numerous body parts, Porsche claim only 13 per cent carry over parts from predecessor. Carrera 4 split torque 31/69 front to rear. All wheel ABS and power steering standard, catalyst introduced. 1989 to 1990: 1990MY - Significant developments: All pre-964 models now deleted. Carrera 2 introduced, Targa and Cabrio available for both Carrera 2 and Carrera 4 models. Tiptronic available on C2. Both Cabrio and Targa 50 kilos heavier than coupé equivalents. 1990 to 1991: 1991MY – Significant developments: Rear drive, 3.3-litre 320hp 964 Turbo introduced complete with 'Cup' design mirrors. 1991 to 1992: 1992MY - Significant developments: Stripped-out Carrera 2 RS launched – the first RS since 2.7 Carrera RS in 1973 – and proves a hit for those who like their 911s raw. 381hp Turbo S model available to order (80 built). 1992 to 1993: 1993MY -Significant developments: Speedster introduced, rear-wheel drive only and based on Cabriolet for US market. 3.6 Turbo production begins in Jan 1993.





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(964): 1989 - 1993

911 (964): 1989 – 1993 Two-door, two+two Coupé, Convertible and Targa. Rear-mounted six-cylinder air-cooled 'boxer' engine, rear and four-wheel drive. For a company that had very little left in the piggy bank and suffering from an economic and sales downturn, Porsche's engineers pulled off a remarkable achievement when developing the 964-series 911. This latest 911 was '87 per cent new' over the model it replaced, and the big news surrounding the 964 was the increased capacity flat-six and the introduction of a four-wheel drive transmission. This resulted in the gearbox and rear final drive having two electronically-controlled wet clutches, limiting slip in both the centre and rear differentials. A torque tube connected the centre and front diffs. The torque split was 31:60 front-to-rear. Joining the new C4 was a Carrera 2 Coupé, Cabriolet and Targa models, three Turbo variants: 320hp 3.3-litre, 360hp 3.6-litre, and a limited run 38 lhp Turbo S. The stripped-out 964 RS and limited run 3.8 RS were available from 1992. Overlooked by many, the 964 offers an affordable entry into classic 911 ownership, although they require regular maintenance and some TLC.



911 (993): 1993 – 1996
Two-door, two-two Coupé, Convertible and Targa. Rearmounted six-cylinder air-cooled 'boxer' engine, rear- and four-wheel drive. Argued by many to be the most beautiful 911 design of all, the 993-series cars are also the best engineered and, for many purists, the pinnacle of the model's achievement.
The last of the air-cooled 911s had it all: pace, grace and, for once, a bit of space. The entry-level Carrera 2 was all you ever really needed, but who could resist the appeal of the Carrera RS or, for the first time, the all-wheel drive, twin-turbocharged Turbo? For the seriously brave there was the GT2 and those after the Turbo look without the go could always opt for the Carrera 2S and 4S.
The 993 also saw the introduction of VarioRam (in 1996). This controlled the length of the engine's induction tracts, and at low and medium engine speeds longer tracts provided a fuller torque curve, while at higher engine speeds the shorter induction length delivered higher peak power outputs.

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Нр	TORQUE (lb ft)	0-62	TOP SPEED (mph)	
Carrera 2/4	1379/1374	1350/1450	3600	250	228	5.7	162	
Carrera 2 RS	1379/1380	1250	3600	260	240	5.3	162	
Turbo	1442/1448	1470	3299	320	332	5.0	168	
3.8 RS	1440/1481	1210	3746	300	266	4.9	168	
Turbo 3.6	1442/1448	1470	3600	360	383	4.8	175	

993(1993 - 1998)

1993 to 1994: 1994 Model Year – Wheelbase (mm): 2272 Length/Width (mm): 4245/1735 (Carrera 4S and Turbo 1795mm) - Significant developments: 993 production begins in Jan 1994. Internal engine upgrades increase power and torque. Multi-link rear suspension is one of the biggest developments in the 911's history and transforms 993 into a more driver friendly sports cars. Four-piston brake callipers standard front and rear. Two- and four-wheel drive offered across the range in either Coupé or Cabriolet quise. 1994 to 1995: 1995MY - Significant developments: Carrera RS introduced as is redesigned, all-wheel drive system for Carrera and Tiptronic S with steering wheel-mounted shift controls for automatic gearbox. New 408hp four-wheel drive, twin-turbocharged 911 Turbo is launched and includes a six-speed gearbox and hollow spoked allov wheels.

MODEL	TRACK	WEIGHT	ENGINE	Hp	TORQUE	0-62	TOP SPEED	
	(f/r mm)	kg	CC		(lb ft)		(mph)	
Carrera 2/4	1405/1444	1370/1420	3600	272	243	5.6/5.3	168/162	
Carrera RS	1413/1452	1270	3746	300	262	5.0	172	
Turbo	1411/1504	1500	3600	408	398	4.5	180	

1995 to 1996: 1996MY - Significant developments: VarioCam engines announced and up both power and torque; revolutionary sliding glass-roofed Targa introduced. Lightweight, 430hp, rear-wheel drive, homologation special GT2 launched. It's the most powerful and fastest 911 production road car ever built. 1996 to 1997: 1997MY - Significant developments: 430hp Turbo S offered as run-out model with 450hp factory engine upgrade also available. Turbo-bodied Carrera 2S built alongside Carrera 4S, but two-wheel drive obviously. It's the last rear-wheel drive, air-cooled 911. 1997 to 1998: 1998MY - Significant developments: An end of an era. Production of the all-wheel drive Carrera 4 and Turbo continues until July 1998 but when the last car finally rolls off the production line (a Carrera 4S) it marks the end of air-cooled 911 production after 35 years. The purists aren't happy, but it signifies a new dawn for Porsche.

MODEL	TRACK (f/r mm)	WEIGHT	ENGINE	Нр	TORQUE (lb ft)	0-62	TOP SPEED (mph)	
Carrera 2/4	1405/1444			285	251	5.2	172	
Carrera 2S/4S	1411/1504	1450	3600	285	251	5.2	172	
Turbo	1411/1504	1500	3600	408	398	4.5	180	
GT2	1475/1550	1290	3600	430	398	4.0	184	
Turbo S	1411/1504	1500	3600	430	398	4.3	185	

996(1997 - 2004)

1997 to 1998: 1998 Model Year – Wheelbase (mm): 2350 Length/Width (mm): 4430 (Turbo & GT2 4435)/1765 (Turbo & GT2 1830) - Significant developments: All-new water-cooled, 3.4-litre VarioCam sixcylinder 'boxer' engines. Rear-wheel drive, six-speed manual transmission or five-speed Tiptronic S at extra cost. Traction control also available. Four-wheel drive Carrera 4 introduced at the end of the year along with Porsche Stability Management (PSM). 1998 to 1999: 1999MY – stripped-out, 360hp GT3 introduced. GT1based engine helps create most focused 996 to date. Additional cooling for radiator, gearbox and engine account for extra weight over standard Carrera 2. Available in 'Comfort' or 'Club Sport' trim, breaks Nürburgring Nordschleife lap record for a production car (8mins 03sec). 1999 to 2000: 2000MY - the new 911 Turbo arrives. Twin-turbocharged, water-cooled flat-six with VarioCam Plus develops 416hp through fourwheel drive chassis. First 911 Turbo available with Tiptronic S. 996 - 2000 to 2001: 2001MY - GT2 returns with 462hp, rear-wheel drive, Porsche Ceramic Composite Brakes and no PSM! Breaks production car lap rec ord at the Nordschleife (7min 46sec)

MODEL	TRACK	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED	
	(f/r mm)	kg	CC		(lb ft)	0-60*	(mph)	
Carrera 2/4	1455/1500	1320/1430	3387	300	258	5.2	174	
GT3	1475/1495	1350	3600	360	273	4.8	188	
Turbo	1465/1522	1549	3600	416	413	4.2	190	
GT2	1485/1520	1440	3600	462	457	4.1	197	

New 996 - 2001 to date: 2002MY - Significant developments: Second-generation 996 introduced. Engine capacity grows to 3.6-litres, power increase to 316hp. Turbo's trip computer standard across range, as are Turbo headlights. Cup holders fitted for first time. New Carrera 4S introduced with Turbo brakes, suspension and wide-body. 996 Targa model launched with retractable sliding glass roof.

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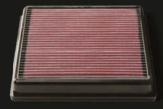


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996: 1997 – 2005 Two-door, two-two Coupé, Cabriolet and Targa. Rear-mounted six-cylinder water-cooled 'boxer' engine. A water-cooled engine in a 911! Whatever next? Once the purists had calmed down, beneath the 996's slightly frumpy looks is one of the greatest cars of our time. Carrera 2 is all you ever actually need, but the four-wheel drive Carrera 4 and Carrera 4S are unstoppable. The latter, with its Turbo sourced brakes, suspension and bodywork is possibly the best value 911 Porsche has ever built. The 416hp, four-wheel drive Turbo is a contender for the greatest supercar ever built, and swept aside all in its way during its time on the price list. The 462hp GT2 was deemed a tad excessive for most on the road, and didn't enjoy the kudos of its predecessor, nor that of the 911 GT3. This stripped-out 911 was as close to a 911 RS you could get without actually calling it such. One of the most rewarding 911s when it was new, it's still a favourite amongst the purists but subsequent evolutions are better still. GT3 RS was further honed for the track, compromised for the road. The Targa featured the now traditional opening rear glass hatch, while the Cabriolet was perfectly at home in Miami.



997: 2004 – 2012 Two-door, two+two Coupé, Cabriolet and Targa. Rear-mounted 3.6- and 3.8-litre six-cylinder, water-cooled 'boxer' engine. Evolution not revolution, second-generation water-cooled 911 has a hint of 993 look about it. A 321hp Carrera or 355hp Carrera S. PASM as standard on Carrera S. Interior quality improved over 996. Turbo and CT3 models even better than their predecessors, the Turbo model introduces Variable Turbine Geometry and Porsche Traction Managment, the GT3 gets traction control. At 530hp and 204mph, the 997 GT2 is the most powerful and fastest 911 to date.

204mph, the 997 GT2 is the most powerful and fastest 911 to date. With the introduction of the Gen 2 997 Porsche offers its greenest car to-date. The heavily revised DFI flat-six now has no intermediate shaft, so should prove more reliable. PDK system is a revelation. Model expansion is greater than with any other 911; Porsche offers a Carrera, Targa, Turbo and GT models Porsche plus four special models, too: the GT2 RS, GT3 RS 4.0, Sport Classic and Speedster. Of the 22 models only four aren't available with PDK (Sport Classic, GT3, GT3 RS, and GT2 RS and GT3 RS RS 4.0-litre), two models are only available with the seven-speed double-clutch unit (Turbo S and Speedster). Only five models are offered with a narrow body (Carrera and Carrera S – coupé and cabriolets – and the GT3) with the rest of the range all using the wider body first introduced with the four-wheel drive models. Twelve Coupés, seven Cabriolets, two Targas and a Speedster body are available. Three different size of brakes are fitted, one of which is made from ceramic composite material, two suspension systems are available (passive and active – PASM), with five different front and rear track widths also used. Four different engines are offered. Final GTS model is the pick of the bunch.

996 2003 to 2004: 2003MY - Significant developments: GT3 returns with 381hp while the GT3 RS has the same power but weighs 20 kilos less thanks to carbon fibre body panels and a plastic rear window. Turbo and Carrera 4S launched as a Cabriolet models. GT2 aets power hike to 483hp. 0-62mph time drops to 4.0 seconds, top speed climbs to 198mph. 996 – 2005: 2005MY – Significant developments: The 911 Turbo S makes a return and signals the beginning of the end for the 996. 450hp and PCCB come as standard.

MODEL	TRACK (f/r mm)	WEIGHT kq	ENGINE cc	Нр	TORQUE (lb ft)	0-62	TOP SPEED (mph)	
Carrera 2/4	1465/1500	1345/1405	3596	316	273	5.0	178	
Targa	1465/1500	1415	3596	316	273	5.2	177	
Carrera 4S	1472/1528	1470	3596	316	273	5.1	173	
Turbo	1472/1528	1540	3600	414	413	4.2	190	
Turbo S	1472/1528	1549	3600	450	457	4.1	190	
GT3	1485/1495	1380	3600	381	284	4.5	191	
GT3 RS	1485/1495	1360	3600	381	284	4.4	190	
GT2	1495/1520	1420	3600	483	457	4.0	198	

997(2004 - 2008)

2004: 2005 Model Year – Wheelbase (mm): 2350; Length/Width (mm): 4427/1808; Height (mm) 1310/1300 (Carrera/Carrera S) - Significant developments: 3.6-litre 321hp, and 3.8-litre 355hp, watercooled flat-six engines for Carrera and Carrera S respectively. New six-speed manual gearbox standard on both models, Porsche Active Suspension Management (PASM) standard on Carrera S – lowers car by 10mm, cost-option on Carrera. 19-inch alloy wheels standard for Carrera S. 2005: 2005MY – Carrera 4 and Carrera 4S launched. Engines as Carrera and Carrera S respectively, rear body widened by 44mm, PSM now equipped with 'pre-filling' brake system to quicken responses. 2006: 911 Turbo and GT3 launched. The former features Variable Turbine Geometry, Porsche Traction Management and 480hp. The third-generation GT3 is the best all-rounder yet. PASM fitted as standard, as is a 415hp 3.6-litre flat-six engine and traction control. 911 Targa 4 and 4S launched based on the wider Carrera 4/4S shell and feature the full length glass sliding roof. GT3 RS launched. Same power as a GT3 but 20 kilos lighter and unique aero pack. 2007: 997 Turbo Cabriolet launched, followed by the new 911 GT2 with 530hp, rear-wheel drive, traction and stability control, and launch control. 204mph claimed maximum.

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MODEL	TRACK	WEIGHT	ENGINE	Нр	TORQUE	0-60	TOP SPEED	
	(f/r mm)	kg	CC		(lb ft)		(mph)	
Carrera	1486/1529	1395	3596	321	273	5.0	177	
Carrera S (Pkit)	1486/1511	1420	3824	355	295	4.4 (4.4)	182	
Carrera 4	1488/1548	1450	3596	321	273	5.1	174	
Carrera 4S (Pkit)	1488/1548	1475	3824	355	295	4.8 (4.7)	179	
Targa 4	1488/1548	1510	3596	321	273	5.3	174	
Targa 4S	1488/1548	1535	3824	355	295	4.9	179	
GT3	1486/1511	1395	3600	415	298	4.3	192	
Turbo	1490/1548	1585	3600	480	457-501	3.6	192	
GT3 RS	1497/1558	1375	3600	415	298	4.2	192	
GT2	1515/1550	1440	3600	530	501	3.7	204	

997 Gen-2 (2008 – 2012)

2008: 2008MY – Wheelbase (mm): 2350; Length/Width (mm): 4435/1808; Height (mm) 1310/1300 (Carrera/Carrera S) - Significant developments: All new 3.6-litre 345hp and 3.8-litre 385hp, water-cooled flat-six engines for Carrera and Carrera S now fitted with Direct Fuel Injection, Six-speed manual gearbox standard on both models and new seven-speed PDK available as option. PASM standard on Carrera S, costoption on Carrera. 19-inch alloy wheels standard fitment for Carrera S. Minor styling changes to lights and bumpers. New PCM3, Bluetooth and steering wheels. Carrera 4 and 4S model get reflective light strip across tail and identical updates to two-wheel drive models. Cabriolet models of all variants go on sale with Coupés. PDK-equipped cars two-tenths quicker to 60mph, but 1mph slower on top speed. 2009: 2010 MY - Eagerly awaited Gen-2 997 GT3 is launched with larger capacity 3.8-litre, normally aspirated flat-six. New 911 Turbo quickly follows with all-new 3.8-litre, DFI, twin VTG turbocharged engine, it's the first all-new engine for the 911 Turbo in 35 years. PDK replaces Tiptronic and Porsche offers optional steering wheel mounted paddleshift controls for the first time. Limited run of 250 Sport Classic models mix Carrera 4 wide-body looks with rear-wheel drive and a 408hp 3.8-litre Powerkit engine. Built by Porsche Exclusive it also features a doubledomed roof, ducktail rear spoiler and the return of Porsche's famous Fuchs wheels and PCCB as standard. A bespoke leather interior is also fitted. 911 GT3 RS is announced alongside Sport Classic at Frankfurt. New RS comes with a wider front track, a new aero-pack that doubles downforce, a more powerful version of the Mezger 3.8 litre flat-six and a 25kg drop in kerb weight over a regular GT3. Air-con, PCM and leather are all options. 2010: 2010MY - 530hp Turbo S available as coupé or cabriolet. PDK with paddle-shift, PCCB, dynamic engine mounts, Sport Chrono and Torque Vectoring are standard. Interior features a dual tone leather trim and adaptive sport seats. The 620hp 911 GT2 RS is the most powerful production Porsche ever. Based on the GT3 RS it features further aero tweaks and recalibrated PASM, Traction and Stability systems. 3.6-litre engine is the final swan song for the Mezger flat-six, and is fitted with a single-mass flywheel and a revised charge air intercooler. It's the first Porsche to feature different N-rated tyres on the front and rear axles. Carbon-fibre bonnet - and front wings if you wish - help shed kilos as does plastic rear and rear quarter windows. Only 500 built, and all sold within three-months. To mark its 25th Anniversary Porsche Exclusive builds 356 911 Speedsters. As with the Sport Classic it features the Carrera 4 body with rear-wheel drive running gear and the 408hp Powerkit 3.8-litre motor. PDK-only transmission, PCCB standard and Pure blue paint or white the only colours. Windscreen 72mm lower than standard and roof is a manual-electric mix that hides under a traditional Speedster double bubble engine cover. First Porsche Speedster for 16 years. The final 997 series 911 could possibly be the best. Carrera GTS is available as either coupé of cabriolet and again mixes the Carrera 4 body with rear-drive; 408hp 3.8-litre Powerkit engine does all the work. Six-speed manual or seven-speed PDK both available, PCCB optional. 19-inch RS Spyder design wheels

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991 (GEN 1): 2012 – 2016 Two-door Coupé and Cabriolet, water-cooled and direct fuel injected flat-six, rear-engined, rear- and four-wheel drive. Seven-speed manual and PDK gearbox. New, longer wheelbase, new body and design and new interior. The seventh generation of the iconic 911 was as big a step-change from the 997 as the 993 was to the water-cooled 996. The carry-over parts were very few, the changes made were like nothing seen in the last 17 years. There is the new seven-speed manual gearbox, a world first, dynamic chassis control (a first for the 911) and new, electronic power-steering - the critics slam it. The more powerful, 400hp 3.8-litre has an epic performance. For the first time we'd consider PDK over the manual gearbox. But PDK only makes sense with the optional paddleshift controls. If you opt for either the GT3 or Turbo models PDK is your only option. The 911 was the last bastion of the truly wonderful manual gearbox, now it's gone from the likes of the GT3 and the Turbo, it feels like a chapter has closed. Advent of GTS models creates a fast road 911 with all the comforts but in 2015 if you

like a Chapter has closed. Advent of GTS models creates a fast road 911 with all the comforts, but in 2015 it's the GT3 RS that blows everyone away. It's one of Prenunger's finest and one of the most track-focused 911s ever created.



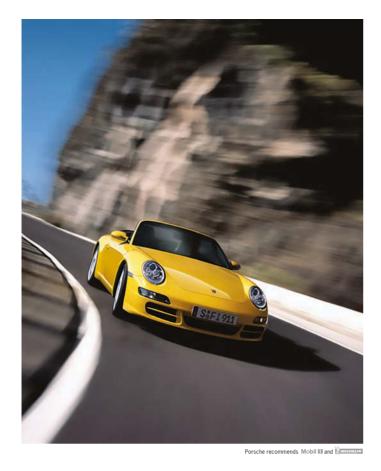
991 (GEN 2): 2015 –
 The 911 Carrera goes turbocharged. It's the biggest step change for the 911 since the shift from air to water-cooled engines. Face-lift is subtle; new bumpers, lights, and vertical slats on the decklid being the real giveaways. Four variants appear at first: Carrera Coupé and Coupé S, Cabriolet and Cabriolet S; all run a new 2981cc engine with two small BorgWarner turbochargers. PDK or manual gearboxes are offered. The Carrera versions offer 370hp, the Powerkitted S models 420hp, the Carrera S is the first sub four-second 0-60mph 911 Carrera ever, doing it in 3.9-seconds. Carrera 4, Carrera 4S, Targa and Cabrio versions soon follow.
 Inside, the 911 falls in line with its siblings with a 918-inspired wheel. New driving mode switch allows adjustment to the car's performance, new Sports Response Button (SRB) shifts the car into a heightened state of readiness for overtaking. Rear axle steering from Turbo and GT3's Nose Lift are Carrera options for the first time. New comfort and convenience features are added, too.
 Following the Carrera models, Porsche reveals the 3.8-litre javialable in Coupé and Convertible guises. Power gains are provided by a modified cylinder head and new turbochargers with larger compressors.
 Both receive the Sport Chrono (with Mode switch), and the SRB. PASM is standard. PCCB ceramics come are standard on the Turbo S. Each can be specified with a radarbased lane change assist function and Nose Lift. Revised for edsigned with longitudinal louvres, and a section designed to optimise air flow into the engine. New, wider, 20-inch wheels feature on both models, the Turbo S features new seven-spoke centre locking alloy wheels.

standard. GTs also feature SportDesian front bumper and deeper sills. Inside is a mix of leather and Alcantara with a new SportDesign wheel also standard. Rear-seats optional. 2011: A 500hp, normally aspirated 4.0-litre flat-six engine, crank lifted straight from a GT3 R. The 4.0RS is extreme. It weighs 1360kg and has aero dynamic add-ons designed for the Nürburgring. It cherry picks the best bits from every 997 before it to produce the ultimate 997 2012: Porsche has time for one last 997 swansong: the Carrera 4GTS. A four-wheel drive version of the Carrera GTS.

MODEL	TRACK	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED	
	(f/r mm)	kg	CC		(lb ft)		(mph)	
Carrera	1486/1530	1415	3614	345	285	4.9	179	
Carrera S	1486/1516	1425	3800	385	310	4.7	187	
Carrera 4	1488/1548	1470	3614	345	285	5.0	177	
Carrera 4S	1488/1548	1480	3800	385	310	4.7	184	
Carrera GTS	1488/1548	1420	3800	408	310	4.6	190	
Carrera 4GTS	1488/1548	1480	3800	408	310	4.6	188	
Targa 4	1488/1548	1530	3614	345	285	5.2	176	
Targa 4S	1488/1548	1540	3800	385	310	4.9	184	
GT3	1497/1524	1395	3797	435	317	4.1	194	
GT3 RS	1509/1554	1370	3797	450	317	4.0	193	
GT3 RS4.0	1509/1554	1360	3996	500	339	3.9	193	
Turbo	1490/1548	1570	3800	500	479	3.4	194	
Turbo S	1490/1548	1585	3800	530	516	3.3	195	
GT2 RS	1509/1558	1370	3600	620	516	3.5	205	
Sport Classic	1492/1550	1425	3800	408	310	4.6	187	
Speedster	1492/1550	1540	3800	408	310	4.4	190	

991(2012 - 2016)

2012: 2012 Model Year – Wheelbase (mm): 2450; Length/Width (mm): 4491/1808; Height (mm) 1303/1295 (Carrera/Carrera S) - Significant developments: All new 911s featuring a longer wheelbase, lighter body and more technology than ever. DFI engines carried over from 997, so too is the seven-speed PDK. However, a new seven-speed manual gearbox – based on the PDK – was introduced to replace the six-speed manual. Option of PDCC on a 911 for the first time, dynamic engine mounts and Torque Vectoring. Electric power steering replaced the previous car's hydraulic setup; not one of Porsche's most popular decisions. There was also a new look both inside and out, the new interior regaining the air of quality that some felt had been lacking in more recent 911s. Carrera coupé and cabriolet models were fitted with a 355hp, 3.4-litre engine, Carrera S models with a 400hp 3.8-litre motor. 2013: The Carrera 4 and 4S Coupé and Cabriolet (width: 1852mm) joined the line-up at the end of 2012 as 2013 model year cars. Available with the same engine and gearboxes as the Carrera models, four-wheel drive variants equipped with a multiplate, electronically-controlled version of Porsche Traction Management. Rear was 44mm wider than the twowheel drive derivatives. At Geneva Porsche revealed the new 911 GT3. Out went the Mezger 3.6-litre engine and in came a 475hp, 3.8-litre DFI based loosely on the Carrera S's motor. No manual gearbox were offered, instead only a heavily revised PDK unit. Active rear-wheel steering, electric power steering and, for the first time, the GT3's shell was taken from the wider C4. Soon after came the new 911 Turbo. Available as either a 520hp Turbo or 560hp Turbo S, both fitted with a PDK gearbox only. Active rear-wheel steering, torque vectoring, PDDC, dynamic engine mounts all available and, for the first time, the 911 Turbo features active aerodynamics for both the front and rear spoilers. The 911 Turbo's body is also 28mm wider than the Carrera 4 at 1880mm. 2014: Targa model becomes available with highly effective roof system, only available with all-drive layout, specs are similar to Carrera 4 and 4S, added weight for metal roof system the only real difference. GTS models launched: GTS and 4 GTS variants are later followed by Targa GTS, all retain the same 3800cc DFI engine, yet Powerkitted engine provides 430hp, available in two- or all-wheel drive, manual of PDK, Coupé or Cabriolet, shell sourced from wider Carrera 4 regardless of which you buy, bespoke dampers feature, sports exhaust and PASM standard, revised seven-speed manual 'box, black 20" centre lock wheels, GT3 door mirrors a 'comfy' GT3 - it's an instant classic 2015: GT3 RS - A new 4.0-litre version of Porsche's DFI engine producing 500hp, 460Nm torque (around 339lb ft), 0-62 in 3.3 seconds and a top speed of 192mph. A body constructed from aluminium, carbon fibre and magnesium weighing 10kg less than the GT3 (at 1420kg). A staggeringly quick Nordschleife lap time of 7min, 20secs – faster than a Carrera GT. And a devastatingly aggressive aero-led aesthetic. GT3 RS is one of Preuninger's finest. Only available with PDK, the GT3 RS boasts double the downforce of the GT3 with less than a third of its drag-co-efficient. This is unheard of. A new Michelin rubber compound adorns the 9.5x20-inch front wheels and 12.5x21-inch rears providing 20% increased stickiness, with increased spring rates (up 10% over GT3) and a 50-milimetre wider rear axle, the changes between GT3 and GT3 RS are vast. A 'paddle neutral' facility and a 'pit speed' button aid track use. PTV with rear limited-slip differential, PASM active dampers and PSM feature. A Club Sport Package and seats straight from the 918 Spyder have been added inside – Sport Chrono is optional. 2016: 911 R – Take a 991 GT3, fit a 500hp GT3 RS engine, six-speed manual gearbox, style it to look like a Carrera and strip it of 50kg - you have the R, a last hurrah for the Gen-1 991. A 1370kg back-to-basics rear-drive 911 resurrecting the R badge of 1967, this is the 'return of the fun factor', built to thrill not to set lap records. Magnesium roof, bonnet and front arches are carbonfibre, rear screen and three-quarter windows are plastic, PCCBs as standard, 410mm six-piston callipers (front), 390mm fourpiston callipers (rear), reduced sound insulation, air-con and PCM deleted, nose-lift optional, unique rear diffuser. 918 buckets trimmed with Pepita. Lightweight MacPherson struts (front), lightweight multi-link suspension (rear), PTV, PSM, mechanical rear differential lock. The most exciting 911 for a decade? Quite possibly...



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912: 1965 - 1969: 1975

912: 1965 – 1969; 1975 Two-door Coupé and Targa, rear-engined four-cylinder air-cooled 'boxer' engine. 'The poor man's Porsche' was actually quite expensive, not that this stopped it from building a strong following, especially in the States. Sharing the 911's body, the 912 was fitted with a 2.0-litre, four-cylinder engine and came with a spartan interior that saw many of the 911's luxuries ditched. Developed on a yearly basis, the 912 closely followed the 911 in terms of new technology and very soon outsold its more expensive brother, with over 30,000 delivered during its first production run. Re-introduce in 1975, a further 2000 examples were built including a Targa Variant.



914: 1970 – 1976 Two-door Coupé with mid-mounted four- and six-cylinder air-cooled 'boxer' engines. Built by Karmann, Porsche's original mid-engined roadster was praised for its unrivalled dynamics, although its boxy looks and awkward gearbox were often criticised. The four-cylinder engines were source from VW, and the later six-cylinder Porsche units offered significant performance advantages – and even more of a challenge for the 'entertaining' dynamics. Sales were poor throughout the model's six-year lifespan.



924:<u>1977 - 1988</u>

924: 1977 – 1988 Two-door, two+two Coupé, front-engined, four-cylinder water-cooled engine, rear-wheel drive, five-speed gearbox. The 924 was Porsche's first front-engined sports car and production car fitted with a water-cooled engine. Originally conceived, designed and developed for Volkswagen, it was eventually launched as a Porsche, albeit still powered by a VW/Audi sourced engine. Performance wasn't earth-shattering, but its transaxle configuration provided the balance and handling worthy of the badge. Continual development saw the 924 improve in the performance stakes, especially so when it received the 2.5-litre engine from the 944. Peak performance, however, came with the Turbo models, which delivered the much needed performance gain, ultimately reaching its peak with the Carrera GT, a homologation requirement in order for Porsche to race the car at Le Mans. A handful of more extreme, lighter Carrera GTS models were also built. Sadly for the 924, with every evolution came a price increase and the coupé quickly went from the affordable entry level Porsche it set out to be, to becoming an expensive, out-dated car.

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Нр	TORQUE (lb ft)	0-62	TOP SPEED (mph)	
Carrera	2012	1380	3436	350	287	4.8	179	
Carrera 4	2012	1430	3436	350	287	4.9	175	
Targa 4	2014	1540	3436	350	287	5.2	173	
Carrera S	2012	1395	3800	400	325	4.5	188	
Targa 4S	2014	1515	3800	400	325	4.7	183	
Carrera 4S	2012	1445	3800	400	325	4.5	185	
Carrera GTS	2014	1495	3800	430	325	4.6	188	
Carrera 4 GTS	2014	1515	3800	430	325	4.7	183	
GT3	2014	1430	3799	475	325	3.5	196	
GT3 RS	2015	1420	3996	500	339	3.3	192	
R	2016	1370	3996	500	339	3.8	201	
Turbo	2014	1595	3800	520	486	3.4	195	
Turbo S	2014	1605	3800	550	516	3.1	197	

991 Gen-2 (2015 -)

2015: 2016MY – Wheelbase (mm): 2450; Length/Width (mm): 4499/1808; Height (mm) 1303/1297 (Carrera, Carrera S/Carrera Cabriolet, Carrera Cabriolet S) – Significant developments: All-new 2981cc turbocharged DFI engine with two small BorgWarner turbochargers, seven-speed PDK or seven-speed manual gearboxes offered, the Carrera versions provide 370hp, Powerkitted S models 420hp, Carrera S the first sub four-second 911 Carrera to 60mph at 3.9-seconds (PDK with Sport Chrono), driveability is the big question, torque 332lb ft and 369lb ft respectively, new driving 'Mode' switch provides different driving dynamics, new Sports Response Button shifts the car into a heightened state of readiness for overtaking, for the first time on a Carrera rear axle steering from Turbo is an option, GT3's Nose Lift also available, facelifted styling is subtle: new bumpers, lights and vertical slats on the deck lid are the real giveaways. There are also revised exhaust tailpipes and a new alloy wheel design - rear wheels now measure 11.5" wide, overall weight increases, partly due to heavier turbocharged engine, Carrera now weighs 1430kg. All-wheel drive Carrera 4, 4S, Cabriolet 4, Cariolet 4S, Targa 4 and Targa 4S models soon follow. Power and torque identical to Carrera models

New 540hp 911 Turbo and 580hp Turbo S follow, available in Coupé and Convertible quises offering more power than their predecessors. The 3.8-litre bi-turbo six-cylinder engine boasts an increase of 20hp over its forebear, gains are provided by modified cylinder head inlet ports, new injection nozzles and higher fuel pressure. The 911 Turbo S uses new turbochargers with larger compressors, it hits 62mph in 2.9 seconds; Turbo model does the same in 3.0 seconds. The top speeds reach 200mph for the first time: 205mph (Turbo S) and 199mph (Turbo) respectively, yet they can return in the region of 30mpg. Both models receive the Sport Chrono Package (with Mode switch), and the SRB allows drivers to select one of four dynamic driving modes. PASM is standard on both, PCCB ceramics are standard on the Turbo S. A radar-based lane change assist function is an option, as is Nose Lift. Both feature revised front end styling incorporating LED lighting, the rear decklid has also been redesigned featuring longitudinal louvres and a separate section designed to optimise air flow into the engine. New, wider, 20-inch wheels feature on both models, the Turbo S features new seven-spoke centre locking alloys.

MODEL	MODEL	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED	
	YEAR	kg	CC		(lb ft)		(mph)	
Carrera	2015	1430	2981	370	332	4.2	183	
Carrera 4	2015	1480	2981	370	332	4.1	181	
Targa 4	2015	1570	2981	370	332	4.3	179	
Carrera S	2015	1440	2981	420	369	3.9	191	
Carrera 4S	2015	1490	2981	420	369	3.8	189	
Targa 4S	2015	1580	2981	420	369	4.0	188	
Turbo	2016	1595	3800	540	524	3.0	199	
Turbo S	2016	1600	3800	580	553	2.9	205	

912 (1965 - 1969; 1975)

912 - Wheelbase (mm): 2211 (1969 - 2268, 1976 - 2272) Length/Width (mm): 4163 (1976 -4293)/1610. Significant developments: 356C four-cylinder engine, four- or five-speed gearbox, disc brakes, MacPherson front and semi-trailing rear suspension, low-spec interior. 1969: Larger wheelbase and 911 body introduced before production ends for six years. 1975: Re-introduced using the 914's VW 2.0-litre. Heavier than its predecessor, five-speed gearbox fitted as standard.

912 1965 to '69 950 1582 90 86 11.6 115 912E 1975 1132 1971 90 98 13.0 110	MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Нр	TORQUE (lb ft)	0-62	TOP SPEED (mph)	
912E 1975 1132 1971 90 98 13.0 110	912	1965 to '69	950	1582	90	86	11.6	115	
	912E	1975	1132	1971	90	98	13.0	110	

914 (1970 - 1976)

914 - Wheelbase (mm): 2459 - Length/Width (mm): 4050/1650 Significant developments: 1.7-litre VW four-cylinder and de-tuned 911T 2.0-litre six-cylinder engines offered, MacPherson front and rear trailing link suspension, disc brakes all-round, five-speed gearbox and low-spec interior. **1972** – 914-6 dropped due to

poor sales. 1973 -	- 2.0-iitre engin	e <i>Decomes</i>	s an ориоп.	1974 -	Bore Increase	raises aisp	σιαcement to 1795	CC.
MODEL	MODEL	WEIGHT	ENGINE	HP	TORQUE	0-62	TOP SPEED	
	YEAR	kg	CC		(lb ft)		(mph)	
914 1.7	1970 to '73	970	1679	76	96	13	108	
914 1.8	1974 to '76	970	1795	72	99	12	110	
914 2.0	1973 to '76	970	1971	95	105	10.5	115	
914/6	1970 to '72	940	1991	110	115	8.2	119	

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928: 1978 – <u>1995</u> Two-door, two+two Coupé, front-engined, water-cooled V8. Built to succeed the 911, 928 went head-to-head with Jaguar's XJS and Mercedes' SL. V8 engine offered stonking performance and grew to a mighty 5.4-litres and a heady 360hp before stepping aside to allow the 911 to continue its success story. Auto 'box most popular choice, although a manual is the one to go for, and both choices offer intergalactic cruising ability. Dynamically as sharp as any Porsche, the 928's popularity is not without foundation.



944: 1983 – 1991

944: 1983 – 1991 Two-door, two+two Coupé and Convertible, front-engined, water-cooled. NA and turbocharged. The 944 was an unprecedented success, breaking all sales records and keeping Porsche afloat during the 1980s. The 924's body and turbo suspension formed the basis, but the 944 felt better. Turbo models offer good combination of performance and ability, although the last of the line 16-valve S2 models are probably the better option. If your budget doesn't stretch that far a good 2.7 will do. Cabriolet had sleek looks with Coupé's performance, though loss of rigidity takes shine off the driving experience. Considered to be the perfect introduction to Porsche ownership.



959: 1988

YOY: 1900 Two-door, two+two Coupé, flat-six, twin-turbocharged water/air-cooled flat-six. 197mph, 4WD, supercar. Based (lightly) around the 911, the 959 was Porsche's homologation special for Group B rallying. A technical *tour de force* for its time, the 959 boasted all-wheel drive with active torque split-drive, selectable traction settings (dry, wet and snow conditions), electronically-adjustable ride height and damper control, water-cooled cylinder heads and multi-stage turbocharging, and a 911 evolved composite body providing 'zero-lift'. All 283 959s built cost Porsche more than double the price the customer was as asked to pay



968: 1992 – 1995 Two-door, two+two Coupé and Cabriolet, front-engined, water-cooled. Porsche's last attempt at a front-engined Coupé resulted in its best effort to date. What the 944 derived 3.0-litre four-cylinder engine lacked in character, its chassis – especially in Club Sport spec – soon made up for. Regular car not as sharp as bare-to-the-bone Club Sport or semi-stripped Sport, but all offer one of the best front-engined/rear-drive experiences. Convertible lacks dynamics and looks a little frumpy, while limited edition Turbo S offer 911 levels of performance. Comparatively cheap to buy and run, 968 is one the safest Porsche ownership experiences.

924 (1977 - 1988)

924 Wheelbase (mm): 2400; Length/Width (mm): 4213/1676; Track front/rear (mm) 1418/1372; Significant developments: Four-cylinder engine, four-speed transaxle gearbox, front MacPherson struts and rear semi-trailing arm suspension, four-stud 5.5x14-inch steel wheels and floating callipers. VW/Audi threespeed auto assembly but with ratios specific to the 924; 1977: Getrag five-speed dog-leg gearbox optional. Rubbing strips added. Martini 924 SE launched; 1978: Bodyshell now hot-dipped zinc-coated. Oval tailpipe introduced; 1979: Separate air blowers improve ventilation; 1980: Five-speed Audi-derived gearbox introduced. Fuel tank capacity raised to 66-litres, second fuel pump fitted. Le Mans SE model offered; 1981: Carrera GT introduced. Kurzhals fuel pump introduced. 50th Jubilee SE model offered; 1982: Carrera GTS introduced. Limited-slip diff an option. Torque converter uprated on auto 'box. Ventilation system upgraded. 911 three-spoke steering wheel now standard; 1983: Turbo's spoiler becomes standard. Front anti-roll bar uprated to 21mm; 1984: 924 gets 944 tilt-slide roof mechanism; 1985: 924 replaced by 924S; 1986: 924S arrives in UK. 2.5-litre engine shared with 944 (as are gearbox, brakes and suspension) but de-tuned;

1987: Rear axie s	strengtnenea; Is	988: 924	gets 944	engines. r	'ower steering	stanaara.	Le Mans SE laun	cnea.
MODEL	MODEL	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED	
	YEAR	kg	CC		(lb ft)		(mph)	
924	1976 to '78	1080	1984	125	122	9.9	125	
924	1979 to '85	1130	1984	125	122	9.9	125	
924 Turbo	1979 to '81	1180	1984	170	181	7.8	140	
924 Turbo	1982 to '84	1180	1984	177	185	7.7	140	
Carrera GT	1981	1180	1984	210	203	6.9	150	
Carrera GTS	1982	1121	1984	245	247	6.2	155	
924S	1986 to '87	1190	2479	150	144	8.5	134	
924S	1988	1195	2479	160	158	8.2	137	

928 (1978 – 1995)

928 Wheelbase (mm): 2500; Length/Width (mm): 4524/1835; Track front/rear (mm): 1551mm -1552/1530 -1529mm. Significant developments: 1978: 90° V8, five-speed, rear-wheel drive, independent A arms at front, trailing arms at rear, discs all-round, automatic available, luxury interior 1983: Regular 928 and 'S' models replaced with by 928 S2 model; 1987: S4 introduced with 5.0-litre V8 and 316hp; 1989: 928GT loses 44 kilos and gains 14hp. 0-60mph drops below 6.0 seconds; 1993: Final 928 GTS sees V8's capacity arow to 5.4-litres and 350hp.

MODEL	MODEL	WEIGHT	ENGINE	Нр	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)	
	TEAN	kg	CC		(in it)		(IIIpII)	
928	1978 to '82	1490	4474	240	268	7.5*	142	
928 S	1980 to '82	1530	4664	300	284	6.8	146	
928 S2	1983 to '86	1589	4664	310	295	6.5*	155	
928 S4	1987 to '92	1600	4957	316	317	6.0	165	
928 GT	1989 to '91	1566	4957	330	317	5.6	165	
928 GTS	1992 to '95	1600	5397	350	362	5.2	169	

944 (1983 - 1991)

944 Wheelbase (mm): 2400, Length/Width (mm): 4213/1735. Track front/rear (mm): 1472/1451; Significant developments: Body based on the 924 Turbo, as was suspension, but used 2497cc engine. Brakes from the 924 Carrera GT; 1985: New dash, power steering becomes standard. RHD models have left parking wipers. Transmission casing revised. Cast alloy lower wishbones and semi-trailing rear arms standard; 1986: Turbo launched with 2.5-litre engine, gas-filled shocks, anti-roll bars and four-pot brakes. Power steering standard, redesigned interior; 1987: LSD revised, ABS, driver and passenger airbags optional. 944 S 16-valve used gearbox and driveshafts from Turbo; 1988: Turbo SE offered with uprated engine, 7- and 9x16-inch alloys. 944's engine capacity increased to 2.7-litres with larger bore, new block. Celebration SE offered; 1989: 944 gets ABS as standard, discontinued at end of model year. Turbo gets Turbo S engine and new rear spoiler. S2 production begins in Jan 1989, Cab in July; 1990: S2 Cabrio launched (70kg heavier than Coupé); 1991: Turbo Cab launched, airbags standard on European Turbo models.

MODEL	MODEL	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED	
	YEAR	kg	CC		(lb ft)		(mph)	
944	1982 to '87	1180	2497	163	151	8.4	131	
944	1988 to '89	1260	2681	165	166	8.4	136	
944 S	1987 to '88	1280	2497	190	170	7.9	142	
944 S2	1989 to '91	1310	2990	211	207	6.9	149	
944 Turbo	1985 to '88	1350	2497	220	243	6.3	152	
944 Turbo	1989 to '91	1350	2497	250	258	5.9	162	
944 Turbo S	1988	1350	2497	250	258	5.7	162	

944 Turbo S 1988 1350

959 (1988)

959 – Wheelbase (mm): 2272 – Length/Width (mm): 4260/1840 – Significant developments: Air-cooled six-cylinder engine, liquid-cooled heads, four-valves per cylinder, twin turbocharged. All-wheel drive, six-speed gearbox, active split-driver, double wishbone suspension front and rear with adjustable ride height. Aluminium and composite body panels, four shocks per 17-inch wheel, 322 and 308mm discs front/rear. Adjustable ride height and dampers

MODEL	MODEL	WEIGHT kg	ENGINE cc	Нр	TORQUE (lb ft)	0-62	TOP SPEED (mph)	
959	1988	1451	2847	450	370	3.7	197	



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BOXSTER (986): 1997 2004BOXSTER (987) 2005 - 2012

BOXSTER (987): 2005 – 2012 Two-door, mid-engined, six-cylinder convertible. The saviour of Porsche after the recession-hit '90s, the Boxster offered true entry-level Porsche ownership. 911 looks drew criticism, but sublime chassis amore than made up for this. Early straight-line performance worries of original cars now totally forgotten thanks to 2.7 and 3.2 S engines. Superb chassis dynamics provides 986 with serious point-to-point ability and rewards are purer for some than 911s of the era. Image not the strongest, but crucially Boxster stimulates all the right senses and is a real mini-911 with down-to-earth running costs. Eight years after the first car a heavily revised Boxster arrived, the 987. Both the 2.7 and 3.2 S feature slightly improved straight-line performance and a new exterior, cabin quality a real step forward, it now mimics the 997's. S receives Cayman S's 3.4 engine, 2.7 gets 5hp boost. 2010 the Boxster Spyder arrives weighing 80kg less than the S on which it is based. Electronic hood is replaced by a canvas rain cover saving 21kg. Doors and front luggage lid are aluminium, the interior is comprehensively stripped with no radio, air-con, cup holders, door pulls and bins. Even the wheels are lighter. The Boxster was already a dynamic masterpiece, but the Spyder takes things to the next level.



BOXSTER 981: 2012 – 2016 Two-door, two-seat, mid-engined roadster. 2.7 or 3.4-litre water-cooled flat-six, rear-wheel drive, six-speed manual gearbox fitted as standard, seven-speed PDK double-clutch gearbox available as an option. Porsche improves on perfection, this is one of its very best road cars. In the 981 Porsche improved on its mid-engined dynamics further still allowing you to maximise the performance on offer from either of its flat-six engines. Looks improved with a far greater quality interior, it now comes equipped as standard with kit that should have always have had. The 2.7 needs enthusiasm to extract its best, 3.4S great straight-out-the-box with only a slippy diff the essential extra to take advantage of the sublime chassis. In 2015 Spyder model arrives with the 911's 3.8-litre -the fastest Boxster ever. Lightweight like its forebear, much improved roof. The true performance Boxster we'd been waiting for, undeservedly overshadowed by the GT4.



BOXSTER 718: 2016 — Two-door, two-seat, mid-engined roadster. A new name, 718, for a new era: the four-cylinder Boxster arrives. Newly-developed 2.0 and 2.5-litre (S model) flat four-cylinder turbocharged Boxer engines use 911's variable turbine geometry technology. Six-speed manual or (optional) seven-speed PDK. For the first time S can be specified with a PASM Sport Chassis, and Sport Response Button from 911.

968 (1992 - 1995)

968 – Wheelbase (mm); 2400, Lenath/Width (mm); 4320/1735, Track front/rear (mm); 1477/1451 (1457/1445 with 17" wheels)- Significant developments: 3.0-litre four-cylinder S2-derived engine, S2 suspension, four-pot fixed callipers, ABS and 7- and 8x16-inch alloys; 1993: Lower spec and stripped down Club Sport launched with 7.5x17-inch alloys (front) and 9x17-inch (rear), no driver's airbag and all 'unnecessary' equipment (electric windows, sunroof etc) removed. Turbo S launched with 8-valve Turbo head and 305hp. Similar spec to CS; 1994: 968 Sport introduced with same chassis tweaks as Club Sport but with a number of creature comforts (and weight) reinstated. Standard 968 dropped from line-up, Sport and Club Sport continue for a further 12 months.

MODEL	MODEL	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED	
	YEAR	kg	CC		(lb ft)		(mph)	
968	1992 -1994	1370	2990	240	225	6.5	156	
968 Sport	1994 - 1995	1400	2990	240	225	6.5	156	
968 Club Sport	1993 –1995	1320	2990	240	225	6.3	160	
968 Turbo S	1993 -1994	1300	2990	305	369	5.0	175	
Dovotor (DOG (100	7	0001	. 007	, 1000E	\cap		

Boxster 986 (1997 – 2004); 987 (2005 – 2009; 2009 - 2013); 981 (2013 - 2015)

BOXSTER - Wheelbase (mm): 2400, Length/Width (mm): 4133/1740 Track front/rear (mm): 1465/1528 ('96-'03), 1455/1514 (03-04) - Significant developments: Introduced in 1997 with 2.5 'boxer' engine, five-speed manual transmission, four-pot callipers front and rear, ABS, dual and side airbags; 1999: Boxster S launched with 3.2-litre version of boxer engine and six-speed gearbox. White dials, titanium-trimmed windows and twin-centre exit exhaust pipes and larger 17-inch alloy wheels only exterior change to distinguish 'S' from standard model. Entry-level Boxster's engine capacity raised from 2.5- to 2.7-litres. resulting in healthy power hike to 220hp. Both models available with five-speed Tiptronic gearbox; 2003: Boxster's first face-lift. Both 2.7 and 3.2S models gain extra 8hp, raising power to 228hp and 252 respectively. S's torque also up by 3lb ft. Front and rear bumpers are new, and the air intakes are improved for both aerodynamics and cooling. New retractable rear spoiler also fitted. Clear indicators, upgraded interiors (cup holders), sportier exhaust note and lighter alloy wheels help differentiate the new from the old.

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)	
Boxster 2.5	1997 to '99	1260	2480	205	180	7.0	155	
Boxster 2.7	1999 to '02	1260	2687	220	192	6.6	156	
Boxster S	1999 to '02	1295	3197	252	225	5.9	161	
Boxster 2.7	2003 to '04	1275	2687	228	192	6.4	157	
Boxster S	2003 to '04	1295	3179	260	228	5.7	164	

BOXSTER 987 (2005MY -) Wheelbase (mm): 2415, Length/Width (mm): 4315/1780. Track front/rear (mm): 1490/1534 (2.7), 1486/1528 (3.2S) - Significant developments: 2005: 2.7 and S launched with subtly revamped exterior and new interior. 2.7 gains 12hp over old model, while 3.2-litre ups power by 20hp. Torque is also increased in both cars. PCCB, PASM and Sport Chrono pack are optional extras, variable ratio steering rack standard; 2006: 2007 Model Year – VarioCam Plus engines from the Cayman and Cayman S replace existing engines; power up to 245hp and 295hp respectively, revised Tiptronic S software; 2009: 2009 Model Year – All-new flat-six engines: 255hp 2.9-litre is new entry model, 310hp 3.4-litre motor with direct-fuel injection for the S. Six-speed manual gearbox standard, seven-speed PDK optional. Limited-slip differential, touchscreen sat-nav and Bluetooth phone are all optional extras. Both models get new front and rear bumpers. 2010: The lightest production Porsche money can buy goes on-sale in the form of the Boxster Spyder. Electric folding roof is replaced with a Lotus Elise style canvas rag, there's a new engine cover, aluminium doors and front luggage compartment lid and the radio, sat-nav and air-con have all been ditched. The standard seats are hip hugging sport bucket items and the doorcards and door pulls are inspired by the 911 GT3 RS. There is even a set of lighter alloy wheels and the ECU map from the Cayman S to extract a further 10hp from the 3.4-litre motor. Six-speed manual is standard, PDK optional with Sport Chrono Plus and Launch Control Porsche claim a 4.8-second 0-62mph time.

MODEL	MODEL	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED	
	YEAR	kg	CC		(lb ft)	0-60*	(mph)	
Boxster 2.7	2005 to '07	1295	2687	240	200	6.2	160	
Boxster 3.2S	2005 to '07	1345	3179	280	237	5.5	168	
Boxster 2.7	2007 to '09	1295	2687	245	201	6.1	160	
Boxster 3.4S	2007 to '09	1345	3386	295	251	5.4	169	
Boxster 2.9	2009 to '12	1335	2893	255	214	5.9	163	
Boxster 3.4S	2009 to '12	1355	3436	310	265	5.3	170	
Boxster Spyder	2010 to '12	1275	3436	320	273	5.1	166	

BOXSTER 981 (2012MY -) Wheelbase (mm): 2475, Length/Width (mm): 4374/1801. Track front/rear (mm): 1526/1536 (2.7), 1526/1540 (3.4S) - Significant developments: 2012: Just like the 911 the Boxster came in for a major overhaul in 2012, its first since the original was launched in 1996. A longer wheelbase, lighter, wider track and cleaner, more efficient engines the Boxster had grown into a true thoroughbred. The range now started with a 265hp 2.7-litre engined Boxster, fitted with a six-speed manual as standard or available with the optional seven-speed PDK (which adds 30kg to the kerbweight). The Boxster came with the same transmission options but was powered by a 315hp 3.4-litre engine. PASM is optional on both models, so too are dynamic engine mounts and Porsche Torque Vectoring which also includes a mechanical locking differential. Electromechanical power steering is standard. Wheels sizes range from 18 through to 20s, and the brakes are more powerful, the S borrowing its discs and callipers from the 991 Carrera. An electric parking brake is now standard, PCB still optional. The 981 wears a completely new







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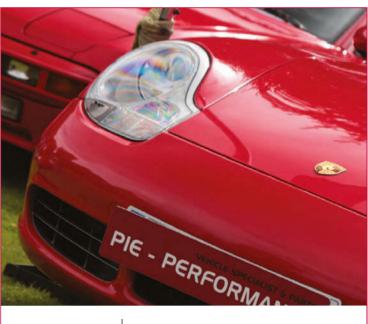
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CAYMAN 987: 2005 – 2013 Two-door, mid-engined, six-cylinder coupé. Its near perfect weight distribution and mid-engined dynamic stability make the Cayman one of the finest drivers' cars ever made. This is something Porsche is acutely aware of, hence the model is not available with a limited-slip differential and, until further notice, we will only see smaller-engined variants of the Cayman to avoid any deflection for the company's headline sports car. At the end of 2010 Porsche announced the Cayman R at the LA Auto Show. Following a similar development programme as the Boxster Spyder, the Cayman R is a lighter, more powerful version of the Cayman S. Power is up 10hp to 330hp, and the kerb weight drops 55kg to 1295kg. Aluminium for the bonnet and doors and a stripped interior and a smaller fuel tank are all contributing factors to the weight loss.



CAYMAN 981: 2013

CAYMAN 981: 2013 -Two-door, mid-engined, six-cylinder coupé. Like its Boxster sibling the Cayman underwent a thorough overhaul in 2012, which must have been a thankless task for the engineers as the outgoing 987 was deemed one of the best sports cars money could buy. Once again, though, Porsche's engineers came up trumps and produced a truly sensational car. Still sharing much with the Boxster – wheelbase, engines, gearbox, suspension and steering – the Cayman was finally let of its leash and allowed to show us just what it is capable of. Alert, precise, involving and dynamically astute, the 981 Cayman is one of the purest drivers cars and greatest sports cars to have come out of Stuttgart. It really is that good. The 2.7-litre car needs working hard to maximise its performance, but the 3.4S is honey sweet providing the perfect blend of performance with precision to make it one of the quickest cross-country cars you can buy. The manual is still the slick six-speed car carried over from the 987 and is still the default option. Even the electric power steering doesn't seem to effect the Cayman like it does the Boxster and Carrera models. Porsche perfection? Possibly.



CAYMAN 718: 2016 — Two-door, two-seat, mid-engined coupé. Shortly after its roadster twin was announced, the 718 Boxster, Porsche reveals the 718 Cayman. It too features the newly-developed 2.0 and 2.5-litre (S model) flat-four-cylinder turbocharged Boxer engines. The S also uses the 911's variable turbine geometry technology. Six-speed manual or (optional) seven-speed PDK. For the first time S can be specified with a PASM Sport Chassis, and the Sport Response Button from 911. Lighter than the Boxster and, for the first time, priced lower than it following the conventions established by the 911 coupé and convertible.

body and new roof and the interior takes its styling cues from the 991. 2015: Boxster Spyder arrives. Reminiscent of its 987 forebear, 981 Spyder is a topless GT4 without the input of Weissach: 3.8 911 power, 30kgs lighter than GTS, manual only like GT4 – no PDK, 911 Carrera brakes, 918-style steering wheel and seats. Bereft of a radio or air-conditioning, these can be reinstated at no cost. £15,000 dearer than the old Spyder, but it's the most radical Boxster we've seen. At only £4000 cheaper than the GT4 though it's only for the hardcore wind-in-the-hair aficionados.

MODEL	MODEL	WEIGHT	ENGINE	Нр	TORQUE	0-62	TOP SPEED	
	YEAR	kg	CC		(lb ft)		(mph)	
Boxster 2.7	2012 to '16	1310	2706	265	206	5.8	164	
Boxster 3.4S	2012 to '16	1320	3436	315	265	5.1	173	
Boxster Spyder	2015 -	1315	3800	375	310	4.5	180	

Boxster 718 (2016 –)

Boxster - Wheelbase (mm): 2475. Length/Width (mm): 4379/1801. Significant developments: 2016: 718 Boxster (named after mid-engined racers of the '50s) launched with newly-developed 300hp 2.0 (in place of the old 2.7-litre) and the S model's 2.5-litre (replacing the 3.2) flat-four-cylinder turbocharged Boxer engines. Both use variable turbine geometry technology and fuel-saving 'virtual gear' technology previously reserved for the 911. This is Porsche's first four-cylinder engined sports car since the 968. Six-speed manual or (optional) seven-speed PDK transmissions. For the first time Boxster S can be specified with a PASM Sport Chassis, and recieves second-generation 991's Sport Response Button. Both models are marginally heavier than the old car – the Boxster is up by 10kg, the S carrying 15kg additional load. However, with a PDK transmission and the Sport Chrono Package optioned it's 0.8secs quicker to 62mph than its forebear, the S is 0.6 seconds faster. MPG is improved marginally, CO2 is down, too. For the first time the Boxster S can be specified with a PASM Sport Chassis. 718 Boxster benefits from same four driving settings found in the Gen-2 991: Normal, Sport, Sport Plus, and Individual. New interior works well, updated lighting falls in-line with the Gen-2 991 but the jury is out on sharpened exterior styling.

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Нр	TORQUE (lb ft)	0-62	TOP SPEED (mph)	
Boxster 2.0	2016 -	1410	1988	300	280	4.7	170	
Boxster 2.5S	2016 -	1430	2497	350	310	4.2	177	
Cayman	987 (20)05 -	2009	; 200)9 - 20)13),		

981(2013 -)

Cayman S - Wheelbase (mm): 2415, Length/Width (mm): 4315/1801, Track front/rear (mm): 1490/1534 (Cayman), 1486/1528 (Cayman S); 2006 – 3.4-litre water-cooled flat-six is enlarged Boxster S engine with 997 Carrera 2 internals producing 15hp and 14lb ft of torque over the mid-engined roadster. Six-speed manual gearbox is standard with first and second ratios shorter than those found in the Boxster S. Tiptronic S optional, variable rate steering also carried over from Boxster and Carrera models. Boxster S brakes standard fitment, but PCCB optional as is Porsche Active Suspension Management (PASM) and Sports Chrono pack. Body is 100 per cent stiffer than Boxster S, and is as stiff as a 997 Carrera 2 Coupé, Porsche Stability Management (PSM) comes as standard; 2006: 2007 Model Year - Entry-level Porsche coupé receives 2.7litre flat-six engine fitted with VarioCam Plus technology. Five-speed manual gearbox standard, six-speed manual and five-speed Tiptronic S available as option. Steel springs and gas dampers standard, PASM optional; 2009: 2009 Model Year – All-new flat-six engines with 265hp 2.9 replacing 2.7 engine, with a new 320hp 3.4-litre motor for the S, which also comes with direct-fuel injection as standard. Six-speed manual gearbox standard with seven-speed double clutch PDK an option. Optional limited-slip differential turns it into a genuine 911 alternative. Mild redesign includes new bumpers and head and tail-lamps. PCM3 is available with touchscreen sat-nav and Bluetooth phone capability. 2011: 2011 Model Year – Cayman R introduced; lighter more powerful version of Cayman S with 330hp and 1295kg kerb weight. Aluminium doors and front bonnet

19-inch wheels and an Alcantara sport interior. First R model in 43 years. Series production car.

MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (lb ft)	0-62	MAX MPH	
Cayman S	2005 – '09	1340	3386	295	251	5.4	171	
Cayman 2.7	2007 – '09	1300	2687	245	201	6.1	162	
Cayman 2.9	2009 – '12	1330	2893	265	221	5.8	164	
Cayman S	2009 - '12	1350	3436	320	273	4.9	171	
Cayman R	2011 –'12	1295	3436	330	273	5.0*	175	
*manufacturor's	claim							

manufacturer's claim

Cayman 981 – Wheelbase (mm): 2475, Length/Width (mm): 4380/1801, Track front/rear (mm): 1526/1536 (Cayman), 1526/1540 (Cayman S); 2013 – 275hp, 2.7-litre and 325hp 3.4-litre DFI flat-six engines. Six-speed manual gearbox standard, seven-speed PDK optional (adds 30kg). New, lighter body and longer wheelbase; electromechanical power steering standard. PASM, Porsche Torque Vectoring and mechanical locking diff all optional as is the Sport Chrono pack and launch control and a sports exhaust. 18-20-inch wheels available, brakes carried over from the Boxster, including 991 Carrera stoppers for the Cayman S, PCCB optional. New interior as per 981 Boxster making the Cayman a serious alternative to a 911. As with all modern Porsches it is very spec sensitive and in our experience less always amounts to more. 2014: Cayman GTS arrives and finally moves the Cayman story on. 3.6-litre flat-six produces 340hp with 280lb ft torque. The heaviest Cayman to date (1345) is offset by the additional power, the package has been tailored to provide the best possible driving experience. PASM and Sport Chrono with Dynamic Engine Mounts come as standard. Standard GTS alloy wheels are 8 (front) and 9.5 (rear) x20-inch Carrera S rims. A no cost option is Sports suspension lowering the car by -20mm. The one to have. 2015: The Cayman we'd all been waiting for. 991 Carrera S 3.8-litre flat six, GT3 aluminium suspension and chassis parts, PTV, PSM fitted as standard. Only available with a six-speed manual gearbox, shade lighter than the GTS (1340kg) but the rest of the figures don't do it justice. The 385hp figure is conservative, it feels quicker, 310lb ft toque equate to a 0-62 time 0.2-seconds quicker than the GTS. Six-piston calipers (front), four-piston calipers

(rear), ventilated discs or optional PCCB. A cut price GT3 and finally a Cayman to give the 911 a run for its money

MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (lb ft)	0-62*	MAX MPH	
Cayman 2.7	2013 -	1310	2706	275	213	5.7	165	
Cayman 3.4S	2013 -	1320	3436	325	272	5.0	175	
Cayman GTS	2014 -	1345	3436	340	280	4.6	177	
Cayman GT4	2015-	1340b	3800	385	310	4.4	183	
* () /	1 :							

*manufacturer's claim

Cayman 718 (2016 -)

Cayman – Wheelbase (mm): 2475. Length/Width (mm): 4379/1801. Significant developments: 2016: 718 Cayman (named after mid-engined racers of the '50s) launched shortly after the Boxster to which it is nearly identical save a roof, newly-developed 300hp 2.0 (in place of the old 2.7-litre) and the S model's 2.5litre (replacing the 3.2) flat-four-cylinder, turbocharged Boxer engines. Both use variable turbine geometry technology and fuel-saving 'virtual gear' technology previously reserved for the 911. Six-speed manual or (optional) seven-speed PDK transmissions. For the first time Cayman S can be specified with a PASM Sport Chassis (lowering it 20mm), and it receives the second-gen 991's Sport Response Button. Manual Cayman S weighs 1355kg, an increase over its forebear but lighter than the 718 Boxster on account of the the roof. With a PDK transmission and the Sport Chrono Package optioned, a Cayman will now dispatch 0-62mph in 4.7 seconds. That's a full second quicker than the old 2.7 car. An S model is even quicker, doing it in 4.2seconds, CO2 is down, too. Updated interior and exterior styling falls in line with the 718 Boxster and Gen-2 991

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Нр	TORQUE (lb ft)	0-62	TOP SPEED (mph)	
Cayman 2.0	2016 -	1335	1988	300	280	4.7	170	
Cayman 2.5S	2016 -	1355	2497	350	310	4.2	177	

Cayenne (2003 - '07; 2007 - '10; 2010-'13; 2014-) Cayenne – Wheelbase (mm): 2855, length/width (mm): 4782 (4786 Turbo)/1928, track front/rear (mm):

1655 – 1641/1670 – 1656 (17-20-inch wheels); Introduced in 2003 with choice of normally-aspirated or twin-turbocharged 4.5-litre V8. Six-speed manual gearbox or five- and six-speed Tiptronic S for Turbo (optional on S). PASM, adjustable ride height, electronic damper control, differential locks, six-pot callipers, 18-inch alloys standard, 19- and 20-inch optional. PTM, PSM, ABS, ABD and ASR all standard; 2004: Entrylevel Cayenne the first Porsche with V6 power. Transmitted through a six-speed manual. Steel springs standard, PASM and air optional. V6 is also fitted with smaller brakes; 2006: Cayenne Turbo S gains an extra 72hp, 0-62mph in 5.2 seconds, 167mph and 2355kqs; 2007: Second generation Cayenne: V6, V8 S and Turbo all get DFI engines, a face-lift improves looks. PDCC active anti-roll bars available on cars with PASM; 2007: 2008 Model Year – GTS arrives. Combines Turbo looks with V8 S running gear. Shorter gear ratios in both manual and Tiptronic. Turbo brakes standard. New Turbo S announced. Power up to 550hp, torque to 553lb ft; 2009: The Cayenne diesel arrives. Three-litre Audi sourced V6 available in entry-level trim only with six-speed Tiptronic S. Over 600-mile range and 30mpg. 2010 Cayenne - Wheelbase (mm): 2895, length/width (mm): 4846/1939, track front/rear: 1655 (1643 Turbo)/1669 (1657 Turbo); First all-new Cayenne since 2003 is bigger in every way. Engines carried over but now include Porsche's first Hybrid; 3.0 supercharged V6 works in parallel with a 47hp electric motor. All but the entry level Cayenne V6 petrol get new eight-speed Tiptronic (V6 get six-speed manual). New four-wheel drive system replaces low ratio aearbox with the latest PTM and electronics of new Tiptronic S 'box. Diesel and Hybrid models permanent all-wheel drive, others get an active system. PASM, PDCC and PCCB optional. New Panamera-based interior. 2012: GTS arrives with a 4.8-litre V8 from S, engine modified taking power to 420hp. Eight-speed Tiptronic S the only gearbox, chassis combines steel springs with PASM, air optional. GTS rides 24mm lower than S, wider front and rear track and 20-inch wheels are standard. Front bumper and lights are from Turbo. 2013: S Diesel and 550hp Turbo S arrive. S Diesel gets a twin-turbo 4.8-litre Audi V8 diesel. Spec is the same as the petrol-engined S, but with huge torque. 2014: Fourth gen Cayenne offers five models: S, Turbo, Diesel, Diesel S, and S E-Hybrid. More power and torque, lower consumption, sharper design and increased comfort. Longer aluminium bonnet, headlights incorporate DRLs, 918-style steering wheel. Macan's 3.6-litre bi-turbo replaces V8 petrol. S E-Hybrid uses Panamera S E-Hybrid's drivetrain, batteries now optismised for greater performance. New GTS arrives, it ditches the V8 for 3.6-litre V6 bi-turbo from the S. Power increases to 440hp. Sports exhaust system standard, PASM and steel springs (sits 24 mm lower), air suspension optional. Turbo model's front styling, new skirts, arches, roof spoiler all feature with 20-inch wheels. GTS sports seats have leather/Alcantara mix.



CAYENNE 2014 – The changes are subtle for this, the fourth generation Cayenne ahead of the arrival of a completely new model expected in 2017. Five models were available at launch, ontinuing where the previous version left off: S, Turbo, Diesel S, and S E-Hybrid. More power and torque, lower fuel consumption, sharper and cleaner exterior design and increased levels of interior comfort are the headlines. A longer aluminium bonnet, shapelier headlights (now incorporating the DRLs) and revised rear styling match. Adaptive cooling vanes hidden in the front bumpers are aluminium bonnet, shapelier headlights (now incorporating the DRLs) and revised rear styling match. Adaptive cooling vanes hidden in the front bumpers are aluminium bonnet, shapelier headlights (now incorporating the DRLs) and revised rear styling match. Adaptive cooling vanes hidden in the front bumpers are aluminium bonnet, shapelier headlights (now incorporating the DRLs) and revised rear styling match. Adaptive cooling vanes hidden in the front bumpers are aluminium bonnet, shapelier headlights (now incorporating the DRLs) and revised rear styling match. Adaptive cooling vanes hidden in the front bumpers are aluminium bounet, shapelier headlights (now incorporating the DRLs) and revised rear styling match. Adaptive cooling vanes hidden in the front bumpers are aligned by a styling in the Macan, on paper the new Cayenne offers greater performance than its eight-cylinder forebear. In the Turbo we get the 4.8-litre bi-turbo V8 engine putting out 520hp, it's fast and capable. The Diesel and Diesel S should be the best-selling models in the UK. The Diesel uses the three-litre V6 coupled to an eight-speed Tiptronic. The Diesel S really is billiant though despite using an older engine (the only mill which is not Euro 6 compliant). The first plug-in Hybrid in the premium SUV segment, the S E-Hybrid uses the same drivetrain as the Panamera S E-Hybrid, although there are differences between them – chiefly the batteries.



CARRERA GT: 2003 – 2006

Two-door, mid-engined, V10 Roadster. Still born Le Mans racer evolves into the greatest supercar every built. Carbon-fibre tub, 612hp V10, 205mph maximum and a birch wood gear knob. Perfection!



<u> PANAMERA:</u> 2009 -2013

Five-door, front-engined, rear-and four-wheel drive saloon-coupé; normally aspirate, turbocharged and supercharged V6 and V8 petrol, diesel and hybrid engines, six-speed manual and seven-speed PDK transmission. The last new Porsche to be launched while Dr. Wendelin Weideking was running the company, the Panamera is Porsche's fourth





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model line and, according to the company, a car that creates a new class. Powered by either a normally aspirated 4.8-litre V8 or a twin-turbo charged version of the same engine, Panamera is available in rear-wheel drive 'S' guise with a six-speed manual gearbox, or an all-wheel drive 4S or Turbo (both only available with the 7-speed PDK gearbox, which is also an option for the S). 3.6-litre V6 engine added to the line-up in 2010 with rear and four-wheel drive options. Rear-drive model gets six-speed manual as standard, Panamera 4 the seven-speed PDK and PASM suspension. V6 offer all the luxury and comfort of the V8 models. Only a four-seater, the Panamera's interior is the most striking Porsche has designed for decades, and as you'd expect of such a car there is very little in terms of luxury or convenience that has been omitted from the specification or options list. Panamera range is extended further with the cracking diesel model in 2011, along with the S Hybrid and slightly bonkers Turbo S. The former two are rear-wheel drive only and come with the conventional eight-speed Tiptronic S gearbox. In early 2012 the range is topped off with the GTS – a breathed on Panamera 4S with more power, a Turbo look and sport inspired interior. It's no GT3 but it's a great way to hustle nearly two tons.



PANAMERA: 2016 – Fve-door, front-engined, four-wheel drive saloon-coupé. All-new Panamera arrives with three models at launch: 45, 45 Diesel and Turbo, with new 2.9-litre V6 and 4.0-litre V8 bi-turbo DFI engines. Petrol Panamera 4S gets a 440hp V6, 45 Diesel receives a 422hp V8 (627lb ft), V8 petrol Turbo model boasts 550hp. All come with permanent all-wheel drive (a first for the Diesel) and a new eight-speed PDK transmission. PASM, PDCC and PTV Plus are all options. There's a new electro-mechanical steering system and a new rear axle steering system, too. Optional Mode Switch (Normal, Sport, Sport Plus or Individual) with the Sport Response Button comes across from the second-generation 991. The 177mph common rail bi-turbo Diesel produces peak waiable turbine geometry (VTC) lifted from the 9111 Turbo. Capable of 0-62mph (with optional Sport Chrono) in 4.3 seconds), it is the world's fastest production vehicle with a dised engine. V8 Turbo is the most powerful petrol engine available in the new Panamera (550hp and 568lb ft) taking it to 62mph in 3.6 seconds with Sport Chrono and onto a 190mph top speed. The Turbo is the first Porsche with new adaptive cylinder control, which temporarily switches off four of the most fuel efficient engines ever offered in the Gran Turismo saloon with a claimed mpg of 34.4-34.8 (combined). Longer, wider and (slightly) taller than its forebear, a of mee the elsing and (slightly) taller than its forebear, a New Porsche four-point LED daytime running lights come in three different versions. Three-dimensional LED rear lights with integrated four-point brake lights are familiar from second-gen 991, as is the narrow LED strip connecting the rear clusters, reminiscent of the 911 4S. Extendible rear spoiler is now finished in body colour, Turbo version is larger. 19-inch (45/4S Diesel), 20-inch (Turbo) and optional 21-inch alloy wheels. Inside there's four seats, 495 to 1304 litres of luggage capacity and the new Porsche infotainment systems, includi

MODEL	YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (lb ft)	0-62/60*	MAX MPH
Cayenne S	2003 to '06	2245	4511	340	310	7.2	150
Cayenne Turbo	2003 to '06	2355	4511	450	457	5.6	165
Cayenne	2004 to '06	2160	3189	250	228	9.1	133
Cayenne Turbo S	2006 to '07	2355	4511	521	531	5.2	167
Cayenne	2007 to '10	2160	3598	290	283	8.1	141
Cayenne S	2007 to '10	2225	4806	385	369	6.5*	156
Cayenne Turbo	2007 to '10	2355	4806	500	516	5.0*	171
Cayenne GTS	2007 to '10	2225	4806	405	369	6.1	157
Cayenne Turbo S	2008 to '10	2355	4806	550	553	4.0	174
Cayenne Diesel	2009 to '10	2240	2967	240	405	8.3	133
Cayenne	2010 – '13	1995	3598	300	295	7.5	143
Cayenne Diesel	2010 – '13	2100	2967	240	405	7.8	135
Cayenne S	2010 – '13	2065	4806	400	369	5.9	160
Cayenne S Hybrid	2010 – '13	2240	2995	380 ¹	427 ¹	6.5	150
Cayenne Turbo	2010 – '13	2170	4806	500	516	4.7	172
Cayenne GTS	2012 – '13	2085	4806	420	379	5.7	162
Cayenne Turbo S	2013 – '13	2215	4806	550	553	4.5	175
Cayenne S Diesel	2013 – '13	2195	4134	382	627	5.7	156
Cayenne	2014 -	2040	3598	300	295	7.7	143
Cayenne Diesel	2014 -	2110	2967	262	427	7.3	137
Cayenne S	2014 -	2085	3604	420	405	5.5	160
Cayenne S Diesel	2014 -	2215	4134	385	626	5.4	156
Cayenne S E-Hybri	d 2014 –	2350	2995	416	324	5.9	150
Cayenne GTS	2014 -	2110	3604	440	442	5.2	163
Cayenne Turbo	2014 -	2185	4806	520	553	4.5	173
Cayenne Turbo S	2014 -	2235	4806	570	590	4.1	176

1 when combined with electric motor * 0.60 mph tir

Porsche Carrera GT (2003 - 2006)

Carrera GT – Wheelbase (mm): 2730, Length/Width (mm): 4613/1921, Track front/rear (mm): 1612/1587 Significant developments: All alloy, 40-valve V10 with titanium conrods, nickel/silicone liners, dry sump lubrication and VarioCam, rewing to 8400rpm. Rear-wheel drive with six-speed manual gearbox. Carbon fibre monocoque with steel crash structures and carbon fibre bodywork. Double wishbone pushrod axles front and rear, 19-inch magnesium alloys, 380mm ceramic composite discs all round with six-pot callipers. Built at Leipzig in Berlin, left-hand drive only, over 1260 examples built between November 2003 and May 2006

MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (lb ft)	0-62	MAX MPH
Carrera GT	2003 to '06	1380	5733	612	435	3.9	205
Panamera	a: (2009	9 – 20	13: 20	014	. —)		

Panamera S, 4S, Turbo – Wheelbase (mm): 2920, Length/Width/Height (mm): 4970/1931/1418, Track front/rear (mm): 1658/1662 (1656/1646 Turbo); 2009 - 2010MY 400hp 4.8-litre or 500hp 4.8-litre twinturbo water-cooled eight-cylinder, DFI and VarioCam Plus with adjustable valve lift; six-speed manual gearbox and rear-drive for S, seven-speed PDK optional; 4S and Turbo get electronically controlled four-wheel drive with PTM and PDK. Engines adapted from Cayenne, PDK unique to Panamera. PASM standard on all models, self-levelling adaptive air-suspension standard on Turbo. PSM as standard featuring: ABS; ASR; MSR; ABD; Brake Assistant; and a pre-filling of the brake system. PDCC and PCCB optional. 18-inch wheels standard on S and 4S, 19-inch on Turbo; Variable rate steering standard, speed sensitive Servotronic steering optional. Adaptive aero on all, S and 4S models use two-way spoiler, Turbo has four-way. 4S and Turbo get 100-litre fuel tanks, S 80-litres. Bi-xenon headlights standard, adaptive light function for Turbo. Radar-based distance cruise, Porsche Entry & Drive (standard on Turbo) and Burmester High-End Sound system all options. Sports Chrono Plus optional, when combined with PDK offers Launch Control. 2010 - 3.6-litre V6 petrol. V6 available as rear- or four-wheel drive, former with manual six- or optional seven-speed PDK, latter PDK only -300hp and 295 lb ft torque. Standard spec is the same as V8 engined S, except for optional TPS and PASM. 2011 – 2012MY Diesel arrives, 3.0-litre V6 turbo donated by Audi. Spec on par with V6 petrol. S Hybrid also arrives fitted with 3.0-litre petrol supercharged V6 and a 47hp, 221lb ft electric motor. Energy for electric motor stored in batteries under boot floor charged via the engine and regenerative sources such as braking. 1.2-mile electric range, motors have 46mph top speed. Bi-turbo S arrives with lighter turbo vanes. Power climbs to 550hp. Agate grey paint exclusive to model. 2012 - GTS arrives with Exclusive bodykit and 4.8-litre V8. Active air intakes, revised camshafts and ECU extract extra 30hp and additional 15lb ft. Turbo brakes, air and PASM (now tauter) standard. Sport Chrono Plus standard as is Turbo's four-piece rear spoiler and 19-inch wheels. Chassis 10mm lower with 5mm spacers at rear. 18-way adjustable seats, sports steering wheel with paddles also standard. Four-wheel drive only with seven-spe d ÓDV

wheel with public	es also stariaan	u. roui-wile	ei unve onij	vviui s	even-speed PDI	N.		
MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (lb ft)	0-62	MAX MPH	
Panamera	2010 - 2013	1730	3605	300	295	6.8	162	
Panamera 4	2010 - 2013	1820	3605	300	295	6.1	159	
Panamera S	2009 - 2013	1770	4806	400	369	5.0	175	
Panamera 4S	2009 - 2013	1860	4806	400	369	4.4	175	
Panamera Turbo	2009 - 2013	1970	4806	500	516*	3.5**	188	
Panamera Diesel	2011 - 2013	1880	2967	250	405	6.8	150	
Panamera GTS	2012 - 2013	1920	4806	430	383	4.5	178	
Panamera S Hybrid	d2012 – 2013	1980	2995	380	427	6.0	167	
Panamera Turbo S	2012 - 2013	1995	4806	550	553	3.8	190	

* 567lb ft when in Sport Plus Mode when Sport Chrono Package Plus fitted. ** 0-60mph time



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918 SPYDER: 2014 – 2015 Two-door, mid-engined, petrol-electic plug-in hybrid. The supercar has evolved into the hypercar, one that combines the thoroughbred engine from an LMP2 race car with the pioneering engineering of electric motors and lightweight(ish) batteries. The 918 signals the beginning of a new dawn for Porsche, one that provides the company with a halo product on which to hang its Cayenne, Panamera, Macan and, potentially 911 hybrids from. To help the 918 along the way its launch coincides with Porsche's return to top flight sports car racing, including Le Mans, with an all-new LMP1 race car. A petrol-electric hybrid race car. The 918 has a lot to deliver, but on the eve of its launch it made an impressive debut with a sensational 6 minute 57 second lap of the Nürburgring Nordschleife. 918 SPYDER: 2014 – 2015



MACAN: 2014 -

MACAN: 2014 –
Built to fulfill Porsche's ambitions to build 200,000 cars by 2018, the Macan is the company's answer to the expanding premium compact SUV sector. Porsche forcasts to build 50,000 Macans a year and will add to the range with another diesel engine – a four-cylinder this time – a petrol-hybrid and a four-cylinder petrol engine.
It launches with two trim levels, S and Turbo. The former is available with either a twin-turbocharged V6 petrol engine or single-turbo diesel V6. The Turbo is fitted with a 3.6-litre twin-turbocharged engine. A Turbo S and GTS trim-line joins to line-up later on.
Sitting below the Cayenne in Porsche's SUV line-up, the Macan is lighter by over 100kgs, 16cm shorter in overal length, eight centimetres shorter. Usefully quicker than its big brother, with the petrol S model faster to 62mph than the quickest normally aspirated Cayenne. The Macan Turbo's sprinting prowess sits neatly between the Cayenne furbo engine as the S model with the same three-litre V6 bi-turbo engine as the S model with the same three-litre V6 bi-turbo engine as the S model yet this time boasting 360hp. Torque is also increased to

2013–2014MY Gen-2 Panamera gets new front and rear bumpers, lights and side sills and a range of new engines. Interior untouched. Out goes 4.8-litre normally-aspirated V8 in the S and 4S models, in comes a more powerful 3.0-litre bi-turbo V6. Big V8 stays for the GTS and Turbo, 3.6-litre petrol V6 and 3.0-litre turbo diesel also feature. Hybrid now called S E-Hybrid and is a pluq-in, mates the 3.0-litre supercharged V6 with an electric motor twice as powerful and a battery pack storing five times the energy. PDK standard for all models bar Diesel and S E-hybrid, which get Cayenne's eight-speed Tiptronic.

	MODEL YÉAR		ENGINE (cc)	BHP	TORQUE (lb ft)	0-62	MAX MPH	
Panamera Diesel	2013-	1880	2967	250	405	6.8	151	
Panamera	2013-	1770	3605	310	295	6.3	160	
Panamera 4	2013-	1820	3605	300	295	6.1	159	
Panamera S	2013-	1810	2997	420	383	5.1	178	
Panamera 4S	2013-	1870	2997	420	383	4.8	177	
Panamera S E-Hybrid	d 2013–	2095	2995	416	435	5.5	167	
Panamera GTS	2013-	1925	4806	440	383	4.4	178	
Panamera Turbo	2013-	1970	4806	520	516	4.1	189	
Panamera Turbo S	2013-	1995	4806	570	553	3.8	192	

Panamera (2016 -)

2016- Wheelbase (mm): 2950, Length/Width (mm): 5049/1937, Track front/rear (mm): 1671/1651 (4S). All-new Panamera gets a new platform shared with the Bentley Continental GT, a styling refresh to bring it into line with second-generation 991, and new engines. Three models available at launch: 4S petrol (V6) and Diesel (V8), and Turbo (V8). With 422hp and 627lb ft Diesel is the most powerful Porsche diesel engine yet, Turbo debuts adaptive cylinder control which temporarily switches off four of its eight cylinders when under partial load to reduce fuel consumption. All models are permanent all-wheel drive (a first for Diesel) and new eight-speed PDK transmission. PASM, PDCC and PTV Plus are all options. New electro-mechanical steering system. New rear axle steering system. 911's Mode Switch with Sport Response Button is an option. New LED lighting incorporated. Extendible rear spoiler now finished in body colour, Turbo version has larger version. Latest PCM system features inside typically luxurious Panamera interior.

MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (Ib ft)	0-62	MAX MPH	
Panamera 4S	2016-	1870	2894	440	406	4.2	179	
Panamera 4S Diese	el 2016–	2050	3956	422	627	4.3	177	
Panamera Turbo	2016-	1995	3996	550	568	3.6	190	

918 Spyder (2014 - 2015)

918 Spyder – Wheelbase (mm): 2730, Length/Width (mm): 4643/1940, Track front/rear (mm): 1664/1612 Significant developments: 2013 - 2014MY. 4.6-litre V8 traces its routes back to the 2007 LMP2 RS Spyder racer and runs seven-speed PDK with RWD. 286hp electric motor fitted to front axle with its own transmission. 918 can be driven by the petrol engine, electric motor, or both, this results in 887hp and 944lb ft of torque (V8 produces 676lb ft alone). V8 screams to 9150rpm. Five driving modes: E-Power, Hybrid, Sport-Hybrid, Race-Hybrid and Hot Lap, each determines which power source is required. Carbonfibre monocoque, carbon body includes two-piece Targa roof. PCCB brakes standard, 20-inch wheels at the front, 21s rear with Michelin Pilot Sport Cup 2 tyres. Two trim levels, Spyder and Weissach Package, the latter reduces weight by 41kg – magnesium wheels account for a 14kg saving. Ceramic wheel bearings, titanium chassis bolts and brake pad supporting plates. Upgrades include additional aero parts such as aeroblades behind rear wheels, thinner paint and exposed carbon fibre.

MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc) BHP	TORQUE (lb ft)	0-62	MAX MPH	
918 Spyder	2014 to '15	1674	4593	608/286	676/944	2.6	214	
918 Spyder Weiss	ach2014 to '15	1634	4593	608/286	676/944	2.6	214	

Macan (2014 -)

Macan – Wheelbase (mm): 2807; Length/Width (mm): 4681 (Turbo 4699mm)/1923; Track front/rear (mm): 1655/1651; Weight: 1865kg (S), 1880kg (S Diesel), 1925kg (Turbo): 2013 – Built at Leipzig, two petrol V6 engines, four-cylinder turbocharged petrol engine, and V6 diesel donated by VW. Macan S gets 340hp three-litre bi-turbo V6; Turbo has 400hp, 3.6-litre bi-turbo V6. S Diesel fitted with 3.0-litre single turbo V6 diesel engine. PTM four wheel drive running gear, drivetrain essentially rear-wheel drive sending torque to front axle when required. PDK as standard – no manual, shorter gear ratios aid traction. S model fitted with a 65-litre fuel tank, S Diesel a 60-litre tank, Turbo 75-litres. Both S models available with 75-litre tank. Steel springs and fixed rate dampers standard on S, Turbo comes with PASM. All available with PASM providing an additional 40mm of clearance. Sport button as standard, PTV Plus optional. S fitted with 350mm front brake discs, Turbo 360mm, rears are 330mm and 356mm respectively. All Macan models fitted with different size tyres front-to-rear. Narrower front tyres provide greater steering feel, wider rears for optimum grip. Electromechanical power steering all round. Turbo is fitted with bi-xenon headlights, S with halogens, PDLS optional. 918 Spyder-style multi-function steering wheel with paddle shift as standard. Full length panoramic alass sunroof available, S models trimmed in partial leather and alcantara, full leather interior a cost option. 2015 – GTS arrives sitting between S and Turbo. Uses three-litre V6 bi-turbo from S with more power, PDK

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MODEL	MODEL YEAR	WEIGHT (kg)	ENGINE (cc)	BHP	TORQUE (lb ft)	0-62	MAX MPH	
Macan	2014 -	1770	1984	237	258	6.9	138	
Macan S	2014 -	1865	2997	340	339	5.4	157	
Macan S Diesel	2014 -	1880	2967	258	427	6.3	142	
Macan GTS	2015 -	1895	2997	360	368	5.2	159	
Macan Turbo	2014 -	1925	3604	400	405	4.8	165	



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GTPORSCHE 911S at 50

MAY 2016

Cover Story: 911S at 50 Inside: Andreas Preuninger on the 911 R, Elva Porsche, Monte Carlo Historique, KLASSIKER 911 SC, original 718s, PS Works 911 3.2 Carrera, Cayman GT4 Clubsport, 908 remembered, Mezger engines (part two)



ORER 2015 Cover Story: Thirty years of 959 Inside: Classic 911s: 2.2 vs 2.4 - which is best? Cayman GT4 takes to the Alps, 996 GT3 RS vs 997 GT3 RS, Olaf Manthey interview. Silverstone Classic. PCGB National Event, Steve Richards profile,

996 CSR Retro, TPC Racing Module tested



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FEBRUARY 20 Cover Story: 964 Backdates Inside: RSR evocation and Pro-9 built 964 C2. 964 vs 911 SC. Boxster 2.7-litre. Formula One in Stuttgart. 356B racer. Macan GTS first drive. TwinSpark Racing





JUNE 2016 Cover Story: 718s: new Cayman revealed, new Boxster driven. Inside: Restored 911 2.7 Carrera RS, Cayenne Turbo S vs 911S, 968 Clubsport, 993 backdate, 996 4S vs 996 50 Year Edition, Below Zero ice driving, forged Porsche IDs



MARCH 2016 Cover Story: 996 vs Cayman Inside: Restored 917, 991.2 Turbo and Turbo S first drive, James Dean's 'Little Bastard', 993 X51, Porsche PDI process, 912 Coupé, Porsche Sport Driving School Precision course. Market Place: 996 Carrera 4S



JULY 2016 Cover Story: 911 R driven

Inside: 924 Carrera GT vs Cayman GT4, 924 at 40 shootout, 924 prototype, 997 C2S Cabriolet vs 991.2 C2S Cabriolet, Ultimate Drives, 997 GT3 RS vs 930 Turbo, transaxle Porsches, Market Place: 996 GT3 RS, LED laser headlamps



2016 APRIL

Cover Story: New 911 meets 3.2 Carrera **Inside:** 991.2 first UK drive, 2.7 Carrera RS, 718 Boxster explored, 991.2 Targa and 991.2 4S driven. RUF 964 Carrera RS RCT versus 964 3.6 Turbo, 9ff 997 Turbo, Mezger engines (part one), London Classic Car Show. Dutchmann profile



AUGUST 2016

Cover Story: 918 Spyder vs 968 Inside: 997 C2S vs 911S, Panamera Development (part one), 991 Turbo S First UK Drive, 911 Turbo No.1, 993 Targas, Steve McQueen, 2.7 RS Replica, 986 Boxster vs 718 Boxster, Players Classic, Porsche wins at Le Mans

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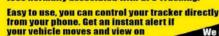
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Colin Goodwin has cleared the cobwebs from his wallet; Brian Redman is to blame...

hen a journalist spends his or her own money on something, the world should take notice. Especially a motoring journalist, who is second only to travel writers in the hierarchy of the 'Worshipful Company of Blaggers'. So pay careful attention because I have just spent £55 on a book. It would normally be £50 but my copy is signed by the author, and since that author is Brian Redman, it is a fiver well spent.

I have long been a Redman fan. I was a little too young to watch him race in his youth and the wrong side of the Pond in his later career, but I've been fortunate enough to have met him on many occasions and to have interviewed him a few times. I knew that his accomplishments behind the wheel, his sense of humour and his intelligence were the ingredients for a great book. I wasn't wrong. Brian Redman, Daring Drivers. Deadly Tracks was written with assistance from a chap called Jim Mullen who I have never heard of but clearly has a light touch as I recognise Redman's tone in the written words. Redman had the most fascinating

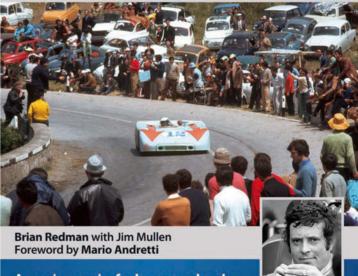
> Redman is profound when talking about the risks of racing in his era

career driving single-seaters in Formula One and Formula 5000, saloons (including BMW CSLs), and, of course, sports cars. And many of his greatest drives were behind the wheel of Porsches. He was a Works driver when the 917 was launched, he won the Targa Florio in a 908, and drove his way through the Porsche racing catalogue via the 917/30 to the 935, finishing with the 962.

I don't want to spoil the book for you by giving away all the best bits, but each of the spreads in which he describes a lap of a circuit is pure magic. I have read the bit about his lap of Spa in the 917 four times already, the lap of Le Mans in the same car three times, and the description of his lap around the Targa Florio's Piccolo Madonie course in the Gulf 908/3 is equally as good.

It was in the latter car, in 1971 (a year after winning the event in a 908/3 with Jo Siffert), that Redman had one of his most serious accidents. The car caught fire after hitting a stone wall (the steering failed) and Brian wound up in a terrifying Sicilian hospital and ultimately had to have incredibly painful skin grafts. Redman is profound when talking about the risks of racing in his era. Clearly he loved racing cars but he also talks of it as a profession, almost with the same tone as if he were a bricklayer, about needing to race to support his young family. Throughout his career he's been supported by wife Marion, whether it's recovering from injuries or emigrating to South Africa for a ridiculously short attempt at retirement as a Volkswagen salesman in Johannesburg. Redman is excellent on the subject of apartheid and how it was viewed at the time and his and Marion's direct experience of its cruelty. Redman drove for the Porsche

Brian Redman DARING DRIVERS, DEADLY TRACKS

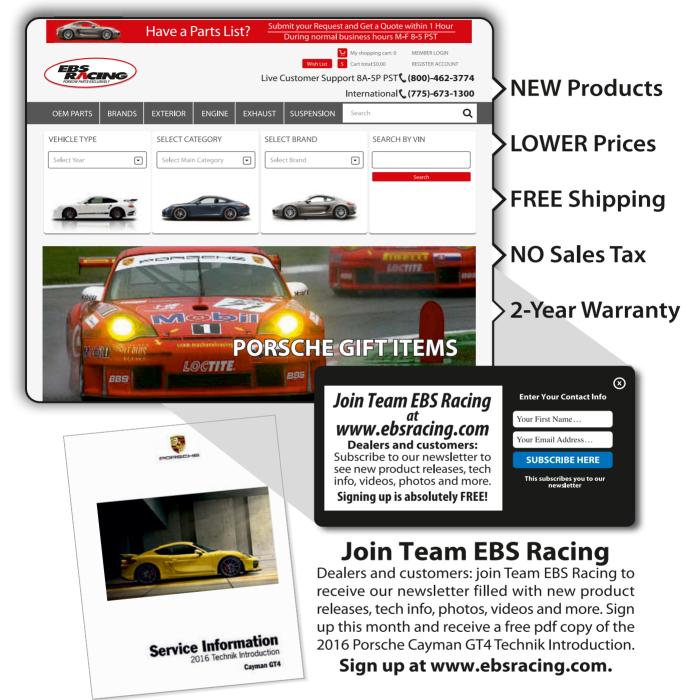


A racer's memoir of a dangerous decade 1965–1975

factory when it had the most incredible line-up of drivers, from Jo Siffert to Pedro Rodriquez to Vic Elford. He made a point of trying not to make friends with his fellow drivers in an era when a third of top line drivers were killed. For a man as outgoing, kind and as funny as Redman this was clearly not possible. He's not afraid to describe sleepless nights before a big race, his fears of leaving his family alone to fend for itself if he were to be killed racing.

There are plenty of books on Porsche's racing cars, and especially on the 917. I own many of them but my favourite books are about drivers. This is one of the very best, by one of the very best \bigcirc

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