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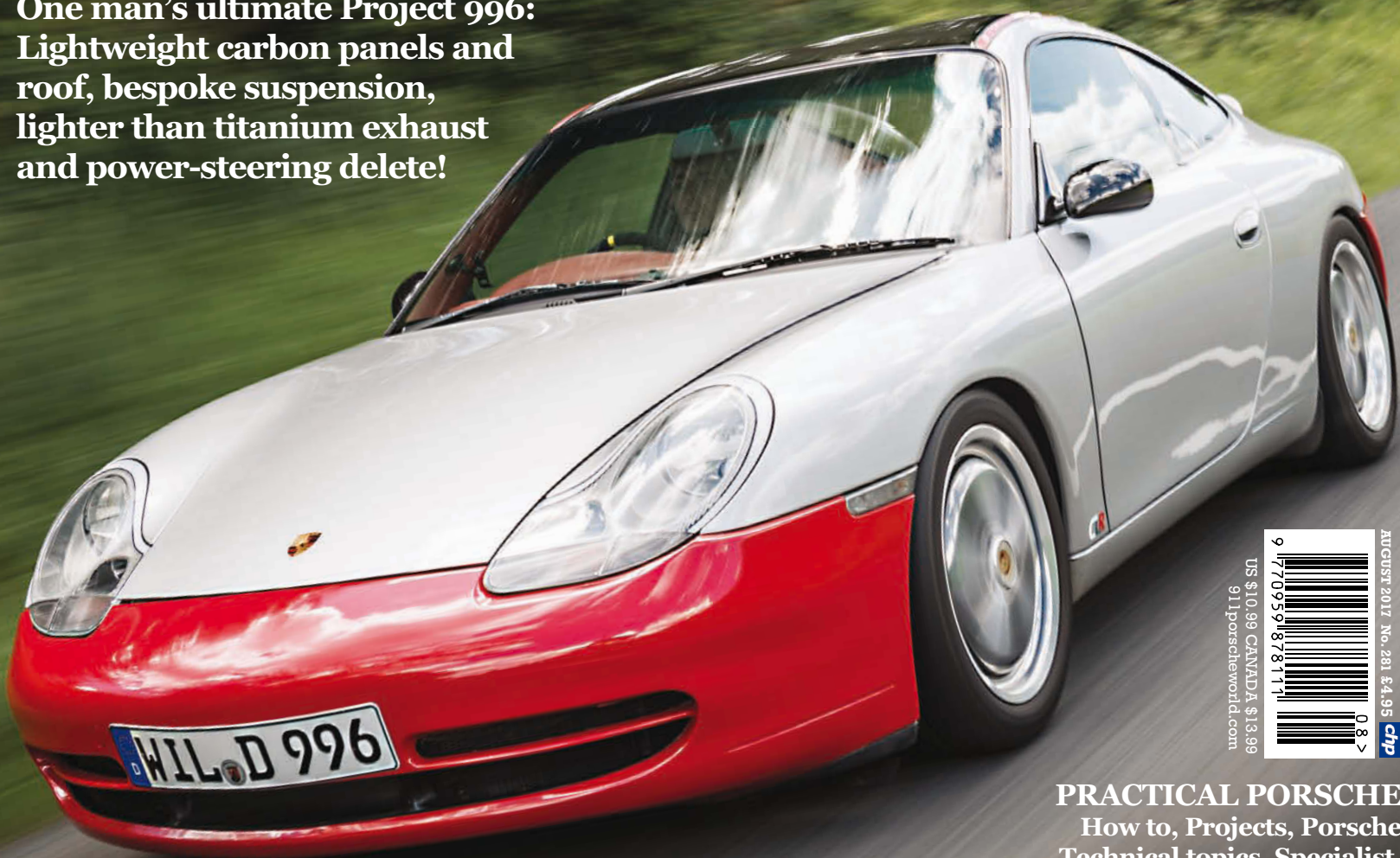
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UP FRONT

Getting excited about a modern project Porsche that aims
to replicate the driving experience of the 911 past

When *911&PW* contributor, Jeremy Laird, told me that he was following the build of a lightweight 996 project, with carbon bodywork and roof, a myriad of home-brewed suspension solutions, air-con delete, including all bracketry in the engine bay and – get this – no power steering, I knew it had *911&PW* written all over it. That it was going to be driven in my neck of the woods was a bonus, as it meant that I got to meet its creator, Richard Beaumont, and take it for a drive, too. His choice of a 996 C2 for this project was an interesting one, particularly given how much he has spent, but his reasoning is solid: it is, he reckons, the last of the truly mechanical Porsches right down to its old school throttle cable (only found on very early 996s).

“ His choice of a 996 C2 for this project was an interesting one ”

Anything later and the nannying effects of electronics start to worm their way in and the true passive driving experience begins to be lost. The 996, then, is an ideal starting point for a project that was inspired by the driving experience of earlier air-cooled 911s like the R and ST. And Richard has certainly succeeded. It drives like no other modern Porsche I've encountered. The drastic weight loss programme has altered the dynamic movement of the car, giving it a very different balance, and the steering is a revelation. Sure you have to work it a bit, but blimey does it reward. A worthy cover car indeed.

A word of warning. You'll find a rather radical kit car Boxster in this issue. With Boxster prices where they are, it was always going to present itself as a donor car. I'm just waiting for a Boxster based Beach Buggy. I'm told it's on its way!

STEVE BENNETT
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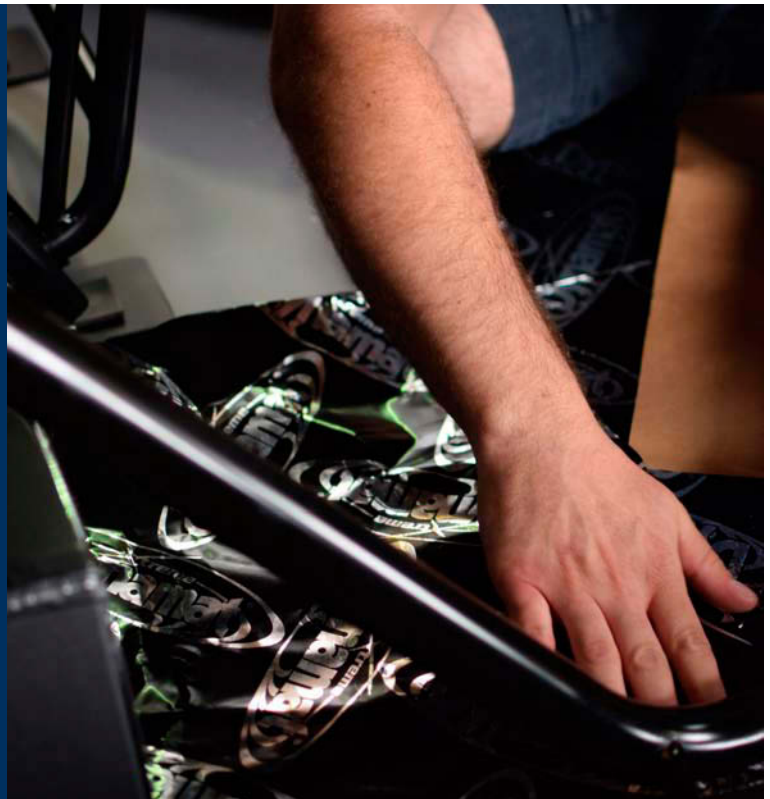
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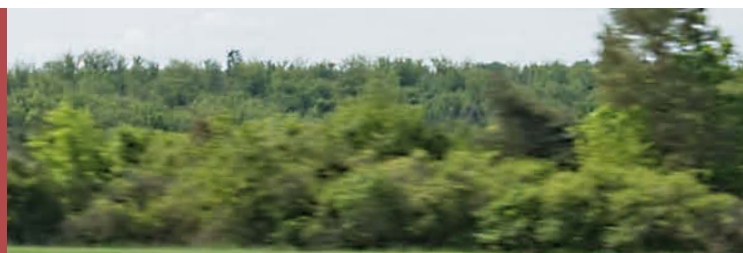
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NEWS

New 991 GT2 RS breaks cover. One millionth 911 is built. Tweaked 911 Turbo S breaches 600bhp. VW Heritage moves into Porsche parts business. Porsche makes it 19 wins at Le Mans with 919 Hybrid



NEAR-700HP GT2 RS REVEALED

Twin-turbo, rear-wheel-drive monster picks up where the 997 left off

It's the worst kept secret since moviegoers pondered the problem of Luke Skywalker's paternity. But the wraps are finally off Porsche's outrageous new 911 GT2 RS.

As yet, nothing is absolutely official other than the final look of the car and the fact that it's coming. Porsche actually revealed the final production version of the new GT2 RS in all its NACA-ducted glory at the launch of Forza 7, an Xbox computer game, at the E3 tech show in Los Angeles. Precise power, performance and pricing have yet to be confirmed.

However, Porsche has indicated that power will be in excess of 650hp with torque weighing in somewhere north of 550lb ft from a heavily revised iteration of the familiar 3.8-litre twin-turbo flat six, as seen in the current 911 Turbo and Turbo S models. Performance-wise, we're talking

sub-three seconds to 60mph, 125mph in under nine seconds and a Vmax on the silly side of 210mph.

For context, the last car to carry the 911 GT2 RS badge was the second-generation 997 model from almost exactly seven years ago. That clocked in at 611bhp and 512lb ft – enough to sprint to 60mph in 3.5 seconds and hit the wall at 205mph.

For the new model, Porsche has created a monster powerplant. According to Andreas Preuninger, the master of all things GT at Porsche, the new engine is something special. "It's not just a chipped Turbo S," Preuninger says. "It's completely re-engineered."

The revised motor packs unique turbos, bespoke internals and a new ultra-light exhaust system. But the most intriguing feature involves a new water-spray intercooler system. It uses a dedicated

five-litre tank that will apparently need refilling after three hot laps of the infamous Nürburgring circuit. The system reduces the engine's intake temps by as much as 15 degrees and is critical in enabling the GT2 RS's huge hike in power.

That said, Preuninger also reckons the new model is significantly more couth than its headbanging precursor. "It's brutal, it has more power, way more power. But it's a joy to drive on the track. It's so precise, so nimble and agile and a lot easier to drive than a 997 GT2 RS. That was a brute to the point where you couldn't handle it sometimes," he reckons.

Of course, it's not just the engine that has been given the GT2 RS treatment. The chassis has had a major makeover, too, including the replacement of every single suspension link with the exception of a single connection on the rear-wheel

With just minimal disguise, the 991 GT2 RS is on its way. Indeed the full production look was actually unveiled for Forza 7, which is some kind of new-fangled computer game (right). Power will be close to 700bhp, and no, you can't have a manual



steering system with rose joints for added precision. What's more, the front spring rates are no less than double those of the recently revised 911 GT3. The rear spring rates are also significantly higher.

Weight loss is another major part of the GT2 RS package. As standard, the new model is expected to slip in under 1500kg, in part thanks to the signature rear-wheel drive setup. As with previous GT2 models, the four-wheel system from the 'donor' 911 Turbo model has been ditched. Porsche's seven-speed PDK paddle-shift gearbox is also standard.

For further added lightness, Porsche is offering the Weissach Pack. That swaps the aluminium road wheels for magnesium items and in turn the standard magnesium roof panel for carbon-fibre. It also includes a fancy sounding titanium roll cage. All told, the Weissach Pack is good for around 30kg of weight saving. Meanwhile, the overall impact of the engine, chassis and body

tweaks is thought to be good for a lap time at the Nürburgring that should slip under the seven-minute barrier and place this mighty new 911 derivative among extremely exotic company.

Finally, there's the minor matter of the GT2 RS's styling. Tarmac-trampling aggression is a given. However, a few details are worth highlighting. The bonnet gets NACA-style ducts that feed directly to the standard-fit ceramic brakes, for instance. Extensions to the front-wing gills first fitted to the 991.1 GT3 RS can also be seen in the final production car, as can massive front radiator intakes that lend a distinctly square-jawed visage and a huge new rear wing.

If you have to ask you both probably can't afford it and have likely already missed out on available allocations. But a final price in the vicinity of £200,000 is probable. As are guffaws were you to pop down to your local OPC to enquire. But then, you never quite know.





911 HITS THE MILLION MARK

Our favourite sports car passes a major milestone

The 911 is the only car you can drive on an African safari or at Le Mans, to the theatre or through New York city. So said none other than Ferry Porsche. It seems at least a million people agree. That's precisely how many copies of the most iconic sports car of all have been called into creation since the model went on sale in 1963. At least, that was the total a little earlier this year when the one millionth 911 rolled off the production line in Zuffenhausen.

But what of the identity of that millionth example? Turns out it's a second-generation Type 991 Carrera S, aka the new turbocharged Carrera. But not just any Carrera S. Porsche has painted it in period Irish Green and lavished it with a range of options from its Porsche Exclusive catalogue. Highlights include wood trim dash and steering wheel inserts, Houndstooth seat fabric, gold lettering for the rear marque and model badging, and chrome for the side window surrounds and the door handles. Oh, and one final anachronism – a manual gearbox.

Of course, such a landmark deserves something of a celebration. So that one millionth 911 will be touring the globe, starting with a trip to the Scottish Highlands where it was joined by an array of icons sourced from the 911 back catalogue via the Porsche Museum in Stuttgart.

From the starting point at Edinburgh Castle, the 20-strong gathering of 911s, including everything from an original 1967 Targa to the latest 911 GT3, with the likes of a 964 Turbo, the 993 Carrera 2 Targa, a 959 and even

an incredibly rare GT1 motored their way to the Scottish West Coast and the Kyle of Lochalsh, just south of the Isle of Skye.

The production of the millionth 911 also invites reflection on the longevity of the cars themselves. Porsche reckons 70 per cent of 911s produced remain roadworthy, which tabulates out to 700,000 examples in existence today. Even now, that number is growing fairly rapidly. In 2016, Porsche found homes for over 32,000 new 911s worldwide and 2017 is on track for similar sales volumes. It's also sobering to consider just how far the 911 has come. At launch in 1963 it constituted essentially a single model in the shape of a rear-wheel drive coupe with a 2.0-litre flat six producing around 130hp.

Depending on how you measure it, the current 911 family includes in excess of 20 models, including coupes, cabs, Targas, rear-wheel drive models, all-wheel drive models, engines from 3.0 litres up to 4.0-litres and from a minimum of 370hp all the way up to nigh-on 700hp from the hot new GT2 RS. It has developed into a mini industry of its own. And yet the core proposition of a four-seat, rear-engine coupe powered by a flat-six petrol engine and framed by that unmistakable roofline endures.

Anyway, since we started with a quote from yesteryear, let's also finish with a period quip. "This car is useless," said Helmuth Bott, head of experimental road trial department, after experiencing the prototype of the original 911, then known as the 901. Happily, Herr Bott had it wrong.

THE 911'S GREATEST HITS

Forget the mega-money specials. It's the mainstream models that got the 911 to the one million mark



1963 – 901/911

It all began here. And it very nearly wasn't called the 911. Only the intervention of Peugeot prevented Porsche from using the 901 name. The rest is automotive history.

Specs:
2.0-litre flat-six
130hp



1997 – 996 Carrera

The first all-new 911 since 1963 and the water-cooled template for every 911 since. Clever modular architecture meant massive cost savings and kick started Porsche's financial rebirth.

3.4-litre flat-six
300hp



1973 – 911 2.7

The first significant cosmetic overhaul and the introduction of the so-called impact bumper 911. The 2.7 was an early indication of how the 911 would endure via evolution, not revolution.

2.7-litre flat-six
150hp



2004 – 997 Carrera

Rebooted retro looks returned the round headlights to popular acclaim. A facelift of the earlier 996 rather than all-new underneath, but a smash hit in terms of worldwide sales.

3.6-litre flat-six
325hp



1989 – 964 Carrera 4

By far the biggest technical update up to that point despite retaining the original body shell, the 964 was also the first mainstream 911 to offer all-wheel drive, ABS and power steering.

3.6-litre flat-six
250hp



2011 – 991 Carrera

The second all-new 911 and the first to feature hybrid steel and aluminium monocoque construction. Larger and more luxurious, it's also the first 911 with electric steering assist.

3.4-litre flat-six
350hp



1993 – 993 Carrera

The last air-cooled 911, of course, but also a transitional car. Trialled modern manufacturing processes and served as an effective stopgap while the company restructured.

3.6-litre flat-six
272hp



2015 – 991.2 Carrera

A facelift of the existing 991 and the first mainstream 911 with turbocharging. May prove to be the last 911 available exclusively with petrol engines. The hybrid era approaches.

3.0-litre flat-six
370hp

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TWEAKED TURBO S BREACHES 600HP BARRIER

Going for gold: Porsche Exclusive's latest muse

If 580hp and zero to 62mph in 2.9 seconds isn't enough to drag you out of bed of a morning, Porsche sympathises. Enter the new 911 Turbo S Exclusive Series, all 607hp of it.

Along with those 37 ponies, the Exclusive Series also ups the ante over the standard Turbo S to 553lb ft across a full range of 2250 to 4000rpm. The poor old Turbo S could only achieve that figure for short periods in overboost mode.

The upshot in terms of claimed performance is incredible, if incremental. The sprint to 62mph hasn't changed, nor has the 205mph top speed. However, Porsche has shaved a few tenths off the sprints to 99mph and 124mph. Of course, Porsche's performance claims are notoriously conservative, so you can expect the Exclusive Series to bank some mend-bending numbers when somebody straps on the timing gear.

Performance aside, the Exclusive Series is all about, well, exclusivity. That takes the form of higher quality materials and unique detailing. Most obvious is a new 20-inch centre-lock wheel design finished in black with Golden Yellow Metallic accents applied using what Porsche says is a new laser technology (don't ask about the refurb options...).

For the first time, the brake calipers for the PCCB ceramic brake system are available in black and with the Porsche logo in that same

Golden Yellow Metallic. That colour, needless to say, has also been applied to the entire coachwork, though other options are available. However, what's not immediately obvious is that the bonnet, roof and side skirts are now carbon fibre, something that's revealed on close inspection courtesy of central stripes exposing the carbon weave.

At the rear, Porsche has applied the wing from the Turbo Aerokit option pack along with a new rear apron, the ram-air scoop in carbon and the exhaust system with two twin tailpipes in black stainless steel. Inside, the 18-way adjustable sports seats are covered in two layers of perforated leather. The inner layer has two stripes in Golden Yellow, creating a unique effect. The seams and the Turbo S lettering stitched on the headrests are also in contrasting Golden Yellow and the roof lining is made of Alcantara with a Golden Yellow double-stripe look. Fine copper thread is integrated into the trim strips of the carbon interior package.

For the record, like other big 'T' Turbo models, the Exclusive Series is available only with Porsche's seven-speed PDK paddle-shift gearbox. As for pricing, it's yours for a piffling £186,916 or just over £40,000 more than a standard Turbo S, which itself commands a £20,000 premium over the poverty-spec Turbo. Just 500 examples will be made.

Just 500 tweaked Turbo S models will be made courtesy of Porsche's Exclusive department

OUR TAKE



ABSOLUTE POWER

Remember that moody end-of-series epitaph that was Jeremy Clarkson's review of the Aston Martin V12 Vantage back in 2009? The portentous one with the melancholic score and the world financial crisis looming in the background?

Apart from being a reminder that the big-haired buffoon can occasionally pull a straight face, it seemed to make a very sensible point. "Thanks to all sorts of things," he proselytised, "the environment, the economy, problems in the Middle East, the relentless war on speed, cars like this will soon be consigned to the history books."

At the time, it seemed prescient. But here we are nearly a decade later and Aston is still cranking out V12 Vantages and has just launched its latest V12 GT in the DB11 with yet more power. OK, it now has turbos. But at over five litres, it's barely downsized. Anyway, Ferrari, Lamborghini, Audi et al still make large naturally aspirated engines and if anything it will be customer demand for more easily accessible power that forces even Ferrari's hand when it comes to further turbo adoption, not emissions laws.

As for Porsche, this month we have news of a 700-odd horsepower GT2 and a 607hp Turbo S-derived special. You can also buy a mainstream 911 Carrera with 450hp. Even the basic Boxster is now a 300hp car and would blow the doors off the original 260hp 930 Turbo of 1975. It's an extraordinary turnaround for what looked like a performance car segment running on borrowed time back when that Top Gear episode went out.

How much longer it will last is impossible to say. Never mind the terrifying volatility of world politics and economics, of late. At the current rate, Porsche will be cranking out 900hp 911s in a decade's time. Can that ever really make sense? Eventually, then, the prophet Clarkson will probably be proven right, so belt-up and enjoy the ride.

VW PARTS SPECIALIST TAKES AIM AT PORSCHE

VW begat Porsche

Long-standing VW parts specialist Heritage Parts Centre has entered the burgeoning fray for Porsche parts. After 30 years in the Vee Dub scene, Heritage reckons the move into Porsche parts is a natural progression.

With several Porsche parts specialists in-house and supply and logistics partnerships already in place, the team have been working hard sourcing 3000 parts to stock in their 40,000 sq ft warehouse near Brighton. A brand new mobile-friendly website has been developed and is now live.

A quick perusal of the new website reveals an impressive array of parts already. The site is split into model-specific sections and very user friendly. The models covered are impact bumper and earlier 911s, the 912, 964, 993, 996, 997, 986, 987, 944 and 928.

Even more intriguing is Heritage's plans to manufacture its own parts in future. In the meantime, Heritage is offering the chance to win a Porsche driving experience. The lucky winner will strap into a classic 1980s Carrera, the last-of-the-aircooleds 993 and the latest 991 Carrera S at the historic Silverstone race

circuit. The closing date for applications is 31st August and you can both apply and tour the new site at heritagepartscentre.com.



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PORSCHE MAKES IT 19 WINS AT LE MANS

Behind the headline was a race of attrition and a near shock win for an LMP2 Oreca

It might not have been quite the dramatic victory of last year, when Porsche swooped after Toyota's last lap demise, but this 19th Le Mans victory was certainly more unexpected and harder fought, too. The bald facts are this: despite spending 65mins in the pits early in the race, having its front electric motor changed, the No2 Porsche 919 Hybrid, driven by Timo Bernhard, Earl Bamber and Brendon Hartley took the win some 20hrs later, which tells you everything you need to know about the fate of both the No1 Porsche and the trio of LMP1 Toyotas.

After winning the opening two rounds of the 2017 WEC and qualifying ahead of the Porsches for the 24hr event, it really looked as if Toyota had this one sewn-up, and no one would have begrudged the team the win after last year's heartbreak. But 24hrs is a long, long time and Toyota was hit by a calamitous sequence of events, two of which were by no means the team's fault, but signalled the demise of two its TS050 Hybrids, with clutch failure and hydraulic failure caused by a puncture and bodywork damage. The team's third car was hobbled with a front electric motor and battery change.

This all played into the hands of the Porsche No1 car driven by Neel Jani, Andre Lotterer and Nick Tandy, which, with four hours to go, was leading by 13 laps. Then, with Lotterer at the wheel, the 919 Hybrid lost oil pressure. He tried to limp back to the pits on electric power only, but didn't make it. This elevated the Jackie Chan (yes, that Jackie Chan) entered LMP2 Oreca driven by Oliver Jarvis, Ho-Pin Tung and Thomas Laurent into the overall lead and it

really looked as if an LMP2 car was going to take the overall win over the fast, but fragile LMP1 hybrids.

But the No2 Porsche was still in the game and pit wall number crunchers predicted it would catch the Jackie Chan Oreca on the final lap. Nail biting stuff. As it transpired, the Bernhard/Bamber/Hartley machine reeled the Oreca in in the last hour, with some frantic driving, and went on to win by a lap and 25 secs, which in Le Mans speak is still what's known as 'squeaking' it. The only other LMP1 car left running – the third Toyota – was way back in eighth place.

With just six LMP1 cars in the race, it was not a great result for the leading class and one wonders whether Toyota will have the fortitude or desire to carry on beyond 2017, with the hugely complex and expensive hybrid format. By comparison the LMP2 class now all run with the same 600bhp Gibson V8 engines. Dull, but simple and effective.

Porsche was less successful in the GTE Pro class. Fiercely contested between Porsche, Aston Martin, Ford, Ferrari and Chevrolet, the category uses a 'Balance of Performance' formula to equalise performance. But, as ever, some are more equal than others and the three-way fight between Aston Martin, Porsche and Chevrolet went Aston Martin's way on the final lap. The Porsche RSR – driven by Frederic Makowiecki, Richard Lietz and Patrick Pilet – was in the hunt all the way but was delayed with a puncture in the final hour.

Exciting stuff, even from the comfort of the 911&PW sofa!

24hrs is a long time and long enough to overcome a 65min pitstop for the winning Porsche 919 Hybrid, driven by Timo Bernhard, Earl Bamber and Brendon Hartley. Below: The GTE Pro Class RSR was in contention right until the last hour, when a puncture intervened



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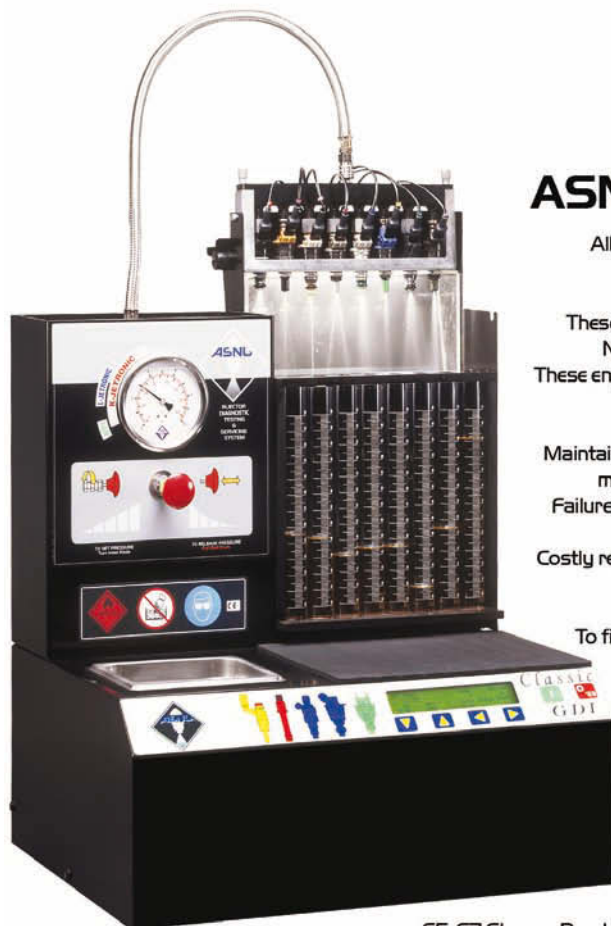
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PRODUCT BRIEFING

ESSENTIALS

The tempting trinkets that enhance Porsche ownership

TITANIUM TITILLATION

Forget ye olde IMS and bore scoring scares. There's a lesser-known M96 and M97 engine nasty that's waiting in the wings. We give you corroded and snapped exhaust header studs that require labour-intensive drilling and then very likely further work on the cylinder head to repair the threads. Not nice. The solution takes the form of these titanium studs, knocked up by a 996 enthusiast and race engineer in his spare time for the users of the 911uk.com forum. Such has been demand, he has set up a microsite to supply the studs, along with matching nuts and washers. As for the techy bit, the studs are hewn from Ti6Al4V, which is stronger than pure titanium but retains the same stiffness. It will never rust, rot or corrode. The full set of 12 studs with accessories for both sides of the engine is yours for £115 including VAT from porschetistuds.co.uk.



LIGHT-WEIGHT WONDERS

Adding lightness is always a boon. Adding unsprung lightness via feather-weight wheels is even better. Enter the Dymag Boxstrom 7Y. The superleggera shizzle here involves CNC machined and forged aluminium centrepieces fastened with titanium fasteners to the Dymag Boxstrom carbon barrel to ensure a lightweight, highly-durable state-of-the-art wheel. Dymag says it worked closely with the UK National Composites Centre to develop the carbon barrel with particular attention paid to ensuring load path optimisation and utilising a sacrificial layer, strengthening the structure of the wheel. The wheels are available to suit any PCD and stud arrangement, including centre-lock configurations. Sizes ranging from 19x8" all the way up to 21x12.4" are available. For pricing and further information, head for dymag.com.



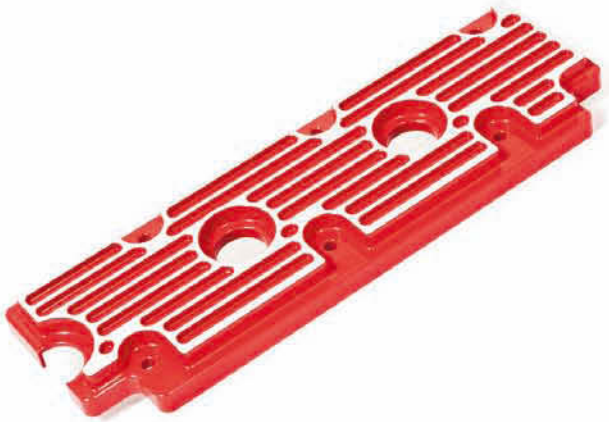
BBI'S 700HP BAHNSTORMER

Spare a thought for the owners of Porsche's feeble 911 Turbo S. The latest model must make do with a mere 580hp and limps to 62mph in 2.9 seconds. Oh dear. Happily, the technical wizards at BBI Autosport feel their pain and have come up with a Stage 2 package that adds a little much-needed vim. The basic kit includes a 304 stainless steel aerospace exhaust, a 3D-modelled plenum, Y-Pipe and engine coding. Together, you're looking at an additional 100 peak horsepower plus the minor matter of 120lb ft of torque. Yup, we're looking at a near-700hp 911. Who needs that rumoured GT2? The kit includes multiple options and prices vary according to application. Available worldwide, contact Jerry@BBiAutosport.com for more information, and to be hooked up with your local BBI-approved dealer or visit bbiautosport.com.





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ADD A LITTLE FLARE

Widebody flares for aircooled 911s are not all equal. For starters, the difference between the shape of, say, a 2.8RSR flare and a 930 Turbo arch is much greater than many appreciate. Then there's the widely varying quality of construction. It's an appreciation of those finer points that has driven EB Motorsport to add what it describes as a set of 'perfect' 911 RSR steel arch flares to its expanding catalogue of reproduction Porsche racing parts. "Having spent years in search of the perfect RSR arch flare, everything we found involved making compromises," says joint MD James Bates. "However, we finally found a supplier capable of producing high quality steel panels and we are delighted to add these wonderful RSR steel arch flares to our catalogue." Prices are £1340 for the front pair and £2370 for the rears, plus VAT. Find out more from eb-motorsport.com.



GIVE YOUR 981 SOME CLARITY

Heads up 981 Boxster owners. If you're unhappy with the mesh air deflector fitted by the factory, there is now a solution. Long-time car enthusiast and 981 owner Michael Jacobson is of a similar mind and was disappointed to discover the only clear plastic replacements he could find were in the £200 to £300 price range and sourced from Germany or the USA. Enterprising chap that he is, he decided to design his own. Jacobson reckons it's a perfect fit with no rattles or vibrations. They're made from durable 4mm-thick acrylic and come with a 10-year guarantee. They fit all 981 and 718 Boxster models and can be had for just £65 including delivery to anywhere in mainland UK. For more info or to place an order please contact Mike on 07979 076555 or 0113 267 5899 or email: mhjacobson67@gmail.com.

PIPING HOT

In the pursuit of driving purity, removing as much lag from the driver-input, machine-output process is key. Adding individual throttle bodies for each cylinder and bolted directly to the cylinder head does just that by reducing the distance between the throttle valve and the combustion chamber. Which brings us to AT Power's latest take on ITBs for air-cooled engines. The new AT Power 42mm bodies are intriguingly said to provide both more power and torque than competing 46mm bodies, proving that bigger is not always better. The trick is that AT's throttle butterflies are shaftless. Add in a super-thin butterfly blade and the result is maximum airflow. Indeed, AT reckons its new design delivers 99.5% of the flow of having no butterfly at all. Prices vary by application and the place to go to find out more is atpower.com.

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WALKER'S WHEELS

Is there no stopping Magnus Walker, he of the beard, the threads, the outlaw 911s and the monotone, transatlantic delivery? Apparently not, as these 1:43-scale models rather illustrate. Yes, the famous '277' Walker car has been immortalised in all its Harlequin-coloured splendour in a limited-edition series of just 911 copies. But that's not all. One of Walker's slightly lesser-known cars, his R-inspired 1968 short-wheelbase car, has also been given the small-scale treatment. Walker bought it as a short-wheelbase runner with a 2.2T motor. Not quite a 911R clone, it's more a hot-rod re-interpretation of the 1967 original and is powered by a 220hp 2.5-litre short stroke development of an aluminium 2.0-litre engine. It's a pretty little thing and you can bag it or its partner for €49.95 or roughly £40 from selectionrs.com.



A MOMENT FROM LE MANS

Porsche hasn't quite had time to rush out a model of this year's winning 919 Hybrid, so we must look to last year's race and Porsche's jammy last-gasp victory. Safe to say, the drama of the last lap which saw the leading Toyota suffer a heart-breaking mechanical failure, within minutes of what would have been an overall win will go down in history as one of the most spectacular race results ever – and anywhere, not just Le Mans. Porsche's 2017 win is well deserved, but doesn't quite match the emotion of 2016's win, so why not commemorate Porsche's derring-do with this glorious 1:18 scale model of the winning Porsche 919 Hybrid. Presented in a bespoke display case and with its base signed by the driving trio of Romain Dumas, Neel Jani and Marc Lieb It's yours for €299.95 or roughly £260 in HM's legal tender. Grab your little slice of Porsche history from selectionrs.com.



MEGA-MONEY MODEL

Fair to say the sordid matter of money looms large when it comes to all things Porsche of late. Whether it's low-volume specials selling at spectacular numbers over list price, air-cooled classics commanding many millions of pounds or even the latest 718 Cayman and Boxster models and the question of value following the move from flat-six to flat-four power, the old pound sign always seems to pop up. In that context, Porsche's latest official scale model is either entirely par for the course or symptomatic of a broader market madness. Either way, what you're looking at here is a 1:18-scale model of the 2016-season 911 RSR. Captured in what you might call forensic detail, it's a staggeringly accurate effort. But then it ought to be given the £9000 price tag. About the same as a nice 1:1 scale 986 Boxster, then. Head, if you dare, to porsche.com/uk for yours.





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LETTERS

Got something to say? Need to express an opinion on the Porsche world? E-mail us on porscheworld@chpltd.com

924 TURBO FUN

I read the letter from Neil Warrington in the July issue of *911&PW*. So, his dream car is a 924 with an engine swap from a 944 Turbo.

I can promise Mr Warrington, it is a lot of fun. I own the very thing: a 1986 924S with a 951 Turbo S engine conversion. It has the complete running gear, with gearbox, front and rear brakes and the longer front wishbones, plus fully adjustable KW Variant 3 suspension kit. The car runs the original forged 16in

'Teledial' wheels from the Silver Rose Turbo S.

The engine is modified with a chip and MAF kit and delivers around 300bhp. I carried out the conversion myself and the car is German TUV approved. The car goes like hell on the German Autobahn!

Go on with your great Porsche magazine...

Jorg Langhinrichs, via email

IN SUSPENSE

I read with interest the trials and tribulations of Jeremy Laird's Cayman suspension (*911&PW* July issue) set-up. Thanks for the heads up, Jeremy, I now know that I won't be messing around with the suspension on my own Cayman. This really is public service journalism at its best.

Seriously, though, I can't really see how the standard set-up could be bettered. Maybe it's because my car has got PASM, but the ride quality is astonishing for something with 19in wheels – even on horrible Brit B roads. And then, when I fancy driving quickly, the suspension adapts to meet the challenge. I just can't imagine that there is an aftermarket box of tricks out there that could do better, although I will concede that the sport setting is too stiff for the road, but then it's perfect for the occasional track day.

It sounds like Jeremy has spent a lot of money in order to make his car worse and, reading between the lines, there appear to be other *911&PW* writers who are less than enamoured with their suspension set-ups and are putting on a brave face. Porsche spends millions on chassis and suspension development. Surely it's naive to think we can do better?

Andrew Smithers, via email

Steve Bennett replies: *Naive we may be, but we collectively remain undaunted in our quest for suspension and handling Nirvana. The perfect set-up is out there...*



DON'T GET ME STARTED...

Great magazine, but then you know that already. Why am I writing (well emailing)? To have a rant about the most annoying piece of new tech to be fitted to modern Porsches and modern cars in general: electronic hand brakes.

I've got two current Porkers – a Cayenne and a Cayman – and both are blighted with the infernal things. Still I reach for the handbrake every time I come to stop, or have to perform a hill start and then remember I need to be operating the useless pull switch thing under the dash. What's wrong with a simple handle and a cable? It's amazing how much I miss the versatility of a handbrake, and often you almost subconsciously use it, until it's not there. Yes,

both will hold the car on an incline, but do I trust it? No, not much.

The final injustice of the wretched things comes in the form of maintenance. The Cayenne is a good deal older than my Cayman and so, predictably, the electronic gizmo started to play up. The whole thing operates in a pretty harsh environment – particularly in the winter – and so was partially seized. My local Porsche specialist is well versed in the procedure of removal, stripping down and rebuilding, not just on my car, but many others, too.

Like I say: What's wrong with a cable?

Mark Thomas, via email

GOOD SERVICE

Having had to sell my beloved 964 Cabriolet on the birth of my son some years ago, I was delighted on my retirement to be able to get back into 911 motoring with a 996 C2 Tiptronic Cabriolet. Yes, I know, not the most desirable in the current climate, but I love it. Obviously there's been the usual trials and tribulations, but it's fair to say that it's been a pleasure to drive.

But enough of the history lesson. As well as the Porsche I also bought a property in Spain for my retirement. Back in March I was going to drive the 996 to the apartment and so filled up with fuel the day before setting off. Suddenly, though, the voltmeter plummeted. Now bearing in mind I had ferries booked in advance, the first leaving at 11am the following day, it is fair to say that I was stressed and my wife was in tears!

Luckily my local Porsche specialist is JZM in Kings Langley.

I limped in there and told them what had happened and our predicament. The staff were so considerate with our situation. JZM chief, Steve McHale, dealt with me personally and was absolutely amazing. He knew immediately it was an alternator fault, sourced one for delivery within half an hour, and top mechanic, Mike Etherington, fitted it.

I was back on the road in three hours and home in Mallorca within two days. Amazing staff and amazing service. A big thanks to them all. I know I have been thoroughly spoilt by JZM and only wish they would open a branch in Mallorca.

Andy and Debbie Goding, via email



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NEW DESIGN

Throttle Bodies for Porsche application

AT Power have recently been working with Reno Rennsport on developing 'Shaftless' Billet aluminium Direct-to-Head Throttle Bodies for the Porsche 993, 964 and 911 engines.



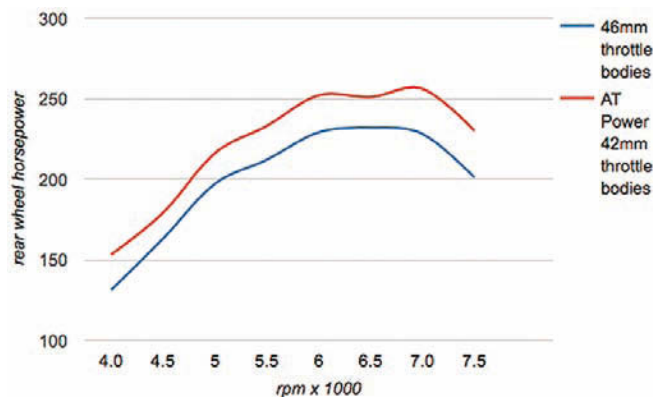
Porsche 911 **Throttles**



Porsche 964/993 **Throttles**

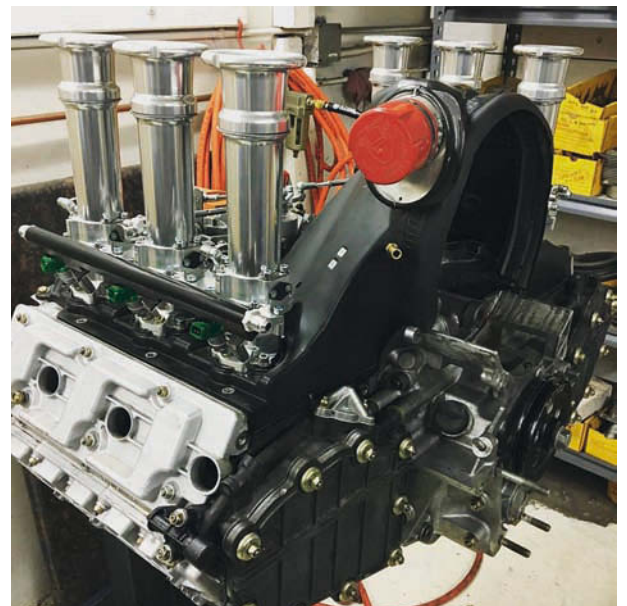
Dyno Data

Porsche 3.0 liter Euro engine, 46mm aftermarket stacks vs AT Power Shaftless throttle bodies.



Comparison is between two identical stock Porsche euro spec 3.0 liter engines. Each motor also has 1.5 inch headers and racing mufflers. Both engines have the same fuel injection system and ecu. One has a reputable aftermarket throttle body system with 46mm diameter shaft butterfly. The other contains the AT Power designed throttle body system with 42mm shaft-less butterfly. Both runs were done in same ambient conditions on the same wheel dyno. All other specs on the cars are identical.

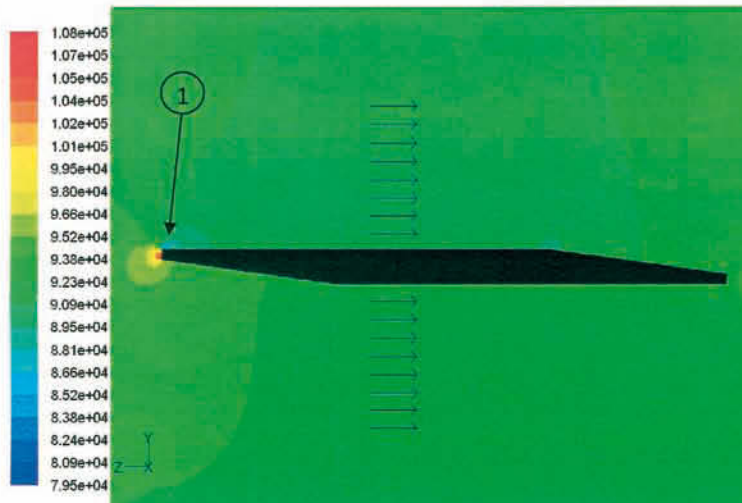
Throttles Installed



AT Power Improved Shaftless Flow Data

AT Power Shaftless Throttle

- Butterfly knife edge on leading and trailing edges minimising air flow separation.
- Minimal butterfly thickness maximising volumetric efficiency.
- No shaft or screws giving 99.5% the same flow efficiency as having no butterfly at all.
- Higher airflow velocity resulting in higher volumetric efficiency, horsepower and torque.

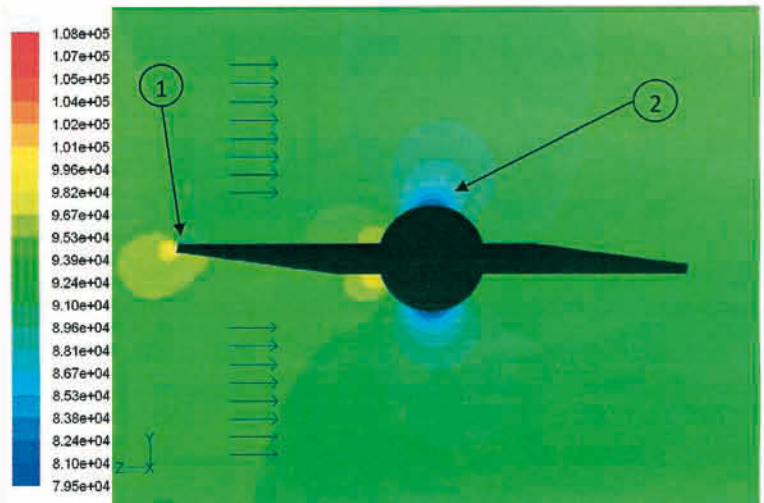


Contours of Static Pressure (pascal)

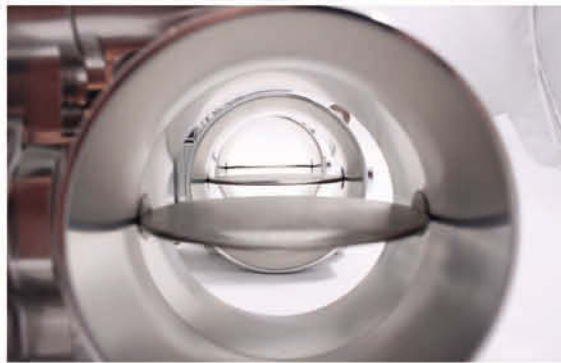
Standard Shafted Throttle Flow Data

Traditional Shafted Throttle

- Shaft and butterfly fixing screws causing air flow separation and stagnation areas.
- Reduced volumetric efficiency.
- Reduced airflow velocity resulting in reduced volumetric efficiency, horsepower and torque.



Contours of Static Pressure (pascal)



The Shaftless Difference

One area where traditional butterfly throttle bodies are lacking is that the butterfly valve is held via a thick shaft and two screws. The shaft and screws cause disruption to the airflow, reduce flow velocity and hamper the performance of the engine. To rectify this problem, AT Power developed an award-winning design concept where the blade is supported at each end and has no shaft in the throttle bore. The thickness of the blade is reduced to the minimum achievable, with knife-edged leading and trailing edges and the rotating shaft does not ingress into the airflow passage.

Our patented technology maintains all the benefits of the butterfly throttle system while improving the part and fully open airflow characteristics. Our 'Shaftless' system can improve flow by up to 10% on common throttle body sizes. In fact, tests show an AT Power throttle has 99.5% the same flow as having no butterfly at all. The minimal disruption caused by our 'Shaftless' blade allows us to specify a smaller throttle bore, resulting in higher airflow velocity resulting in a higher volumetric efficiency.

Customer Testimonial Reno Rennsport:

“The shaftless throttle body design is an amazing improvement over its predecessor. Not only do they work far better, but the details are incredible. From the weight saving aluminium parts to the bevelled blade and gorgeous air horns, this is an amazing product. We compete in one of the most competitive spec racing series in the US for air cooled Porsches (Spec 911) so any legal edge is of huge value. We have used just about every induction system on the market for a 911 and this is our favourite. The throttle response and power gains are truly impressive. Thanks AT Power.”

Brian Lowrance, Spec 911 Racer Partner - Reno Rennsport

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THE USUAL SUSPECTS



KEITH SEUME
Editor of
Classic Porsche

What is it about certain old Porsches that makes them worth ten times a more modern equivalent? *Keith Seume* tries to understand what determines the value of a classic car – and then wonders if it isn't time for backdating to stop...

WHAT PRICE HISTORY?



In last month's issue of this very magazine, I reported on a nicely executed 'homage' to the legendary 2.8 RSR. And quite by coincidence, in the latest issue of its sibling, *Classic Porsche*, of which I am editor for my sins, we carried a story on a genuine 2.8 RSR. Both cars are Viper Green, both – to the untrained eye, at least – virtually indistinguishable from each other.

The replica – I don't really like using that word as it's not a true re-creation of a genuine RSR (modern interior, modern higher-output engine, etc) – looks every bit as good as the genuine article and what makes the comparison all the more intriguing is that both are finished in that wonderfully 1970s hue, Viper Green.

The 'real deal', as we referred to it, is worth a small fortune – correct me if I'm wrong, but probably not far short of £1.5 million – while the homage probably has a value of one tenth that amount. I find that disparity in values fascinating.

In terms of driving experience, the modern interpretation was truly impressive. It handles superbly, and had straightline performance which surely must have matched an original RSR (sadly, the opportunity to try them side by side never presented itself). It certainly had more torque than the screaming 2.8 of old, and modern fuel-injection meant that it was far more drivable in real world situations. It stopped, too, thanks to the big 930 brakes.

The 2.8 RSR is a far more visceral entity. You have to fight it, grab it by the throat and drive it hard to get the most out of it. And

when you do, it will reward you in spades. It's an altogether more 'edgy' experience, louder, bumpier, less comfortable in every way. But it will leave you with a huge smile on your face and begging for more.

Two similar looking cars, two rather different driving experiences, both guaranteed to thrill in their own different way. And yet separated by a factor of ten in terms of their value.

It would be easy to make the homage more 'RSR-like', stripping out the interior, maybe fitting PMOs instead of Jenvey ITBs, and at that point there would be very little to choose between them in terms of driving

experience. And to that untrained eye, the two cars would be so alike that the price differential would make no sense.

So does it? Look, let's be honest here: I'm playing Devil's advocate. I know which I'd prefer, and which I'd spend my money on if I had a cool mill-and-a-half to spend. And for all that, I know which everyone would recommend as an 'investment', much though I hate that word when used in conjunction with old Porsches...

But what are you actually paying for? The obvious answers are history and originality, but how can you quantify those? I'm honestly not trying to be obtuse here, but genuinely interested to put my finger on what dictates values.

I posed the question to Robert Barrie, classic racer and purveyor of fine automobiles: 'You are paying for authenticity. How much you are prepared to pay for it is a different question, but there is a small number of people with deep pockets for whom it is very important!

'You see it in every market they take an interest in. They want the real thing – and *only* the real thing. While the rest of us might be quite happy banging around in something that looks like it, the uber-collectors aren't.'

But there are pitfalls: 'On yet another tack,' says Robert, 'tastes can change – I recently read that the bottom had dropped out of the Elvis Presley memorabilia market. It appears there are more sellers than buyers, as they say!'

The closest I've personally ever come to

Left and below: Will the real RSR please stand up! What is it that determines the fact that the real 2.8 RSR (below) is worth ten times the modern replica (left)? We live in a world where originality is everything – and the market has spoken...



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other highly-modified car when a sunny day presented itself. The feeling of responsibility was great and that troubled me. I felt I couldn't do what I really wanted to do to the car (change the gearbox to a later part-synchromesh one, for example) and eventually made the decision to sell. It sold quickly to a collector in Japan (VWs were – and still are – big news out there).

Back to Robert: 'The demographic point is the Elvis Presley point – things become expensive, people forget exactly why, then they become less expensive, and we all move on. I do think there is something special about the cars and the era that we are all interested in, but it won't always be as popular as it is now.'

'The investment types say buy the best you can, because that's most likely to hold its value when tastes change...'

I can see why that should be the case but what I still can't fathom is why there is such a massive price disparity between two ostensibly similar vehicles. We are a strange race, we humans. We are prepared to pay enormous amounts of money for something we can't actually hold in our hands, or see with our eyes. Or show off to others who have no real understanding of our obsession with these old cars.

In the case of a race car, entry into events such as Le Mans Classic, of course, is a major factor. But then the world of racing is whole other subject. Like I say, we are a strange race...

Left: You can tell the photo was taken a few years ago because Seume (right) still has vestiges of dark hair. The Beetle was extremely original and packed with period goodies – unlike Delwyn Mallett's Pre-A 356 coupé 'streamliner' alongside it...

understanding this market is when I used to own a 1951 split-window VW Beetle. It was an incredibly original car that had been imported into the UK as a 'barn find' before the expression had been invented.

The person who saw through the layers of dust and surface rust was a pre-war MG enthusiast who also happened to love old VWs. He took it upon himself to restore the car as sympathetically as possible, using every original nut and bolt he could, carefully repairing any rusty metalwork with only the smallest of patches, rather than succumbing to the temptation of fitting

whole new panels. Even the upholstery – a wool mix that rots and stains easily – was unpicked, cleaned and lovingly reinstated. It was a perfect example of how to retain a car's original character when carrying out a restoration.

I became obsessed with collecting period-correct original accessories for it, and became upset if someone pointed out a small inaccuracy. I'd check and double-check to see if they were right, correcting any 'errors' if they were.

Ultimately, though, I found I wasn't using the car as much I first did, preferring my

SAVE THE 964!

Another area of our hobby that fascinates me is the subject of backdating – you know, taking a Porsche (usually a 911) and making it look like an older model. This, of course, is in complete contrast to the 1970s and '80s when everybody seemed obsessed with making their cars look more modern – who can forget seeing those poor tired early 911s running around with cheap 'Turbo' whaletails or, worse still, impact bumper conversions?

I carried out a backdate about 14 years ago, converting a (oh how I hate to admit it today!) 1974 2.7 Carrera into, well, I'm not quite sure. It had 911R-style lights, a mesh engine grille, Minilite wheels and a Kremeresque paintjob in black and orange. And, of course, glassfibre pre-impact bumpers.

At the time, not too many others were going down the backdate route and I got asked about it quite a lot ('Why did you do that?') and laughed at ('What is that engine grille all about?'), but I liked it at the time, although I have to admit that today I wouldn't dream of doing it to a Carrera.

In fact, I probably wouldn't do it at all as I now prefer the idea of not trying to hide your car's true age. If I ever did another project (which is unlikely given how the

price of even the roughest of 911s has risen), then I'd be more tempted to buy something like a 911SC and do a 3.0RS or IROC lookalike – something which didn't try to hide its impact bumper origins.

I know it's all a case of each to his own, etc, but I can't help thinking that it is time we stopped looking back and trying to recreate the past, and instead celebrate the age in which our particular 911 was built.

I can see the attraction of backdating an SC or Carrera 3.2

as they are relatively plentiful and not too far removed from the earlier cars in terms of technology. What I struggle with – and this is purely a personal feeling – is backdating something like a 964 and pretending its an older 911. Sorry Singer, *et al...*

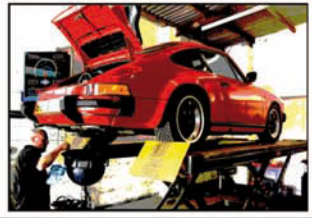
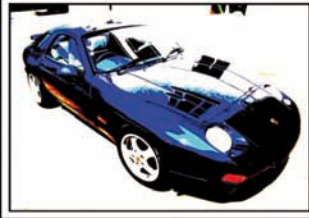
The 964 was a watershed moment in 911 history, with

Dr Porsche's beloved torsion bars being junked in favour of wishbones and coils, and I think it should be celebrated as such. For too many years, the 964 was the poor relation in the 911 family, but that is most certainly no longer the case.

It deserves to be held in high esteem as the link between Porsche ancient(-ish) and modern. And it was the last to retain that famous profile, at least from the bumper line upwards. **PW**



So many 964s have been the subject of backdating that it's a wonder there are any original examples left! But Seume reckons it's time to stop looking back to the past and start treating these more modern Porsches with some respect...



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PORSCHE MID-LIFE CRISIS!

Ah, the old mid-life crisis story. Man gets to 50-odd and suddenly feels the need for a sports car. Call it the 'Menoporsche' if you like, but for Frank Rowlands it meant a Porsche 928, followed by a 968 Club Sport and now a Boxster 2.7, a 924 and 944 S2. All in all that's quite a big crisis, but what the hell, you only live once and you can't take it with you...

Words and photography: Brett Fraser

Ex-IT manager Frank Rowlands blames his Porsche fanaticism – two Porsches previously owned, three currently owned – on a mid-life crisis. 'I'd reached 50-odd,' he explains, 'and felt the need to treat myself to something sportier and more exciting than the cars I was running around in as everyday transport. Previously I'd had a run of German cars – several BMWs and the first generation Mercedes-Benz A-class, the 'elk' model, which I loved – so had a feeling for their quality and depth of engineering. They were good cars and represented good value for money. Subconsciously these factors may have steered me towards a Porsche.'

Frank can't quite recall what triggered his desire for a 928 specifically, beyond the fact

that he thought it looked superb. 'I began trawling the internet, as you do,' he recalls, 'and saw a 928S within budget being sold by a bloke down near Basingstoke. Perhaps I should have done a more thorough check of the car, but as soon as I saw it I knew that I'd buy it. Even after several years of ownership I would stand looking out the window in my front room admiring the car's lines: the 928 is such a beautiful thing and I'd really love another one, although the way values are going at the moment, that now seems extremely unlikely.'

Despite the somewhat impetuous nature of its purchase, Frank's 928S didn't give him much bother during 12 years of ownership, although it wasn't entirely trouble-free. 'About six years into our relationship the oil cooler blew up,' admits

Frank. 'It took me the best part of a year to get around to having it fixed by (928 guru) Paul Anderson of 928 Spares Ltd. Paul also informed me that the seats in my car were from an S2, and that at some stage the speedometer had probably been replaced. Not that it worried me too much – my car was never intended to be a concours winner!

'Apart from the oil cooler issue, all the other niggles were minor: the headlining was floppy and the boot spoiler came loose. During the last five years nothing went wrong and I absolutely adored the sound and performance of that big V8. I took it out to Germany and spent a week using a hotel on the edge of the Nürburgring as a base to tour the local area. And, of course, I did a day on the 'Ring itself.'

Frank Rowlands with the newest of his Porsche trio - a Boxster 986 2.7



Concurrent with his 928 ownership, Frank found himself making a second Porsche purchase. 'It was a bright sunny day and we happened to be passing Howard Watts (incorporating Riddelsdell Brothers) in Boxford (Suffolk), and there was this shiny red 924 sitting on the forecourt. I fell in love with it and bought it there and then – my long-suffering wife, Sue, wondered what on earth I was doing. What clinched it was the fact that the 924 had a private plate that had a particular relevance to my family.'

Although he admits that the 924 has never been used very much beyond 'the odd joyride' and the occasional bit of commuting, Frank has hung on to the four-cylinder coupe, and keeps it in a garage at his daughter Niki's house. The sun has faded its paintwork to a sort of matt pink, but there seems to be little surface rust and the car was recently treated to a set of new wheels and tyres. 'I've never had to do any major work on this car,' states Frank, 'although I have to confess that it is due a fairly hefty service.'

With the 924 helping convince him of the virtues of front-engined rear-wheel drive Porsches, Frank bought a 968 Club Sport to join its forefather and the 928S. 'At that point Club Sports were still reasonably cheap, but I bought an expensive one... It didn't have much history but it had been part of a private collection for several years and was clearly well cared for. Everyone rightly makes a big deal about the way the Club Sport handles, but I thought that it also went like stink in a straight line. I really enjoyed driving it on the road, but never took it near a track.'

Frank's Porsche obsession inevitably meant contact with his local independent Porsche specialist, PIE Performance in Brent Eleigh, near Sudbury in Suffolk. And so it was to Chris and John Lansbury he turned when it was time to dispose of the 968 Club Sport and later the 928S.

'After owning the Club Sport for three years I decided to move it on for a couple of reasons. Firstly, my biggest expenditure on the car was for new batteries – they kept going terminally flat through lack of use. And I was approaching retirement and thought that a car I wasn't using was perhaps too much of a luxury. So I approached Chris to see if we could do a deal, which of course we could. By now Club Sport values were starting to accelerate, so I even made a modest profit.'

'Much as I loved the 928,' sighs Frank, 'it had reached the point where it was going to become expensive to maintain. Plus, in my head I thought I should downsize my fleet. When I mentioned to John that I was considering selling the 928 he quickly offered me a trade-in against a 2003 Boxster 2.7 with about 82,000 on the clock – so much for downsizing!

The sales of the 928S and the Club Sport had reduced Frank's fleet to just a pair of Porsches – the long-serving 924 and newly acquired Boxster – but again the downsizing was to be short-lived. 'I chanced upon Charlie Abbott who used to work for Paul Stephens but is now running William Francis Specialist Car Storage and Sales, in Woolpit [Suffolk]. He was selling a 944 S2 that looked beautiful in a sort of ice blue/silver colour: once again it was a decision of the heart rather than the head...

Frank's 924, with Boxster just reversing into the foreground. Frank confesses to using the 924 for just the occasional joyride, but the front-engined, rear-drive layout convinced him to buy a 968 Club Sport



“ Much as I loved the 928, it had reached the point where it was going to get expensive ”



Above: Frank at the wheel of his Boxster, which he reckons is perfect for the roads in and around his rural Suffolk location. Interior of 924 is in sound condition



HISTORY
Frank's Porsche duo featured here offers a look at Porsche's entry model line-up separated by 20-years and vastly differing concepts. The 924, launched in 1976, was borne out of VW's stillborn sports car project and was forever tainted with that association, but was a huge success none the less. The Boxster, launched in 1996, into a global boom, was just what Porsche needed at the time and, like the 924, was a massive success story. They couldn't be more different in character, but each played a pivotal role in Porsche's fortunes.

I paid market price for a car in this condition, but maybe I should have thought harder about what that condition really was when it was being sold pretty much 'as is'.

'The car had a cracked dash – as so many 944s do – and as my first priority I managed to find a tidy replacement on eBay. I asked PIE to fit it and to have a good look around the car to see what else might need to be done. When Chris called me over to the ramp to have a look underneath the car I could hear him tutting from several feet away...

'The car needs sills, front and rear quarter panels, and a bunch of mechanical work. That's what happens when you let your heart make purchasing decisions for you! But I've already bought all the repair panels and the 944 is sitting at the bodyshop across the yard from PIE, waiting for them to have the time to start working on it. I'm consoling myself with the thought that because values of 944s have been rising quite rapidly, I'll pretty much have broken even by the time the work has been completed.'

Meanwhile Frank is relishing using his

Boxster as his everyday wheels: we went out for a ride with him on the Suffolk lanes near his home, and can confirm that he drives it in precisely the manner that Porsche intended. When we comment that the chassis seems in particularly rude health, Frank tells us that one of the first things he did after buying the mid-engined roadster was to have its

a pair of 1:43 scale models of an original 911 and a 991 mounted on the same plinth, and it appears as if the model-makers got the scale wrong on the older car.'

One of the regular journeys Frank makes in the Boxster is down to PIE. Not because there's anything wrong with the car, but because he now has a job there. 'When I told John I was retiring he was quick to ask

“ Frank is relishing using his Boxster as his everyday wheels ”

suspension fully polybushed. Other than that, though, it's standard.

'It's got more than enough performance for today's roads and traffic conditions,' Frank insists, 'and it's a nice size for the lanes around here – mind you, the 924 is even better in that respect. So-called small modern cars look enormous alongside those two, and a 991 is a leviathan. I've got

if I'd consider working there doing some office admin. Initially it was for one day a week, and then two. Now I'm down there four days a week looking after the office and allowing Chris to get on doing what he enjoys the most – working on the cars. And for me it's like a dream job, being surrounded every day by an ever-changing collection of fabulous Porsches.' **PW**



Left: The 924 has been very reliable, although Frank concedes that it could do with a major service. Framed timeline of Frank's front-engined machines, starting with the 928, 968 and 924. He just needs to add the 944



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Silver with black leather
48,000 miles.....**£34,000**



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Basalt black with black leather
60,000 miles.....**£33,000**



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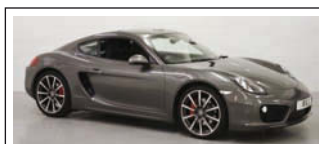
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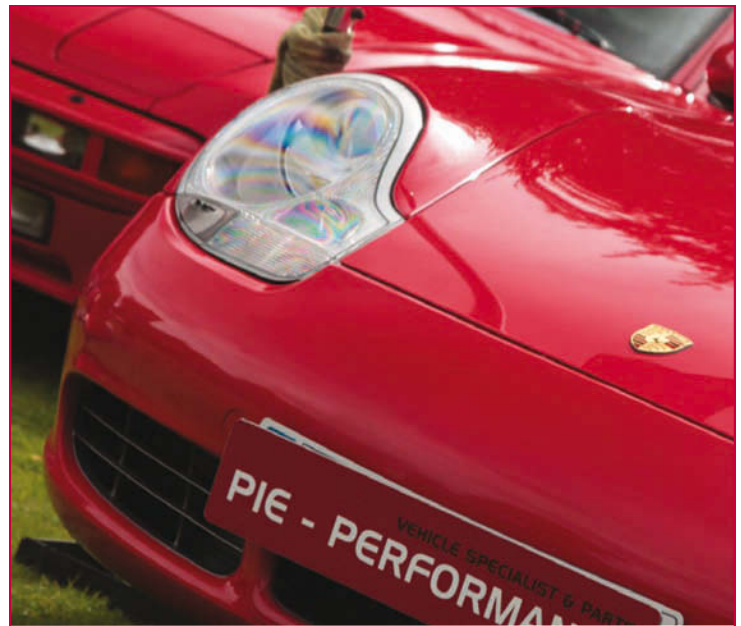
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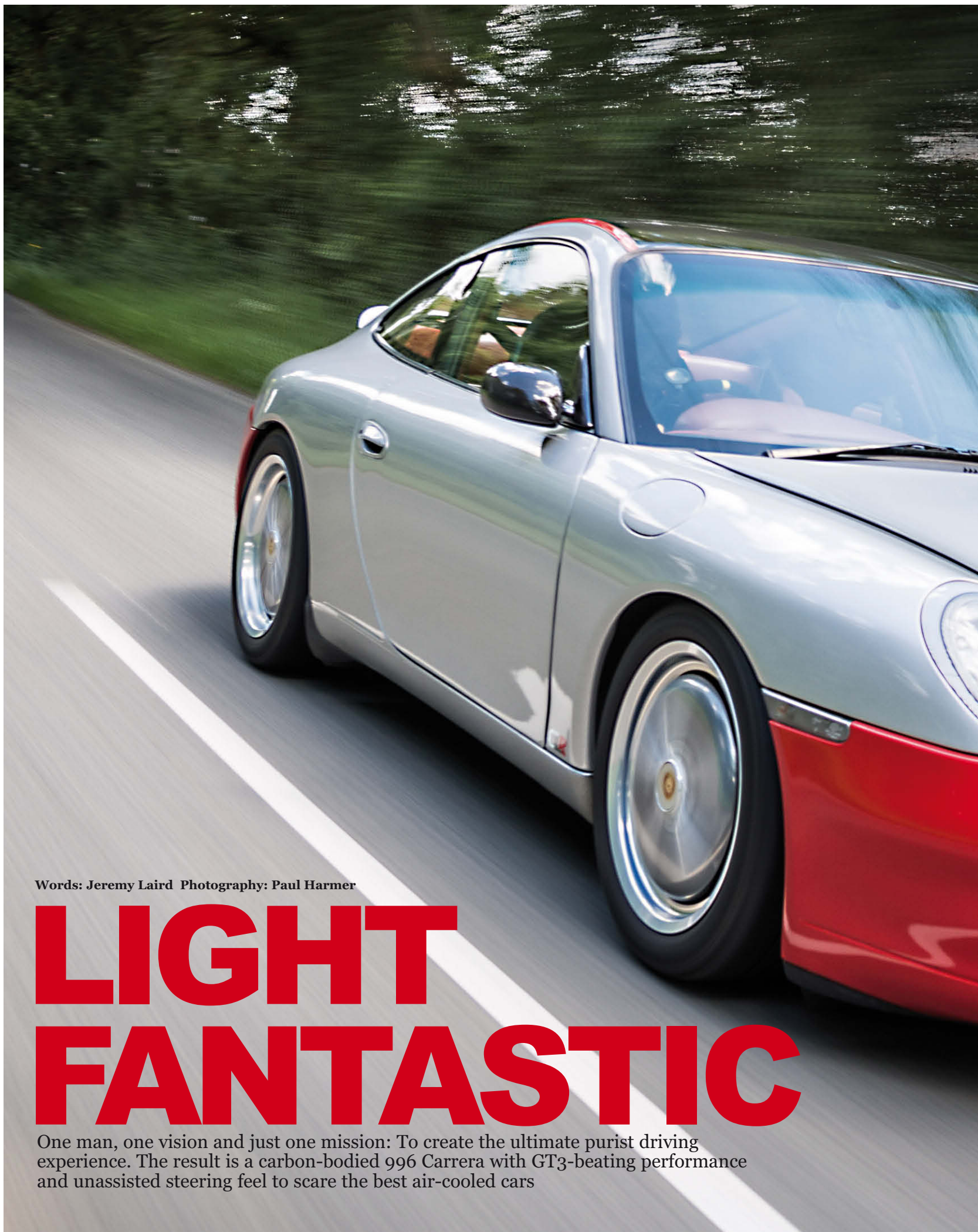


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LIGHT FANTASTIC

One man, one vision and just one mission: To create the ultimate purist driving experience. The result is a carbon-bodied 996 Carrera with GT3-beating performance and unassisted steering feel to scare the best air-cooled cars

Absorb the images on these pages. Then consider the following factoids. You're looking at a 996 Carrera with over £100,000 of investment under its forged Fuchs wheels and untold hours in the making. It's the singular vision of one man. And it doesn't just demand a fundamental recalibration of the 996's position in the all-time 911 pecking order. It might just reboot your reckoning of what's really important in a driver's car.

"The original 1967 911 R and its slightly later ST sibling are great examples of trimming the fat and focusing on purist perfection," explains Richard Beaumont, the man behind this most focused of 996s. "But the modern reinterpretations like the new 911 R are a bit gimmicky by comparison. I wanted to create something that brings back the magic of those early cars."

Basing that pursuit for the ultimate in

purism upon the humble 996 Carrera is certainly brave. Some would say borderline bonkers. But as commercial aircraft engineer and former army flight technician Beaumont would have it, the 996 isn't just misunderstood. It's up there with the very best 911s ever, an unrivalled combination of modern engineering and analogue transparency. How do you like them apples, air-cooled aficionados?

Beaumont doesn't put it quite like that, of course. Unassuming to a fault, especially for someone so technically astute, what comes across more than anything is his love for the 996. If you hadn't already warmed to what was until very recently the least loved 911, a few minutes with Beaumont will almost certainly win you round.

"Peak automotive engineering was around the mid '90s to early '00s," Beaumont reckons. "Chassis development and reliability were quite advanced, but without the nannyish nonsense and

interference systems that strangle contemporary cars. The creep really started towards the end of the 996.1 series with its E-gas throttle implementation. If such systems were isolated, it wouldn't be a concern. But they are so tightly integrated, peeling back the layers becomes ever trickier."

Ultimately, the story here isn't a Top Trumps-style quest for the identity of the best 911 ever. Instead, this very special 996 is a lesson in what's possible when a talented man has a clear vision and sees it through. It's also a timely reminder of what makes a car truly exciting. We give you the 996 'CLR' or Carrera Lightweight Racing.

It's not a numbers car, of course, this hyper-honed 996. But a few figures are very hard to ignore. For starters there's that £100,000-plus investment, swiftly followed by the minor matter of 260kg's worth of weight loss. The latter is the key contributor to both a power-to-weight ratio in excess of





Why choose a 996 as a basis for a lightweight build? Because it's the best of the modern generation 911s for the job, when the 911 was still largely 'mechanical' in terms of engineering, reckons the CLR's creator, Richard Beaumont

Surprisingly, perhaps, the 996 still has most of its interior, making it pretty comfortable for such a lightweight. Carbon doors are incredibly light

300hp per tonne and what Beaumont reckons is GT3-beating and sub-four-seconds-to-60mph acceleration. For context, the legendary 996 Turbo clocks in around 270hp per tonne.

It's within the fine details, however, that the true character of the car is encoded. There's so much to process, doing justice to the CLR is almost impossible. But try the following highlights for starters. Beaumont designed and fabricated all new suspension arms including modified pick up points and composed of 230 parts, engineered an unassisted steering solution, commissioned a bespoke exhaust that very possibly sets a new record for lightness in a 996 and replaced much of the bodywork with custom-commissioned carbon-fibre panels.

It's worth repeating part of that. Every single suspension arm has been replaced by

a bespoke item of Beaumont's own design. As for why, over to Beaumont. "I've always believed that wheel spacers are a compromise. So designing a completely new suspension system from scratch to push the front hub out 26mm and the rears 18mm was

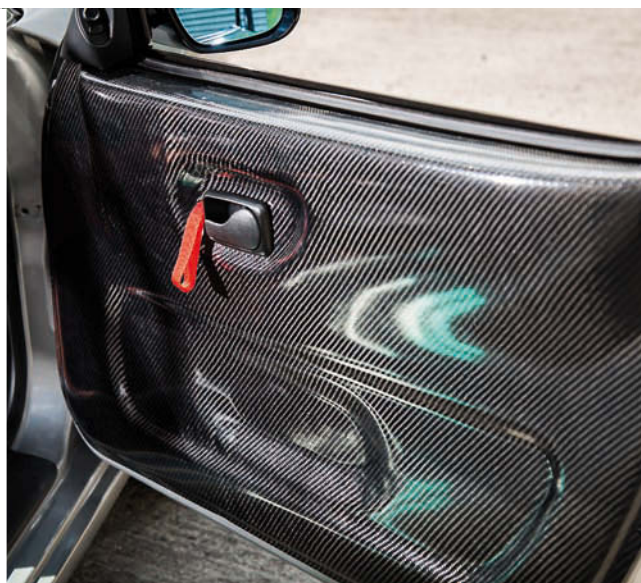
car tuning. Remarkable. Indeed, a passing glimpse of the multiple engineering drawings he created when designing the CLR's monoball suspension top mounts, alone, is enough to give the workshy motoring scribe composing this very piece the chills.

“ Beaumont designed and fabricated all new suspension arms ”

the only way to get to where I wanted to be. Many of the components were redesigned multiple times to get right."

Remember, this is one man working on his own and without any previous track record in

The bodywork is another major feature. "I have experience doing complex sheet metal repairs with aircraft," Beaumont says, "so the roof was a relatively straight forward job." Easy for him to say. But not many would want





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to set about a 996 body with a drill, removing all the spot welds. Whatever, out came the sunroof panel, then the steel roof itself, along with 18.7kg where it really counts. In went a carbon panel clocking in at just 2.8kg.

The front wings, bonnet, rear ducktail, door skins and door cards are also carbon-fibre and all contribute to that stellar 260kg weight reduction. But here's the kicker. The CLR isn't a stripped-out track rat. Many of the original interior panels remain. Those that have been removed were replaced by carefully fitted and finished lightweight items, such as Alcantara coverings for the roof beams. It's a simple touch, that kind of thing, but it makes a huge difference to the cabin ambience.

If the litany of bespoke engineering is impressive, Beaumont has also chosen from the cream of the aftermarket crop in terms of off-the-shelf and custom tuning parts from

some of the best known brands. Among the showpiece items are the suspension and exhaust. Ohlins' R&T coilover kit is a familiar and increasingly popular solution thanks to its ability to add both focus and compliance to a Porsche's chassis. But even on repeat viewing, the sight of those lush damper bodies tucked under the wheel arches is a delight, not to mention sympathetic to the quality of Beaumont's bespoke work.

"Ohlins' R&T is a great road / track compromise," says Beaumont, "though more geared towards road use. A 15 per cent spring rate increase would push the compromise a little towards track work. I was considering custom valving and springs. But with the finished car weighing in 18 per cent lighter, the characteristics I was aiming for are effectively achieved with the stock R&T setup. There's also enough adjustability in the

dampers to fine tune to personal preference.

Then there's the ultra-light exhaust with custom autoclaved carbon tips. "Initially I lined up a company to make a titanium system. Though light and aurally distinctive, titanium is prone to cracking and doesn't like extreme heat or repetitive heat cycles. So, I chose Inconel625, a material I'm familiar with from aircraft engine components where the lowest CTE (Coefficient of Thermal Expansion) is required. The only other environment I know of that uses Inconel625 is F1 exhausts. It's as light as titanium but extremely strong and resistant to corrosion and cracking."

The downside is that Inconel625 is challenging to work with, requiring tube sections built up from flat sheets. Only a very handful of outfits are up to the task. In the end, it was Kline Innovation in Romania who delivered a system that's fully 20.8kg lighter



than a standard 996 cat-back exhaust. That's a hefty weight saving and ideally located in a rear-engine car.

Elsewhere, Beaumont has used a ZF Performance clutch, AASCO lightweight flywheel, Fuchs RSR forged wheels, Odyssey Extreme PC680 battery and BMC engine air filter, among a long list of further tasty components. Speaking of the engine, that's had a full rebuild at Hartech, including a conversion to closed-deck cylinders. Along with that exhaust, a tweaked throttle body and a remap, Beaumont reckons on a modest uptick in output to around 330hp from the 300hp of the stock 3.4-litre M96 motor. Enough, in other words, to hit that 300hp-per-tonne target in a sub-1100kg car.

Comprehensive stuff, but little more than a highly abridged précis of the multi-page spreadsheet that is the CLR's extraordinary

spec list. It also just leaves the minor matter of how the car drives. Before you even slip aboard, prepare to be stunned by the featherweight feel of the CLR's door. 996 doors aren't exactly monsters as standard, but the CLR's are actually silly. With the windows up, you need to be quite deliberate to overcome the air pressure and achieve full closure. The door is so light, it wants to bounce off the seals.

Safely aboard, you're sitting snug in 996 GT3-style carbon buckets supplied by none other than Design 911. Of course, Beaumont has had custom frames and sliders fabricated to ensure a sufficiently low seating position and plenty of fore and aft travel. Yup, it's that attention to detail again.

Ignite the M96 motor and you'd never know it wasn't far off standard tune. You'd struggle to connect it with the negative vibes the

engine type often inspires on internet forums, either. With the lightweight flywheel, the exotic exhaust and, of course, a cable throttle (the base car is an early 996.1 Carrera), the lack of inertia and lag is immediately apparent. The same goes for a soundtrack. It's musical, sophisticated and expensive. And it's all that before you've even moved off.

When that happens, it's the unassisted steering that initially dominates proceedings. It fires a massive braindump of information at you from the first turn of the wheels. For anyone not accustomed to unassisted steering, it'll be a significant culture shock, especially when delivered in the incongruous confines of a 996 cabin. But if you're even a little bit open minded, it's also the CLR's stand-out feature.

Thanks to the work Beaumont has put into reducing unsprung mass and optimising the

We've never driven a 996 like this, not even a 996 GT3. It is a true one-off with a range of responses that take some time to sink in



geometry, not to mention the overall chassis weight reduction, the result is an unassisted system that more than bares comparison with that of any aircooled 911 you care to mention. In reality, it's as good as any and better than most. On the move it's deliciously weighted 95 per cent of the time and the feedback levels are off the chart.

The one potential issue involves tight second gear corners and hairpins where the effort level spikes. Whether it's too much is a subjective call. In a 3.2 Carrera with the wider wheel option, it would be unremarkable. But our take is that it's absolutely central to the man-machine interface that makes the CLR so special. If it is too much for you, the rest of the car probably won't appeal in any case.

Once you've recalibrated mind and torso to the steering, you can begin to soak up the rest of the dynamic package. Take the engine and the performance it delivers. Firstly, it's properly quick, the CLR. Subjectively, it's quick enough that you'd want to drive it back to back with a 996 GT3 to know which felt more rapid, though the CLR undoubtedly has less inertia at low revs. It positively hovers up the Tarmac in true GT3 style towards the

top of the rev counter, too.

You'd have a very hard time picking between this car and a GT3 for soundtrack and throttle response as well. The iconic Mezger engine has more grit, gravel and growl. But the CLR counters with sweeter, more orchestral acoustics. The point is that it sounds at least as special as a GT3. It's different, not better or worse, than even the hallowed Mezger. Thanks to the lightweight flywheel, delightful rev-matched downshifts

valving absolutely delivers. The combination of compliance and control is simply preposterous when compared to something like the relatively unyielding M030 factory damper option for the 996.

What Ohlins can't take full credit for is the totally viceless and sorted balance Beaumont has achieved. It's so good, it's probably beyond our pay grade to fully assess the detailed balance or the CLR's near-limit behaviour, especially on public roads. It's

Whereas modern GT Porsches are all about grip, grip, grip, Richard's car is narrow enough and light enough on its Michelins to move around in an old-school 911 sort of way. And then there is the steering in all its unassisted glory

“ It's the way the CLR moves down the road that is most impressive ”

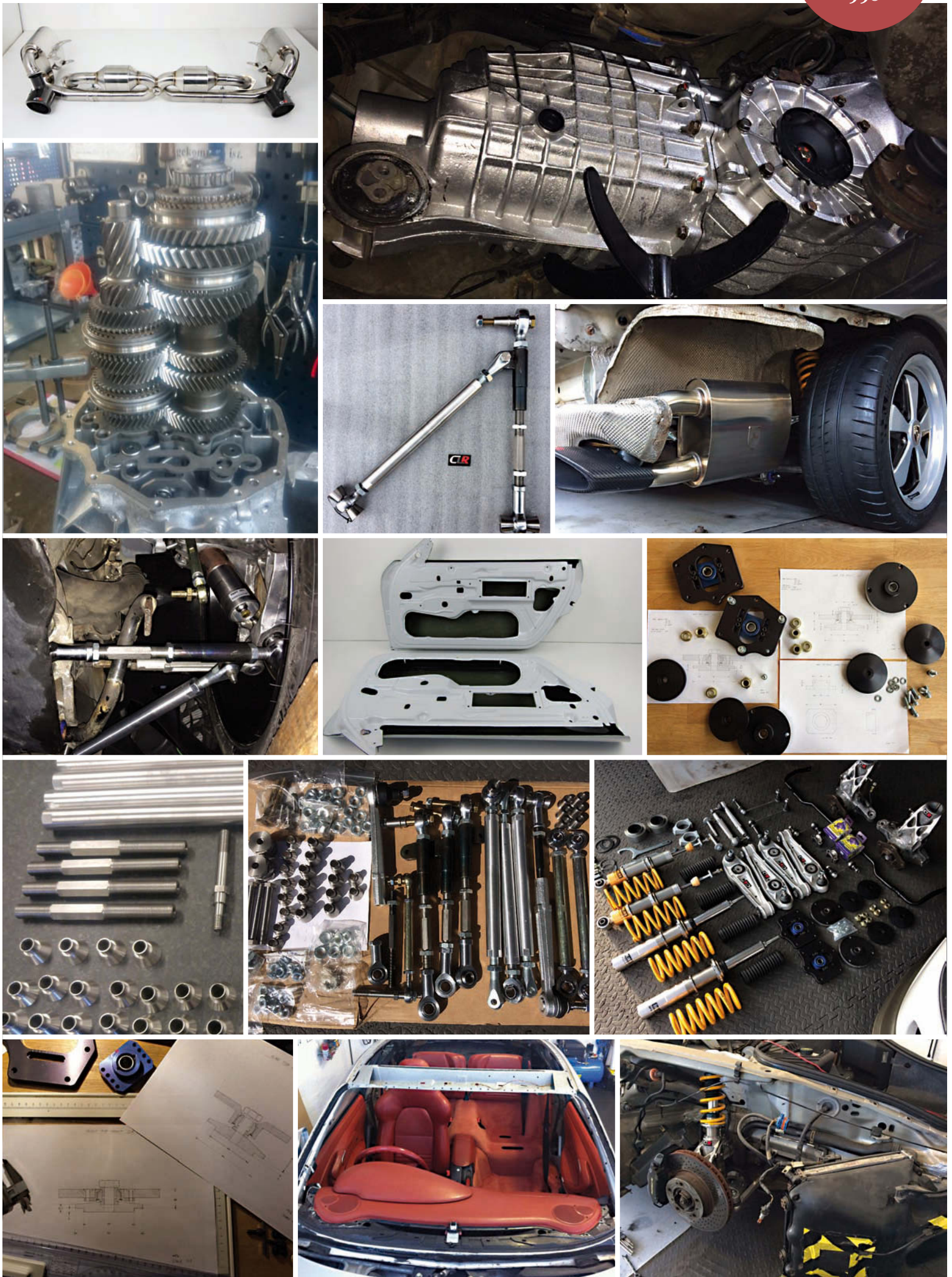
are a mere throttle tickle away, too.

But it's the way the CLR moves down the road that is probably most impressive. The Ohlins dampers are, as ever, a revelation. For sure, there are more exotic damping solutions available, including from Ohlins itself. But the R&T kit and its clever DFV

tricky, for instance, to immediately unpick exactly what the chassis is doing in low speed corners thanks to the unusual sensation of unassisted steering loading up in a 996 chassis. What we can say is that grip levels are very high, as is the flow rate of information. 996s are inherently analogue

Right: Where to start? Richard fabricated all his own suspension components, including the hubs, so that he wouldn't have to use wheel spacers. The exhaust is a custom one-off and weighs 20.8kg less than the standard system. Roof panel was removed and replaced with carbon, as were bonnet, wings and doors







Everything about this car is different and we rather like the colour combo, too. The red aprons front and rear are reminiscent of Porsche prototype racers of the late '60s

and transparent. The CLR only magnifies those characteristics.

Still, if anything captures the full breadth of the CLR's capabilities, it's the fact that it delivers not only when you're driving with your pants on fire in full-on hooligan mode but also when aiming for that intangible flow at six to seven tenths or so. When you're indulging in the former, the CLR is a riot for the senses – the noise, the sheer mechanical chutzpah of the steering, the electrifying throttle response, the clarity and transparency of the chassis and primary controls. But go for the flow and it's remarkably cool thanks to the viceless setup, those exceptionally compliant Ohlins dampers and the broader proportionality and polish of the whole package.

The one exception to all that is a super-aggressive limited-slip differential that's arguably a little at odds with that aforementioned overall polish, though Beaumont says the diff's specification is more of an initial flutter than a final doubling down. That said, thanks to a cabin that retains a full set of panels plus an exhaust that's vocal but far from deafening, the CLR is relatively refined when not running on full reheat, especially given the hard-core remit.

Put all that together and you have a driver's car that's as layered, sophisticated, engaging and exciting as just about any 911 at any money. That's not to say it's necessarily better than any given air-cooled icon. Ranking 911s is ultimately an exercise in subjectivity. But to drive the CLR is to understand that it and in turn the core of the plain 996 Carrera certainly deserves to be part of the conversation.

will I be selling parts and so on. It was only then that I thought this may be a way of leaving my current job and doing something I really enjoy. In some way I owe it to those guys that the car has evolved into being what it is today."

What's more, Beaumont reckons he can apply the same principles to the closely-related 997 platform. He has a highly modified

“ This is a driver's car that's layered, sophisticated and exciting ”

The final twist in this tale is that you might, just might, be able to buy a CLR for yourself. Beaumont is currently considering the CLR for commercial availability.

"My objective from the start was to make the perfect 911 for me," he says. "I never thought about making a commercial product. As I got about halfway through the project people started asking questions. Can I supply aspects and parts of the CLR,

997.1 GT3 RS of his own. Food for thought if you like the concept but prefer the 997 as a starting point.

There's no firm pricing. A customer CLR wouldn't be cheap. For some it will be a leap too far compared to the obvious GT3 options. But for those willing to relinquish their preconceptions, to get past the fact that the CLR is based on a 'mere' 996 Carrera, something very special awaits. **PW**

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Right: The creator of this extraordinary 996: Richard Beaumont. Such is the level of interest in his creation, it might just be the start of a commercial enterprise





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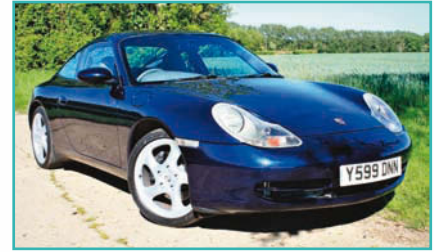
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2003 PORSCHE
996 3.6 C2 MANUAL COUPE £19,995

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AC/DC/SC

Take one unsuspecting 911SC, replace its flat-six engine with an electric motor and, hey presto, the world whizzes by a whole lot faster. Future shock: as ardent petrolheads, we'd better get used to this!

Words: Johnny Tipler Photography: Antony Fraser

This is totally uncanny: an air-cooled Porsche 911 in motion, making no noise. Where's that flat-six rasp? Been replaced by a fizzing electric motor! We surge effortlessly away down the street, accelerating more swiftly and with less drama than the petrol-powered donor car – which all comes as a bit of a shock. Ostensibly it's still an SC: everything about it says 911 – till it's in motion, or you lift the lids, revealing batteries up front and two in-line electric motors in the back. Welcome to the silent world of clean energy.

There's a curious paradox, in that one perceives the electric car movement to be an urban-focussed scenario, yet, right now, we couldn't be further from a major conurbation. We're visiting Richard Morgan – Moggie to his mates – at his mid-Wales-based Electric Classic Cars workshops, located in the lush hillsides surrounding provincial Llanidloes. Every market town seems to be 14 miles from the next one, a

but somebody made me an offer I couldn't refuse and I sold it, and then built another one, bigger and better, and again, somebody bought that, and I thought, "there might be a business in this," and I haven't looked back: now, I only go to a petrol station for milk or to check the tyres.'

Appreciating the benefits of alternative energy requires a leap of faith. 'When you put your foot down in an electric car for the first time you go, "bloody hell, all that power with no changing gear, that was a surprise;" and the other noticeable thing is that when you're cruising silently along on a beautiful sunny day in the countryside you can even hear the birds singing! Or you can just put your foot down and go nuts.' The other fundamental difference is power delivery: 'With a petrol engine max power is top-end, from 4000rpm to 6000rpm, whereas an electric motor provides instant torque from zero rpm, so the power band is from zero to 4000rpm.'

Richard's first effort, created in 2015, was a fully restored Beetle with a 22kWh battery



“ Appreciating the benefits of alternative power is a leap of faith ”

legacy of Roman times, Richard explains, 'when 14 miles was a day's march for the legionnaire foot soldiers.' Hence the Welsh Marches, maybe.

Are friends electric? In Richard's case, certainly, though he has, till recently, been a devout petrolhead, running Beetles since he was 17, and then competing in the British Historic Rally Championship from 2005 in a Porsche 914. 'I rallied that for 10 years all over the UK and Europe, so my background is setting up and running my own rally car as well as maintaining classic Porsches and VWs. I've had classic cars all my life, and I've never owned a car that's younger than me – all pre-1974.' But how come he's now gone electric? 'During the rallying phase our paddock runaround was an electric motorbike, and that was amazingly potent with just a tiny motor – wheelies at the drop of a hat! When I'd finished rallying a couple of years ago, it prompted me to put an electric motor in one of my Beetles. I wasn't expecting to sell it,

pack, giving 100 miles range. Today, there are currently six cars in his workshops, including two Fiat 500s, a BMW CSI and a 2002, a '65 Beetle, a 1980 Range Rover and an E-type Jaguar. While this 911SC has a 54 kilowatt-hours battery pack, the Range Rover is going to have 80kWh, literally a Tesla Model S battery pack, but ironically it will end up lighter than the car that the batteries come from because modern cars are relatively heavy. Richard speaks of a year's wait if you fancy rocking down to his personal Electric Avenue. He has just one workmate – Peter Cotterell – but two more technicians are set to join him soon.

Richard sources cars for some customers, while others bring along their donor car. In this case the 911SC belongs to a Lancashire client for whom Richard helped choose the car and carried out a bodywork restoration as well as overhauling the running gear. It's a pretty car, understated, devoid of whaletail – and





Power up-front! Tesla lithium-ion battery packs are distributed equally between the front compartment and rear seat space

exhaust pipe, obviously – and badged, tongue-in-cheek, as a 911 'E'. The polished stainless-steel Targa hoop and Porsche script instead of rear reflector strip also define it as something special. Bereft of its flat-six engine, there's a void in the engine bay that makes the motors seem quite diminutive. The twin HPEVS (Hi-Performance Electric Vehicle Systems) electric motors – coupled in-line – are attached to the existing 915 gearbox via an adapter plate, just like the original 911 engine, and a mount on the rear of the electric motor connects it to the 911 engine's original mounting points. The air-cooled motors are actuated via the accelerator pedal, as Richard says, 'we either replace the pedal with a modern unit that has a 0-5v output on it, or we install a TPS (Throttle Position Sensor) at the end of the throttle cable as we have done on this SC, which also gives us the 0-5v output that we need to feed into the controllers.' He's also added a few other subtle mods: 'I've attached the J-West shifter and the super lightweight flywheel – no starter

It's go-juice, but just a different sort of go-juice! Appropriately the charging socket lives where the petrol filler once did, under the hinged filler flap

ring – with sports clutch to handle the torque.'

The Tesla lithium-ion battery packs are distributed equally between the front compartment and the rear seat space, although the rear battery pack can also be installed either side of the motor, if desired, so the back seats can still be used. Up front they're mounted in cages, which are bolted to mounts welded to the inner walls of the front compartment. The batteries themselves are secured by bolts, topped by a studded panel for safety and neatness. Distilled water is long gone. Think laptop batteries. In fact, the drivetrain is maintenance free, as the motor is a 3-phase brushless AC unit, so there aren't any brushes to wear out.

The F1-style KERS (kinetic energy recovery system) regenerative braking effect of the motor assists the rear brakes, but given the additional weight of the batteries, the front brakes are upgraded to 'Carbon 12' six-pot CNC-machined aluminium calipers allied to 24mm discs. 'There's also a brake pressure sensor in the brake line,' Richard explains,

'which informs the controller if the brakes are being applied, and by how much, so that the controller can apply the proportionate amount of regenerative braking to assist the brakes. As well as stopping the car on a dime, it's simultaneously feeding energy back into the battery system each time you brake, which helps extend the range.' The weight transference due to having a lightweight motor at the back and heavier batteries up front has meant making some adjustments to tracking and camber settings, so there's more toe-in and a camber increase on the front, and slightly less at the rear. Richard is confident the front anti-roll bar is stiff enough, so that stays the same.

Wheels are 15in Braids, accurate Fuchs replicas, 7in front and 9in rear, wearing Pirelli Cinturatos with characteristically tall sidewalls and a classic tread pattern, 215/60-15 on the back and 195/70-15 on the front. They suit the car's looks as well as its behaviour, they give an agreeable ride and grip well on the twists and turns, as well as inspiring





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AC/DC

Forget the heavy metal for a moment, here's some real headbanging material: A/C alternating current induction drive motors are the norm for high-performance pure electric vehicles, as fitted in Tesla Model S and Roadster, while D/C brushless drive applications dominate the petrol-hybrid and plug-in hybrid markets. As hybrids become more electrically intensive and performance levels increase, it's probable that A/C induction and D/C brushless applications will be amalgamated.

The great distance and charging conundrum. Creator, Richard Morgan, reckons up to 200-miles if driven carefully and 150-miles driven fast. Charging depends on type of charger and how flat your battery pack is. A rapid charger can deliver an 80% charge in 20-mins. Worst is a good old three-pin plug from the mains, which can take 22hrs!

confidence on A-road bends.

Headlights are JW Speaker items, containing a clear Italian lens and a second bulb for sidelights. If ever a car deserved upgraded headlamps it's the 911, and as Richard attests, 'these give the best spread of light and are also the best looking in the car.' So, er, electric lights orchestrated, then.

In the SC Targa cockpit the obvious differences from standard are the Momo Prototipo wheel, Boxster seats (replacing worn 911 ones), rear seats replaced by battery compartment, and the amps gauge. An electric power steering motor has been fitted, so twirling the wheel – once the power's turned on – is easy. And there's much less to go wrong than with a fluid system. It's supplied by Dutch firm EZ Electric Power Steering whom we featured in *911&PW* three

switches because we didn't want to spoil the dashboard with modern ones, but there's an extra one for switching between Eco mode and Power mode. Running in Eco provides the maximum range, triggering lots of regenerative braking effect when you're going downhill and the engine braking is putting power back into the battery. And then Power mode is all guns blazing. Apart from that the only other difference on the dashboard, if you discount the Porsche radio/satnav, is the battery monitor, which tells you how charged the batteries are. Treat it as the fuel gauge if you like.'

As we leave town it's reading 96.5 percent, and Richard estimates 1% equals 2 miles. So what mileage does a secure journey constitute? 'Around 200 miles, though again, it all depends on how you are driving; if you

whatever, and it shows you where all the charging sites are along the way.' I've since downloaded it and, sure enough, there seem to be dozens of locations near my home in North Norfolk – way more than petrol stations – were I looking to recharge an electric vehicle. In the lakeside visitor centre where we stop for lunch, Richard plugs into a designated supply point to demonstrate the charging procedure, attracting the attention of a trio of women hikers who compliment us on our environmental preference: we are in Electric Ladyland, apparently.

But how long does it actually take to charge up? 'That depends on how empty your battery pack is,' he explains. 'And it can take anywhere from 20 minutes to 10 hours, depending on the power of the charging point that you're using. A three-pin plug – which is a worst-case scenario – can only give you a constant 10 amps of electricity without the cable melting, and 10 amps is about 2.4kw, which translates as roughly 22.5 hours to charge up from empty. Normally, people use a 7kw Type 2 wall pod charger, which would take 7.7 hours – effectively overnight. If you use the rapid charger, which is what most motorway service stations provide, as well as locations like the Channel Tunnel, then it takes about 20 minutes to get up to 80% capacity. In Europe there's pretty much international coverage, and with Tesla taking off there's a lot more charging points throughout the continent now.' For an electric newbie, I now visualise a journey punctuated by more 'comfort stops' than perhaps I'd

“ The only other difference on the dashboard, is the battery monitor ”

years ago. It's speed and torque sensitive, so going reasonably quickly there's no effect, but as speed reduces, and most especially when I'm performing innumerable turnarounds for the benefit of my snapping colleague, it gives much more assistance. Richard's also fitted a heater from the all-electric Nissan Leaf, which provides an impressive blast of instant heat. 'We've re-used the existing

drive fast it could be 150 miles; drive normally and you'll get 200 miles, and I'm pretty sure if you drive like Miss Daisy you'll get closer to 220.' Fair enough, but the big question for me is, when and where am I going to be able to recharge those batteries? 'You download an app on your phone called Zap Map, which acts like a satnav for electric cars, so you plumb in your destination – Cardiff, Bristol,



Richard Morgan is sold on electro power. "I haven't been to the fuel station for months," he reckons. The 911 is a customer car. Beetle lurking in garage is Richard's. Other conversions include a Jaguar E-type, two Fiat 500s and a Range Rover

normally make, but I can see it is workable because I can plug in, go for a coffee and come back and it's charged. The SC uses the same charging points as any other electric car, such as the Nissan Leaf, and its on-board socket is mounted – where else – beneath the fuel cap. The cables simply live in a snare-drum bag and marry up easily with the universal Type 2 Mennekes charging points. As for running costs, here's Richard again: 'assuming a tariff of 1kwh equals 10p (to keep the maths simple), that's £5.40 to charge up and get you 200 miles. But if you've got solar panels like me you can recharge for next to nothing – that's when the sun's shining in Wales, of course!' There are other benefits such as concessions in congestion zones. See how the concept trickles up on you?

It does call for a different technique to operate, more akin to driving an automatic, so Richard demonstrates. First thing I notice is how swift it is out on the open road. As we're going along, the speedo reads 60mph, the rev

counter 1500rpm; but what does that tell us? 'I've built an interface isolator that takes the revs of the electric motor and converts it to the signal required for the tachometer on a Porsche, so essentially this rev counter is giving us the revs of the actual motor and, coincidentally, the red line on this motor is 6500rpm, same as the Porsche gauge.' Out on the khaki hills we pause by a reservoir dam and remove the Targa lid, which now stows above the engine along with the connector cable, as there's plenty of space in the compartment now. Electric windows down, (classic) three-quarter windows open, we swap over. I turn on the power switch to the right of the steering wheel; clutch in, pop into 1st gear, foot off clutch – you don't need to find the biting point with an electric car – then press the accelerator pedal. We're off, swift acceleration, moderating for the bends, where it handles like a 911 crossed with a 914 due to the weight being biased more towards the nose, jinking around lambs like a fairground

dodgem. The electric motor is mated to the standard 915 gearbox, and when shifting gears on the move I do dip the clutch, though when stationary it's foot off the clutch pedal. And when parking or manoeuvring from a standstill, if the motor is not turning, I don't need to dip the clutch for 1st and reverse. It is uncannily straightforward once I've got my head around the methodology. When the car's in motion I spend much of the time in 2nd and 3rd gears as 1st seems redundant, while on the highway 4th and 5th soon come into play. Indeed, where I'd normally be swapping from 2nd to 3rd and 4th on this twisty hillroad with a petrol engine, I just stay in 3rd. Gradients are as nothing to the electric 911. Then, when I approach a junction I go into auto mode: I don't touch the clutch, just press the brake pedal and the car comes to a stop; then accelerate away again. Simple!

Alternatively, I can merely leave it in 4th all the time and treat it like an automatic. The last electric car I drove was the Ruf Greenster, a

Battery monitor gauge lets you know what's left in the tank, so to speak





It is reasonable to ask how much a conversion like this would cost and the answer is about £35,000 – not including donor car. Expensive, but what cost the planet, some might ask... Below: There's more batteries where the rear seats once were, so don't plan on packing much luggage. Mind you, you might get a few bits and pieces under the engine cover...

CONTACT

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997 Cabriolet-based product emanating from the fertile mind of 911 revisionist extraordinaire Alois Ruf, and that simply had two modes, forward and reverse. 'I thought about doing the same,' reports Richard, 'but I felt that you would lose too much of the classic experience of moving up and down through the gears.' This SC feels lots faster and livelier than the Greenster, though, as indeed does Richard's 1303 Beetle in which he shanghaies me later for a manic midnight burn-up, and that is indecently quick for a car that presents as a VW: 'the Bug does 0-to-60 in about 6 seconds,' he says, and I don't doubt him. 'The SC is about 7 seconds. But both feel lightning-fast compared with their piston-engined siblings because of the instant off-the-line acceleration, which is due to the max torque at zero rpm that's available with the electric motor. If you want more aggressive throttle response or more regenerative braking effect we can re-programme it within five minutes.' On the main road the motor is drawing 120 amps to run at 70mph, and when I brake the amps

go into positive, putting 35 amps of regenerated energy back into the batteries. Sounds of silence? It is way quieter than an infernal combustion engine, but there's still plenty of electric whirring, similar to a London underground train pulling out of a station. We swish up the Welsh valleys, increasingly remote, and for much of the time we're gliding along it's so quiet all I can hear is the tyres rolling on Tarmac. Could that tranquility be an issue? A Highland longhorn cow moseys into the road, necessitating an emergency stop, and we halt almost instantaneously, from something like 40mph. I try to figure out people's reactions as we pass by. Do they detect a mysterious lack of engine noise, or do they just love the car? 'Classic car enthusiasts are split,' states Richard; 'some say, "oh, I can't believe you've done that to a classic 911," but the other half think it's amazing that we're second-lifeing classic cars, taking them into the 21st century.'

So what would it cost to have a Porsche turned into an electric bolide? Assuming you

provide or fund the donor car, Richard's prices for the conversion start at £35,000 all in, including parts, labour and VAT, though selling the redundant petrol engine should recoup £5 grand or so. In the case of this SC, the sale of its flat-six financed the restoration and repaint of the bodyshell. Whether you consider that good value depends on your green aspirations, your motoring perspective and prolonging the life of a classic Porsche. Plus the electrifying performance, of course. As Richard sums up, 'the concept is about maintaining the enjoyment of owning a classic car but removing negative aspects like maintenance issues and less desirable mechanical quirks, but adding a huge amount of power, effortless acceleration, zero noise and a great driving experience; put the two together, imagine a 21st century classic car, and you have the best of both worlds.'

Fancy it? I came away convinced I'd glimpsed the future, and that is a surprise. Phil Oakey was right after all. We'll always be together, together in electric dreams! **PW**



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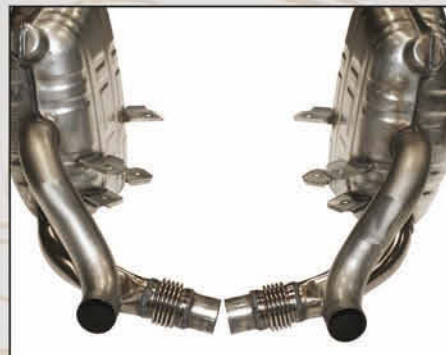
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MASSIVE ATTACK

The turbocharged 934 dominated GT racing in the mid-'70s, and by decade's end its flat-nose 935 sibling was virtually invincible. We're tantalised by their on-track potential

Words: Johnny Tipler
Photography: Antony Fraser





Like a pair of heavyweight boxers, the 934 and 935 we're observing at Abbeville race circuit are palpably mightier than anything else here.

Amongst the effete 964s and 3.2s clustered in the Abbeville paddock, these two veteran prize-fighters look like they've just swaggered in from the ring: bruised, bellicose and dangerous, the 935 especially so with its broken nose and cauliflower ears. They might punch you, just for kicks, so they command respect.

Our normal quickie yardsticks, the nimble RSs, 911ST and 2.0-swb racecar sparkle their way round the track, their eager flat-six sirens wailing. But when the 934 and 935 roar by, be very afraid! The ground shakes. Their gruff, turbo-muted soundtrack tends to belie the fact that these mighty rumblers are some way quicker than their immediate predecessors but, visually, there is no doubting there's a broad margin in their relative speed differentials.

The 934 and 935 were based on the road-going 911 Turbo – now commonly known as the 930 – and spawned in an era of profound change in international sports-GT racing, affected by a combination of rule changes and technical advancement in the shape of aerodynamics and turbochargers. Between 1972 to 1975, Group 5 sportscars and Group 4 GT cars contested the freshly renamed World Championship for Makes, and from 1976 to 1981 the series was open to Group 5 special production cars, including Group 4 GT cars such as the 934 and 935, and they came to dominate the championship. Soon enough, in '76 Porsche produced the mid-engined 936 prototype to run in the World Championship for Sports Cars.

Charming as it is, Abbeville's thirteen tight turns are, frankly, not the perfect environment for unleashing the 600bhp that both these muscular monsters are capable of delivering. However, our patron, Johan Dirickx, will give it his best shot with his

934, as will Pascal Pauwels in his 935 – once he's sorted issues with its 917 brakes. The 934 was recently acquired by the Antwerp-based JFD Collection. Built in 1976, chassis 930 670 0153, engine number 676 2005 type 930/71, proprietor Johan provides the history lesson. 'The first production 3.0-litre Turbos came off the line at the end of 1974 and the first half of 1975, and these are by far the most sought after Turbos, because they were built as lightweights and they had more in common with the 3.0 Carrera RS than the 3.3 Turbos that were introduced in summer 1975 for the 1976 model year.'

That first production year Porsche built just 286 of the 911 (930) Turbos. On the racing scene the old Carrera RSR 3.0 was still competitive, but technology had moved on and Porsche developed the Turbo for racing clients. The 934 became the Group 4 contender, and the 935 was a Group 5 car that the factory initially used itself, and the mid-engined 936 was the Group 6

Based on the road-going 930 Turbo, the 934 was conceived for the Group 4 GT Class in the World Championship for Makes for series production sports and saloon cars from the mid '70s to the early '80s

The 935 was an evolution of the 934, with many teams converting their 934s to 935 spec, with its all-in-one glassfibre front-end and massive rear wings to accommodate wider tyres



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prototype. In 1976, Porsche built thirty-one 934s, with a further 12 for the 1977 model year, mainly for the North American Trans-Am and IMSA series.

The 934 was created on the 930 base car. 'At the time it was officially called the Turbo RSR,' states Johan. 'You had the '74 Martini Turbo Carrera, but the 934 was the only 911 Turbo that was ever called an RSR.' It had a broader track and wider wheels, so riveted-on wheelarch extensions accommodate the vast tyres (325/630 x 16

jetronic injection. As Johan explains, 'when the cars were delivered to clients, the engines were tuned to 485bhp, but by the end of 934 production in 1977 when it was known as the 934/5 and fitted with a Bosch injection pump, output had risen to almost 650bhp.'

It had an illustrious career as a racecar, but the electric windows and un-stripped cabin appear anomalous, if not incongruous. 'As the 934 was a 3.0-litre Turbo, it was penalised with a weight

for DM107.670. However, Carra didn't take delivery of the car, even though the factory had been asked to change its gearbox ratios, and together with an 80% limited slip diff, they remain unchanged today. In April '76 it was then reserved for well-known Swiss driver Claude Haldi, but instead he bought number 930 670 0171, a 934 reserved for Georg Loos. Swings and roundabouts. Never mind, next candidate is Belgian veteran racer Jean Blaton – racing name: "Beurlys" – who was possibly attracted by the yellow Helligelb livery, which was his national racing colour. 'So the chain of ownership reveals it has mostly been in Belgian hands,' Johan tells us. Here's the roll-call: 1976, Jean Blaton; 1977, Pierre Vandermeulen – who leased the car to Jean-Pierre Gaban until 1988; then 1997, Walter Pauwels; 2012, Eric Nijman (NL); 2014, Albrecht von Witzleben (G); 2016, auctioned by Fiskens, and the car then came back to Belgium.' Johan bought the 934 from Fiskens at Retromobile 2016. He's kept tabs on it since the early '90s, and knows it in intimate detail. He had been in negotiations with Walter Pauwels to buy the car, but it was sold to Eric Nijman who commissioned a cosmetic restoration – fortunately without compromising the car's originality. 'This car has never been transformed, as so many of its peers have, into a 935, that it was almost a miracle.

There's no other way to describe it: the 934 is something of an animal on track. With only a four-speed gearbox, and wide ratios, turbo lag is an issue. To get a good corner exit, you need to be on the throttle before the apex and hope you've timed the power delivery just right...

“ The 934 was a race car, but it was possible to make it road legal ”

rear and 265/600 R16s front) and big ventilated 917 brakes. The front bumper was reworked, as the 934 was the first Porsche to use both air and water-cooling; the turbo intercooler was water-cooled, hence two water radiators mounted behind the front spoiler. The cooling fan for the engine was relocated from its traditional vertical position and mounted horizontally on top of the engine like the Group 6 prototypes. The 934 was a single plug engine, and initially used the Turbo's K-

handicap. Its minimum weight was pegged at 1200kg, but when built it actually tipped the scales at 1124.5kg, so that's why Porsche didn't bother to take out the electric windows – which could be seen as a bonus because the driver could easily lower the passenger side window for ventilation. The 934 was indeed a race car, but it was possible to make it road legal and have it road registered.'

This 934 was initially sold to Rome resident Luciano Carra on 3rd March 1976



This 934 engine wears its history proudly, still sporting oil and grime from a competition history that includes three appearances at Le Mans. Power ranged from 485bhp to 650bhp depending on year and spec

Imagine 24hrs in either of these cockpits. Hot, hot, hot, while manhandling the massive front tyres, with unassisted steering and coordinating a merry dance between brake, clutch, accelerator and gearlever. Exhausting!

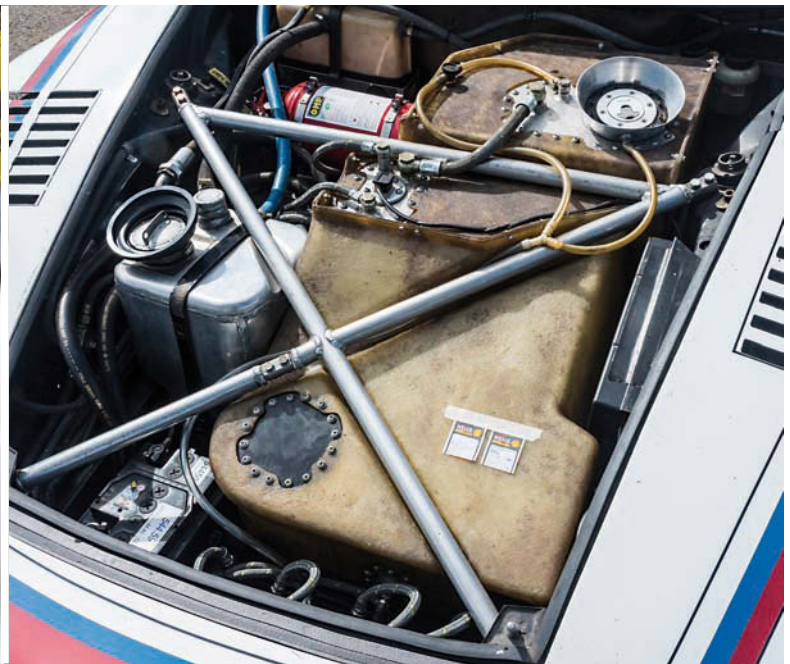
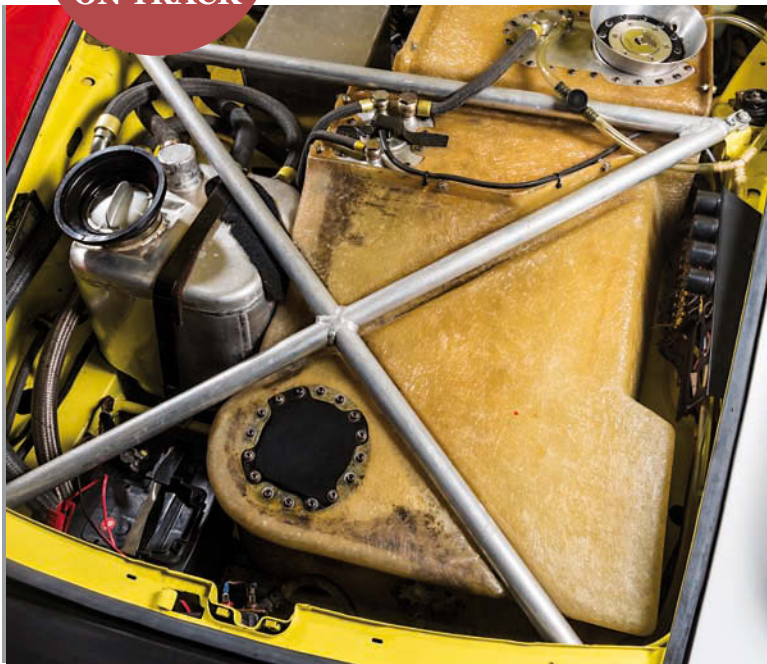
Trunk, interior, engine compartment and chassis remain untouched. As I'm friends with Pierre Vandermeulen I've been able to buy quite a lot of original spare parts belonging to this 934, including turbochargers, radiators, exhaust manifolds, BBS wheels, rev-counter, all of which have been kept meticulously so they are reunited with the car.' Johan also plans to acquire an original front spoiler and aluminium roll cage, though that's not eligible for historic racing; the cabin currently sports a full FIA-spec steel roll cage so it can participate in FIA sanctioned races, but he believes it's important to have the original parts.

In 1983 a competition comeback was proposed, in the guise of a rally car for Belgian ace Patrick Snijers, recruited by its then owner J.P. Gaban and benefiting from Bastos sponsorship. 'They entered the 934 for the Ypres Tarmac rally, but at the very

last minute the entry was cancelled, most probably because Gaban and Snijers realised that the 934 was not an ideal rally weapon. Instead, Gaban bought himself an SCRS for his star driver Snijers to compete in the 1984 Belgian Rally championship, which they won.' While in Walter Pauwels' ownership the car was still painted in Bastos livery, and participated at Classic Le Mans, helmed by Pascal and Dominic Pauwels, with Gilles Stievenart as third driver. Today it's presented in its 1976 Le Mans colour scheme, as driven by Beurly's, Nick Faure and John Goss. 'That was probably its finest hour,' Johan suggests. 'Unfortunately it didn't finish because at the time turbocharged racing cars were relatively new, and they didn't understand that when you came into the pit lane you should let the turbos cool off by keeping the engine running to circulate the coolant, but

they didn't, they shut off the engine, and the turbos broke.' In 1977 the car was run by Nick Koob on behalf of J.P. Gaban, and ran at Le Mans with Willy Braillard, Koob and Guillermo Ortega sharing the driving, only to retire in the 16th hour, again with a blown turbo. For 1978's 24-Hours, it was entered by Jean-Louis Ravenel and driven by Willy Braillard, Jacky Ravenel and Philippe Dagoreau, lasting eight hours until the injection pump broke. A month earlier, Braillard had won the Spa 600kms with the 934, so it does have winning provenance, and Marc Duez placed 2nd in the Benelux Cup at Nivelles with it a month later. Thereafter its competition career was on hold till 1983. Now, our Abbeville shakedown preps it for a private day at Porsche's Leipzig track, and thereafter Johan has his sights on a couple of races in the Patrick Peter championship with Le





Mans Classic in 2018 as the ultimate goal. And what of this slant-nose sibling? At the outset the first 935s looked like 934s, but the factory's Weissach competitions department under Norbert Singer created the slant nose 935, making eight units between 1975 and 1978. Customer teams

the car easier to work on. All 935s had air jacks, adding maybe 10kg, but making for far more efficient pit stops. This 935 was the very last one built of thirteen made during the 1977 season, the first season Porsche built 935s for its clients. The 1977 cars were the famous fireball-spitting single-

sold to legendary US entrant and Porsche collector Vasek Polak and he owned the car from 1977 till 1998, when it passed into the hands of the Pauwels family. This 935's race history is brief but reasonably illustrious, at least in terms of driver status: on 9th July 1977 it did the Watkins Glen Six Hours No 16 driven by Brett Lunger and George Follmer, placing 2nd overall. The same duo drove it at the Mosport Six Hours on 20th August '77, placing 17th, and then on 28th August '77 Jacky Ickx and Skeeter McKitterick brought it home 2nd in the Mid-Ohio Three Hours. It seems to have been laid off for a year, till the Watkins Glen Six Hours on 8th July 1978, when George Follmer and Jacky Ickx came 26th.

There's little difference between the 934 (left) and the 935 under the front hood. Both house long-range fuel tank and dry-sump oil tank

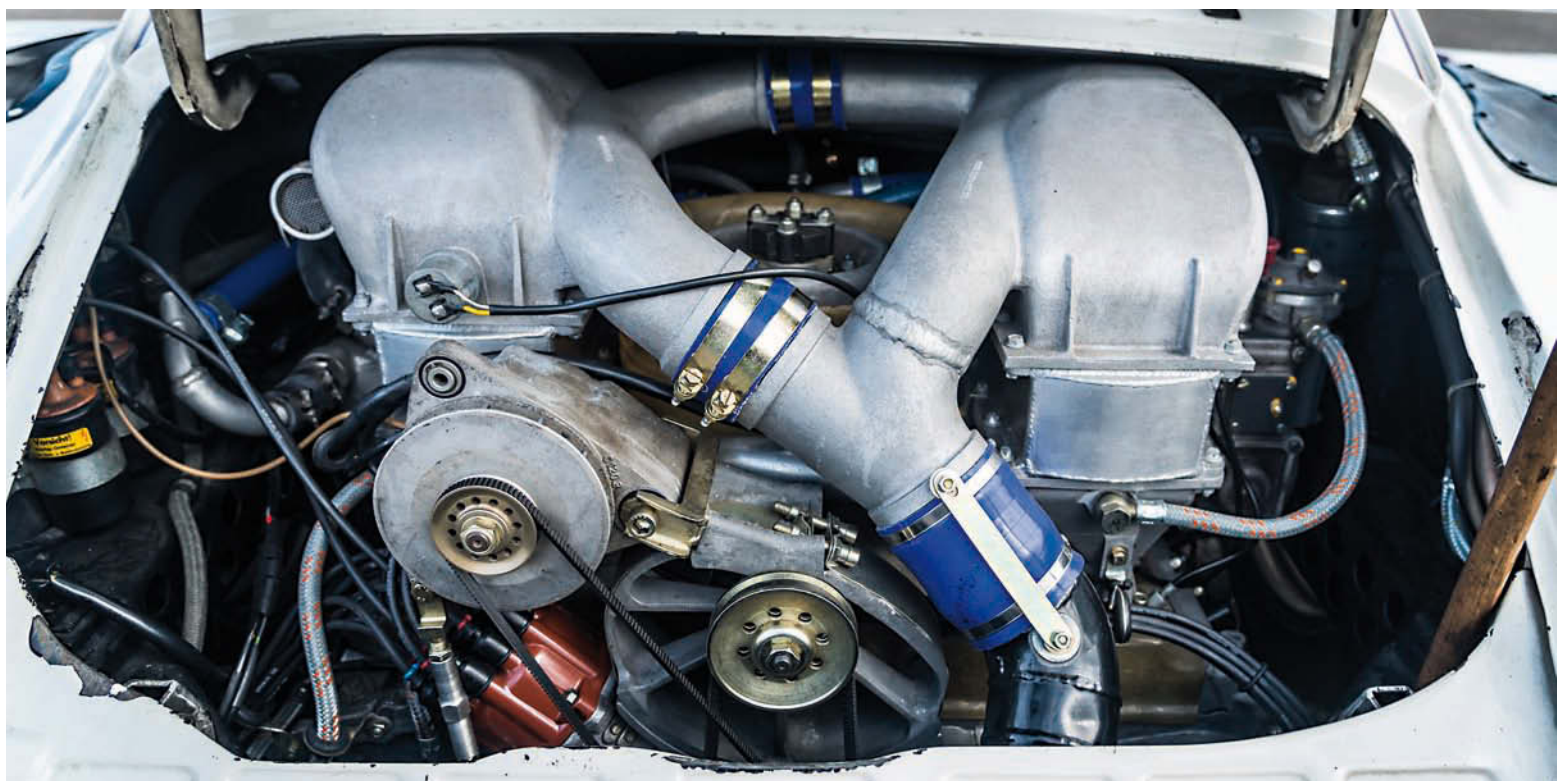
“ This 935 was the very last one built of 13 made during 1977 ”

lost no time in fashioning their own take on the factory 935, including Alméras, GELO, Garretson and, most notably, Kremer – see our recent review of the K3 in *911&PW*. The one-piece glassfibre slant-nose was a logical way of reducing the 911's frontal area and providing more downforce, as well as being lighter, with the benefit of making

turbo cars, much more difficult to drive than the 935's twin-turbos that were developed thereafter. Seventeen customer 935s were produced in 1978, and seven for 1979. Around 40 more 935s were built by independent teams and firms, ranging from Kremer and Brumos to Jöst and Fabcar. Our star car, chassis 930 770 0913, was

Pascal is wary of racing the car in highly competitive historic events: 'it's all very well damaging the body – the glassfibre is easily repaired, but the engine is incredibly expensive. That's one reason why we didn't paint it; all the scratches say that it's original, and the stripes are from Polak's

Single-turbo 935 engine is a tricky beast compared to later twin-turbo 935s, with power coming in a massive rush and doubling from 300bhp to 600bhp in a blink



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day.' The Ickx/McKitterick name-check on the side was reinstated for a Brussels exhibition. It's a dramatic machine by any standards, pared to the bone, an out-and-out racer, with purposeful ducts and splayed haunches, its inner spaces a web of scaffold poles. A wheel the size of a saucer on the dashboard adjusts the turbo boost: 'turn to the right gives you more, turn to the left gives you less,' describes Pascal. 'There is also a panel in front of you with control lights and they go from yellow to white to green and red, so when you're running in the red and the engine blows there's no excuse to tell the team manager you didn't see it.' In the early days a few

things went wrong but by the end of '77 they lasted OK if you stayed within the limits. Engines were wrecked by down-shifting, because there's only four gears and some drivers down-shifted too fast in order to slow the car down and it's such a big gap between the ratios that if they go down one too low then mayhem happens.'

These cars belong on track, so let's get on with it. I've driven a 934 before, on the road, though – chassis # 930 670 0177, a six-times Le Mans runner and 1981 GT Class winner for a feature in sister magazine *Classic Porsche* – so I know what an animal it is. Now, we're in the right place to see how this one behaves in

Johan's capable hands. 'In all honesty it's a car that can scare you, as good as you might think that you are,' he says candidly. 'It's a very dangerous car because it's a turbo, and as long as you're under 4000rpm you have a very sympathetic throttle response, but once you're above 4000rpm the turbo kicks in, and you go up to 1.2, 1.5-bar, and that's a huge amount of power suddenly coming in, and all of a sudden you go from 300bhp to 650bhp in an instant. So, basically, when I come out on the track I'm in 1st gear, and I take 2nd and 3rd and then I shift back to 1st for the first set of tight right-left turns. It's only four gears because it's the Turbo gearbox, but there's so much

In legendary Vasek Polak livery, this 935 had a reasonably prolific competition career, placing well in events with drivers like Jackie Ickx, George Folmer and Brett Lunger

Both the 935 and the 934 are rather restricted by the tight confines of the Abbeville track, but what the hell, at least they're being exercised!





NICK OF TIME

Sharing the driving of this 934 in the 1976 Le Mans 24-Hours was Nick Faure, doyen of semi-professional Porsche racers during the '60s and '70s. He recounts his impressions of racing the 934: 'this was Porsche's first attempt to produce a Group 4 racer out of the new production 930 Turbo. With such little experience of running these amazing machines, Porsche did not understand that when you came into the pits the turbo was still turning up at mega revs, but with the engine turned off it was not getting the necessary lubrication and simply burned out almost immediately, the engine then giving nothing more than non-turbo power. When it was out on the circuit it was massively quick, and I remember that it stood firm and proud on the circuit delivering enormous power, somewhere near 500bhp from memory, but felt like a very steady, firm machine, with very little compliance, relying on the power to set it up in the fast corners. Strange thing was we had to run these Group 4 cars at production weight (crazy) putting huge strain on all the moving parts especially at Le Mans when all the components need all the help they can get for reliability. So much so that we had to carry a lump of lead in the passenger footwell – and run with electric windows! Who was quickest of the three of us? NF of course!

'As for the livery, the Belgians turned up at my request with the car painted plain white, which I painted in the garage in Arnage that they used before the race. I masked the car up myself, and all the colours were hand painted using Halfords spray paints. I brought along Harley-Davidson again as I was friends with Clayton Day Jnr, the European "President" who was a college kid from the US. I chose the design myself to make it distinct from the previous year with an offset red stripe, incorporating the front wing.

'It was great to drive and had a tremendous turn of speed on La Ligne Droite des Hunaudières – the Mulsanne Straight to you! My memories are of a great GT racer with fantastic response and solidity, only held back by the regulations. Yes indeed, we suffered the indignity of having to replace four new turbos, and Jean Blaton the owner got rather pissed off, especially with the considerable expense of a succession of trips to the Porsche parts van in the paddock. But nevertheless, pioneering the turbo for the factory was a great story. Eventually we decided to park up the car in the pits and then just do the final few laps so as to be classified as a finisher. Nobody can replicate the whole experience and atmosphere of the 24-hours in those days, a different era of the wealthy amateur.'



CONTACT

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The 934's road-going origins are clear to see, with only its bolt on arches and front spoiler separating it from a standard 930 Turbo

torque that here I don't even get into 4th, and in fact I'm doing most of the inner part of the circuit in 1st gear because 2nd puts the revs on the low side, between 3- and 4000rpm, which is a bit too shallow. I limit myself to 7000rpm (which we do see quite often). It's all about anticipation. Once you come out of a corner you really need to wait until the power comes on. I tried another little trick, I came in on the brakes and then I was putting the power down before the apex, on the gas already, and then once the car had come out of the apex it had full power. But it's really tricky getting that just right, because if you miss it, you miss it big time. I suppose at the time the very good drivers were able to do left foot braking and control the turbos with their right foot, and if you look at period coverage you see all those 935s coming out from the apex and they're already power sliding. So, basically, they braked, they shifted, they braked, and accelerated so the turbos kicked in once they were on the apex and then they had full

power, but you have to be very, very good to do that. The fun thing about it is that, one day, you're going to meet yourself: there will be a limit, and what will that limit be? In that moment you know that it has to end here. I've had a lot of fun in my 3.0 RSR, and I know what I can do with that car, but I cannot tell the same thing with the 934.' As

end of the next straight I stand on the 917 brakes and it hauls up pretty abruptly.

And talking of those massive brakes, unfortunately Pascal's 935 front right-hand corner cracks a caliper and there isn't a spare to hand, so consequently his lap times reflect that. Final word to Johan, then. 'You have to be aware that these are '70s

“ There's only one way to tackle the 934: monster the monster! ”

Some things will never be improved on and that certainly applies to split-rim BBS race wheels, with gold lattice centres. A design classic

I've observed, there's only one way to tackle the 934: monster the monster. Because the turbo comes in with a violent flush at 4500rpm, the car surges tsunami-style down the straight, leaning on the tyres as I pitch it into a right-hander. It's fluent through the turns and surprisingly compliant, and at the

racecars, and they were not as easy to live with as the cars today. The main thing you have to know is that you have so much power on the rear wheels and you don't want that to step out, but apart from that they are 911s.' Pugnists don't pack more of a punch than these. **PW**





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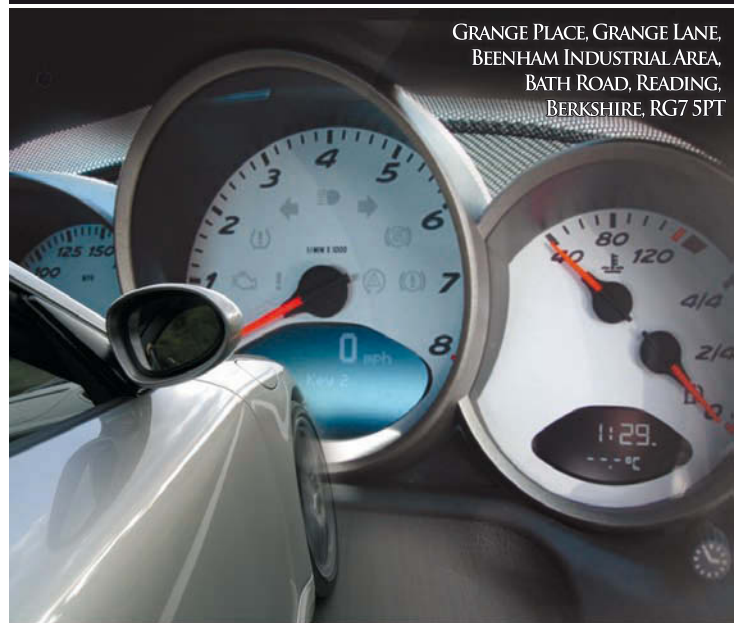
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Words and photography: Steve Hole

SMOKE AND MIRRORS?

The specialist car market is discovering the virtues of using the 986 Porsche Boxster as a donor vehicle, with one of the most interesting being the Avalanche GT from Nottingham-based Turismo UK



It's a Porsche, but not as we know it. Some will be appalled, but we're a broad church here at *911&PW* and if folk are going to such lengths to create wild machines based on the humble Boxster, then we'll take a look

Look away now if you are of a nervous disposition. Fact is the ubiquity of the Boxster, and its rather good secondhand value, makes it a top choice as a donor car in the kitcar scene. So we sent Steve Hole – Editor of *Total Kit Car* magazine – out to investigate with the help of a Turismo modified Boxster:

Although *Max Power* magazine closed its doors in 2011, it's easy to forget that it regularly sold over 230,000 copies per month. Gulp! Big numbers. Much like when I worked at Link House magazines in the eighties, the directors held a crisis meeting when sales for *Custom Car* magazine dropped below 100,000.

The 'modified' movement, although

smaller, is still massive and, regardless of how our (kitcar) industry views that sector, the fact is we often look at their vehicles in wonderment.

Well-known modifiers are highly-lauded, as are the cars they produce. One such company who were highly successful in that arena was Nottingham based Turismo, run by Al Alyaus, who woke up one day when it dawned on him that his products would dovetail nicely with the kitcar market.

Al was aware of the kitcar world, but until he discovered that body conversions were well-received and – importantly – IVA test (Individual Vehicle Approval) exempt, he had always watched from afar. However, 2014 would see Turismo take their first tentative steps into it making

their show debut at the Donington kitcar show with the tasteful Avalanche, a Toyota MR2 Mk3 conversion inspired by the 911.

For over 20-years, Turismo has been modifying customer cars. They specialise in one-off commissions and are happy to create a bespoke vehicle for you.

Al likes Porsche 911s and its derivatives and the Avalanche took its cues from the Gemballa Avalanche GT. Although it was well-received, several customers were put off by the Toyota underpinnings and in a Eureka moment it dawned on Al that he had a Porsche style product, so why not base it on a Porsche? He saw the 986 Boxster as being an ideal donor vehicle.

He isn't the first to use the Boxster. Mark Cook of GT Supercars used the Car



Styling is a lot of Carrera GT, with a bit of Gemballa Avalanche mixed in. Rear lights are from the 991. All in all 18 new GRP panels are used to transform the Boxster

Factory kit package from America as inspiration creating the Boxster-based Carrera GT replica for the UK market back in 2009. Soon others were looking at it, too, and kits are slowly trickling out into the market.

Drive a good Boxster – you’ll soon know if it’s a shed – and it will invigorate you, making you realise quite why it got such a great reception when launched.

There’s no getting away from the fact, though, that they cost proper money to run, but if you know where to look a lot of parts can be found rather cheaper than a Porsche dealer would ask.

When it comes to the Evolution GT, AI had definite ideas on what he wanted to achieve. He’s a Porsche enthusiast of many years’ standing and will be happy to advise on donors.

For many the Boxster interior would suffice, but not AI; all factory builds will benefit from a re-trimmed interior and he’ll suggest that self-build kits follow suit, thus creating maximum impact, if and when kits are offered.

you may agree with him as it offers better performance, although the smaller engine is an absolute vice-free gem. However, an S donor will cost more to buy.

Turismo do some work on the standard suspension, they fit new dampers and

“

In total there are eighteen new GRP panels

”

The leather used is high quality, as are the new carbon trim pieces. For AI there’s only one version of the 986 Boxster worth using and that’s the 3.2 S: “No point using the 2.5,” he says. If you’ve sampled both

springs, which has the effect of lowering the ride height and giving the vehicle a much more aggressive stance befitting the illusion that the Evolution is trying to achieve. In good modifiers’ fashion, an air-ride kit could



Interior is entirely retrimmed and certainly looks the part with good quality leather and carbon



well be an option for the front-end.

Porsche brakes are among the best around and you won't need to uprate these, while the 20in rims really look the part, but you do need spacers! However, three-piece split rims are now available.

A new stainless steel exhaust is also fitted, which enhances the aural assault, while items such as the washer bottle and condensers are relocated. The GRP is of a very high standard and Turismo use the original boltholes where at all possible, while other panels are bonded into place, such as the rear quarters.

In total there are eighteen new GRP panels, with only the donor's engine cover being completely left untouched, although the original doors are used – with the upper section only being re-skimmed.

Al goes to the trouble of manufacturing his own headlight pods for the Evolution GT, while current 911 (991) rear lights,

reflectors and side repeaters are used.

I guess it's the sheer level of quality, going the extra mile in detailing that demands the attention here. Everywhere you look there's something extra to see. I really like the diamond stitching on the seats, for example.

When it comes to performance, Al reckons that power should be around 300bhp but he hasn't had the demo car on a rolling road yet. In addition to the new exhaust, the manifolds have also been upgraded, with Cell 200 cats fitted, cold air induction and a remap. If your pockets are deep enough the sky is the limit when it comes to tuning a modern Porsche engine.

Within the Evolution a lot of the appeal is the image, plus 300bhp is plenty adequate for the road, which is where this car will primarily be used.

When it comes to cost Turismo will charge around £25,000 to convert your donor vehicle,

to which you'll select wheels, suspension upgrades and the interior revisions, which means that prices start from around £40,000 all-in depending on spec, but could rise quite quickly once you start adding niceties. Yes, there are all sorts of Porsches that you could buy for that sort of money, but that's a whole other debate, which ignores the appeal of something like the Turismo in the first place.

There's no doubt that using a Porsche donor gives a project instant cachet and credibility. As such, a car that looks like this would be dead in the water if it used Metro mechanicals (it has been known). It's a very specialised, ultra-stylish and well-built addition to our scene, that is going to win a lot of friends. Meanwhile, Al doesn't seem to ever stop coming up with ideas and I was lucky enough to get a glimpse of what he's up to and there's some truly impressive stuff coming. Who knows, you might read about it here... **PW**

Monster 20in wheels fill the arches and are in keeping with the wide-body look. Standard brakes and discs will suffice, but these carbon ceramics and six-pot calipers do rather look the part

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TECH: HOW TO

COLD COMFORT

Air-cooled 911s have marginal cabin heating, and the always optional air-conditioning is pretty hopeless, too. But now an innovative British company has devised an a/c system that not only approaches the standards of a current model, but crucially requires no irreversible modifications to install. Story by Chris Horton; photographs by the author, Classic Retrofit and Antony Fraser



If this distinctive 911SC looks familiar, that's because you saw a rear view of it in the December 2016 edition of *911&PW*, as a prelude to a story about Classic Retrofit's innovative spark boxes (above) for the 1969–1983 models. The same vehicle also runs Classic Retrofit's beautifully engineered fuse boards – see the August 2015 edition for more on those. And watch out soon for a full feature about this remarkable machine

The classic air-cooled 911 has many admirable qualities, but sadly an efficient – or even a vaguely comprehensible – heating and ventilation system is not high among them. Certainly the later cars – the 964 and then the 993 – were significant improvements on the Carrera 3.2 and its predecessors, but by and large the myriad scattered controls, vents and blower motors (as many as four of those last items in some models) between them serve mostly to chill or, in warm weather, to roast the car's occupants. And the optional factory-fitted air-conditioning, with its condenser mounted directly above the hot engine – never mind the power-sapping engine-driven compressor at the same already overly heavy end of the vehicle – is little more effective than simply opening the windows.

Take a bow, then, Jonny Hart of Five Ashes, East Sussex-based Classic Retrofit. Himself the enthusiastic owner of a subtly modified 911SC, and also a highly skilled electronics engineer and industrial designer, he has developed an entirely home-grown

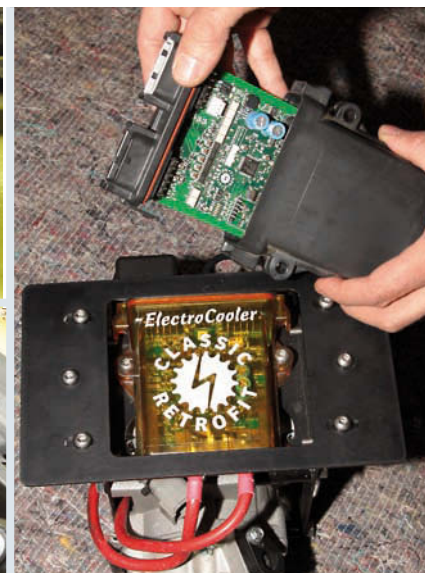
air-conditioning system that, in principle, will easily fit the majority of 911s from 1965 through to the end of Carrera 3.2 production in 1989. It's a top-quality job, too. The kind of thing that Porsche itself might – eventually – have come up with had it had, back in the day, both the will and the budget, and perhaps even the foresight. (And let us not forget that in the early 1980s there was an aspiration within the company to drop the 911 in favour of the 928.) See also the August 2015 and December 2016 editions of *911 & Porsche World* to find out about Classic Retrofit's no less innovative fuse boards and so-called spark boxes for this same range of air-cooled 911s.

'We designed our ElectroCooler, as we've branded it, primarily for the 1974 to 1989 impact-bumper models,' says Hart, 'and such that, as well as being both light – around 14kg all told – and efficient, it requires no irreversible modifications to the vehicle's structure. There is no drilling into the steelwork, for instance. To that end, our development "mule" was my own 1982 right-hand-drive SC. But within that broad spectrum there are so many variants that

we cannot guarantee that earlier cars will offer quite the same levels of "plug and play" – although we would offer all the help we can to anyone tackling an installation in a more unusual car. It is also a prerequisite that the original – or any after-market – air-conditioning system is first removed. Even so, we believe it will be a relatively easy installation in just about any of the many older air-cooled 911s still in existence – and certainly simpler and cheaper and more effective than trying to renovate the original factory-fitted air-conditioning.'

As in any complex system of this nature, it is difficult to isolate the single most important element, but clearly central to ElectroCooler's effectiveness is a compact but light and powerful electrically driven compressor. To those of us raised on the notion of good, old-fashioned engine-driven air-conditioning compressors in our cars, that sounds too feeble to cope with the demands of cooling even a space as small as a 911's cabin, but it is the kind of technology that has powered domestic refrigerators and air-conditioners for decades – and the fact is that as hybrid

In left-hand-drive cars the electric compressor, complete with its specially designed ECU, fits neatly inside the so-called smuggler's box inside the front compartment (right). Right-hand-drive cars have a smaller box, though, so perforce the pump is mounted on a purpose-made bracket at the very front of the compartment, cleverly picking up on the mounts for the fuel tank and the battery: no drilling into the body is necessary. Lower of the two middle photos also hints at how the standard washer bottle, mounted under the left-hand front wing, has been replaced with one from a VW bus. The ECU in Jonny Hart's own car is in a special casing designed for maximum effect at shows, but production units come in this understated black box (far right)



and fully electric road vehicles begin to proliferate, so too will the high-tech electric pumps required to drive their auxiliary systems. We are already familiar with electric power-assisted steering, for instance, and other (electric) pumps will be required for increasingly sophisticated suspension and braking functions.

In left-hand-drive 911s the ElectroCooler compressor – which is said to use less than 1bhp of engine power to drive it – sits neatly inside the so-called smuggler's box toward the rear of the luggage compartment, by means of a specially designed clamp mechanism that grips the edges of the aperture. ('Specially designed' is a recurring theme in Classic Retrofit

products. 'Beautifully made' is another key phrase.) In right-hand-drive cars – which have a smaller smuggler's box – it sits on a bracket in the space between the spare wheel, the fuel tank and the battery. That bracket – another specially designed and beautifully made device – picks up on one of the fuel-tank mounts and the retaining tab for the battery. So once again no drilling is necessary.

In truth, concedes Jonny Hart, even a compressor of this nature requires a fair amount of electrical power to drive it, but a built-in ECU, to his own design, monitors both the car's charging system and the loads placed upon it, and will either reduce the compressor speed or temporarily shut it

down during prolonged periods of low alternator output – such as when idling in heavy traffic. That, of course, might well be when you most need copious quantities of cooled air, but the recovery period – like some of the system's other parameters – can if required be configured by the user, and in any case is usually only a minute or so at a time. Quite survivable, in other words, unless you are planning to park up in Death Valley for an hour or two.

'We do stipulate that you need a 90-amp alternator from a Carrera 3.2,' says Jonny, 'and to uprate the relevant wiring, but that's easy enough. Additionally, the battery itself must be at least a 75Ah unit, and in first-class condition. You also need to bear in

REFRIGERATION: HOW DOES THAT WORK, THEN?

Air-conditioning uses essentially the same principle as your domestic refrigerator. Inside the pipework – that is to say the compressor, the condenser and the evaporator – is a special gas, pressurised to around 3.0 bar. In very early refrigeration systems this would have been toxic ammonia, after which followed various more efficient alternatives, but these came ultimately to be blamed for depleting the earth's ozone layer, and today a more environmentally friendly gas prosaically known

as R134a is the most widely used – although even that is fairly unpleasant stuff, and should neither be inhaled nor deliberately released.

The gas, whatever it may be, is further pressurised – to around 20 bar – by the compressor. This, thanks to one of the many quirky but convenient laws of physics, causes it to heat up. This compressed and heated gas flows to the condenser(s) where, as it gives off its acquired heat to the outside air, it turns back into a still pressurised liquid.

The liquid moves through an expansion valve where, as it expands, it becomes colder. (Good old physics again.) The cold liquid passes through an evaporator – essentially a sort of reverse radiator, deep inside the main body of the heater/blower unit – where it turns back into a gas, and in so doing draws the heat out of the external air passing over it and into the cabin. The gas, now at low pressure again (ie 3.0 bar), flows back to the compressor, and the process begins all over again.

Condenser and its associated electric fan are neatly mounted under the left-hand front wing – which is why the windscreen washer bottle has to be repositioned (see above). Hoses are fed through existing holes, so again no drilling is required



TECH: HOW TO



mind that any electrical system has its limits, so the ECU might switch off the compressor if too many other consumer units are making demands upon it – the wipers, the headlights and the heated rear window, for instance. And we suggest that users don't make too many short trips at low speed. Cranking the engine significantly depletes even the very best battery, and it takes a fair amount of driving time – and a pretty good alternator – to replenish it. Our bottom line was that the air-conditioning should never compromise the ability of the battery to start the engine.'

If finding a home for the compressor was straightforward, then choosing one for the condenser and its associated fan was rather less so. 'We wanted to mount it away from sources of heat,' says Jonny, 'and as close as possible to the rest of the system to keep the hoses short. The solution was to remove the windscreen washer bottle, from under the left-hand front wing, and put the condenser there – as in the 996 and later cars. The standard bottle is huge, and many people choose to remove it anyway. In my car we fitted the bottle from a VW T2 bus, at the front of the luggage compartment. At the moment, it's held in position by its own weight, and the close

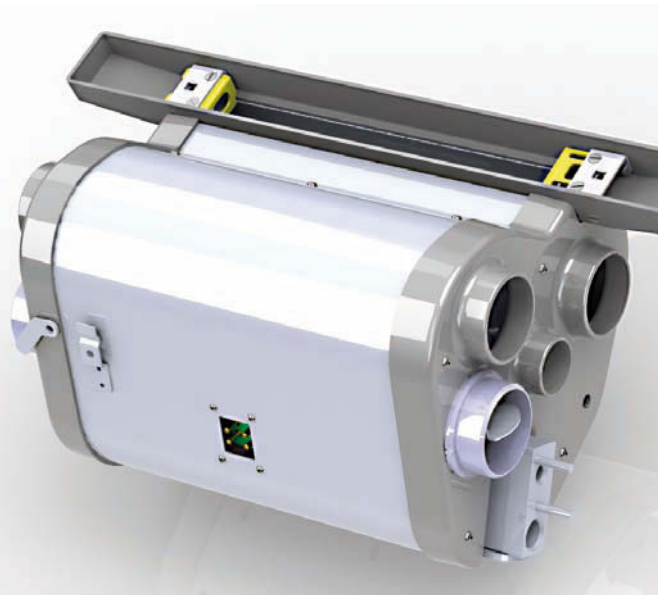
proximity of both the fuel tank and the front panel, but we are designing mounting brackets for that, as well. The two hoses for the condenser pass through the original hole in the bottom of the headlamp bowl, again eliminating the need for any drilling.'

This 'standard' condenser assembly, complete with an electric fan and some once again exquisitely engineered mounting brackets, will also fit single-battery 911s built before 1969, says Jonny, because the space there is empty (the single battery projects some way into the right-hand front wheelarch), but currently there is no simple solution for the twin-battery cars built from 1969 to 1973, because the left-hand battery box is in the way. 'We are working on an alternative solution,' adds Jonny. 'It might be possible to mount our existing condenser inside the rear wheelarch, but we haven't tested that configuration. In later Carrera 3.2s with inset front fog-lights, the lamp bracket on the left-hand side will need modification to clear the condenser.'

By far the greatest challenge, though, came from the main blower assembly at the rear of the luggage compartment. Initially, says Jonny, he tried modifying the standard Porsche unit, but it became clear that not only would it be difficult to fit inside it a

decent-sized evaporator (that's the bit that cools the incoming air, and so crucial to the success of the system), but also that it was really just a bit too crude to do the rest of the new set-up justice. In the end, it was easier (and ultimately cheaper, despite the false start) to use a CAD programme to design a new housing, and perhaps most significantly this adds the sophistication of recirculating the cabin air, which is both an integral feature of all modern systems and, if you think about, vital to the efficient operation of any air-conditioning process. (Better further to cool air that has already passed through the evaporator and around the cabin, basically, rather than continually to draw in what is likely to be warmer ambient air from outside.)

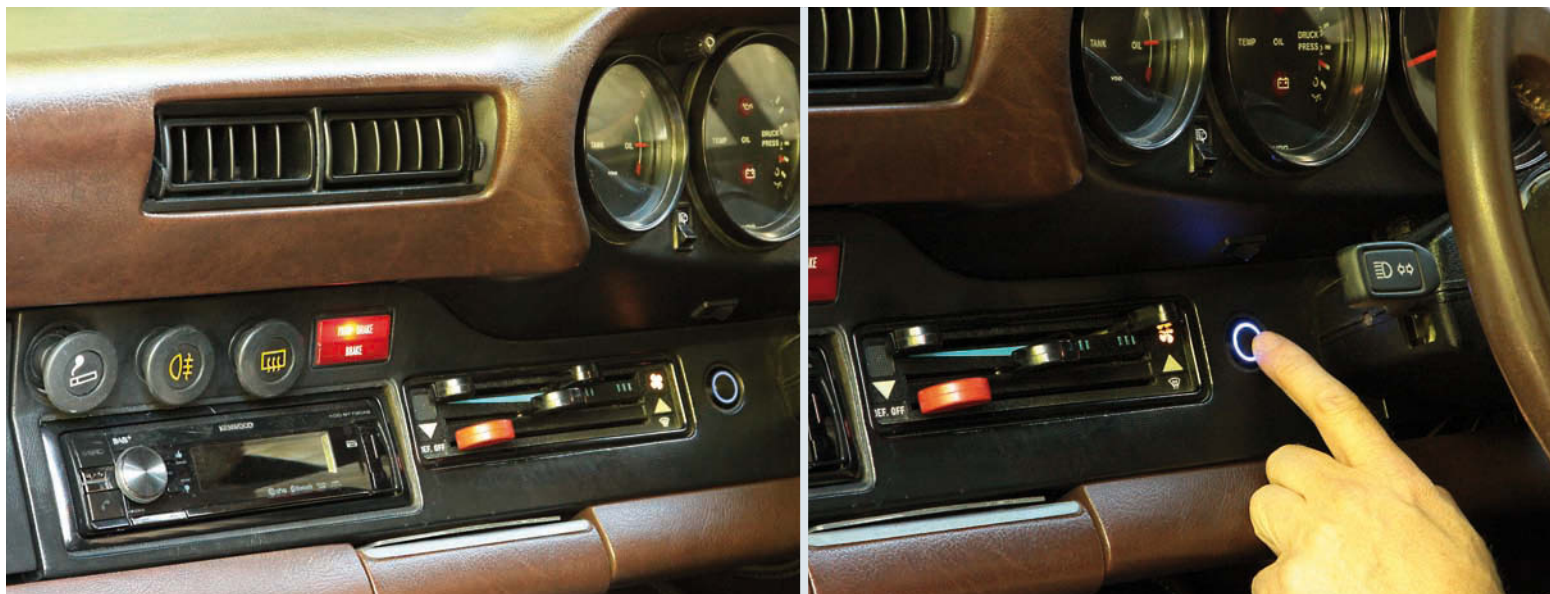
'Our new double-cage blower unit is a direct, bolt-in replacement for the original Porsche assembly,' says Jonny, 'but we couldn't retain the original cardboard trim that both hides it from view and protects it from the contents of the luggage compartment. But the carpet can still be put back over the blower, and since that offers quite a pleasing, simple shape, it still looks presentable. It might be possible to get the card trim to "work" with some spacers and other modifications, but since it was hardly



Jonny Hart began the project by assuming that the existing blower unit below the scuttle could be 'repurposed' to incorporate the evaporator – the bit that cools the air passing into the cabin – but in the end was forced to conclude that a clean-sheet approach would be the way forward. And this beautifully designed and made box is the result – once again fitted with no irreversible modifications to the rest of the car, but no less crucially allowing all the vents in the cabin to provide cooled air, as well as ambient and hot. If only Porsche had had a CAD system back in the 1960s we might all be living in a very different world... Standard board trim won't fit over the new blower, but carpet will – and the unit looks good enough to show off, in any case

Conventional air-con hoses require their specially designed end-fittings to be crimped on to the rubber (item in the foreground in the photo on the far left shows one that has been assembled, but not yet crimped), but cleverly the Classic Retrofit system uses hardware certified for use with these doubled-up 'Oetiker' clips (and appropriate pliers), exactly like those used for fuel lines, and so on. Blue plastic device is a gauge to allow the clips to be positioned correctly. Note, too, smaller diameter of hose, which makes installation so much easier. Opening engine cover gives no indication that this SC has an air-con system to equal that in any modern water-cooled Porsche





Inside the cabin, the only evidence of the SC's new-found comfort is a discreet pushbutton control on the fascia, with two stages of illumination to indicate the boost level selected. Standard slider controls remain as mysterious as ever, but there is no doubting the system's overall effectiveness: temperature drops markedly within just a few minutes, and modern electronics maintain the required level thereafter. 'Conditioned' air is also inherently more efficient when it comes to demisting the windscreen, too, making the system a year-round boon, and not just one for the summer

Porsche's finest achievement in the first place it would surely be no great sacrifice to do without it. On the lower part of the blower casing a modification will also be required for the steering-column cover. This will need a notch cutting out, or once again you can just leave the cover off.'

An additional benefit of placing the evaporator inside what was the fresh-air blower is that, by definition, all of the cabin vents can now provide cooled air as well as both ambient and hot, a function that was impossible with either the standard factory-fitted air-conditioning system or after-market units. This negated the need for the Classic Retrofit set-up to feature additional vents, which as well as simplifying the installation keeps a clean 'factory' look and saves a modest amount of weight. Later cars – that is to say, the SC and the 3.2 – benefit from centre and side vents, in addition to those below the windscreen and in the footwells.

'Interestingly,' says Jonny, 'even in cars without the centre vents, cooled air to the windscreen and footwells does quickly reduce the temperature inside the cabin – and it is also effective at clearing a misted windscreen in warm and humid conditions. You don't get the immediate effect of cooled air on your face, but the car does become much more comfortable. In earlier models you could provide that cool air to your face

by fitting a centre vent – either a round outlet to replace the clock in the dashboard, or perhaps an after-market vent where the ashtray used to be. We don't provide these, but there are extra ports on our blower box for owners to experiment with.

'Similarly, we wanted the system to work as far as possible with the standard control levers. The only additional interface is a single discreet button to switch on the cold air supply – push once for "normal", and again for "boost", the mode being indicated by the brightness of the LED inside the switch. The temperatures at which the system switches on and off are set up using a laptop – we supply a USB lead – and in due course we hope can be controlled via Bluetooth and a smartphone. This protocol also allows various other parameters to be set – normal and boost temperatures, for instance, and battery voltage thresholds, although the system comes pre-configured to suit most circumstances, so you don't have to adjust anything if you don't wish to.'

And that, remarkably, is about it. The only other hardware of any note is the high-pressure hoses linking the compressor, the condenser and the evaporator, and here too Jonny Hart has taken advantage of modern thinking and materials. The hose he has chosen has the same internal diameter as in a typical modern car, but a significantly

smaller external diameter, and that allows it to assume tighter bends, and generally to occupy far less space. It comes within the ElectroCooler kit as a single length, ready for cutting to suit the specific installation, but ingeniously requires no special heavy-duty tools to add the necessary end-fittings. Those simply push in, and are then secured by two Oetiker-type clips per side, a blue plastic gauge ensuring that they are positioned correctly before being nipped up with a pair of special (but easily obtainable) pliers. See the photo on the opposite page.

You also get all the necessary wiring and switches, of course, plus a receiver-drier canister (mounted next to the condenser) to collect moisture within the pipework and compressor that could freeze and cause problems. All you need to add after that is the refrigerant – eco-friendly R134a, and which can be installed, usually for as little as around £30, by any competent air-conditioning specialist. The result will be an efficient and effectively invisible air-conditioning system in a car that, frankly, was never designed with such sophistication in mind, and one that, given its ease of installation (and removal, if need be), should add at least as much value to the vehicle as its not insignificant cost. Cold comfort? It sounds more like a classic win-win situation to us. **PW**

THE KNOWLEDGE

Full details of the Classic Retrofit ElectroCooler kit can be found at classicroetrofit.com. The kit as shown here retails for £2995 plus VAT, or for £1750 plus VAT you can buy just the combined compressor and ECU module. This would suit those wishing to devise a system for an entirely different kind of Porsche (a 944, perhaps...) and who by definition would require both an alternative condenser and blower/evaporator unit. Fitting costs will depend on who does the work, and obviously how quickly they do it, but a good independent Porsche specialist, familiar with air-cooled 911s, should take no more than a day or so. Having the system charged with refrigerant could cost as little as £30 if you shop around.

To maximise the effectiveness of your ElectroCooler system, suggests Jonny Hart, make sure the remainder of the car's heating

and ventilation system is in good order. You will by definition have eliminated the original blower unit, so that leaves the heat-exchangers (at some point you will probably need warm air as well as cool) and not least the cable-operated flap valves beneath the rear of the floorpan. Those often seize up through corrosion, in which case you cannot shut off the supply of hot air, and obviously that will compromise the system's effectiveness. Consider, too, applying a UV-resistant film to the windows in order to help reduce the heat build-up in the cabin. Jonny Hart recommends 3M's Crystalline, but many others are available (and this is a subject we plan to come back to in a future edition, not least because of the protection such films offer against trim damage and even skin cancer).

As far as further reading goes, there are a number of previous *911 & Porsche World*

stories that should help. Way back in Issue 39 we ran a guide to getting the best from the air-cooled cars' heating and ventilation systems (including their frequently misunderstood slider controls), and in the June 2014 edition reader Chris Hatton explained how he solved a number of heating-related problems in his Carrera 3.2. We have also covered air-con condenser replacement in the water-cooled cars, and although not strictly relevant here those features once again offer some useful background. See the September 2009 issue (mainstream 996), September 2010 (996 GT3), or September 2015 (997).

Lastly, and if you find Jonny Hart's 911SC as appealing as we do, look out for a full feature on that alone within the next few months. It will give you plenty of inspiration and ideas, we can assure you.



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RENNSPORT: STYLE WITH SUBSTANCE

Relatively new to the game, but with years of collective experience behind them, Rennsport pack a visual and presentational punch, that's backed up by its restoration work and retro look conversions

Words and photography: Brett Fraser



First impressions count. And first impressions of Moreton-in-Marsh-based Porsche restorer Rennsport are, well, deeply impressive. Located at the end of a road inside the Cotswold Business Village, the company's premises dominate your field of view as you approach: it's a tall, broad, imposing building, clad in chic silvery-grey panels, and its upper floor is punctuated by a strip of deep windows that teasingly reveal the colourful delights within to anyone standing outside.

That Rennsport's stylish headquarters is reminiscent of Porsche GB's own HQ in Reading is surely no coincidence, and the company's simple yet bold script adorning the top of the building also has a familiarity about it. Regardless of such observations, however, when you arrive at Rennsport you get the immediate feeling that this is likely to be a Porsche specialist experience like no other. And on the day of our visit, with the sun blazing down upon the place, it felt like

rocking up at a showroom in Beverly Hills.

Enter the downstairs lobby and through a windowed door to your left you'll spot a glimpse of a white-walled workshop and, quite probably, an early 911 in the midst of restoration. But reception is upstairs and as you crest the staircase you're greeted by the sight of a huge open area that looks more like a modern art gallery than a car showroom. Various Rennsport recreations and restorations are dotted here and there on the dark, rubberised flooring, with a rally-prepared 356 and a Porsche tractor to keep them company. And there's so much space. You could stick another dozen cars up here and it still wouldn't feel cramped.

Straight ahead of you is a viewing gallery from where you can look down into the neat workshop you spotted earlier: to your right, cordoned off by a ceiling-high glass wall, is the office, also characterised by a lavish use of space, a lack of clutter, and a sense of serenity. In many other offices the massive, stylised boardroom table would dominate the room, but in here it's just

another piece of (stylish) furniture.

At the other end of the showroom is a comfortable seating area where you can enjoy hot drinks and watch movies – Le Mans, with Steve McQueen is playing during our visit – if you've got time to kill. As we sip on a latte, we ask Managing Director and co-owner of Rennsport, Paul Cockell, why he has clearly chucked so much money at this enterprise.

'Blame my dad,' Paul laughs. 'In about 2011 or 2012 I got back into restoring old 911s again and selling them at auction, having spent a few years as a property developer. It was quite fun and exciting, but I noticed that lots of other people were doing the same sort of thing, either themselves or on the cheap. Dad and I then realised that there was a gap in the market for higher end restorations with a higher level of workmanship and consequently a higher price. That's when Dad suggested that we needed the building, because when you're selling an expensive product your customers have an expectation of the

Not your average Porsche specialist exterior. Indeed, Rennsport's HQ is more in keeping with Porsche's own corporate look, only with more interesting cars to peruse

Restoration or retro or both. The choice is yours at Rennsport



environment in which they're spending their money.

'Up until that point I actually had a bit of money of my own... So we bought a plot of land and built our own premises to our own specification. I view it as an investment in both the business and, eventually, my own retirement.'

But behind this talk of matters financial, what really fires up Paul are the cars. 'My passion really is rebuilding old 911s,' he admits. 'I started playing with cars when I was five years old and I went straight from school into an apprenticeship at a Porsche main dealer in Warwick. I didn't know much about the brand at that point, other than a 911 was old and a 944 was new. I'd been swayed to go there a little by Dad [Keith, a respected car designer who styled the Chrysler Horizon and Alpine, and the Talbot Tagora, as well as the famous 'dog's bone' grille on the Ford Escort], who thought it was better to learn my trade at a prestige

marque.'

Turned out that was good advice, because within two years Paul had been poached by Mike Jordan of Eurotech Racing to work on preparing cars for the Production Porsche series in the late 1980s. 'It was great,' recalls Paul. 'I was building race cars and providing support on

Modified Road Saloons. But it was very expensive.'

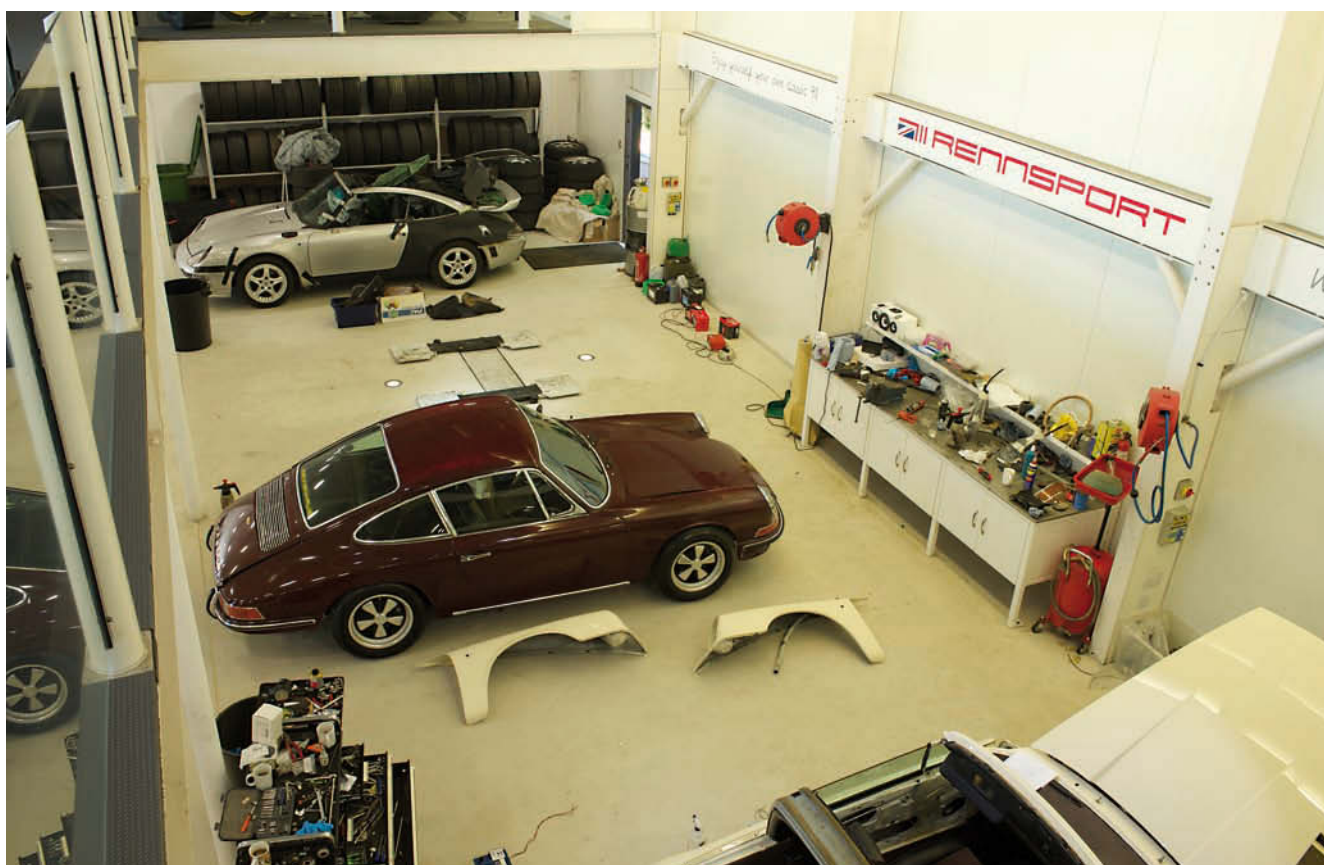
After seven years or so at Eurotech, Paul set up on his own in a small local garage, before being lured into the employ of Malcolm Wilson's rally team, running Ford Escort RS Cosworths in the World Rally Championship; meanwhile he was also

“ I went from school to an apprenticeship at a Porsche main dealer ”

race days. And I got to work on all sorts of stuff – early 911s, 2.7 RSs when they were only worth about ten grand, 944 Turbos: I even race prepped a [944 Turbo] Silver Rose SE... While I was working at Eurotech I was also racing myself, driving a Sunbeam Lotus with some success in

instructing at the Silverstone Rally School. By the early 2000s, though, he left the automotive world 'to make some real money in property development.'

As mentioned earlier, the allure of four wheels was too strong to resist on an extended basis, so Paul returned to



Where it all happens: Busy workshop at Rennsport. Most work is done in house save for some bodywork and paint, which is entrusted to two outside paintshops, both renowned for their work

TECH: SPECIALIST



Impact bumper Targa is getting the retro look. Build will be to the customer's individual specification

restoring and modifying 911s. 'My first car in the style of what would ultimately become Rennsport,' he explains, 'was a 1979 911 Turbo. It had been restored by the owner

differently to the others, and nobody else was working on Turbos. It was a notion that obviously resonated with potential customers, because I sold that car long

trim, whatever. But I believe that there's a ceiling to what people are prepared to spend on a recreation, especially now that the standard air-cooled cars are achieving such astronomic prices. And on the other hand, there are plenty of original cars out there and because of those prices, people are now willing to spend more on their restoration.

'We undertake restorations very efficiently, are normally quite quick – typically six to nine months – and we work to a very high standard. In part that's because we have some exceptional staff: [Master Technician] Steve Stuckey, for instance, was previously an engineer working on vintage Rolls-Royces and Bentleys, while [Senior Technician] Joe Turner spent seven years working in

“ We undertake restorations quickly and we have exceptional staff ”

who had done a pretty good job of it, and I bought it to drive around in myself. Within a couple of days, however, I found I was bored of driving it so decided to turn it into a 2.8 RSR recreation.

'We'd already been thinking that we needed to up our game and do things

before I'd finished it.'

But while recreations are an integral and exciting part of Rennsport's operations, Paul understands the limitations of that market. 'We can, of course, create a 911 to a customer's very personal specification, from the bodystyle, engine, exterior colour,



Left: Rennsport main man, Paul Cockell. Immaculately prepared bodyshells ready to be transformed

Rennsport handle trimming in-house. Right: Everyone needs a Porsche tractor



Tuthill's body and trim shop.

'As far as is feasible, we try to keep most jobs in-house. Trimming, for example, electrics, and engine and gearbox repairs and rebuilds. We do a fair amount of fabrication and body repairs here, but we also use an outside bodyshop when the occasion demands. As yet we don't handle painting in-house, instead relying on two of the UK's best paintshops – there's a black painted bodysell downstairs at the moment that shines like glass.

'Whether you're looking for us to build you a bespoke recreation or you want your car restored and perhaps lightly modified, we'll ask how you're planning to use it – we want our customers to have a car that they can and will use. So if you think you'll be cruising around Europe regularly, we'll recommend something different to what we'd suggest to the customer who'll only ever take their car out on a sunny Sunday afternoon to the pub. We also advise

people to think about future resale – get us to build you something too wild and it may take you a while to find another buyer with similar tastes to your own.'

Endorsing the exceptional standards to which Rennsport works is upmarket car retailer HR Owen – or, more specifically, its recently launched luxury and sports car division, HR Owen Ecurie, which lists

August sees one of its quarterly open days. Meanwhile, Rennsport is also recruiting for new junior technicians to join the team.

And that's not to mention the sheer volume of work already lined up for those pristine workshops. Since Rennsport started numbering its new-builds three years ago, it has reached car number 56. Add restorations on top of that, and factor in that

“ Since Rennsport started numbering its builds, it's reached car number 56 ”

several of Rennsport's cars on its website.

The next few months will be busy for the Cotswolds-based Porsche specialist. It will be exhibiting at the Silverstone Classic in late July and also has a stand at the Goodwood Revival in September; 20

99 per cent of UK-based customers bring their cars back for servicing, and you start to see the sense of such a large building. Clearly, as well as making a good first impression, Rennsport makes a lasting impression, too. **PW**

Fairly typical of an unrestored air-cooled shell and relatively sound, too, compared to many



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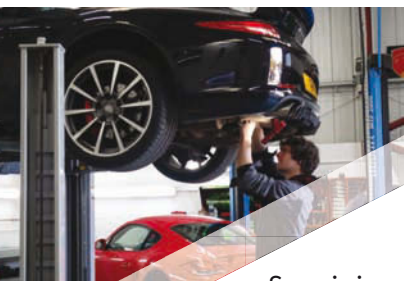
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PROJECTS

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THE TEAM

STEVE BENNETT

996 C2/944 LUX



Well, miracle of miracles I've sold my 944 Lux, within mere minutes of putting it online. I'm pleased to say that it's gone to a *911&PW* reader, who handily lives near 944 gurus, Augment Automotive.



KEITH SEUME

912/6 'EL CHUCHO'



While 'El Chucho' will probably never be totally finished (what 'project' ever is), at least I can enjoy regular drives now on great local Cornish roads. It's been a struggle at times, but I'm reaping the rewards.



CHRIS HORTON

924S, 944



Resealing the 944's rear light units proved to be a fool's errand, but I kinda got there in the end – and made some useful if not joyful discoveries along the way. I won't be rushing to repeat the job on the 924S, though!



PETER SIMPSON

356C



So it's time to start collecting parts for project rot box. To be fair it's better than I first expected: I can only see a few parts missing at the moment – a door glass and a screen being the most obvious.



BRETT FRASER

BOXSTER 3.2S



Wow, summer is certainly here and the Boxster is spending much time with the roof down and I'm just enjoying the drive. It's dressed for the summer, too, with fresh paint on the rear apron and door mirrors.



JOHNNY TIPLER

996 C2



As you can see opposite, the 996 has received a new Turbo look front-end courtesy of Porscheshop. No space opposite, though, to say that I've now sold the 996 and replaced it with a Boxster 986 S!



JEREMY LAIRD

CAYMAN S



The saga of the springs continues. The defective front springs have been replaced with H&R to moderate acclaim. A tolerable medium-term solution should be achievable, but hindsight says Ohlins.



MORE FRONT THAN SAINSBURY'S

When the splitter on Pig Energy's ersatz 996 GT2 front panel started to look the worse for wear, rather than mend it, Johnny Tipler got a new nosecone fitted



JOHNNY TIPLER

996 C2

Occupation: Freelance writer
Previous Porsches: Carrera 3.2, 964 C2, Boxster 986
Current Porsches: 996 C2
Mods/options: Modified induction/K&N filter, remapped ECU, Dansk exhaust
Contact: john.tipler@paston.co.uk
This month: New Turbo look front end

Normally it's when the flashing blue lights suddenly appear in my mirror that I break out in a cold, cold sweat. The boys in blue are on my trail – at least proving they're awake. However, it's their dormant colleagues who've been giving me grief during the couple of years that 996 Pig Energy has worn its competition-style 997 GT2 Cup front panel. The reason being that its projecting front splitter more often than not grated on sleeping policemen, chipping off shards of glassfibre to the point where it began to look a little sorry for itself. I'd slow right down for all traffic-calming humps regardless, negotiating them at zero miles-per-hour in 1st gear, much to the chagrin of following traffic, which would not be aware of, nor care less about, the extravagant Cup-style nose. And there's no excuse really, unless I was doing a Nordschleife

trackday where the merciless Karussell banking would make short work of it, or indeed those massive Mexican topes encountered in and out of every village during La Carrera Panamericana which were tall enough to ground our 914 on every one. No, the damaged nosecone panel would have to go. The splitter was an integral part of the whole nosecone so it couldn't simply be detached and replaced. I asked a couple of glassfibre specialists if the lower section of the panel including the splitter could be cut down to resemble the 997 Sport Classic's, or the existing one removed and repaired, but while I considered these rather costly options, along came Ian Heward from Porscheshop and made me an offer I could not refuse: 'we'll put a new one on for you, Johnny,' he said. 'We've got a spare 996 Turbo front and we can fit that and it will finish the car off nicely.' My mind raced. How would that

Tipler's 996 gets a new face, with an added smile

On the ramp and fully primed for paint. Turbo front end sits higher than previous GT2 inspired nose





look? The broad flanks of the 996 C4S are fronted by the Turbo nose, though the 996 Celebration model (launched 2003, 1963 units built) is the same narrow bodied C2 as mine, and that sports the Turbo nose. Fair enough then, let's do this! 'You'd better leave it with us for a week,' said Ian. 'It'll take that long to remove the old one and paint and fettle the Turbo one.'

Conveniently I'd called in at Porscheshop's new premises at Hartlebury trading estate between Worcester and Kidderminster *en route* to an electric photoshoot in mid-Wales, so I left the 996 there and hitched a ride with my snapper chum who kindly deviated for me.

When I went back to collect the car it was a jaw dropping surprise. Not only did Pig Energy have a new face, it had completely changed its personality. Gone was the sham race car look, replaced by something much more grown-up and special. And clearly it wasn't about to grind itself to buggery on those sleeping policemen any more. Sure, prudence is always a virtue as the suspension's low-slung, but the Turbo front panel is also curter and less vulnerable than the stretched out panel it replaced. Ian described the installation

process: 'The panel's new old stock; don't forget it's probably 15 years old now – the last of the 996 Turbos was '04 – and it's got a secondhand splitter on the bottom.' I'd asked for the air vents and ducting to be clad with mesh to keep the garbage out, and they were panted black like the old ones. What I wasn't expecting though was the 'moustache' grille in the upper facet of the nosecone. 'We did that as a surprise, Johnny,' says Ian. 'I thought you'd appreciate that; it sets it off rather well, don't you think?' Well, yes, I suppose so. It's certainly not a run-of-the-mill look, not even 996 Celebration, C4S nor Turbo. And the black splitter on the bottom is discrete, too. 'I could have put one of our Turbo front splitters on, which angles forward, but it's glassfibre so it would have defeated the object; because you want a bit of pliability to it, so this one's polyurethane.' So much for what's visible. 'A lot of work goes on behind the scenes, bracketing and straps, trimming the scoops,' he points out. 'We bond the grilles on the inside of the panel at the rear of the air ducts. And we had to put some extra brackets in where your central radiator mounts on those captive brackets (if you had one fitted), but we've kept your

original air scoops behind there. Once you mesh it you can't see it, but because it's a conversion you have to do some work around the bracketing underneath, and the straps and the scoops. We've blacked out your bumper bar, and you wouldn't have known that if I hadn't shown it to you, but if it were silver it would stand out a mile.' As for the overall look, 'I think the car looks classier and more stylish now, especially as it matches the proportions of the ducktail. The old Cup bumper matched your boomerang wing, but this suits your ducktail. And no-one's going to say, "oh, that's a Turbo look," because it's just a nice generic bumper, isn't it. I think it was a really good call.'

And so do I. The Dear Leader agreed – 'the dog's bollocks,' he averred. It's given the car a new lease of life, aesthetically, though I'm not so sure it's as aerodynamically competent as its predecessor: travelling swiftly on the autobahn recently I could feel crosswinds playing with the front end, which might not have been the case previously, though to be fair it was pretty breezy at the time. The main thing is though that it is now proof against sleeping policemen, and I can rest easy with that. **PW**

Above and below: Tipler's Bitsa, as in bits of this and bits of that! We have a Turbo front-end, with an added 'moustache' grille, GT3 side-skirts, a RUF ducktail and C4 wheels. And visually it works, too!

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THE MYSTERIOUS CASE OF THE LEAKING TAIL-LIGHT HOUSING

Prising out the 944's rear light housings to reseal them was a bit of a mission, reports Chris Horton, and brought a less than encouraging discovery about the car's possible past. Photographs by the author



CHRIS HORTON

924S, 944

Occupation
Consultant editor,
911 & Porsche
World

Previous
Porsches 924S
Current
Porsches
924S, 944

Mods/options
The two cars are
virtually standard,
apart from slightly
wider tele-dial
wheels for the
924S, and throttle-
response cams for
both. Original is
best, I think – for
day-to-day road
use, anyway

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This month
Attempting to
reseal the 944's
tail-light housings
against the body –
and sometimes
wishing that I had
left well alone...

It was one of those classic 'Eureka!' moments. Further to my campaign to eliminate any trace of exhaust fumes from within the 944's cabin (see my report in the July issue), I had convinced myself – rightly or wrongly – that the rear light units were no longer sealing properly against the bodywork. There certainly appeared to be quite a lot of water entering the right-hand rear corner of the cargo area, and that was the side of the admittedly then rather dilapidated tailgate that still had a reasonably sound joint between glass and frame. And the tailgate's perimeter seal was a relatively recent replacement, too, so I didn't suspect that as the culprit.

I subsequently spent several increasingly frustrating hours, spread over a period of three or four days, trying to figure out why, despite diligently using the correct Porsche mastic strip, I simply could not form a good,

reliable seal between the plastic mouldings and the bodywork. Which was doubly annoying because, if the lights had been almost impossible to remove the first time, embedded as they were on 32-year-old adhesive that effectively made the securing nuts completely redundant, they were only marginally less difficult the second and third times. That stuff is STICKY, believe me.

But then, looking at the high-resolution photos of the process that I had taken and uploaded to my lovely brand-new iMac, I felt sure that I had spotted the problem. (I'm not trying to sound like a commercial for the Apple Corporation here, but that latest screen is so much better than the now seven-year-old job that it is replacing – another iMac – if only because I can crank up the brightness to a reasonable level without the thing going into a sulk and turning completely black until I restart the machine. But I digress.)

I had already realised – for the first time since buying the car, more than 17 years ago – that the rear light units were not a matching pair. The one on the right looked a little newer than that on the left – suggesting a replacement – but I could see no obvious signs of the accident damage that might have prompted this. (Oddly, and slightly worryingly, it was the stud holes in the left-hand aperture that I discovered had for some still unknown reason been enlarged slightly.) Both of the tell-tale vertical seams in the rear panel seemed OK – and I could examine them from inside the shell as well as from outside – and all of the spot-welds at the base of the light apertures appeared to be 100 per cent original, too.

When I directly compared the best images of the two rear corners of the car, however, it was suddenly all too obvious – or so I concluded, anyway. The light from the fill-in flash that I was using appeared to

The original plan had been to change the 944's leaking tailgate, but more in hope than expectation Horton reassembled the old spoiler, and thus far it remains on the car – which does look the better for it (above). Ancient mastic sealant was so solid that it took time and patience to prise the light units out without cracking the brittle plastic (below), but the warm spring weather helped





show a very minor but none the less evident distortion on the roughly inch-deep vertical face immediately above the right-hand light housing (see photos above), and I can only assume that the movement there must have pushed in by roughly the same small but vital amount the inner mounting (and thus sealing) flange.

It is a discovery that is neither surprising – even if I have never damaged the car, it would be remarkable if it hadn't suffered a minor bump or two in the 14 years before I bought it – nor particularly significant. There are, after all, plenty of other bodywork issues to address. It's rather disappointing, though, because we all like to imagine that our cars have never been bashed (well, I do, anyway), and I know from similar but today far more obvious historic damage on my E39 BMW – shockingly poorly repaired after a rear-end shunt when it was just two years old – that it would probably be impossible fully to rectify the 944 without creating even more future problems.

My first attempt at making up the difference, as it were, was simply to add just a little more mastic at the 'low' point along the top of the right-hand aperture, and also in the gap at the front outer corner

of the light housing. But that wasn't particularly satisfactory, with the material squeezing out such that it was not only visible, but also so that its obviously sticky surface would quickly pick up and retain grit and dirt. In the end, and after much deliberation, I took my cue from whoever had enlarged the light unit's mounting holes on the left-hand side of the car, ultimately taking them out to 8mm with a good, sharp drill bit. This seemed to allow the entire moulding to be raised just enough not only to close up the gap along the top edge, and even at that front outer corner, but also to look much neater, too.

At this point – and bearing in mind that I tend to write these reports in fits and starts – I was going to conclude by saying, 'And so far, so good.' But then, just a day after I had finally resealed the rear lights – or so I thought – we had a brief shower of rain, and the amount of water that quickly accumulated inside the cargo area had to be seen to be believed. Optimistically I blamed first the then still-to-be-addressed tailgate (see later text), but gently playing an airline around the right-hand light housing, with my other hand on the inside of the boot space, no less quickly proved

that there was still a small but crucial gap just about where the reversing-light section meets the indicator. I am plainly going to have to add still more mastic, and try again. More on that next time, anyway.

Meanwhile I have had, as I suggested at the end of my last missive, a bit of a rethink on the tailgate. You will recall that I was planning to do a straight swap with Richard Baker, owner of the white 924S trackday car that I 'borrowed' for the modified-Porsche extravaganza in our May 2017 issue. In fact, all Richard wanted from mine was the aluminium perimeter frame, which was already partially separated from the glass, and to which he was intending to fit a lightweight plastic window. That plan may yet come to fruition, but in the course of idly pulling together all of the various bits and pieces of hardware that I knew would be needed to rebuild my own tailgate (or to fit my 944 rear wing to Richard's 924S tailgate) I appear to have, well, rebuilt my own tailgate.

To be honest, it is still missing any kind of mastic between the lower rear part of the glass and the adjacent frame, and also the rubber lip seal that fits between that area of the frame and the underside of the

Clockwise from top left: dirt on the inside of each light unit showed how much rainwater had been running down over them. Note plastic-only blades to help ease them away from old mastic. Previous owner had bent over these stiffeners inside boot to allow the bulb-holders to be removed. Right-hand light housing is newer than left. Look closely and you can see the very slight distortion at the base of right-hand body seam (arrowed). Below, from left: cleaned right-hand light unit with new mastic strip in place, and then first-fitted. Several goes later it's still not as neat as the left-hand housing, but probably the best that is achievable without some fairly major structural work



TECH: PROJECTS



polyurethane rear wing. But I think I have proved to my satisfaction that said wing does, indeed, exert the required clamping force to keep the frame and the glass firmly in contact with each other, even without the mastic, and in the course of preparing another how-to feature about bonded-in windscreens (more about that in a future edition) I think I have found the perfect product. More on that in due course, too.

I have even managed, without trying overly hard, to adjust the tailgate's combined mounts and hinges, such that the projecting body of the right-hand latch mechanism no longer scrapes against the rear panel as the window opens and closes (see photos above). I wanted to make sure that I would be able easily to undo the four tailgate securing screws when I drove down to Richard's place for the intended swop, and in the course of doing that one fine morning in late spring decided that I might

just as well take the entire thing off. As you do. That obviously enabled me to twist it very slightly when replacing it, and thus correct a misalignment that had probably existed for many years – although I am fairly certain that the paint wasn't thus damaged when I first started driving the car.

In truth, the tailgate will in any case have to come off again at some point in the fairly near future – both hinges are partially seized, and I want to buy and fit some new sealing gaskets to sit beneath them – but knowing now how easy that will be is a significant incentive. It will also be the most convenient way of refitting that lower rear lip seal that I was talking about a moment ago. Whether or not my cunning plan permanently to reunite the glass and the frame with the aid of the aforementioned sealant will work remains to be seen, but it has to be worth a try. Watch this space.

Other than that, all good on the 944 front.

(But no movement on the now dormant 924S.) The occasional momentary misfire that probably helped destroy the previous rear silencer seems miraculously to have cured itself, and the only other engine issue is a slight rattling from one or more of the valve lifters after a cold start, but that disappears soon enough. Overall oil consumption is perhaps a bit high, and there is a distinct whiff of burning lubricant in the general miasma of exhaust fumes that still persists in the cabin at low speed, but that too disappears when you get going with the windows up, so maybe it's all related to the previously rather haphazard tailgate/rear-light sealing. (Although I do have a feeling that the engine is a little bit 'tired'.) I've still neither an oil-pressure gauge nor a coolant-temperature gauge – the former has never worked in all the time I've had the car – but there is no sign of distress from either department. **PW**

Clockwise from top left: Porsche mastic (part number 000 043 172 00) costs about £50 per box, but has a multitude of other uses round the car and garage. Only problem was that each time the rear lights were fitted and removed the surplus could be saved only as an amorphous lump. It will be used eventually, though. The tailgate proved easier than expected to remove and refit. It will be coming off again before winter, though, for new hinge gaskets to be installed. Exhaust hanger was reclaimed by drilling out broken captive stud, and replacing with a bolt. Refitting tailgate allowed it to be adjusted such that the right-hand latch no longer catches on bodywork. Tailgate does open and close easily enough, but hinges are plainly in need of attention to free them up: it was almost impossible to rotate them without lever effect of the opening panel. Left: summer downpour quickly revealed the fundamental flaw in the so-called drainage channels between rear spoiler and glass. It was this scenario, believes Horton, that caused standing water to destroy the sealant between the glass and its light-alloy frame in the first place



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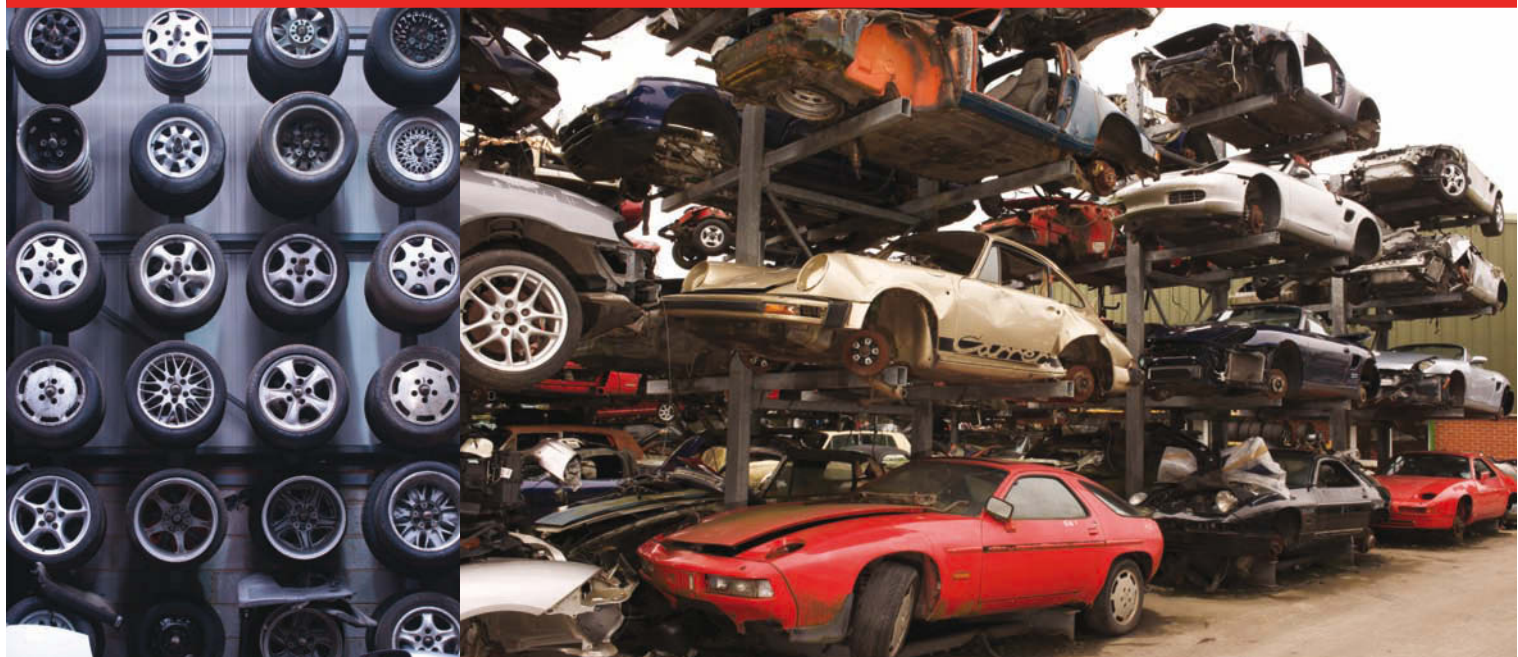
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ACTION THIS DAY!

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'Since 1984 I have owned something like 50 Porsches,' begins Darren, 'from 356s all the way through to a Cayenne Turbo. Among them have been several other post-1998 cars, and all of those had the usual rather annoying but certainly not often dangerous problem of corroded and unsightly heads on the wheel bolts.'

'My most recent acquisition was a 2006-model 997. It's a very smart, two-owner car with a comprehensive official Porsche history – which I have in my possession, including the original order letters and sales receipt, as well as a fully stamped service book and loads of other paperwork. It is 100 per cent original.'

'I took the wheels off to change the brake pads, and was deeply shocked by how easy all of the bolts were to undo. They were all screwed in correctly, but the conical washers that bear against the holes in the rims had turned

literally to powder, and as a result the bolts came undone with little more than the weight of a wheelbrace on them. This really freaked me out, because I had just driven the car over 150 miles.

'It's not as if there were any warning signs that I might have missed. The car's paintwork is good, but without being so good that it has obviously been tarted up for a quick sale – just the usual age-related stone-chips. In any case, I am a qualified coachbuilder and automotive refinisher, so I would know if it had been badly damaged and then repainted. And the previous owner was plainly so fastidious that he would surely have kept and passed on to me any relevant bills.'

'It was the same with the wheels. They look entirely original, with no signs of either kerbing or new enamel – and certainly not of having been cleaned with some acid-based product that might have caused the collars to corrode. And I would be very surprised if the corrosion had been accelerated by atmospheric conditions. The car was sold new in Tonbridge, Kent, and then lived in Birmingham, so almost certainly no salty

sea air to do the damage.

'I mentioned the situation to an old friend of mine, Verne, who owns and runs The Wheel Specialist in Fareham, Hampshire, and another friend and fellow Porsche man, Tim Barnard, who works with him. They just laughed. "We see them all the time," they told me. "In fact, sometimes those conical washers are so badly corroded that they actually separate from the bolts when you unscrew them, and are stuck inside the wheel – in which case we have to knock them out with a drift."

'Fortunately, I was able to "repair" the damage to my car with a set of 20 new wheel bolts – although even that ended up costing me quite a lot of money. But it could so easily have been very much worse. One or more of the wheels could have been damaged by not being secured firmly to the hub, or might even have come off altogether. I would urge anyone who owns one of these later vehicles to check immediately that their wheel bolts are genuinely OK.'

'And it's no good just looking at them while they

are fitted to the car. Even the heads are quite deeply recessed into the rims, and the only way you will ever get a proper look at the washers is to jack up the vehicle and physically remove them.'

A job for the weekend, then, if not for the very moment when you get home from work this evening. And if you happen to be reading this in a motorway service area, then dare I suggest that you check the tightness of all your wheel bolts even before you set off again. It might just save your – or someone else's – life.



Might your outwardly smart 997 wheels (or 996, Boxster, Cayman rims etc) be concealing disastrously corroded securing bolts, like these? In truth, it's the conical collars that are corroded, not the bolts themselves, but the result will be much the same, suggests Darren Collins. You have been warned!

RECYCLING IS GOOD – BUT A GENUINE REDUCTION IS EVEN BETTER

I receive a large number of press releases from vehicle and other manufacturers. Most of them, inevitably, are of little interest to me, professional or otherwise. (And far too many of them, I might add, are not only dispiritingly badly written, but also contrived around some specious 'eco' message or other. But that's quite another story.)

How refreshing, then, to see this eye-catching headline on a recent item from Michelin: 'Changing tyres at 3mm unnecessary, costly and harmful to the environment'. The full story is too long and detailed to repeat here, but suffice it to say that, contrary to what you might expect, the manufacturer is rejecting calls from parts of the tyre industry – which presumably wants to sell us more of its products, in the face of what are likely to be gradual reductions in the distances we drive –

to raise the minimum legal tread depth for road-car tyres from 1.6mm to 3.0mm.

The company's argument is simple and, I think, entirely correct. Modern technology makes it possible to provide high levels of performance and grip from brand-new and throughout a tyre's life right down to the current legal wear limit. (With the obvious sub-text that top-quality tyres – such as its own – will always perform better than poor-quality casings.) Replacing tyres before they are fully worn does not guarantee greater safety, it adds, and no current studies have established a direct link between tyre tread depth and accident rates.

What is more, calculates Michelin, changing tyres too early would in Europe alone result in an additional 128 million tyres being used each year, and that would create an additional nine million

tonnes of CO₂ – with further pollution generated by car owners' journeys to have them fitted. Quite apart from the environmental impact, says Michelin, the move would represent a significant and unjustified increase in costs to consumers. Indeed, accountancy firm Ernst & Young estimates an extra six billion euros in Europe alone.

The problem, continues Michelin, lies in the simple fact that currently tyres are comparison-tested for their obviously important straight-line and lateral grip – as well as for noise and rolling resistance – only when they are brand-new. And that, of course, is a condition which by definition they enjoy only very briefly.

Instead, it argues, we should be looking at how tyres behave as that once reassuringly deep tread is abraded. The company's own tests have shown that a

'premium' tyre worn down to the legal limit can in dry conditions offer precisely the same levels of grip as a cheaper brand-new cover. And we all know that smooth racing 'slicks' are the tyres of choice for motorsport – on dry Tarmac, anyway. Similarly, on wet roads some worn tyres – again, presumably, Michelins among them – can perform as well as some new ones.

What is more, claims Michelin, the rolling resistance of a tyre at the legal tread limit can be as little as 80 per cent of the same tyre's in its brand-new state. Thus using the cover until it reaches that legal limit increases the time – and quite obviously the distance travelled – during which it is in its most fuel-efficient condition.

It's an intriguing and persuasive argument, but one which I suspect will take a little time to gain traction (no pun intended). Many people

are plainly happy to drive on the most appallingly badly worn and/or damaged tyres – just look at some of the finally discarded horrors outside your local tyre fitting depot next time you are there – but for we hopefully more responsible Porsche enthusiasts old habits will die hard, and deeper treads will continue to mean deeper reserves of grip.

That said, we famously keep our Porsches themselves running for far longer than the motor-industry average of currently just under 14 years, and these days sustainability is everything. So maybe – eventually – we shall begin to see ever-increasing consumption of raw materials and other resources as the threat it is undoubtedly rapidly becoming, and genuinely reduce rather than merely recycle. And our tyres will be a very good starting point.



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RESISTANCE IS NOT FUTILE – IN FACT, IT’S ESSENTIAL

I very much like the idea of using LED light bulbs in vehicles in place of the old-fashioned incandescent variety, certainly for auxiliary illumination, if not necessarily for headlamps. (And do bear in mind that by no means all such devices carry the necessary Type Approval marking that renders them legal for road use.) I am gradually fitting more and more of the appropriate type throughout my house, too.

In part that is because they consume less energy than a conventional bulb, but primarily because as a consequence of that they also generate far less of the waste heat which can eventually – and sometimes very quickly – cause so much damage to surrounding plastic lenses, trim and the

like. Oh, and because by and large they are at the same time brighter and crisper than those low-tech filament jobs. Never mind that my 944’s interior ‘light’ is more like a black hole; the so-called instrument panel illumination has become just a rather dangerous joke.

LED lamps do have one inherent drawback, however, and certainly so in more modern vehicles – or even in those older ones with slightly more sophisticated electronics. They draw less current than the original items, which although generally a Good Thing (for the reasons outlined above), often upsets peripheral systems which depend upon sensing that load for their own correct operation.

Install LED brake-light

bulbs in your older Porsche that also has cruise-control, for instance, and you will discover that the latter no longer works. (No great loss to me, because here in the UK I think it’s more trouble than it’s worth, but plainly many of you, both here and elsewhere in the world, will have other ideas.) The electronics detect the reduced load as a fault – and it’s the application of the brakes and thus the brake lights, remember, that instantly switches off any selected cruise function – and the system won’t even engage in the first place.

I was naturally interested, then, to read about the latest release from Norway-based Bergvill F/X, now well established as what you might call a facilitator of LED

lighting and other modern – and sensible – electronic upgrades for older Porsches. It offers what it calls a solid-state smart ballast device to replicate the necessary resistive load on the brake-light circuit when needed, but crucially without generating excess heat – and, no less crucially, designed for what looks like ultra-simple installation.

In a 993, for instance – and the device has also been tested in a 928, a 964 and a 996, we are told – you simply remove one or other of the rear-light lenses and, using the Scotchlok-style blocks supplied (not my favourite way of joining wires, but in this scenario probably the most practicable), connect the resistor in accordance with the clearly illustrated

instructions. Just one resistor per vehicle is required, and the unit is compact enough to tuck neatly inside the lamp housing when you come to refit the lens.

The resistor, one of a growing number of products of this nature, costs just US\$43, and is available direct from the company’s website at bergvillfx.com. And if while browsing that website you don’t find at least another half-dozen must-have items – including radios, speakers, aerials, leads and even replacement ball bearings for your 964’s or 993’s self-raising rear wing – then I would be very surprised, indeed. Where else might you now buy a brand-new Bosch ‘hammer’ diagnostic machine? No, I don’t know, either!



Clever little ‘ballast’ device (middle photo) from Norwegian Porsche electronics specialist Bergvill is designed to allow earlier Porsches with cruise-control also to run LED brake and tail-light bulbs. It fits neatly behind one of the rear light units – and only one unit per car is required. ‘Scotchlok’-style connectors permit quick and easy wiring

BEARING UP UNDER THE STRAIN

Further to my IMS/RMS story in these pages a couple of months back, I hear from the specialist handling the job that some progress has been made. Apparently they have managed to find on eBay a used but standard and perfectly serviceable Porsche spigot – the component that effectively couples the IMS bearing between the intermediate shaft and its visible outer flange.

It cost £70 – quite steep for a (second-hand) piece of metal as relatively small as that, you might think, but better that, as I suggested last time, than having to buy from Porsche itself a complete brand-new intermediate shaft and spigot for about £800 (they are not sold separately), and then either discarding the shaft or, in order to fit it, stripping and rebuilding the

engine. Which would naturally be even more costly.

Even now, of course, it may well be that the original spigot, still inside the after-market IMS bearing, itself still in the crankcase, is of a pattern that can be used again with a typically £20 proprietary bearing. (The car’s owner had been persuaded that it would be better to remove the after-market IMS bearing, and in this context return the engine to standard.) In which case that eBay purchase would be effectively £70 wasted.

Again, though, better that than taking everything apart and then being unable to track down that vital single component to enable the car to be put back into service – and already it has been off the road for several months. Sometimes you just have to assume the worst, and accept

any incidental expenditure such as this as what you might call collateral damage. Or even as some kind of insurance policy against the inevitable Sod’s Law.

Incidentally, Porsche seems to appreciate – or has itself discovered the hard way – that it can be quite difficult to fit the IMS bearing’s outer flange without at the same time very slightly damaging the perimeter seal as it enters the naturally rather sharp-edged rebate in the crankcase.

Buried deep within the official workshop manual, I am reliably informed, is a recommendation very lightly to polish with ultra-fine wet-and-dry paper the two points where the crankcase halves meet, in order to eliminate the minuscule step between them, and thus a possible pathway for oil to leak through. And so

it would seem perfectly permissible to give the same treatment to the outer edge of the rebate – which is what had most likely damaged the seal in this particular power unit in the first place.

Just make absolutely certain, of course, that you then remove all traces of abrasive and aluminium dust, or you could simply be storing up a whole new world of pain and expense for the future.



Whether or not this early double-row IMS bearing has the right central spigot to allow an after-market set-up to be converted back to standard specification is uncertain, but even the possibility that it does shows the value of stockpiling old parts for a rainy day



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GOING THE EXTRA MILE

I sometimes use what might appear to be a rather mysterious acronym in my how-to stories in the magazine: WYAIT. To me, it stands for While You Are In There – ‘There’ being deep inside the complex workings of a modern Porsche, such that to put everything back together without attending to any related problems that you encounter would be false economy at best, extravagant madness at worst.

It was a situation facing Auto Umbau technician Terry Parker when for my recent how-to on repairing a corroded rear crossmember in a 997 – his own 997 by that time, having bought it from his boss, Robin McKenzie – he had the car’s engine and gearbox out for the required access to the affected area of the body shell.

It was obviously going to be a good opportunity to fit new coil packs (and spark plugs;

why on earth would you not replace those while you had the coils out of the way?), and naturally the poly-rib belt driving the alternator, the water pump and the power-steering pump – although it is generally so easy to replace, even with the engine in situ, that there is no excuse for leaving it until it starts to perish.

It didn’t take long, though, before Terry realised that, as so often happens in this scenario, his parts bill was going to be quite a lot larger than he had anticipated. (And let the record show that all this – and not least the corrosion in the rear crossmember – had been reflected in the price he paid Robin for the car.)

The so-called tandem pump, for instance, which provides the vacuum for the brake servo, was predictably badly corroded, and so too the aluminium ferrule at each end of the rubber coolant hose immediately above it. In fact,

Terry also had to buy the aluminium housing via which the engine end of said hose is attached to the coolant jacket. There was no way that he was ever going to separate it from the old hose without seriously damaging something.

The coolant pump itself was another item likely to need changing sooner or later, so off that came, too, and although Terry would probably have changed them all on cosmetic grounds alone, at least one of the drive-belt’s tensioner/idler rollers had two hairline cracks in the plastic outer section, most likely caused by the very visible corrosion on and resultant expansion of the steel centre section.

The car had also been suffering from a rough and heavy clutch action, said Terry. That was soon traced to wear at the business end of the clutch slave cylinder’s pushrod, where it bears

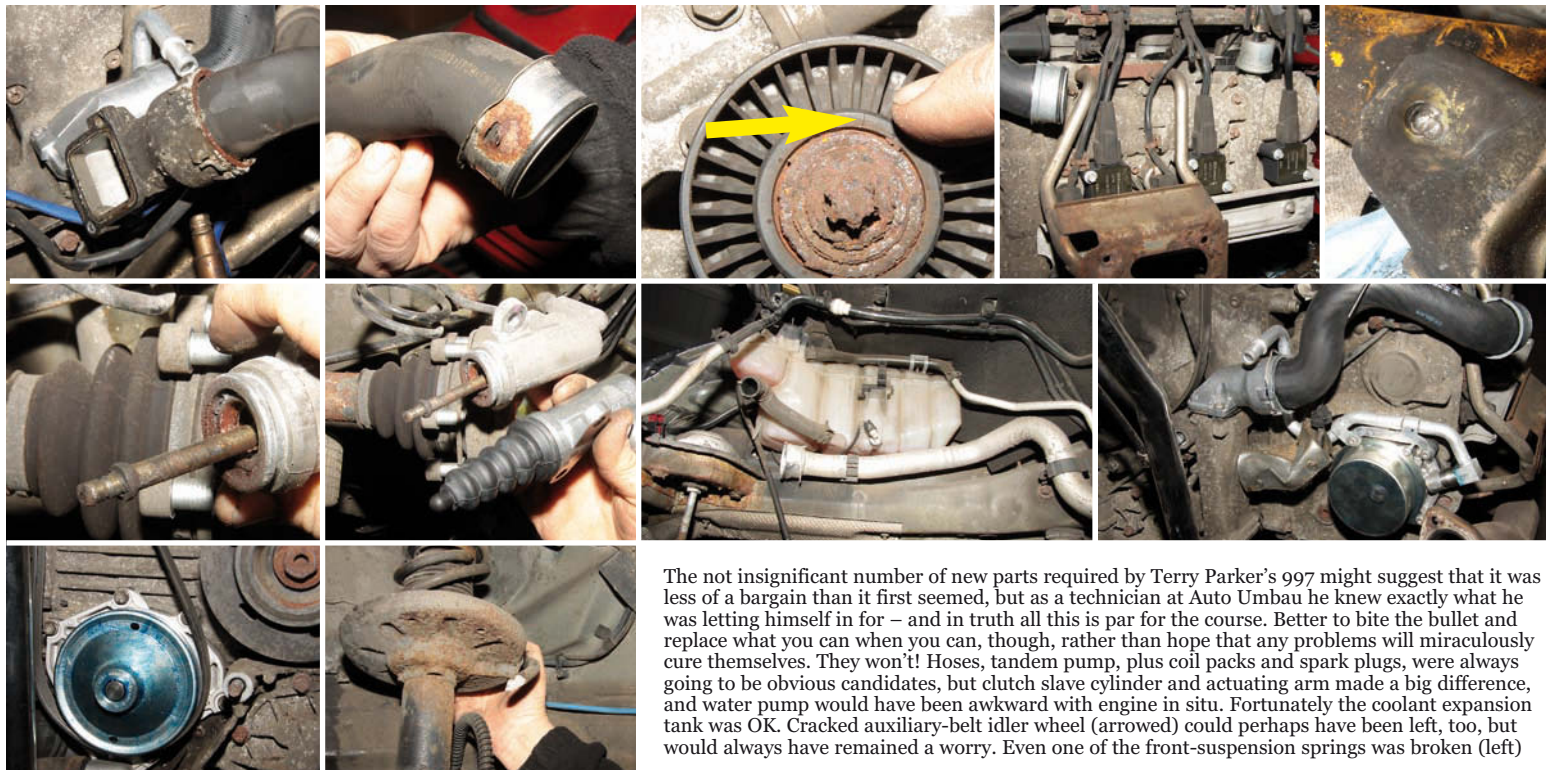
against the clutch actuating arm, but it would be no use replacing one without the other, and so he had no alternative but to separate the engine and transmission. At least the clutch itself was OK – and Terry did take the pressure plate off to make sure – and having got that it was only natural to have a look at the IMS bearing’s flange for oil leaks. Again, mercifully, no problem there – and so for fairly obvious reasons no merit in taking off the outer flange just to see what might be inside.

All of this exploratory work came at no practical cost to Terry, who was benefitting from his own expertise and spare time – plus Auto Umbau’s facilities, of course; and he gets his parts at trade prices – but you can see how even a nominally ‘good’ car like this can soon start to rack up huge bills, such that many owners will either live with the

resulting deterioration in the driving experience (and the car’s inherent value), or else take fright and move it on to someone else, who either doesn’t know about the implications, or perhaps doesn’t care.

Oh, and even that wasn’t quite the end of Terry’s odyssey. With the car up on the lift for all this work to be carried out, and thus the wheels and suspension hanging free, it didn’t take his experienced eye long to spot a broken front road spring.

‘All in all, it was quite a major overhaul,’ he told me. ‘But at least now I know the car should be good for another 20,000 miles or more without needing too much attention, and for me that will be many years from now, if I keep it that long. And if I don’t, I shall be able to sell it safe in the knowledge that I’ve done all I can to preserve its long-term health.’ **PW**



The not insignificant number of new parts required by Terry Parker’s 997 might suggest that it was less of a bargain than it first seemed, but as a technician at Auto Umbau he knew exactly what he was letting himself in for – and in truth all this is par for the course. Better to bite the bullet and replace what you can when you can, though, rather than hope that any problems will miraculously cure themselves. They won’t! Hoses, tandem pump, plus coil packs and spark plugs, were always going to be obvious candidates, but clutch slave cylinder and actuating arm made a big difference, and water pump would have been awkward with engine in situ. Fortunately the coolant expansion tank was OK. Cracked auxiliary-belt idler wheel (arrowed) could perhaps have been left, too, but would always have remained a worry. Even one of the front-suspension springs was broken (left)



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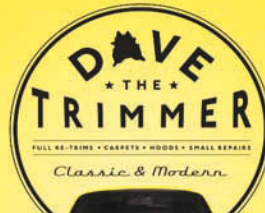
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928: BACK TO THE FUTURE

History tells us that the 928 fell short of being a 911 replacement, but it did go on to be Porsche's GT model from 1977 to 1995, which is more than a lifetime in car production terms and a testimony to the 928's very forward looking design and concept. On the margins for years, the 928 is finally having its day

When launched in March 1977 the Porsche 928 was intended to replace the 911, then thought to be nearing its sell by date. As we know, the V8 front-engined coupe ultimately turned out to be little more than a diversion for Porsche, with the 911 re-established during the 1980s and never looking back. Nonetheless the GT car remained in the Porsche line for almost two decades – over twice as long as any 911 generation has – and during that time was kept fresh with regular powertrain updates. It seemed so much like a glimpse of the future when unveiled that even as it was retired in 1995, to clear production space for the all new Boxster and 911, it still looked fresh and modern.

A far more complex car than the 911, not least due to its rear-mounted gearbox, integrated with the differential, the 928 gained a reputation for fearsome running costs. So once released into the market by their early owners, these scaled up "transaxle" cars found few takers, and used values scraped along the bottom; until quite recently any 928 that mustered a five-figure price had to be in better than average condition.

But in the present, rising classic car market that was always going to change, and in the last couple of years we've seen 928s welcomed into the "young classic" club, and values rising accordingly, price tags of over £50,000 now seen. The cheap 928 still exists, though, with scruffier cars changing hands for under £10,000, hence a certain amount of confusion over the Porsche's status. So how much should you pay, and, of equal importance, what are the problems you need to look out for?

DESIGN, EVOLUTION

When the spaceship-like coupe was announced, badged simply "928", the 911 had not long entered the "impact bumper" era, which gives us a certain perspective. So does the fact that in the UK it was priced over a third higher than the then current 911, the SC, when it went on sale in the UK in February 1978, at £19,500. Its all-new, water-cooled, single-cam-per-bank V8 of 4.5 litres with Bosch K-Jetronic injection produced 240bhp and 257lb ft torque, which could be mated to either a three-speed automatic gearbox supplied by Daimler-Benz (but in a Porsche casing) or a Porsche five-speed manual with a

"dog leg", left-and-back first. The body, with its distinctive flush lying headlamps and glassy, rounded tail was made from galvanised steel (apart from the bonnet, doors and front wings, which were aluminium).

The cabin was extraordinary for the time, especially compared to the even then antiquated 911 interior, with an instrument panel that pivoted when the steering-wheel was adjusted, a large, slanted centre console, rear seats sculpted around the "Weissach axle", and a chess board pattern for the seat velour distorted enough to cause an optical illusion. The 928 was a sensation, this reflected in its collection of Car of the Year in 1978, a time when such awards still meant something big.

The 928 was built for little more than a year before becoming the 928S, its engine bored out to 4.7-litre which brought a 60bhp increase to 300bhp and 26lb ft more torque, at 283lb ft. This addressed criticism that the 928 had not been quick enough for a Porsche. The main exterior differences were a new style of alloy wheel – still 16-inch diameter and running 225/50 Pirelli P7s, the original low-profile tyre – to replace the original "telephone dial" rims, and front and rear spoilers.

This last of the line 1995 928 GTS still looks modern. Imagine how the 928 looked in 1977?





Interior architecture changed little over the years. Dash pod famously tilts with the steering wheel. Note cluster of controls next to handbrake. This GTS is a rare manual version

This model ran until autumn 1983 when it evolved into the S2, using the same capacity engine but with the latest Bosch fuelling, LH-Jetronic, which boosted power to 310bhp and torque to 295lb ft. Given that three-quarters of 928s were being delivered with automatic transmission, Porsche made the autobox – now four-speed – standard, and the five-speed manual a no-cost option.

In 1986 the 928S4 arrived with its 5.0-litre, quad cam 32-valve motor, output rising to 320bhp and 317lb ft torque. This model was automatic only, a situation rectified in March 1988 when the 928S4 with Sport Equipment, a model in its own right, was introduced, equipped with a five-speed close ratio manual gearbox. Although having the normal S4 output, higher-lift camshafts and revised engine management along with a lowered final-drive ratio improved performance: 0–62mph was pared from 5.9sec to 5.6. The SE pack also included a limited-slip differential, sports suspension – the springs and dampers were 10 per cent firmer – and lighter wheels, 8Jx16-inch at the front with 225/50 tyres and 9Jx16-inch rears with 245/45s. Inside, the SE had black leather sports seats with cloth inserts and red piping.

This model was replaced in February 1989 by the 928GT, also with a manual gearbox and sports suspension, but with a

higher rev limit and modified exhaust tickling power up to 330bhp (torque remained as per the S4). In September 1991, for the 1992 season, it was replaced by what would be the final, and now most coveted incarnation, the 928GTS.

The V8 went up from 5.0 to 5.4 litres, increasing power slightly, to 335bhp, but significantly increasing pulling power, to 369lb ft. The motor also received two extra balancer weights on the crank, making eight, and transmission was either a five-speed manual (with modified shift) or a four-speed automatic, both boxes with a new oil cooler. There was also an electronically controlled differential, derived from the exotic 959, while new, 17-inch Cup Design wheels were fitted, 7.5-inch wide at the front (225/45 rubber) and nine-inch wide rears (225/40). Larger brake discs and calipers went with them. Outside, the tail profile was revised a little and more streamlined door mirrors fitted, while inside the spec included electrically adjusted leather seats, air-conditioning, cruise control and a 10-speaker sound system.

generations of the V8 are happier working at medium rather than high revs, sounding a bit boomy when extended. The automatic transmission, even the early three-speeder, suits the car much better than the manual, whose shift is lifeless and sometimes difficult – not a gearbox that encourages you to use it for fun.

Handling is wonderfully progressive and predictable – it could not be more different to contemporary 911s – thanks to the even weight distribution the transaxle provides. Indeed, so well located is the rear suspension that power slides are not really an option, especially on the later cars with their wider, grippier tyres. Despite its considerable width the 928 does not have much interior luggage space unless the two small rear seats are folded down, so while it's a good cruiser, it's effectively one for two people.

TIMELINE

March 1977
Original 4.5-litre 928 revealed at Geneva motor show

September 1979
Replaced by the 928S, 4.7-litre

September 1983
Evolved into the 928S2, same engine capacity

September 1986
928S4 launched, 32-valve 5.0-litre engine

March 1988
Manual only 928S4 with Sport Equipment added to range

March 1989
928GT launched, very similar to 928SE

September 1991
Final 928, the GTS, manual or automatic, is launched

January 1995
928GTS production discontinued

WHAT YOU'LL PAY

You can still buy a 928 for under £10,000, but while only a few years ago that would have given you a quite wide choice, it now means a tatty auction lot or a privately advertised car that needs to be trailered away. The price for a good running car starts at £10,000, with the better presented but still way off concours cars on

DRIVING THE 928

If you want a truly sporting Porsche, the 911 or even the 944 is a better bet, because the 928 was always a grand tourer. All

SPECIFICATIONS

	Built	Engine	Power	Torque
928	1977–1979	4474cc V8	240bhp/5500rpm	257lb ft/3600rpm
928S	1979–1983	4664cc V8	300bhp/5900rpm	283lb ft/4500rpm
928S2	1983–1986	4664cc V8	310bhp/5900rpm	295lb ft/4100rpm
928S4	1986–1989	4957cc V8	320bhp/6000rpm	317lb ft/3000rpm
928GT	1989–1991	4957cc V8	330bhp/6200rpm	317lb ft/3000rpm
928GTS	1991–1995	5396cc V8	340bhp/5700rpm	369lb ft/4250rpm

Maintenance costs, 928 (including labour and VAT)
 Oil service £216
 Major service £492
 Automatic transmission oil change £210
 Front/rear brake discs and pads £594/468
 Cambelt renewal (during service) £510
 Four shock absorbers (Bilstein), and wheel alignment £1675
 Four premium brand tyres (225/45 ZR17, 225/40 ZR17) £400
 Workshop prices supplied by SCS Porsche

WHAT YOU'LL PAY

£5,000–£10,000 Basket case, and much work needed inside and out
£10,000–£20,000 The price range of most average condition 928/S2/S4s offered privately
£20,000–£30,000 For this price expect good mechanical order and solid bodywork
£30,000–£40,000 Starting price for the 928GT and GTS; rarity gives manual cars extra value
£40,000–£60,000 Collectors bracket, usually for GT and GTS, most often seen at classic specialists
£60,000-plus "Time capsule" cars in pristine condition, at top end classic dealers

mainstream advertising platforms priced from £20,000.

Switch to dedicated classic car websites and you see the lower mileage, better preserved examples offered as collectors' cars. The most desired model, unsurprisingly, is the last-of-the-line 928GTS, the best ones usually in the hands of classic dealers and mostly priced at £40,000 upwards, although you will see the odd one for under £30,000.

As mentioned in last month's Market Watch page, one London dealer, Hexagon Classics, has taken the lead with 928 pricing, offering a UK supplied 29,200-mile, 1995 928GTS for £94,995; it has the rare manual gearbox, which Hexagon says people prefer now that the cars are no longer everyday drivers.

WHAT TO LOOK FOR ENGINE

The 928 engines are extremely long lived – provided they are properly serviced. 'Life of 200,000 miles is not unknown, but it is important that the coolant is changed every two years, including fully

draining the block by removing the two block drain plugs each side,' says 928 expert John Speake of JDS Porsche based in Cambridgeshire. 'Otherwise there is a risk of head gasket failure.'

This maintenance should include cambelt changes every five years or 60,000 miles, whichever is sooner. John tells us that this can be an achievable DIY task: 'There are comprehensive guides with pictures on the internet to show how this can be done by a competent home mechanic.'

The more complex, four-valve cylinder-heads did not cause any reliability problems, but the 5.4-litre engine in the GTS is prone to heavier oil consumption. This is due to a different design of piston, with a shorter skirt length and which were therefore less well supported, causing more bore wear than normal. 'Porsche replaced some engines under warranty,' John reports.

If the engine is misfiring, the mass airflow sensor (MAF) may need replacement. 'They typically have a life of 75,000 miles – less if the majority of journeys are under 10 miles,' says John, who specialises in supplying rebuilt MAF units.

WHAT THE PRESS SAID

'It is easy to dismiss the 928 as almost dull in a corner. And then you think of how fast you are going through the corner. It is remarkable how quickly the car will turn, without any fuss. Traditional Porsche aficionados may claim that Weissach has taken the fun out of Porsche driving, but the 928 is just as much fun as a 911, it just does it all much more subtly.'
Autocar 928 Road Test, 28th October 1978

'The expected performance is there and so is the superb roadholding and handling. It has marvellous brakes and steering, and as a high-speed autobahn express for two it takes some beating. Yet for all this perfection it emerges as a shade impersonal, lacking the emotional magnetism of an Italian or even British exotic.'
What Car? 928S2 Road Test, August 1984

Another management related problem is that the fuel-injection ECU on S4s and later is prone to failure. 'The hybrid circuit is poorly protected against electrical impulses in its inputs,' John explains. 'We offer a far more rugged version, which we often fit as preventative maintenance.'

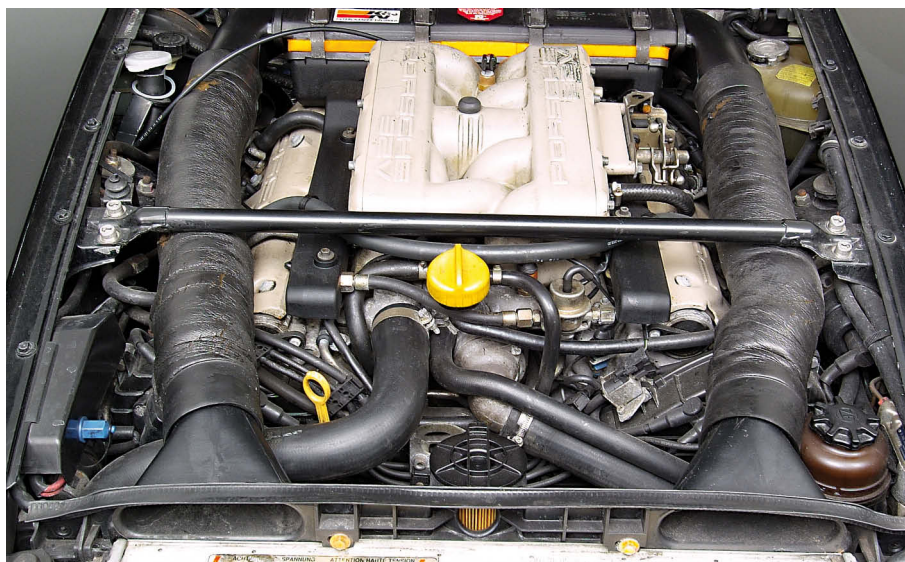
TRANSMISSION

Most 928s are automatic, and the three-speed gearboxes, and the four-speeders from the 1983 S2 on, are reliable, but again this is dependent on proper maintenance. 'The autobox is trouble-free as long as fluid and filter changes are observed at 24,000 mile intervals,' John warns.

Autoboxes from 1984 onwards were fitted with a "flex plate" coupling between

Essential styling changed little over the years. Late model GTS got flared arches to cover the larger rubber fitted. Rear reflector strip was a stylistic nod to the then current 911, which was the 993





Over its 18-year lifespan the 928's engine capacity grew from 4.5- to 5.4-litres and with it power increased from 240bhp to 340bhp

the engine and the driveshaft in the torque tube. 'The splined drive shaft is known to move forward in the plate clamp under acceleration, but does not slide back, which causes an unwanted loading on the engine crankshaft thrust bearing,' John explains. 'If this tension is not checked and released regularly, then it can result in crank and engine block failure.' Hence a pre-purchase inspection by a specialist should include a flex plate and crank end float test, he advises. Additional clamps are available on the aftermarket.

A mechanical limited slip differential (LSD) was available as an optional extra until 1990 when Porsche introduced its PSD hydraulic-electronic limited slip diff as standard. 'The hydraulic liquid used is brake fluid and this should be changed every two years,' John says. 'But because the hydraulic unit is hidden behind the right hand rear wheel arch cover, this essential maintenance is often forgotten.' Drive shaft rubber boots can split and cause the universal joints to wear prematurely, so should be checked annually.

SUSPENSION, STEERING AND BRAKES

Suspension, including the Weissach axle designed to limit lift-off oversteer gives little trouble, but at this stage wear is the bugbear. 'Most 928s now have in excess of 100,000 miles and if the dampers have not already been changed, then they will need to be replaced,' John reckons. 'And while suspension and roll bar bushes are long lived, they should be checked regularly.'

The rack and pinion steering can leak fluid onto the boots on the end of the steering rack, while the rack's mounting bushes can become spongy if contaminated with engine oil, causing the steering to feel vague. Inner track rod joints

wear, but can be changed easily.

Late 1986-on S2 cars were fitted with Brembo four-piston calipers; earlier cars have sliding, single piston calipers. 'The Brembos can suffer from corrosion between the brake caliper body and the keeper plate,' John reveals, 'and this can stop the pads from freeing off, causing the brakes to bind.'

ELECTRICS

The fuse/relay board on the 928 can look frightening at first glance, having 45 fuses and 24 relays on the later cars – as the years went by, the electrics became ever more complicated, with seat memories, anti-lock brakes, temperature sensing on the cylinder heads, tyre pressure monitoring and PSD being added piecemeal. Yet the electrics are not fundamentally troublesome: 'The worst thing that can happen to 928 electrics is inexperienced hands adding, with poor workmanship, extra items such as alarms,' John observes.

BODYWORK

Despite galvanisation and the use of aluminium body panels, sheer age means corrosion is to be expected. 'Surface corrosion of the aluminium will cause the paint to bubble, and rust can be a problem under the rear window seals and the spoilers,' John says. 'And fuel pipes run inside the right hand rear wheel arch and under the car, and should be treated with anti rust protection.'

VERDICT

The 928 has a reputation for very costly maintenance, and this alone has held down values. But while it is a highly complex car,

at least by the standards of the day, it is also a reliable and dependable car.

The problems usually start when maintenance stops – therefore a pricier car with a sound service history is always a far better prospect than a very cheap one with no paperwork.

The model in most demand is the manual 928GTS. But all 928s are impressive – provided you accept that the driving experience is very different to a 911's. **PW**

SPOTTED FOR SALE

Private seller
1989 928S4 automatic, blue, black leather, part history, 143,000 miles, £16,500, Kent

Porsche specialist
1991 928S4 automatic, white, black leather and cloth, full Porsche dealer history, 31,000 miles, £30,000, Devon
williams Crawford.co.uk

Classic car specialist
1990 928GT, manual, 18-inch wheels, 162,000 miles, £33,700, Brussels, Belgium
gem-classic-cars.com



USEFUL CONTACTS

JDS Porsche
jdsporsche.com
A long standing 928 expert, particularly in respect of engine electronics; our technical consultant for this Buyer's Guide

928Spares
928spares.co.uk
A leading UK specialist in 928 spares, maintenance and modifications, and which also sources remanufactured 928 parts

Braunton Engineering
brauntonengineering.co.uk
Based in north Devon, and has worked on and restored 928s for a number of years

SCS Porsche
scsporsche.co.uk
A Porsche specialist located near Exeter with 928 expertise

BUYERS' CHECKLIST

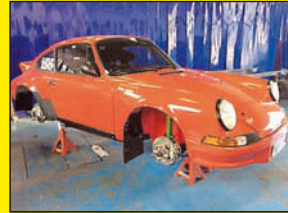
Engine cambelt changes are essential for reliability – check for documentary evidence of this work
Look out for smoking on 5.4-litre GTS, which is prone to heavier oil consumption
Misfire may be due to a faulty mass airflow sensor.
Non running engines could have a failed fuel-injection ECU
The autobox's oil has to be changed every 24,000 miles for long term reliability
Drive shaft rubber boots can split and leak fluid
If a 928 is still on its original dampers, they are bound to be worn out, and soft
Aftermarket alarm systems can cause electrical problems
Check for aluminium corrosion on the bonnet, doors and front wings

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Strengthening mods for front legRING FOR DETAILS



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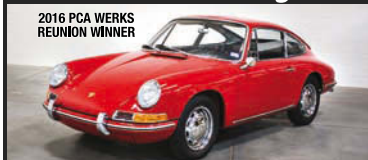
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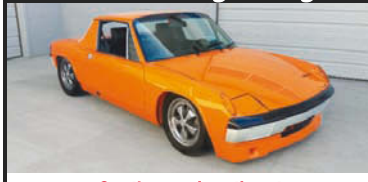
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DEALER TALK: 911 VIRGIN

As general manager at this Buckinghamshire-based Porsche specialist, Tom Harris sells all models, air and water-cooled, but also has an eye to the future and what electric models might soon be on his premises



How long have you been in the Porsche business?

911Virgin was established in 1996 by my half-brother Henry (who owns the business), his wife Sharon and my late father. I joined in 2001 straight out of university, and for several years have overseen day to day operations.

What Porsches do you specialise in?

The simple answer is pretty much all Porsches from around 1980 onwards. We start with the 911SC, although we sold a Carrera 3.0 recently, and work through to the very latest models. That includes the transaxle cars, Boxsters, Caymans, Macans, Cayennes and the occasional Panamera.

What's your cheapest, and most expensive Porsche presently in stock?

Currently our cheapest car is a 987-model gen 2 Cayman S priced at £26,995, and the most expensive is a 997 GT3 gen 2 car at £103,995.

What would you recommend as the best "first Porsche" to buy?

It depends upon the customer's budget. People are waking up to the fact that well looked after 996s are good cars and represent great value for money, and consequently make an ideal first 911. We like the second generation 987 Boxsters and Caymans – they are fantastic cars to drive and represent a reasonably priced entry to the Porsche world. A little further up the scale the second generation 997s, either a Carrera or Carrera S, provide a great driving experience and are a sound purchase.

Where do you get your stock from?

Almost all our cars are purchased from private individuals. We are fortunate that having been in business for many years and having established a large customer base, quite a few of our customers will return to us when they want to sell or upgrade. It's always good to see cars that we know well coming back to us. One of the most difficult parts of our business is obtaining the best cars; we reject many more than we purchase to ensure a high standard.

What warranty do you give, or sell?

Our warranties are underwritten by ourselves, as we do not believe it is possible to get the same level of customer care from an insurance or third party warranty. All of our cars come with a comprehensive three-month 3000-mile warranty that covers all faults. We also offer a warranty that provides cover for the first 12 months of ownership at a cost of £500. This warranty covers engine and gearbox faults with no excess or limit on claims up to the value of the car.

What's "hot" at the moment?

In the more specialist category, 997 GT3s are selling well, and there is always a strong demand for good Boxster Spyderys and Cayman Rs. In the air-cooled market, the wide-bodied 993s are much sought after.

What's best value at the moment?

At the lower end of the scale the price of decent 996s is starting to move upwards, but

they still represent a good value way in to Porsche ownership. Further up the scale 996 GT3s are, in our opinion, currently excellent value.

Name a car that you have sold in the past that you would happily have kept for yourself

We recently sold a 987 Boxster Spyder with only 4000 miles and the perfect specification of bucket seats, Spyder wheels, sports exhaust and a short shift manual gearbox.

What car do you drive every day?

Family commitments are such that I cannot drive a sports car as my everyday vehicle, but I am fortunate that I get to drive a different Porsche almost every day as part of our ongoing quality control process.

What are your plans for the future?

We will continue to focus on what we do well – sourcing good cars and offering a first rate service to our customers. We pride ourselves on taking time with people that are new to the Porsche world – 911 virgins – and enjoy guiding them through the selection and purchase process.

For the longer term we are considering how the increasing focus on electric vehicles will impact on our world. While we believe there will always be a strong market for performance petrol engine cars, we are alert to the changes that hybrid and electrification may bring.

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HELPING YOU BUY YOUR PORSCHE

PCP – THE PITFALLS

In the UK last year £31.6bn was borrowed for cars, 80 per cent of it for 'Personal Contract Purchase' (PCP) whereby you don't own the car but monthly payments are lower than for traditional hire purchase. Porsche's scheme is called Solutions.

But it's emerging that many of those using PCPs for new and used cars don't understand what they're signing up for, and finding themselves in a pickle. According to the price guide Parkers, almost half of users do not realise their contracts have a mileage limit, and that exceeding it incurs an additional cost per mile – which could be as high as 30p, or £300 for every additional 1000 miles. Parkers also found that a quarter did not know the length of their contracts.

Another common misunderstanding is that you can hand the car back early. In the later stages of a contract you can, but you'll still have to pay the outstanding instalments. Early in the contract you can't, meaning you'd have to sell the car privately and cover the remaining debt – and the price you'll get in a sale may be less than the amount you owe. Solutions is a great way to finance a Porsche, but as with all PCPs, you need to know what you are letting yourself in for.



HELPING YOU RUN YOUR PORSCHE AVOID HOLIDAY DRIVING HASSLES

Brits driving their Porsches to mainland Europe this summer should note that, despite the UK still being in the EU, it is all too easy to expensively fall foul of the law. For example, as from the beginning of 2017, all drivers in France needed to display a Crit'Air sticker detailing how much their car pollutes; you could get an on-the-spot fine of over £100 for failing to do so (stickers can be obtained in advance from www.certificat-air.gouv.fr). And company car drivers may also need to complete a VE103b form, an authority to travel, before taking their company car to Europe – this provides formal confirmation that the driver has permission from the owner to drive the car abroad.

This advice comes from the AA, which also has some common sense tips, such as taking a spare set of keys, because replacing a lost set on holiday could be a lengthy and expensive business. Go to theaa.com for full holiday driving advice.



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944S2

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944



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993 G	911 SHE
993 POR	CAR232A
993 RUF	930 FR
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'P911 SAB'. Tel: +44 1628 633745. Email: mocflyer@hotmail.co.uk.
£9950 P0817/047

REGISTRATIONS

JJI 9115

Registration for sale
'JJI 9115', number on retention. Tel: 07810 058297. Email: s-blakeley@sky.com.
£2000 P0817/014

C4 TGA

'C4 TGA' number plate
Number plate for sale. Tel: 07799 894494. Email: retoworks@hotmail.co.uk.
£2000 P0817/013



C'mon you SPURS!!
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£2500 or very near offer P0817/031

L911 BAD

Porsche cherished number
'L911 BAD', complementary number for a special 911. Tel: 07415 252911. Email: keithnicko@aol.com.
£3850 P0817/045



'JAZ 4911' private number plate
Private number plate, dateless number plate currently on a car, can be moved onto retention or onto your car, (JAS, JAS 911). Tel: 44 7944 494840. Email: pssall@hotmail.com.
£1000 P0817/029



SWANN or SWAN
Super number plate for anyone named Swann or Swan, it isn't often that you can get a perfect name plate, so grab this whilst you can. On retention certificate, at just £1999 it is a real bargain, excellent investment for the future, pass it on to your children, please call or email, do not text. Tel: 07020 923542. Email: saltydog1@ymail.com.
£1999 P0817/020

REGISTRATIONS

LES 190

'LES 190' registration for sale
Until recently on my 964 but have now decided to sell the registration, on retention certificate, no VAT or other charges to pay. Telephone with offers. Tel: 07425 153194. Email: lezdawes@gmail.com.
£3500 P0817/046

HELL CAR

Porsche registration HELL CAR
'HE11 CAR', looks great on a 911! Tel: 07415 252911. Email: keithnicko@aol.com.
£3850 P0817/011



Porsche 911 Arsenal plate
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£3500 P0817/010



'TEL 993' cherished registration number
The ultimate dateless Porsche registration number plate, Terry with Porsche 993 or other Porsche owner, held on V778 retention document for immediate transfer. Tel: 07887 593939. Email: taylor@thackers1.fsnet.co.uk.
£2990 P0817/028



GTS number plate
'GT55 RED', a great looking plate on any Carmine Red GTS model, Macan, 911 etc, held on retention, not currently on a vehicle. Tel: 07787 292572. Email: scott.easton@ntlworld.com
£499.99 P0817/008

AUCTION/SHOWROOM/CLASSIFIED

MARKET WATCH

The much hiked prices of the ultimate Cayman, the GT4 track special, have now fallen back, with many unsold cars on the market. But if that particular variant has peaked, values of 981-model Caymans in general appear strong thanks to a wave of affection for the last of the six-cylinder cars, says David Sutherland



Want a Cayman GT4? There's no shortage of ultra low-mileage examples out there

It's tempting to assume that every time Porsche introduces another special, limited run model, such as a new 911 GT3 or the 911R of spring 2016, it is pandering to investors, knowing these cars will go straight into secure collections, to be kept long term or sold on for a killing when demand peaks, usually within a few months. This is nothing new, arguably the first of these being the 911 Sport Classic of 2009, 250 of which were built.

The Cayman GT4 unveiled in November 2015, six months before the end of Cayman 981 production, was unusual in that here was an achingly desirable, track-spec, motorsport-bred machine that was not a 911. What was familiar, however, was the way that GT4s were hoovered up almost exclusively by on-the-ball speculators who were soon re-selling at asking prices in the early £100,000s, way over list, and seemingly achieving these figures. Just one more made-for-driving

Porsche destined to be a four-wheeled but static investment chip from the outset, it appeared.

It's therefore rather surprising to see, 18 months on from launch, that this once hottest of property is hanging round the market in surprisingly large numbers. In fact you might even call it a glut. On a random day we saw 35 advertised, nearly 10 per cent of all GT4s delivered in the UK. What was even more surprising was that 22 of them were for sale at Porsche Centres – indeed, the Porsche network had almost as many GT4s as it did the regular Cayman S.

All were priced at between £85,000 and £95,000. Most had under 5000 miles on the clock, and some with not much more than delivery mileage. The most "used" GT4 we spotted was a white, 3447-mile example at Porsche Centre Colchester, priced at £88,995.

The basic list price of a GT4 in late 2015 was

£64,451, but of course all would have been specced up considerably, with for example PCCB ceramic brakes, Club Sport Package, carbon seats and Sport Chrono Package, so a sensible estimate puts the effective list price in the mid to high £70,000s. Therefore asking prices are presently up to £20,000 above list.

Of course, PCs are forbidden by Porsche to sell new cars above list price. But that does not apply to used cars, so they can join in the free-for-all. Interesting, the lowest mileage GT4 in the entire network – a grey metallic 2016, 65-plate car with 384 miles, at Porsche Centre Silverstone – had already had two keepers, rather shorter than the average lengths of ownership for a late model Porsche, we'd guess.

So what is happening in the GT4 market? 'Nobody seems to be buying them at the moment – we've not sold one for a while and haven't seen

any that have sold recently,' says Phillip Woolley of Porsche specialist 911 Sport in Horncastle in Lincolnshire, who has sold 19 GT4s since they were launched. 'We get four or five calls a week offering to sell us GT4s.'

The obvious conclusion is that the GT4 market has cooled and that sellers, including PCs have yet to make the realistic price cuts in order to shift them. Incidentally, price expert Glass's does not even attempt to value GT4s – but with this kind of car you might as well close the values app on your phone anyway, because the situation can change so quickly.

We suspect that if he could edit his recent past, Phillip might have avoided acquiring GT4s for stock. 'We've got five, one advertised, four in storage,' he reveals. 'I think that buyers now want to spend list or below on them.'

Phillip admits to being baffled at the large number on sale at PCs, but suggests the reason might be a simple one – the new 911 GT3, deliveries of which will soon be made to customers. 'I think that the number on sale might be because with the new 911 GT3 coming soon, PCs are encouraging Cayman GT4 owners to bring them back in exchange, hoping to make a profit out of them.'

But Phillip knows that he has seen the best of the GT4 days, when prices hit close to £110,000. 'Everybody's worried where prices are going,' he tells us. 'The GT4 people are a different breed to GT3 owners, I don't think the

car has quite the same strong, lasting appeal.'

However, if GT4s are fading, it seems that, albeit lower down the price range, other late-model Caymans, especially the GTS with its extra power and equipment, are enjoying strong values. This may be because as the last of the normally-aspirated, six-cylinder Caymans, they have a traditional appeal that the current 718 four-cylinder turbocharged cars can't match.

Priced from £55,400 when launched in spring 2014, you will struggle to buy a GTS for that money, the cheapest ones being a thousand or two more than that, and average prices probably £61,000 to £62,000. Porsche Centre Brooklands in Surrey took the prize for the highest priced Cayman GTS, a white 2015/15-plate car that had already three owners in its 5900-mile life, asking £68,995. Porsche Centre Exeter was close behind, its red car of the same age and 9300 miles but just one owner priced at £68,850. The cheapest Porsche Centre GTS was at Porsche Centre Swindon, another 2015 example but in white, with 6000 miles and three owners, stickered at £59,850.

Tellingly, these still youthful cars are beginning to show up for sale on classic car websites. So if GT4s in particular are losing some of their fire in the market, it looks like 981 Caymans in general are one of the select band of cars that attained collectors status the minute it was discontinued. **PW**



Manual only for Cayman GT4



981 Cayman residuals strong



Cayman GTS prices barely dropped



981 Cayman has cachet of flat-six

TRIED & TESTED

With 911 & Porsche World's roving tyre kicker, Kieron Fennelly

PORSCHE 993 C4S 1995 62280 MILES £99,995

Registered in November 1995, this C4S was probably the first RHD version to arrive in the UK. Unusually, there is no sunroof, a factory-delete option, and the Certificate of Originality which accompanies the documents indicated that this was a show car: initially it belonged to Porsche Cars GB before going to AFN at Guildford as their demonstrator and was not sold to the first of its five private owners, a Mrs Ann Miles, until April 1998. The invoice for this transaction shows £65,995 and 19,000 miles. Her ownership lasted until 2005 when the mileometer read 42,000 miles. In twelve years four subsequent owners have added barely 20,000 miles. A very full service record shows services by Rivervale Porsche until 2005, and subsequent routine work by Paragon, who also carried out a Xenon headlight conversion in 2008, and JZM who attended to electrical gremlins, the result of a corroded earth strap. The multiplicity of carefully filed invoices shows this 993 has throughout its life wanted for nothing in terms of service. A measure of how 993s have appreciated is a bill of sale dated January 2008, when Alexander David Motor Co of Sunninghill sold the C4S to owner number three for £33,000.

Finished in metallic viola, apparently one of only two UK 993s in this shade, this 993 is positively lustrous, but the paint quality has the uniformity of a new car: there is no discernable stone damage, the window seals are like new and there are no obvious signs of respraying, however minimally. Deeper valance, side skirts and chrome exhaust tips are all factory fit. The glass has distinctly period factory-etched announcements that an immobiliser is fitted and a discreet Porsche Club GB sticker shows a previous owner, James Auckland, was a member, always a good sign. Pirelli P Zeros look new and the 18 inch alloys are unblemished. The cabin is immaculate, the fluffy grey carpet has none of the usual grubbiness, the grey leather upholstery has minimal signs of wear and the patina and smell of leather are that of a car which has always been kept like this rather than deep-cleaned occasionally. Clearly derived from the blown 993, this early C4S even has a turbo boost gauge, which of course reads zero at all times. The boot carpet has two tiny holes where the spare wheel-mounted DVD player has rubbed, but the electrical connections and the general under-mat area are undisturbed. The engine compartment is very clean, looking as if it has always been maintained as such.

The C4S fires with the characteristic restrained



burble of all 993s. Clutch take-up is smooth, gearshift precise and the controls all feel taut: there is an almost new car feel which completely belies this 993's 60,000 miles. Years of garaging, careful use and fastidious maintenance have resulted in a twenty-year-old which simply feels nicely run in. A test drive designed to elicit faults finds none: uncomplaining and surprisingly flexible at low revs, but eager, responding instantly to the throttle this 993 can clearly offer its full factory performance quotient. Damping is firm and the steering displays all the precision you would hope. Combining dynamics and refinement, this 993 serves up the rare pleasure of just how impressive these final air cooled Porsches must have felt when they were new. **PW**



CHECKLIST

BACKGROUND

The 1974 Turbo introduced the first wide bodied 911 and, by the 1980s, its flared rear wings had started a fashion which would never go away. Porsche responded with several wide body, low volume specials in the 1980s, but the 'Turbo look' did not become a series production model until the 993 C4S of 1995. This used the Turbo's underpinnings and the blown car's wider body. The Turbo model's static, larger rear spoiler, side skirts and deeper front valance were Exclusive Department options frequently specified

WHERE IS IT?

Both partners at Dunt Barn, Jonathan and Lee, are keen collectors and enthusiasts themselves, and simply aim to provide a professional, safe and flexible solution to vehicle management. With storage being the main focus of the business, sales and other services come naturally. "We hit on the idea of offering professional storage services, says Lee. "I already had a couple of cars of my own in storage and as a Ferrari club member, I knew people who might want to store their own cars so, with a collector partner, we set Dunt Barn up two years ago and opened this specially built facility in January 2017. We are primarily storage, but sometimes owners ask us to find takers for cars we store, which is how this C4S is for sale."

Dunt Barn, Hurst, Berkshire. Tel: 0118 934 1088, info@duntbarn.com, duntbarn.com

FOR

Original, unblemished, new car-like condition, which extends to drive experience

AGAINST

Hopefully the condition and value won't dissuade new owner from ever using this 993 properly

VERDICT

Quite exceptional C4S, but at this price may end up as investment. Being a unique car in terms of spec and condition, it sits at the top of the 993 market

VALUE AT A GLANCE

Condition	●●●●●●●●
Price	●●●●●●●●
Performance	●●●●●●●●
Overall	●●●●●●●●

CLASSIFIEDS

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£1500 P0817/022

911 RUR

Number plate '911 RUR'
Perfect number plate for the new 911R, on retention, offers in the region of £7000. Tel: 07710 627575. Email: juliajenkin0@gmail.com.
£7000 P0817/027



Andrew, Andrea, Andre, Andy??
This number plate is A1 for anyone named Andrew, Andre, Andrea or Andy, absolute bargain buy and will continue to rise in value. Imagine this on your motor, get in touch if you want it, it is on a retention certificate so a very simple operation, send me a message now. Tel: 07779 767605. Email: rugbytickets@rocketmail.com.
£1950 P0817/018

PARTS

1977 Porsche 911 parts for sale
911 parts, bonnet, boot lid, bumpers, various instruments/sundries. Tel: 07879 466740. Email: keith@seatown.co.uk.
P0817/039

PARTS



Genuine Porsche 1969 911S 901/07 transmission
1969 Porsche 911S 5-speed transmission of type 901/07 with the serial number 7191337, these 901/07s were the last Porsche transmissions of type 901 made before Porsche changed to the 911 transmission. A 901/07 comes with the following gear ratios: 1st: 11:34, 2nd: 18:34, 3rd: 22:29, 4th: 25:26, 5th: 29:23, transmission shifts easily into all gears, gears turn smoothly, email me for more. Tel: 34 272 001413. Email: sallysally17@gmail.com (Spain).
£1500 P0817/025



Genuine Ruf wheel set for Porsche 993
Ruf wheels (complete set of 4) for Porsche 993 including tyres Pirelli P Zero. Front: wheels 8.5 J x 18 H2 ET58, tyres 225/40 ZR 18 N4 DOT 0910; rear: wheels 10 J x 18 H2 ET66, tyres 285/30 ZR 18 N4 DOT 3607. Wheels are in perfect condition, no damage at all, tyres are perfect with 7 mm profile, centre caps not included, fits C2, C4, Targa, S, 4S, RS, Turbo. Tel: 32 475 723939. Email: guysteen68@gmail.com (Belgium).
£2400/€2750 P0817/021

PARTS



Sports exhaust tips for 997 Turbo
Chrome sports exhaust tips for 997 Turbo in perfect condition. Tel: 07530 365573. Email: stephenanderson911@gmail.com (Ballymena).
£250 P0817/026



Porsche Carrera 911 996 3.6L engine
'02 '03 '04 '05 Porsche Carrera 911 996 3.6L engine assembly motor dropout, 80K miles, engine runs great, email me for more photos if interested. Email: gavinblaublau@gmail.com.
£4000 P0817/024



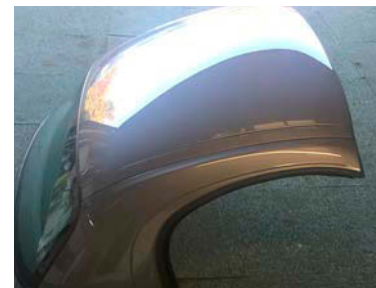
911 996/Boxster S 6 speed carbon aluminium gearknob and handbrake
Carbon/aluminium gear knob/handbrake, 6 speed, 996 Boxster S, grey leather gaiter, silver bezel, cost a fortune new, good used condition. Tel: 07855 308771. Email: skinleymax@yahoo.com (Worcs).
£800 P0817/002

PARTS



Speedline Corse wheels for sale
Speedline Corse 3 piece wheels, fronts 8.5x18 and rears 10x18, all ET 18, until recently fitted to my 911 3.2 Supersport therefore will suit 930s and other wider-bodied Porsches, will require refurbishment therefore first £500 secures, collect south Nottingham. Tel: 01159 235088. Email: raypage836@btinternet.com.
£500 P0817/049

Porsche 911 Fuchs wheels
Set of 6" x 16 & 7" x 16 Fuchs wheels, anodizing is excellent, no kerbing, red centres, £1495. Also breaking 1987 911 Cab, window frames with quarter glass £150 each; blue seats, clocks; mint rear engine lid, no spoiler, £395; side sills, wings, bonnet hood (small tear 1.5"), G50 rear suspension arms, drive shafts, loads of parts left over from previous 911 projects. Tel: 07974 758272. Email: julia.may@hotmail.co.uk (West Glamorgan).
P0817/040



Boxster hard top for sale
To fit a 987 model in Seal Grey, collection only from Brackley, perfect condition. Tel: 07711 182888. Email: pr@trade-events.co.uk.
£995 P0817/030

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With 911 & Porsche World's roving tyre kicker, Kieron Fennelly

CAYMAN 981 2013 '63' 49,300 MILES £30,000

A measure of the strength of 981 residuals is that only now are early examples of the 2.7 reaching the £30,000 threshold. This particular one owner car offsets a relatively high mileage with a generous specification which took its original retail price to £48,000. Supplied by Mid Sussex Porsche, the white 2.7 was first registered on 5 October 2013 and lived in Shepperton, though having covered almost 50,000 miles in three years it has barely had a chance to cool down. Two services were carried out, both by Reading PC, at 20,929 miles on 3 February 2015 and at 41,363 miles in July 2016, which also included brake fluid. New Continental Sport tyres appear to have been fitted at much the same time.

Sitting on unmarked 20-inch spoked wheels, at £2600 its most expensive extra, the Cayman looks immaculate and indeed it is. Inspection reveals that the PV has been resprayed, though vendor Ashgood says it rarely sees a Porsche where the front valance has not had paint at some point. The finish otherwise is unblemished and this extends to the interior where slight creasing of the driver's seat and scuffing of the door threshold are the sole signs of wear. Both luggage compartments are unmarked and this Cayman has seemingly served most of its time carrying its driver alone. Among other equipment specified for long days on the road are heated sports seats, PCM sat nav, electrically folding mirrors and a multi-function steering wheel. On the move, the Cayman is smooth and rattle-free and feels like a new car, the beautifully weighted gearchange in particular has none of the looseness of a well used 987. The ride is already on the firm side thanks to the low profile Contis and to have specified PASM would have been rather a waste of money. The consensus is that Caymans usually ride better on the standard, but less imposing at 18 inch alloys. The 2.7 is the smallest of Porsche's flat sixes since the original Boxster, but it is always very keen to get on with the job. With marginally less torque than its predecessor it simply asks to be revved and in this respect a reminder of those original highly strung, air-cooled, small capacity 911s except that the modern engine revs on to an intoxicating 7500rpm, averages 35 not 18mpg and will pootle along at 1800rpm if asked. The brakes are evidently original, the front pads appearing about two thirds worn, but the pedal is firm, travel minimal and retardation extremely authoritative, a noticeable



improvement over its predecessor.

A driver's car par excellence, here perhaps in its purest form, this flat-six 981 Cayman represents a lot of car for the money and, of course, they don't make them like that any more! **PW**



CHECKLIST

BACKGROUND

The 981 Cayman moved the game on considerably: the new 991 chassis meant the Cayman (like the 981 Boxster) gained a longer wheelbase as well as a wider front track. With noticeably shorter overhangs and a revised, 'corporate' rear, the new Cayman traded a slenderness which had hinted at the much admired 904 GTS for a rather stockier, though more potent appearance. The 3.4 flat-six of the S continued, now uprated to 321bhp and shared, incidentally with the 911 Carrera while the previous indirect injection 2.9 was superseded by a new DFI unit of 2706cc producing 271bhp. Porsche priced the 981 Cayman and Cayman S strategically at £39,000 and £48,000 respectively, well apart from the 911 Carrera at £71,000.

WHERE IS IT?

Ashgood Porsche is at Horton, just off the M25 at Heathrow's western extremity. Opened in 2012, Ashgood is a relative new boy on the block, but makes up in enthusiasm for what it lacks in history. Director Mike bought a Boxster in 1996 and never looked back. He sells a few classic Porsches from home and the Horton site concentrates on gen 2 987s and 997s and 981/991s. Ashgood sets great store by its preparation – "it's in our interest too," says Mike, "as we back our warranties ourselves – no third parties, and we carry out any routine mechanical work on site. If a customer likes a car but wants bigger wheels for instance we can do all that to close the deal." Ashgood sold 42 cars in February, its best month to date.

Contact: 01753 680558 ashgood.co.uk

FOR

High spec, manual gearbox, faultless presentation

AGAINST

Pub braggards will want a 3.4S

VERDICT

Rare opportunity to bag a three-year-old 981 Cayman for sub £30k

VALUE AT A GLANCE

Condition	●●●●●●●●
Price	●●●●●●●●
Performance	●●●●●●●●
Overall	●●●●●●●●

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PARTS



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£1995 P0817/048

MISCELLANEOUS



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Email: rashford@hotmail.co.uk (Dorset).
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£20 P0817/001

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93 issues from no 17 Sept/Oct 1993 to 107 Feb 2003 (exc issues 33, 45 and 48), plus issues 112, 116, 191, 192 and 193, buyer collects, reasonable offer considered. Tel: 07827 885723. Email: smunday1963@gmail.com (Cams).
£75 P0817/003

Porsche 959 official factory technical report 1986
Excellent condition, extremely rare, 24 pages with superb illustrations, German text, factory publication code WVK 104 710, an essential addition for the serious collector/owner, p+p free, will be carefully packaged and sent Royal Mail recorded signature, £150 secures. Tel: 07470 447017. Email: michaelocallaghan12345@hotmail.com.
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£150 P0817/017



Porsche magazines 911 & Porsche World
67 copies of 911 & Porsche World, mint condition, £100 on collection. Tel: 07712 710093. Email: rashford@hotmail.co.uk (Dorset).
£100 P0817/032

MISCELLANEOUS

Porsche books for sale

Excellence Was Expected, original version, first edition, £140; 911 Restoration, Haynes Porter & Morgan, £100; 911 Identification Guide, P Raby, £15; 964 Technical Guide Without Guesswork, Bentley, £25; Cars Are My Life, Ferry Porsche, £30; Porsche The Man And His Cars, Richard Von Frankenberg, £30; Ultimate 964 Buyer's Guide, Morgan, £10. 2004 996 press pack, £offers; 1998 993 press pack, £offers. Porsche Past and Present, Denis Jenkins, £10; Porsche 911 Buyers, Leffingwell 2002, £5; Porsche Carrera Dynasty by Smale, £15. Tel: 07462 563156. Email: cgpl200@gmail.com.

P0817/042

911 & Porsche World magazines

911 & Porsche World magazines, 247 copies with original 1st copy, full sets from 2001-2015, some from 1990 -93-95/2016, with 7 binders and supplements and collector editions, all excellent, £200 no offers; also GT Porsche mags, total 51 2006-2009, plus a couple 2010-2011. Tel: 07860 700486. Email: kevin997clark@yahoo.com (Tyne & Wear).

P0817/043

WANTED

Porsche 997 GTS Coupe wanted

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P0817/044

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Porsche 356 B 1600 Roadster T-5 1960, Manual Gearbox, LHD, Red with Black interior.



Porsche [911] 930 Turbo 3.3L 1985, Manual Gearbox, LHD, Black with Black interior.



Porsche 911E 2.7L 1971 Targa Manual Gearbox, LHD, Yellow, Original Colour Gold Metallic 8810.



Porsche 911 2.0L 1967 Coupe Manual Gearbox, LHD, Ivory White 6604 with Red interior.



Porsche 911T 2.4L 1972 Coupe Manual Gearbox, LHD, Slate Grey with Red leather interior.

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TIME MACHINE

Editor Bennett peruses the archives of *911 & Porsche World* from days gone by. What's changed? That will be everything and nothing...



AUGUST 2006 (ISSUE 149)

How's this for a road trip? With both Le Mans and the Nürburgring 24hr race taking place on the same weekend, we were faced with something of a quandary as in which we were going to go and watch? Each has its merits. Le Mans is the ultimate race, with oodles of Porsche history, but the 'Ring 24hrs is a madcap event that needs to be experienced to be believed. So what to do? Toss a coin? No way. In the spirit of endurance that Porsche is renowned for, we decided to do both!

The brief was simple enough: Once leaving Blighty we had 24hrs to get to both races and get back home. Our chosen chariot? A Speed Yellow 997 C2S. And we did it, too, catching the first few hours at Le Mans, before hoofing it 450-miles to the 'Ring for the early Sunday morning stint and a sunrise that made it all worthwhile. No frequent driver changes for us, or teams of physios, nutritionalists or masseurs. No, it's Jambons and Red Bull and a speeding fine! Amazing what you can do in 24hrs.

Elsewhere in the issue we drove a couple of rather special 911s: a 993 GT2 Evolution and a 996 GT3. This duo was doubly special because each had only 3000 miles on the clock. Both cars were part of a private collection, but the owner had decided that he wasn't using them enough and so decided to sell up and replace them with a brand-new 997 GT3. In a sign of the times, the potential value of these machines wasn't really touched on, because back in 2006, there wasn't such a mad frenzy surrounding super low mileage GT Porsches. One thing is for sure, it certainly wasn't in the millions, which is what a 3000-mile 993 GT2 would be if



it hit the market today.

In the back of the mag, in the 'Our cars' slot is one of our all time favourite *911&PW* pics. It shows the crankshaft from Johnny Tipler's 964 'Peppermint Pig.' 'So what?' you might say. Well, it's the fact that it's snapped clean in two. Yep, that's right, Johnny snapped his own crank. A snapped distributor drive belt pointed to a terminal ignition event, but was that the cause of the busted crank, or a result of? We will never know...

AUGUST 2012 (ISSUE 221)

Can it really be five years ago that what we still perceive to be the 'new' Boxster was launched? That's Boxster as in 981 Boxster, with it's rather more bespoke styling, thanks to not having to share doors with the 911. Of course it's had another update since then, but still looks largely the same albeit it with a rather different sound track, thanks to its flat-four turbo engine. But in 2012 it was still packing the full flat-six and, on our first UK drive, we were sold hook, line and sinker for its charms and relative value, particularly as it barely cost any more than the original Boxster of 1996.

Taking a walk on the wilder side of all things Porsche, we dropped in on Gemballa, purveyors of ultimate modified Porsches. This was not so long after Uwe Gemballa's rather sinister demise in South Africa, where he was murdered over an apparent financial dispute. Best not to ask too many questions we thought, and besides Gemballa was – and still is – in completely different ownership, while carrying on with Uwe's vision for ultimate Porsches.

And talking of ultimate Porsches, we managed to score a drive in one of the very first 911 Turbos in the UK from 1975. Hard to believe now, but its 260bhp was a big deal, but then comparatively speaking, when most of the poulou was tooling round in single carb fed Cortinas and Escorts and the like, and barely mustering 75bhp, it was a very big deal. Certainly big enough to warrant a poster on anyone's bedroom wall!

AUGUST 2003 (ISSUE 113)

And talking of JT as we were above, here's another favourite from the August 2003 issue. Faced with a family driving holiday to Portugal, Johnny managed to squeeze Mrs T and two children into his then Carrera 3.2, with a roof box for the luggage. And no, they didn't cheat by catching the ferry from Plymouth to Santander and young Alfie only fainted once from the heat! Family Tipler, we salute you!

In the news pages we reported on the impending arrival of the new 996 GT3 RS. With just 200 being sold worldwide we reckoned that most would be snapped up by collectors and put into storage as a long-term investment. We weren't wrong.

Keeping with the new 911 theme, we journeyed to Austria, courtesy of Porsche, to drive the new 996 C4S Cabriolet, the 10th model in the ever expanding 996 range. Our man Raby was rather taken with it, but then he's always been a Cabriolet sort of chap.

Sticking with the wind in one's hair, we pitched the 911 Targa against the 944 Cabrio. It was close, but no cigar for the 944, although these days relative values would render such a comparison meaningless.



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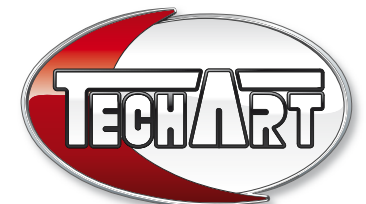
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