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# GT PORSCHÉ

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Issue 174

## 911S at 50

Celebrating five decades of the archetypal classic 911



### New 911 R

The GT3 RS-powered  
lightweight 991 arrives



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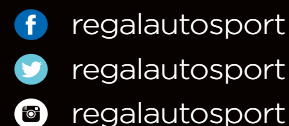
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# Ignition



Simon Jackson  
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Contributor Andrew Frankel talks us through the archetypal classic 911 this month, the 911S, as it celebrates its 50th birthday. Andrew admits that he sees the model as one of the greatest in the 911's illustrious history, so it only seemed right to commemorate the date by letting him take one out for a spin, p52. Andrew's passion for that particular iteration of 911 got me thinking: I'm sure we all have our favourite models in the Porsche range (and within those ranges, certain preferred variants), and I'd gamble that the majority of those are the models designed for unadulterated driving pleasure.

Of course, when it comes to the Porsche 911 there are many different versions created in this ilk, but what's great about the idea of a pure Porsche sports car is that it still burns strong within the heart of the company today. Look at some of Porsche's contemporary prestige rivals then tell me they are still building uncompromised cars and I'll probably call you a liar. Despite what some people may have you believe, the traditional spirit of Porsche is certainly alive and well, and evidence of that came at this year's Geneva

Motor Show with the reveal of the much-anticipated 911 R.

You'll undoubtedly have read a fair bit about the new car by now, but find out what the man behind Porsche's GT cars, Andreas Preuninger, thinks of it on page 20. What you'll discover is that 'Mr GT3' is a wholly passionate individual – passionate about the 911 R and passionate about that ethereal Porsche spirit too. As a result he has a (very) big hand in the creation of cars like the R – a 991 for the purist and a model that is surely set to become one of those aforementioned fan favourites in years to come.

Above all else, what we learnt at Geneva is that a six-cylinder normally aspirated Porsche still has legs, and that the desire within Weissach to build cars that excite genuine enthusiasts, still exists. At a time of downsized engines and concerns over emissions figures this really is very good news. Porsche still employs out-and-out car people, and you'd surprised and disappointed at how few modern automotive manufacturers could genuinely share that claim.



It may be a limited numbers offering, but the 911 R bodes well for the future of Porsche sports cars

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

**This month:** Andrew looks at one Porsche's most enduring racing cars, the 908, and he celebrates the 50th birthday of the 911S.



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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 investigates whether or not Porsche's baby SUV, the Macan, makes for a wise used car purchase...



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Journalist, historian and author, Johnny's specialist subject is Porsche. He drove the 2011 La Carrera Panamericana in a 914.

**This month:** Johnny follows the fortunes of a pair of Scandinavian 911s during the Rallye Monte Carlo Historique



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## GENEVA MOTOR SHOW 2016

**Porsche debuted the 718 Boxster and 911 R in Switzerland, while tuner RUF displayed a typically stunning collection of reworked 911s...**

Porsche personnel described this year's Geneva International Motor Show as a relatively 'quiet one' in terms of reveals, but clearly no-one outside of Porsche read that version of the script. As expected, the firm showcased the 718 Boxster for the first time in Geneva – the new car's turbocharged flat-four-cylinder engine and new design was something most were seeing for the first time in the metal. Indeed the new Boxster took on the main focus of Porsche's stand in Hall One, with several variants of the model on display alongside its distant relation, the 718 racer of the 1950s.

But on the revolving turntable the Boxster was clearly to be joined by a second reveal, or so suggested the

teasing silk draped across what was clearly a 911 of some sort. It turned out that this surprise was indeed that of the much-anticipated 911 R, a run-out limited numbers first-generation 991, and a very exciting car that takes the 911 story back to its roots.

'Quiet' the Palexpo was not once the drapes were withdrawn from the R, for it was the 911 Porsche fans had requested for some time. The lightweight machine uses the 991 GT3 as its basis, takes the engine and other structural elements from the GT3 RS, and comes up with a completely new concept in 911s. Well, we say completely new, it might be a new idea in contemporary times, but Porsche has not resurrected the R

badge lightly, for this new 911 bears more than just a passing resemblance to its 1967 namesake. You can read all about the new 911 R on page 20.

Away from the main Porsche area, the pick of the independents was once again the RUF stand (below). The German tuner has a knack of nailing motor show stands, and for the Porsche fan there was much to like. From the stunning 525hp RCT 4.2, to the RTR, the firm's bright yellow 800hp and 730lb ft monster 991, there was a broad selection of old favourites and new offerings too.

TechArt boasted an impressive display of its cars, from a bright blue 991 Carrera 4S reworked with a selection of its body additions, and a

991 Turbo S Cabriolet with similar styling additions, to the Grand GT and its take on a modified Panamera Turbo S. TechArt has further cemented its place as the acceptable face of contemporary Porsche modification, and there are agents in the UK who can help you personalise your car with its products. Some of the other European 'tuners' offer their own parts to rework your Porsche too, but most require a paper bag in hand to catch the inevitable projectile vomit they invoke.

Geneva continues to prove a popular and friendly motor show. It's a great way to kick-start the automotive year and an entirely accessible and manageable event for any Brits wishing to visit. We'd highly recommend it.







Porsche saw Geneva as a relatively low key affair this year, the crowds seemingly didn't agree...





# LATEST 911 RESTORATIONS **BY SINGER REVEALED**

The ever-popular Singer Vehicle Design has revealed two new creations, The North Carolina Car and The Florida Car...



California-based Singer Vehicle Design kick-started concours season by showcasing its latest Porsche 911 restorations at Florida's Amelia Island Concours d'Elegance, and The Palm Event, in March. Named after their eventual geographical homes, The North Carolina Car and The Florida Car have both been 'Restored, Reimagined, and Reborn' by Singer Vehicle Design. Both started life as 1964 model 911s yet have been redesigned in Singer's unique style that has seen it create more than 40 cars for clients all over the world since its inception in 2008. Founder Rob Dickinson's mantra of 'everything is important' is cited as a cornerstone of the business.

The North Carolina Car, a 1991 964, features a 4.0-litre engine linked to a six-speed transmission, with Brembo brakes and Öhlins suspension. It has been fitted with carbon body panels subsequently finished in Blood red, while the interior contrasts with touring seats covered in black hide. The 1990 Florida Car also started life as a 964 and features a 4.0-litre





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engine, a six-speed gearbox, Brembo brakes and Öhlins suspension. Its exterior has been refinished in Hemingway blue, while a Sand beige suede leather interior and track seats are key alterations inside.

Rob Dickinson said: "We began in 2008 with a vision to offer aficionados the opportunity to reimagine their 911 without compromise. And now, with more than 40 commissions completed, and a significant global following, we've expanded our promise to remain obsessive in the details and keep striving for more innovations along the way." Singer re-creations are highly sought-after with only a limited number available throughout the course of any single year, with each restoration typically taking between eight and ten months to complete. The Amelia Island Concours d'Elegance and The Palm Event are both high calibre concours events, sure to have garnered further interest for Singer. For more on Singer Vehicle Design visit the website: [www.singervehicledesign.com](http://www.singervehicledesign.com)

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# 911 RSR CLAIMS THIRD AT DRENCHED SEBRING

Round two of the IMSA Championship was both wet and wild for Porsche...

## IMSA CHAMPIONSHIP ROUND TWO: SEBRING

Porsche made it two podiums out of two races in the IMSA Championship at the 12 Hours of Sebring in Florida. In horrendously wet conditions which saw the race red-flagged for a period, Earl Bamber, Frédéric Makowiecki and Michael Christensen scored third spot in the GTLM class with the 911 RSR, which moved them up the rankings to sit second in the drivers' championship standings. An accident took the second RSR of Patrick Pilet, Nick Tandy and Kévin Estre out of the lead, forcing a retirement.

Torrential rain, thunder and lightning soaked the track three hours into the start of the race, forcing a stoppage at the Florida circuit for more than two hours. In 64 runnings of the race it's only the sixth time it has rained. Initially the Porsche team used the wet weather to its advantage, with the Pilet, Tandy and Estre car in the lead after 56 laps. With

Tandy at the wheel of the No.911 car and Bamber in second place in the No.912 contender, things were looking good. The red flag came after 66 laps thanks to an absolutely flooded race track, and the field was directed back to the pits.

Two hours later the cars were back out, and on a drying track the No.911 car held the lead to the seven hour marker, with the No.912 car following in its tyre tracks. After 116 laps, though, the leading RSR, with Estre at the wheel, collided with a Corvette in turn 13, ending its race in a tyre barrier.

Christensen inherited the lead spot in the No.912 car, but facing now-dry conditions he was unable to maintain the lead. Makowiecki took the wheel of the 911 RSR at the next pit stop while running fifth, making up a position to fourth, Bamber moved the 911 up to second place, but ended the race in third spot just five

seconds off the race leader. Dr Frank-Steffen Walliser, head of Porsche Motorsport, said: "We can be very pleased with third place today. The race was tumultuous with many caution phases and a break of more than two hours – it was difficult for everyone. Unfortunately we too were a victim of the rain."

Briton Nick Tandy said: "I drove my whole stint in the rain and we were leading for most of it. Our car was really good. It's a pity that we couldn't turn it into a fitting outcome."

His team-mate, Kévin Estre, spoke of the race-ending incident: "I battled against the Corvette for the lead spot. We both overtook a GTD vehicle and I was determined to stay in the front. That proved to be the wrong decision at that moment. There was water in the corner on my racing line and I spotted it too late. I should have braked earlier and let the Corvette







pass. I'm sorry for my team, which had worked so hard, and for my team-mates who drove fantastically so that I could take the 911 RSR out on the track and continue the race in the lead."

Michael Christensen was positive, despite the 911's seeming lack of pace in the dry: "Those were 12 exciting hours. None of us made a mistake and the team supported us with a super strategy. Our vehicle had a great setup that worked perfectly on a wet and dry track. In the end it wasn't quite enough, but we can live with that. The season has only just begun."

The result sees Porsche maintain second position in the manufacturers' classification. Sebring marked the first running of the 911 RSR with modifications designed to comply with new aerodynamics regulations, it remains to be seen whether these are having a detrimental effect on its performance.

## RACE RESULTS

### GTLM class

1. Gavin/Fässler/Milner, Chevrolet Corvette, 235 laps
2. Auberlen/Spengler/Werner, BMW M6, 235
3. Makowiecki/Bamber/Christensen, Porsche 911 RSR, 235

10. Tandy/Pilet/Estre, Porsche 911 RSR, 116

### GTD class

1. Segal/Nielsen/Balzan, Ferrari 488, 229 laps
2. Klingmann/Curtis/Freiberg, BMW M6, 229
3. Potter/Seefried/Lally, Audi R8, 229
4. Farnbacher/James/Riberas, Porsche 911 GT3 R, 229
5. McNeil/Keen/Jeanette, Porsche 911 GT3 R, 229

## POINTS STANDINGS

### GTLM

#### Drivers

1. Millner, Fässler, Gavin, Corvette, 72 points
2. Bamber, Christensen, Makowiecki, Porsche, 62
3. Auberlen, Spengler, Werner, BMW, 60

9. Estre, Pilet, Tandy, Porsche, 46

#### Manufacturers

1. Chevrolet, 70 points
2. Porsche, 62
3. BMW, 60

#### Teams

1. No.4 Corvette Racing, 72 points
2. No.912 Porsche North America, 62
3. No.25 BMW Team RLL, 60

10. No.911 Porsche North America, 46



## GT PORSCHE TRACK EVENING 2016

**Brands Hatch in Kent will once again host the *GT Porsche* track evening on Tuesday 28 June 2016.**



*GT Porsche* will host a track gathering of like-minded Porsche enthusiasts in June, welcoming those both participating and spectating, at Brands Hatch circuit in Kent, a favourite amongst professional, club and amateur track drivers. The Brands Hatch Indy circuit will be opened exclusively to a field of Porsche cars and with an open pit lane and a realistic decibel limit, our evening is both affordable and popular with Porsche fans from all walks of life.

A real favourite amongst track drivers, the Brands Hatch Indy circuit is surprisingly difficult to perfect, with double apexes at both Druids and Clearways. The lap also features the exhilarating swoops and dips of Paddock Hill Bend, adding to the excitement. Taking to the track will be both older and newer Porsche models, from track-biased 944s to fire-

breathing 911 GT3s, Boxsters, Caymans, 968s, and air- and water-cooled cars, creating a colourful and diverse sight on the Kent circuit's glistening asphalt. After a briefing by the Brands Hatch team and a couple of sighting laps behind a safety car, the throng of Porsche cars assembled will be free to take to the track, coming and going as they please throughout the evening.

All levels of driver are welcome on this event, instructors will be on-hand at all times to offer advice and one-to-one in-car tuition (for a £25 fee). For the novices, of which there are often several, this event provides breathing space with which to learn the circuit and how best to extract their car's potential, pushing beyond that which would be possible on the road. Those who come merely to

spectate are able to grab a cup of coffee from the track's pit facilities, then sit and watch from wherever they please – even the pit wall itself. Our event always boasts a relaxed and enjoyable atmosphere, and from the feedback we receive everyone involved enjoys the experience.

Following registration, your car will be noise tested, so please pay special attention to the noise limit (102 dB(A) static, 92 dB(A) drive-by). Call Brands Hatch direct on 0843 453 3000 if you require further clarification on the event.

The evening costs £129, additional drivers cost £25, passengers £10, and helmet hire is £10. To book your slot visit: [www.msvtrackdays.com](http://www.msvtrackdays.com) or follow the link pinned at the top of the *GT Porsche* Facebook and Twitter accounts – we'll see you there!







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**In what year was Piloti founded by a sport shoe designer and racing enthusiast?**



Terms and conditions: No employees of Unity Media, Piloti or any other associated companies may enter. Entrants must be aged 18 years and over. We reserve the right to disqualify any entrant for any reason and without notice in accordance with the competition rules. Closing date for entries is 12 May 2016.



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

## So you've always fancied the idea of restoring an old Porsche? Peter Morgan recalls three 911 SCs he's appraised recently...



I've been fortunate to drive no fewer than three classic 911 SCs over the past month. The SC was produced from August 1977 to July 1983 and was Porsche's first serious attempt at a world market car. It was a big step forward compared to the previous mainstream 2.7-litre Carrera models as it used the then-new Turbo's 930 engine without the turbo, and continued the policy started two years earlier of fully zinc-coated the bodyshells.

The 1975-'76 Carrera 3 was the prototype for the SC and trialled many of the refinements that made the SC such a big step forward. The first SCs were fairly breathless and offered only 180hp with such delights as an exhaust air pump to improve emissions. By 1980, power had crept up to 188hp and from 1981, peaked at 204hp. These last models are the ones to look for today and they can be most easily spotted by the model year identifier in the Vehicle Identification Number (VIN) being B, C or D at the tenth digit – the earlier cars have a different VIN system.

The 930 engine benefits from the

*"The skill in buying this type of car is identifying whether the restoration really is a top quality job"*

flexibility of the reliable Bosch K-Jetronic fuel injection system and most cars have the well proven 915 gearbox with its classic Porsche synchromesh. Body styles came in coupé and targa only, although a cabriolet launched late in production in 1982.

This brief introduction to the model range defines a Porsche that has become a sensibly priced choice (in classic 911 terms, anyway) for those seeking a keeper that is fun and won't lose chunks of value over time. Nevertheless, the dilemma for potential buyers is what kind of car to buy.

The first of the SCs I've seen recently had a 'make as new' restoration and was very good, but because it was a UK RHD car with a traceable history file, it made it a really nice example and not surprisingly it was offered at strong money: £65k.

There are even more expensive options for ultra low mileage examples, but as the SC lives in the shadows of arguably more speculation-prone models, there is a risk that the return on capital could be disappointing. The skill in buying this type of car is identifying whether the restoration really is a top quality job and not a cheap makeover. The best cars will have been subject to almost entire structural rebuilding, with at best, only skim filler in some panels, but not the heavy filler seen in cheaper restorations. After a torch therefore, the best tool the prospective classic car buyer can have is a paint depth gauge. My first car was a good job and with a solid UK provenance, it represented a good deal for the 'hands off', non mechanical type of keeper.

The second car I saw needed work, but was a Florida import so had a good

shell. The engine and gearbox weren't so bad, but it did need work on the interior. The car was offered at around £30k with miles that suggested 70k (but without any real history to back this up). Mileage on these cars is largely academic as it's so easy to adjust or replace the speedo. What you're looking for is its condition and overall desirability. It's easy to overlook future costs like new carpeting and retrimmed seats that can easily run up a bill of £3k (+VAT) and by the time you're finished detailing the rest of it, you'll have spent £5k. You'll probably find out later that the engine is down on compression, which could confront you with another bill for say £8-10k, and that the notchy second gear will need £3k to fix. Car restoration is defined by the phrase 'while you're in there', so trust in your specialist and a sensible contingency fund is essential for a happy outcome. So my second SC was a usable but higher maintenance proposition (and it was probably 15 percent overpriced).

The third was a full-on project. It was up for around £20k and looked quite good from two metres away. It was a UK RHD car and needed a lot of work. Some might be tempted by a potential bargain like this, but the reality was that it was a money pit for the unwary. It was overpriced and after it gets its full body restoration, engine/gearbox rebuild, new brakes, suspension and interior, there wouldn't be any change out of £30k. Around 15 years ago, SCs like this would have been broken for spares. Today, there's only a marginal prospect of covering the costs even if you plan to do the majority of the work yourself. If you plan to hand the car to a restorer, you're not going to make money on resale any time soon.

We all think we can do more with a classic car than we actually can, but in some cases you need motivation, large pockets and plenty of free time to do it. Deciding what you want from your classic can be the difference between enjoying the experience and despair ○

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





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**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)

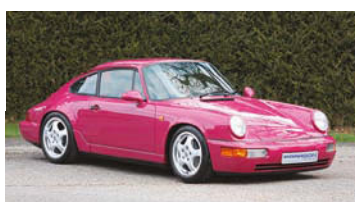
**£249,995**



**911 2.4 S (LHD)**

Maritime Blue • Triple Tone Leather Bucket Seats • Manual Gearbox • 17" Magnesium Cup Wheels • 93,656 km (58,195 miles) • 1992 (J)

**£209,995**



**911 Carrera RS (964 LHD)**

Rubystone Red • Triple Tone Leather Bucket Seats • Manual Gearbox • 17" Magnesium Cup Wheels • 79,487 Km (49,390 miles) • 1992 (J)

**£199,995**



**911 2.0 S (LHD)**

Silver Metallic • Black Half Leather Sport Seats • Manual Gearbox • 15" Fuchs Wheels • Rare Short Wheelbase Model 1968 (F)

**£174,995**



**911 Carrera 3.2 Speedster**

Silver Metallic • Burgundy Leather Sport Seats • Manual Gearbox • 16" Fuchs Wheels • Turbo Body • 29,334 miles 1989 (G)

**£139,995**



**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**



**911 Turbo (993)**

Midnight Blue • Marble Grey Leather Sport Seats • Manual Gearbox 18" Turbo Wheels • Electric Sunroof 65,458 miles • 1995 (N)

**£99,995**



**911 Carrera 4 S (991)**

Basalt Black • Black Leather Sport Seats PDK Gearbox • Touchscreen Satellite Navigation • 20" Carrera III Wheels 9,226 miles • 2013 (63)

**£79,995**



**911 GT3 (996)**

Arctic Silver • Black Half Leather Bucket Seats • Manual Gearbox • 18" GT3 Wheels • Air Conditioning • 11,096 miles 2005 (05)

**£74,995**



**Boxster 2.7 (981)**

Agate Grey • Black Leather Seats Manual Gearbox • 20" Carrera Classic III Wheels • Heated Sport Seats 26,114 miles • 2013 (63)

**£34,995**



**911 Carrera 2 S (997)**

GT Silver • Black Leather Sport Seats Manual Gearbox • Satellite Navigation 19" Carrera Classic Wheels • 36,012 miles • 2005 (05)

**£29,995**



**911 Carrera 4 S (997)**

Seal Grey • Black Leather Seats Manual Gearbox • Satellite Navigation 18" Turbo II Wheels • 50,992 miles 2004 (04)

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# BASIC INSTINCT

Porsche has resurrected the R badge with a model that takes the 911 back to basics. Andreas Preuninger tells us this is the exciting analogue 911 we all asked for...

Story: Simon Jackson Photography: Porsche





**B**igger, harder, faster, stronger. It's the way of the world these days and it's certainly been the general ethos behind the 911's unstoppable evolution through the past five decades. Until now. At this year's Geneva Motor Show, Andreas Preuninger, the head of Porsche's GT department, drew a hypothetical line in the Porsche sand. 'This far, and no further'. With the 911 R, Porsche has pulled the parachute; it has, in many ways, performed an abrupt about-turn by creating a back to basics 911 that puts fun

before figures – something we haven't seen for a decade. Porsche has listened and built the 911 we all asked for: an analogue car in our modern digital world.

At the back end of last year I wrote some words about the 991 GT3 RS – a fantastic, wild, animalistic car but one you'll really only get the best from if your last name is Webber and you live at the foot of a race track. That car's obstinate performance, 500 horsepower, mind-bending torque and science fiction levels of downforce are the stuff of computer games. It's

the result of talented people chasing tenths of a second on their stopwatches. An incredibly accomplished car without doubt, but it takes an incredibly accomplished driver to get the best from it, one likely travelling at incredibly ridiculous speeds. Is the 991 GT3 RS too good? Could that really be a thing? Possibly. It's a nice problem to have if you're Porsche, I suppose, and it's one the brand is clearly well aware of, but it puts it in a somewhat sticky situation. At what point does more of everything become too much? Preuninger thinks Porsche has reached a



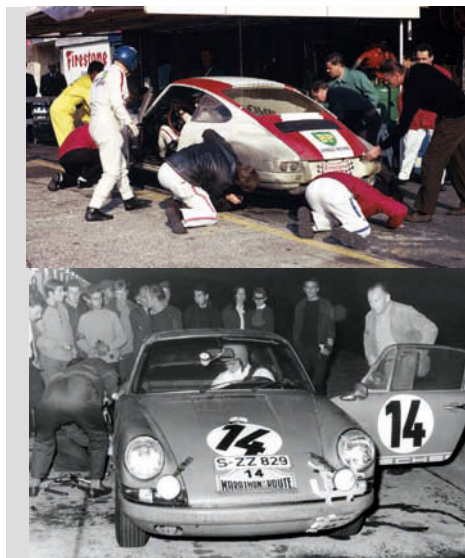
crossroads. "Today's performance cars are getting quicker and quicker but they lose a bit of their character in doing so," he told us. "Despite being awfully quick, some of our customers are looking for a car that gives a more visceral driving pleasure, a more engaging drive. They want to get out and be totally satisfied and happy."

So, on the one hand you have an existing bunch of Porsche vehicles for the racers; highly proficient, utterly breathtaking performers completely at home on the track for which they were designed. On the other, you'll find a number of Porsche purists lamenting the loss of the analogue era of 911, bemoaning nanny modern driver aids, an increasing list of comfort and convenience features, and the general bulk their favourite sports car had now gained as a result of keeping up with the flow of modern technological expectations. Add to that the idea that some 911s now have turbocharged hearts where traditionally once there had been a normally aspirated engine, and there was a chance things might have gotten ugly all-round. Luckily Andreas Preuninger is three things: a charming man with some blinding clout at

Porsche; a chap capable of delivering the goods with impeccable timing; and (most importantly) an out-and-out Porsche purist. He's one of us, and his latest creation, the 911 R, has neatly diffused a potentially destructive situation. By all means read the specification and statistics for this car but be under no illusion that this is a 911 we can simply summarise in numbers. It is a far rarer beast these days: a modern car with character and soul, a vehicle designed with passion, and a 911 that is happy to throw the Porsche form guide out the window. If you were to build the 991 of your dreams then this, so they say, is the engaging machine you would attempt to create. And perhaps most importantly of all in a world of tenuous links to past glories, it does not dilute Porsche history by taking the R name, originally used in 1967, in vain. "The return of the fun factor is the basic strategy behind the 911 R. We wanted to build a car that is characterful, that makes you smile, that is quick and agile," Preuninger said. "The R has a lot of effort put in to save weight, like the original R of 1967. R represents total devotion, looking for every single gram [of weight saving]. Back in the day they

were looking for a race car with a superior power-to-weight ratio. They took a race engine, like we do today with the RS and its race-derived engine, and they started with a normal bodied Carrera and took everything out of it. This formula has translated 50 years later to this R."

Based on the current 991 GT3, the 911 R ('R' stands for 'racing') takes its name and ethos from the original lightweight 911 R of 1967, a road-homologated racing car. The new limited run model (of just 991 examples) uses the naturally aspirated 500hp 4.0-litre flat-six engine from the GT3 RS. It is driven exclusively by its rear wheels, boasts a six-speed manual gearbox (hurrah!) and a lightweight body, resulting in an overall weight of just 1370kg. That's some 50kg less than the aforementioned RS making it the lightest 911 currently available. The new 911 R can launch to 62mph in 3.8 seconds, generates 339lb ft torque, and will reach a top speed of 201mph. Featuring a specially developed rear axle steering system and a mechanical limited-slip differential, Preuninger's team has ensured the R delivers direct turn-in and plentiful traction. Its 410mm (front) and 390mm (rear)



## 911 R HISTORY

Born out of Ferdinand Piëch's experimental department in 1967, the 911 R was originally developed for the purpose of competing in rallies and GT racing. The lightweight machine took as its basis much of the 911S and utilised a race-bred 210hp 2.0-litre mill that shared DNA with the engine found in the Carrera 6. Plastic rear windows and a thin gauge front screen featured on the first four prototype cars along with aluminium and fibreglass panels. Vented brake discs, a wider rear track and matching wider wheels were other specification highlights. The 911 R looked surreptitiously normal yet it was quite the wolf in sheep's clothing...

The 911 R debuted at Mugello in July of 1967 where it was raced to third place behind a duo of

910s. That was swiftly followed by overall victory in August at the 84-hour non-stop Marathon de la Route at the Nürburgring, and a set of endurance time and distance records at Monza in October. Porsche gave the green light to produce 20 more examples and the production for these series produced cars varied a little from their prototype forebears and the essence was the same, they weighed just a touch over 800kg making them the lightest 911s ever built. Further competition success would follow for the 911 R (third place in the Corsica Rally of 1967, overall victory in the Tour de France of 1969, and it also competed in the Targa Florio). The 911 R almost certainly paved the way for the RS cars of the 1970s...





## 2016 911 R

**ENGINE:** 3996cc flat-six DFI

**TRANSMISSION:** Six-speed manual, rear-wheel drive

**BRAKES:** Porsche Ceramic Composite Brakes, 410mm six-piston callipers (front), 390mm four-piston callipers (rear)

**CHASSIS:** Lightweight MacPherson struts (front), lightweight multi-link (rear), PTV, PSM, mechanical rear differential lock

**WEIGHT:** 1370kg

**PERFORMANCE:**

**Power:** 500hp @ 8250rpm

**Torque:** 339lb ft @ 6250rpm

**Top Speed:** 201mph

**0-62mph:** 3.8-seconds

**Fuel Consumption:** 21.2mpg

**Co<sub>2</sub>:** 308g/km

**ON THE ROAD PRICE:** £136,901



*"People have the attitude that their cars are too valuable to drive now, that's a negative thing... I really hope everyone who gets a 991 R really uses it"*



Porsche Ceramic Composite Brakes come as standard equipment, while staggered 9x20-inch and 12x20-inch centre-locking forged aluminium wheels (the rears have a lower ET to ensure they sit right out at the arches) shod with 245/35 (front) and 305/30 (rear) tyres make contact with the road. An optional single-mass flywheel offers a high-revving and ultra responsive engine, and there's also a double-declutch system for aiding downshifts.

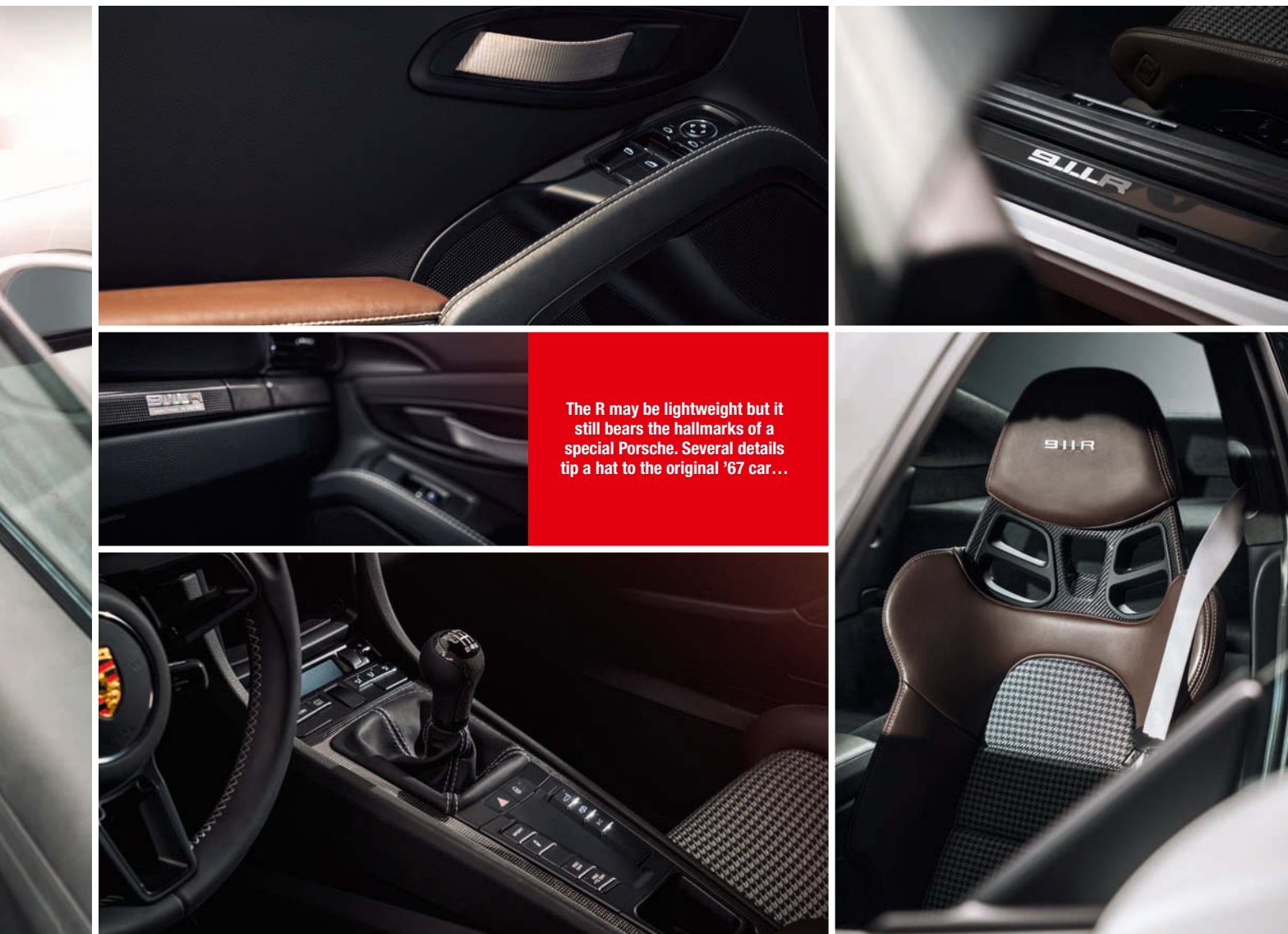
Like the GT3 RS before it, the R has been sent on a crash diet. Its bonnet and front arches are constructed from carbon fibre, the roof is made from magnesium, while the rear screen and three-quarter windows are plastic, not glass, akin to the 1967 original. The interior has been stripped of its rear bench and features reduced sound insulation. The air-conditioning system and PCM audio system have been deleted, although customers can reinstate these. They can delete the coloured stripes while they're ticking boxes, too. Porsche's nose-lift function is optional. Externally the R might take its lead from the GT3 upon which it is largely based yet it also appears closely related to the 911 Carrera,

too. There's no sign of the GT3's rear wing, instead you'll find a retractable spoiler borrowed from the Carrera model. A diffuser located underneath the R performs the aerodynamic role of the GT3's rear decklid spoiler. The front and rear styling is GT3-esque in its execution; a new lip spoiler sits at the sharp end to direct the flow of fresh air. Inside carbon fibre 918 bucket seats are trimmed with Pepita tartan as a nod to the original 1967 car. Door pulls replace the plastic handles, as you'd expect, while a unique 360mm GT steering wheel and a short-throw gear lever provide the driver's main touch points with the car. Carbon trim and a build number plaque finish things off nicely. In short the 911 R is dedicated to the purity of its driving experience. It's a Porsche designed to connect with the purists on an emotional level, reworking the genes of its original incarnation for a modern era without becoming overburdened with contemporary tech. We haven't driven it yet but Preuninger does a good job of communicating its ethos, and it's one we like the sound of: "For a 911 its agility is unparalleled: it is more agile than a Cayman GT4 and yet it's a rear-engined car. The

calibration of the rear-wheel steer is completely different on this car. In conjunction with the calibration of the front steering, we have never had a better calibrated 911. What this car can do [as a result] is mind-blowing. That, in combination with the visceral noise and the mechanical components in the car, creates this old-school motoring feel that you normally only get with classic cars at a lot lower speeds."

Preuninger continues to wax lyrical about this car in such a fashion that implies more than just a passing connecting with its philosophy; it's clear this is a car he truly believes in: "The magnesium roof, the lightweight gizmos from the (GT3) RS, in conjunction with the wonderful RS engine, it's the same as the original but interpreted 50-years later... this car deserves the R badge." Unlike some recent Porsche offerings, this car clearly does bear a resemblance to its historical namesake. To ensure those specification parallels translated to the driving experience Preuninger revisited some pretty special old Porsches including the likes of the 993 and 996 RS, the 997 RS 4.0-litre and, as the museum in Stuttgart doesn't own an example,





The R may be lightweight but it still bears the hallmarks of a special Porsche. Several details tip a hat to the original '67 car...

Porsche 'borrowed' an original 1967 911 R (worth €3.5 million!) from a private collector to enable Preuninger to drive it and subsequently capture its essence for this new car. And Preuninger is crystal clear about the kind of driving experience the new 911 R provides: "You notice that the car is lighter, that the settings of the dampers are different, but it's very competent on bumpy roads – without yaw roll, which is very important as no body movement creates the sports car feel."

"This car is set up to shine between consecutive curves with a lot of short-shifting between second and fourth gear. You don't need the redline all the time. It's not long geared so the first four gears are similar to those in the GT3. Fifth and sixth are a little bit longer than those in the GT3, but when you use fifth and sixth you're going pretty fast. This car doesn't have any wings so it has little resistance. It's very efficient in the wind and actually a tad quicker than a GT3 at high speeds despite having a reduction in its gearing. I think a seventh gear would only harm the driving experience."

Having no seventh gear saves 1kg in weight,

too, which isn't to be sniffed when you're chasing savings at this level. Preuninger's eyes shine when he talks about this car. It's a subject he could passionately discuss all day long. "Downforce was a big factor," he explains. "We needed to balance the car and keep it neutral, but with the little rear spoiler (that only comes up to the position of the Cabriolet model's spoiler) it was still lacking. We couldn't put a gurney on there because I wanted to keep it clean, but we couldn't do it technically either as the pressure on it at speed would damage the mechanism of the system. So we looked at the underbody of the car. Everyone – including all the LMP1 guys – were thinking that normally a diffuser doesn't work on a 911 because the engine in the back sits too low but we found a way. It took many nights in the wind tunnel to make it work, and it provides just the right amount of downforce to keep the car in check."

"The tyres mean the contact patch with the road is smaller than with the GT3 RS but it has more power at the wheels because on a manual gearbox you have less drivetrain losses so you get more power to the wheels. You feel that the car

has 'zing'. It's a new driving sensation for a modern car. Despite being a modern car it offers an old-style driving experience but without feeling old fashioned!"

So there's an overriding nostalgic vibe being communicated with this car, but at the same time we should be under no illusions that this trait might equate to an underachieving Porsche. "This car feels so good to drive; it's so engaging and rewarding," Preuninger enthuses. Part of that thrilling driving experience is the result of new dampers, yet despite the GT department's experimentation with them, the 911 R retains GT3 spring rates. "We've had it on the track for calibration purposes but we don't think too many customers will use it as a track tool. We built the car to be enjoyed more on deserted country roads within legal limits, that's what it's set up for and that's where the car shines. I would love to take this car to Wales: long winding curvy roads, a little bumpy... great for this car."

Much of what this car represents is sure to filter its way through the rest of the Porsche range given time. Its back to basics ethos focused on the thrill of the drive is good news for Porsche

*"Believe me I like all the cars  
I have created, but this is the first car  
that I want to own personally and keep forever"*



enthusiasts and proof that this low volume (in the grand scheme of things) car maker has not forgotten its roots, wants to keep its fans happy and ultimately remains dedicated to producing very exciting cars. Want evidence of this car's importance? Try this. "If we find out this manual gearbox is the driving factor behind people buying the R, we'll fit it into the next generation of GT3," Preuninger said.

Perhaps the most interesting telegraph from Porsche is the abhorrence for the current trend of people buying Porsches solely for financial gain. It's another show of support for you, the genuine Porsche enthusiast, yet the question remains as to what influence Porsche can really have on the used car market? "I like to produce cars for people that use them: I don't see much sense in a car sitting around in a garage waiting to become more valuable. Come on, this is a car, it needs to be driven! But some people have the attitude that their cars are too valuable to drive now; that's a negative thing for them as they don't use them anymore," Preuninger replied. "I really hope everyone who gets a 991 R really uses it. I think if this car has some stone chips, some signs of usage, then that's sexy. We don't want to encourage speculative buyers, people who buy the cars just to make money. The situation has got a little out of our hands. In the former days of the 996 and 997 everyone really used their cars hard. The UK is a motoring country. This car is tailored for the use that UK



GT customers put on their cars."

The 911 R is undoubtedly an ice-cool, contemporary Porsche, one truly created in the vein of cars of old. A limited numbers affair it might be (fewer than 40 examples are rumoured to be destined for UK shores) but importantly its arrival promises much to be excited about for future Porsche products. At a time when enthusiasts are struggling to embrace the winds of change, with many fighting the concept of a four-cylinder Porsche, the new 911 R will prove a welcome addition to the 911

range. The model's philosophy is given further significance by Preuninger's gushing final endorsement: "With the 991 R I think we will reach a lot of customers who stopped buying modern cars because they think they're too boring, not visceral enough, and not engaging enough, so they turned to the classic market. Believe me, I like all the cars I have created but this is the first car that I want to own personally and keep forever..." So, this is a car that Preuninger wants to own himself, and to be honest that says it all... ○





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Dawie Gous was first lured to a race track in 1958, the old Grand Central Circuit in South Africa, where he instantaneously developed an urge to go racing. Together with his close friend, surgeon Tielman Roos, they purchased a Porsche 356 Speedster to take on the competition. Sadly, Roos died before they could lay any rubber on the track. Dawie persevered with the scheme and went on to partner with John Love. They finished second in their class at the 9-Hour held at the Grand Central Circuit in 1959.

Ecstatic with the result, Dawie scouted for a more track-focused machine. It came in the form of a Porsche 550 RS, which he purchased from the illustrious Ian Fraser-Jones. In only their second attempt Dawie Gous and John Love secured the

9-Hour at the Grand Central Circuit in 1960 – the final year the race was held at that circuit.

In 1961 the 9-Hour was moved to the world famous Kyalami Racing Circuit and Dawie together with Neville Austin were able to secure the double. Dawie also managed to clinch two 6-Hour victories at Pietermaritzburg's Roy Hesketh Circuit in the RS. By 1963 Dawie was in need of an even quicker Porsche, so he bought Hermann Muller's 1963 European Hillclimb Championship-winning Porsche 718 RS61. To avoid import duties Dawie had the car shipped in bits and pieces so it was consigned as spares. Clever. The RS61 was potent enough to ensure that Dawie was crowned South African Sports Car Champion in 1963. The very car, chassis number 718-076, was sold by RM Auctions in the US in January 2007 for \$800,000.

In 1965 Dawie Gous knew that he was in the twilight of his racing career and wanted to remain competitive for what would be his last season. He had heard of the success that Elva had achieved in US with the Mk7 chassis fitted with a Porsche four-cam engine. He proceeded to enquire about the Mk8 but was informed that it would not be ready for some time, but that a Mk7 chassis was virtually complete and could be shipped in a couple of weeks. Dawie had his own ideas of the engine to be fitted and needed an Elva with the raised engine cowlings to accommodate the four-cam he was planning to install. The factory therefore had to fabricate a domed bonnet lid, to suit the vertical fan engine Dawie had lined-up. It turns out that of the 19 Elva Porsches made, only two were sold with the raised engine lid, the





# The Perfect Partnership

The Elva Porsche Mk7 was the first time the Porsche marque appeared on a chassis made by another manufacturer. It enjoyed a colourful racing career before almost vanishing into obscurity...

Story: Johann Venter Photography: Michael Schmucker and RacePics

car here in our pictures being one of them.

The Elva, finished in South African racing colours of green and gold, reached South African shores on the 21 May 1965, at a cost of R4000, the equivalent of £1200. Dawie's trusted master mechanic who had been with him virtually throughout his racing career, Al Gibson (his son Alastair became a chief F1 mechanic at Benetton and BAR Honda from 1999-2008) duly installed the RSK four-cam engine and 718 gearbox – just in time for its maiden outing on 5 June 1965, achieving second place at Kyalami. Dawie managed three wins that season at East London, Lourenco Marques (Maputo, Mozambique) and Kyalami. At the end of the season Dawie sold the Elva to 'Luki' Botha. In 1966 Dawie partnered with 'Luki' for the 6-Hour at the Roy Hesketh

Circuit, and for the very last time for the 9-Hour at Kyalami. Unfortunately, in both instances they dropped out. After 'Luki' Botha the Elva changed hands at least eight times before being restored – more about that later. In order to fully appreciate the Elva Porsche, it warrants taking a closer look at Elva, the manufacturer.

Last year Elva celebrated its 60th anniversary. The name is abbreviated from the French term *elle va* meaning *she goes*. Frank Nichols, a keen racer, started the Elva company in Bexhill, Sussex, building racing chassis with smooth elegant fibreglass bodies. These cars were primarily sold without an engine and gearbox to privateers, and race teams participating in sports car racing and Formula Junior. Elvas enjoyed relative success in the mid-Fifties to mid-Sixties in the US. They

were a popular choice due to the light and sturdy tubular space frame construction, which could be fitted with a variety of engines including Coventry Climax, BMC, DKW, Ford (Cosworth twin-cam), Osca, and Lotus. It didn't hurt that the Elvas also came at an attractive price point.

Elva's progression as a business, however, was turbulent to say the least but the chassis it produced was top-notch. It was even commissioned by McLaren to produce the Elva McLaren Mk A1 for McLaren customers. Elva extended its offering in 1959 to include road cars, the most well-known being the Courier Mk2. In terms of elegance and sheer beauty it has to be the Elva BMW GT 160, which is based on the Mk7 S BMW sports racing chassis with an Italian Fissore body – only three were ever produced.





Porsche racing privateers and teams were left wanting somewhat with the onslaught of British racing cars on American race circuits in the early Sixties. By the time the Elva Mk7 debuted in the US, Porsche racing drivers had been enthused with the success Elva was having. Carl Haas, Elva importer and racing privateer, became all too aware of the frustration of Porsche racing drivers and teams with the dated 718 RSK and RS60. As an aside, Carl Haas went on to be one of the most prolific motorsport team owners in the United States: winning three SCCA (Sports Car Club of America) Formula 5000 championships, four Can-Am championships, and another in Super Vee. Haas also campaigned cars in Formula One and the NASCAR Nextel Cup and Busch Series. Carl got in touch with the Midwest Porsche distributor Oliver Schmidt to broach the idea of marrying a Porsche engine to an Elva chassis, in consultation with Frank Nichols. As the old adage goes, necessity is the mother of invention, and sometimes it is more desperation.

Together they approached Porsche with the idea. Their proposition was given further impetus as the USRRC (United States Road Racing Championship) allowed sports cars with

under two-litre engines to compete against cars with more powerful engines in the 1964 championship season. Consensus was reached with Porsche and Frank Nichols was immediately entrusted to modify the Mk7 chassis by widening the tubular space frame at the rear to accommodate the broader Porsche engine. The Mk7 chassis, designed by Keith Marsden, was 20lb lighter than the Mk6 chassis and, crucially, stronger through the use of the fusion welding process.

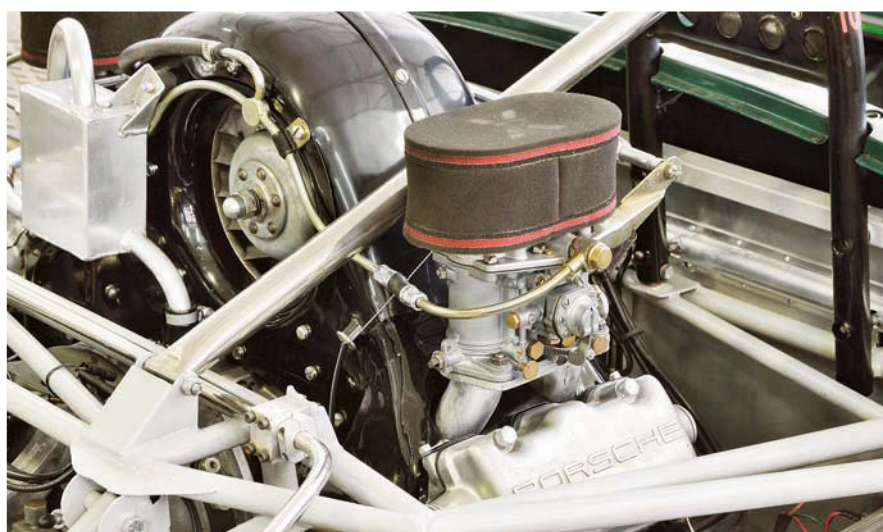
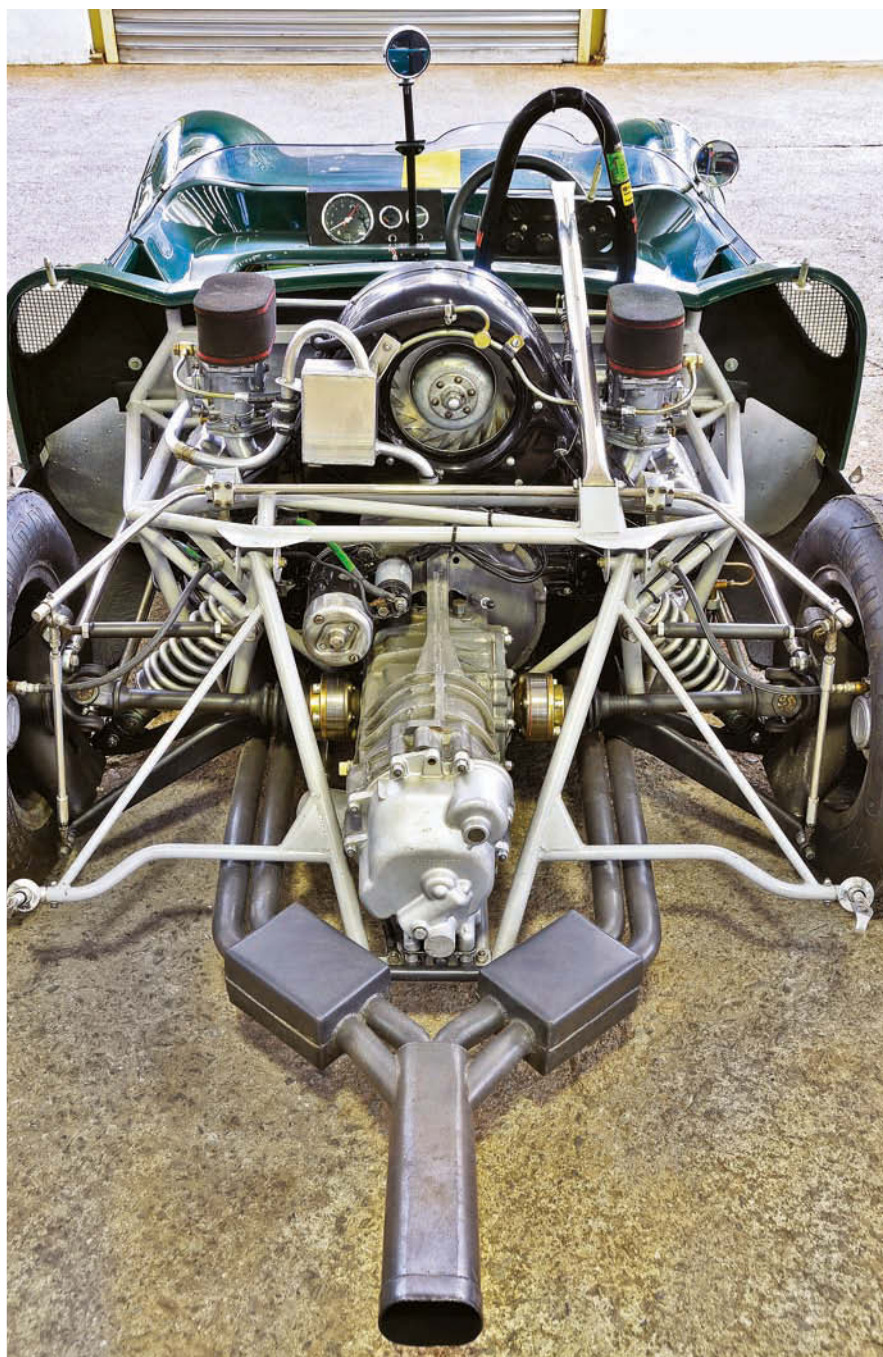
The flat-four, four-cam, 1700cc (type 547/5A) engine fitted with a horizontal cooling fan (as used on the F1 Porsche) was slightly modified to fit into the chassis, and the 718 five-speed gearbox was updated somewhat to suit the Elva package. Dual 48 IDA Weber carburetors were installed, coupled with twin plugs per cylinder, a dual ignition system and a roller bearing crankshaft – producing around 185hp. To keep the Elva snaking around the track a sophisticated suspension setup was developed, comprising unequal-length wishbones, magnesium uprights, coil spring dampers, and an anti-roll bar at the front. The rear comprised of unequal length trailing arms with a single top transverse link and





lower wishbones. Momentum was achieved through 13-inch magnesium wheels fitted at each corner to keep weight down. The Elva only weighed 970lb, ensuring maximum agility, while Girling disc brakes provided the stopping power needed. Of interest is that around the same time Elva partnered with BMW to produce Elva BMW racers based on the same Mk7 chassis.

Stuttgart sent development driver Herbert Linge to test the Elva in the UK in August 1963 to ensure that Porsche would not be embarrassed by this experiment. Notably this was the first time that the Porsche marque was used on a chassis made by another manufacturer. Even before the engine had time to cool down, it was summarily shipped to the US to partake in the penultimate race of the USRRC: the Road America 500 at Elkhart Lake. To everyone's surprise the Elva won the 500-mile race outright, beating much faster competition in the form of Shelby Cobras, Ferrari 250 GTOs, and Lotus 23s. More surprising is that on 8 September Augie Pabst drove part of the race for the Mecom Racing Team (while Bill Wuesthoff was behind the wheel of the Elva) in a Ferrari 250 GTO sharing the drive with Roger Penske.





Of the 27 Mk7 Elva chassis built, 19 wore Porsche badges. This one had run a Lola T212 body for much of its life...



The crowning glory is that co-driver Augie Pabst had not even sat in the car, let alone driven it before the race. The following year at the Road America 500 Joe Buzzetta and Bill Wuesthoff only managed to secure the under 2.0-litre class. In total 29 Mk7 chassis were developed, of which 19 were badged Elva Porsche, and of the Mk7 S (with bigger aluminium brake callipers and larger twin radiators) 41 were produced, 15 carrying the BMW insignia.

To understand the next chapter in this Elva story, we meet up with Clive Winterstein. Clive comes across as a rather laid-back, unassuming gent but beneath that persona lies a prodigious motoring enthusiast, collector and restorer. Behind a nondescript little shopping centre in a leafy suburb north west of Johannesburg is where he keeps this Elva. Wandering into Clive's garage/man cave is like stumbling onto the Lost City of Eldorado. It is awash with memorabilia: posters, banners, pictures, old signs, newspaper clippings, trophies and even an old petrol pump, and that's not counting his fabulous collection of Stuttgart metal. Granted they might not all be from the Porsche stable but





they are all Germanic and from Stuttgart, so we'll forgive Clive this time.

The first thing we want to know is how Clive first came to know about the Elva Porsche? "I was 18 years old at the time with very few prospects. Nevertheless I was keen to see the South African Sports Car champion, Dawie Gous take on the 9-Hour at Kyalami in '66 – in his latest Porsche from England," he replies. "Avoiding the entry fee, I leaped over the fence and took some photos; one of them happened to be of the very Elva I own today. That was the very last time I saw it until I bought it!" Talk about fate.

So who it was that Clive eventually bought the Elva from? "I attended a talk that Dawie Gous was giving at the Porsche Centre about his racing career. Whilst there I got wind that Howard Robinson had bought it from Don van Staden. That must have been in the early 2000s." The story goes that Don was selling his Lola but upon closer inspection by Howard he discovered that it was, in fact, an Elva Porsche. "Howard was an exceptional South African motor racing historian and one of the founding members of the HRCR (Historic Racing Car Register) of South

Africa," Clive expounds. "The rear chassis is shaped in a unique way to accommodate the exhaust and this is what led Howard to believe that it was an Elva Porsche." So nostalgia set in and Clive obviously wanted to buy the car he had seen Dawie Gous race in at Kyalami all those years ago. "I made Howard an offer without even having seen the car. Unfortunately he had no intention of selling the Elva; he did, however, commit to giving me first option if it ever did come up for sale."

By 2012 Howard had set his sights on the Peter De Klerk Special – a Formula One car. "Peter De Klerk built that car in his garage," Clive continues. "It was based on a Cooper. One of his best results was at Kyalami in '63, where he finished third behind two Works Ferraris. He was a highly respected racing driver and one of the first people Colin Chapman employed at Lotus. As a result Howard was true to his word and gave me first refusal. I jumped at the chance. He had owned the car for approximately eight years but had done nothing to it. Fortunately, though, he had secured a Mk7 body from Roger Dunbar at Elva."

By the time Clive got hold of the Elva it had

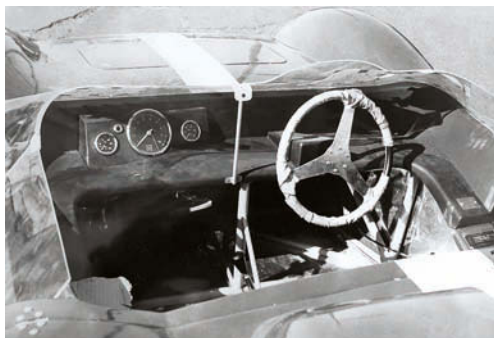
truly been through the mill. It had not been raced as an Elva for many years and been decked out in a Lola T212 body for most of its life. It had been fitted with a variety of powerplants ranging from a Coventry Climax 2.7-litre Lotus twin-cam to a Mazda rotary engine. The chassis had been hacked and reshaped to accommodate whichever engine was going in next. A monumental task lay ahead in restoring the Elva. "Fortunately Howard introduced me to Andrew Thompson who is a legend when it comes to restoring historic race cars," Clive continues. "He raced in the '70s for the Gunston Chevron team in the South African Driver's Championship and later went on to become the team manager," Clive recalls. "He is an absolute perfectionist. He is fanatical about his work and does everything himself."

How long did the restoration take? "Three long years, plenty of research, time and effort, never mind the green stuff invested into resurrecting the Elva," answers Clive. "There was a substantial amount of rust which had to be removed and new sections fabricated. All the magnesium suspension uprights had cracks and so had the wheels, so I sourced new uprights and wheels



Top right: The first outing at Kyalami in June 1965, the Elva finished second  
Middle: (Colour) Luanda GP, 1965, the car finished fifth behind four Ferraris. (B&W) Gous collecting the Elva at Cape Town docks, 21 May 1965  
Bottom: Clive Winterstein saw the Elva for the first time at the 9-Hour at Kyalami on 5 Nov 1965; he took this image





Left: Dawie Gous and his master mechanic, Al Gibson, shortly after the RSK four-cam engine and 718 gearbox were installed

from Lee Chapman Racing in the States.

"In addition, a four-cam engine was found in France and a 914 five-speed gearbox with a limited-slip diff imported from the US. It was virtually impossible to find a 718 gearbox. Capricorn does manufacture a 718 'box but the price was astronomical. I got in touch with Carquip in the States, who informed me that it was common in the heyday of the Elva Porsche to replace the 718 'box with that of a 914. One was tailored to fit into the Elva chassis and adapted for my short track racing needs and shipped to South Africa."

The first shakedown was done in September 2012 at the Midvaal Raceway. "Andrew Thompson, Bernard Telanus, the actual test driver and I took the Elva down to find out if our hard work had paid off," Clive says. "I was absolutely ecstatic, over the moon. It is excellent on the braking and the road-holding is superb. But don't take my word for it, ask Bernard who also put the Elva through its paces."

For the last three years the Elva has been raced in the green and gold livery on the historic racing circuit (single seaters) throughout South Africa and has also participated at the Simola Hillclimb in Knysna. It's a truly remarkable story of a legendary car that has become part of Clive Winterstein's life the minute he saw it back in '65, and lives on making history in South Africa.

Before we leave, though, we have to take the opportunity to find out about some of the other stunning examples from Zuffenhausen Clive owns that are staring us in the face. "I became a 'Porsche man' when I was five years old," he grins. "My dad got back from Germany and told me about this wonderful car he'd driven which was virtually touching the ground. My first car was actually a Beetle, although my first Porsche was a 356C. It was a bit of a rust-bucket but I managed to sell it for a profit. By the '90s I had gotten my second 356. Unfortunately the front half was from a B model and the rear from an A. Needless to say I got rid of that in a hurry!" The

cabriolets that are sitting in Clive's garage look in immaculate condition, though. "The white one is a '63 356C model with the T6 body and features disc brakes," he explains. "I bought it from Gavin Rooke who, as you know, is the founder of Dutchmann (*GT Porsche 04/16*). The red one also has a T6 body. It is a 356B from 1961. It's a lovely car. I've toured most of Europe in it." The 356 racer looks the business and we love the bucket racing seats. "I bought it on eBay before the Elva was track-ready," Clive says. "I've redone the motor a couple of times but nothing beats the thunderous exhaust note and sheer exhilaration of driving my 356 Carrera 2 four-cam."

Clive has so many Porsches but too little time. He's currently working on a 356 Speedster, amongst other restorations. It was the very first to come to South Africa in 1956. Unfortunately it was in a fire which has made the restoration more complicated. Fortunately it is very near completion. It sounds like another Clive Winterstein Porsche story worth looking into... ○



THANKS  
Ron Silke





This factory RHD and UK supplied RS Touring is finished in its original Grand Prix White with Blue Script and wheels, and has had just one owner since 1988. The car is highly original and retains its original owner's manual, tools and the incredibly rare, original Carrera RS supplement. In November 2015 the car had a comprehensive, major "engine out" service to ensure that this car is in need of absolutely nothing and is presented in excellent condition. £595,000

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This early RHD Mark 1 GT3 was delivered in February 2001. Black Pearl Metallic with a Black leather interior. The vehicle has been maintained at regular intervals, with a total of 12 stamps in the book. The car has covered 31,000 miles from new, comes complete with all books and its spare key. £69,995



#### RHD Porsche 997 Gen 1 GT3 RS

This RHD example was delivered in 2007 and is presented in the fetching scheme of black with orange script and wheels. Internally this RHD GT3 RS has full fabric bucket seats with an orange roll cage. This wonderful RS has covered a total of 18,500 miles from new. £134,995



#### LHD Porsche 997 Gen 1 GT3 RS

Delivered to the Monaco Porsche Dealership in October 2007 this LHD 997 Gen 1 belonged to the legendary Petter Solberg, the only man to have claimed both the FIA World Rally Championship (WRC) and the FIA World Rallycross driver's titles. A UK Registered, one-owner car, that has covered 10,700 miles and has recently received a Major Service at Porsche GB. £139,995



#### LHD Porsche Carrera GT

This EU specification example was originally delivered by Porsche Centre Leipzig. Finished in the classic GT Silver livery, combined with a Tan interior along with air conditioning and a Premium Sound System, which were fitted as optional extras. The car has just returned from Porsche Great Britain, having undergone a no expense spared "engine out" major service which included replacing all four tyres. £624,995



#### RHD Porsche 356A Speedster

One of less than 30 RHD Porsche Speedsters. It has had just one owner since 1979 until now. Upon arrival in the UK, this remarkable car underwent a complete and comprehensive restoration at the 356 Porsche specialist Roger Bray. At the time of restoration an upgraded motor was fitted along with Rudge wheels. Finished in the exact original colour combination and arguably one of the rarest and most sought after 356s available. £POA



#### LHD Porsche 911 964 Carrera RS

This superb LHD example was completed in 1992 and is finished in Polar Silver with a Black interior with Grey Triple Tone bucket Seats. The car has covered an indicated 22,500 miles from new and is UK registered, it is currently available to view at our showroom based just outside London. A splendid condition unmolested car with all original metal panels and complete with tools and service book. £195,995

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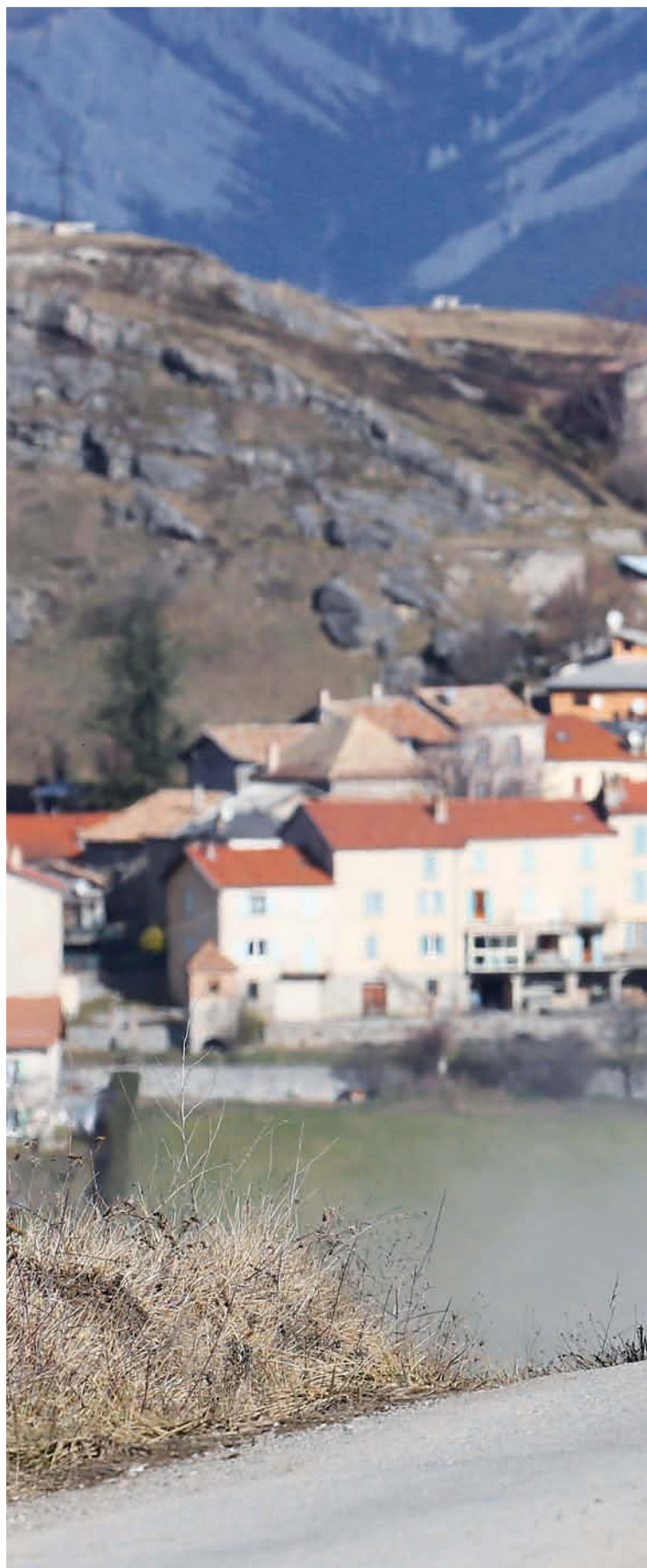


# SAGA HOLIDAY

The Rallye Monte Carlo Historique attracts a fair number of crews from Scandinavia – 24 out of 306 entries this year – and their prevailing winter climate means they have a natural aptitude for rallying. We follow the fortunes of two Norse 911s...

The power goes down and the wild man pilot of this rocketship, Mauritz Lange, is hovering on the outer edge of adhesion. Traction control? Get away! We're watching the action on an Ardèche stage of the Historic Monte Carlo Rally, the AC de Monaco's 19th classic incarnation of the FIA's WRC event, and it's a 300-car fest of bangers built between 1955 and 1980. No fewer than 55 of these are Porsches: 911s, 356s, 914s and 924 Turbos – a feast for Zuffenhausen fans. Snapper Fran Newman and I have been co-opted into two of the 911 squads – Mauritz Lange's Swedish enterprise with the ex-Rothman's team 911SC scout car (co-driven by Piotr Bany), and Norwegians Tore Johannessen and Tine Hallre in their Signal orange 2.2 911T – so we are observing the action from the inside. This includes service halts along the way and a total immersion in Scandinavian bonhomie in the bars for the daily debriefing. The rally lasts six days for long-range entrants – seven if you stick around for the results and the evening's swanky 'après rally' shindig in Monaco's Salle des Étoiles. There are six start cities: Glasgow, Oslo, Bad Homburg, Reims, Barcelona, and Monte Carlo itself (they do a huge loop out of Monaco while everyone else is thundering southwards). We've elected to go with Mauritz's team from Reims – we did Copenhagen last year – along with their service duo Johnny Nilsson and Peter Bergqvist, old hands on the Monte Historic themselves. Their VW Transporter van is packed with tools and 18 wheels shod with studded tyres. One by one, at three minute intervals the cars leave the dais outside Le Mairie, scudding across the cobbles and disappearing out of town.

When Mauritz goes, we leave too. We head south on the French B-road route that loops 500-miles south and southeast via Roanne, Montelimar and Gap down to the Principality for the first time. The first special stages at St-André-les-Alpes and Villars-sur-Var snap open drowsy eyelids. This part of the journey may take 20-hours but it's traditionally part and parcel of the Monte. By now the cavalcade is







Story: Johnny Tipler    Photography: AC de M, Mauritz Lange, Peter Bergqvist, Johnny Tipler and Fran Newman



united with starters from the other three 'short haul' cities and, after a fretful overnight stay in Monaco, the whole entourage winds northwest via three back road stages to Valence for an intensive four stages of Regularity rallying. That's a full day in the forested Ardèche mountains. Usually there would be plenty of the white stuff but this year there's almost none, just a smattering in the high forests but none of the roads are affected. False sense of security anyone?

We rendezvous with Tore and Tine. They've also started from Reims and are currently in the top ten. Most of the 911s sport distinctive colour schemes but their Signal orange 2.2T is as easy to spot as Mauritz's SC's Rothman's livery. We hang by a viaduct that provides shelter beneath its arches for service crews as well as a superb vantage over the transit road and the hilly Ardèche backdrop. The Norwegian 2.2T is one of the first to blast past, giving us a flash and a blast on the klaxons as it goes by. Even experienced rally spectators behave like twerps on the fringes of stages, and the blaring air horns at least give them a jolt. We saw silly spectators on several stages, not least the daunting Col de L'Écharasson that summits over the Vercors east of Valence. The serpentine rally stage is another one that's usually surfaced with hard-packed snow and ice, but there's nothing doing this year, sparing competitors from sheer drop-offs into trees. With better weather, more spectators cluster on the tricky corners. Spectator adulation is part of the Monte mystique. "It's not only in the villages where you've got loads of people who have come out to watch," says Tine. "That's the magic part about Monte Carlo – they are up in the Alps, maybe in a storm, and they'll sit under an umbrella if it's really bad weather and they'll jump up when a rally car comes by, and they wave you to go faster. That's the joy of Monte Carlo, the atmosphere, and that people are actually on every single turn throughout the entire rally. They're enthusiasts. They don't care about bad weather. They make bonfires. It's just mental. It's *blitzkrieg* and because of their camera flashes at night it's hard to see the road!"

Stages like Col de L'Écharasson are also Mauritz's natural habitat, as he explains: "I enjoy it most when we have a lot of space and a lot of snow. Then I start driving fast. Nobody else drives fast in snow, but this is my strong point." Sadly Mauritz is out of luck this year on that score. "When you're driving fast and you feel the car and the engine between 6000-7000rpm it's sensational. But you must not touch the steering wheel; you're driving with the engine, on the throttle, and this is the best car in the world when you have a lot of power, a full differential lock, and a 100 litres in the tank. This does make it a little bit heavy on the front, though, and my rack has only two-and-a-half turns lock-to-lock. You must concentrate because at 200km/h it starts to get a little scary!"

The Rallye Historique follows much the same route and stages as the FIA WRC event and locals are flushed with excitement from the big time bonanza that







passed though a week earlier. The flags and bunting are still in place in many villages. The place to be in Valence is the Bistrôt-des-Cléracs, whose patron regularly campaigns a BMW 2002. Our respective Scandacrews are known here and there is suitable joshing and sploshing with the staff. For four hours cars continue to roll into the checkpoint at the municipal Champ-de-Mars gardens, and six hours later they begin to head off again, going west into the Ardèche stages once more. This year St Bonnet-le-Froid is back on the calendar – so aptly named on its exposed plateau! Mauritz swaps from winter tyres on Fuchs to studs on steels, while Tore uses studs for the whole time. By comparison, Mauritz uses 16 of his complement, Tore just four. The nucleus of this set of stages is the little market town of Ste Agrève which is chock-a-block with rally cars grinding in and out of the cattle market time-check. Baguette-clutching shoppers stop and stare. The afternoon's Regularity stages involve belting along country lanes, then it's back to Valence for another hardcore evening. Covering stages involves leapfrogging one or two so we are well placed on the third one to snap the cars as they snarl past.

Next morning we make for Puget-Théniers via Sisteron and Barrême, over the Haute-Alpes and Alpes-Maritimes along the fabulous Route Napoleon with its hairpins, impressive rock formations and netted cliffs. Tore and Tine have been in the top ten on several stages; they even led a couple. They are inveterate rally addicts, these guys, tackling the Midnight Sun, Winter Challenge and Tour de Corse without batting an eyelid. Tore, a schoolteacher, owns nine 911s. Mauritz too is a 911 connoisseur, having done the Historic Monte eight times, including being







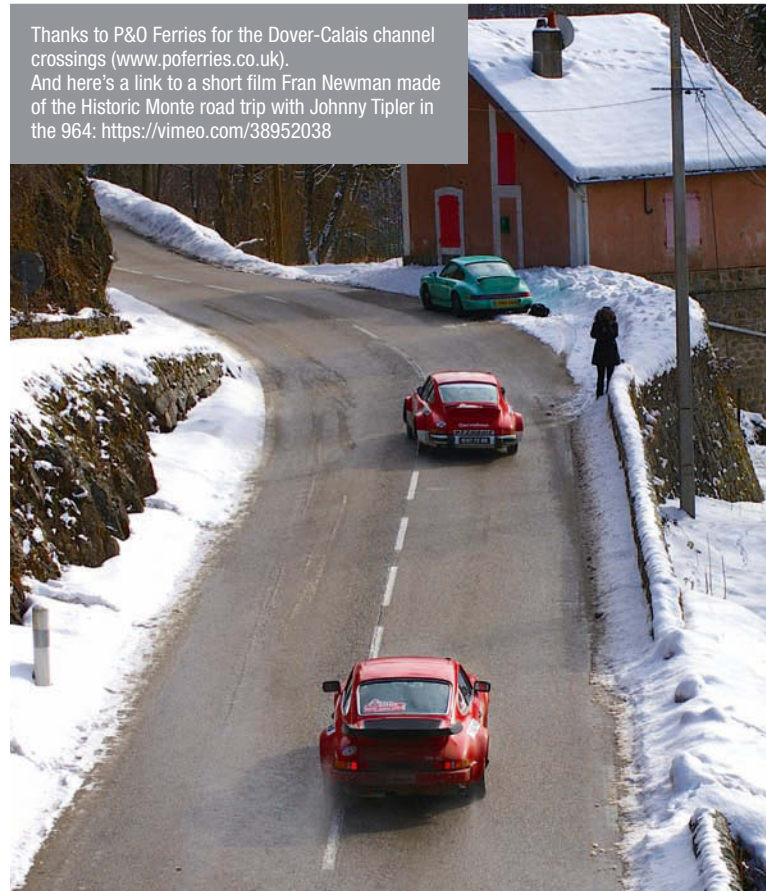
co-driven by Lars Helmér (winner in 1969 and '70 with Björn Waldegård) in his own 911T. The Rothman's SC will be superseded by a 930 rally car, though worryingly he still waxes lyrical about a Lancia Stratos.

After a brief few hours respite in Monte Carlo, one by one, at roughly one-minute intervals, the entire entourage departs the rostrum by La Rascasse on Quai Albert 1er, heading up into the Alpes-Maritimes to Lucéram and Sospel. By night these are magical mysterious places, gateways to the endless hairpin lanes winding up to the La Bollène and Col-de-Turini stages. Here lurks bad craziness: braziers and thunderflashes, *crêpes* and *vin chaud* vendors. Last time Fran and I were up here at midnight a gang of yellow anorak'd Japanese fans got off on touching the rally cars as they careered by on the brink of disaster. It was a miracle no one got killed. On the way down a herd of shaggy longhorns blocked our way. This year the roads are mostly clear, though the first half of the field is confronted with fog and drizzle, ensuring a number of cars manifest battered corners the following morning. Tine and Tore are unscathed, though Mauritz has a few light scrapes. "There was only a little bit of ice on some corners over the top of Turini," says Tine, "and the rest was not very slippery at all, though it was a quite hectic four hours of hardcore rallying in the dark." Spectator interaction can be useful, as she elaborates: "There are four different ways to go down from Turini but the fans are blocking the two wrong ways so it's easy to see where you are supposed to go. They do that throughout the rest of the stages as well. Even if you know where to go, they still help you. They stand there pointing for every single car that shows up!" On the other hand, when I covered the rally in 2011, spectators had thrown snow onto the hairpins to liven things up a bit. Around midnight we call time and head back down to the Principality. By 3am the majority of cars are back in *parc fermé* and the mood is palpably one of elation as corks pop, tops flip, and crews hug and relax.

Results are posted by midday, and Mauritz and Piotr are classified 84th, while Tore and Tine are slightly miffed with their 37th overall. "We won our class last year, and we also won the male-and-female class," muses Tine, feeling they should have been higher. "Frankly, though, it's gratifying just to make it back to the finish." Overall winners are Daniele Perfetti and Ronnie Kessel in their Alpine-Renault A110 – rather fitting since Perfetti won the GT3 category of the British GT Championship in 2012 in a Porsche 997. There are 258 classified finishers out of 306 starters, and the highest Porsche is the '65 911 2.0 of Fabrizio Bentivoglio/Maurizio Torlasco in sixth place.

A final burger in Stars'n'Bars and after a session in the Tip Top, we depart Monaco at 3.30am. We elect to use the autoroute and swallow the €80-worth of tolls that will sponge. Eighteen hours later we're back in Blighty, licking our wounds. But actually, that brief blast of Mediterranean sunshine and warmth makes the whole thing worthwhile. It's why the Monte was invented in the first place – and why it's so popular with the Scandinavians ○

Thanks to P&O Ferries for the Dover-Calais channel crossings ([www.poferries.co.uk](http://www.poferries.co.uk)). And here's a link to a short film Fran Newman made of the Historic Monte road trip with Johnny Tipler in the 964: <https://vimeo.com/38952038>





*"You must concentrate because at 200km/h it starts to get a little scary!"*



## FLIGHT OF THE NAVIGATOR

The navigator's role as is fundamental to a good rally result as any amount of driver arm-twirling skill. Even though this is a classic car, the navigation apparatus is still way more sophisticated than when the car was in current production. Co-driver Tine Hallre explains the functions of the complex equipment she's looking at from her passenger seat in the 2.2T, going from right to left...

"This black box is my 'timetable'. I first adjust the speed while we're driving. At the same moment we start I hit zero. It will then start counting and show me what my trip meter is supposed to show me. So if my trip meter shows two less than this then we are two seconds behind (or 20 metres, which is about two seconds). This is my most crucial piece of equipment. Every 100 metres I need to tell my driver if it's matching.

"Next is what's called La Solution. I enter the speed we are supposed to be driving, zero it at the same time, and it will beep if we're on time. This is connected to the VH trip meter, and it's also a kind of a timetable: it will beep if these two match, and it will also show me if we are three seconds ahead or two seconds behind. If we're behind then the driver must go as fast as he can until it starts beeping, then we're back on time and he cools down. When we're on time it beeps continuously, which is really annoying over a whole week! This one is connected to the trip meter, and if I hit this button it will go ten metres ahead. So we adjust the trip meter to show not quite enough because the driver is turning all the time so we need it to show just a little bit less. I can adjust it as many as six times during one stage. I will hit this button and I'll double-check with my notes that this is correct."

Tine employs a routine methodology: "We get a countdown at the beginning of a stage. As we start I set all the trips to zero (and my back up stopwatch, too. I also have a timetable printed out on paper like they did in the old days as a back up). So I've got my stopwatch and I can see the distance and on my timetable I look through the distance and after say 12.3km my stopwatch is supposed to show me this, and I compare the two and then tell the driver if we're two seconds ahead or behind."

The official ring-bound routebook is also key. "Basically I'm working with the routebook reading the 'tulips' and calling the corners for him. For every single point in the book I write down if we're on time or ahead or behind. When we get the results I can compare the penalties that we actually get with my notes. It's also useful to see where the controls are located, so it's interesting to see whether they put controls ahead of the hairpins or behind them; usually they put the controls at the top, but sometimes they also put them at the bottom, just to make sure that you can't be ten seconds ahead at the bottom before the hairpin starts. They'll check you at the bottom of a hill and also on the top and also usually on the other side of junctions, so at junctions and hairpins we like to stay two seconds ahead so that we're actually on time when they take the time. I'm calling every note to the driver all the time, and if we see that we're approaching the end of the stage I'm actually giving him half seconds just to make us really on time at the finish line because we know they have a control there."

Phew! She had her first 911 drive on a transit, and if she's as good at helming as she is in the navigation department she has a promising future behind the wheel as well.



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Simon has worked across several automotive publications over the past decade

## Andreas Preuninger confirms the 991 GT2 RS, a manual gearbox for the next GT3, and a six-cylinder engine in any future GT4...

We all know Andreas Preuninger by his colloquial title 'Mr GT3' but in many respects that's selling him short; he's always happy to comment on all aspects of the Porsche business, not just its GT road car programme. As always the Porsche Motorsport boss was on good form at the Geneva Motor Show as he regaled a handful of journalists with the kind of information on future Porsche products that can only induce a cold sweat from any Porsche PR or marketing expert within earshot. Those professional brand builders really shouldn't worry, though, as Preuninger has a talent for being suggestive without endangering the profile of the company he holds so dear by letting any cats out of the bag.

Naturally the subject of the 911 R was a hot one on Preuninger's lips at Geneva, and you can read more about his views on that car on page 20 of this issue. What he also made clear was that the 911 R, should it prove as popular as we all know it will, is certain to influence the future of the 911. The 911 R was created as a mule during the development of the 911 GT3, and it's clear Preuninger and his team were fans of its manual, analogue prospect. As such the next 911 GT3 (yes, there will be a second-generation 991 GT3), will come with the option of a manual gearbox as a wink to the purists. The manual gearbox is certainly not dead for Porsche, of that you can be sure.

Preuninger also confirmed that we should expect a new 911 GT2 RS and that lightweight, turbocharged GT car is likely to arrive at the end of the second-generation 991's lifecycle, which we presume to be around 2019. "We've always had a GT car with a turbo that was a different model line, for a different customer group," Preuninger said. "We wouldn't want to ditch that model, that beast, that animal – people want that from a GT2."

Talking of Rennsport Porsches, what of a GT4 RS? Are we likely to ever see



*"For us GT guys I think we're going to stick with six-cylinder atmospherical engines, because our customer group want an atmospherical engine"*

one? Preuninger appears open-minded about the idea, but he's clear that such a model is not planned at present and therefore is not likely to be considered before the next generation of Cayman. Reading between the lines, Porsche is concerned about where such a car might sit within its model line-up too; might it usurp the 911 GT3? It's highly likely... And what of the rumours of a four-cylinder turbocharged 718 GT4? Preuninger says future Boxster and Cayman GT cars will still use six-cylinder normally-aspirated engines. "There have been turbo Porsche

engines since 1970, so we have huge expertise with turbo engines and atmospherical engines, so we really can afford to have both in the product programme," Preuninger said. "For us GT guys I think we're going to stick with six-cylinder atmospherical engines, because our customer group want an atmospherical engine."

The main "limiting factor" in all this as Preuninger puts it, is his department's engineering capacity for taking on extra work. We've seen a beautiful glut of new GT cars of late, but their creation is typically tackled in

turn: "We're a small team. We used to do one project after another: when a GT3 was ready we would begin work on a GT3 RS. Now we have to do everything in parallel but there is a certain limit because it's the same people involved in the projects."

All this means that there is usually a two-year time span from the start of engineering any new GT project to when its production begins. The 991 GT3 RS and GT4 were born in parallel, but that's a relatively new concept for Preuninger and his team, and it means they're working to absolute capacity most of the time. Does this phase him? Of course not, he says that it merely drives creativity within his workforce.

For every juicy piece of information that Andreas Preuninger happily divulges, you can see in his eyes that there's plenty of fascinating stuff he's not sharing. That means Porsche fans can rest assured that there are some really exciting times ahead... ○

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



# FIRST KLASS

Performance-Porsche's restoration arm, KLASSIKER 911, has built its first 'Retro' 911 from a former SC Targa. This is a backdate project that in many respects owes its existence to 1970s custom car culture.

Story: Simon Jackson  
Photography: Matt Woods

It's highly apparent that Richard Illand, a director at Performance-Porsche, has an inherent passion for the past and that nostalgic fervour has undoubtedly influenced the car you see here: the first KLASSIKER 911 Retro. In his teens, Richard got into the custom car scene during its Carlos Fandango heyday of the late 1970s and early 1980s. By his early 20s he was driving a Ford Pop and that car gave way to a bunch of wild modified creations and saw Richard ending up mired in the Cal-look VW Beetle scene. From there it was just a small hop into the world of air-cooled Porsches, although not in the sense you might be expecting. Richard's Covin 911 Turbo replica was as unreliable then as it would be unwelcome in these pages today, but it did neatly transition him into the purchase of a few bona fide classic Porsches.

His involvement with the Porsche marque was born, and it would never wane, but how did it sprout a business? "After a major house renovation of a Grade 2 listed building, Boothtown House, which was owned by the cats eyes inventor Percy Shaw, I needed to sell the house and we found ourselves with a bit of spare cash," Richard explained, "I used a large chunk of the money to start up an independent Porsche business with a friend who had worked for Porsche. To cut a long and frustrating story short the friendship ended and I lost everything I put into it the business."

Undeterred and armed with a small loan, Richard started all over again from scratch, this time with new business partner, Andy Smith, and Performance-Porsche Ltd in Brighouse, West Yorkshire was born. Through the support of a loyal customer base, Performance-Porsche became a success for Richard and Andy, and by way of repayment the two fought to provide a largely unparalleled level of customer service. Today the business has grown to operate out of a 10,000 square foot premises with a team of 11 busy yet committed and talented staff, and two brands: Performance-Porsche for servicing, maintenance, engine building, and paintwork for everything from 356s to current Porsche models, and KLASSIKER 911 Ltd for its restoration work.







*"It took 160 man hours to complete the roof.  
The job is certainly not for the faint-hearted"*







"Air-cooled cars have always accounted for a good proportion of our day-to-day work, however since the massive upsurge in 911 values we are now doing more major restorations," Richard said. "KLASSIKER 911 came about when one of our customers asked if we could build him something very different and wild a couple of years ago. At that time Andy and I had a rather special and rare 911 tucked away to restore ourselves in the future. After some persuasion we decided to sell the car on the basis we would be commissioned to build it. That car was to be the first launched under the new name of KLASSIKER."

The car in question was a 1979 911 SC Targa which, remarkably, had been fitted with a turbocharger when it was just a year old in 1980. It's likely the conversion would have invalidated any factory warranty at that stage, so the owner was either a hardened enthusiast, or a maniac. Judging by the car's original bill of sale which details the deletion of any badges alongside other unique stipulations, and the listed trade-in of his 1977 911 at the dealership, it's likely that he was in fact in full control of his faculties.

The boys at Brighthouse were to ensure the fellow's old car and its interesting history were continued in the same vein. As such, the specification for the first KLASSIKER 911 was drafted up and a build price agreed, and that's where Richard's hot rod roots came back into play. Given the agreed upon budget it was logical that the car would be rebuilt using fibreglass panels, but the KLASSIKER team were in no mood to compromise here so metal would be the order of the day. "The car was to echo the stunning beauty of the Singer cars yet at a fraction of the cost," Richard recalled. "It wasn't going to be easy, we had neither the budget nor resources

of Singer, however we did have passion and the ability to produce one-off 911s to a budget."

Richard cites the work of Singer, and the 'build them, drive them, have fun' attitude of Magnus Walker, as being strong influences. This drove him to ensure each KLASSIKER car shared a common look and yet were unique at the same time – and that included their paintwork. "The build for the turbo Targa was taking a little longer due to changes to its bodywork specification; it had to be very wide and low," Richard explained. "Our customer had seen a green concept Targa that Singer released and asked for his car to look like that. But during the fabrication stage, the owner had bought himself another project car and it was agreed that we would drop this project in before the wide-body car, so it transpired that it was this that became the KLASSIKER number one car."

This new car started out as a 1980 SC Targa, yet at some point in its life it had been altered to

mimic a 964 with genuine body panels. It was in need of major restoration work so it was stripped back in order for the extent of any corrosion to be effectively assessed. The budget was once again tight, but a plan was hatched to build this new car in the vein of the modern Porsche backdate projects commonly doing the rounds. Despite a short four-month build window, KLASSIKER embarked upon one of the most labour-intensive alterations possible: turning the Targa into a Coupé.

"I now realise the job is not the most straightforward of conversions!" Richard laughed. "It took 160 man hours to complete the roof work alone. We reckon we could do it in less than half that time with our next one, but it is definitely not a job of simply cutting and welding – it's certainly not for the faint-hearted."

The roof itself was donated from a damaged 964 with a sunroof, so the roof hatch was duly welded up and finessed with KLASSIKER's







English Wheel. Richard also dictated that for the car to effectively pull off the pre-'73 aesthetic it must have its oil pipes hidden inside its sills, and it would also have to sport narrow steel arches both front and rear. It is attention to detail like this that Richard prides himself on.

"A lot of the cars that I have looked at are really nice but the attention to detail is where I am particularly stringent, I am very strict on panel gaps and alignment," we're told. "There have been areas where time and financial constraints have dictated the finished result on this car – such as the long hood which uses the original bonnet and front slam panel. I have seen so many where the extension has been made with sections of steel and a bucket of filler. Ours had to be done correctly with one piece of steel, double-skinned and edged so that even close examination would have you scratching your head. A lot of neat touches have been incorporated into this car, such as the custom oil cooler and thermostat along with the hidden stainless braided hoses."

This car doesn't conform to any particular model of 911, rather KLASIKER's aim was to highlight the beauty and style of the early cars in a timeless fashion. Mission accomplished, right? Its ride height remains stock at the rear, with the front subtly lowered for that classic nose-down stance. Reproduction 5.5x15-inch Fuchs occupy each corner, refinished to replicate the style of early 911 wheels. And, importantly, the car's entire running gear is now either new or refurbished to factory 3.0-litre specifications by Andy in order to keep within the budget.

"Detailing an SC engine isn't easy but we have pulled off an amazing finish with every part being either painted, plated or polished, and the results speak for themselves." The budget didn't allow for a gearbox rebuild but the unit has been reliable with the addition of fresh oil and a new clutch. And we doubt you've failed to notice the paint job either, itself rather unique: "The colour was based on a 1970 Porsche shade of metallic green. We mixed up our own variant with slightly more yellow and a bit more metallic, this gives the car the gorgeous green hue that it now proudly wears," Richard said.

Inside, the plan was to keep things simple and true to the early 911 vibe, however once more the extra mile was travelled. Bespoke mild steel doorcards and handles were crafted, while reproduction Recaro-style seats were fitted and a roll of basket weave vinyl purchased from Southbound trimmers for the rear seats, door panels and dash fascia. A period 1970s Blaupunkt radio was installed (with modern iPod and Bluetooth connections), while a personalised rev counter is another alteration that nods to the custom car scene. Pre-'73 buttons and knobs have been fitted on the dash itself, the position of the glovebox knob has been moved to the centre, while modified early indicator stalks and a period dash top with a speaker grille appear too. You'll spot a multitude of chrome splashed around both inside and outside for the true period effect, as well as KLASIKER fitted titanium bolts on various parts of the car – purely for personal satisfaction.

"This car is KLASIKER 911 Retro number one. In order to make each car unique we are naming them either as KLASIKER 911 Retro (for our backdate style cars), KLASIKER 911 Custom (for

the hot rod and outlaw-style builds), or KLASIKER 911 Resto (for those receiving an original restoration)."

Each car receives personalised body plaques with its unique number and date of creation, and in addition each will come complete with its own hardback book produced to commemorate its build. KLASIKER wishes to keep all of its bespoke creations under its watchful eye for years to come, so there is aftersales support on offer to customers too.

Work is now back on track with the turbo Targa project, it is set to be the first KLASIKER 911 Custom, and with word of a second Retro build based on a 964 Targa already underway (amongst other exciting Porsche projects), you can expect to see more of the KLASIKER name throughout the coming year and beyond, and we think that's a good thing. We'll leave the final word for Richard: "We welcome anyone who wants to see what we do, have a look around and meet the staff. The kettle is always on and we extend our Yorkshire hospitality out to anyone who wants help, advice or to discuss the next KLASIKER 911 project." ○



Contact: [www.performance-porsche.co.uk](http://www.performance-porsche.co.uk)



*"Attention to detail is where I'm particularly stringent,  
I'm very strict on panel gaps and alignment"*





# KLASSIKER

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## Reinventing the 911

The Porsche 911 has become an icon that many companies think they can improve upon by tinkering with the original design. Many of these reinvented cars only copy Porsche factory design features, so there's no great breakthrough. Some of these companies earned their spurs the hard way and spent years servicing and repairing Porsches, and I do believe that their knowledge and advice is worth a lot in the remanufacture of a 911.

Some companies, though, seem to have come from nowhere and are suddenly claiming to be experts in retro-

**BRITEMAX**

**Star Letter**

style Porsches. Reinventing the classic 911 seems to be the path to get rich quick for some companies but I believe that the established Porsche specialists are the people to turn to if you want something different, and it's probably a safer place to spend your money.

*Nicholas Smith, email*

*You raise an interesting point, Nicholas, perhaps you're not alone in this viewpoint? GT*

## 991.2 Carrera

I've just picked up a new 991 C2S so I was interested to read Colin Goodwin's view on the new 911. My own view is that this is one of the very best 911s I've owned, and I've owned around 20. I traded in a fifth-generation 991 Turbo S for the car and I'm happier with the new one that to me feels lighter (it is) and more nimble. The spread of torque is what does it for me, giving in-gear performance that is remarkable for a 3.0-litre engine. I agree with you that this is one of the best-looking 911s for some time as well.

Regarding your real issue of the engine's characteristics, you do have a point. Apart from the sports exhaust (that is probably synthetic) there isn't a great deal of character, just a huge slice of ability. I'm about to take delivery of a 911 ST from PS Automobile in Germany – I think this

car will give me exactly what you describe as the perfect 911.

*Trevor, email*

*Glad you're pleased with your new toy, Trevor. We'd love to see the ST some time. GT*



## Lively livery

Greetings from SoCal – great magazine! In your August 2015 issue you wrote a nice article about the Porsche Classic Centres in Hatfield and Leeds. Among the pictures was a white 991 GTS: it was decorated in a livery paying homage to the #23 917. I'm considering a similar treatment for my new white GTS myself!

*Chris Giordano, email*

*We'd love to see the finished result, Chris. Good luck! GT*



## Have Your Say

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A photograph of a bright yellow Porsche 911S sports car parked on a gravel road. The car is shown from the rear three-quarter view, highlighting its iconic design. The background features a dense line of bare trees under a cloudy sky, suggesting a late autumn or winter setting. The overall mood is classic and nostalgic.

# Porsche. *Personified*

Andrew Frankel celebrates the 50th birthday of one of his favourite iterations of Porsche sports car, the 911S, by taking one for a spin...

Story: Andrew Frankel Photography: Gus Gregory





Porsche has been building 911s for over 50 years as we all know. But when I think of the car that defines the true spirit of the 911 it is neither the original steel-wheeled 901 that floats into my brain, nor any of the increasingly bewinged 911s of the mid 1970s and later. I think of the 911S, the car that combined the car's simplest shape with its first performance tuned engine and, of course, those inimitable Fuchs alloy rims. Not the first, certainly not the last and few would argue even the best of the 911s, it is nevertheless the 911 archetype. And this year it is 50 years old.

It is interesting to remember where Porsche was in early 1966. Although the 911 had been shown – as a 901 – in 1963, production didn't start until late in 1964 which means the car had actually been on sale for just one full year. Moreover, the 356 that had sustained Porsche from birth had literally only just stopped being built, production ceasing late in 1965. That the 911 had potential was clear to see and its all-new six-cylinder engine was earning it a lot of fans. But that potential had yet to be realised.

The 911 was always designed to be developed. Indeed one of the reasons the car came with six-cylinders, overhead camshafts and trailing arm rear suspension rather than the four-cylinder pushrod in the 356s with their swing axles is that Porsche knew from the start it'd soon be asking more from its new design than anything influenced by the 356 would be able to manage.

Porsche's plan was to stretch the car at both ends, metaphorically speaking. Those who lamented the passing of the more affordable 356 would be satisfied by the introduction of the 912 with its related four-cylinder motor, but at the other end of the scale a rather grander gesture was required.

First and foremost, more power was needed and, again some perspective is required. In its earliest production form, the 2.0-litre 911 engine



*The car was one of the fastest standard production cars of any kind that could be bought in 1966*

produced a true 130hp. To give you an idea of how impressive an output that was, consider that contemporary big saloons of the time like the brand-new Rover P6 or Citroën DS20 struggle to extract 90hp from their 2.0-litre motors: Porsche extracted almost half as much again from the same capacity.

But the new 'S' version would need more power, even than that. Much more in fact. And Porsche being Porsche, it did not shrink from the task. New cams, bigger valves, a meatier compression ratio, different carburettors and a new exhaust system allowed more fuel into the engine where it would ignite with a bigger bang and exit more swiftly. Forged pistons and nitrided con-rods would ensure it stayed in one piece. The engine would spin more freely, happy to zing way past 7000rpm, and developing peak power at 6600rpm, fully 500 further up the scale than the standard engine. The aforementioned Rover and Citroën were all done by 5000rpm. That power output would stand at 160hp, a full 80hp per litre of displacement or, put another way, very little less per 1000cc than Ferrari suggested for its 12-cylinder 250GT coupé, and that was back in the day when Ferrari were not exactly sticklers for accuracy with such numbers.

Of course the company did not stop there. There were new ratios for each and every one of its five gears – one more than you'd find in the Ferrari – and you could order a limited-slip diff too. It became the first car anywhere near its category to offer ventilated disc brakes at all four corners and, indeed according to 911 oracle Karl Ludvigsen, the first on any European car. A rear anti-roll bar, re-rated dampers and those iconic lightweight wheels rounded off the picture.

The car was electrifyingly fast; a completely new level for a street-specification Porsche model and, indeed, one of the very fastest standard production cars of any kind that could be bought in 1966. Indeed this was the year the







*Every aspect of that cabin design, from the four-spoke wheel to the twin electric window switches are design icons*

Lamborghini Miura wowed the world and became known as the first true supercar. Its 0-60mph time was 6.7sec, while eminent racing driver and motoring journalist, Paul Frere, scorched there in an early 911S in just 6.5sec, two whole seconds faster than he'd managed in a standard 130hp 911.

And it just went on getting more powerful, in 10hp jumps. The first, to 170hp, came in late 1968 with the replacement of the Weber IDA carbs with mechanical fuel injection, the second a year later with an increase in capacity to 2.2-litres, courtesy of wider cylinder bores and another increase in valve size. Top speed was raised from 138mph to 144mph, another astonishing result for the era. The 2.2 stayed in production for two years until it was replaced by the 2.4-litre, though sticklers for accuracy will note that with a capacity of 2341cc, it's actually closer to 2.3-litres.

But although S versions now boasted an amazing 190hp, putting it in reality on at least an even footing with Ferrari's new Dino 246GT, for the first time Porsche's motivation for this development was not power alone. The extra capacity was actually there to offset what would otherwise be sizeable power loss resulting from the need to drop the engine's compression ratio sufficiently for it to run on poor quality fuel and lower nitrogen oxide emissions, in anticipation of both the oil crisis and Germany's planned reduction in the lead content of its petrol. With compression dropped from 9.8 to just 8.5:1, the 2.4-litre 911S would run on 91 octane fuel instead of the previous prescribed 98. Or, in the language of the day, two star rather than four. Under the circumstances it's fairly amazing





Porsche was able even to maintain power, let alone increase it. Indeed it would take ten years and a 3.0-litre engine before the standard production (rather than homologation special), normally aspirated 911 had more power than the 2.4-litre 911S.

Chris Knowles' example is the finest of the kind I have seen, largely because it is not perfect. Restored by Autofarm over a two-year period, the decision was taken to preserve and retain as much of the original car as possible, even if that gave it a more lived-in feel. Headlinings are almost always replaced because they show their age and once out of the car are almost impossible to refit. But refitted it has been, after hours of gentle heating and stretching. The original stickers under the bootlid have been retained, as have the carpets. So the car looks, feels and smells real – like the 44-year-old machine it is, not a tool room copy created in 2016 with hardly any original parts. It is perfect in its imperfection.

But I still worried about driving it, and not just because we'd insured it for an amount of money that even a couple of years ago you would have scarcely believed. Uppermost in my mind was the fact that I've been spoiled rotten when it comes to early 911s, the last two I borrowed from Autofarm: a 2.7 Carrera RS and a 2.8 Carrera RSR. The last 'normal' 911 I drove from this era was the beloved dog-eared bitsa once used as a daily driver by Colin Goodwin in which sat an engine of indeterminate size and origin. And that was probably a decade ago. Would it feel quick, alive, intimate and interesting as I'd hoped, or would it just be quaint, slow and as someone I once knew would

put it, 'a nice car for somebody else'?

In fact you don't even need to start it up to be charmed by it, especially if you're of an age and mentality that meant when these things were new you spent as much time as you could peering through their windows. Every aspect of that cabin design from the thin rimmed, leather bound four-spoke wheel to the twin electric window switches in the door are design icons to me. There are still useless defrost levers between the seat, that shapely gear lever (though I'd have preferred the earlier, more awkward but elegantly arranged 901 transmission with its race-inspired dog-leg first) and of course those fabulous, large, simple and exquisitely beautiful dials with the rev-counter quite correctly at the front and centre of the stage in proper Porsche tradition. I even love the floor hinged pedals and do not understand to this day why so many people struggled to get on with them. All I don't much like is the driving position and then only because it is offset in right-hand drive cars.

The engine catches in an instant. I can remember years ago borrowing a similar car overnight for a classic car group test and emerging the following morning to discover it and all its rivals had turned into ice sculptures in the car park. While colleagues struggled to judge how many pumps of the throttle, how much choke and time might be needed to coax their carb-fed engines from their sub-zero slumbers, I just leant in, turned the key and heard the engine fire seemingly before the first turn of the crank. Such are the joys of even early fuel injection.

You can argue long and loud about which precise flat-six makes the most appropriate sound for a 911, but to me none does the job

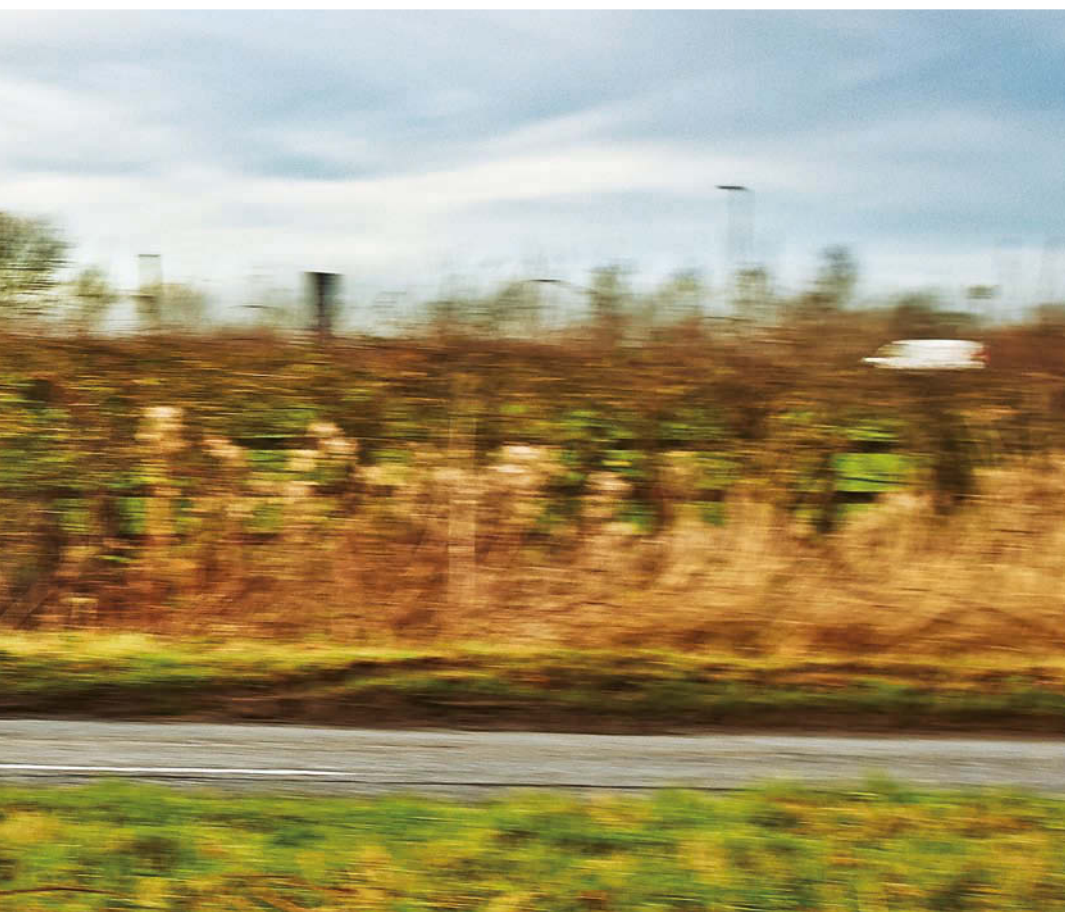
better than an early, air-cooled injected engine. Certainly others sound more exciting – even my old SC on triple choke Webers and SSI exhausts to name but one – but the purest is here.

A quick prod into first. These 915 gearboxes span the range from adequate to awful and no two feel the same, but this is certainly one of the better ones. The clutch is gentle, the wheel feels perfect in my hands, all the dials are pointing in the right direction and we are rolling.

As the oil heats through I ponder the strange sense of privilege now pervading the cabin. What's remarkable is not how special this car feels, but that it does so without being a whizz-bang limited numbers homologation hot rod. This 2.4-litre 911S was, and is, an absolutely standard production model but it's as clear as the nose on your face why Porsche thought it the ideal sire for the 2.7RS. The RS is quicker, but the feel, that sense of drinking a concentrated shot of everything a Porsche sports car should be, is the same.

I'll tell you something else: it handles beautifully. Owner Chris Knowles has wanged the engine past 7000rpm as is entirely permissible, but even stopping a little short of that mark there's enough get up and go here that once you've stopped savouring its searing engine note and perfecting your gear shifts, it can really give the chassis some work to do.

This was the last generation of 911 to have the same size tyres front-to-rear. As I write, I'm just back from driving the new 911 Turbo S which has fully six sections more rubber at the back than front – a 305 versus a 245 – but 45 years ago a 185/70 VR 15 Michelin XWX at each corner did just fine. Or did it?







With many thanks to Autofarm ([www.autofarm.co.uk](http://www.autofarm.co.uk)) and Chris Knowles for all their help with this feature

*You feel connected to this car in a way you just don't in any modern standard production machine*



We all know the reputation. Sneeze at the wrong moment and you'll be punching holes in the scenery before you can say 'oversteer'. Except it's all rubbish. Yes you can get yourself into trouble and I'd not want to commit to a quick wet corner and suddenly finding I needed to slow in a hurry, but if you obey the age old 'slow in, fast out' rules, there is nothing to fear here, wet or dry. Indeed because Porsche had not yet decided to tie the rear end down with a relatively wider footprint, the car understeers far less than later air-cooled 911s (like SCs and Carreras) and feels far better balanced. And because there's really not much grip you can use the power at corner exits not to broadside the car across the road, but just to nudge the back loose enough to make the car feel like it's flowing over the surface of the road. With steering providing feel of a kind you don't find these days, and with that noise behind your ears, you feel connected to this car in a way you just don't in any modern standard production machine.

This is a very thought-provoking car. Even though it feels fully capable of matching the figures claimed for it, it's still not a very quick. There's not much grip either. As a Top Trumps card it would be pretty useless. But as a device to engage and enthuse yet still be as easy to live with as all 911s must be, it is pretty faultless. To me, and more than anything, it offers the very essence of what its brand should be. Put it this way: if a Martian fell to earth and asked to be shown the very quintessence of Porsche, you'd show him a 911S and I doubt it would matter whether its engine has 2-, 2.2- or 2.4-litres. Fifty years on and in my experience at least, none has done that job better ○



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# FAMIL





# Y T R E E

Porsche is attempting to link the new four-cylinder Boxster and forthcoming Cayman with the past glories of its 1950s racers. But what made the period flat-four 718s so special?

Story: Simon Jackson Photography: Porsche





When you think about historical Porsche competition cars, it's likely that your brain will conjure up imagery of heart-stopping 917s, race-bred 911s and fire-spitting six- and eight-cylinder powertrains. However, Porsche actually has a very diverse past when it comes to motorsport competition, encompassing all manner of car and drivetrain combinations, some of which may surprise you.

Most of these engineering triumphs are very famous and so will need little introduction, indeed it's possible to trace their direct bloodlines through years of rich Porsche history. There are, however, those that the company moved away from relatively quickly yet which deserve equal recognition and column inches. You could argue that one such example is the Type 718 and its four-cylinder mill. To understand the history of the 718, first we must clarify that those three digits relate to a broad mix of machinery raced by Porsche throughout the 1950s and 1960s. Indeed, the '718' designation does not refer to just one car, rather to many different ones built and raced from 1957 onwards. By resurrecting the label for the new iteration of Boxster and Cayman 50 years after it was last used, Porsche is making reference to a very specific spell in its racing past, one both wildly varied and quite successful.

The genes of the first car to bear the designation 718 can be tracked back to the flat-four-cylinder Type 550s of the early 1950s. Porsche's 550 Coupé and 550 Spyder share both a visual resemblance and a mechanical architecture with the first 718, which was actually a rather heavily modified 550A. Briefly called the RS-2 yet more widely known as the RSK, the car was colloquially so termed on account of the shape of its front torsion bar that bore a striking resemblance to the letter K (the

RS part we're sure you can decode yourselves).

The RSK's first appearance was at the Nürburgring 1000km in May 1957 where it was rolled out just for the practice session, not the race proper. Those familiar with Porsche's factory drivers back in period will note that Herbert Linge and (the newly signed) Edgar Barth shared the driving duties with positive results. The shakedown was a pre-cursor for Le Mans the following month where a yet further revised 718 RSK lined up with Barth and Umberto Maglioli driving. Down the Mulsanne Straight the car clocked just over 142mph, a sadly similar top speed to its predecessor, the 550A, and it was forced to retire ten hours in after a collision with another car.

Changes for 1958 were pretty drastic; out went the recognisable K-shaped front torsion bar and existing swing arm/torsion bar rear suspension system, and in came engine revisions (read larger Weber carbs and cams) allowing the car to put out around 150hp. Rather confusingly during this period, Porsche ran 1957 cars modified to 1958 specifications, and new 1958 cars, some with 1498cc engines, others with 1587cc flat-fours. The mixture of specifications suited the assorted events and venues the cars competed at, such as the 'Ring, Sebring, Le Mans and for Mountain Championship hillclimbing in Europe (with Wolfgang Von Trips at the wheel). Of its best results, third at Le Mans for the Jean Behra and Hans Herrmann 718 RSK Spyder was probably the most notable.

Porsche continued its development of the RSK apace for 1959, largely making improvements to the suspension systems and gradually increasing reliability and engine performance. While the cars continued to prove problematic at times, Porsche achieved an outright win in the 1959 Targa Florio with a modified 1958-spec RSK. Such luck did not befall the six cars entered for Le Mans that

year though, all of which failed to finish due to various mechanical issues. Von Trips did, however, win that year in an RSK at AVUS, the road and race circuit in Berlin. But regular works driver Behra wasn't so lucky— at the circuit's notorious banked North Curve, Behra crashed his Porsche and was killed whilst challenging for the lead in the wet. He lost control, slid up the banking, hit a former gun emplacement, and was hurled from the car where he struck a flagpole. He was 38. If anyone needed reminding, these were dangerous times for racing drivers.

By this point Porsche was selling numerous RSK variants to privateer racers, so there was a mix of versions starting on grids around the world, and some were near-identical to the factory cars. Alongside a consistent tactic to enter RSKs sporting differing specifications in various states of development into races, bolstering the field like this was something of a cunning ploy by Porsche to aid its chances of good results. Still, the development progress of the true works cars trudged onwards. In 1960 a 718 RS60 Spyder (the car you see here) that had a 1679cc flat-four engine with 167hp won the Targa Florio again, but not before it clinched victory at Sebring that same year in the hands of Graham Hill.

What's difficult to comprehend in modern times is that while Porsche was winning these circuit and road endurance races, it was also busy building a 718 Formula Two car. While Formula Two was, like today's GP2, a less complicated version of Formula One at the time, it was not a strictly open-wheel formula and catered for 1500cc cars. This meant that Porsche could enter the 718 RSK and it had been doing so since 1957. Almost unbelievably in 1958 the team converted an RSK from the racer you see here to a single seater in just two weeks between race meetings at Le Mans and Reims (GT 02/15)! It was an exercise Porsche would repeat during







Clockwise from top left: The 718/2 with which Porsche clinched the F2 constructors' title in 1960, Moss won in Zeltweg. The 718 RSK Spyder won the first European hillclimb championship for Porsche in 1958, von Trips is seen here on the Gaisberg en route to victory. The 718/2 competed at the Nürburgring in 1959, Porsche mechanics push Herbert Linge in the pits in this image. The closed cockpit 718 GTR Coupé won the 1963 Targa Florio with Bonnier at the wheel.





the course of the year, and a conversion it would even offer independent privateer drivers.

The success of the Formula Two project sparked an interest in Formula One at Porsche when the FIA announced rule changes that might favour the 1500cc engine. In parallel with its other racing exploits with the RSK, Porsche began work on an all-new single-seater racing chassis between 1958 and 1960 destined for F1. Helmuth Bott and Hans Mezger worked on the project that, despite bearing little visual relation to the existing RSK sports cars, was also dubbed a 718 car. The 718/2, as it was known, shared much with the aforementioned RSKs under the skin thanks to a similar space framed chassis design, enabling Porsche to use the new F2 car to test running gear for its active competition RSKs.

This new formula car was very fast; in testing in 1959, with Von Trips at the wheel, it set a time around the 'Ring that was just five seconds off his own qualifying time the year before in a V6 Ferrari 246 F1 (the first V6 in F1 and the car Mike Hawthorn took to the driver's World Championship in 1958). It would have put Von Trips and the Porsche in sixth position overall on the grid for the 1958 German grand prix. This was an F2 car that could potentially mix it up with the bigger F1 boys. Although excited, Porsche remained cautious, entering the car into the Monte Carlo Grand Prix for starters. However, it did not have any victories with the 718/2 at that race or any subsequent events in 1959 either.

For 1960 Porsche further developed the 718/2 and bagged star signing Stirling Moss. It was not all plain sailing, but Moss managed to secure the car's first F2 win at the Aintree 200 in Liverpool. Moss, in the R.R.C. Walker Racing Team entered the 718/2, completed the 50 laps at Aintree in just over an hour and a half, and was followed home by Jo Bonnier and Graham Hill in their works 718/2 entries – all had been kept honest by a hard-charging John Surtees in his Cooper-Climax. Moss would leave Porsche in 1961 but not before claiming another couple of victories

in the four-cylinder F2 car.

In 1961 Porsche was in something of a transitional period; it fielded further revised 718/2s to race but it was also in the process of eyeing Formula One properly. A heavily reworked longer wheelbase car was developed, so radically altered from what had gone before it that Porsche deemed a new Type number was warranted; the 787 was born. Difficult times lay ahead though, and Porsche ended up running both cars during the season, even favouring the older 718 machines when the 787 failed to live up to expectations. A new 2.0-litre eight-cylinder engine (a replacement for the derivatives of the trusted flat-four that made its racing debut in 1957) was then developed, and in 1962 it was ready to race. Although the 718s would still be seen on the race track, now largely in the hands of privateers, it was the end of the road for the single-seater four-cylinder 718 cars, but Porsche wasn't done with the platform entirely.

Despite its now relatively elderly nature, Porsche set to work at the end of 1960 building up the first 718 Coupé, which bore a resemblance to the old 550s, and is cited as the basis for the 904 that would appear a couple of years later. With its aluminium body and Porsche's utilisation of the flat-four engine once more (although this model, too, would upgrade to 2.0-litre eight-cylinder engines during its lifetime), the 718 would go closed cockpit for GT racing. Porsche ran the two different engines in parallel with one another and drivers such as Barth and Linge liked the extra rigidity provided by the coupé design.

Developments to the car followed through 1961, which also saw Porsche create an open-topped roadster version, called the W-RS Spyder, yet known internally as the 718-047. The car ran a 2.0-litre four-cylinder engine at the Targa Florio in 1961 with Moss and Hill sharing driving duties, and leading going onto the final lap of the gruelling 44-mile circuit. But the car retired just a few miles short of the finish line. It was a similar tale at Le Mans that same year where the

four-cylinder engine was outmoded. However, Ferry Porsche decided that the tactic would be something like the tortoise and the hare with Porsche playing the slower role. To ensure reliability, the drivers of the three Porsche entries kept a close eye on their rev counters so as not to overstress their flat-fours, three different varieties of which were raced (1.6-, 1.7- and 2.0-litre). Ferry's plan to hedge his bets and pace their progress broadly worked, the cars finished fifth (2.0-litre) and seventh (1.6-litre), with the 1.7-litre car of Jo Bonnier and Dan Gurney retiring after completing 262 laps – 71 behind that of the winning 3.0-litre V12 Ferrari with Phil Hill and Belgian Olivier Gendebien at the wheel. It was the end of the road for Porsche's flat-four race engines. Zuffenhausen had readied its larger eight-cylinder engine for 1962 and modified the W-RS chassis to accept it. After five rollercoaster years the marriage between the versatile four-cylinder engine and the 718 variants cars ceased.

Porsche has quite a history of carrying its engineering ideas through decade upon decade, finessing them to perfection and never abandoning a concept despite the tide of popular convention. See the history of the 911's rear-engined layout for proof of that. For a competition engine, five-years of racing is a relatively short period in Porsche terms, but that's the short timeframe within which it persevered with the flat-four powertrain in its various guises, appearing in many incarnations of cars to wear the 718 designations during that period. There are, of course, similarities between the 718s of old and the latest iteration of Boxster and Cayman; namely both came in roadster and coupé guises, and all share the commonality of a flat-four.

Whether or not you see this distant link reaching across a 50-year timeframe as proof of Porsche's prowess with four-cylinder engines, or nothing more than a marketing ploy, is up to you. One thing is certain: when Porsche makes a technical decision, typically it sticks by it for however long it takes for that concept to bear fruit ○





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# In The Works

Based on a 3.2 Carrera, is this outlaw-style 911 by PS Works the answer for those who can't stretch to the expense of a period-correct Porsche or a detailed re-creation project?

Story: Simon Jackson  
Photography: Gus Gregory











*"We understand what ingredients are needed to make a great 911..."*

The trouble with old cars is that they tend to drive like old cars. That might seem like an obvious statement, even an odd one, but it's a fact that some people, particularly those lacking seat time in any vehicle built before the 1990s, often overlook. A person, you see, can legitimately harbor a passion for old cars, the aesthetics and mechanics of them, but that doesn't necessarily mean they'll naturally gel with the driving experience they offer. When it comes to Porsches, the disparity between the experiences offered by the older air-cooled cars and their contemporary counterparts can be like night and day. Classic Porsches often require a deft touch, a bit of mechanical sympathy and an appreciation that, by design, they are often nowhere near as forgiving, versatile or useable as a modern car.

Even when you take all that into account they can still throw you a curve ball and offer up unwelcome surprises. It's not true of every old Porsche, but it's something I'd advise prospective purchasers to be aware of, especially those stepping out of more modern machinery. Of course with the recently bolstered momentum toward classic Porsche ownership, no doubt many folk will be finding all this out for themselves first hand. But, there is an answer if they decide that all these considerations are too much to stomach: backdating. Regular readers will be aware of what this process involves, but aside from simply making a car appear older than it is, the process also opens up a whole bunch of customisation and modernisation options, and that's where the car you see here comes in. However, this is not your typical backdated Porsche...

PS Autoart, part of independent specialist Paul Stephens in Essex, is a name that will probably be familiar to Porsche enthusiasts for its detailed retrospective creations taking the ethos of a classic 911 and improving upon it. In short, by cherry picking the best parts from across the 911's five decades of existence and integrating them with modern parts, PS Autoart builds dream 911s. There's just one drawback to all this – admittedly they're rather expensive.

This is a fact the PS team is well aware of and do not apologise for – in the Porsche world you get what you pay for, quality of this calibre costs. The Essex squad do, however, offer an alternative for those who like what it does, but who might not have the kind of money required to purchase

one of its dream machines. Enter the parallel arm of Paul Stephens – PS Works.

"Cars created by PS Works are for the individual who is inspired by the modified early 911 outlaw scene and either doesn't have the budget, or the need, for a period correct car, or the obsessive detail that goes into one of our own Autoart creations," explained Paul Stephens. Indeed, this is backdating with a difference.

The 911 'Hot Rod', as this car is affectionately termed by the PS Works chaps, is not a replica of any particular 911, rather it takes its visual inspiration from competition Porsches of the 1970s and mixes with that a dash of more modern road-going grit and aggression. This car started life as a humble 1986 3.2 Carrera. It had covered 90,000 miles yet it had been well looked after with a continuous service history. Regardless of its mechanical well-being PS Works treated the car to a top-end engine and gearbox rebuild to ensure it was in fine fettle before setting to work on transforming the rest of it.

"With over two decades of buying, selling, building and racing these cars we understand what ingredients are needed to make a great 911," Paul told us. "Fortunately that doesn't always mean those ingredients have to be the most expensive, it's just a job of ensuring they work effectively together." The ingredients Paul speaks of are mainly tailored to maximize driving pleasure, delivering the visceral experience older 911s are known for: "ABS, power steering, traction control, PDK gearboxes or any other modern driver aids are simply not an option on these cars, ensuring the full adrenaline experience is available on every journey."

Naturally, each and every customer who collaborates with PS Works ends up with a different outcome, and as such each 911 the firm creates is unique to the next one, despite sharing similarities. "Big brakes, big wheels and big power are usually on the shopping list," Paul continued. "However these items are also expensive, so our core models; the 'Hot Rod', 'Clubsport' and 'SCR' which are based on the 911 SC or 3.2 Carrera, initially capitalise on weight reduction to improve all-round performance together with minimalist motorsport styling cues inspired by 911s from the 1970s."

Naturally there's an added bonus that comes as a byproduct of all these modifications: "That improved performance not only extends to increased acceleration and top speed, but also







fuel consumption, braking efficiency, handling and overall reduction on component wear making these cars very cost-effective to own."

When it comes to the styling side of things, there are various options open to customers, and it's very much a case of PS Works catering to each individual's palette: "Whilst our model range is deliberately slim, light and nimble, with just a hint of aggression thrown in, we can also build wide-body cars for those who prefer the 'full fat' look," we're told.

It's highly likely that the outlaw Porsche movement will need little introduction to you, but for those who are unsure, in a nutshell the concept flies in the face of the concours cars. Embracing custom period machines wearing motorsport and fast road parts, these cars are ultimately used as Porsche intended. There's a fine line between a true outlaw, hot rod or rat rod Porsche, but the crux of the differences are really found in the details. The 3.2 Carrera you see here, as PS Works state, has a foot marginally in each camp, taking its inspiration from both the outlaw and hot rod movements.

The body has been converted to mimic the ilk of a pre-1973 911 before being shot in that

*"The engine propels  
this hot rod along  
at a cracking pace  
whilst still being  
totally reliable"*





gorgeous (and importantly period) shade of Slate grey. The window frames are period correct, as is the other brightwork around the car. Finally, a set of classic Minilite alloy wheels refinished in gold complete the look, and it's a good look at that. Inside, PS Works has taken inspiration from period lightweight Porsche 911s; as such you'll find lightweight-style half leather seats, a timeless Momo Prototipo steering wheel, and a matching period gear knob. It's enough to transmit a tangible sense of period and a certain level of excitement that emanates from within and around this car, and that's all before you jump inside to drive it.

Talking of driving it, might there be a danger that this is a 911 that looks the part, yet fails to deliver on its promise of thrilling its pilot? There was, of course, only one way to find out...

From the moment you climb inside and pull the door shut behind you, there's a reassuring and overriding sense of quality. The fit and finish on this car by no means communicates a corner-cutting exercise, this is not a half-baked backdate project but rather a well-considered and beautifully executed modified 911.

Start it up, select first gear and rather than

being greeted by a lazy cranking process, lumpy idle and obstreperous gate, this car feels cooperative throughout. It sounds just fruity enough to excite the senses, but it doesn't feel difficult to drive in any fashion. Indeed it's a best-of-both-worlds affair: it looks period but it feels modern to drive, it's a car anyone can simply jump in and use without any automotive anxiety.

Out on the road, this ease of use is typified by the progress you can make and the speed at which you feel comfortable with chucking it around a bit. With 234 horsepower this car is not a deadly quick one by any stretch, but given that it tips the scales at just 1000 kilograms it certainly doesn't feel slow either. I'd go so far as to say that it offers just the right amount of power for the majority of drivers, akin to the lighter and nimble 911s of old yet at the same time assisting progress through its modern elements, namely that delightful gearbox, well setup chassis and more modern engine mechanicals. Indeed, Paul summarises this car neatly: "The engine propels this hot rod along at a cracking pace whilst, unlike a period original, still being totally reliable and flexible for daily use."

That reliability is backed by a full 12 month

warranty from PS Works, which means the 911 hot rod is tailored for immediate enjoyment and peace of mind too. The car you see here is priced at £74,995, which is pretty reasonable in our book considering what you're getting in return for that figure, but if that is too much for your budget PS Works can still help you.

PS Works is happy to build you an entire custom car, such as the vehicle you see here, but it's also able to upgrade your existing air-cooled 911 with as many (or as few) parts along these lines as you might like. Indeed the range of performance enhancing products on offer is comprehensive to say the least. "If you have the passion but not the expertise to create your own individual 911, PS Works can help you fulfil that dream," Paul explained.

Personally speaking I like this car; it's a kind of antidote to the current trend for creating highly precious Porsche projects too expensive or involved to be used properly. Not only does this 911 look cool, it drives beautifully too – it truly is a willing partner, a Porsche you could use everyday if you so wished. Given that its creation did not involve a nut and bolt restoration or hugely expensive period parts, your conscience







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can also rest assured that actually using it is not going to be as detrimental to its future desirability and value as it would be with a typical full bore recreation or backdate car.

There may be people out there who feel that this car is pretending to be something it is not and therefore dismiss it, but those people will be missing out. This car is not pretending to be anything, in actual fact it's as honest as they come. It is a retro-styled 911 offering the convenience of a more modern Porsche, it's essentially a car that looks old yet drives like a far newer one, and that is sure to appeal to a lot of people. This is a 911 that has been built to be enjoyed, and a project that has not cost the earth to put together, and therein lies its appeal. Surely that is an ethos we can all get onboard with? ○





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# SOMETHING FOR THE WEEKEND?



There will be a new Porsche racer giving the usual pack of GT3s a run for their money this season, the Cayman GT4 Clubsport – yours for around £86,000...

Story: Simon Jackson Photography: Victor Jon Goico

Porsche's Motorsport department is constantly striving to innovate in an effort to provide us with yet more capable competition cars that excel on the race track in ever-impressive style. For most car companies, this kind of activity is usually all part of a wider marketing strategy designed to excite enough that it might sell vaguely related road cars to you at a later date.

The old adage 'win on Sunday, sell on Monday' might be a tad simplistic for today's informed and intelligent autosport audiences, but the general ethos behind it, no matter how simplistic, does still hold water in a fashion. If Porsche wins races its image, its stock if you will, goes up. Now when it comes to Porsche you'd like to think there's no such crude marketing tactic at work. Porsche as a brand is





unconditionally linked with motorsport, it is part of its heritage, part of its very fibre, so you'd like to think it would go racing no matter the influence it may (or may not) have on shifting cars off forecourts. When Porsche wins on the race track as so often it does, be that through its lavish exploits in the World Endurance Championship, or in a lower form of racing championship, it can only be a good thing for the brand as a whole. The only problem with all this is that, broadly speaking, the general public associates Porsche with the 911 and not much else, and as we know it's not the only car in the current Porsche range. The GT3 has years of racing success under its belt, and audiences can easily relate the GT3 they see racing at weekends (in Porsche's 20 one-make championships

around the world) with the road car they might see on their way to work in the week. The same can't really be said for any other Porsche in the contemporary line-up, and that creates a bit of a problem, especially when you have another highly capable sports car in your range, like the Cayman. So when the Cayman gives birth to a road-going GT car, like the GT4, that car needs to develop a thoroughbred racing pedigree, and fast – enter the GT4 Clubsport.

Porsche is big on drawing links between its past and its present. The mid-engine, two-seater Cayman's likeness to the makeup of its racers of the 1950s is therefore handy. Porsche also suggests a connection between the GT4 Clubsport and its descendants, the 918 Spyder and 919 Hybrid endurance racer. Of course the GT4

borrows much more from the 911 GT3 than these other race cars, but a bit of infamy by association doesn't hurt. As you'd expect, the GT4 Clubsport takes much of the road-going Cayman GT4 as its basis – the pair share the 911's naturally aspirated 3.8-litre boxer engine developing 385hp at 7400rpm, and they're both good for 183mph – although the race car does have a revised rear spoiler conducive to added downforce and therefore, you might assume, drag on the straights.

The Clubsport version is 40 kilos lighter than its road-going counterpart, weighing 1300 kilos, and there's something else important that differentiates them too; the gearbox. Where the GT4 is only available with a six-speed manual gearbox, the GT4 Clubsport comes solely with a six-speed automatic PDK transmission. Racers





also benefit from the same lightweight front struts, and 'enhanced' lightweight rear suspension (with transverse arms) as you'll find on the 911 GT3 Cup car (it's 29mm lower than the road car at the front and 25mm lower at the back).

The braking system is also the same as the road car. Both are derived from the 911 GT3; 380mm steel brake discs feature all-round and these are clamped by single-piece six-piston aluminium callipers at the front and four-piston equivalents out back. Porsche has ensured the anti-lock braking system can be adjusted in 12 incremental stages, there's a mechanical locking differential, and the ABS and ESP has been revised to operate effectively with the Clubsport's 18-inch Michelin slick tyres. A weld-in roll-cage and a bucket seat (with a six-point harness fed through it) completes

the main lightweight changes to the car, but there are some finer points used to refine it, too.

Porsche produces the GT4 Clubsport partly in parallel with the normal GT4 road car, though each shell is diverted at the body-in-white stage of the build process (a term not to be confused with its Porsche Motorsport white paint job) and is packed off to a special corner in Weissach. It's here, ex-works, that Porsche adds lightness, ensuring the Clubsport shells are built-up devoid of any superfluous sound deadening materials or interior trim that are essential on a road car yet pointless on a race track. The Clubsport's battery is relocated into the passenger's footwell, the cage is offered inside along with the aforementioned bucket seat and any displays and controls for the driver – carbon PDK paddle shift facility included. This is

the GT4 now in its purist and most agile form. Purchasers can specify one of three different sizes of fuel tank in their cars; a 90-litre tank comes fitted as standard, or there's the option of a 70-litre or larger 100-litre version. Slightly bizarrely the fitment of a fire extinguisher system is optional (a box you'll probably want to tick), as are pneumatic air jacks (one you might skip) and, apparently, optional Walter Röhrl inscribed sill kickplates.

Who does Porsche see driving these things? Aspirational young GT drivers, that's who, the kind eyeing a move up the circuit racing ladder. They'll be joined on the grid, so say Porsche, by those affluent gentleman racers looking for a nice way to spend their weekends – putting themselves to the test and doing battle in any number of eligible racing series around the



If the GT4 Clubsport isn't enough for you, Porsche tuner Manthey is offering a 'Trophy' version which we fully expect to see in VLN races this year...



world. Amongst those suitable series are some illustrious championships, one-make series and one-off events such as the British GT Championship, the Continental Tire SportsCar Challenge, the Pirelli World Challenge and the Porsche Sports Challenge, plus any number of endurance races across the world. Notably for us Europeans, the German VLN Championship at the Nürburgring is set to be a home-from-home for the GT4 Clubsport, and if it's the VLN you're interested in, then German outfit Manthey-Racing can tweak your car for purpose (it calls its version the GT4 Trophy). Nicolas Raeder, CEO of Manthey, explains: "Several upgrade options will

be available to enable the car to participate in its own class as a part of the ten rounds of the VLN endurance race series at the Nürburgring."

Manthey's upgrades for the GT4 Trophy include the aforementioned 100-litre fuel tank, a Recaro race seat, a fire extinguisher system, and the air jack system. For comfort purposes during a longer stints on track it gets air-conditioning too, all fitted from the factory we understand. But Manthey has also used its considerable experience racing Porsches to fiddle with the GT4's chassis setup, and as such bespoke spring and damper settings are worked into the car's KW Competition setup. Manthey says the GT4 Trophy

will, as well as being ideal for the VLN, be suitable for the 2016 Porsche Sports Cup in Germany too, a series that incorporates six rounds at five different racetracks.

The Cayman GT4 Clubsport is available to purchase from Porsche Motorsport in Weissach and Porsche Motorsport North America. Before country-specific taxes the GT4 Clubsport is priced at €111k (around £86k), and the GT4 Trophy is rumoured to set you back approximately €145k (about £112k). Keep your eyes peeled for a version of either racing throughout the 2016 motorsport season, they'll likely be giving a 911 GT3 a real run for its money... ●



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Jerry Seinfeld's Porsches sell for over £15.5 million while the Restoration and Classic Car Show, CCA March Classic Car Sale and H&H's Donington Park sale offered more realistic prospects...



Hammer price:  
**£3.7 million**  
(\$5,335,000)

1955 550 Spyder

**Auction House:** Gooding & Company  
**Auction:** Amelia Island  
**Location:** Florida  
**Date:** 11 March 2016  
**Estimate:** \$5-6 million

The Gooding & Company auction house saw its records smashed at the Amelia Island event, where Porsches from The Jerry Seinfeld Collection went under the hammer, achieving more than \$22.2 million in total for the comedian. Seinfeld's 550 Spyder proved the most popular lot, the unrestored Porsche is an exceptionally original example. It boasts just three owners over the past 50 years and retains its original colour scheme and upholstery. A matching numbers car, it is powered by the venerable 1498cc DOHC Type 547 flat four-cylinder engine on twin Solex carburetors, which has covered just 10,500 miles from new.



Hammer price:  
**£40,150**

1988 911 SUPERSPORT TARGA 3.2

**Auction House:** Classic Car Auctions  
**Auction:** CCA March Classic Car Sale  
**Location:** Leamington Spa  
**Date:** 19 March 2016  
**Estimate:** £22,000-25,000

This manual 3.2 Carrera Supersport Targa had been with its current owner for 17 years and auctioneer CCA scored its condition as 70/135 overall. Option code 'M491', known as the 'Turbo-look', gives this car Turbo-style wide arches, rear spoiler and wheels from the factory. A mere 75 of these Supersport cars were produced in RHD form, out of a worldwide production of around 250, only a few of which were Targas. Having been off the road for approximately six to eight years, the car was running and driving with 106k on the clocks and a limited history. A great investment once recommissioned.



Hammer price:  
**£56,250**

1995 993 Carrera 2 Coupé

**Auction House:** Silverstone Auctions  
**Auction:** Restoration and Classic Car Show  
**Location:** Birmingham  
**Date:** 6 March 2016  
**Estimate:** £55,000-65,000

This manual 993 has covered just 32,936 miles and was supplied new by Dick Lovett Porsche in Swindon. It comes complete with its Porsche book pack detailing its options which included a lowered chassis (033), sport bucket seats (373 and 374), Cup alloy wheels (398), a rear wiper (425), top tinted windscreen (567), sunroof (650) and Midnight blue carpets (1693). A comprehensive history file and the fact the car had been stored between August 2003 and May 2014, meant the car covered just 160 miles in 11 years. Fully recommissioned since, this has to be one of the freshest 993s around.



Hammer price:  
**£7232**

1997 BOXSTER

**Auction House:** H&H Classics Limited  
**Auction:** Donington Park  
**Location:** Derby  
**Date:** 24 February 2016  
**Estimate:** £5500-6500

This 2.5-litre Boxster offered by H&H Classics Limited at its Donington Park auction at the back end of February made for a worthy prospect. Resplendent in its rare white paint work with contrasting red hide interior, the car boasts just 69,000 miles on its clocks, low for a car of nearly 20 years of age, and just four previous keepers on its documents. Coming complete with its original book pack, a stamped service book and a wad of invoices, the car is MoT'd until this month and in our book, was worthy of its £7232 winning bid.



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# OUT FROM THE SHADOWS

Eclipsed by the 917, history hasn't always remembered the Porsche 908 in the way that it really should...

Story: Andrew Frankel Photography: Porsche and Lothar Spurzern

Remember the poor old Hawker Hurricane? A bit older than a Spitfire, a bit slower than a Spitfire, it's what pilots who couldn't fly a Spitfire flew. Never mind that it was a superb design in its own right and actually shot down more aircraft in the Battle of Britain than every other fighter combined, Spitfire included. Today it lives almost entirely in the shadow of the Spitfire's elegantly crafted elliptical wing.

The Porsche 908 suffers from a similar identity crisis. It may be familiar to you and I as Porscheophiles, but while I'd back anyone with any interest in motor racing history to be able to name and identify a 917 in an instant, the 908 will be less distinct. It never won Le Mans, it had only three litres and eight cylinders, and it wouldn't do 240mph. Oh the shame of it. A bit older than a 917, a bit slower than a 917, it is what drivers who couldn't drive a 917 drove.

Or so popular misconception goes. In fact, as I shall dedicate the next 2000 words attempting to prove, the 908 was at least as good a racing car as the 917 and, in many ways, even more remarkable.

I believe people often think it was the 917 with its bonkers 4.5-, 4.9- and 5.0-litre flat-12 engines that constituted Porsche's first proper attempt to compete not merely for class honours in racing, but outright victory. But it wasn't; it was the 908. Conceived to take advantage of new rules mandating a 3.0-litre capacity limit for prototype racers in 1968, it was only focussing on one step of the podium. And had the rule makers not relaxed the rules for 'production' racers the following year, so that only 25 units rather than 50 needed to be sold, the 917 would never have sneaked into a category designed to ensure no such car ever got to race, because it would never have been built. Which meant the 908 would never have fallen into its shadow and now we'd have a rather different view of the car.

It didn't start well, as if Porsche's attempt to rise to the top level of sports car racing was somehow above its station. And had the 908 been a brand-new, experimental car full of untried technology and an unproven engine that would have been understandable. In fact and despite all it would eventually go on to achieve, the 908 was very simple and derived from products Porsche knew extremely well. Indeed in his benchmark *Excellence Was Expected*, renowned Porsche authority Karl Ludvigsen described the 908 as 'nothing more than a 907 with 26 per cent more power'.

The 907 was a classical Porsche prototype, designed around a tiny gauge space frame chassis, with skinny glass fibre bodywork and powered by a small capacity air-cooled formation engine, albeit with eight-cylinders and a 2.2-litre capacity rather than the more usual 2.0-litre six. It was a quick car for its size but, in the era where there was no limit on engine size, it was a minnow among sharks when faced with 7.0-litre Ford GT40s when it made its debut in 1967.

But as it happens, it was those Fords that paved the way for the 908 because even the authorities soon realised that 7.0-litres was a trifle excessive. So while Porsche was never going to build a 7.0-litre engine, it was that engine that inadvertently ensured rules restricting prototypes to 3.0-litres. And that was far more doable.

However, it wasn't quite as simple as stretching the 907 engine, which was a pure race motor and



already expanded as far as it could go. So, pragmatic to a fault, Porsche looked around to see what else might work. It found an engine called a 916, which had been developed from the 911's normal flat-six with a view to using it racing and rallying. It still had six-cylinders but, crucially, had all new heads with double overhead camshafts on each bank. More importantly too, if one more cylinder was grafted onto each side of the engine, it would provide a cubic capacity just inside the new 3.0-litre limit. A brand-new six-speed gearbox was built to handle the torque of the new engine and, with everything else coming from the 907, the 908 was born with very little fuss.

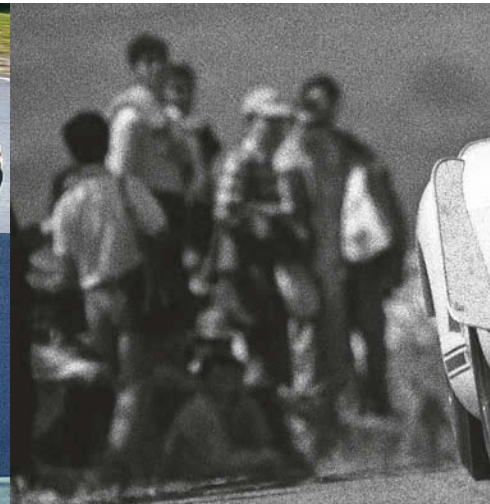
Its infancy was a different matter: 1968 was an almost total disaster for a car tipped by many to be the class of the prototype sports car field, and more than a match for the heavy and old GT40s with engines now capped to the 5.0-litre capacity of the production class. Indeed the only reason Porsche still came within a sniff of snatching the World Championship from under Ford's nose was that the 907 remains in place to fill the void left by the inadequacies of the 908.

Its first test revealed hideous aerodynamic instability, just as it would a year later for the 917. Further tests revealed weaknesses in the gearbox. It did win first time out at the Nürburgring, a circuit that could hardly have been better suited to its lightweight design and where it would go on to create a fabled record, but look closer at the results and you'll see the 907 that came second out-qualified it with a time the 908 couldn't beat in the race either. So not much to show for all that extra engine just yet. It was beaten by both a GT40 and a 907 next time out at Spa and could manage no better than fifth at Watkins Glen. Only at the short 500km race at Zeltweg did it hint at its potential, Jo Siffert bagging the holy trinity: the win, pole and fastest lap.

But at Le Mans (delayed by industrial action to the end of the year) Porsche's usual legendary reliability was once more notable only by its absence. It's worth remembering that this was the 18th time in succession that Porsches had raced at Le Mans, but the very first which it had a realistic chance of winning. Indeed, the four works 908s were clear favourites. But while Siffert claimed pole and Rolf Stommelen the fastest lap, by the end of the race just one of the four survived to place third, behind not only yet another GT40 but, humiliatingly, a privately-entered 907.

It seemed the 908 project had failed. Even with the 907 sparing the company blushes by winning the big American races at Daytona and Sebring as well as the Targa Florio, Porsche had failed to win a title that all the pre-season smart money must have bet was its to lose. And Porsche's attention was already elsewhere as, for 1969, it would have the 917 to elevate sports car performance to an undreamt of level.

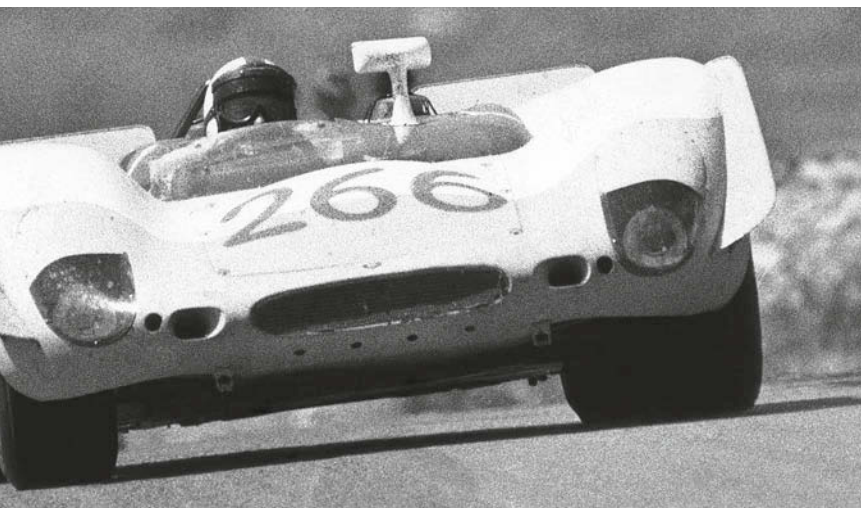
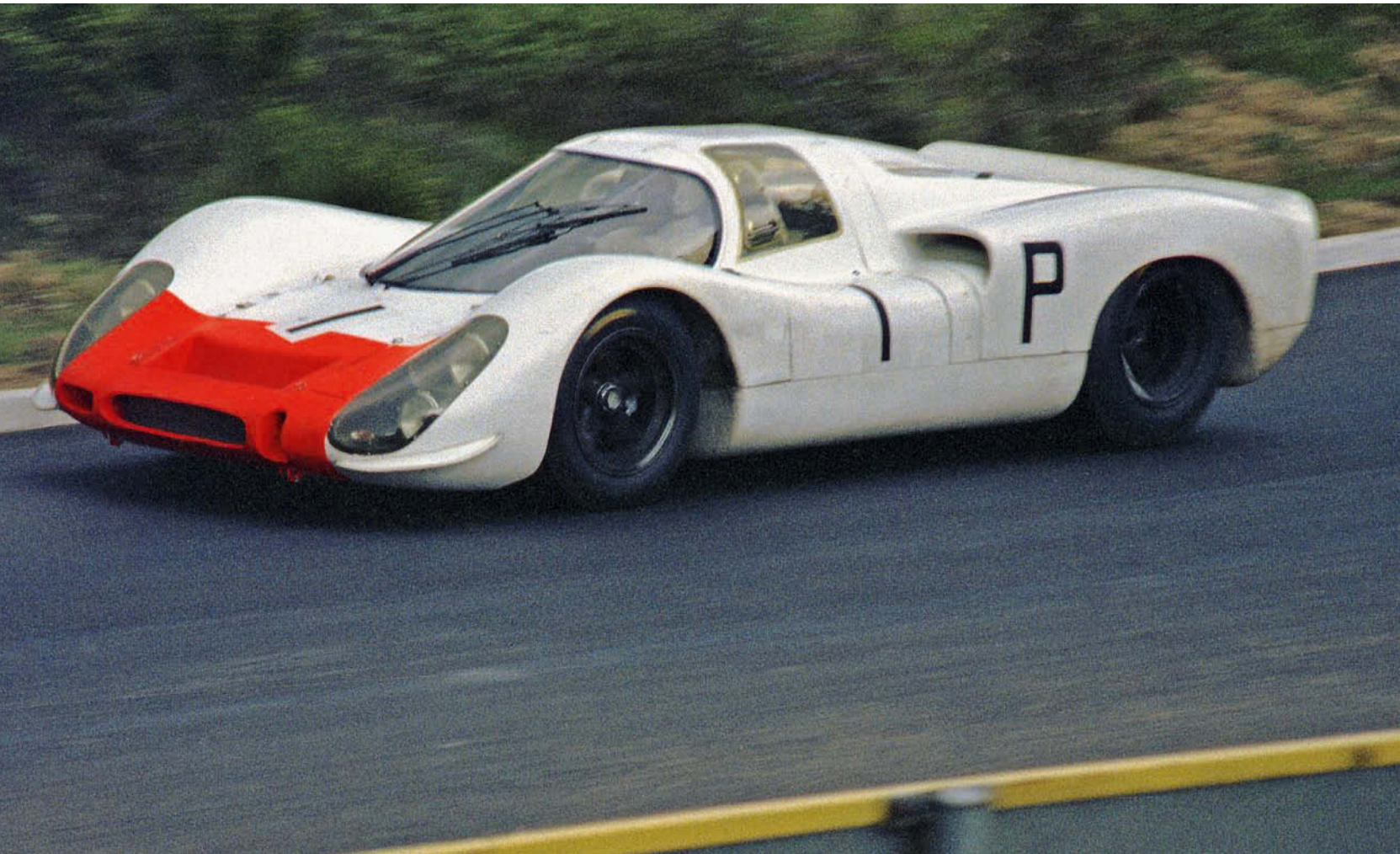
But Porsche did not abandon the 908. First, Porsche tends not to quit easily and second it knew the 917 was such a leap in the dark it needed a reserve just as the 908 needed the 907. So exploiting new rules that meant there was no longer a minimum weight or windscreen height requirement, Porsche developed the 908 Spyder, known as the 908/2, for short course racing, retaining the original 908



Top left and right (images Lothar Spurzern): Elford in the 908, 1971, a privately entered 908/03 in 1973  
Above: Hans Herrmann in the 908/03 of 1970, and (right) Herrmann again in the long tail 908 at the 'Ring in 1981







*The 908 was at least as good a racing car as the 917 and, in many ways, even more remarkable*





*At the Targa Florio, Porsche  
elected to field the 908/3  
which around such  
twisting courses was as  
a whippet to stallion*





Here, clockwise from top (images Lothar Spurzem): The 908/02 of 1969. Jürgen Barth in the Liqui Moly 908/03 turbo of 1980. Jo Siffert in the 908/03 of 1971



coupe for longer tracks. Engine modifications and another new gearbox now with just five speeds were hoped to bring the reliability so sorely missed the previous year.

Fat chance. With the 917 not available until mid season, Porsche brought an unprecedented five works 908s to the Daytona 24Hrs, and every last one of them succumbed to the same engine failure. At Sebring, not only were they beaten by a GT40 that was in its sixth season of racing, but far more worryingly, Ferrari's brand-new 3.0-litre 312 prototype, the first direct competitor to the 908. And had things stayed that bad, Porsche may well have consigned the 908 to the very small collection of failed Porsche sports racing cars. But the darkest hour is often before the dawn, and by the time the championship circus rolled into Kent for the Brands Hatch 1000km, the 908s had been given strengthened chassis frames and, at a stroke, all its problems evaporated.

The 908 Spyders came first, second and third, then handed over to the long tail coupés to come first and second at Monza. The Spyders were back for the Targa Florio, this time bulldozing all-comers to take the top four places, while at Spa one lone Ferrari in second place spoiled another Porsche podium lock-out for the coupés. Porsche got its own back at the Nürburgring, with five works Spyders entered and five coming home in the top five places. Coming first, second and third at Watkins Glen must have seemed an anti-climax by comparison. Indeed, the only race that eluded the 908 was the one that really mattered, and the story of the closest non-staged finish at Le Mans in the history of the race needs no retelling here, save to say that after 3105 miles of racing, the gap between the winning GT40 and the second-placed 908 was a little over 100 yards.

But not even this could cloud the fact that a car which for over a year appeared to be a busted flush, had just delivered Porsche its first World Championship title, and by such a margin that its points tally equalled that of second and third place Ford and Lola combined.

The 1970 season is remembered as the one in which the Porsche 917 seemed to win everything. In fact, at both the Nürburgring 1000km and the Targa Florio Porsche elected to field the brand-new, ultra-light 908/3 which around such tight, twisting courses was as a whippet to stallion. They came first and second at the Nürburgring, with all bar two of the top eight places taken by one kind of 908 or another. In Sicily they were first, second and fifth.

Perhaps a repeat performance was too much to ask in 1971, the 908's fourth consecutive year of racing, and it certainly seemed it when the three works cars all retired from the Targa Florio. But no, they were back at the Nürburgring to vanquish the brand-new works Alfa Romeo T33/3s for their traditional top three lock out and to claim its third win on the trot on home soil.

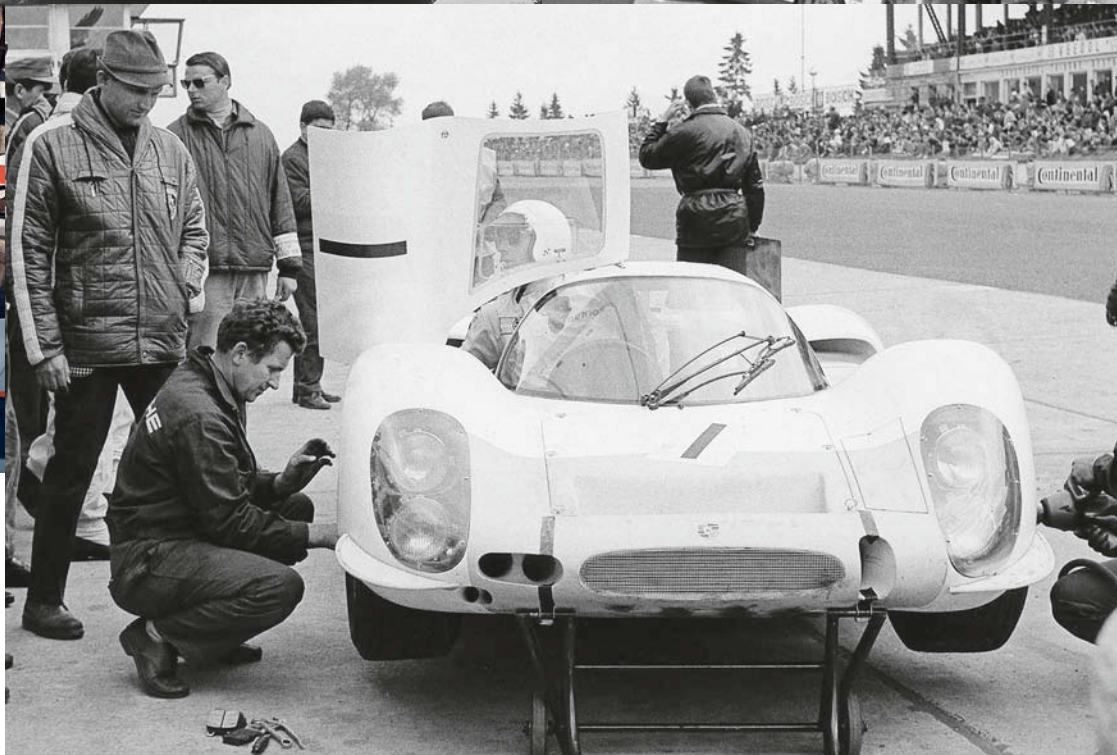
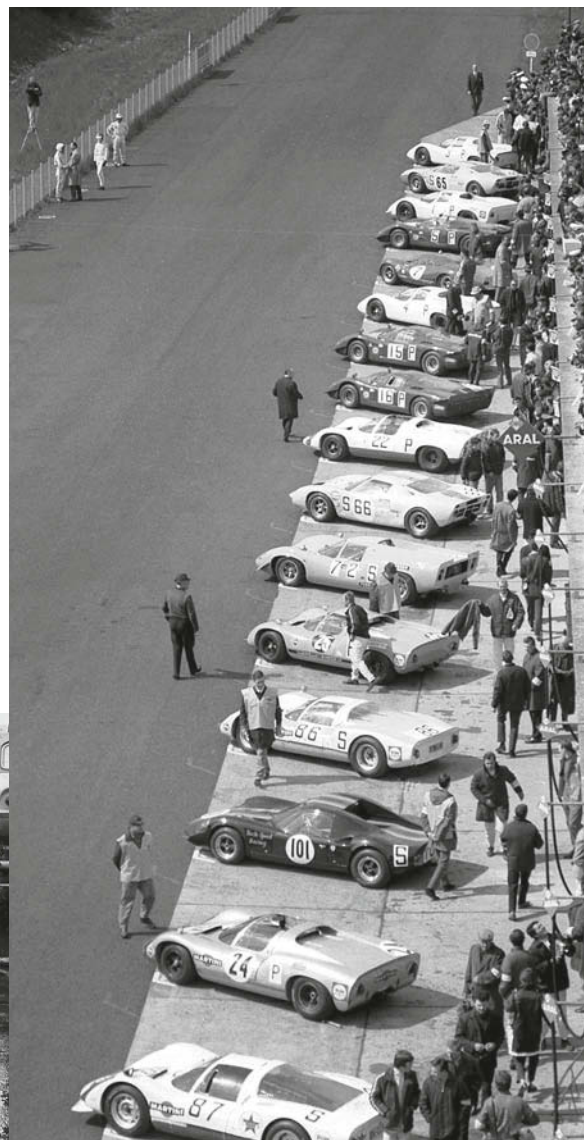
But that really should have been it for the 908. The car was old, it had helped Porsche to a hat-trick of world titles and now the 917 had been banned, Porsche gave up sports prototype racing to focus on Can-Am in America instead and sold the cars.



And yet the 908 refused to die. Privateers bought the cars and despite their age, continued to do well with them. At Le Mans in 1972 a private 908 came third, first car home behind two brand-new works Matras. Indeed there were 908s at Le Mans up to and including the 1976 race, its ninth year of competition. And if you thought that really must have been it, others begged to differ. It was discovered that the 2.1-litre turbocharged engine developed for the 936 slotted very nicely into the 908's chassis and with similar bodywork to the 936, the 908/80 was created which led to one final hurrah for this most extraordinary of sports racing cars.

In the 1980 World Sports Car Championship, a car with a design a dozen years old came second at Silverstone, second at Vallelunga and, yes, second complete with fastest lap at Le Mans. But at the Nürburgring, the happiest of happy hunting grounds for the 908 with its trio of wins from 1968-'70, it won outright. The following year it was on course to do so again when Herbie Muller's 908 spun to avoid a car and hit a Porsche 935 that had been parked at the side of the track. Both cars exploded and Muller died at the scene. The race was stopped and the win awarded to the car that was leading at the time, a BMW M1 which had yet to stop for fuel unlike the second-placed 908 that, were it not for that pit stop, would have led and therefore won the race.

Finally night fell on the career of the 908, and while some continued in Touring car and Interserie races into 1982, its time was finally over. But let's not remember it for that. Let's recall the fact that in the entire history of sports car racing, just one car has won the same world championship event in three different decades. It was the 908 at the Nürburgring, one of the world's greatest racing cars at one of its greatest racing circuits. As an epitaph, it could scarcely be more fitting ○







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44,000 miles, (12 - 2012), Basalt black with black leather .....**£40,000**



**Porsche 911 (996) Turbo 3.6 tip**  
62,000 miles, (52 - 2002), Seal grey with black leather .....**£40,000**



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27,000 miles, (12 - 2012), GT silver with red leather .....**£39,000**



**Porsche 911 (997) '4S' 3.8 tip cab**  
46,000 miles, (57 - 2007), Basalt black with black leather .....**£38,000**



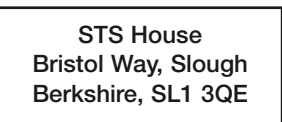
**Porsche 911 (996) Turbo 3.6 tip**  
70,000 miles, (52 - 2002), Seal grey with cinnamon leather .....**£38,000**



**Porsche 911 (997) 'C2' 3.6 'Gen 2' pdk**  
53,000 miles, (58 - 2008), Meteor grey with black leather .....**£37,000**



**Porsche 911 (997) '4S' 3.8**  
41,000 miles, (57 - 2007), Meteor grey with black leather .....**£36,000**



**Porsche 911 (997) '4S' 3.8**  
41,000 miles, (57 - 2007), Meteor grey with black leather .....**£36,000**

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# The Mezger engine

PART TWO

Why is Mezger's flat-six engine so enduring? In part two of the Mezger engine story, Peter Morgan takes a deeper technical look at the features that have made this engine so special.

Photography: Various

Countless books have tried to analyse what it is about the Porsche 911 that has appealed to successive generations of drivers. Some rightly point to EA Porsche's original and timeless profile, while others to the driver-focused design philosophy and sheer engineering calibre that comes from almost continuous motorsport development over a 50-year period. It is all of these. But the real heart of the 911's success has been down to its original flat-six engine and particularly its subsequent incredible versatility and development scope. This automotive icon has since become known universally as the Mezger engine, after Hans Mezger, Porsche's gifted engineer responsible for producing the first design in the 1960s.

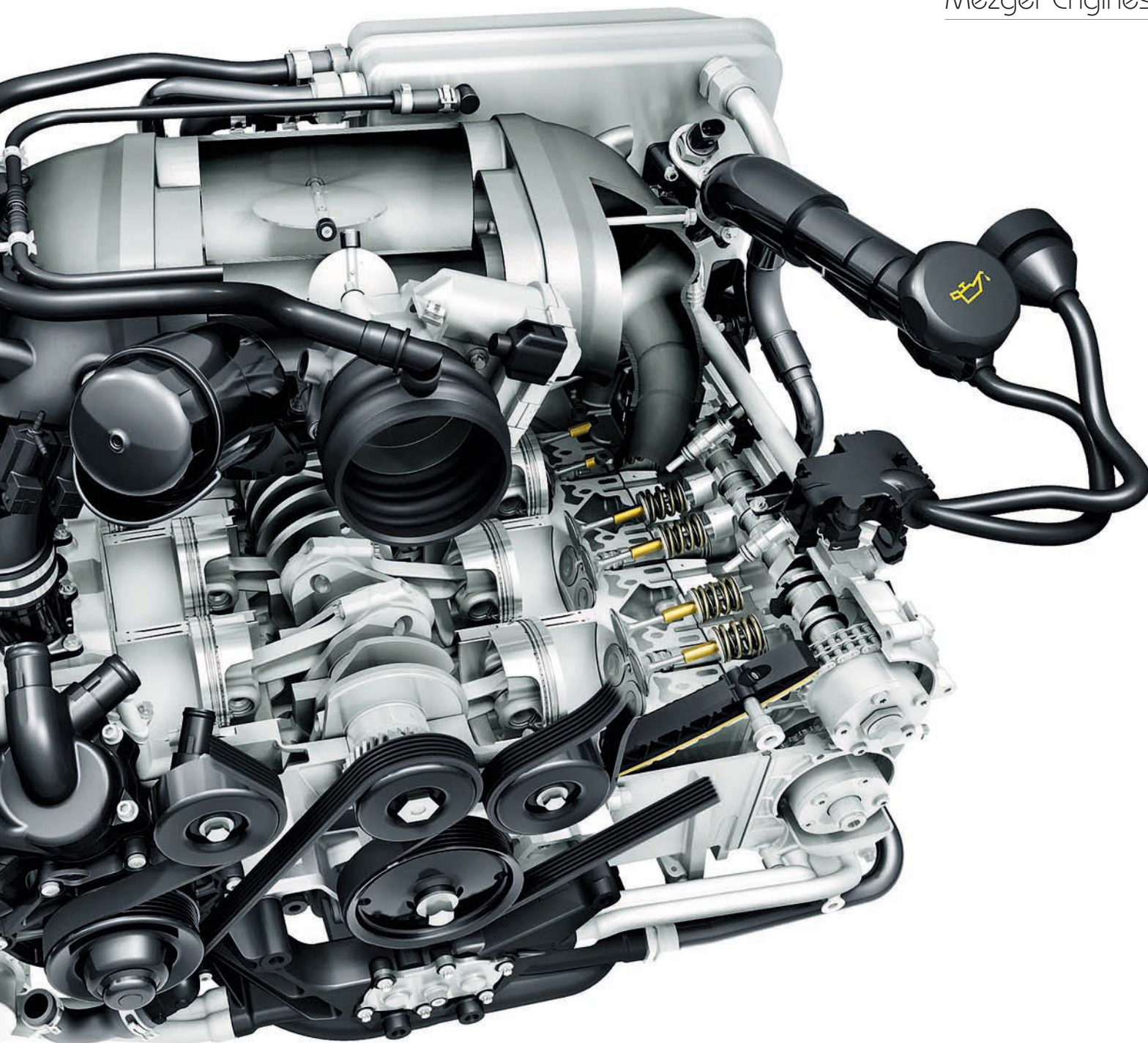
If we consider the key features of the original 911's flat-six and the subsequent upgrades that were integrated into the design over its astonishing production lifetime, a line of continuous development emerges that is a textbook case of evolutionary and revolutionary progress. The story of how the specification evolved has been relentless. But within this steady progress, there are also points at which the flat-six was subject to revolutionary design. The first was the application of the turbocharger to the uprated 930 engine in 1974, the second the complete redesign in the late 1980s that resulted in the 964's M64 engine and finally, the successful incorporation of water-cooling and four-valve cylinder heads for the late 1990s 996 Turbo and GT engines.

The place to start in tracing this fascinating development lineage is February 1963. By this stage the development of the proposed new model that would, 18 months later, roll off the production line as the 911, had progressed as far as testing prototypes. The all-new six-cylinder engine had been given its own type number (745), but the problem was that after some three years of development, it wasn't making the design brief's specified 130hp.

When engineer Hans Mezger and his boss Ferdinand Piëch, fresh from Porsche's abruptly cancelled F1 programme, were reassigned to the new project they began to consider the reasons for the shortfall in power. They found an engine that was very conservative in its design. It failed to reflect the significant advances the two young







engineers had observed in racing and in high performance automotive engine design generally. And crucially, due to its traditional design, the 745 would be quite unsuitable to meet the company's future needs not only in production but also in motorsport.

Nevertheless, the anachronism in the Porsche design that would remain was air-cooling. This was completely at odds with the then trends in advanced engine design. But at Porsche, air-cooling was tried and tested. Both the 'Fuhrman' four-cam four-cylinder and the F1 eight-cylinder were air-cooled and the method was soundly proven on all of Porsche's production designs to that point. And air-cooling undoubtedly led to a basically simple and lighter weight engine design compared to the water-cooled high performance

units of their competition. The key compromise, which wasn't considered as important as producing a basically simple design at this stage, was that air-cooling only allowed a two-valve cylinder head layout (because with a four-valve head, the lower valves wouldn't be cooled properly with the one directional cooling airflow).

Unfortunately, the 745 was effectively a six-cylinder 356 engine. It had two camshafts running above and below the crankshaft, with a tangle of pushrods to operate the overhead valves. The crankshaft was only supported in four main bearings, with two connecting rods between bearing pairs. For racing, this was a non-starter.

Mezger set to work, almost entirely revising the layout and the new design was given the type number '901'. The crankshaft was supported in

seven main bearings, in a very stiff aluminium case that split vertically. Each main bearing was held by two long bolts, with the result that the assembly became very rigid – essential for an engine whose torque was expected to be high. The crankshaft rotating forces were minimised by a short connecting rod stroke and having individual balancing webs for each con rod on the crankshaft.

The decision to use dry sump oiling was more expensive than the wet sump arrangement suggested for the 745 (and the later interim 845) prototype engines, but it ensured foam-free oiling of the high speed components – another essential need for a future competition engine. The pump was mounted below the crankshaft and driven from an intermediate shaft (also below the





Mezger's engines are legendary in the Porsche world, having featured in various cars over the decades...



crankshaft). The intermediate shaft itself was gear driven from the nose of the crankshaft and its principal function was to provide drive to duplex chains driving the overhead camshafts (one per cylinder bank). These chains were kept in mesh by plastic ramps and automatic tensioners – replacing the noisy and complicated all-gear drives used on the race engines. The first tensioner design was devised by Mezger after a drive across Stuttgart to nearby Mercedes Benz to see a design it was using at the time. The first version was an open cup concept, which was superseded by a closed cup design in the late 1960s. In subsequent years the tensioners would be developed significantly further.

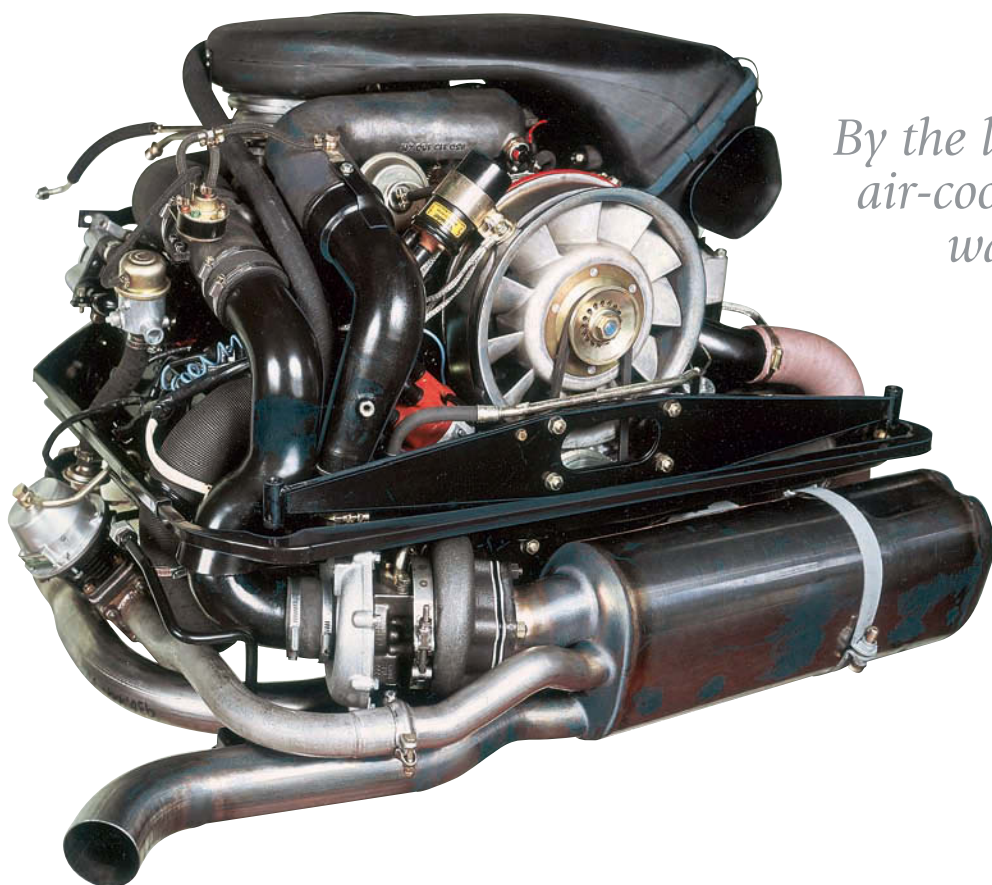
The cylinder barrels and heads were quite separate entities from the fully bolted up crankcase assembly – and this was another of the

original design's secret assets. The very rigid crankshaft/crankcase proved to be a perfect platform for capacity increases using ever larger bore and to a lesser extent, crank strokes. In being able to develop the cylinder/barrel sizes and materials separately to the crankcase, the engine became extremely able to benefit from changing market or competition needs, plus advances in design thinking and materials technology.

The barrels and heads offered the ultimate plug and play facility to get the best from future developments, which included larger valve sizes, hydraulic tappets and twin-plug heads. But the initial hemispherical design two-valve combustion chamber used all the knowledge gained from the F1 engine – a basic layout that endured until the introduction of water-cooling in the late 1990s.

Water-cooling was briefly considered as early as 1968, but at that point air-cooling was still proving very satisfactory (and was good enough for the early 1970s 1100hp 917 CanAm sports cars). Mezger's team avoided the need to introduce water-cooling for the flat-six's heads until the 1978 race engine in the 935/78 – the Moby Dick – its twin-turbos and four-valve heads demanding significantly better cooling than air could provide. The water-cooling arrangement was further refined on the 962C race cars.

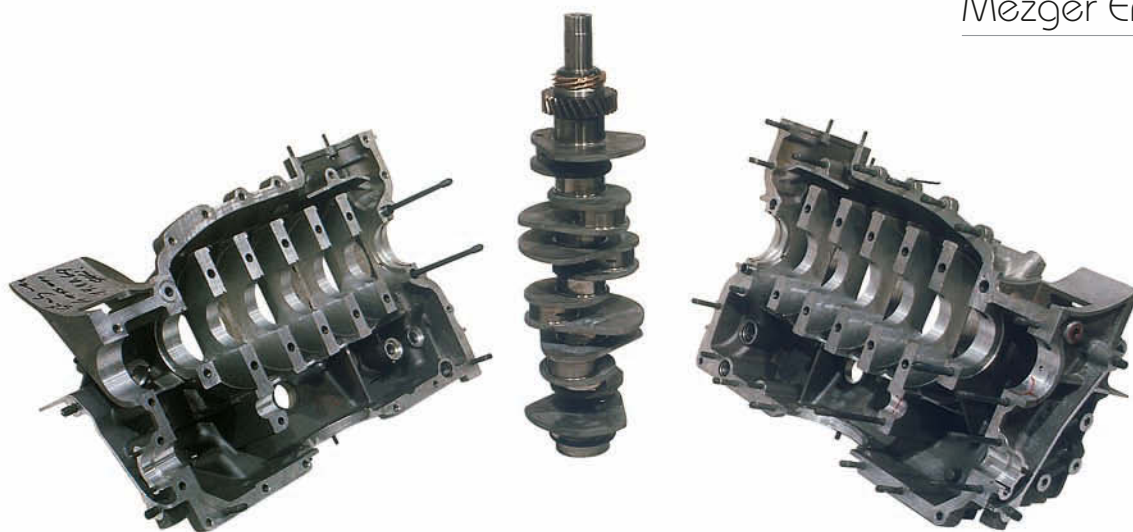
By 1974, turbocharging had forced a complete revision of the engine to build in more strength reserves. While solidly evolved from the 901, the type 930 engine had far greater ability to cope with the massive torque generated by forced induction. The new 3.0-litre 930 engine served the production 911 well, first for the early Turbos,



*By the launch of the 993, the air-cooled M64 powerplant was at its pinnacle*







followed by the normally aspirated Carrera and SC models and stepping up to 3.3-litres for the Turbo in 1978.

With the M64 3.6-litre engine, first revealed in the 964 for the 1989 model year, a new generation of engineers took the design to its third iteration in the search for more performance. The principal areas of redesign were accommodating the larger cylinders, introducing twin-spark ignition and anti-knock control, while still retaining the proven 901 fundamentals of air-cooling, a seven-bearing crankshaft, dry sump lubrication and individual barrels and heads. While the 959 supercar had shown Porsche was on the road to productionising the water-cooling arrangement used on the 962C, it was still considered too expensive a step for the new M64. The new engine kept the proven two-valve air-

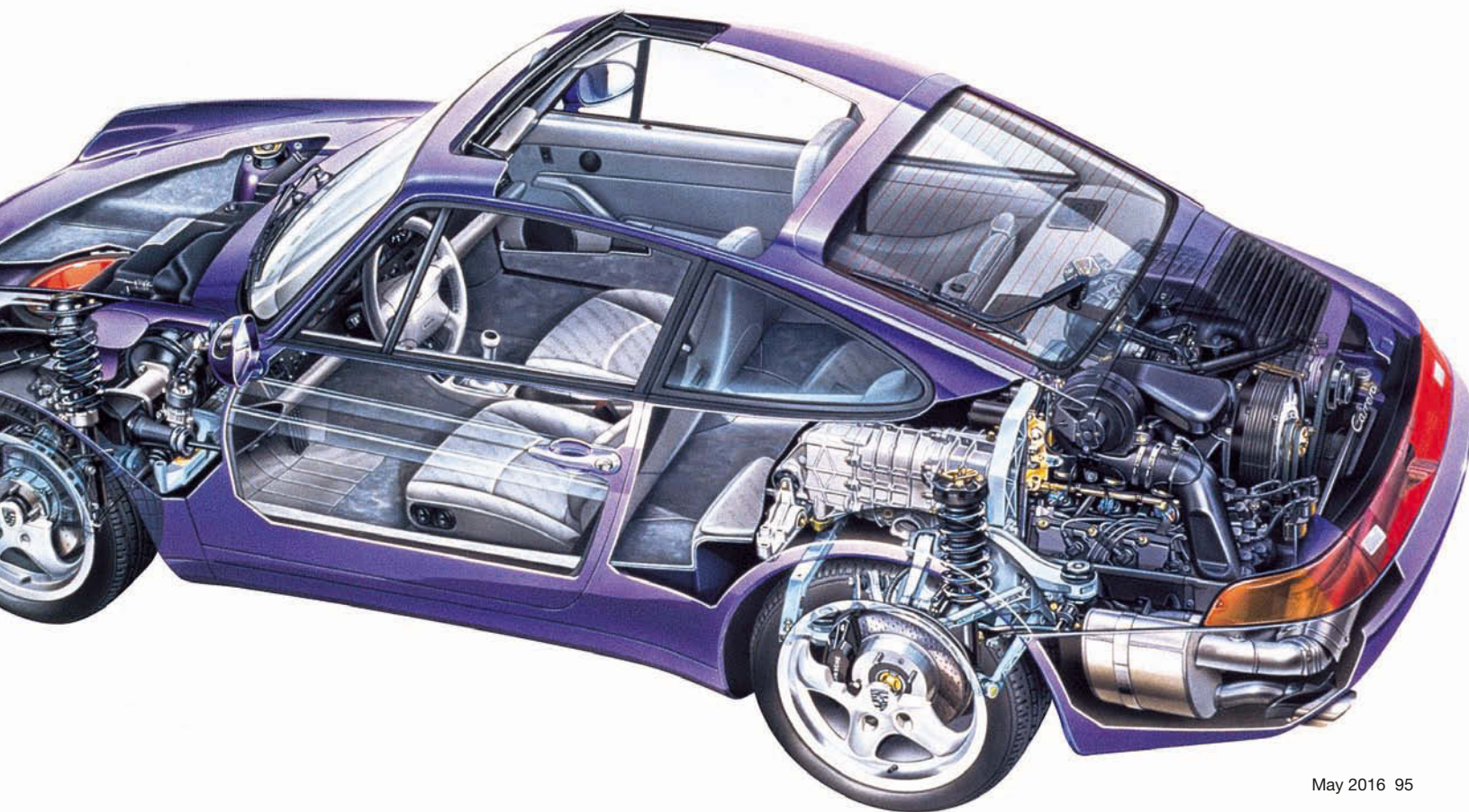
cooled layout and delivered more power with a larger capacity and the increased compression ratio. The new engine offered higher maximum power while improving fuel efficiency and emissions. Nevertheless, the new M64 evolution was, like the 930 before it, a major step forward. An improved version followed with a 3.8-litre capacity, both for racing and limited edition street examples.

By the launch of the 993, the air-cooled M64 powerplant was at its pinnacle – a fantastically robust yet elegantly advanced and capable engine that nonetheless raised two fingers at other more complex multi-valve, water-cooled designs. The 408hp Turbo version now replicated the long proven race setup in having two turbochargers (but was still air-cooled), while the later Varioram versions of the Carrera models produced an ultra

reliable 285hp from a flat-six that could trace a direct lineage back to Mezger's first 901 of 1963.

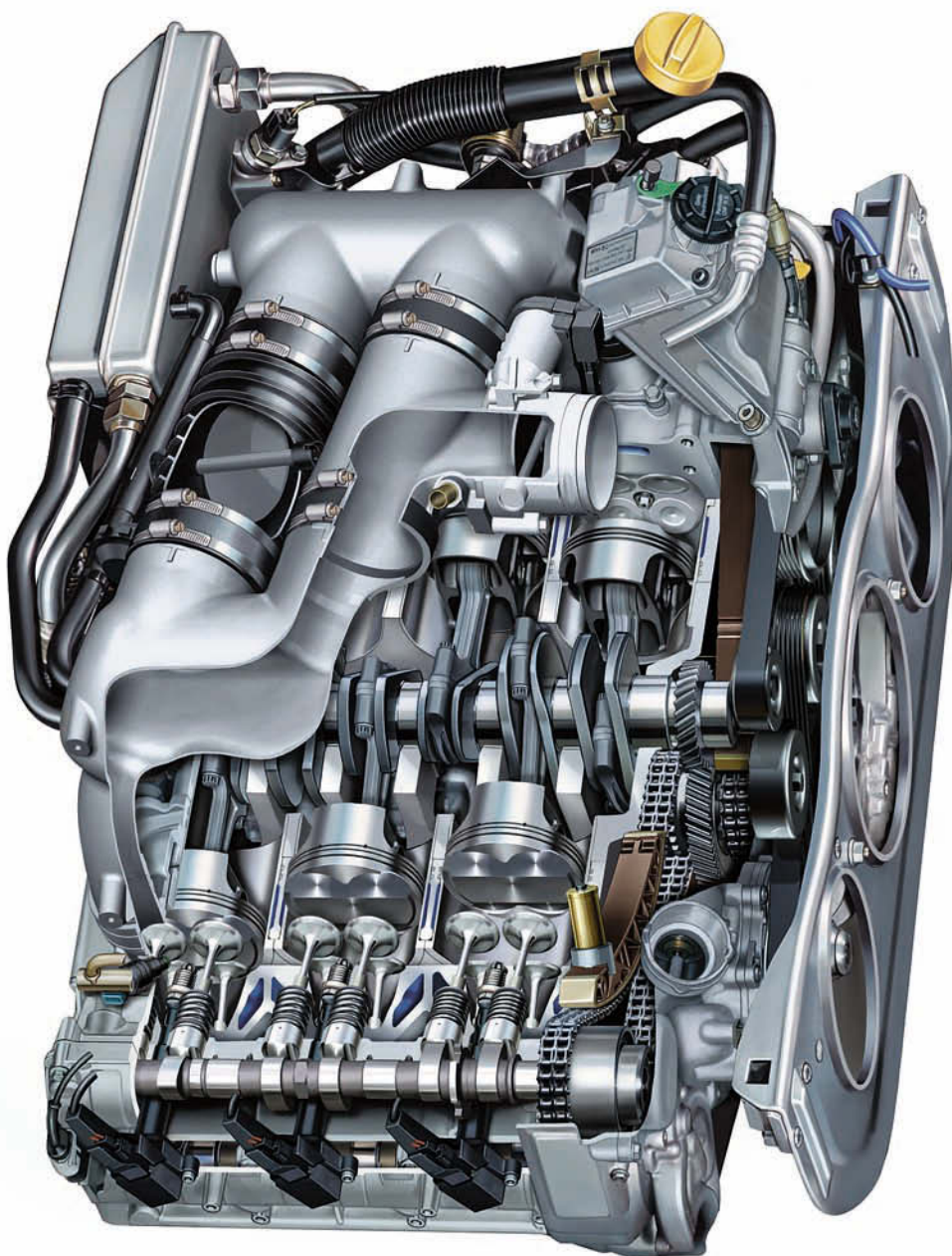
The growing problem for the M64 was that the world was evolving away from powerplants designed primarily for performance. Exhaust emissions and noise were becoming critical requirements for engine design – achievable not only with complex digital motor electronics, but also with sophisticated four-valve technology using water-cooling. Water also had the advantage of reducing passing noise levels compared to the air-cooled arrangement.

The other factor that would impede the transition of the M64 motor to a new generation was that it was relatively expensive to build at a time (the early 1990s) when Porsche was going through its worst trading period ever. New management brought in Japanese mass





*This hugely versatile engine could trace its lineage all the way back to 1963, a full 50 years...*



production experts to significantly reduce manufacturing costs for a new family of Porsche sports cars. And in that objective they were extremely single-minded.

With the benefit of hindsight, that initiative appears to have been a step too far in terms of powerplant design. Almost all of the 12 years (1996-2008) that the M96 Carrera engine was in production, development was primarily focused on trying to emulate the quality and reliability standards set by the original 901/M64 powerplant.

The new engine was also found wanting by the Motorsport department. The wet/dry sump design gave concerns for oil surging and a too flexible crankcase combined with over-zealous cost-saving in other critical areas ruled it out as a high performance capable powerplant.

After the racers successfully made the case for the new flagship 996 Turbo model to have a full water-cooled version of the M64 engine, work started on a completely new design using the proven bottom end (the rigid crankcase and seven-bearing crankshaft) as a foundation. The entire cylinder and head arrangement was redesigned to include water jackets around the cylinders on each bank and integrated four-valve cylinder heads. The engineers drew heavily on previous experience with the 962C and 959 developments. They were also working in parallel with the three-year campaign to turn the 911 GT1 (which used a developed version of the 962C engine) into a Le Mans winner – a goal achieved in 1998. The new M96/70 series water cooled production engine would effortlessly combine evolution and revolution in opening up an entirely new generation of faster Porsches.

The first application was the Supercup race series – another perfect development and test laboratory for the new design. The new engine made its debut for the 1998 season and to qualify the car for wider international competition, a limited edition production model called the GT3 was introduced from 1999, followed by the new 996 Turbo in the 2000 model year. Its four-valve heads featured variable valve timing and lift – another technical first for Porsche.

With progressive development, particularly to the engine management electronics, the M96/70 motors stunned observers by continuing to offer ever increasing maximum powers while consuming ever less gasoline and with cleaner exhausts. In its 2008 model year M97 GT2 version, the flat-six was delivering a staggering 530hp from its 3.6-litres. This hugely versatile engine, which could trace its lineage all the way back to 1963 (a full 50 years) bowed out with the 2012 GT3 RS. Its full 4.0-litres delivered a maximum output of 500hp from its normally aspirated engine.

Looking back, development of the M96/70 series from the earlier M64 engine proved to be one of Porsche's most strategically inspired decisions. It was indeed the climax of a remarkable development story, and one which is never likely to be repeated again... ○



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# gt porsche retrospective

ONE  
YEAR  
AGO  
MAY  
2015



We drove the new Cayman GT4 12 months ago and, boy, did we like what we found. Andrew Frankel wrote: "The engine has the kind of throttle response that comes from a single map, chosen by people at the top of their game." Still talking GT cars, we also got to grips with official details of the latest 911 GT3 RS, one of the most hardcore Porsche road cars of all time. On the classic Porsche front we got under the skin of the 911SC, asking if it might be the last affordable 911 at £20k to £35k, and pitched the 911T against the 964, £35k to £50k 911s to decide which offered the best prospect for potential buyers. Lastly we looked back on the racing career of John Fitzpatrick.

FIVE  
YEARS  
AGO  
MAY  
2011



The big news was that Porsche had given the green light for the build of the 918. All we'd seen up to that point were sketches of the car, but that, and word that it would be a 700hp hybrid, were enough to excite. Meanwhile Andrew Frankel got behind the wheel of the new Cayman R, and we put the R and S variants head-to-head, finding: "Where we considered the S to be the nadir of mid-engined coupés, the R has shown it to be a little slow." We also pitched the 964 RS against the 997 GT3 RS. Dickie Meadon wrote: "Despite their differences, both cars hook you in the first five minutes and never let go." Lastly we checked out a 2011 Carrera Cup GB 911 GT3 just before the start of the new season of racing.

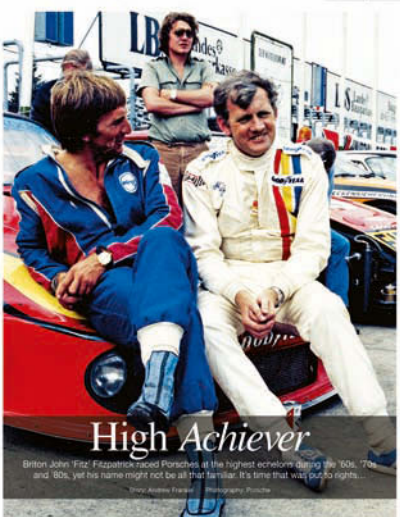
TEN  
YEARS  
AGO  
MAY  
2006



A decade ago Chris Harris went Norwegian ice driving in a 911, something we'll be repeating very soon. Harris wrote: "I hadn't prepared myself for the most outstanding fun imaginable." Our main focus though was pitting the (then) current range of Porsche cars against each other: 997 Carrera took on Cayman S and Boxster S in the ultimate face-off. We found: "As good as the family members are, the 911 is still the daddy." Also in this issue we drove a 968 Club Sport. "The feedback is so immediate you can explore the chassis balance without going crazy," we wrote. Finally we met Michael Kelly and his amazing collection of Porsches (right).



John Fitzpatrick



## High Achiever

Britain's John 'Fitz' Fitzpatrick raced Porches at the highest echelons during the '60s, '70s and '80s, yet his name might not be as familiar. It's time that was put to rights.

Story: Andrew Franks Photography: Freddie

MAY 2016 51

911T v 964



## The Next Level

Got a little more cash to splash on a 911T? Although two decades apart, both the E-Series 911T and the 964 offer alternative prospects for around £45,000.

Story: Simon Jackson Photography: Gus Gregory

MAY 2016 41

964 RS v 997 GT3 RS



## New Power Generation

On paper the 964 RS and 997.2 GT3 RS couldn't be further apart, but drive them back-to-back and a different picture emerges.

Story: Richard Moxden Photography: Malcolm Griffin

MAY 2011 35

2011 GT3 Cup



## up for the cup

The 2011 Carrera Cup GB season gets underway this month and we've grabbed a drive in the all-new GT3 Cup race car.

Story: Richard Moxden Photography: Gus Gregory

MAY 2011 47



## WHAT'S IN YOUR GARAGE?




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## WHO'S THE DADDY?

For the first time we gather together the 911 Carrera, Boxster S and Cayman S on road and track for a three-way shootout.

Words: James Nelson Photography: Dave Smith

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MAY 2008 43



*Légende et Passion*

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# long-term fleet

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



## Jack Wood – 2015 981 Cayman GT4, 2010 997 GTS, 2004 996 GT3

Jack went halves with a friend for a shared ownership experience on the GT4 and the pair took delivery of the car new at the very end of 2015. The GT Metallic silver Cayman was specified with 918 carbon bucket seats, the ClubSport pack and it wears a rather familiar 'FAB' numberplate, like Jack's GT3...

Purchased in November 2014, Jack's 997 GTS was something of an impulse buy. The Meteor grey Carrera 2 started life as a demonstrator at Swindon Porsche and is fully-loaded with extras. So far it is living up to the hype and has been a pleasure to use.

Jack's 996 GT3 was bought in April 2012 from a reputable Porsche specialist, and it was pressed into immediate service as a combined daily driver and track car. It is now very much a third car.

[@Jackkwood](#)



## Rich Duisberg – 1994 968 Sport

The 968 Sport is essentially a 968 Club Sport with parts put back by Porsche GB. Rich bought his in 2013. He'd wanted a car with reliability, RWD, retro looks, good handling, a manual 'box and Coupé styling. He also wanted it to be suitable for airport runs, road trips abroad and track days.

[@TheDuisbergKid](#)



## Martin Spain – 2002 996 Turbo

After an extensive search for the perfect 997 Carrera 2S, Martin was 'seduced by the boost' and ended up with a 996 Turbo. It was purchased in April 2014 as a weekend and occasional track day car. Other than the outrageous performance, it is the famous Turbo script on the rear that Martin loves.

[@MartinSpain](#)



## Ryan Stewart – 2007 987 Cayman S

Priced out of the 911 market, Ryan decided a Cayman was the next best option. He purchased his 987 S in August 2015 with a view to putting it to work on track. The car runs PASM and a Porsche Sports exhaust, but for weight purposes there are no additional frivolities.

[@RyanStewart](#)



## Martyn Morgan-Jones – 1986 924 S

Having hankered after a classic 911S or a 944 Turbo, the 924 S fitted Mart's budget far better. He sees the car as a really practical classic Porsche and claims the car is a keeper. The '86 924 is in pretty good condition but it does need a little cosmetic TLC, which he'll be documenting here...

[@MartynMJones1](#)



## Matt Biggs – 1986 924 S, 1981 911 SC

A project bought unseen as a non-runner, Matt's 924 has been given a replacement engine, SPAX coilovers, 968 ARBs, and race seats. It sees plenty of track days. The SC was tatty but it was exceedingly cheap for an air-cooled 911 so Matt couldn't resist! He's gradually tidying the car.

[@PawnSacrifice](#)



## Rob Richardson – 1978 911 SC

Rob's an old hand when it comes to tinkering with classic cars and has even owned and modified a 924 in his time. Having hankered after a classic 911 he's finally tracked down his perfect project. Expect to see this '78 911 SC being given the 'Richardson touch' over the coming months...

[@Racereightsix](#)





# long-term fleet

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## 987 CAYMAN S

I've sort of let this project get out of hand. When I say 'let', I mean encouraged it with a willing and able credit card. My reasoning, beside blind excitement, is that if I prepare the car bit by bit as funds allowed, I would most likely miss the majority of the summer track events. Now, not that I am advocating diving into debt for a slew of shiny new parts, it does mean that I've been able to cram in a full six months of upgrades into a convenient ten-day install.

This means that the next few updates will not be in chronological order, but I'll go into detail on each of the upgrades in the following issues. You'll have heard me waffle on about striving for a 'mini GT3' driving experience before but I really think I might have cracked it with the latest crop of parts. I left you last month praising the Bilstein DampTronic suspension kit; continuing on this

theme I have taken the rest of the project to this level. As usual, Regal Autosport in Southampton were trusted to install the goodies and with a 20-day trip out of the UK on the cards, I hatched a plan with the guys to drop the car off for surgery.

Thanks to a very similar design to its big brother 911, the Cayman is blessed with a wealth of suspension arm options from companies like Road Sport Supply (RSS). With the handling compromised by the limited geometry setup with the stock arms I looked to RSS for help. After a conversation with Mike Shalke I found myself purchasing a beautiful set of four RSS lower control arms, RSS front and rear bump steer correction kits, RSS transmission mounts and an RSS rear toe lockout kit. The quality of these items is fantastic and allows for finite adjustment of the geometry.

The new suspension arms coupled

with the Pirelli Trofeo R tyres and Bilstein coilovers allow for some really impressive cornering speeds. To protect the engine from oil surge and cavitation during cornering Chris from Regal suggested adding a Porsche Motorsport baffled sump and air oil separator. Not one to argue with g-forces I added these to the project with little protest. It's an often-missed part of track preparation and not something I fancied falling foul of.

Elsewhere, my enthusiastic track driving had really taken a toll on the clutch. First signs of wear came from a leaking clutch master cylinder which liked to stick the third pedal to the floor in traffic and later progressed into full slipping clutch syndrome. Luckily the guys at Regal have their own billet lightweight flywheel and sintered metal clutch package, so that made it onto the shortlist along with a Wavetrac differential. Wavetrac's unique

differential is a great amalgamation of the benefits of a plate type and ATB-style differentials and something I will go into detail on in another update.

With all these upgrades under the skin, I felt like I needed a little more bark to match the bite. Having researched various potential exhaust upgrades I didn't feel confident any would match the Porsche Sports Exhaust for quiet motorway driving and full throttle gruffness. Then I found the AWE tuning exhaust system for the Cayman S. AWE use clever double pass boxes with a balance pipe to iron out the low rpm resonance and allow for a wonderful high-pitched singing voice at higher rpm. To my surprise it's actually quieter on the motorway than the PSE yet sounds like a supercar when uncorked. To finish off the TIG-welded, handmade system I opted for the AWE black chrome exhaust tips.

Arriving back from my trip the day





before the Track Addict track day at Rockingham Circuit, I went straight from the airport to Regal Autosport to collect the car. There I found all the upgrades installed and the car fully prepared, corner weighted and aligned for track use. At Rockingham the car performed faultlessly, which is a testament to the level of detail and care taken on the installation at Regal Autosport. With this many items changed in one hit, I'm seriously impressed with the result.

Rockingham itself is a fantastic circuit, with the pits situated on the infield so you always feel at the heart of the action. The Track Addict guys have a great approach to track driving and despite the chilly track temperatures and brief snow shower the day went without a hitch. As for the little Cayman, well, let's just say I'm no longer hankering after a GT3.

*Ryan Stewart*



Ryan thinks he's cracked the Cayman project with his latest round of upgrades performed by Regal Autosport, all of which he put to the test at Rockingham...











## 924 S

ast month I reported the problems I was having with the 924 S following the fitting of the new knock sensors.

After a number of days, and having decided that I was possible being a little over sensitive, one Sunday morning I decided that I might as well see if I could try and get the 924 through its MoT. I knew that there were a few points lingering from the previous year's attempt but it's quite hard to tell what is going to be marked down from one year to the next. I swapped the cars around and put the 924 S on stands.

Having made myself a cup of tea I started the car and got underneath to check for exhaust leaks. I was pretty sure there was one around where the main exhaust met the downpipe. One is a sleeve that fits over the other, and not very well. I noted that there was indeed a leak from one site. Thankfully I also noted the cause of the knocking noise from the engine. A socket had fallen down the back of the engine and was wedged against the starter and bellhousing. Once that was removed I fired up the engine again and it was far quieter. It still needs some work, though, and probably a full service.

I tidied up the joint where the exhaust sections met with a flat-head screwdriver and wire brush and then

applied generous amounts of Gun Gum. As I needed it to set properly and I didn't really want to be in the garage with the engine running (if one of the neighbours happened by they might see it as a cry for help), I set about the exhaust pipes with a hot air gun. It heated it up a treat. I lightly burned my hand on the pipe and the putty bubbled up and then, I hope, set.

With the exhaust done I took the back wheels off to adjust the handbrake. A while back the handbrake cable snapped and the replacement worked fine for a little while but then started to loosen. I can only assume that it was stretching with use. Once one of the most hated of tasks, I seem to be getting the hang of the damned brake shoe things and in no time I appeared to have tightened the brake sufficiently. I am still not entirely sure what the correct method is for determining when the correct settings have been achieved. I tend to rely on guesswork and pot luck. In this instance it worked.

With the wheels back on the car and the car on the ground I did my usual checks. I can never be too sure whether or not all of the lights are going to be working. Most of the time the car's electrics are fine but strangely they become somewhat unpredictable come MoT time! Fortunately all was

well. The washer jets were also in good order (another possible wildcard when it's inspection time). I cannot explain why but I felt it good form to give the car a wash before heading off. I put some air in the tyres, too. It took just a few hours between deciding to MoT the car, handing over the keys and walking into Five Guys to await my fate.

It's a good job I enjoyed the burger I had while I waited because the MoT outcome was not good. There was quite a long list of jobs that needed doing:

- Battery insecure
- Centre exhaust has a major leak of exhaust gases at pipe joint
- Four separate counts of 'brake pipe excessively corroded'
- Power steering inoperative

The battery was a bit of a schoolboy error. It went flat when I was trying to get the car started, when the knock sensor was broken. When I'm engaged in maintenance I often leave things in a moveable state. In my eagerness to get the car in for its MoT in must have inadvertently forgotten to bolt the battery back down.

As for the exhaust, I have yet to redress that particular problem but I suspect I may have issue with the use of the word 'major'.

The power steering being inoperative was an odd one, as it was

the first time I've had this flagged. It was failed on the assumption that it was factory standard fit, in which case it could not be disabled. If PAS was an option then it would not be a problem. Apparently a call to Porsche is required to confirm, but not on a Sunday when it's closed.

The brake pipes are points that obviously require a reasonable amount of work. I had a look online and I think that the original items will cost pretty much what I laid out for the car! Thankfully with the internet another option is never too far away, the key message being not to buy copper as it can easily rust, although using copper pipe is an area of great internet debate. I was able to buy a roll of Cunifer (copper-nickel pipe) with connectors and a fitting kit from which I could make my own brake pipes. It should be interesting and I will hopefully get to give it a go in the next week or so.

The documents tell me that the 924 S has not seen much use over this last year, although its mileage would have been greater were it not for the time that it spent on the back of a low loader. Thankfully the running problems that I have had this last year appear to have been all but resolved, notwithstanding the fact that I can't drive it anywhere right now to confirm.

*Matt Biggs*



# long-term fleet

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## 1981 911 SC

I had to move the SC yesterday, for the first time in far too long. It was, admittedly, just to get the 924 S into the garage as there is some work that I need to get on with.

I have had a problem drying the car out where water had gotten in on the driver's side. In the cold damp weather, with the car languishing in the garage unable to take advantage of what precious sunlight there is, there has been little chance of the moisture leaving. On the recommendation of a colleague who has one for his boat, I bought a small greenhouse heater that I put in the car when it is not in use. It appears to be working, for while the car didn't feel especially warm inside when I opened the door, there was a significant amount of water in the moisture traps – demonstrably more than had collected in the months prior to the heater going in. It's worth noting that if you do decide that you want a heater to keep your car warm, even if not to dry it out, you would do well to put a moisture trap, or something similar, in the car as running the heater in cold weather will create a reasonable amount of condensation. If you have a damp car, then this could be an ideal solution, and far cheaper than buying a dehumidifier. The heater was around £15 and another £5 for the moisture traps. It would have made life a lot easier if I'd had this when the Boxster had taken on water.

Having gone to the effort of moving the cars around and seeing the SC there on the driveway I could not resist a recreational drive. With all of the things that I have going on with the house and work I cannot recall the last time I went for a drive just for the sake of it. It was a pleasant enough, dry afternoon and I'd earned a break. I set out at a gentle pace, letting the engine

and gearbox warm. As I pootled off in no particular direction the DAB radio pouring out of just three speakers was a reminder that I was really letting things slip on the car front. I was almost through another winter and I had not begun any of the tasks I was aiming to undertake at the end of 2014, let alone the simple plan I had going into this winter. I need something to spark a change in behaviour and get things back on track, not literally, although some track time would be great!

Mercifully other Sunday drivers were few and far between and that allowed me to amble peacefully through the countryside. A mixed blessing at this time of year, the roads did not appear to be overly salted – a benefit of heading through the countryside on B-roads. It could be as a consequence of my not having driven the 911 for some time but I found my driving to be very tentative, particularly when it came to cornering. Even within the parameters of warming the engine, my speed was slow. It is probably that my mind takes over from my senses. The knowledge that it is not too far above freezing and I am running track-focused tyres override the input from the steering wheel about what is happening at the light front end. Manning up and returning with stories of big oversteer angles is one thing but returning with the car (and pride) intact was arguably more pressing.

I pulled over, at a layby on a quiet road, to take photos. I felt confident enough to leave the engine running as I sought, yet did not find, my inner artist. Climbing on fences and clinging to trees I drew strange looks from the occasional passing motorists, although sighting the SC appeared to provide

reasonable enough explanation of my actions; it's awesome, why wouldn't you photograph it? While I was doing this I could hear a deep whirling noise above what is to be expected from an air-cooled Porsche. If the car was moving I would have attributed it to a driveshaft or bearing but as it was stationary I can only assume it is the flywheel or bearing between the engine and gearbox; something that would be a lot easier to isolate with a transaxle!

Accepting that I was never going to capture a picture of the car that reflected its true glory (as Martin Spain seems to so consistently manage with his Turbo), I set off again. The roads, that I had not driven previously were far more open, fields without hedges or crops to obscure my vision, so I could easily see where the road was going and felt the urge to press on the accelerator. It started to come back to me, how good this car is, and how much I can lean on it, pushing into corners faster actually increased rather than took away confidence that the car would get round. It gripped and fed back messages from the Tarmac beneath it. Coming out of a tight corner a long straight allowed me to wind the engine up, not all the way to the redline but enough to make me wonder why I am bothering with anything else and not just focusing on restoring this magnificent machine to its former glory. This thought stayed with me as I made my way homeward, back on the main roads, zipping past slower cars.

For now, though, the 911 is at rest on the driveway, disconnected from the increasing number of life support cables going into its body. I am hoping for a clear morning so that I can give it a run into the office and, just maybe, a grin-inducing detour on the way home.

*Matt Biggs*











## 968 SPORT

"You bend it, you mend it." My friend Paul was happy to let me drive his Cosmotron but was understandably a little cautious about having me at the controls for the first time.

Inspired by the works of Ed Roth he turned a BMW Z3 into a spectacular piece of road-legal sci-fi. The skinny Mooneye wheels haven't helped the Z3's rather humdrum handling but I found 'Cosmotron' to be great fun on the road. The rear-hinged Perspex bubble canopy, in particular, is a work of automotive art. However, I thought that Paul might like to join me on a track day and try something from the other end of the automotive spectrum: my Porsche

968 Sport. "You bend it, you mend it," I said.

I have owned this 968 for exactly three years now. My buying criteria included proven reliability, RWD, retro looks, good handling, a manual 'box and coupé styling. I also wanted it to be suitable for airport runs, road trips abroad and occasional track days. My shortlist, for the budget, meant there was one clear choice. I've had quite some fun with it in the last three years and the only non-maintenance expense has been a handbrake cable. I had not even needed new tyres. Note the change in tone at this point... you may guess what's coming.

You may know that the 968 Sport is a 968 Club Sport with bits put back in by Porsche UK who, over 20 years





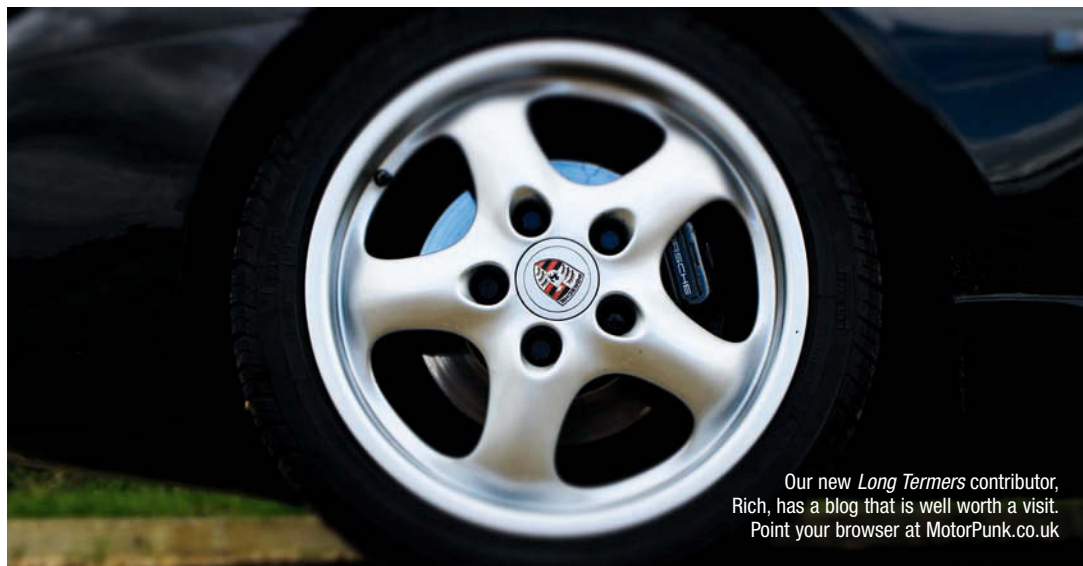
ago, was desperate to shift a few of these then-unloved machines and inadvertently created a new model. It's a Club Sport with electric bits and little rear seats, or a standard coupé with better suspension and a bit of fat trimmed, if you prefer. For me, the little rear seats are essential as this car occasionally needs to do the school run. As I explained to 'Mr Cosmotron', this car has no traction control, no airbags, and the engine needs to be wound up a bit thanks to the Variocam nature of the power delivery.

Staffordshire in the winter is a cold place and as I wandered off to find a cup of tea I failed to notice my car, with him at the wheel, creeping ever nearer the front of the queue to get on track. When the little crowd went 'ooh' and 'aah' like they were watching a firework display, I realised that a) something had come unstuck and b) it was probably my car. I didn't get to finish my cuppa.

Fortunately Curborough is mainly field with just a bit of Tarmac on it, meaning ham-footed drivers can't do any damage. The back had stepped out, a wheel caught the grass and Paul executed a 90-degree turn. Nothing bent. Nothing to be mended. I had a few laps myself and realised that the old P6000s (yes, I know) really were past their best. Plenty of tread depth does not automatically mean plenty of grip. We enjoyed chewing off a few more millimetres of tread and called it a day.

After dropping off a still-grinning Paul I cleaned the car (black is a real pain to keep clean, my only bugbear) and ordered some Bridgestone SO2s. £148 each, fitted to my Cup 2 alloys, they seem to be the tyre of choice amongst fellow 968 owners. They're not the quietest but they're a considerable improvement on the P6000. Last week I flew back to Blighty after a few days abroad to be met by sleet on the ever-miserable M6. I was pleasantly surprised by the amount of grip the SO2s offer in such conditions. I suspect Matt Biggs will be shouting 'fit some winter tyres!' at me when I next see him. He's probably right, but I know the risks. 'You bend it, you mend it'.

*Rich Duisberg*



Our new *Long Termers* contributor, Rich, has a blog that is well worth a visit. Point your browser at [MotorPunk.co.uk](http://MotorPunk.co.uk)







## 981 CAYMAN GT4

I'm not a clean freak when it comes to my cars. None of my cars have been garage queens and they've been used in the way their makers intended. They got dirty, stone chipped and scuffed. They wore their battle scars with pride, their patina there for all to see. But things changed with my GT3 '3FAB'. After it had its full glass-out respray I had PaintShield's self-healing paint protection film (PPF) installed and I've not looked back. A bigger convert you will not find to this exceptional product.

Early on in discussions myself and James agreed that the GT4 '4FAB' would get a similar level of protection so that we could enjoy the car in convoys and on track and just generally not have to worry about a) who was driving the car when it receives a loving kiss from that humongous stone that falls off the back of a lorry you're following on the M6 within the first week of ownership or b) the general condition and erosion of the paint that occurs from running close to other cars at speed.

As good as the PaintShield is on 3FAB, the company's HQ is a terribly long way away from us – not really an issue apart from the fact that to be completely sure that the car doesn't pick up any chips prior to film installation the car really needs to be trailered direct from the dealer to the PPF fitter. The additional cost of this is several hundred pounds, and though we aren't scrimping on this car I felt there were possibly better options available to us.

A bit of research later and I found Steve at Invisifilm in Cheadle. He came highly recommended and his Facebook and Instagram pages are filled with all kinds of exotica that he works with on a daily basis. He has built a reputation working with Lamborghini and Ferrari, travelling as far as Glasgow and Aberdeen to install film on Huracáns and Aventadors, and he has worked on everything up to (and including) Bugatti Veyrons. But recently he has also been doing quite a lot of work with customers from the local OPCs and, in fact, had already

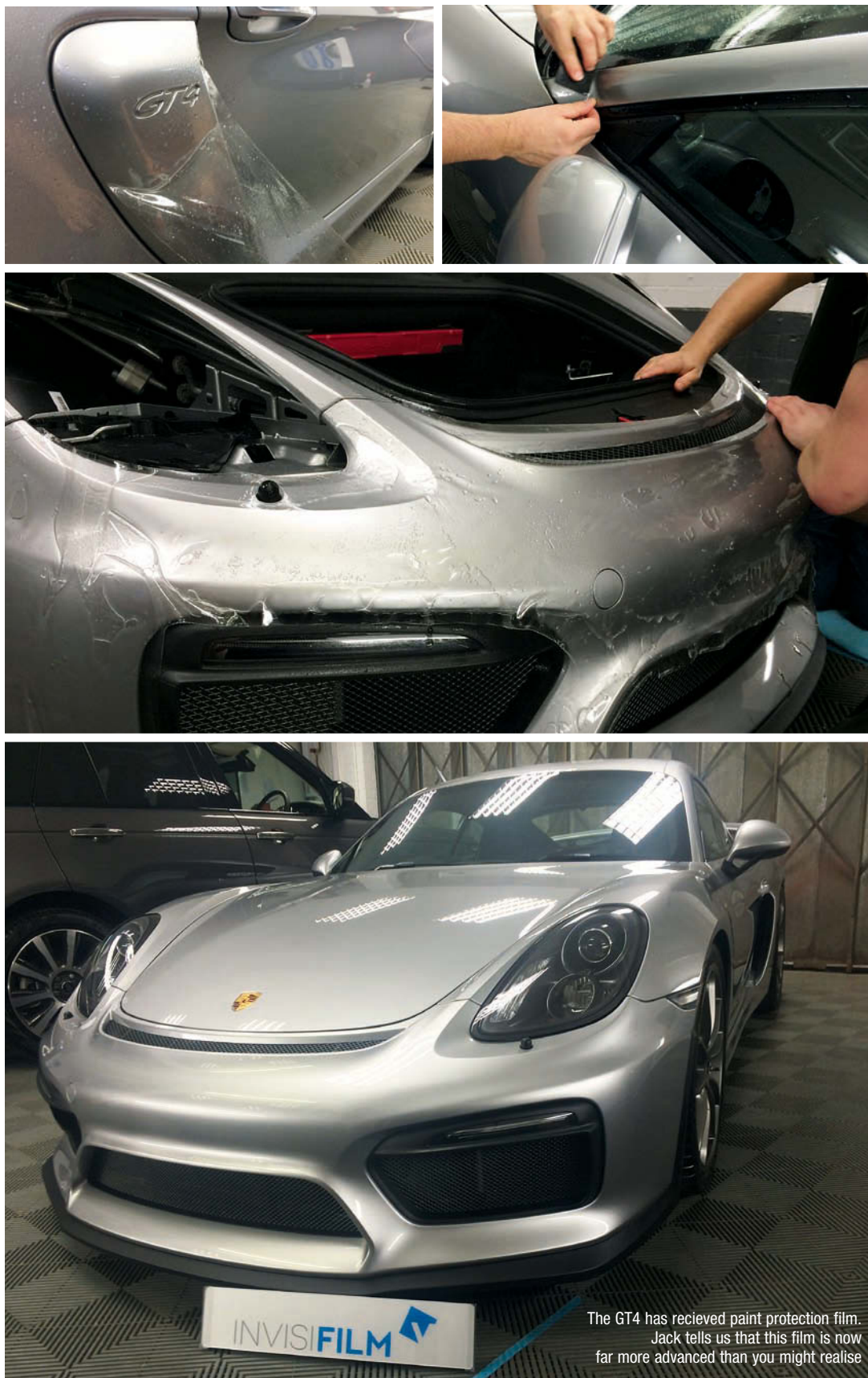
applied film to two other GT4s before we booked ours in. By the time 4FAB was delivered to him he even had another four booked in. The popularity of paint protection film on this type of car is definitely on the up.

And why is that, exactly? Well, to start with the new films are nothing like the stuff you'd have got even five years ago. The current crop of premium films, namely Xpel Ultimate and Suntek, both offer what they call 'self-healing' properties. Any scratch or scuff that the film does receive repairs itself over a period of time or with the application of a bit of heat, be it from some warm water or hot air. Secondly the clarity on these films is spot-on. There's virtually zero orange peel effect and even after years of service it should remain completely clear with no discolouration. Finally, the way these films are applied, with almost every edge having the film wrapped over it, even from very close range it's almost impossible to see. Forget films of the past, this latest generation stuff is simply superb, both in how it

protects the car and how undetectable it is. In the end we decided on Xpel Ultimate for our car. It is slightly thicker than the film PaintShield used on the GT3, making it fractionally more visible on the car but also more durable in order to take the abuse that was going to be thrown at it from track work and the tours we have planned over the coming months.

Right from the off dealing with Steve was a breeze. He's a real petrolhead with a passion for cars and he's dedicated to keeping his customers happy. Emails were replied to promptly, pricing was very transparent (pardon the pun), and his overall can-do attitude a pleasure to deal with. For example, to save the car from being trailered the three miles-or-so from the dealer to his studio, he drove to the OPC, installed some small pieces of film to the high impact areas, such as the rear wheel arches, before driving the car himself very carefully back to his unit. After the work was complete he delivered it back to the OPC ready for us to





The GT4 has received paint protection film. Jack tells us that this film is now far more advanced than you might realise

collect. It was a completely pain-free process for us. He also included some extra pieces that weren't included in the quoted price but felt should be included anyway, such as the door handles. On returning to his premises to pay for the service we discussed a couple of other areas of the car that we felt would need protection but the patterns for the pieces weren't currently available to download from the Xpel website, such as the leading edge of the two rear spoiler end plates. He offered to make some up for the car if we dropped it back with him at a later date, and I've heard from a couple of GT4 owners that have been to him since that he has now made up the template for those areas and includes them in his kit.

As far as what level of coverage we decided to go for, we went for a 'partial' kit in the end, but it's actually very comprehensive and excellent value and includes: full front cover (the bonnet, wings and bumper); the A-pillars; the sills; the leading edge of the roof; the side inlet scoops (which are a must as you can already see they have received several large impacts after only a thousand miles); inner rear arches; and rear wings... basically all the high-impact areas.

We're very happy with the results. And, of course, we did get some stone damage from a passing truck that left a huge scuff in the film on the nearside front wing. It's inevitable with a brand-new car. At least the paintwork is intact and the ten-year warranty on the film means that we should be getting that panel of film replaced free of charge once we find time to drop it round to Steve. We'll get those additional areas done at the same time, of course.

In the meantime we'll keep piling the miles on this staggering little car. I don't want to reveal too much at this point, but it's just completed its first track day and, as promised, I took 3FAB along as an old-school foil to this modern GT product in an attempt to discover whether the GT4 is a pretender on track or whether it has the wherewithal to hang with true Porsche Motorsport products of the past. Full details next month.

*Jack Wood*



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# the market place

by Philip Raby



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

## Macan

Porsche's baby SUV is a wonderful machine but is it worth buying a used one just yet?

When Porsche launched its first SUV, the Cayenne, some 13 years ago, there was uproar. How dare the sports car manufacturer build an off-roader, and an ugly one at that? Thankfully, the world has warmed to the Cayenne – both the concept and its looks – over the years and it has proved to be a useful source of

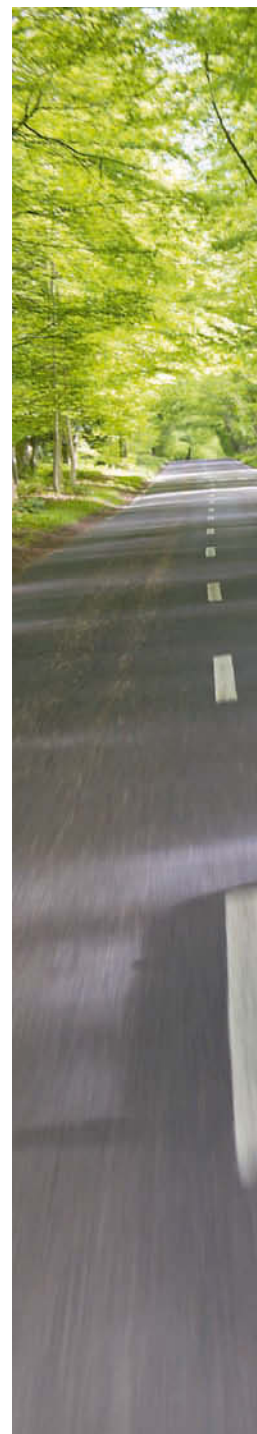
income for Porsche. Since its introduction, though, the market has evolved and a new niche has developed – that of the compact SUV. Cars such as the BMW X3 and Range Rover Evoque proved that there is a demand for small SUVs that appeal to families by dint of their size, lower price and better economy.

Porsche naturally wanted a piece of the action and set to work developing

a Cayenne junior (indeed, the name Cajun was mooted for some time) based on the Audi Q5 platform. This went on sale in 2014 as the Macan (after an Indonesian word for tiger).

In a short space of time, the Macan has proved to be a winning formula. Being smaller, it's easier to live with in cities than the big Cayenne and offers a sportier driving experience, thanks to a lower, more car-like seating position,

*In a short space of time, the Macan has proved to be a winning formula*









*Macan owners love to tell you  
how great their cars are and  
we agree – they are superb!*







reduced weight, tuned suspension and a seven-speed PDK transmission.

Macan owners love to tell you how great their cars are and we have to agree – they are superb machines!

Which is all very well, but the thing with a well-received new model is that residual prices remain high, and that's great news if you own one, but less so if you're a buyer on a tight budget.

Let's look at the numbers. If you went out and ordered a brand-new Macan today, you'd be spending £43,500 on a basic 2.0-litre model. Add a few choice options such as metallic paint, heated seats and parking sensors and you'll soon push that price to £50,000 and beyond. And while this entry-level model shouldn't be sniffed at – it's far better than a 2000cc four-pot engine should be – you may be tempted to increase your budget by just two grand to be able to hold your head high and say you own the 3.0-litre V6 or, for about the same price, the more economical diesel. If money is no object, then we'd have to opt for the freshly launched £55,000 GTS, which we would take over the range-topping Turbo at £62,000. Again, all these prices are plus options and it's hard to buy a new Porsche without choosing a few extras, so you need to add up to £10,000 to the ticket price.

Now, hold those figures in mind while we look at used values of Macans. The cheapest example we could find was an early diesel with 17,000 miles, a decent spec including full leather, Litronic lights, auto-dim

mirrors, memory seats and much more, for sale privately at £44,000. When it was new, less than two years ago, this car would have been around £10,000 more than that, once you tot up the extras. Which is pretty good in terms of depreciation and, as a used buy, it's tempting as the car comes with over a year's worth of Porsche warranty and the amount you'll save over a new one is not to be sniffed at.

We could only find one 2.0-litre Macan on the used market for under £50,000 and, despite this entry-level model being a good car, we do wonder how popular it is proving as a new purchase which means it could end up being a duffer when it comes to selling second-hand. The 3.0-litre V6 petrol offers better performance, similar economy and, well, gives you more credibility as a petrolhead. That said, the one used 2.0-litre was a 2015 car and had a good specification (another £10,000-worth) and cost £46,000 so, again, a tempting prospect.

It's the same with diesels – the one to opt for if you're worried about fuel economy – you'll struggle to find one for much less than £49,000. However, increase your budget a few grand and you'll find that diesel Macans are the most popular on the used market – we found 44 listed for sale – which is not surprising when they return over 40mpg in normal use. You're spoiled for choice which means that there's a good chance that you'll find a Macan S Diesel in the right colour and with pretty much the specification that you want.





# the market place

It's too soon to find a GTS on the used market so, if you want the ultimate Macan, go for the Turbo, prices of which start at £62,000 used, which is what you'd pay for a new one without options. And there-in lies a quandary. Yes, a used Macan will save you money and you can get your hands on one immediately but there's still a real argument for popping into your local Porsche Centre and putting your name down for a brand-new one. It will cost you up to £10,000 more than a used example once you've spec'd it up and there's a waiting list, but you have the luxury of choosing exactly the car you want and you'll have the pleasure of knowing that no one else has owned and abused it. Which is very tempting.

If a used Macan is out of your price bracket, you're going to have a long wait before values really drop, but they will in time, so hold fast. In the meantime, how about a Cayenne? It's just a large Macan! ○



*The thing with a well-received new model is that residual prices remain high...*







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# all you need to know...



## Carburettors

Jesse Crosse explains all you need to know about carburettors...

Back in the day, carburettors were the main instrument used for mixing fuel and air together and introducing that mixture into the combustion chamber of a petrol engine. Unlike fuel injection systems which literally squirt fuel into either an inlet manifold (port injection) or directly into the combustion chamber (direct injection), carburettors function almost entirely by atmospheric pressure and gravity. Early Porsche 356s and 911s were equipped with Solex carbs. These gave way to Weber and finally Zenith before the introduction of Bosch fuel injection, but they all had a couple of things in common – they were all fixed-jet, downdraft carburettors.

So let's start at the beginning. Some of the earliest carburettors designed at the end of the 19th or beginning of the 20th centuries were immensely crude. One design, for example,

consisted of a rotating brush positioned in the choke (throat) of the carburettor on to which petrol was dropped. Fuel would fly off this brush due to centrifugal force and the atomised fuel would enter the engine. A rod touching the brush in response to the throttle pedal caused more or less fuel to fly off the bristles to control power. Well, that was the theory.

In contrast, a modern carburettor is an instrument of great precision and there have been many designs. In essence, they all subscribe to the same principle. As a piston moves downwards inside the engine, it generates low pressure in the cylinder. At that point, the inlet valve, or valves, will be opening, connecting the cylinder to the inlet tract. Air rushes through the carburettor and into the cylinder to try and return the pressure in the cylinder to the ambient pressure. This is what is meant by a 'naturally aspirated' engine. It breathes

much like a human body but using a piston rather than a diaphragm and it does so using atmospheric pressure.

The carburettor contains a choke, which means the centre part of the inlet tract narrows. Its proper name is a 'venturi' and its effect is to cause the flow of air to speed up as the diameter of the venturi narrows. This invokes the Bernoulli principle which in plain English means that as the air speeds up, the pressure drops. If the venturi is connected to a reservoir of fuel which is at atmospheric pressure, via a jet as it is in a carburettor, then fuel will rush through that jet into the low-pressure airstream, mixing with the air as it continues its journey into the engine.

As the pressure drops, so does the temperature of the airstream and it is this which can cause carburettor icing. Ice forms in the venturi and causes rough running at best and at worst, the engine will stop. It's less of a

problem in water-cooled cars which usually have heated inlet manifolds, but can manifest itself on air-cooled engines. The problem is much less severe on cars where the engine bay remains relatively warm but in carb'd piston-engine aircraft is a major consideration for pilots who must use a carburettor heater, especially on the descent.

A crucial component is the throttle butterfly; a thin disc mounted on a spindle which sits in the airstream and rotates in response to the accelerator pedal. It can either close the choke completely or rotate up to 90 degrees to the full throttle position. The more air it lets through, the greater the pressure drop and quantity of fuel that is sucked into the airstream.

That, then, is the basic principle of a carburettor. On a simple engine, there would normally be one carburettor feeding an inlet manifold branching to each cylinder. On high



performance engines, the ideal is to have one carburettor choke dedicated to each cylinder and that's exactly what happens with a Porsche. They are equipped with two, triple-choke carburettors. Although the basic principles are simple, the practice is more complex and all carburettors can be likened to scientific instruments.

Weber carburettors come in different sizes but then have removable choke tubes which can be fitted to suit the capacity and type of engine. Multiple fixed jets include a main jet, an idle circuit and something called an accelerator pump jet. This contains a tiny spring-loaded pump which does what it says, injecting a spurt of fuel when the throttle is opened to give instant engine response. Once a Weber carburettor is set up, the only adjustment is on the throttle stops which allow idle speed to be set by holding the butterflies open a fraction and the idle air screws which adjust idle mixture. Setting a Weber carburettor up from scratch on



a modified engine can only be done properly on a rolling-road, by someone with plenty of experience.

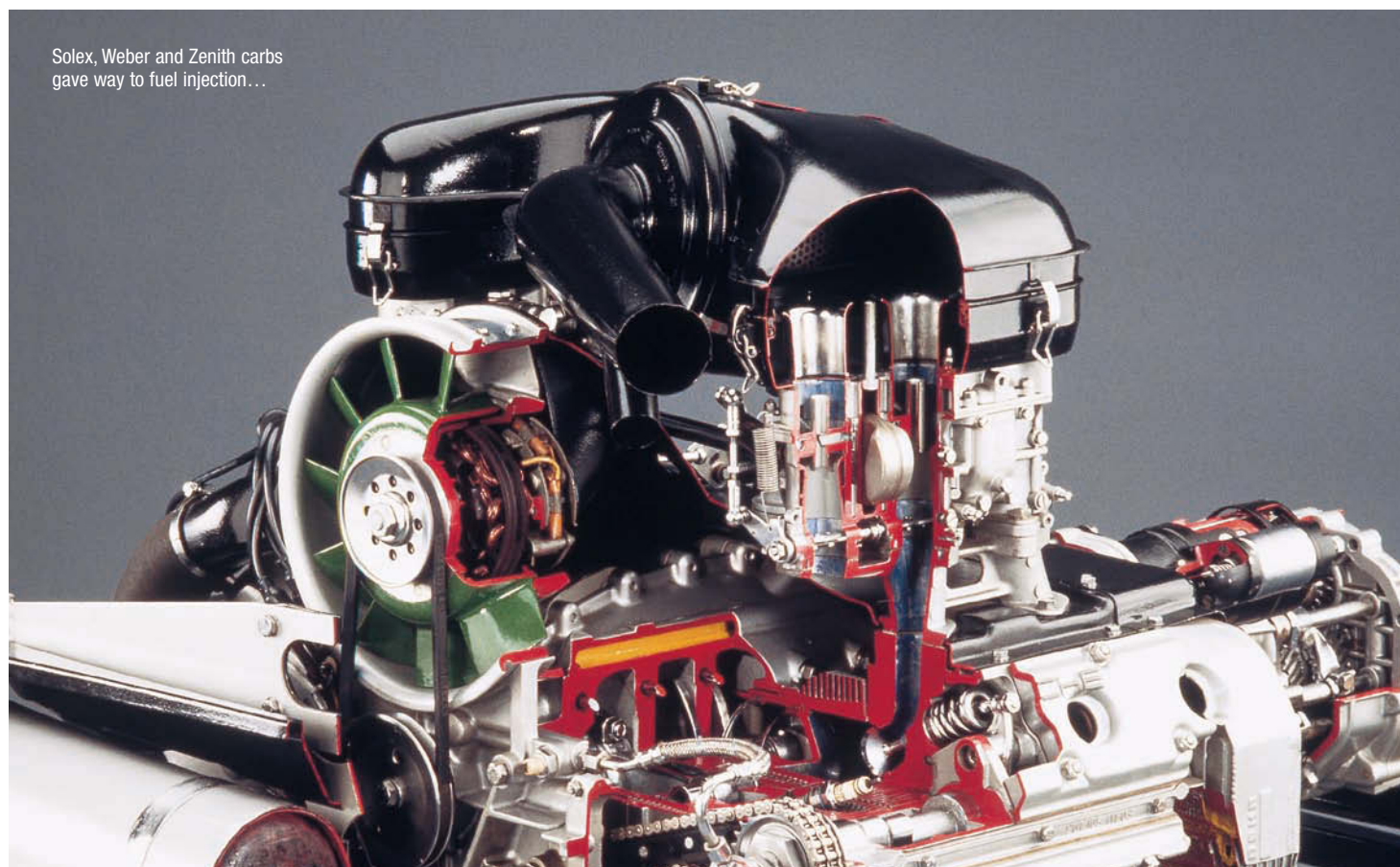
The fuel is fed to the carburettor jets from a reservoir called a float chamber. The fuel level in the float chamber is critical, not enough will cause lean running and allowing the chamber to fill with fuel unchecked will cause rich running or flooding. Fuel is pumped from the tank into the float chamber by the fuel pump and the fuel level is regulated by a float

pressing against a tiny needle valve. In Weber carbs, the float level must be accurately set using a special tool.

Like any fuel system, carburettors are susceptible to dirt and the filter systems of the day were less effective than that of a modern fuel injection system where dirt absolutely cannot be allowed to enter the injectors. On a carb'd car there will usually be a filter on the tank exit and carburettors should have them inside the fuel intake banjo fittings. These days, it's

worth fitting a modern inline plastic filter as well on an older car because tanks and fuel systems become contaminated over time.

Carburettors were superseded on the 1973 911T by Bosch K-Jetronic fuel injection, then later, by more sophisticated L-Jetronic systems. They were more efficient, gave better fuel consumption and required less maintenance, but there's nothing quite like the sound made by a pair of triple-choke Weber carbs ○







## Vinyl Graphics

Jesse Crosse looks at how to spruce up your Porsche with vinyl graphics...

The great thing about Porsche ownership is that it can be so varied. Many owners want to keep their Porsches as classic and original looking as possible... but that's not always the case. You might have an older front-engined car and fancy brightening it up with some graphics or you may be racing, sprinting, hill-climbing or rallying a car, in which case you almost certainly would want to add some graphics to it. This could be anything from a few stripes to a full-blown branding exercise for a sponsor or your own business. If that's the case, then one word describes what you need: vinyl.

It's odd that adhesive vinyl or 'sticky-backed plastic' as it was known eons ago, used to have the tackiest of connotations. Now, it's the favoured method, not only for decorating a car but also for completely refinishing it in place of paint. Though most view vehicle wrapping as something for the experts only, there are plenty of instructional videos around as well as suppliers of the materials, cleaning

equipment and the accessories you need to work with it if you want to have a go yourself.

The first thing to know about vinyl materials is that there are lots of different types from quite a few manufacturers. The type used for signs is not the same as a proper automotive wrap vinyl and there are big differences in what each material is capable of. There's also a big difference in price. Standard sign vinyl can cost as little as £5 or £6 for a linear metre (a metre length from a roll) while a metre of high quality automotive vinyl wrap can set you back £25-£30 per linear metre.

With that in mind the first thing you need to decide is what you want to do with it. If you want to produce a few stripes or similar graphics on the car and the body contours the vinyl has to cover are fairly flat, then low-cost vinyl is fine. If, however, your plans are more ambitious (maybe some large graphics covering much of the car or you want to tackle the whole car, for instance) then you need the proper automotive wrap. The automotive wrap is more workable, stretches more easily to

cover awkward shapes and has a cross-hatched adhesive to allow air bubbles to be squeegeed out.

Vinyl can be cut in a number of ways. You can rough cut it with scissors or with a more professional tool called a 'rodent knife' which quickly slices chunks off. When it comes to cutting a precision edge you can use a craft knife or, better still, a Swann Morton scalpel using a 10a or 11a blade.

If you've ever had any kind of art school training then some of the techniques will be familiar. You can use French curves (the plastic or bendy type) to help draw your shape or cut card templates. Or you may have come across something called Frisk film used by airbrush artists. It's a low tack film that is normally cut directly on the illustration board using a scalpel.

If you're not too worried about the paintwork or are already a dab-hand, you can take the same approach for tidying up edges. This is where a scalpel scores over a craft knife. They're extremely sharp and the sharper the blade, the easier it is to lightly cut the film without attacking the surface

underneath. To trim vinyl on the car and be completely sure you won't score the paint you can apply trim tape (like a pinstripe) beneath the vinyl along the lines you want to cut. Once the cut is made, the trim tape can be pulled out. Always be sure to use a fresh blade, though.

Vehicle wrap has a forgiving adhesive and as long as it's lightly draped over the surface, it can be adjusted. Experience is needed to judge how a difficult contour can be tackled without the wrap lifting but it's surprising how versatile the material is. In some cases, like the surfaces of wild boxy arches or compound curves, it may be necessary to cut panels of gussets and overlap. When starting out it's a good idea to buy a bit extra and experiment. A low temperature heat gun can also be used to apply the film although overstretching can lighten the colour. Another miracle tool or material used for cutting wrap is called 'knifeless tape.' Next month we'll take a closer look at that as well as how to prepare surfaces before cutting and then applying the wrap ○



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## BBS CH-R 'NÜRBURGRING EDITION'

**How much?** £509 (per wheel)

**Where from?** [www.bbs.com](http://www.bbs.com)

BBS has launched a Porsche-specific 20-inch version of its centre-locking CH-R wheel called the 'Nürburgring Edition'. The CH-R wheel is available in 18-, 19- and now 20-inch sizes with a specific 9.0J x 20-inch (front) and 12.0J x 20-inch (rear) size developed for the 991 GT3. Finished in matt black with laser engraving, the wheel typically has a stainless steel rim protector as an optional extra, the 'Nürburgring Edition' includes laser engraving and the optional rim protector finished in BBS red, all for a £50 additional fee per rim.



## PORSCHE IPAD AIR CASE

**How much?** £140

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## MODERN ESSENTIALS BY BECKHAM

**How much?** From £24.99

**Where from?** [www2.hm.com](http://www2.hm.com)

High street clothes store H&M has a range of new Modern Essentials by David Beckham. The slim fit two-button jacket comes in beige or blue, is constructed from a stretchy cotton weave, features three inner pockets and is available in a range of sizes priced at £39.99. Matching cotton trousers are available for £24.99. Another addition to the Beckham-endorsed range is the dark blue canvas jacket. The unlined jacket is perfect for the spring and summer weather. Its sturdy cotton canvas material is brought together with a chunky metal zip and it is priced at £24.99.



## ULTIMATE DRIVES PORSCHE EXPERIENCE

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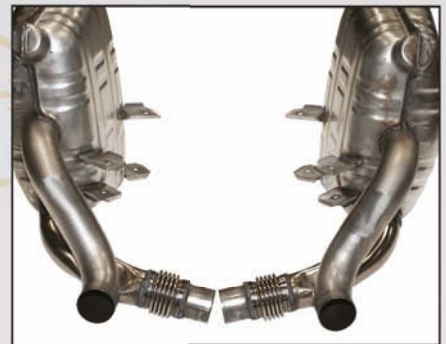
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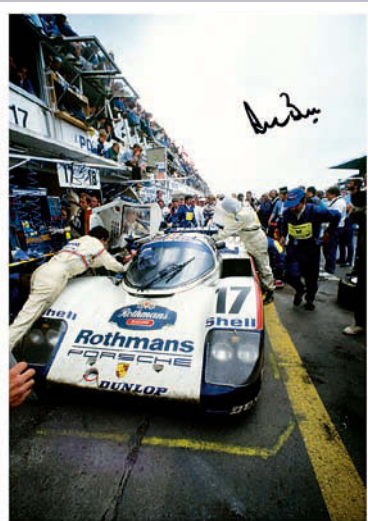
## SIGNED DEREK BELL PRINTS

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**Where from?**

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These two new lithographic prints depict Derek Bell's Le Mans victories with Porsche are available from The Signature Store as signed by the man himself. In 1987 Bell shared the iconic Rothmans Porsche 962C (#17 car) at Le Mans with Stuck and Holbert to take a record fifth career victory. Derek Bell is the most successful British driver at the Le Mans 24 Hours.



1st Place 1987, Derek Bell shares the iconic Rothmans Porsche 962C of 1st car with Stuck & Holbert to take a record fifth career victory at the Le Mans 24 Hours. Stuck & Holbert share the iconic Rothmans Porsche 962C of 1st car with Bell to take a record fifth career victory at the Le Mans 24 Hours. Stuck & Holbert share the iconic Rothmans Porsche 962C of 1st car with Bell to take a record fifth career victory at the Le Mans 24 Hours. Stuck & Holbert share the iconic Rothmans Porsche 962C of 1st car with Bell to take a record fifth career victory at the Le Mans 24 Hours.

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**Where from?**

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These 3D framed sets by Graham & Leigh are exclusively available from The Signature Store. The first celebrates Porsche's victory at the 1961 Targa Florio and is priced at £149.95. It measures 25x35cm and features the date of the race, a model car and a 'floating' circuit, it also happens to be hand signed by Sir Stirling Moss and comes with a Certificate of Authenticity. Also available is a similar version celebrating Derek Bell's five victories at Le Mans, again it is signed by Derek and comes complete with a Certificate of Authenticity, it is priced at £99.95.



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**How much?** £180

**Where from?** [www.racingmodels.com](http://www.racingmodels.com)

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## 1:43 MINICHAMPS 934

**How much?** £40

**Where from?** [www.racingmodels.com](http://www.racingmodels.com)

The Diego Febles Racing 934 / 930/71 was driven at Le Mans in 1980 by Armando 'Mandy' Gonzales, Diego Febles and Francisco Romero. Sadly the team retired following an accident in the 15th hour, but their efforts are remembered via this 1:43 scale Minichamps model supplied in a fine 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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## 1:43 MINICHAMPS 996 GT3 RS

**How much?** £36

**Where from?**

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This limited edition (of 2016 pieces) 996 GT3 RS was raced at Le Mans in 2006 by the T2M Motorsport team. Drivers Yutaka Yamagishi, Jean-René de Fournoux and Miroslav 'Miro' Konopka sadly retired from the event but this fine Minichamps model commemorates the team's entry. Add code 'POR010' to your shopping cart during checkout to receive a ten percent discount exclusive to *GT Porsche* readers.

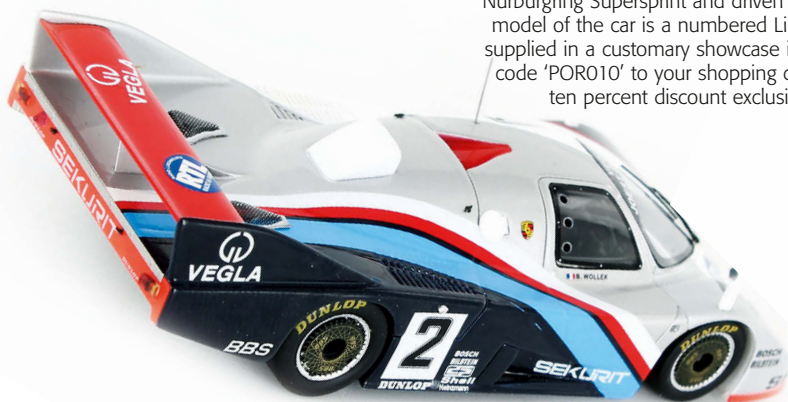


## 1:43 SPARK 936

**How much?** £46

**Where from?** [www.racingmodels.com](http://www.racingmodels.com)

The Velga Racing Team-Joest 936J was raced in the 1982 DRM Nürburgring Supersprint and driven by Bob Wollek. This superb Spark model of the car is a numbered Limited Edition affair and it comes supplied in a customary showcase inside a special German box. Add code 'POR010' to your shopping cart during checkout to receive a ten percent discount exclusive to *GT Porsche* readers.



## 1:43 EBBRO JGTC 911 GT1

**How much?** £38

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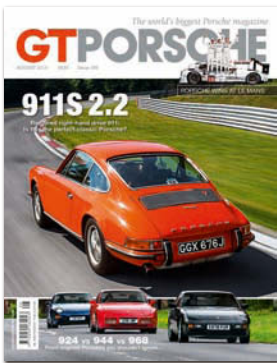
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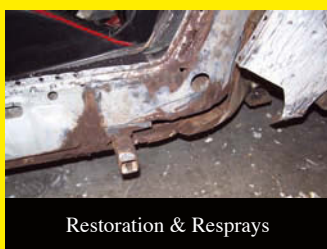
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## GMÜND COUPÉ/356: 1948 – 1964

Two-door, two+two Coupé, Roadster, Speedster. Rear-mounted four-cylinder air-cooled 'boxer' engine.

This is where the Porsche story begins. After the aluminium prototypes and numerous projects for Volkswagen, Dr Porsche gave the go-ahead for his company to relocate from the converted shed in Gmünd to a rented workshop in Stuttgart (owned, incidentally, by Reutter, the coachbuilder responsible for building the 356 body for Porsche). At the 1949 Geneva Auto Salon Porsche displayed a 356 for the first time, with a coupé and drophead model taking the limelight. A makeshift production line was started in the same year.

The following year the 356 was shown to a meeting of Volkswagen main dealers as well as European and overseas importers who promptly placed orders for 37 cars. The first Stuttgart-built 356 rolled off the production line in Easter 1950.

The 500th Porsche was built on 21 March 1961, with the 1000th model arriving just six months later, and when the last 356 was built in 1964 – a 356C convertible – a total of 76,302 examples had been built.

The arrival of the 356 also signalled Porsche's first forays into motorsport. Dr Porsche's cousin, Herbert Kaes, is thought to be the first to compete in a Porsche car when he took an early 356 and entered it in a race around the streets of Innsbruck, Austria on 11 July, 1948. Kaes and the Porsche won their class, obviously. The first recognised 'factory' victory came in 1951 in the 24 Heures du Mans (where else!) when Porsche's French importer, Auguste Veuillet, convinced Dr Porsche that by entering a car into the twice-round the clock race it would result in a big boost in sales and Porsche's global awareness. Veuillet, along with his co-driver Edmund Mouche, won their class in the 1100cc 356. The rest, as they say, is history.

Today the 356 enjoys the status of a genuine classic car. Collectors and enthusiasts alike have seen that the majority of examples have been meticulously restored and maintained and this is reflected in the values they are reaching on the classic car market. Demand for all models and variants is high with the Carrera models some of the most sought after.



## 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 aluminium-bodied 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 down-draught 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.

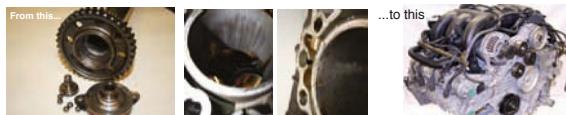
**1952:** Split-screen front windscreen replaced with single piece window; bumpers mounted higher and further forward from body; rectangular rear taillights replaced with circular items. 1500cc engine loses 5hp but is more refined and was the first engine to feature the 'Alfingier' crankshaft. 1500 S (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 GT-denoted models aimed specifically at motorsport. They were dry sumped, had reduced compression ratios and rewired 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 YEAR	WEIGHT	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
Gmünd Coupés	1948 to '50	605	1086	35-40	50	23.0	80
<b>'Pre-A' 356</b>							
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
<b>356A</b>							
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
<b>356B</b>							
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 GT	1959 to '61	890	1588	115	99	10.5	124
Carrera 2	1962 to '64	890	1966	155	144	9.0	124
<b>356C</b>							
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 Length/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)	Hp	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 kg	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 (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (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 ignition required to meet new EU emission laws.

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (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 (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (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 Length/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	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
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 (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (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

**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.



## 911: 1963 – 1989

Two-door, two+two Coupé, Convertible and Targa. Rear-mounted six-cylinder air-cooled 'boxer' engine, four- and five-speed manual and four-speed Sportmatic gearbox.

For some a real 911 is an air-cooled 911, and some of the greatest examples are from this period. Two of the most iconic 911s ever produced – the 2.7 Carrera RS and 3.0 Turbo – arrived on the scene during this time and Porsche also gave us the sublime 1970 2.2 S. Bosch K-Jetronic fuel injection was introduced (1976) and the first 911 Cabriolets (1983) arrived in showrooms. The 3.2 Carrera fed the Yuppie boom (1983) and the Carrera Club Sport (1988) was the first lightweight 911 special since the original Carrera RS some 15 years earlier.

On its arrival the original 911, or 901 as Porsche had first intended calling it until the French manufacturer Peugeot pointed out that they owned the trademark to model designations with an 'O' in the middle, was a huge leap forward from the company's original four-cylinder 356. With its 2.0-litre flat-six, five-speed gearbox, independent suspension and disc brakes the new 2+2 sports car was quickly snapped up when it first appeared at the 1963 Frankfurt Motor Show.

A seemingly continuous development programme saw the 911 evolve at a pace. The Targa model was launched in 1965 in anticipation of US legislation that would ban fully convertible cars (it never happened, but the Targa proved a popular choice with its distinctive brushed stainless steel rollover hoop and zip-out plastic rear window). More power (160hp) and larger wheels (5.5-inches) arrived 12 months later, as did ventilated discs and a four-speed Sportmatic gearbox. The Targa's plastic rear window was replaced with a more conventional glass item in 1968.

The start of the next decade saw the flat-six's capacity grow to 2.2-litres and gave us the sublime 2.2 S and a chunky 180hp (190hp in 1973). Measures were also taken to prolong the life of the 911 with PVC and galvanised floors both introduced, and the legendary Fuchs wheels became available across the range.

1973 was the year every 911 aficionado has indelibly inked on their mind: the 2.7 Carrera RS arrived. 975 kilos, 210hp, aluminium bodywork, lightweight glass and the infamous duck-tail spoiler signified the most focused, driver-orientated production 911 to date. Rarer R and S/T racing models had come and gone, but this was the first performance-orientated 911 road car to be sold through the dealer network. A legend was born.







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 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 2.4S 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.

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

**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 rushed into production and launched following successful design study.

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (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 adds 50 kilos and increases drag.

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (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 (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (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 (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (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.

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	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



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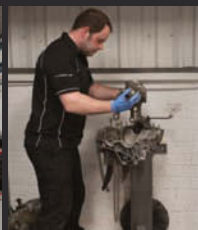
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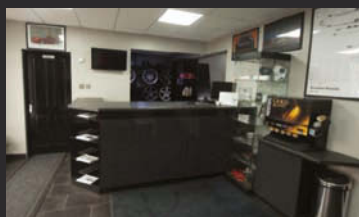
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## 911 (964): 1989 – 1993

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 381hp 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. Rear-mounted 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.

## 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 guise. **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 alloy wheels.

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (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 kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
Carrera 2/4	1405/1444	1370/1420	3600	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 six-cylinder '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. GT1-based 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 four-wheel drive chassis. First 911 Turbo available with Tiptronic S. **1996 – 2000 to 2001:** 2001MY – GT2 returns with 462hp, rear-wheel drive, Porsche Ceramic Composite Brakes and no PSM! Breaks production car lap record at the Nordschleife (7min 46sec).

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (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. **1996 to 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 gets power hike to 483hp. 0-62mph time drops to 4.0 seconds, top speed climbs to 198mph. **1996 – 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.



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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 GT3 models even better than their predecessors, the Turbo model introduces Variable Turbine Geometry and Porsche Traction Management, the GT3 gets traction control. At 530hp and 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 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.

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	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, water-cooled 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.

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-60	TOP SPEED (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, cost-option 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 paddle-shift 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 double-domed 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 or 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 standard, GTs also feature SportDesign 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.



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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 it's the GT3 RS that blows everyone away. It's one of Preuninger'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 bi-turbo six-cylinder 540hp 911 Turbo and 580hp Turbo S, available 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 radar-based lane change assist function and Nose Lift. Revised front end styling incorporates LED lighting, rear decklid is also redesigned with longitudinal louvers, 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.

MODEL	TRACK (f/r mm)	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62* 6sp/7sp	TOP SPEED (mph)
Carrera	1486/1530	1415	3614	345	285	5.1*/4.2	179
Carrera S	1486/1516	1425	3800	385	310	4.3*/4.1	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	4.6/4.2	190/189
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	4.0*	194
GT3 RS	1509/1554	1370	3797	450	317	3.8*	193
GT3 RS4.0	1509/1554	1360	3996	500	339	3.9	193
Turbo	1490/1548	1570	3800	500	479	3.6* (3.2**)	194
Turbo S	1490/1548	1585	3800	530	516	2.9**	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

\* 0-60mph: cars fitted with six-speed manual gearbox; \*\* cars fitted with Sports Chrono Plus and PDK

## 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 multi-plate, electronically-controlled version of Porsche Traction Management. Rear was 44mm wider than the two-wheel 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, PDCC, 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-millimetre 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 four-piston 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...

MODEL	YEAR	WEIGHT kg	ENGINE cc	Hp	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



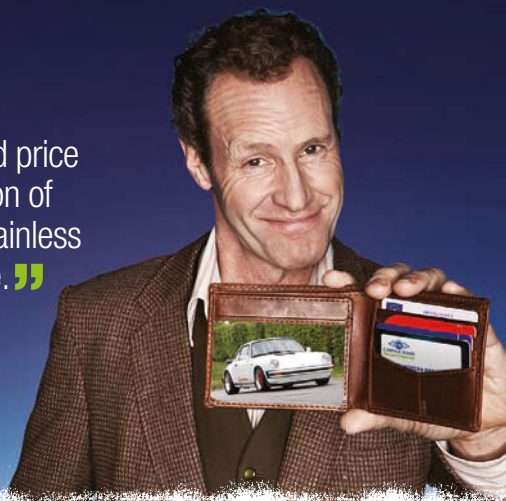
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## 912: 1965 – 1969; 1975

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 outdid its more expensive brother, with over 30,000 delivered during its first production run. Re-introduced 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 sourced 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: 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.

## 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, face-lifted 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 guises 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 YEAR	WEIGHT kg	ENGINE cc	HP	TORQUE (lb ft)	0-62	TOP SPEED (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.

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	HP	TORQUE (lb ft)	0-62	TOP SPEED (mph)
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-litre engine becomes an option. **1974** – Bore increase raises displacement to 1795cc.

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	HP	TORQUE (lb ft)	0-62	TOP SPEED (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

## 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 three-speed 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. Kurzhaals 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 axle strengthened; **1988:** 924 gets 944 engines. Power steering standard. Le Mans SE launched.



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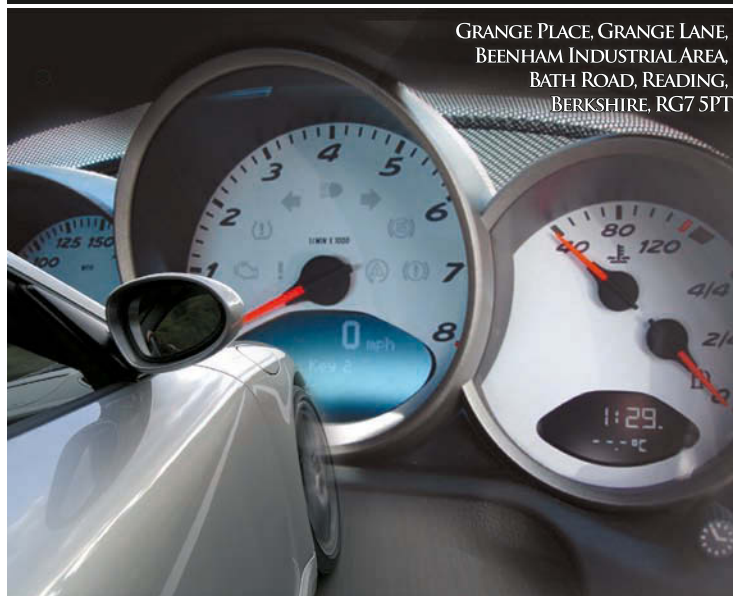
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## 928: 1978 – 1995

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

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

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 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.

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (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 grow to 5.4-litres and 350hp.

MODEL	MODEL YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (mph)
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 YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (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

## 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-drive, 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 YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (mph)
959	1988	1451	2847	450	370	3.7	197

## 968 (1992 – 1995)

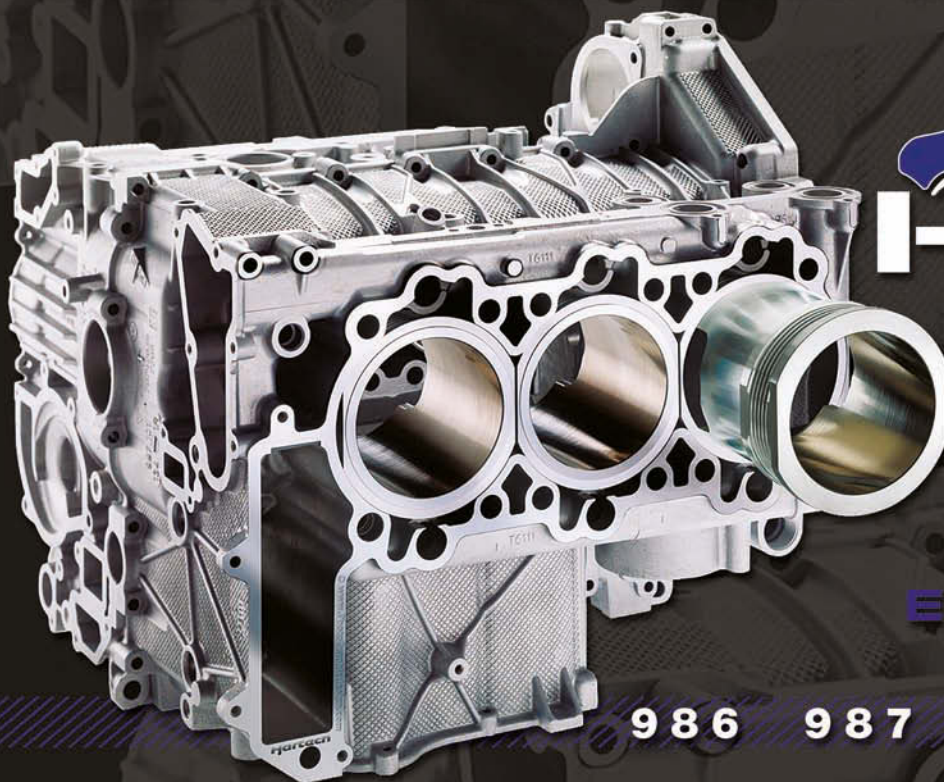
**968** – Wheelbase (mm): 2400, Length/Width (mm): 4320/1735, Track front/rear (mm): 1477/1451

(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 YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (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



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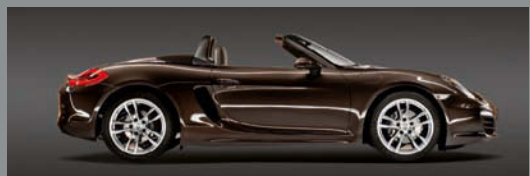


## BOXSTER (986): 1997 – 2004; BOXSTER (987): 2005 – 2012

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 more 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 had. The 2.7 needs enthusiasm to extract its best, 3.4S great straight-out-the-box with only a slippery 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.

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 31b 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 YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62 0-60*	TOP SPEED (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 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 GT4, 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 YEAR	WEIGHT kg	ENGINE cc	Hp	TORQUE (lb ft)	0-62	TOP SPEED (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 receives 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.





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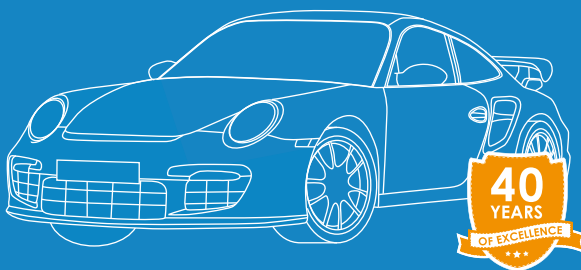


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## CAYMAN 987: 2005 – 2013

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 –

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.



## CAYENNE: 2014 –

Five-door, front-engined SUV. 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 made available at launch, very much continuing where the previous version left off: S, Turbo, Diesel, Diesel S, and S E-Hybrid. They now have more power and torque, lower fuel consumption, sharper and cleaner exterior design and increased levels of interior comfort. Visual changes primarily comprise a longer aluminium bonnet, shapelier headlights (now incorporating the daytime running lights in a similar fashion to the Macan) and revised rear styling to match. Adaptive cooling vanes hidden in the front bumpers of the

MPG is improved marginally, CO<sub>2</sub> 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	Hp	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 (2005 – 2009; 2009 – 2013), 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 2.7-litre 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

\*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 torque 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 GT3	2014 –	1345	3436	340	280	4.6	177
Cayman GTS	2015-	1340b	3800	385	310	4.4	183

\*manufacturer's claim

## 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**: Entry-level 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**: 2006 Model Year – Cayenne Turbo S gains an extra 72hp, 0-62mph in 5.2 seconds, 167mph and 2355kgs; **2007**: 2007 Model Year – Second generation Cayenne: V6, V8 S and Turbo all get DFI engines to improve performance, economy and emissions, a face-lift improves looks. PDCC active anti-roll bars available on cars with PASM; **2007**: 2008 Model Year – GTS model introduced. Combines Turbo looks with V8 S running gear. Shorter ratios in both manual and Tiptronic gearbox. Turbo brakes standard. New Turbo S announced. Power up to 550hp, torque to 553lb ft, 174mph and a 0-60mph in 4.3 seconds; **2009**: 2009 Model Year – Porsche introduces a Cayenne diesel. Three-litre Audi sourced V6 available in entry-level trim only with six-speed Tiptronic S as standard. 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); Introduced in 2010 this is the first all-new Cayenne since the original. Bigger in every dimension. Engine range carried over from the previous model but now includes Porsche's first Hybrid vehicle with the Hybrid Drive model which sees a 3.0 supercharged V6 working in parallel with a 47hp electric motor. All but the entry level Cayenne V6 petrol get new



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PD013K Kit	Yellowstuff highest friction pads and GD sport drilled black Geomet® discs
PD016K Kit	Greenstuff sport pads and BSD blade style slotted black Geomet® discs
PD017K Kit	Redstuff premium fast street pads and BSD blade style slotted black Geomet® discs
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new Cayenne are akin to those used on the 918 Spyder, as is the rollerball-style steering wheel, much like Macan.

The biggest news is that the old petrol V8 has been replaced with a 3.6-litre biturbo petrol engine – part of Porsche's downsizing practices. It's the same unit we've seen in the Macan, and with 420hp and 550Nm torque on paper the new Cayenne offers greater performance than its eight-cylinder forebear. But, if you're talking about a petrol Cayenne then it's really all about the Turbo. In the Turbo we get the 4.8-litre bi-turbo V8 engine putting out 520hp with 750Nm of torque; it's fast and capable.

The Diesel and Diesel S should be the best-selling Cayenne models for Porsche in the UK. The Diesel model makes use of the three-litre V6 coupled to the eight-speed Tiptronic. We expect that this will be the more popular choice in the UK, but the Diesel S really is brilliant and worthy of serious consideration despite being an older engine (the only engine which is not Euro 6 compliant) and commanding an £11,572 price premium over the £49,902 for the Cayenne Diesel. The power delivery is refined and almost like a petrol car, arriving low down. What's interesting is that the Diesel S is almost as quick as the Turbo, over £30,000 cheaper, and it's more economical.

The first plug-in Hybrid vehicle in the premium SUV segment, the S E-Hybrid uses the same drivetrain as the Panamera S E-Hybrid, although there are differences – chiefly the batteries. Driving requires an altogether new mindset. At £61,434 it's almost exactly the same price as the Diesel S – choosing between them is a question of priorities.



## 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!



## PANAMERA: 2009 – 2013

Five-door, front-engined, rear-and four-wheel drive saloon-coupe; 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 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

eight-speed Tiptronic automatic (V6 gets a six-speed manual as standard). New four-wheel drive system replaces the low ratio gearbox with the latest development of PTM with enhanced electronics of new Tiptronic S 'box.

Diesel and Hybrid models get permanent all-wheel drive, others get an active system. PASM, PDCC and PCCB are optional. New Panamera-based interior is higher in quality. **2012:** Introduction of the GTS. Fitted with the 4.8-litre V8 from the S, GTS engine receives a host of modifications that push power to 420hp and torque to 380lb (up 20hp and 11lb ft respectively). Eight-speed Tiptronic S is the only gearbox fitted, chassis combines steel springs with PASM. Air is an option. GTS rides 24mm lower than S, a wider front and rear track and 20-inch wheels are standard. Front bumper and lights are from Cayenne Turbo, there's a new lower lip spoiler, side skirts and a bi-plane rear wing. Windows are framed with gloss black trim. Leather and Alcantara interior. **2013:** S Diesel and the Turbo S arrive. The latter is a bell-and whistles Turbo with power increased 50hp to 550hp. Two-tone leather options are standard as is a host of equipment that is optional on the Turbo. S Diesel takes a twin-turbo charged 4.8-litre Audi V8 diesel. The spec is the same as the petrol-engined S, but with huge torque. **2014:** Fourth generation Cayenne offers five models at launch: S, Turbo, Diesel, Diesel S, and S E-Hybrid. More power and torque, lower fuel consumption, sharper and cleaner exterior design and increased levels of interior comfort. Longer aluminium bonnet, headlights incorporate DRLs, new 918-style steering wheel. 3.6-litre biturbo V8 petrol engine, it's the same unit found in Macan (420hp and 550Nm torque). S E-Hybrid uses the same drivetrain as Panamera S E-Hybrid, although there are differences – batteries are now optimised for greater performance. New GTS arrives later in the year, it ditches the V8 for the 3.6-litre V6 biturbo engine from the S. Power increases by 20 hp to 440 hp, torque is up to 442lb ft. Sports exhaust system as standard, PASM and steel springs (sits 24 mm lower), air suspension optional as is Sport Chrono. Turbo model's front styling, new skirts, arches, roof spoiler all feature with 20-inch wheels. GTS sports seats in leather/Alcantara are inside.

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 <sup>1</sup>	427 <sup>1</sup>	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-Hybrid	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

<sup>1</sup> When combined with electric motor. \* 0-60 mph time

## 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, revving 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
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Carrera GT	2003 to '06	1380	5733	612	435	3.9	205
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## Panamera: 2009 – 2013: 2014 – To Date

**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 twin-turbocharged water-cooled eight-cylinder engine, DFI and VarioCam Plus with adjustable valve lift; six-speed manual gearbox and rear-drive for S, seven-speed PDK optional; 4S and Turbo feature electronically controlled four-wheel drive with PTM and PDK as standard. Engines adapted from Cayenne, PDK is unique to Panamera. Double-wishbone front suspension, multi-link at rear with PASM standard on all models, self-levelling adaptive air-suspension standard on Turbo. PSM as standard featuring: ABS; ASR; MSR engine drag force control; ABD; Brake Assistant; and a pre-filling of the brake system. PDCC and PCCB optional on all. 18-inch wheels standard on S and 4S, 19-inch on Turbo; Variable rate steering standard, speed sensitive Servotronic steering optional. Adaptive aerodynamics on all, S and 4S models utilise a two-way spoiler while Turbo has four-way item. 4S and Turbo get 100-litre fuel tanks, the S has a 80-litre tank. Four individual seats for interior. Eight airbags as standard; bi-xenon headlights standard, adaptive light function for Turbo. Radar-based distance cruise control, four-zone air-conditioning, Porsche Entry & Drive (standard on Turbo) and Burmester High-End Sound system all options. Sports Chrono Package Plus is optional, when combined with PDK offers Launch Control function. **2010** – 2010MY First non-V8 engined Panamera: 3.6-litre V6 petrol. Panamera V6, is available as rear- or four-wheel drive, former available with a six-speed manual or optional seven-speed PDK, the later PDK only. Engine produces 300hp and 295 lb ft torque. Standard specification is the same as a V8 engined S, except for a tyre pressure monitoring system and PASM suspension which are optional. **2011** – 2012MY Panamera Diesel arrives. 3.0-litre V6



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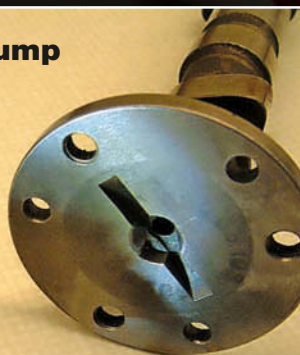
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and come with the conventional eight-speed Tiptronic S gearbox. In early 2012 the range is topped off with the GTS – a breathed on Panamera 4S with more power, a Turbo look and sport inspired interior. It's no GT3 but it's a great way to hustle nearly two tons.



## 918 SPYDER: 2014 – 2015

Two-door, mid-engined, petrol-electric 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.



## MACAN: 2014 –

Five-door, front engined, permanent four-wheel drive compact SUV, six-cylinder turbocharged petrol and diesel engines; seven-speed PDK transmission. Built to fulfill Porsche's ambitions to build 200,000 cars by 2018 the Macan is the company's answer to Land Rover's Evoque, BMW's X3 and Mercedes GLA in the premium compact SUV sector. Porsche forecasts 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.

The Macan launches with two trim levels, the S and the 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 is expected to join the line-up, along with a more basic trim level to sit below the S models; expect this to be offered with a four-cylinder engines, both petrol and diesel.

Sitting below the Cayenne in Porsche's SUV line-up, the Macan is lighter by over 100kgs, 16cm shorter in overall length, eight centimetres lower in height and sits on a wheelbase eight centimetres shorter than the Cayennes. The Macan is usefully quicker than its big brother, too, with the petrol S model faster to 62mph than the quickest normally aspirated Cayenne, the GTS. The Macan Turbo's sprinting prowess sits neatly between the Cayenne Turbo and Turbo S. The smaller SUV is also usefully more fuel efficient and cleaner than its big brother, too.

In 2015 the Macan gets a GTS version, joining the other Porsche models in this now established sub brand. GTS sits below the Turbo model with the same three-litre V6 bi-turbo engine as the S model yet this time boasting 360hp. Torque is also increased to 368lb ft and it's lighter than the Turbo model. It is only available with a seven-speed PDK gearbox. The styling falls in line with other GTS models in Porsche's range, offering the SportDesign package as standard. Equipped with a PASM chassis that is lowered by 15 millimetres, it sits on matt black 20-inch RS Spyder design alloy wheels.

turbocharged engine donated by Audi. Spec on par with V6 petrol. S Hybrid also added to range fitted with 3.0-litre supercharged petrol V6 engine and a 47hp, 221lb ft electric motor. Energy for electric motor stored in batteries fitted under the boot floor charged via the engine and regenerative sources such as braking. Full electric range is 1.2-miles, electric motors have a 46mph top speed. Turbo S also arrives running a pair of turbos with lighter vanes. Peak power climbs to 550hp. Agate grey exterior paint exclusive to the model. **2012** – 2012MY GTS arrives with Exclusive bodykit and 4.8-litre V8. Active air intakes, reprofiled camshafts and revised ECU extract extra 30hp from V8 and an additional 15lb ft torque. Turbo brakes are standard, as is air suspension and PASM – which is reprogrammed to be tauter. Sport Chrono Plus is standard as is the Turbo's four-piece rear spoiler and 19-inch alloy wheels. The chassis is 10mm lower with 5mm spacers fitted to the rear axle. 18-way adjustable front seats and a sports steering with paddles are also standard. Four-wheel drive only with the seven-speed PDK.

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	2012 – 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

**2013** – 2014MY The gen-2 Panamera gets new front and rear bumpers, lights and side sills and a range of new engines. Interior untouched. Out goes the 4.8-litre normally-aspirated V8 in the S and 4S models, in comes a more powerful 3.0-litre biturbo V6. Big V8 stays for the GTS and Turbo, 3.6-litre petrol V6 props up the range along with 3.0-litre turbo diesel. Hybrid model now called S E-Hybrid and is a plug-in, it mates the 3.0-litre supercharged V6 with an electric motor that's twice as powerful and a battery pack that can store five times the energy. PDK for all models bar the Diesel and S E-Hybrid, which get the Cayenne's eight-speed Tiptronic. **2015**: Edition - special versions in three styles: Edition, 4 Edition, and Diesel Edition (not global)

MODEL	MODEL YEAR	WEIGHT (kg)	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	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

## 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, the electric motor or a combination of 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. Chassis is a carbon-fibre monocoque, carbon body includes two-piece Targa roof. PCCB brakes as standard, 20-inch wheels at the front, 21s rear with Michelin Pilot Sport Cup 2 tyres. Available in two trim levels, Spyder and Weissach Package, the latter reduces weight by 41kg – magnesium wheels account for a 14kg saving. Other weight saving includes 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. Nürburgring lap time: 6min, 57secs.

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 Weissach	2014 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 biturbo V6; Turbo has 400hp, 3.6-litre biturbo 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 the 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 optional 75-litre tank. Steel springs and fixed rate dampers standard on S, Turbo comes with PASM as standard. All are available with PASM providing an additional 40mm of clearance. Sport button fitted as standard, PTV Plus optional, as is Sport Chrono. S models 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 bixenon headlights, S with halogens, PDLS optional. T918 Spyder-style multi-function steering wheel with paddle shift as standard. Full length panoramic glass sunroof available, S models trimmed in partial leather and alcantara, full leather interior a cost option. **2015** – Macan GTS added to range sitting between S and Turbo. Uses three-litre V6 biturbo engine from S model with more power, PDK only, SportDesign styling package as standard. Porsche's new PCM system makes its SUV debut in GTS.

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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**FEBRUARY 2016**

**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 profile. Porsche history: Vees. Market Place: 944 Turbo



**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



**APRIL 2016**

**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

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MODEL	PRICE	ENGINE	POWER	TORQUE	0-62MPH	TOP SPEED	WEIGHT
<b>BOXSTER</b>							
718 Boxster	£41,739	4cyl/1988cc	300hp	280lb ft	4.7secs	170mph	1410kg
718 Boxster S	£50,695	4cyl/2497cc	350hp	310lb ft	4.2secs	177mph	1430kg

<b>CAYMAN</b>							
Cayman 2.7	£39,694	6cyl/2706cc	275hp	213lb ft	5.7secs	165mph	1330kg
Cayman Black	£45,989	6cyl/2706cc	275hp	213lb ft	5.7secs	165mph	1330kg
Cayman S	£48,783	6cyl/3436cc	325hp	272lb ft	5.0secs	175mph	1340kg
Cayman GTS	£55,397	6cyl/3436cc	340hp	279lb ft	4.9secs	177mph	1345kg
Cayman GT4	£64,451	6cyl/3800cc	385hp	310lb ft	4.4secs	183mph	1340kg

<b>911 COUPÉ (991)</b>							
New 911 Carrera	£76,412	6cyl/2981cc	370hp	332lb ft	4.2secs	183mph	1430kg
911 Carrera Black	£75,074	6cyl/3436cc	350hp	287lb ft	4.8secs	179mph	1380kg
New 911 Carrera S	£85,857	6cyl/2981cc	420hp	369lb ft	3.9secs	191mph	1440kg
911 Carrera GTS	£91,098	6cyl/3800cc	430hp	325lb ft	4.4secs	190mph	1425kg
New 911 Carrera 4	£81,398	6cyl/2981cc	370hp	332lb ft	4.1secs	181mph	1480kg
911 Carrera 4 Black	£79,309	6cyl/3436cc	350hp	287lb ft	4.9secs	175mph	1430kg
New 911 Targa 4	£90,240	6cyl/2981cc	370hp	332lb ft	4.3secs	179mph	1570kg
New 911 Carrera 4S	£90,843	6cyl/2981cc	420hp	369lb ft	3.8secs	189mph	1490kg
911 Carrera 4 GTS	£95,862	6cyl/3800cc	430hp	325lb ft	4.4secs	188mph	1470kg
New 911 Targa 4S	£99,684	6cyl/2981cc	420hp	369lb ft	4.0secs	188mph	1580kg
911 Targa 4 GTS	£104,385	6cyl/3800cc	430hp	325lb ft	4.7secs	188mph	1555kg
911 GT3	£100,540	6cyl/3799cc	475hp	325lb ft	3.5secs	196mph	1430kg
911 GT3 RS	£131,296	6cyl/3996cc	500hp	339lb ft	3.3secs	192mph	1420kg
911 R	£136,901	6cyl/3996cc	500hp	339lb ft	3.8secs	201mph	1370kg
New 911 Turbo	£126,925	6cyl/3800cc	540hp	524lb ft	3.0secs	199mph	1595kg
New 911 Turbo S	£145,773	6cyl/3800cc	580hp	553lb ft	2.9secs	205mph	1600kg

<b>911 CABRIOLET (991)</b>							
New 911 Carrera	£85,253	6cyl/2981cc	370hp	332lb ft	4.4secs	181mph	1500kg
911 Carrera Black	£81,852	6cyl/3436cc	350hp	287lb ft	5.0secs	177mph	1470kg
New 911 Carrera S	£94,698	6cyl/2981cc	420hp	369lb ft	4.2secs	180mph	1520kg
911 Carrera GTS	£99,602	6cyl/3800cc	430hp	325lb ft	4.6secs	188mph	1495kg
New 911 Carrera 4	£90,240	6cyl/2981cc	370hp	332lb ft	4.3secs	179mph	1550kg
911 Carrera 4 Black	£86,125	6cyl/3436cc	350hp	287lb ft	5.1secs	175mph	1500kg
New 911 Carrera 4S	£99,684	6cyl/2981cc	420hp	369lb ft	4.0secs	188mph	1560kg
911 Carrera 4 GTS	£104,385	6cyl/3800cc	430hp	325lb ft	4.7secs	183mph	1515kg
911 Turbo	£129,223	6cyl/3800cc	520hp	486lb ft	3.5secs	195mph	1665kg
911 Turbo S	£150,897	6cyl/3800cc	560hp	516lb ft	3.2secs	197mph	1675kg

<b>CAYENNE</b>							
Cayenne	£49,576	6cyl/3598cc	300hp	295lb ft	7.7secs	143mph	2040kg
Cayenne Diesel	£50,441	6cyl/2967cc	262hp	428lb ft	7.3secs	137mph	2110kg
Cayenne S	£60,845	6cyl/3604cc	420hp	406lb ft	5.5secs	160mph	2085kg
Cayenne S Diesel	£62,099	8cyl/4134cc	385hp	627lb ft	5.4secs	156mph	2215kg
Cayenne E-Hybrid	£62,099	6cyl/2995cc	416hp	435lb ft	5.9secs	150mph	2350kg
Cayenne GTS	£72,523	6cyl/3604cc	440hp	443lb ft	5.2secs	163mph	2110kg
Cayenne Turbo	£93,574	8cyl/4806cc	520hp	553lb ft	4.5secs	173mph	2185kg
Cayenne Turbo S	£118,455	8cyl/4806cc	570hp	590lb ft	4.1secs	176mph	2235kg

<b>PANAMERA</b>							
Panamera Diesel	£65,289	6cyl/2967cc	300hp	479lb ft	6.0secs	160mph	1880kg
Panamera	£63,913	6cyl/3605cc	310hp	295lb ft	6.3secs	160mph	1770kg
Panamera 4	£67,474	6cyl/3605cc	310hp	295lb ft	6.1secs	159mph	1820kg
Panamera S V6	£82,439	6cyl/2997cc	420hp	383lb ft	5.1secs	178mph	1810kg
Panamera 4S V6	£86,080	6cyl/2997cc	420hp	383lb ft	4.8secs	177mph	1870kg
Panamera S E-Hybrid	£84,401	6cyl/2995cc	416hp	435lb ft	5.5secs	167mph	2095kg
Panamera GTS	£93,391	8cyl/4806cc	440hp	383lb ft	4.4secs	178mph	1925kg
Panamera Turbo	£108,006	8cyl/4806cc	520hp	516lb ft	4.1secs	189mph	1970kg
Panamera Turbo S	£131,152	8cyl/4806cc	570hp	553lb ft	3.8secs	192mph	1995kg

<b>MACAN</b>							
Macan	£41,578	4cyl/1984cc	237hp	258lb ft	6.9secs	138mph	1770kg
Macan S	£44,650	6cyl/2997cc	340hp	339lb ft	5.4secs	157mph	1865kg
Macan S Diesel	£44,636	6cyl/2967cc	258hp	427lb ft	6.3secs	142mph	1880kg
Macan GTS	£55,188	6cyl/2997cc	360hp	368lb ft	5.2secs	159mph	1895kg
Macan Turbo	£60,994	6cyl/3604cc	400hp	405lb ft	4.8secs	165mph	1925kg

<b>918 SPYDER</b>							
918 Spyder	£781,155	8cyl/4593cc	894hp	944lb ft	2.6secs	214mph	1674kg
918 Spyder Weissach	£853,155	8cyl/4593cc	894hp	944lb ft	2.6secs	214mph	1634kg





	Accessories & Parts	Bodyshops	Brakes	Car Care	Car Clubs	Engine	Exhausts	Inspection	Insurance	Interiors	Manufacturers & Tuners	Memorabilia	Sales & Servicing	Suspension	Track days	Wheels & Tyres
<b>Addspeed Performance Cars</b> Tel: 01403 255616 <a href="http://www.addspeed.co.uk">www.addspeed.co.uk</a>									✓				✓			
<b>Adrian Flux</b> Tel: 0800 081 8989 <a href="http://www.adrianflux.co.uk">www.adrianflux.co.uk</a>									✓							
<b>AmD</b> Tel: 01869 323205 <a href="http://www.amdtechnik.com">www.amdtechnik.com</a>											✓					
<b>Analogue Automotive</b> Tel: 01730 892220 <a href="http://www.analogueautomotive.co.uk">www.analogueautomotive.co.uk</a>	✓	✓	✓	✓		✓	✓	✓	✓	✓			✓	✓	✓	✓
<b>Ashley Insurance</b> Tel: 01785 214444 <a href="http://www.ashleyinsurance.co.uk">www.ashleyinsurance.co.uk</a>									✓							
<b>Autofarm</b> Tel: 01865 331234 <a href="http://www.autofarm.co.uk">www.autofarm.co.uk</a>	✓	✓				✓		✓			✓		✓			
<b>Autostrasse</b> Tel: 01376 562922													✓			
<b>Berlyn Services</b> Tel: 01271 866818 <a href="http://www.berlyn-services.co.uk">www.berlyn-services.co.uk</a>	✓															
<b>Belgravia Garage</b> Tel: 0207 2359900 <a href="http://www.belgraviagarage.com">www.belgraviagarage.com</a>													✓			
<b>Bilstein</b> <a href="http://www.bilstein.com">www.bilstein.com</a>														✓		
<b>Blackboots</b> Tel: 01494 797820 <a href="http://www.blackboots.co.uk">www.blackboots.co.uk</a>							✓						✓			✓
<b>Bodytechnics</b> Tel: 01753 505911 <a href="http://www.bodytechnics.co.uk">www.bodytechnics.co.uk</a> The bodyshop for prestige vehicles. Porsche Centre approved body repairer		✓														
<b>Brian Miller Motors</b> Tel: 0131 443 7806													✓			
<b>Cameron Sportscars</b> Tel: 01220 892244													✓			
<b>Carrera Engineering</b> Tel: 01992 892333 <a href="http://www.carreraengineering.co.uk">www.carreraengineering.co.uk</a>			✓			✓	✓	✓						✓		
<b>Cargraphic</b> Tel: 0049 634 188 088 (D) 01293 537911 (UK) <a href="http://www.cargraphic.com">www.cargraphic.com</a>	✓	✓	✓			✓	✓	✓		✓	✓		✓	✓		✓
<b>Charles Ivey Specialist Cars</b> Tel: 020 77313612 <a href="http://www.charlesivey.com">www.charlesivey.com</a>	✓	✓	✓	✓		✓	✓	✓		✓	✓		✓	✓		✓
<b>Chesterfield Diagnostics/Repairs</b> Tel: 01246 234046 <a href="http://www.chesterfelddiagnostics.com">www.chesterfelddiagnostics.com</a>	✓	✓	✓	✓		✓	✓	✓		✓	✓		✓	✓		✓
<b>Classic Additions</b> Tel: 01938 561717 <a href="http://www.classicadditions.com">www.classicadditions.com</a>	✓															
<b>Club Auto Sport Ltd</b> Tel: 01384 410879 <a href="http://www.clubautosport.co.uk">www.clubautosport.co.uk</a>	✓					✓								✓		
<b>CMSPorsche</b> Tel: 01952 608911	✓	✓	✓	✓		✓	✓	✓		✓	✓		✓	✓		✓
<b>Dansk</b> Tel: 07000 911993							✓	✓								
<b>Design 911</b> Tel: 0208 500 881 <a href="http://www.design911.com">www.design911.com</a>	✓	✓	✓				✓	✓		✓			✓	✓		✓
<b>Direct Line</b> Tel: 0845 246 8386 <a href="http://www.directline.com">www.directline.com</a>									✓							
<b>DMS Automotive</b> Tel: 01264 729016 <a href="http://www.dmsautomotive.com">www.dmsautomotive.com</a>											✓					
<b>Dodo Juice</b> Tel: 07990 518430 <a href="http://www.dodojuice.com">www.dodojuice.com</a>				✓												
<b>Douglas Valley</b> Tel: 01257 472866 <a href="http://www.douglasvalley.co.uk">www.douglasvalley.co.uk</a>	✓															
<b>DS Motorwerks</b> Tel: 07002 911356 <a href="http://www.dsdmotorwerks.co.uk">www.dsdmotorwerks.co.uk</a>		✓				✓							✓			
<b>EBC Brakes</b> Tel: 01604 583344 <a href="http://www.ebcbrakes.com">www.ebcbrakes.com</a>			✓													
<b>EBS Racing</b> Tel: 001 800 462 3774 <a href="http://www.ebsracing.com">www.ebsracing.com</a>	✓		✓	✓		✓	✓			✓	✓			✓		
<b>Eibach Suspension Tech</b> Tel: 01455 286524														✓		
<b>Elephant Racing</b> Tel: +1 408 297 2789 <a href="http://www.elephantracing.com">www.elephantracing.com</a>														✓		
<b>Essex Porsche Inspections.</b> Tel: 07768 894324 <a href="mailto:porscheinspections@gmail.com">porscheinspections@gmail.com</a>								✓								
<b>Elite Direct</b> Tel: 01708 525577 <a href="http://www.elitedirect.com">www.elitedirect.com</a>														✓		✓
<b>Engine Builders Supply Co</b> Tel: +1 775 6731300	✓		✓	✓		✓	✓			✓	✓			✓		
<b>Finlay Gorham</b> Tel: 01284 827427 <a href="http://www.finlaygorham.com">www.finlaygorham.com</a>																
<b>Flat-6 Coachworks</b> Tel: 01686 440323 Email: <a href="mailto:flat-6@hotmail.com">flat-6@hotmail.com</a>		✓											✓			
<b>Gantspeed Engineering</b> Tel: 01507 568474 <a href="http://www.gantspeed.co.uk">www.gantspeed.co.uk</a>	✓	✓	✓	✓		✓	✓	✓		✓	✓		✓	✓	✓	✓
<b>Gmund Cars</b> Tel: 01423 797989 <a href="http://www.gmundcars.com">www.gmundcars.com</a>													✓			
<b>Gmund Collection</b> Tel: 0870 2020911 <a href="http://www.gmundcollection.com">www.gmundcollection.com</a>												✓				
<b>Green Flag</b> Tel: 0845 246 2130 <a href="http://www.greenflag.com">www.greenflag.com</a>									✓							
<b>GT One Ltd</b> Tel: 01932 569911/944 <a href="http://www.gt-one.co.uk">www.gt-one.co.uk</a>													✓			
<b>Hartech</b> Tel: 01204 302809 <a href="http://www.hartech.org">www.hartech.org</a> Firewood Works, Firwood Ind. Est, Thicket Ford Road, Bolton, BL2 3TR						✓					✓		✓			
<b>Historika Classica Porsche</b> 07836 384999 <a href="http://www.historika.com">www.historika.com</a>	✓							✓					✓			
<b>HP Motorsports</b> Tel: 020 8500 2510 <a href="http://www.hpmotorsports.co.uk">www.hpmotorsports.co.uk</a>													✓			
<b>Jasmine Porschalink UK</b> Tel: 01282 697171 <a href="http://www.jasmine-motorsport.co.uk">www.jasmine-motorsport.co.uk</a>	✓	✓	✓			✓	✓			✓	✓		✓	✓		✓
<b>Jaz</b> Tel: 020 8903 1118 <a href="http://www.jazweb.co.uk">www.jazweb.co.uk</a>	✓		✓			✓	✓	✓			✓		✓	✓	✓	✓
<b>John Drake Zymöl Detailer</b> Tel: 01590 645623 <a href="http://www.johnsmodelcars.co.uk">www.johnsmodelcars.co.uk</a>				✓												
<b>JZM Ltd</b> Tel: 01923 269788 <a href="http://www.jzmporsche.com">www.jzmporsche.com</a>	✓	✓	✓			✓	✓	✓			✓		✓	✓	✓	✓





## Performance-Porsche

Performance-Porsche and its offshoot, KLASSIKER, is a specialist with customer care at its heart...

### How long have you been established and how did you get started?

Performance-Porsche was founded in 2011; however the company's owners, Richard and Andy, have been involved with the Porsche marque in previous businesses. They are huge petrolheads and eat and breathe anything at all to do with the Porsche brand.

### Who is in charge and what is their background?

Richard takes the lead on customer service and bespoke KLASSIKER projects whilst Andy looks after the workshops whilst leads on technical and performance matters. Andy has been involved in performance motorsport for many years and Richard comes from a customer service background.

### Tell us a little about the products and services you offer?

We offer all the usual services you would expect from an independent Porsche garage but perhaps what makes us different is that we aren't looking to sell you unnecessary things. We are more interested in having a chat and seeing how we can look after you and your car and put that smile back on your face – and keep it there.

### What do you think your potential customers are looking for in an independent specialist such as yourself?

We think customers want someone they can trust and would like to deal with as well as receiving a high class service and competitive prices.

### What facilities do you have on site?

Pretty much everything is done in-house by ourselves including servicing, engine building, bespoke performance tuning and performance modifications. We have all the latest Porsche-specific diagnostic equipment and a full restoration workshop that is equipped with all sorts of fabrication and machining equipment. We also have our own bodyshop with a spray booth but what our customers like best is our amazing retro-styled waiting area that is equipped with '70s pinball machines and plenty of other working collectables. Don't forget the free tea, coffee and biscuits.

### What is your USP?

There's no secret, it comes down to a few simple things: honesty; integrity; passion; top class customer service; and value for money.

### Which Porsches do you cater for?

All models of Porsche, from 356s up to the latest models.

### What is your background with the Porsche brand?

Richard and Andy have owned over 50 performance cars between them over the years, many of which have been Porsches. Richard started a Porsche business a number of years ago and employed ex-Porsche-trained technicians. Andy has a vast wealth of experience having previously being a master technician for a Porsche independent and lead technician for a Group C Le Mans race team.

### How many staff do you employ?

We currently have 11 members of staff. We also work closely with local colleges and currently have three full-time apprentices on board.

### What exciting new products or services should we expect from you soon?

KLASSIKER 911, our restoration division, has some really exciting bespoke projects on the go at the moment. We are building a wild, custom, turbocharged SC Targa, a 964 Targa to coupé retro backdate, and a

1968 911 SWB Resto. We'd love to hear from anyone looking to commission a bespoke Porsche project. We have purchased the moulds to start making our own 356 Speedster replicas and plan to introduce a line of Porsche-themed furniture.

### Lastly, what is your opinion on the current state of the Porsche market and how have things changed since your business was founded?

We have seen an unbelievable amount of work from anything with an air-cooled engine. Interest remains very strong and values are solid. What might not have been an uneconomical restoration a few years ago is now very much viable. However, availability of earlier cars to restore is scarce. The current Porsche range has increasingly developed to offer a wide range to suit all customer requirements ○

### Contact information

Performance-Porsche Ltd /  
KLASSIKER 911 Ltd  
Telephone: 0800 988 2133  
or 01484 721559  
Web: [www.klassiker911.com](http://www.klassiker911.com) or  
[www.performance-porsche.co.uk](http://www.performance-porsche.co.uk)



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LN Engineering Tel: +1 815 472 2939 <a href="http://www.lnengineering.com">www.lnengineering.com</a>						✓										
Loe Bank Motors Tel: 01706 826060 <a href="http://www.loebankmotors.co.uk">www.loebankmotors.co.uk</a>													✓			
Meguiar's Tel: 0870 2416696 <a href="http://www.meguiars.co.uk">www.meguiars.co.uk</a>				✓												
Milltek Sport Tel: 0115 944 0044 <a href="http://www.milltekssport.co.uk">www.milltekssport.co.uk</a>							✓									
Ninemeister Tel: 01925 242342 <a href="http://www.ninemeister.com">www.ninemeister.com</a>	✓	✓	✓			✓	✓				✓		✓	✓	✓	✓
No 5 Garage Tel: 020 8993 7318 <a href="http://www.no5garage.com">www.no5garage.com</a>													✓			
Northway Porsche Specialists Tel: 0118 971 4333 <a href="http://www.northway.co.uk">www.northway.co.uk</a>													✓			
Parr Motorsport Tel: 01293 537911 <a href="http://www.parr-uk.co.uk">www.parr-uk.co.uk</a>	✓	✓	✓	✓		✓	✓	✓		✓	✓		✓	✓	✓	✓
Paragon Tel: 01825 830424 <a href="http://www.paragon.gb.com">www.paragon.gb.com</a>	✓	✓	✓			✓	✓				✓		✓	✓		✓
Paul Stephens Specialist Cars Tel: 01440 714884 <a href="http://www.paul-stephens.com">www.paul-stephens.com</a>											✓		✓	✓		
PCT Cars Ltd Tel: 02476 407770 <a href="http://www.pctcars.co.uk">www.pctcars.co.uk</a>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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Performance Direct Tel: 0844 5733594 <a href="http://www.performancedirect.co.uk">www.performancedirect.co.uk</a>									✓	✓						
Performance Marque Tel: 0800 954 0037 <a href="http://www.performancemarque.com">www.performancemarque.com</a>									✓	✓						
Peter Morgan Consulting Tel: 01672 514038 <a href="http://www.porscheinspections.com">www.porscheinspections.com</a>								✓								
Pie-Performance Tel: 01473 760911 <a href="http://www.pieperformance.co.uk">www.pieperformance.co.uk</a>	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓
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Porscheworx Tel: 020 7916 6911		✓									✓		✓			
PortiaCraft Tel: 020 8959 1604													✓			
911 Virgin Tel: 01895 255222 <a href="http://www.911virgin.com">www.911virgin.com</a>													✓			
Pro 9 Tel: 01527 591992 <a href="http://www.pro-9.com.uk">www.pro-9.com.uk</a>			✓										✓			
Promax Motorsport Tel: 01296 714856 <a href="http://www.promaxmotorsport.com">www.promaxmotorsport.com</a>	✓										✓		✓			
PR Services Tel: 01277 630099 <a href="http://www.prs356.com">www.prs356.com</a>		✓											✓			
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A motoring journalist for over 25 years, Colin has contributed to GT Porsche for a decade

## Colin Goodwin thinks Porsche needs to address an impending supply and demand crisis that is annoying its customers...

Winning the lottery, a big premium bond win and actually being able to buy a Porsche 911 R – all things which involve incredibly long odds. A friend of mine has put his name down for one at his local dealership but it's unlikely that he'll ever see an R on his driveway. He's a successful entrepreneur and has an impressive piggy bank so I suggested that it might help if he nipped into the dealership over the next few months and showed a lot of interest in a new Cayenne for his wife (she rides horses), and perhaps a Panamera for himself for when he's not taking the 911 R out for a blast. Or both.

In truth it probably wouldn't make a difference as it's likely the person who gets the dealership's only 911 R is a serial customer anyway. Or perhaps something more underhanded will have gone on. Not anything illegal, just a bit non-Queensberry rules. I heard an anecdote the other day about a chap who had ordered a Cayman GT4 and was subsequently offered £30,000 by his dealer to forgo the car in favour of another customer. Nice work if you can get it.

This is a situation that Porsche needs to take seriously as it appears to be annoying a large section of its hardcore fanbase. How does it go about fixing the problem? The root of the issue is of course that old friend – the laws of supply and demand. Make something in small quantities that a lot of people want to buy (crucially, that lots can afford) and the price goes up.

As well as my pal who has entered the 911 R lottery, I have a friend called Vic who's been a 911 owner for the last 43 years, starting in 1973 with a 2.7 RS. How did it work back then? Did he have to buy his local dealer a bunch of flowers or take him to the races? "I hadn't thought of buying a Porsche but then my friend, Alan de Cadaine, bought an RS Lightweight and was



*I heard about a chap who'd ordered a Cayman GT4 and was offered £30,000 by his dealer to forgo it in favour of another customer*

raving about it so I thought I'd get one as well," he said.

"It was straightforward: there was no having to make an order or go on a waiting list, all I did was ring a few dealers. Sytners had a brand-new Touring in its showroom. I was living in

Essex and after I'd sent it the money we met halfway between the dealership and the bottom of the M1. It apologised for a stone chip in the special thinner glass windscreen and had a replacement for it within a few weeks," I'm told.

"You have to remember that the RS was a seriously expensive car when it was new. I can't remember exactly how much but it was, more than a Ferrari Daytona. There wasn't so much cash about then, of course, and it was right in the middle of the oil crisis." As he's done with all his 911s, Vic used the Carrera RS as his everyday car. "The idea of a car being an investment didn't really exist back then," he explained, "I can't remember how many miles I put on it, but I owned it for quite a long time and lost about £1500 on it." Guess what he traded it in for? No, I didn't get it either, a

Superspeed Ford Escort powered by an Essex V6.

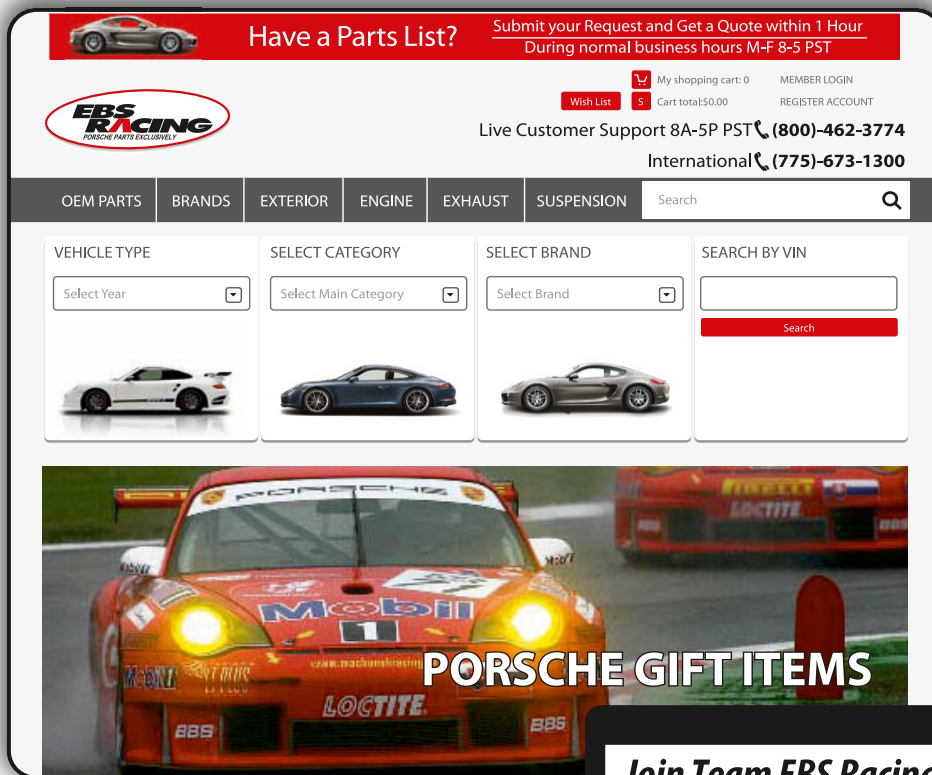
What's particularly infuriating is that Porsche charges a fair price for these special cars – £65,000 is reasonable for a Cayman GT4 and so is £136,000 for a GT3 RS. Sadly I am not in a position to buy any of these cars new and since they go up in price dramatically, I'll probably never be able to own one second-hand either.

The obvious solution is for Porsche to build more of these cars. Only 991 911 Rs are being built which is about 300 less than the number of '73 RSs that were made. Does that make sense in 2016? Even if you add the GT3 and GT3 RS to the numbers it's still not a lot of cars. I'd like to see Porsche build a lean, simple, manual and naturally-aspirated 911 aimed at the hardcore enthusiast and, most importantly, built in unlimited numbers. ○

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



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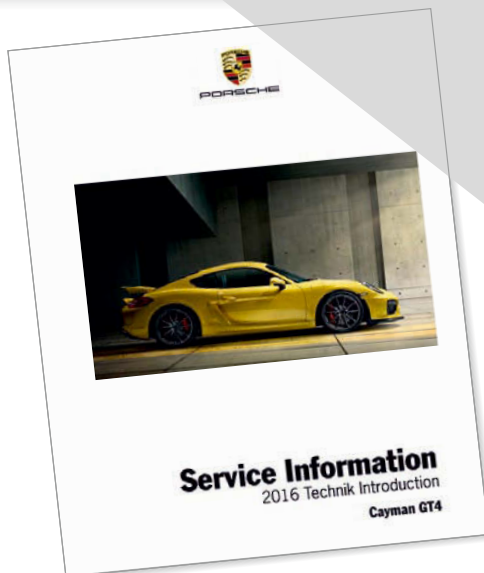
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