

RUESUR

UNRESTORED 1957 356 A T2 SPEEDSTER



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NEXT ISSUE ON SALE FRIDAY 24TH JUNE



DUCK AND COVER



he 1970s was an exciting

decade for Porsche. Hot on the heels of its first overall win at Le Mans in 1970, a second victory at the same venue followed a year later, the 917 earning its place in history as one of the most formidable racing machines of all time. A turbocharger was thrown into the mix for the model's domination of Can-Am thereafter, but all things must pass - the extraordinary cost of developing and campaigning the 917 forged a solid foundation on which Porsche's racing department would benefit for many decades, but a return to action with cars resembling products in the brand's dealer showrooms was required, not only in the interests of keeping the company's accountants happy, but also to re-emphasise the direct link between road cars wearing the Stuttgart crest and the engineering Porsche was putting to good use at the track.

The result of this thinking was the Carrera RS 2.7, a 911 currently enjoying its fiftieth anniversary. This year, we'll be dedicating a fair number of our pages to the legendary automotive icon, kicking off our celebrations with a look at the origins and evolution of the model, from drawing board to production. You can read the article in this very edition of Classic Porsche. We also take a look at the RS's direct successor, the lesser spotted Carrera 2.7 'MFI'. Produced in smaller numbers than the RS, this 210bhp ducktailed G-series 911 commanded a higher purchase price than its immediate forebear when new, but can be yours for half the price of an RS today. Does this make the Hulkhued star of our showcase feature a bargain?

Of course, we've pointed our cameras at many other pristine Porsches for this issue of Classic Porsche, chief among them being our cover car. a 1957 356 A T2 Speedster sporting the most original body we're ever likely to see. A truly remarkable drop-top surviving almost seventy years without a dink, dent, accident damage or corrosion, this sensational air-cooled Porsche perfectly highlights just how much effort the Stuttgart squad puts into ensuring its products last for the long term. Enjoy the magazine.



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FEATURES

SUPER CARRERA
An RS-influenced 911 SC restomod.

34 AUTHENTIC SELF
A pristine 1957 356 A T2 Speedster.

RISE OF THE CARRERA RS
Design and evolution of an icon.

52 SPOILER ALERT
The RS ducktail and its lasting legacy.

HIGHLAND FLING
Hitting Scotland in the 210bhp Carrera 2.7.

66 KEEP ON TOP Porsche's 1956 550A Le Mans coupes.

76 THE LAST LEG
Finishing Carrera Panamericana in a 914.

BY THE TAIL
Ferdinand Porsche's design for the Tiger tank.

THE LOOK OF LOVE
The Carrera 3.2 Supersport.

96 ROOCK STARWe visit Roock Sportsystem in Leverkusen.

102 QUICK SILVER A 1970 911 S powered by a 2.8-litre boxer.













CONTENTS

REGULARS

16 LIVEWIRE

New rules at Reims-Gueux.

PORSCHE PRODUCTS

New gear for you and your classic Porsche.

GUEST SPEAKERSChat from Andy Prill and Kieron Maughan.

114 NEXT ISSUE PREVIEW
The great pretender: an exquisite 550A replica.













SUPER CARRERA

This once derelict 1983 911 SC is now sporting an RS-inspired exterior and is developing close to 275bhp from its freshly tuned three-litre flat-six...

Words Dan Furr Photography Dan Sherwood



hen it comes to hot rods, the mantra 'less is more' is often at the forefront of a modifier's mind.
Less weight means more pace.
Less spend means more bang for your buck. Less displacement,

though? Surely, on the basis of engine size alone, the Carrera 3.2 is a more desirable G-series 911 than the more readily available three-litre 911 SC? Not so, says Mike Champion, founder of Oxfordshire-based independent classic Porsche specialist, MCE Porsche.

"The Carrera 3.2 is heavier than the SC," he explains.
"When people decide they want to get hold of an aircooled 911 and turn it into a hot rod, one of the first
things they think about is ditching weight from the
car. A hot rod has no need for electrically adjustable
mirrors, power seats, electric windows, heated

windscreen and the other raft of comfort equipment we commonly associate with the Carrera 3.2. It's also worth remembering this stuff comes accompanied by heavy wiring. Rather than shell out your hard-earned cash on a comparatively expensive Carrera 3.2, it's better to save money by getting hold of a good SC as the starting point for a hot rod project, thereby giving you a 911 already free of many supplementary toys and their associated weight." You'll also be freeing up vital funds to spend on the build.

What about the loss of engine capacity? "Hot rod engines are traditionally short-stroke," Mike continues. "You're better off taking the SC's three-litre flat-six and equipping it with 3.2 barrels and pistons, resulting in a more free-revving engine than the Carrera 3.2 powerplant, which makes use of a heavier crankshaft and is designed to deliver increased torque at lower



revs." Add a few choice upgrades, such as the PMO carburettors, venturis and the punchy exhaust system seen at the rear of our 911 SC feature car, and you're well on your way to 275bhp. But wait! We're getting ahead of ourselves. Before we delve into what makes this twintone coupe so special, let's remind ourselves of the 911 SC's colourful history.

CAST THE NET

Upon release, the SC's main job was to broaden the 911's appeal. It usurped both 2.7-litre and three-litre Carrera versions of the 911 to become the only naturally aspirated 911 you could buy in dealer showrooms. At the heart of the new Porsche lay a detuned three-litre flat-six. It may have been 20bhp down on the 200bhp

Carrera 3.0, but with new camshafts, a stronger crank and larger main bearings, grunt was more accessible lower down the rev range. And, thanks to the introduction of an

BY THE END OF PRODUCTION, A SHADE UNDER 58,000 EXAMPLES OF THE 911 SC HAD ROLLED OUT OF ZUFFENHAUSEN

eleven-blade fan, the new 911 was quieter, too.

A pollution-reducing air pump made the 1,160kg SC cleaner than its predecessor. Changes less pronounced concerned the car's bodywork — at first glance, unaltered 'impact bumper' looks made the new arrival virtually indistinguishable from the outgoing Carrera 3.0. Initially, the motoring press wasn't entirely won over, but sports car enthusiasts lucky enough to spend meaningful time behind the wheel of the SC were encouraged by the peachy, free-revving engine and the sprint from rest to 60mph taking just 6.5 seconds. Before long, buyers were turning slow sales into busy dealer showroom activity.

Bosch K-Jetronic Continuous Injection System (CIS) fuel injection and a more reliable aluminium crankcase proved to be popular technical highlights. It's also interesting to note the SC was the first 911 with a brake servo. Cog-shifting enthusiasts delighted in five-speed manual 915 gearboxes, while lazier drivers could try their hand at mastering Porsche's then ridiculed (but now respected) Sportomatic transmission.

Importantly, SC bodies were galvanised, promoting the idea of a Porsche not only being dependable, but a car capable of lasting a long time. Around eleven thousand examples were sold in 1979, at which point the model took on more of the earlier Carrera's visual cues, most notably when headlamp surrounds were painted body colour and the remaining brightwork was anodised

black. The 911 SC Targa's Nirosta steel rollover hoop also gained a black coating, while a small hike in horsepower delivered a claimed 188bhp.

As a response to the second global oil crisis in less than a decade, the updated SC featured optimised ignition timing to cure what some considered to be a drinking problem. Sadly, as was the case with many Porsche products, SCs destined for North America missed out on the slight bump in bhp. In 1980, the SC was dropped from the US market altogether, leaving the \$32,050 Weissach Edition to fill the gap.

Fortunately, *Autoweek* magazine was impressed. "The Weissach Edition coupe is a hot car. It goes like hell, stops just as quickly and can turn on you as unpredictably as a rattlesnake!"

Above Mike confirms the finished restomod tips scales at 150 kilograms less than the kerb weight of a standard SC









Above and below Following many years half-built in its owner's single-garage, this 275bhp RS-influenced restomod is now ready for a summer of hard driving

Porsche boss, Ernst Fuhrmann, envisaged the beginning of the end for the 911 ahead of the 944's launch in time for the 1982 model year, but his plans were binned - as was Fuhrmann himself - with the arrival of new Porsche President and CEO, Peter Schutz, who was more than happy to plan 911 production long into the future. What better way to celebrate this reprieve than another boost in bhp?! SCs for 1981 saw their outputs increased to a Carrera-eclipsing 204bhp with 197lb-ft torque developed at 4,300rpm. Top speed rose to 146mph, but thanks to a change in compression ratio to 9.8:1 and a necessary switch to 98 octane fuel, the SC needed a stiffer drink. While official factory performance figures remained conservative, UK motoring magazines reported the 60mph dash to be achievable from rest in a scant 5.7 seconds.

Side repeaters on the front wings provided a visual clue to the new, more powerful SC, a machine put through its paces by two-time World Rally Championship victor, Walter Röhrl, and his co-driver, Christian Geistdörfer, during the 1981 San Remo Rally. Sadly, a

broken driveshaft forced retirement. Interestingly, the SC received few changes in readiness for the 1982 model year, although the alterations were clear to see. Black-centred Fuchs with polished rims were made standard, Turbo-look body styling gave the SC the air of its forced-fed sibling, while two-hundred special editions (seventy of them Targas) named after Ferry Porsche arrived to celebrate the fiftieth anniversary of his founding of the Porsche Design Company. Demure on the outside, the Meteor Grey exterior revealed a more startling burgundy leather interior, complete with Ferry's signature stitched into the head rests. The famous Flachbau (slant nose) debuted in SC form around the same time.

LONG TIME COMING

The 911 SC Cabriolet — the first Porsche Cabriolet since the drop-top 356 —was revealed at the Geneva Motor Show in 1981. There's no denying how rare the 911 SC Cabriolet is today, but the scarcest of SCs is a steel-bodied factory Flachbau. Rarer than the Martini-striped Grand Prix White SC or the Fuchs-rimmed, Bilstein-shocked, spoiler-equipped, UK-only SC Sport, slant-nosed cars were supremely expensive and hand-built for high-worth Porsche clientele by the team stationed in Porsche's Sonderwunsch (Special Wishes) department.

By the end of production in 1983, a shade under 58,000 911 SCs had rolled out of Zuffenhausen. Such relatively high-volume production brought with it a perceived lack of exclusivity, meaning the cost of 911 SC ownership today is attractive, certainly when compared to the price of acquiring a less numerous 911 or, indeed, the more refined Carrera 3.2. "The SC has all the basic architecture you want for a 911 hot rod build," says Mike. "Crucially, it's also free of many things you won't want for a project like this."

The distinctively styled SC you see on these pages rolled off the Porsche assembly line in 1983. Its owner, Simon Barker, acquired the car almost two decades ago. Back then, it was still exhibiting its Guards Red paintwork, but was incomplete, missing many of its



vital organs. Simon was also the owner of a 1975 Carrera 2.7 in a similar state. "His plan," Mike reveals, "was to combine the two cars into one, using the newer SC chassis and picking the best bits from both 911s. He also decided to introduce elements echoing the aesthetic of the Carrera RS 2.7." That'll explain the fibreglass front end and ducktail, then.

The car arrived at MCE earlier this year. "Simon was working out of a single garage," Mike tells us. "The Slate Grey paintwork, including the Gulf orange detailing and the white pinstripes, had been done to a very high standard by a third-

party body shop, but the rest of the car was left wanting." A part-built 1979 SC engine and the Carrera 2.7's magnesium-cased 915 transmission, for example, had been installed, not because

ON THE ROAD, THIS SENSATIONAL SC IS EVERY BIT AS UNADULTERATED AS IT LOOKS

encouragement of intake and exhaust valve overlap, plus the tuned primary manifolds and a shot of induction noise, the noise is simply supersonic!"

Revs are limited at 7,200rpm to preserve the health of the engine for the long term — the lack of lightweight.

of the engine for the long term — the lack of lightweight valvetrain means MCE can't warrant going any higher. At the time of writing, Simon's SC hadn't visited a rolling road, but Mike is confident output is knocking on the door of 275bhp, based on his evaluation of the car's performance and his experience building similarly

swiftly removed and installed on workstands in the MCE

workshop, where Mike proceeded to strip and rebuild

process. The CIS fuel system was ditched, making way

for 46mm PMO carbs, while a 'hot' GE60 camshaft and a

trick exhaust in the style of 1980s ANSA Ferrari mufflers

The resultant throaty roar sounds absolutely epic high

bass frequency

in traffic, for

when you're sitting

example. At high

combined with

the effect of the

GE60 camshaft's

revs, though, when

in the rev range, but not too noisy on idle. There's no low

both units, installing 3.2 barrels and pistons in the

joined the party. "It's a great system," Mike smiles.

expansion volume, not too silenced.

"It features multiple small-diameter pipes and small

Above Gulf orange accent and white pinstriping was painted over Slate Grey, replacing tired Guards Red

they were operational, but simply because Simon didn't have the room to store them separately from the car. "He struggled with limited space and the availability of time to take of the work, which is why I was called upon to put the car together for him. Our aim was to get it on the road in time for this summer."

When Mike first laid eyes on the car in Simon's garage "the Porsche's front end was pointing up to the heavens and its back end was resting on its bump stops." How things have changed! The flat-six and gearbox were

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Above Mike stripped and rebuilt the engine and gearbox, as well as the suspension and braking systems, bringing the car back to life with a bespoke tune on all fronts

specified air-cooled flat-sixes stamping this figure on dyno printouts. "The RSR engines I build feature slightly hotter cams and reach 300bhp, but on the road, the power of Simon's 911 is perfectly adequate, especially considering the engine is propelling such a light classic Porsche." There are further improvements to be made to the top end, though — Mike alludes to extending venturis as a next step.

THE THICK OF IT

The ride has been vastly improved by the appointment of Bilstein clubsport oriented dampers, delivering a more progressive damping rate than street-spec shocks and ideally suited to the drop in ride height Mike has introduced to the car. Along with MCE's in-house chassis

tuning and alignment, these brilliant 'Billies' contribute to a firmer, tauter ride, aided by a super-stiff rear anti-roll bar and the fat Pirellis wrapped around genuine Fuchs staggered sixteen-inch wheels. All in, it's a bespoke configuration ideally suited to Simon's driving style, how he intends to the use the car and, importantly, reflecting the massive 150 kilograms dropped over the standard SC's kerb weight. Needless to say, you shouldn't expect the luxury of electrically operated windows if Simon ever offers you a ride.

Speaking of application, Mike has been sympathetic to Simon's intention to use his resurrected SC as a fast-road car, rather than a 911 likely to engage in an attack of the track. For this reason, the standard, perfectly adequate SC brakes remain in place, though Mike dismissed the servo. "People will tell you a servo improves braking capability, but what they really mean is that a servo affords the driver less effort at the pedal to achieve the same level of stopping power. The brakes themselves are no more effective. It's a matter of personal preference, of course, but deleting the servo provides a more direct connection to what the car is doing when you slow it, reinstating pedal progression and greater control over deceleration." Removing the servo and its supporting equipment gets rid of unwanted weight, too.

In the spirit of a hot rod, the car's cabin is sparse. Mike remade and rerouted the wiring harness, prepared lightweight carpets, RS-style door cards and installed a quintessentially 'classic Porsche' MOMO Prototipo drilled three-spoke steering wheel, which is perfectly at home alongside the leather-trimmed sports seats keeping Simon comfortable.

MCE is experienced in all aspects of personalising air-cooled Porsches. In other words, it's unlikely Mike will be fazed by any job he's asked to take care of an old 911, whether it's mechanical, paint or interior work. Nevertheless, we wanted him to reveal the biggest challenge he faced working on Simon's brilliant 'bitsa'. "To be honest, it was diving into a project half-finished



by third parties," he confirms. "You never really know what you're going to encounter until you're into the journey of discovery, at which point you're faced with taking bits of other people's work and adding your own, combining everything into a cohesive finished car." In truth, for a Porsche specialist such as MCE, the challenge of taking on an already started project is less about difficulty of the work and more about trying to achieve the original brief whilst managing customer expectations regarding the potential for extra manhours, which can be necessary when dealing with poorly executed past toil. The consequent impact on restoration or recommissioning budgets is obvious. That said, Mike is adept at involving MCE clients at every stage of a build, an approach enabling them to get to know their car better and encouraging them to feel even more

invested in their personal Porsche project. It's one of MCE's calling cards. Proving the point, Simon first got in touch with Mike following recommendation from a mutual acquaintance who had instructed MCE to restore a classic 911. "Need someone to sort your SC? Speak to Mike!" came the instruction.

On the road, this sensational SC is every bit as unadulterated as it looks. The soundtrack under load is phenomenal. Moreover, the overall driving experience is best described as 'raw'. Throttle, braking and steering sensitivity is noticeably enhanced, making you feel as though you're travelling at high speed, even when you're sticking to the speed limit. The RS-aping looks are, frankly, an aside. This is a seriously sorted 911 SC - a Super Carrera in more ways than one. Maybe it's time to rethink that Carrera 3.2 purchase? $\mbox{\bf CP}$

Above Exhaust system makes a fantastic noise and follows the design principles of the ANSA Ferrari exhausts popular in the early 1980s











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'What has rolled out of the MCE workshop after many months of dedicated hard work is an absolute gem! Mike's passion and knowledge for all things 911 seems limitless. He was nothing but professional in the way all aspects of the build were carried out and the whole process has been a pleasure. I've now had the car back home for a couple of weeks and it's quite wonderful in the way it drives, and just as much pleasure is brought by simply looking at the quality of Mike's work.'

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LIVEWIRE

Our look at what's happening in the wonderful world of air-cooled classics...



LOCAL AUTHORITIES BAN KERBSIDE VISITORS TO REIMS-GUEUX CIRCUIT

Thinking of stopping at Reims-Gueux for an impromptu photo opportunity when you're next passing through France? Think again. Due to high levels of what governing bodies in the nearby village of Gueux are describing as anti-social behaviour from visiting motorists, a new law prohibits unscheduled visits to the site with immediate effect. The root cause of complaint is dangerous parking and the increased cost of the police presence required to keep a lid on drivers hitting breakneck speed along the stretch of D27 playing host to the remains of the historic French Grand Prix circuit. Local residents are also said to be fed up with rising noise pollution, a consequence of the dramatically increased number of visitors to the site in recent years.

Reims-Gueux was established in 1926 as a Grand Prix circuit on public roads. Five miles outside Reims and carving its way between the nearby villages of Gueux and Thillois, the track became recognised as one of the fastest circuits in the world, an accolade owing to two high speed straights, each measuring well in excess of a mile. In operation as host to the Grand Prix de la Marne, the French Grand Prix, the 12 Hours of Reims and, for a brief period, the French Motorcycle Grand Prix, Reims-Gueux presented many of the most famous battles in open-wheel racing. The last Formula One visit to the venue was in 1966. Financial difficulties caused the site to close in 1972.

CHEQUERED HISTORY

In 2002, various sections of the track were levelled. Traffic calming measures (primarily roundabouts) were introduced along the fast straights in an effort to reduce the speed of visiting motorists. The grandstands, pit boxes and administrative buildings around the start/finish line, however, remain in tact, as do some of the fixtures of less visited portions of the circuit, such as the old Muizon hairpin. These buildings are now in the custody of Les Amis du Circuit de Gueux (The Friends of Circuit de Gueux), a charity dedicated to preserving the



surviving structures and their period sponsor graphics. Needless to say, until now, the sporting heritage, striking appearance and easy access of Reims-Gueux has made it an irresistible 'pitstop' for many racing fans and sports car owners travelling through France.

All is not lost. Car clubs or groups wishing to stop at Reims-Gueux are welcome to do so, but appointments for any such visits must be made in advance through Les Amis du Circuit de Gueux. Likewise, historic motoring events will continue to take place at Reims-Gueux under the charity's watch, but individual and unscheduled stop-offs are now banned. The increased police presence at the D26/D27 roundabout leading to the start/finish straight serves as warning to anyone thinking about breaking the rules, though keep in mind the venue is on public roads — while the new law restricts visitors from parking their cars in front of the grandstands, there is nothing preventing drivers from travelling along the road on which the historic buildings sit. For further information, visit the Les Amis du Circuit de Gueux website at amis-du-circuit-de-gueux.fr.





FORTY YEARS OF GROUP C CELEBRATED AT GATHERING OF 956/962 AT GOODWOOD

In the early 1980s, the world witnessed a revolution in sports car racing. The arrival of Group C ushered in an era where fuel efficiency was paramount and the aerodynamic advances of ground effect would revise the accepted norms of design and performance forevermore. At the vanguard of this brave new world was Porsche, which presented the 956, the manufacturer's first monocoque sports-prototype race car. Fast forward four decades and, at Goodwood's seventy-ninth Members Meeting, twenty-one examples of the 956 and its successor, the 962, assembled, spanning a scarcely credible twelve years of international competition, underlining the scale and scope of their extraordinary dominance as factory and customer racing machines.

Of the 956s and 962s which made the journey to Goodwood, sixteen were taking part in a special high-speed demonstration run, marking the largest number of works and privateer examples to have driven together to date. The spectacle promised to be both unique and unforgettable, overloading the senses with vivid liveries, evocative smells and the incomparable, unmistakable sound of Porsche's turbocharged flat-six at full chat.

Porsche's Le Mans-winning works cars — dressed in their famous Rothmans liveries — were joined on the start line by the recently restored 962 C famous for taking Hans-Joachim Stuck to a decisive victory in the 1987 ADAC Supercup. Alongside was a panoply of privately owned ex-works and customer 956/962s, including the bright red Richard Lloyd Racing Cabin 962-200 and its Italya Sports sister car, complete with unmissable pink bodywork. No less striking was the yellow and black New-Man Joest Racing 956 (winner at Le Mans in 1985), nor the bright green Skoal Bandit 956 B, the Motronic engine management of which helped Derek Bell to the world driver's title in 1986.

One by one, the cars barked into life. Revs built and exhausts roared as the engines warmed through, the sound ricocheting off the pit walls and deep into

GOODWOOD COULD HAVE BEEN LE MANS, DAYTONA OR SEBRING, THESE SAME CARS BATTLING

the English countryside. Cockpits closed, the grid emptied and three-deep rows of spectators lined the perimeter, packing the grandstands and holding their collective breath. As the flag dropped and the engines screamed simultaneously toward their 8,000rpm redlines, the crowd appeared to reel back in a united awe.

The first of Porsche's works cars led a field weaving and sliding onto the famous Goodwood straight, spearing in close formation in the direction of the first corner before turning out of sight. For the following twenty minutes, a tightly packed group of what many consider the greatest race cars of all time lapped the 2.36-mile circuit at near race pace, wastegates chattering and engines hitting shrill peaks as their drivers explored the limits of power and braking, wrestling with unassisted steering, heavy clutches and physical manual transmissions. For a fleeting moment, Goodwood could have been Le Mans, Daytona or Sebring, these very same cars battling tooth and nail for the most coveted titles in endurance racing. All too soon, however, the drive was over, the most astonishing of sights consigned to memory as the cars pulled into the empty paddocks and fell silent once again.

For drivers and spectators alike, it was a privilege to witness this incredible spectacle — a celebration, yes, but also a powerful evocation of an unrepeatable era in sports car racing: following its historic 1-2-3 victory at Le Mans in 1982, the 956 and, latterly, the 962, would take Porsche to six further consecutive wins at the 24 Hours of Le Mans, alongside three back-to-back driver's and manufacturer's titles in the World Endurance Championship. In 1983, the 956 took an incredible nine out of the top ten places come race end at Sarthe. This was also the year in which Stefan Bellof set the long-standing lap record around the Nürburgring's Nordschleife in a time of six minutes and eleven seconds.









US MARKET DRIVES SOARING DEMAND FOR CLASSIC 911 EV CONVERSIONS

If there's a topic sure to polarise opinion on the classic Porsche scene, it's EV conversions, and yet the rate at which air-cooled 911s are being switched to battery power is increasing quicker than many expected. Unsurprisingly, with the cost of motoring now spiralling skyward, many enthusiasts who seek to use a classic 911 as an everyday vehicle are choosing to switch to electrification for economical reasons, as much as because of their concerns about the environment. With this in mind, UK-based EV conversion specialist, Everrati, is making moves to ensure it can meet increased demand for 964 conversions from its US customer base.

Chief among the company's efforts is a new strategic partnership with Aria Group, a company with peerless expertise in low-volume, high-end vehicle engineering and manufacturing, supporting world-leading OEMs and reimagination specialists. Having direct experience creating vehicles for both Singer Vehicle Design and Radford Motors, Aria Group is the natural partner for Everrati, employing the latest production techniques and technologies, with quality and precision at the core of its operations.

"Demand for our electrified icons, such as the 964-based Signature Edition, is surging globally, but particularly in California, where our customer base of sustainability-conscious millennials and Gen-Zs is growing very quickly indeed," said Everrati founder, Justin Lunny. "These discerning buyers want the look of an iconic 911, but would never consider buying a car powered by an internal combustion engine. For them, EV is the only way to go." The flagship Everrati Signature Edition (Gulf-liveried version pictured) features a 500bhp EV motor with a high-power 53kWh battery pack capable of delivering driving range of up to two-hundred miles. The sprint to 60mph

THESE PORSCHES JOIN THE COMPANY'S NEW GT40 EV, ALSO AVAILABLE WITH GULF LIVERY

from rest is despatched in less than four seconds. Special care and attention is taken to ensure the donor 964's original weight, as well as its weight distribution, is maintained.

Traction is aided by a Quaife ATB limited-slip differential and TracTive semi-active suspension with user-controlled drive modes. A range of optional extras (not limited to active sound management and a carbon-fibre body) are available, but it's the promise of zero emissions, regenerative braking and combined AC and DC fast charging — against a backdrop of increasingly tight local emissions and sustainability laws — which has appealed to Everrati's Californian customer base.

"Aria Group's expertise and state-of-the-art manufacturing and composites facility based in Irvine, California, enables Everrati to take advantage of proximity to accelerate delivery times and meet US demand," Lunny explained. Clive Hawkins, CEO of Aria Group, was equally complimentary. "Everrati's EV products, such as its redefined 964, set new standards for electrified classic vehicles. We are excited to be playing a key role in the company's continued expansion into the US market." Their partnership follows the recent launch of Everrati North America.

In addition to the 964 coupe, Everrati is producing 964 Targas and cabriolets with the same powertrain arrangement as the ducktailed tin-top pictured. These Porsches join the company's new Superformance GT40 EV, also available with iconic Gulf racing livery, echoing the look of the Ford GT40s under John Wyer Automotive rule in the 1960s. Other products in the Everrati line-up include electric versions of the Land Rover Series 2A and Mercedes-Benz W113 SL 'Pagoda'. Whether at Everrati or otherwise, however, the classic 911 is one of the most in-demand cars on the EV conversion scene, and the 964 is very much leading the charge.









RENNSPORT REUNION VII SET TO OCCUR IN 2023

Porsche Cars North America (PCNA) has confirmed the next Porsche Rennsport Reunion will take place in 2023. For the seventh time, life on the edge will be celebrated — from the boldest and most exciting Porsche cars yet created and the people responsible for designing them, to the drivers who took these extraordinary vehicles to their limits.

All will gather for an exhilarating event which promises to celebrate not only Porsche's past and present, but to capture a glimpse into the future, on both the track and on the road. The theme, dates and location of Rennsport Reunion VII will be announced in due course.

Conceived by racing great, Brian Redman, and Porsche Cars North America's longstanding press spokesperson, Bob Carlson, in 2001, Rennsport Reunion was created to celebrate the racing heritage of Porsche. The two envisioned an event at which drivers and enthusiasts could gather to celebrate racing and pay tribute to the personalities and cars which helped build the Porsche legacy. Since its inaugural outing at Lime Rock Park in Connecticut more than twenty years ago, Rennsport Reunion has continuously grown in appeal and drew a huge number fans of over the course of the last event, which took place at Laguna Seca in 2018.

"We're excited to be able to announce the return of Rennsport Reunion, which is always a highlight of the Porsche motorsport calendar," said Kjell Gruner, President and CEO of Porsche Cars North America. "Over the years, this special event has grown into a truly one-of-a-kind experience of sight, sound and emotions for Porsche fans of all persuasions. For a few days, it feels like everyone thrilled by the brand is united in one place as a family. We'll announce the date and location of Rennsport Reunion VII soon, but this much I can share already: our ambition is to make this particular Rennsport Reunion the best yet."

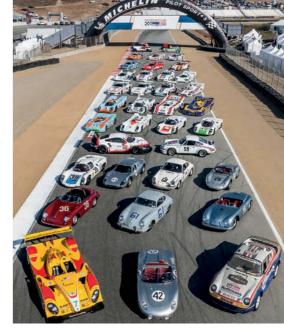
In 2018, around 2,500 vehicles and more than fifty legendary drivers drew upwards of 80,500 spectators (most of them attending the event in a Porsche sports car) from all over the world, resulting in the highest attendance at Laguna Seca Raceway in five years and the toppling of 2015's Rennsport Reunion V record of more than 60,000 visitors. Restored collector cars, unique hot rods and a wide variety of race and rally cars — from the 718 RS 60 to the RS Spyder, the Dakar-winning 959 and the 919 Hybrid — all came together in Porsche's seventieth anniversary year for a four-day thrill of sight, sounds and smells. More than 350 cars were competing on the Californian circuit.

KEEP IT IN THE FAMILY

At Rennsport Reunion IV, indicating a taste of things to come in 2023, Wolfgang Porsche, Ferry Porsche's youngest son and Chairman of the Supervisory Board at Porsche AG, took the opportunity to turn in laps of Laguna Seca in 356 no.1, the first registered Porsche vehicle, dating all the way back to 1948. He was joined by many other well-known Porsche personalities on a list of special guests, not least famed classic Porsche restorer, Bruce Canepa, fresh from the restoration of a 917/30, which he tested at Laguna Seca and, after four laps, posted a time which would have planted him on the first grid row of a modern IMSA race.

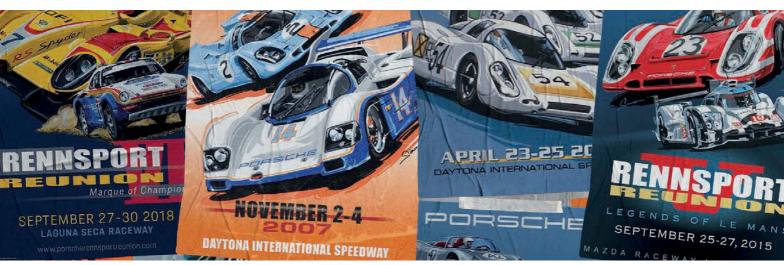
The roster of star drivers in attendance included Jacky lckx, Hurley Haywood and Jochen Mass, while new Porsche products revealed were spearheaded by the unveiling of the second-generation 935, a near 700bhp 991 GT2 RS-based beast echoing the style of the iconic 935/78 known as 'Moby Dick' (on account of the car's giant 'whale tail').

We'll share information relating to Rennsport Reunion VII dates, tickets, camping availability, hospitality packages and event content as soon as it becomes available. Subscribe to Classic Porsche magazine at bit.ly/subscp.









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Arena Red • Black Leather Sports Seats 18" Turbo Wheels • Electric Sunroof Full Leather Interior • Air Conditioning Previously Sold & Serviced by Paragon 62,139 miles • 1996 (P)

£154,995



911 Turbo S GB Edition (991)

GT Silver • Black Leather Sports Seats PDK Gearbox • 20" Sport Classic Wheels One of just 40 UK Cars • Sport Chrono Burmester Premium Sound System 16,357 miles • 2015 (64)

£117,995



911 Carrera 2 S (992)

Guards Red • Black Leather Sports Seats PDK Gearbox • 20/21" Carrera S Wheels Touchscreen Satellite Navigation Switchable Sports Exhaust • Sport Chrono • 7,605 miles • 2019 (69)

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Boxster GTS 4.0 (718)

Guards Red • Black Half-Leather Sports Seats • Manual Gearbox • 20" Satin Platinum Carrera S Wheels • Switchable Sports Exhaust • Sport Chrono 1.501 miles • 2021 (71)

£82.995



911 Turbo S (997)

Carrara White • Black Leather Adaptive Sports Seats • PDK Gearbox • 19" Centre Lock Wheels • Porsche Ceramic Composite Brakes • Sport Chrono 29.893 miles • 2010 (60)

£82.995



911 Carrera T (991)

Carrara White Metallic • Black Half-Leather Sports Seats • PDK Gearbox 20" Platinum Carrera S Wheels Switchable Sports Exhaust • Sport Chrono • 8,631 miles • 2018 (18)

£79.995



911 Turbo (997)

GT Silver • Dark Blue Leather Sports Seats • Manual Gearbox • 19" Turbo Wheels • Porsche Ceramic Composite Brakes • Satellite Navigation • Sport Chrono • 50,128 miles • 2008 (57)

£62,995



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Guards Red • Black Half-Leather Sports Seats • PDK Gearbox • 20" Turbo Design Wheels • Switchable Sports Exhaust Touchscreen Satellite Navigation Sport Chrono • 41,498 miles • 2014 (64)

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PRODUCTS

Hot new products for you and the classic Porsche in your life...



WEBCON IDA3C MANIFOLDS FOR AIR-COOLED FLAT-SIXES

British fuel system and intake product manufacturer, Webcon, has announced the availability of its long-awaited inlet manifold sets to suit the Weber IDA3C carburettors fitted to air-cooled Porsche flat-six engines. Beautifully crafted by Webcon in the UK, these fantastic new manifolds are 90mm tall and boast extra strengthening to ensure superb performance and longevity. They also feature the correct-shaped ignition plug lead holes to allow continued use of OEM plug lead grommets. Suitable for both 40IDA3C and 46IDA3C and perfectly complementing the genuine Spanish Weber IDA carburettors recently reintroduced to the Webcon product portfolio (and pictured in our image), these meticulously manufactured manifolds are available to order direct from the Webcon website and from appointed Webcon dealers around the world. Choose part number MW4340 for 40IDA3C, part number MW4346 for 46IDA3C.

Price: £790.80

webcon.co.uk or call 01932 787100



ROHLER VALVE AND CAMSHAFT COVERS FOR 964/993

Porsche regards motorsport success as pivotal to its line of products, which is why owners of the brand's road cars expect new parts to be manufactured and held up to the same standard. This is especially true when out on a track — you want to maximise the performance return from your Porsche by equipping it with components up to the task at hand. Whether it be engine valve covers or gearbox mounts, the Rohler performance range guarantees assured performance for both street and circuit, providing seamless integration by way of

premium-quality, direct fit parts. Highlights of the Rohler range include CNC-machined valve covers (upper and lower) for the 964, plus camshaft covers for the 993 (including Turbo models). The 964 valve covers replace fragile, leaking factory covers and accept reusable OEM gaskets. With a corrosion-resistant finish, chamfered edges and tight gasket fitment, these are simply the best valve covers on the market, delivering safety and optimisation in your 911's engine bay. Similarly, Rohler's 993 camshaft covers permanently correct the problem of leaks thanks to precision-machined, aircraft-grade billet aluminium construction. They also help the host flat-six to run cooler thanks to vanes promoting increased heat dissipation. To view the full range of Rohler products, visit the Design 911 website today..

Price: 964 valve covers £280.25 (set of two) 993 camshaft covers £280.25 (set of two) design911.co.uk or call 0208 500 8811



ELEPHANT RACING ADJUSTABLE SPRING PLATE FOR 911/912/930

Updating rear suspension camber curve of pre-964 911s (and the 912) to meet the needs of modern, wide, low-profile radial tyres, Elephant Racing's adjustable spring plates deliver superior grip in turns and straight-line braking, as well as providing the benefit of reduced tyre wear. Replacing the troublesome stock eccentric adjusters, Elephant Racing's simple double-adjusters allow settings to be dialled in with vehicle weight resting on the tyres, making it easy to read a camber/toe gauge while changing settings. Quick and easy alterations can even be made trackside when a camber gauge is unavailable. Replacing the stock 1969-1989 spring plate blade and cover, this superb suspension solution is a direct bolt-on — no welding is required. Designed to work with torsion bars or coilovers, these adjustable spring plates are suitable for use with any standard size bushing, though PolyBronze is recommended. Requires the splined hub portion from a set of factory adjustable spring plates or the Elephant Racing QuickChange Spring Plate splined hub (available separately).

Price: \$2,500 per kit

elephantracing.com or call +1 408-297-2789





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RIMBLADES WHEEL PREPARATION AND CARE KIT

UK-based wheel care company, Rimblades, is famous for its range of high-quality alloy rim protection products, but the company also recognises how the overall cosmetic condition of a wheel can make or break a car, hence the introduction of this dedicated wheel preparation and care kit. Including everything you'll need to take care of your Porsche's wheels and supplied in a Rimblades-branded carry bag, the bundle comprises a 250ml bottle of tyre shine remover, a 500ml bottle of alloy wheel cleaner, a 500ml bottle of glue and tar remover, plus a 500ml bottle of waterless wheel and tyre cleaner for when you're on the move and without access to a water supply. Attractively priced at less than forty quid, the kit joins Rimblades multi-surface cleaners and new line of ceramic detailing products, all available to order direct at the company's recently revamped website.

Price: £39.99

rimblades.com or call 01823 426641



DANSK 356 SPEEDSTER BUCKET SEAT

The 356 Speedster is one of Porsche's most desirable products. Among the individual components which make the model so identifiable are its seats, specifically developed to fit the Speedster chassis and taking the form of a metal bucket pressed from a single sheet to ensure lightweight construction. JP Group (the parent brand of Porsche restoration parts manufacturer, Dansk) has now re-launched the 356 Speedster seat as a family of chairs for enthusiasts to park in their dealer showrooms, garages, mancaves or other cosy environments. Bringing the exact seating position of the 356 Speedster from car to chair rack, this hand-crafted Porsche pew maintains the original bucket's seat angle. The framework is constructed from 22mm-diameter pipe with stabilisers in 6mm steel (choose between chrome or powdercoated black finishes), while the seat bucket is pressed from 1mm rigid deep-draw sheet metal. For enhanced comfort, an exclusive perfect-fit leather cushion can be optioned in either white or black. A reclining frame is also available as an optional extra.

Price: From £882

design911.co.uk or call 0208 500 8811

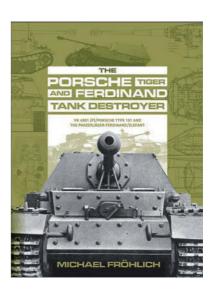


RECOMMENDED READ: THE PORSCHE TIGER AND FERDINAND TANK DESTROYER

During the Second World War, Ferdinand Porsche played an important role designing military vehicles for the Wehrmacht. This 496-page tome from author, Michael Fröhlich, focuses on the VK 4501 (P) 'Tiger' prototype (explored later in this issue of *Classic Porsche*) and the 'Ferdinand' tank destroyer. VK 4501 was the designation for the prototypes competing to become what the world would know as the Panzer VI 'Tiger'. Porsche's concept used a novel gasoline-electric hybrid powerplant, but the Tiger contract eventually went to rival bidder, Henschel. The hull/chassis design from VK 4501 (P) was later repurposed for a large tank destroyer nicknamed 'Ferdinand' in honour of Porsche. These imposing vehicles saw combat on multiple fronts and were later renamed 'Elefant'. Fröhlich's study, available in German as well as English, is grounded in original reports, manuals and technical drawings. And, through details of tank trials at the Verskraft proving ground, readers will gain insight into the Third Reich's armament procurement process.

Price: £72.99/\$79.99

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RACEGLAZE REFILLABLE CAR CLEANING WATER FILTERS

In-line water filters have short service lives and can be an expensive way of reducing the risk of water contamination when washing your Porsche. The car care experts at Raceglaze have found great success with their innovative range of refillable heavy duty water filters, taking the form of durable 11bar pressure-tested fibreglass tanks filled with premium grade mineral absorbing resin (where other water filters make use of poor quality 'reject' resin). Tap water enters the tank and is forced through the resin bed under pressure, emerging on the outlet side as close to zero parts per million of dissolved solids as possible. Raceglaze claims this method of filtration eliminates the risk of unsightly – and often damaging – watermarks on paintwork, allowing you to dry panels without having to rush around your car at warp speed. A choice of 7-litre, 14-litre or 25-litre filters (producing between 400 and 1,400 litres of pure filtered water) are available to choose from, each supplied ready for you to equip with standard Hozelock-style hosepipe connectors. A handy 'water hardness' meter is also available to enable users to detect when their filter's resin needs to be replaced.

Price: 7-litre filter £105, 14-litre filter £195, 25-litre £299.99 raceglaze.co.uk or call 01780 654065



SWAY-A-WAY TORSION BAR SETS FOR 911/912/930

Sway-A-Way torsion bars are high-performance direct replacement parts for your Porsche's stock torsion bars. Available in a wide range of diameters to allow you to choose the right spring rate for your application, Sway-A-Way bars are made from heat-treated 4340 aircraft-grade alloy steel and are centreless ground for vastly improved durability and consistent spring rate. Sway-A-Way bars are available as either solid or hollow bars, the only difference being weight. Talking of which, there is a common misconception hollow bars respond faster than solid bars. In reality, the difference between the two can be measured in nanoseconds. Depending on the bar, the solid could, in fact, be the 'faster' product. Powdercoated to resist corrosion and available for all pre-964 911s, as well as the 912, classic 911 Turbo (930), 924 and 944, Sway-A-Way bars can be ordered direct from the manufacturer in the USA or through the online store of Porsche parts retailer, FVD Brombacher, in Europe.

Price: From \$315

swayaway.com or call +1 818 700-9712



CARBONE FLOOR COVER KITS FOR 964/993

Last month, we brought you details of the customfinish BF Torino seats produced by independent Porsche accessories specialist, CarBone. Just as we were going to press, the Lodz-based business revealed details of its new to market floor cover kits for the 964 and 993. Replacing the factory carpet with neatly trimmed elements the result of a two-year R&D programme, the smooth, lightweight covers harmonize perfectly with the shape of the host 911's body. Included in each kit are covers for the rear cabin, centre section, left and right floors, as well as a centre console overlay, a cup holder and a phone holder. The CarBone studio can design and combine fabrics and leather to suit your taste and requirements, though off-the-shelf colours are available to match the majority of standard 964/993 dashboards, door cards and seats. F- and G-series kits are coming soon.

Price: €5,344.72

carbone.pl or call +48 429 422 115



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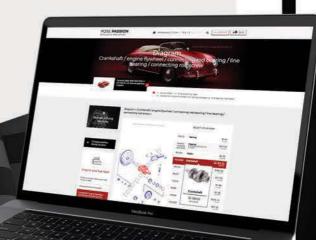
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MITTELMOTOR SUN VISORS FOR 911/912/914

During the course of their service life, sun visors take a lot of abuse. In the case of a classic or modern-classic sports car subjected to regular road use, the parts can prematurely age through worn outer materials, failed swivel bearings, delaminated integrated mirrors or snapped retaining clips. Available with or without mirrors, Mittelmotor's replacement sun visors for the classic 911 (Targa, cabriolet and coupe variants), 912 and 914 can be ordered with or without mirrors and come complete with all new fitting hardware, as well as robust swivel bearings to ensure longevity. Replacing your Porsche's brittle and UV-faded sun visors, these high-quality cabin components are an easy fit, requiring nothing more than a crosshead screwdriver and your patience. For a limited time, they're being promoted by Mittelmotor with a hefty discount on the regular retail price, too. .

Price: From €99 (usually from €139)

mittelmotor.com

or call +49 234 935 1414



STUTTGART CLASSICA CARBON-FIBRE IGNITION LEAD COVER FOR 964/993

Every Porsche enthusiast loves a tidy 911 engine bay, a fact not lost on Will Chappell and Jase Eaton, co-owners of Cotswold-based air-cooled Porsche accessories outfit, Stuttgart Classica. Proving the point, the pair have just announced the launch of a 964/993 ignition cable cover manufactured from genuine carbon-fibre. A direct fit in place of the standard plastic Porsche part and finished in gloss lacquer proudly displaying exposed lightweight weave, this awesome add-on is offered with free UK shipping or low-cost overseas shipping. We can't promise the part will do much to improve your lap times, but it'll certainly enhance the appearance of your late air-cooled 911's engine bay in time for show season.

Price: £350

stuttgart-classica.co.uk or call 01386 701437



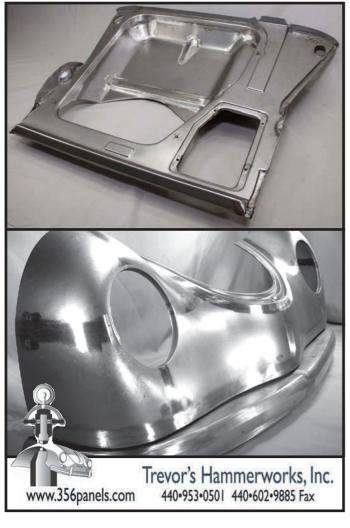
CLARKE CW1D FLOOR-STANDING PARTS WASHER

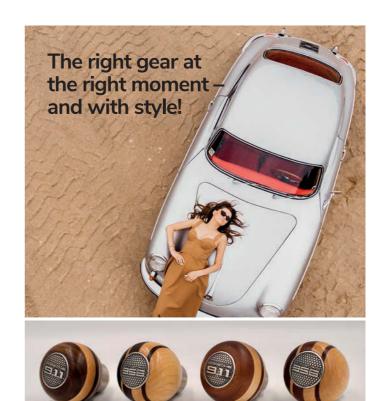
Measuring 785x540x880mm and presenting a tank capacity of seventy-five litres (fluid capacity of forty-five litres), this floor-standing parts washer from workshop tool manufacturer, Clarke, is the simplest way to clean component parts covered in oil, grease and dirt. The internal pump continuously circulates cleaning fluid, delivering it through a flexi-firm nozzle at high pressure. Featuring a draining tray, a small part container, a brush to help disturb dirt and a flexible link automatically closing the product's lid in the event of workshop fire, this red-finished parts washer accepts many commonly used cleaning agents and makes use of an integral, replaceable water filter. An essential product for any engineering workshop or enthusiastic home mechanic's garage. Order from the Machine Mart website, where the product has fast become a best seller.

Price: £167.98

machinemart.co.uk or call 0115 956 5555



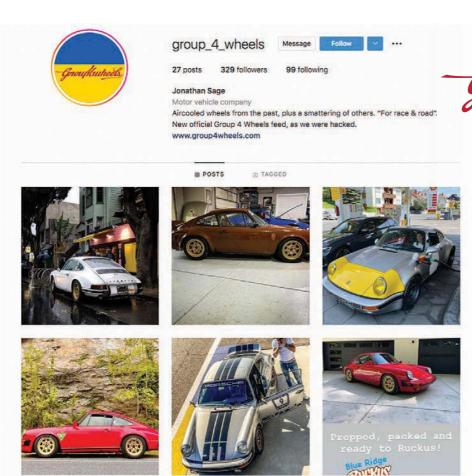




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ANDY PRILL

The thirty-first edition of the Tour Auto has concluded, combining breathtaking landscapes with beautiful classic sports cars, which worked their way through France's mountains, vineyards and race circuits. Culminating with three timed events on closed roads, the stage is well and truly set for next year's event...

Andy Prill is a qualified mechanical engineer with a love of Porsche stretching back to the restoration of a 912 in the early 1990s. Today, he heads up respected marque specialist, Prill Porsche Classics. Find the company online at prillporscheclassics.com



very year, I've made the April pilgrimage to the start of the Tour Auto in Paris. The exact timing depends on when Easter falls, but annually, close to three hundred classic cars of a type which competed in the original event descend on the start. But for the pandemic, I would have been celebrating my twenty-fifth visit (fourteen participations as a driver), but I'll have to mark this milestone in 2023. During my years of being involved, the race has started from the Trocadero, the Tuilerie Gardens, the Grand Palais and, as was the case this year, the Port de Versailles expo centre, an enforced move due to the

tracks, today's Tour Auto isn't for the fainthearted — the long days are as demanding on crews as they are on cars, requiring stamina and reliability.

Tour Auto was revived by Patrick Peter in 1992. In the early days of the reboot, British drivers made up the majority of the entry. Before classic car values increased to today's levels, exotic race machinery was a regular sight, owners recognising they'd have no chance of driving these cars on public roads anywhere else in the world. Think Matra MS 630/650, Ferrari 512, Ford GT40 and any number of Porsche GTs and prototypes. Today, the bulk of the entry is French and the exotic cars are far too valuable to risk. That said, we enjoyed the sight and shrill of a DFV-engined Ligier JS2.







restoration of the Grand Palais. The actual route from Paris changes each outing and, over the years, it has gone in every direction, occasionally venturing into neighbouring countries. The scenery is always spectacular -France has some of the best, if not the best, driving roads in Europe. Add in the beauty of the countryside,

the châteaus, the circuits and the event visits, and you have a unique experience quaranteed.

The first Tour Auto was held in 1899. The modern era ran between 1951 and 1986, by which time the glory

days were over and the event was incorporated into the European Rally Championship. In its heyday, the race was contested over eight days or more, with distances stretching up to 6,000km. Most of the manufacturers and many of the world's best drivers participated. A win was one of the most prestigious on the calendar. Still a mix of closed road stages and race

to welcome the cars as they blast through villages and towns along the route. My annual participation starts with preparation of client cars and the

planning of how my team will support them. For 2022, we had a 356 Carrera 2 and two Carrera RS 2.7s to take care of.

Doing well in this event comes from experience. Thankfully, during this year's Tour Auto, we enjoyed total

reliability, the cars only needing basic checks. There were no breakdowns or any other mechanical issues to speak of, the kind of complaints which always make things difficult on a fast-moving event. Six eighteen-hour days and a seventeen-hour drive home aways feels more rewarding (and less tiring) if everyone has had a good time. Bring on 2023.

One constant is the excellent organisation provided by Peter Auto and its

army of staff and volunteers. The French public turn out in their thousands

IN THE EARLY DAYS OF THE REBOOT, **BRITISH DRIVERS MADE UP THE MAJORITY OF THE ENTRY**

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Steel wheel

Design: OE look steel - colour: silver **Dealer enquiries are welcome**

15"- Steel rim

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6,0 x 15	ET 36	259,00	€

all steel wheels with ECE number



Steel wheel

Design: OE look steel - colour: silver

Dealer enquiries are welcome

16"- Steel rim

5,5 x 16 | ET 15 | 259,00 € all steel wheels with ECE number



KIERON MAUGHAN

A love of rock music and a passion for classic cars have combined to form the basis for an exciting project destined for your bookshelf and tellybox. And if you own an air-cooled Porsche previously in the charge of a famous pop star, there's every chance musician and machine could be friends reunited...

Kieron Maughan is the man behind the Rockstars Cars project and social media channels. Own a Porsche previously in the custody of a famous musician? Get in touch with Kieron at @rockstarscars or via rockstarscars.co.uk



any moons ago, I was the bass player in a rock band. We didn't achieve the mainstream success we were hoping for, which is why, like so many musicians in a similar situation, I went out and got a 'proper' job. I found gainful employment in the field of information technology. It might not be as glamorous as rock and roll, but I made a success of my newfound career. In fact, things worked out well enough for me to be able to buy the desirable cars you might ordinarily expect to find tucked away in a successful musician's garage. And yes, one of my cherished chariots is an old Porsche.

for the first time in a long time. This is especially true of old band vans and touring buses, communal transport before each star of the stage made enough cash to travel to gigs in their own motor.

I've conducted dozens of interviews since starting the project. Nick Mason, the late Ginger Baker, Suzi Quattro, Marky Ramone, various managers and 'drivers for hire' are among those who have participated in my work, revealing amazing insight into the world of stars and their cars. Many more pop personalities have agreed to be interviewed, but before I get too far ahead of myself, I need to get a commission from a television network to allow the project to progress to the next level.







Back in 2008, my passion for both music and cars led me to plan a book documenting the weird, wild and wonderful four-wheelers owned and driven by pop and rock stars over the years. I lined up a series of interviews with various household names, only to discover most of them

had memories and stories, but no photographs of their old rides. Sadly, hand-held cameras in the 1950s, 1960s and even the 1970s, were expensive, difficult to use and often produced photographs of questionable quality. If

INTERVIEWS WITH MUSICIANS KEEN TO TALK ABOUT THEIR LOVE OF CARS AND THE MOTORS THEY USED TO OWN

pictures were captured of musician and car together, unless they were a promotional shot — and therefore likely to be kept on record by media outlets — there's a high probability they've been lost, damaged or destroyed in the decades following their creation.

With this in mind, I decided to alter the format of my project. No longer would I produce only a book. Instead, I developed the idea for television. As opposed to relying on stars of stylus to provide photographs, I made it my mission to find cars once belonging to musicians, with a view to reuniting man (or woman) and machine.

Doing so has unlocked many memories previously forgotten by my interviewees. There's nothing quite like sitting in or driving a car you used to own, an experience which can bring to mind vivid images of days gone by. For musicians, this can mean waxing lyrical about time on tour. Amusing anecdotes are inevitably told about the vehicle being brought to the fore

This, dear reader, is not as easy as it might sound. After all, I may have a strong track record in business, and I'm obviously passionate and hugely knowledgeable about rock music and classic cars, but a proven pedigree in television? Not yet. Thankfully, the Rockstars Cars project has attracted

huge attention across social media. This loyal fanbase helped encourage Fifth Gear presenter, Jonny Smith, to join me as co-host for a round of filming, resulting in fresh 'sizzles' to promote the project to a new and expanded

audience. Since then, I've carried out new interviews with musicians keen to talk about their love of cars and the special motors they used to own. Just before this issue of *Classic Porsche* went to print, for example, I interviewed Mark Wynter, who had four top-twenty singles in the 1960s, including *Venus in Blue Jeans* and *Go Away Little Girl*. He bought two sports cars through Brydor, the business co-founded by Beatles manager, Brian Epstein, to supply exotic vehicles to celebrities of the day.

I'm eager to hear from any *Classic Porsche* reader who might own a car previously bought by a pop or rock star. I'd also be pleased to receive correspondence and photographs from musicians themselves. Perhaps we can track down a long lost Porsche and reunite star with car? I'm going above and beyond to prove each vehicle's authenticity, as you'll discover when my exciting new interviews emerge in the not too distant future. Oh, and if any of you happen to be a commissioning TV network executive...

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AUTI-IENTC SELF

This 1957 356 A T2 Speedster has survived near seven decades without a single dink, dent or any impact damage, resulting in an unrestored body the like we're unlikely to witness again...

Words Dan Furr Photography Dan Sherwood

356 SPEEDSTER

t's easy to consider the 356 a rare thing, but as this magazine demonstrates time and again, a high number of the near seventy-six thousand examples of Porsche's first production car have survived to the present day. Granted, the condition of these air-cooled relics of a bygone motoring age ranges from derelict doer-upper to concours trophy winner, but whether hot rod, road rat, show queen or rust bucket, all are afforded near universal appreciation, not only for their role in establishing Porsche as a volume producer of

high-quality sports cars, but also for serving as the foundation on which the evergreen 911 was built.

Compared to the standard of manufacturing applied to many similarly aged premium marque performance vehicles, such as those from Aston Martin and Jaguar, as well as various Italian brands, the quality of engineering and construction rolling out of Porsche was second to none. This is, of course, is a tradition extending all the way through the company's product line, from 356 no.1 to the very latest GT offerings from Zuffenhausen. It's also the primary reason so many 356s continue



to be used regularly, despite the newest example fast approaching its seventieth anniversary and, it must be said, in spite of the low value of these Porsches during decades past, when many of the 356's contemporaries were sent to the great scrapyard in the sky, their continued operation proving prohibitively expensive.

TRICK OF THE LIGHT

Porsche's no-compromise approach to vehicle assembly is one of the reasons restoration of a 356 is such a complex task - it's easy to underestimate the significant cost and time it takes to properly rectify a corroded 356 body. Some owners consider acquiring a 356 from California as a workaround, as though all vehicles residing in The Golden State - nicknamed primarily in recognition of its fields of golden poppies and the discovery of vast reserves of gold, rather than being credited for its tourist-friendly sunshine - remain in 'as new' condition irrespective of their age. Obviously, this is a nonsense. Granted, the West Coast's warm climate offers old metal a fighting chance of keeping corrosion at bay, but salt in the air as a consequence of being next to the Pacific Ocean brings a different threat to vintage vehicles in California. Also, last time I checked, the West Coast doesn't act as a barrier to accident damage and poorly executed repair work. Needless to say, I've lost count of the number of air-cooled Porsches I've seen arrive in the UK after being bought unseen by buyers confident many years of Californian registration somehow equates to a stamp of approval, only for the car to be a complete basket case when extracted from its shipping container in Blighty. Long story short, outside of full restoration, finding a solid, original aircooled Porsche is something of a rarity.

All of which leads us neatly to the 1957 356 A T2 Speedster you see on the pages before you. Beautiful, isn't it? Anyone would think this shimmering silver droptop had been comprehensively restored, such is its immaculate presentation. Not so, as I discovered on a recent trip to Bedfordshire-based independent Porsche sales and restoration specialist, Export 56.

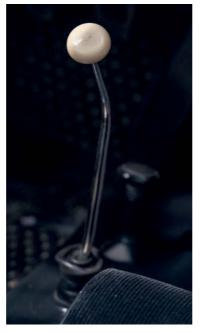
Delivered new to Max Hoffman's New York-based European sports car dealership in Autumn 1957 (for the 1958 model year), this *al fresco* 356 is, as alluded to in the opening sentence of this article, hardly what you should regard as a rare model — from launch to the end of production in late 1958, Porsche manufactured in excess of 3,600 356 Speedsters. 1,171 of them were built in 1957 alone. Getting hold of a Speedster today is therefore a straightforward affair, the only barrier to ownership being the depth of your pockets. What are you getting for your money, though?

Let's face it, most presentable Speedsters have been

Above Demand for 356 Speedsters is high right now, but the model is by no means a rarity, meaning there's plenty of opportunity for you to bag a Speedster to call your own











something Hoffman recognised as being a potentially

lucrative sales arena. In other words, 356 Speedsters

were cars subjected to hard racing and hard knocks.

At one time, they were also the cheapest Porsche

Below In single-family ownership for most of its life, this super Speedster revealed an immaculate body when stripped for fresh paint, with no dinks, dents, corrosion or impact damage suffered in the near seventy years since the Porsche was imported to New York by European sports car salesman. Max Hoffman

restored — there is an argument the buyer is exchanging their cash for what is essentially a new car. New metal, new parts, all in the shape of an old Porsche. Decide your preferred colour, engine and trim combination, then take your pick from a market showing no sign of slowing, despite the economic uncertainty we face right now. What could be simpler?

Well, what if you wanted to own a truly original 356

Speedster? No restoration, no accident damage. A tall order, for sure. After all, the Speedster was a car designed for the US market at the behest of the

AN ALTOGETHER DIFFERENT KIND OF 356 SPEEDSTER TO THE **PROJECT CARS WILLHOIT IS RECOGNISED FOR**

low-rake windscreen and basic bucket seats suited to North America's burgeoning club racing scene,

aforementioned Hoffman, who wanted Porsche to create a fuss-free, stripped-down roadster with a short, products going. No frills, many thrills, often at the expense of the cars themselves. And yet, here we are in Cranfield, in the presence of a true survivor. No corrective bodywork, no chequered history. The 356 Speedster might not

> in this unrestored condition? A very rare thing indeed. In addition to the

be a rare Porsche,

but an example

sale and restoration

of historically significant Porsches, Export 56 curates collections of cars for discerning buyers. These carefully selected assortments of air-cooled classics feature some of the very best race and road cars to carry the Stuttgart crest. Regular readers will know prime selections from the Export 56 fold have made their way onto these pages. "We took on a new client who wanted to build a collection of classic Porsches," company founder, Mick Pacey, explains. "He'd included a 356 Speedster on his wish list, along with a Carrera GT and a Carrera RS 2.7 in Touring specification. I reached out to my contacts in the USA and expressed interest in bringing a Speedster in respectable condition to the UK."

Mick was told, almost in passing, about a Speedster enjoying attention at Willhoit Auto Restoration, the famed 356, 912 and early 911 restoration company in operation since the mid-1970s. Based in a 14,000ft2 facility in Long Beach, California, Willhoit's stable has turned out some of the world's most celebrated restored aircooled Porsches, many of them fixtures of the winner's circle at Porsche concours events. Under the rule of company boss, John Willhoit, all work is performed to an extraordinarily high standard, his aim being to ensure





the Porsches his team produce are not only stunning in appearance, but also hugely enjoyable to drive and use, just as the manufacturer intended.

The 356 Mick was being told about was an altogether different kind of Speedster to the project cars Willhoit is recognised for. Not only was it a late model finished in a rare-for-the-T2 lick of silver, but it was also in near immaculate unrestored condition. Willhoit, so Mick was told, had been tasked with giving the car's mechanicals an overhaul, but the body required no attention. This was music to his ears — a 356 boasting factory originality on this scale is virtually unheard of. He'd found the perfect Speedster to kickstart his client's collection.

DUTY OF CARE

What contributed to this pretty Porsche's preservation? Was it a museum piece? "Not at all," Mick continues. "It had simply led a really good life in single-family ownership and had very little use since its original point of purchase from Hoffman, only coming out for the occasional sunny drive. So many Speedsters were wrecked in club racing or ended up with battered-around bodies, especially in the 1980s, when the value of these cars was at rock bottom. Weird modifications and bad repair work were commonplace back then. In contrast, this car was extremely well looked after, leading it to arrive at the Willhoit workshop for a timely overhaul of its drivetrain and running gear, rather than because it needed repair or corrective metalwork, as is so often the case with 356 Speedsters."

Willhoit — "staggeringly good work," attests Mick, before telling us the Willhoit name carries a premium worth shelling out for when considering the purchase of a Porsche which has been worked on by the company's team of technicians — took care of refreshing the 1.6-litre flat-four, its accompanying transmission, brakes and the suspension, all of it numbers-matched. An inspection of the car as a whole reported no sign of accident damage. "Quite remarkable," Mick concedes. "Willhoit confirmed there was no sign of impact, nor rot or rust anywhere on the car. It really is rare to find a Porsche of this era in such amazing unrestored condition, especially when you consider the manufacturer makes its cars so drivable, a quality which encourages owners to hit the road at every available opportunity." Even so, the silver

Above The car's numbersmatching engine, gearbox and all running gear was thoroughly overhauled by the team at Willhoit Auto Restoration in Long Beach



356 SPEEDSTER







Above Most Speedsters in this presentation would have been subjected to hundreds of hours of body restoration. but not our star car

stunner has seen little action, though this isn't to say it didn't need any cosmetic work, as Mick explains.

"I negotiated purchase of the car after being made aware of the fact it was subjected to a paint job many decades ago. It wasn't a brilliantly executed respray,

but it was true to the factory colour, which was applied to only a handful of late Speedsters. If the original paint was in place, I'm sure my client would have liked us to retain the

WE'RE SIMPLY IN THE PRESENCE OF ONE OF THE MOST **ORIGINAL SPEEDSTERS** ANYWHERE IN THE WORLD

patina it would have displayed, but because the respray was showing signs of slight blistering many years after application, he instructed us to strip his new 356 and give it a fresh coat of colour matching the original silver." After the car completed its journey across The Pond

was looking at metalwork nothing short of spectacular - no welding, no corrosion, perfect factory panel gaps, all the trim holes exactly as they left the factory, plus original leadwork just as it was applied by Porsche."

and landed at Export 56, Mick's team began the weeks-

long process of disassembly, including the laborious

was staggered at the excellent condition of the body

beneath," he gasps. "Over the years, I've seen 356s in

all conditions.

from run-down to

restored, but it's

free of body

awfully unusual to

find one completely

damage, let alone a

Speedster as near

perfect as this. I

job of hand-stripping the offending paintwork. "I

THE HOLY GRAIL

There was slight discolouration where moisture had been trapped beneath side trim sill rubber many moons ago — the parts are meant to protect metal, but can have the opposite effect - but this was really all Export 56 could find fault with. Doors, engine lid, the 'frunk', all of it was pristine. "In all my years working on these cars, I've never seen one this good. Some owners like to preserve their classic Porsches, rather than restore them, but when you pull them apart, smacks, dinks and dents soon make themselves known and restoration work begins. There was absolutely nothing of the sort when we inspected this Speedster post-strip. It required no panel beating whatsoever. A remarkable find."

Many surviving premium sports cars of this era have a strong story to tell. Celebrity ownership, the first (and, perhaps, only) of a particular specification, mind-boggling restoration. These are all familiar themes to readers of motoring magazines like ours. No such tales are carried by this 356, though. We're simply in





the presence of one of the most original Speedsters anywhere in the world. The fact it is now wearing its second respray (expertly applied this time around, I might add) in almost seventy years does nothing to detract from how sensational this Porsche really is. "There's an argument the body would have looked great in bare metal, lacquered to show just how unusually well preserved it is," laughs Mick. "It's not my car, though!" The customer is always right, as the say.

The interior of the Porsche has been given a lift with new carpets and, as the keen eyed among you will have noted, leather-trimmed buckets with corduroy centres. The original leatherette-covered Porsche pews were removed and put to one side to ensure their preservation long into the future. The dash top and door cards are trimmed in leather at owner request.

The Willhoit-serviced engine, gearbox and running gear have delivered a Speedster driving amazingly well. It's an easy 356 to get to grips with, feeling light and very fleet of foot. Naturally, all Speedsters share common on-the-road characteristics, but as is the case with all Porsche models, evolution of the species between 1954 and discontinuation four years later brought improvements in build quality and mechanical technology, meaning a late 356 Speedster is the best of breed in stock form. Willhoit's work in beautifully setting up this air-cooled Porsche's engine, brakes, suspension and steering has reintroduced lost responsiveness, ensuring the new owner will get just as much enjoyment from driving the car as he will staring at its immaculately presented, amazingly unrestored body. And what a body it is! CP

Above Thanks to Willhoit's work on the oily bits, this stunning Speedster drives brilliantly and will be put to good use by its new owner









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CARRERA RS 2.7





Steckkönig had taken the initiative in the preparation of this car and, as an amateur racer since 1966, also shared its wheel.

The Porsche driven by these men was so extensively modified it had to run as a Group 5 Prototype. It had wider rims and tyres, aerodynamic changes to increase downforce, a Teldix anti-lock braking system and a special 2.7-litre engine. In the race, the car finished tenth, headed only by open two-seaters, an achievement demonstrating these kind of changes could make the 911 a serious competitor.

WEIGHT OF THE UNION

Based on these and other experiments, components were chosen for a racing-type 911 to be built in series. Singer, who was put in charge of the project, faced two main challenges in planning this Porsche. One was to determine exactly what the 911 needed in order to be truly competitive as a GT racer. The other was to find out which changes had to be incorporated in the production car — remember, five hundred had to be made — and which extra alterations could be added later under Group 4 regulations. These were activities in which the genial and ingenious Singer would become an unrivalled expert. Most critical and fundamental, he knew, was the need to ensure the cars were light. Porsche succeeded in reducing the homologated weight by 210 pounds to 1,985 pounds — an even nine-hundred kilograms.

Sheet steel thinner than standard was used for the main body panels, cut to 0.70mm from the usual 1.00-1.25mm. Much of the glazing, including the windscreen, was in thinner Belgian-made Glaverbel laminated safety glass. The rear deck was of fibreglass, held down by rubber ski clamps. Cars not intended for road use featured rear aprons, including the bumper uprights, which were also fashioned from fibreglass.

The interior was ruthlessly stripped. Gone were sound-damping materials and carpeting, replaced by rubber mats. Rear seats were absent. Door panels were flat and plain, with a pull cord releasing a simple

latch. A plastic handle was used for closing. The clock and the passenger's sun visor were gone. Seats were simple buckets with thin padding, rolled edges and a thumbscrew adjustment for back angle. Also missing was undercoating, door-sill trim, the glovebox lid, coat hooks and the gas struts to counterbalance the front deck lid. The horn was a token offering.

Bilstein shock absorbers saved another 7.7 pounds. This was the first time these German-made gaspressurized shocks had been made standard equipment on a production Porsche. Anti-roll bars were much stiffer, increased from the standard 15mm to 18mm at the front and 19mm at the rear.

The width of the Fuchs aluminium rims at the front remained at six inches, while the rear rims were widened to seven inches. This allowed them to carry Pirelli CN36

Above On the Porsche stand at the 1973 Geneva Motor Show sits two 914/4 2.0, all three main flavours of 911 and the new Carrera RS 2.7

Below Porsche's first effort at a strong identity for the Carrera RS had the name in script form against a solid background, making the text looks as if on a windy sea

Bottom Illustrated are the experiments with rear-deck spoilers, which led to the final patented design adopted for the Carrera RS and a huge reduction in rear lift









Above Early RS being tested

Top right Carrera RS 2.7 coupe, as it appeared in *Christophorus* magazine, issue 127, published in 1974

Below With larger-bore Nikasil-lined cylinders taking displacement from 2.4 litres to 2.7 litres, the Type 911/83 flat-six of the Carrera RS took vital step toward the unit's future three-litre capacity radials measuring 185/70/15 and 215/60/15. With this combination, Singer's tests showed the Carrera RS — as it was named — could corner at 0.912, the highest lateral g rate of any production Porsche. None of the others could break the 0.9 g barrier.

This combination of wheels and tyres marked a breakthrough for Porsche, said engineer, Peter Falk. "With the help of Helmuth Bott, we managed to introduce

wheels and tyres in different sizes for the front and rear suspensions, despite opposition from our sales and customer departments." To accommodate,

THIS SIMPLE SLAB OF PLASTIC REDUCED REAR LIFT AT 152MPH TO ONLY 93 LBS AND DROPPED DRAG COEFFICIENT FROM 0.41 TO 0.40

the rear quarters were modified with a deep bulge. In the light of the FIA's rules, these bulges were of added significance because they widened the base from which two more inches at each side could be tacked on under the provisions of GT regulations. Track was therefore fifty-four inches at the front and a shade under fifty-five inches at the rear.

When viewed from the back, the Carrera RS was distinguished from other 911s by more than its fender bulges. Jutting from the rear deck was a strange appendage which looked more like the bill of a platypus or a piece of Italian furniture than part of a modern

GT car. The oddlooking addition was a spoiler, an aerodynamic device which quickly became a trademark of the new Carreras of the 1970s. In Germany, this new

component was known as the Bürzel, which is best translated in English as 'ducktail'.

The origins of the Bürzel dated from 1970, when tests on a standard 911 body were made in the big Stuttgart wind tunnel to find out what effect aerodynamic modifications to the basic 911 shape would have on the car's speed and stability. From this work came the nose spoiler introduced on the 1972 911 S. Its American patent in the names of body engineers, Hermann Burst and Rolf Wiener, pointed out how, unlike the added-on front spoiler of the Chevrolet Camaro, Porsche's design fully integrated the functions of bumper and spoiler. The ducktail completed the ensemble.

Energized by Fuhrmann's interest in improving the 911's competition profile, Singer launched further work on the coupe's aerodynamics. He assigned the task to Tilman Brodbeck who, said automotive author, Randy Leffingwell, "was Porsche's first hire as an aerodynamics graduate. Singer sent him, a couple of mechanics, a designer from Tony Lapine's staff and a car into the Volkswagen wind tunnel." The principal reason for the tests was to improve this aspect of the standard 911, not specifically for racing.



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Facing page Porsche print advertisement for the Carrera RS 2.7 — not prototype side script and the centre-aligned RS logo on the ducktail

Top Updated side stripes and Carrera logo for production

Above The Carrera RS 2.7 competing in the 1974 Hot Snow Rally

Top right Further experiments with the RS's rear spoiler

Below Carrera test logo pictured in August 1972

Initially, Porsche engineers tried a boxy bustle on the back of the 911, then experimented with different spoiler heights attached to it. They saw at once how such measures reduced both the drag coefficient and the amount of rear-end lift at the rear of the car. As we all know, in standard form, the 911 body had much rear lift (around 320 pounds at 152mph), which contributed to instability and high-speed oversteer.

In further tests, the bustle was trimmed away and the ducktail was left standing, jutting up to window-sill level from the centre of the rear lid. This simple slab of plastic reduced rear lift at 152mph to only 93 pounds and dropped the drag coefficient from 0.41 to 0.40, which translated into a slight but measurable improvement in maximum speed. "The primary effect" of the ducktail, said Porsche, "derives from the slowing of airstream speed over the rear portion of the roof. From this, braking effect arises, in accord with Bernoulli's principle, an increase in pressure with downforce resulting from the vertical force component."

In a patent applied for on August 5th 1972, Burst,

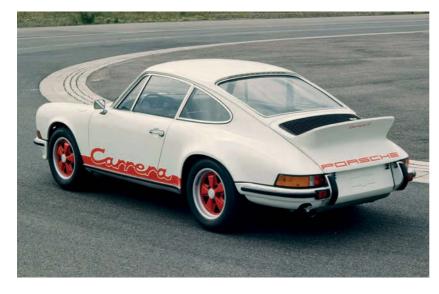
Wiener and Brodbeck were all credit for the part's design. Practical tests refined the ducktail's final shape, wrote Leffingwell. "Falk's test department ran countless laps to determine the part's best placement and height. Lapine made designs of the entire Porsche. When his styling department presented the first finished car just before production was to begin, Falk was startled, complaining the Bürzel was too low. When asked why it was, in fact, lower than when tested, Lapine told him it looked better like this!" The final design, avowed Falk, was a full fifteen centimetres lower than he wanted, but it met Lapine's aesthetic standards and, as an added benefit, allowed full rear visibility.

TRAVEL LIGHT

The ducktail's placement was doubly advantageous in that it raised pressure at the grille admitting air to the engine room. In turn, this increased airflow through the engine compartment and perceptibly decreased oil temperature. An incidental effect was an improvement in airflow over the taillamps, which kept them cleaner than before. Every little helps!

The engine was another distinguishing feature of the Carrera RS. It was larger than 2.5 litres and could be increased further, as allowed by FIA rules, to the next class size, which was three litres. It had the same 70.4mm stroke as the 2.4-litre Porsche sixes, but a larger bore, up from 84mm to 90mm. The biggest bore yet used in a 911 engine, this gave the Carrera RS the same bore and stroke as the 5.4-litre twelve used in the 917/10 in 1972. The six's displacement became half that of the twelve, though — 2,687cc or, in round numbers, 2.7 litres.

Another technique carried over to the Carrera RS from the 917 was the use of Mahle's Nikasil process for protecting the bores of aluminium cylinders. This was used instead of the Biral cylinders of the 911 E and 911 S or the chrome-plated aluminium bores which had once been popular at Porsche. The plated Nikasil layer was about as thick as a chrome coating, but much tougher,





thanks to microscopically small silicon-carbide particles suspended in it. Moreover, the yellowish-silver Nikasil bore surface needed no special treatment to hold oil, unlike chrome-plated cylinders. Crucially, the 917 showed the Nikasil process helped to deliver higher and more consistent power output than the chrome treatment.

Otherwise, the Carrera RS engine — officially the Type 911/83 — was much like that of the 911 S of 1972 and 1973. It had the same 8.5:1 compression ratio, meaning it could run on regular fuel, plus it used the same Bosch mechanical injection system, as well as the same valve sizes and timing. Its DIN output was up 20bhp from the 210bhp of the 911 S at 6,300rpm. There was still speed above this level, with the rev limit set at 7,300 rpm. Maximum torque was 188lb-ft at 5,100rpm. A five-speed transaxle equipped with an oil pump was standard equipment in the Carrera RS.

The idea of giving the new model the Carrera name was a stroke of pure genius. It was new to the 1970s generation of Porsche enthusiasts — not for a decade had it been applied to a car intended as much for the road as for the track. In the 356 era, of course, the Carrera name signified power by the ground-breaking Fuhrmann four-cam engine. With the Abarth-built car (Carrera GTL) and then with the 904 (Carrera GTS), the Carrera name had been given to increasingly exotic Porsches, culminating in the Carrera 6 (906) of 1966 and 1967. Since then, this wonderful name, with its magical blending of foreign romance and racing excitement, had lain dormant at Zuffenhausen. Porsche revived it for just the right car.

Considering they were limited to graphic devices, Porsche's stylists excelled in the way they used the name. There would be no trim or metal lettering applied to the sides of this lightweight 911. Instead, they devised a stripe along each flank, on which a bold depiction of the original Carrera script 'floated.' White cars with both blue and red versions of this striping were shown in the original Carrera RS catalogue and early publicity photos

of the new model. By the time a Carrera RS was shown publicly at the Paris Salon in October, however, the side striping had improved. It was now a narrower stripe raised above the sill, out of which the Carrera script was 'dropped' to look the same colour as the car. This was more subtle and more attractive than the original design. A similar stripe across the rear lid carried the Porsche name, while the Carrera RS designation was lettered on the skin base of the ducktail.

MYSTERY MACHINE

It was easy enough for Porsche to make five hundred units of the Carrera RS between October 1972 and February 1973 to make good the promised number in time for homologation for the new season. This was granted in advance by the FIA on November 27th 1972 to take effect on 1st March 1973, assuring acceptance by would-be racers, but also providing peace of mind to Fuhrmann and Ferry Porsche, who needed all these cars to find homes. Who would Carrera RS buyers be, though? Moreover, would there be enough of them?

Headed by Lars Schmidt, the Porsche sales department in Ludwigsburg raised doubts and

Above Björn Waldegaar and Hans Thorszelius using a Carrera RS 2.7 at the 5,000km East African Safari in 1974, where they scored second place in overall classification

Below Flying high in November 1972







Carrera RS as appealing to the sporting road driver as it

was sure to be to the racer — the West German national

finally pried out of the reluctant bureaucrats, was owed

to a conflict between the ducktail and interpretation of

paragraphs 32 and 33

of the road regulation

rulebook, which dealt

with the need to avoid

sharp edges and

Porsche decided

corners on vehicles.

motor vehicle authority refused to give this new 911

blanket approval for use on the road. This, Porsche

Above Carrera RS 2.7 body production underway

Below Pictured in later years, Norbert Singer (left) and Peter Falk were leaders in the creation of the Carrera RS, with Falk considering it the best road car ever produced by Porsche

objections. Sales executives warned it would be very hard to find buyers for all five hundred cars, especially considering the new engine was not approved for sale in the United States. Porsche therefore couldn't rely on its biggest market.

To help sales, the price was held at DM33,000, only

DM1.500 more than the 911 S. This was the cost of a basic stripped Carrera RS, which was listed as order number M471. If the buver specified order

EVERY MEMBER OF MANAGEMENT ENTITLED TO A TOP-RANK CAR WAS OBLIGED TO TAKE A CARRERA RS 2.7

with the Carrera RS.

paid an extra DM2,500, they were the buyer of a Carrera RS with 'Touring' package. This delivered a completely upholstered and trimmed interior, much like that of the 911 S, plus functional steel rear bumpers and guards. Such cars, Porsche said, were trimmed this way by dealers, thereby not jeopardizing homologation of the five-hundred lightweights.

Porsche had to vault another hurdle to make the

number M472 and

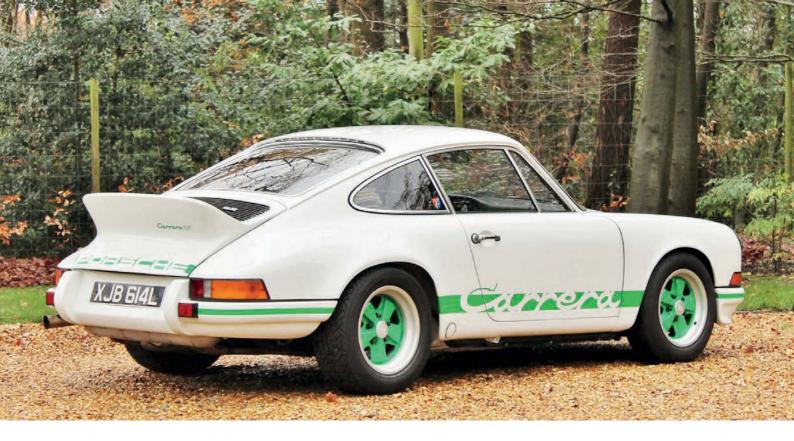
to bypass the head office of the motor vehicle authority in Flensburg by having each Carrera RS individually type-approved for a road license by the local registration office in Stuttgart. This was permissible, as long as no more than one thousand identical vehicles were processed through the same registration office. There seemed no danger of this number being exceeded

As part of this procedure, "the first five hundred cars were all assembled as lightweights," says Randy Leffingwell. "When each Carrera RS reached point eight on the assembly line, with all necessary pieces in place to ensure the car would function fully, but wasn't yet ready for customer delivery, it was taken to the Zuffenhausen town scale. There, each Carrera RS was weighed and certified. The cars were then returned to the factory and split off either for final inspection or returned to assembly to fit customer options."

In September 1972, with only the first prototypes and photos to work with, the salesmen of the VW-Porsche VG went to work getting commitments from their distributors. They scheduled an extra-heavy barrage of press advertisements. Even the Zuffenhauseners, who were normally divorced from sales concerns, got in on the act - every member of management who was



PORSCHE



entitled to a top-rank car was obliged to take a Carrera RS. Staff, meanwhile, knocked on the doors of potential 911 S buyers to 'upsell' them an RS.

By the time the Paris Salon opened on October 5th, a total of fifty-one orders for the Carrera RS had been booked. This was an unexpectedly good start. The Salon brought an even bigger surprise: there was such enthusiasm for the car, the complete run of five hundred was sold out a week after the show closed! Porsche had completely underestimated the popular appeal of its new-style 911.

GREAT EXPECTATIONS

Salespeople who had pushed hard to sell the cars now had to switch to assuaging the hurt feelings of would-be Carrera RS buyers who had learned they were facing an indefinite wait. Their orders held up, though, encouraging Porsche to build a second series of five hundred cars. Understandably, the manufacturer also took the opportunity to bump the price up an additional DM1,000.

On April 9th 1973, the thousandth Carrera RS was completed, which conferred an additional benefit — it could now be homologated in the Group 3 Grand Touring category, in which it would run with relatively little modification and would be highly competitive. On July 1st 1973, this additional homologation was granted.

In fact, the Carrera RS production line kept rolling until July 1973, when the last of 1,580 such cars was made, 1,308 of them being Touring versions and two-hundred Sport models. At this rate, it was no longer possible to sneak cars through the Stuttgart motor-vehicle office for registration. Thinking outside the box, Porsche obtained national approval for the Carrera RS by offering the model without the controversial ducktail. Many were sold in this configuration, but few stayed tailless long.

Indeed, owners could (and did) buy the Carrera RS decklid from their Porsche dealer for \$185, then have it installed and present the car to their local inspection office for approval.

This new 911 struck a responsive chord in the minds of many enthusiasts. Famed conductor and fast-car fan, Herbert von Karajan, saw the Carrera RS as just the right Porsche for "a run in the Salzburg mountains at six in the morning." He ordered a red RS with black striping. Another enthusiast group, the editors of *Autocar*, headlined their test of the Carrera RS with the line, "sensational, even by Porsche standards."

Autocar had, in fact, tested a Carrera with full Touring equipment. It scaled 2,398 pounds with a half-full fuel tank, quite a bit more than the 2,150 pounds typical of the basic stripped RS in the same condition. Front/rear weight distribution was 41/59 percent. The car's heft, however, didn't keep the Autocar car from returning such brilliant acceleration figures as rest to 60mph in 5.5 seconds, to 100mph in fifteen-dead and the standing quarter mile in 14.1 seconds. Top speed was 149 mph. Testing one of the lighter homologation specials, racing driver and journalist, Paul Frère, recorded the same time to 60mph, two seconds less to 100mph and maximum speed of 150mph. Porsche had done its job. Now it was up to the racers. CP

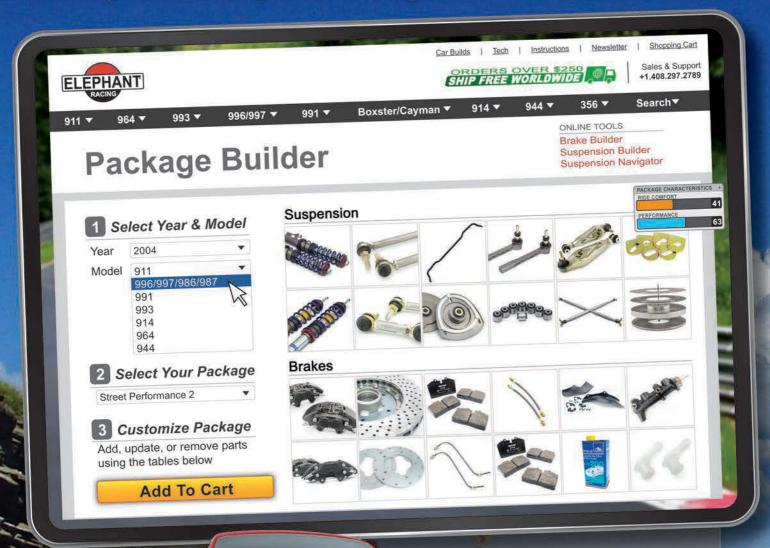
Above and below Peter Falk had a key role in the Carrera RS's differential tyre sizes from front to rear — long resisted by the Porsche sales department, this was a breakthrough for the 911's engineers and helped inform future Porsche production



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SPOILER ALERT

The Carrera RS 2.7's ducktail may have become a style icon, but it was the start of Porsche's focus on aerodynamics for both its race and road cars. Fifty years on, it's also a feature of the manufacturer's very latest products...

Words Shane O'Donoghue Photography Dan Sherwood, Porsche







altering a car's weight distribution and grip levels by reducing contact pressure on the tyres, leading to instability. Conversely, downforce — or negative lift — adds weight, pushing the car down, which aids stability and can increase cornering speeds.

To understand all this, it's easiest to imagine two pathways for air to flow as a car travels through it.

Some of the air goes over the car, some of it goes under. Obviously, air goes around the car, too, but that's of less interest to our explanation. The air going over the top has, simplistically speaking, further to travel in the same amount of time than the air moving in almost a straight line under the car. This causes the air going over the top of a car to speed up. According to Bernoulli's principle (one of the most important in fluid dynamics), for a given volume of air, the higher the speed the air is travelling, the lower the pressure. Likewise, the lower the speed of the air, the higher the pressure. Hence, the slower air underneath a car is at higher pressure, while the faster air over the top is at lower pressure.

BORN SLIPPY

This has the effect of pushing the car up. Therefore, all things being equal, a slippery car body with a small frontal area will mean increased speed of air over the car and, while this reduces drag, it can also increase lift. This is a simplification — various bits of a car, such as the windscreen and wheel wells, can contribute high- or low-pressure pockets of their own, but the fact is all Porsches produced up to the early 1970s exhibit net lift at higher speeds.

The same could be said for Porsche's racers. Even with the massive budget which made the 917 possible, there was limited understanding of the car's aerodynamics and how they were responsible for the early 917's wayward handling. The fix came about at a test session in 1970, where sheets of aluminium were

quite literally taped and riveted onto the back of the car until it drove as expected. Even so, the reasons this worked were not fully understood.

As mentioned by Ludvigsen, the first implemented solution for Porsche's road cars came in the form of a relatively subtle-looking airdam developed in a wind tunnel. An airdam, as the name suggests, is when the lower front bodywork forms a dam for the airflow. Naturally, it can't ever extend all the way to the ground and all the way around the side to touch the tyres, but it does manage to cause an air restriction, which both speeds up the air under the car and results in a 'sheltered' section directly behind the airdam.

Both of these are of low pressure, meaning a reduction in lift at the nose of the car. Such a device was fitted to the 1972 911 S, reducing lift by forty-four

Below Cd value determination for the Carrera RS 2.7, featuring wind tunnel testing of the model with and without its now iconic ducktail



DUCKTAIL LEGACY





Above The final ducktail has gone down in automotive history as a design icon and continues to influence Porsche production

Top right An early example of the ducktail in place

Below Ducktail development at Weissach 1973, where the body shell of the 917/30 Spyder and Carrera RS 2.7 are being worked on in front of a stack of new RS engine lids

percent with no additional drag. The Carrera 2.7's ducktail followed on from this, and though the design of this type of spoiler was led by the trial and error of physical testing (as opposed to computational fluid dynamics on today's powerful computers), it was clear Porsche had truly started down a path of understanding automotive aerodynamics and how to optimise them to its needs.

Much of Porsche's early wind tunnel work was conducted under the management of motorsport engineer, Norbert

to improving the 911's performance as a racer. Indeed, the 1974 911 Carrera RSR Turbo 2.1, complete with its

Pioneered by the aeronautical industry, the profile of a

PORSCHE TOOK THE

OPPORTUNITY TO REALLY

PUSH THE BOAT OUT FOR THIS

SPECIAL 911

wing takes advantage of the Bernoulli principle described above, where higher air velocity means lower pressure, and vice versa. The upper surface of an aeroplane's wing is longer than the bottom's, meaning the air has further to travel. Therefore, it speeds up, reducing the pressure.

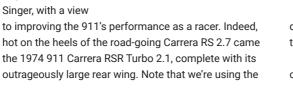
The opposite happens at the bottom surface of the wing, resulting in a net force up on the wing (i.e. the aircraft files). Now, turn the wing upside down and bolt it to a car. Hey presto! The air pressure

differential between the top and bottom surfaces pushes the car down onto the road or track.

The 911 racer didn't just feature a ducktail-like bustle on the rear, but a full-on wing with endplates. Those endplates stop 'leakage' of the high-pressure air to the low-pressure side around the periphery of the wing. maximising its effectiveness. Wings have been found to be far more efficient, in terms of reducing lift, than spoilers, because they create less drag

An evolution of the blueprint laid down by the Carrera RS 2.7 was the Carrera RS 3.0. The FIA's homologation rules had changed, meaning Porsche didn't need to manufacture as many vehicles to qualify the car for racing — where the Carrera RS 2.7 had to be a realistic road car due to the relatively high number of examples Porsche was required to manufacture, only one hundred versions of the Carrera RS 3.0 were required. Consequently, the company took the opportunity to really push the boat out for this special 911. It was deemed acceptable for these cars to be more extreme.

Though the 911 Turbo (930) which followed is probably the Porsche most associated with the new whale-tail-style rear spoiler, the Carrera RS 3.0 is the 911 which featured it first, evolving lessons learned in







the creation of the ducktail and racing 911 to further reduce lift. The massive increase in dimensions was with motorsport in mind, allowing Porsche to run large wings on its 911 racers. Indeed, examples of the Carrera RS 3.0 sold in Germany came with two different spoilers — a smaller, road-legal version fitted at the factory and the larger spoiler synonymous with 911s of the era.

THROUGH THE RANKS

The Carrera RS 3.0's deep front airdam and large whale tail appeared on the 930 prototype revealed at the 1973 Frankfurt Motor Show and was carried through to the production version of the turbocharged 911. Porsche also fitted the rear spoiler as standard to its Carrera models from 1975, while its race cars, such as the 934 and 935, featured more complex and much larger appendages optimised for high-speed track driving.

Armed with its relatively newfound knowledge of automotive aerodynamics, Porsche looked to return a purer silhouette to the 911 for the arrival of the 964 in 1989. The solution was an electrically extending rear spoiler. Up to 50mph, the spoiler — equipped with an integrated air grille — was more or less flush with the rear engine cover. Above this speed, an electric motor moved the spoiler up into place, contributing to a claimed zero lift scenario at high speed. Porsche says the system didn't increase drag, either.

This wasn't the only aerodynamic innovation of the 964, which featured smooth underbody panels, a bonded-in windscreen and rain gutters designed for minimal interruption of the airflow, again to reduce drag. The chunky new front bumper design of the 964 caused the airdam effect described above and, where the 1972 911's side sills allowed the fast-moving air to escape, the 964 featured *lower* sills in a bid to trap air and enhance the effect. The result was low lift at the front, as well as at the back, and an impressively low coefficient of drag.

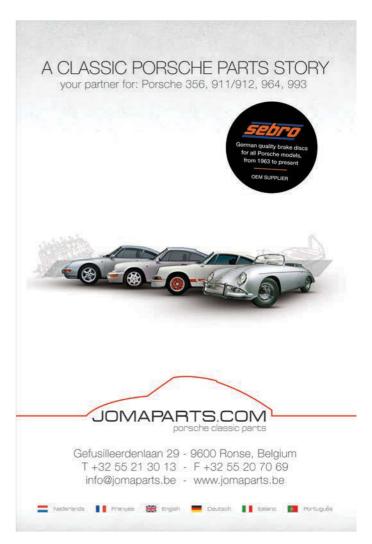
This approach was carried forward to the last of the air-cooled 911s, the 993, with further focus on reducing drag through a smoother design. Indeed, the 993 was informed by the significant development work Porsche expended on the 959, though it didn't receive the 959's ride height reducing dampers or its full-width rear wing.

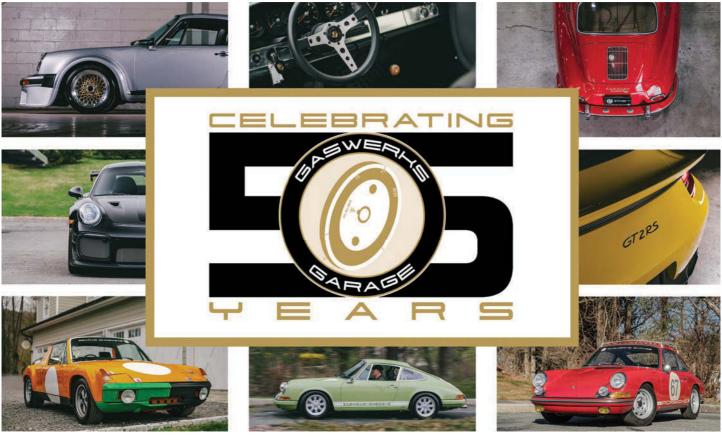
Looking back at the angled piece of plastic atop the rear of the Carrera RS 2.7, it's funny to think this small part has become as legendary as an iconic sports car, such as the 959. One thing's for sure: the RS ducktail was certainly a 'Eureka!' moment for Porsche and, while the brand's current cars make use of modern advanced aerodynamics, the introduction of a ducktail on the 992 Sport Classic proves our favourite manufacturer can't quite let go of the little spoiler which started it all. **CP**

Below A 2.4-litre 911 steps in to assist with first attempts to model the Carrera RS 2.7's ducktail spoiler









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HIGHLAND FLING

After reading this issue of *Classic Porsche*, you'll be well aware of the Carrera RS 2.7's origins and credentials. What's not so well-known is its successor, the Carrera 2.7 from 1974. After taking photos in Glasgow, we went for a spin in the Scottish Highlands...

Words Johnny Tipler Photography Ade Brannan





machine, which is accompanied by a Porsche

Certificate of Authenticity and the original
registration document, here's a bit of context.

The 1973 Carrera RS 2.7 was a runaway success, effectively translating the marque's prolific
competition triumphs into a road-going race car. The

For a short period, then, the Carrera 2.7 was the direct successor to the Carrera RS. By a quirk of legislation, it was actually built in smaller numbers:
1,580 units of the Carrera RS 2.7 versus 1,036
Carrera 2.7 coupés and 433 Targas. The 2.7 MFI car was also more expensive than the RS.



For obvious reasons, the Euro-spec version has become significantly more desirable than the smothered US model, but while the RS Touring is about half-a-million quid in today's money, the Carrera 2.7 fetches about half that sum. In a sense, given its similar performance and handling, you could argue the Carrera 2.7 is something of a bargain.

NEXT LEVEL

Our feature car's Hong Kong-based owner, Simon Ireland, is bent on trading-up to an RS. I suppose, personally, I'd hang on to the MFI car because of its comparative rarity, its amazing colour, its interesting specification and first-class restoration. I also perceive the RS as a sort of 'trophy car' — why spend double the money on

something with equal capabilities? Tom Fitzsimmons reckons the RS 2.7 still represents an investment destined to increase in value, but you might

consider any aircooled 911, including this one, in the same light.

The middle years of the 911's life story, from 1974 to 1989, turned out to be a paradigm of stability as far as its specification was concerned. The frenetic changes in chassis dimensions, body styling, adoption of fuel injection and, most of all, shifts in engine capacity characterising 911s from the late 1960s and early 1970s, settled into a pattern of base models enduring for almost a decade-and-a-half, with just three significant introductions. First up was the 1974 2.7, with three models on offer: the basic 911 (replacing the 911 T), the 911 S (taking over from the 911 E) and what we've

got here, the Carrera 2.7 (superseding the 2.4-litre 911 S), using the 210bhp unit from the outgoing RS. The company also marked its twenty-fifth anniversary with 1,063 special edition Anniversary Carreras, comprising 664 Coupés and 399 in Targa format, all in Diamond Silver Metallic. A handful came with pukka 2.7-litre RS engines. The 2.7-engined cars also embody the transition from flat-six screamers to the torquier three-litre units ushered in by the Carrera 3.0, just a year later, in 1975. The 2.7 and 3.0 Carreras were dropped in 1978, making way for the three-litre 911 SC.

Keen-eyed devotees will have already spotted those raised impact bumpers and the ducktail-spoilered engine lid — paradoxes in themselves, since the ducktail was synonymous with the RS 2.7, which, of course, pre-dated

impact bumpers.
Nevertheless, as a classic reference, the ducktail suits any 911. Witness my own 964 and 996, bedecked with the cheeky upturned spoiler

rather than projecting wings. Back in the day, the concertina-rubber and elevated bumper-sections which came in with 1974's 911 line-up was greeted with a degree of derision, mainly on aesthetic grounds. "What have they done to our pretty 911?!" grumbled the pundits. The new styling and what lay beneath it, however, was imperative to ensure the 911 could comply with stringent new vehicular safety legislation in the United States and Europe, which meant all road cars had to be able to withstand a 5mph impact without sustaining any structural damage. Even the ducktail was binned on grounds of pedestrian safety.

Above Thanks to its utterly gorgeous coat of Hellgrün, you won't exactly miss it in a crowded car park

THOUGH OSTENSIBLY IN GOOD

NICK, CHASSIS 911 560 0123 WAS

COMPLETELY DISMANTLED AND

STRIPPED TO BARE METAL

CARRERA 2.7 MFI









Above Fully rebuilt by Roock Sportsystem and bought direct from Michael Roock, this stunning Carrera 2.7 MFI is currently available for purchase from Border Reivers

Something just as fundamental was afoot on the construction front, too. Porsches were as equally prone to rust as any other steel-bodied cars, and few long-term precautions had been taken to hold corrosion at bay. Now, Porsche tackled the problem by introducing zinc-dipped galvanised steel for all the body panels and was the first manufacturer to offer a six-year corrosion warranty on its car's main body shell, albeit excluding the wings. Talking of which, Border Reivers runs a busy body shop in Glasgow's hinterland. When we took the green machine into the city for a photo shoot, we popped by and noted the team had just completed restoring a 911 previously owned by European Touring Car Champion, John Fitzpatrick.

Tom opened his state-of-the-art body shop in 1988. Before long, Border Reivers was approached by Porsche Cars Great Britain with an invitation to become a designated Porsche Approved Repairer. With a staff of sixty-five, this made Tom's team the largest of Zuffenhausen's nominated repairers in Europe. The premises contains ten body jigs, four spray booths and

low-bake ovens. It was the first Porsche-approved paint shop outside the factory to embrace a water-based ISO-approved paint system. It has also been regularly employed as a training facility by both Porsche and Thatcham for each company's dealerships in Scotland and the North of England.

ROOCK AND ROLL

Any 911 approaching its half century will have undergone some remedial action - likely to fix corrosion - in its lifetime. In 2013, the car pictured here enjoyed a spell at Roock Sportsystem GmbH at Leverkusen, close to Cologne. Though ostensibly in good nick and accident free (as confirmed by proprietor, Michael Roock, who you can read about later in this issue of Classic Porsche). chassis 911 560 0123 was completely dismantled and stripped to bare metal, apart from the floor, which still retained its original protective cladding and was therefore left untouched. The car was then totally repainted in its original Hellgrün hue (code N9N9) and enhanced by Carrera script graphics. Inside the cabin, everything was similarly stripped out, with new carpets. floor mats and front seats, the latter upholstered in distinctive Black Watch tartan. The dashboard and rear seats are original, as is the Blaupunkt Hirschmann radio.

This eye-popping 911 also boasts a retractable electric aerial — a luxury at the time — and front speakers. The seven-inch (front) and eight-inch (rear) Fuchs fifteens were restored and shod with Pirelli P600s, 195/65 and 215/60 at the nose and tail respectively. Make no mistake, this was a comprehensive job. The brakes were overhauled, with new master-cylinder, discs and pads, plus replaced brake lines, fluid and handbrake system. The suspension refresh included new Bilstein Sport dampers and all joints being re-bushed. New fuel lines were installed and the eighty-five-litre tank restored, complete with new fuel pump and filters. The 2.7-litre Type 911/83 flat-six (engine number 665 0177) was completely rebuilt, with new bearings, Mahle pistons and barrels, new valves, springs and guides, along with





a rebuild of the injection pump. The latter is a tortuous piece of work, virtually an engine in miniature. Allow me to explain.

MFI was introduced for the 906 Carrera 6 sportsracing car in 1966. The MFI fuel pump was developed by Kugelfischer and later built by Bosch. Then, in 1967, it was fitted to the 911 R competition car before making its road-going debut on the two-litre 911 S of 1969. Up to this point, all 911s employed carburettors to instil the air-fuel mixture, but incoming emissions regulations as the 1970s drew near, not to mention the demonstrable

increase in power provided by fuel injection, led to the introduction of a mechanical fuel injection system for the 911.

The MFI pump is compact, but

a very complicated piece of equipment. In a way, it's a microcosm of a full-size engine, containing a busy, coresponding assortment of levers, plungers, gears and valves. You don't actually see it when peering into the 2.7's engine bay, though the attendant plastic air-intake paraphernalia tells you something different is going on.

The clue's in the name — created in an era when machinery worked with cogs and levers, before the introduction of electronic sensors and regulators and the digital age, the MFI pump employs a series of

mechanical devices to create a constantly changing fuel map, based on throttle position, engine speed, and barometric pressure. The lower half of the Kugelfischer pump houses a camshaft phased to match the engine's firing order, while in the top half, six plungers (one for each cylinder) occupy their own individual barrels. The pump's camshaft is belt-driven off the crankshaft and, as it revolves, acts on tappets which, in turn, operate the plungers by means of pushrods. As each plunger drops, it exposes a suction valve through which fuel is sucked towards the injectors, while a return spring maintains the

plunger in position when closed.

Injected at between 225-250psi, the increased injection pressure of the MFI unit creates greater atomisation of the fuel. This

OF MOVEMENTS IN THE THROTTLE **BODIES AND IN THE MECHANICAL FUEL PUMP ITSELF**

produces a more even flame-front during ignition, resulting in more efficient combustion. According to the throttle position, the amount of fuel required is regulated by a pull-rod on the throttle linkage, which adjusts a space-cam housed in the base of the pump. The irregular profile of this cam was shaped to match Porsche's desired fuel map for each 911 variant, and so it and differs between the T, E, S and RS.

The space-cam rotates the plungers with a corkscrew motion, by means of a rack-and-pinion gear, providing the Above This is a superb lefthand drive example of one of the highly desirable Eurospec Carrera 2.7 MFI, a 911 which shares the earlier RS 2.7's mechanical fuel injected engine, as well as the RS's suspension and gearbox

HUNDREDS, IF NOT THOUSANDS,





Above Significantly, the 1974 Carrera 2.7 retained the remarkable 210bhp Type 911/83 2.7-litre mechanically fuel injected engine from the 1973 Carrera RS 2.7

Below The 2.7 MFI's arches and rear quarters in the were tastefully flared to accept seven- and eight-inch-wide Fuchs forged alloy wheels amount of fuel required during their movement within the barrels. There's a centrifugal governor above this, connected to the camshaft, regulating the amount of fuel flowing through the pump, depending on the engine speed, and there's a solenoid valve to provide automatic cold-start enrichment.

Deceptively simple on the outside, very complicated within. Hundreds, if not thousands, of movements in the throttle bodies and in the mechanical fuel pump itself are bound to cause wear on moving parts, allowing air to pass through the spindle bushes, corroded throttle chokes, or even a worn 3D cam in the pump itself. If working correctly, however, MFI is a brilliant system, and this one has been competently rebuilt by the team at Roock Sportsystem.

The throttle system was also reconstructed and adjusted on the flow bench, with restored alternator and distributor. All tinwork, engine cladding and air intake trunking was refurbished or renewed, with new exhaust

system and heat exchangers, as well as a revived heating system. Likewise, the Type 915/06 five-speed gearbox (number 7850151) received new bearings synchro rings and a ZF limited-slip differential.

ROAD AND RACE

The work was finished in 2014. The car has only covered a few thousand miles since. You can take it for granted Michael Roock's team did a great job. After all, Roock Sportsystem's formidable record in competition speaks for itself: the team won the 1993 Carrera Cup, the 1994 Porsche Supercup, the ADAC GT Cup two years on the bounce (1994 and 1995), the GT2 class at the 1996 24 Hours of Le Mans and scored many other victories, making it the most successful Porsche customer team of the decade, an achievement helped by Roock's development of a near 600bhp 3.8-litre 993 GT2, entered into Le Mans in 1998 and standing as the lightest 993 GT2 ever assembled, tipping scales at a mere 1,060kg.

This is not the first Porsche I've driven to have been prepared by Roock Sportsystem, nor is it the most garish of colours. Indeed, in 2005, I bought a Mint Green 964 from Michael Roock. The car's adventures were celebrated in these august pages as The Peppermint Pig, acquired on a trip to interview Michael about his ultrasuccessful racing team and its countless successes at Le Mans and in GT2.

As liveries go, Mint is about as in-your-face as Hellgrün. My car was a left-hooker, too, a driving position I happen to prefer, especially in air-cooled 911s — your legs are straight ahead of you, rather than splayed left, as is the case in a right-hand drive example. Same deployment aboard this immaculate 2.7 MFI, too.

Years back, I attended Stirling University, meaning I know Scotland's central belt fairly well. Local to Loch Lomond, there are the Trossachs, gorgeous wooded glens, lakes and braes, with the supremely entertaining ups and downs of the Dukes Pass to helm the 2.7 MFI over. Here we go, then.





The zesty flat-six delivers a brisk performance and excels from 4000- to 5000rpm. The exhilaration levels get really high under acceleration, and the power kicks in spontaneously when exiting these Dukes Pass hairpins. The zingy RS engine really loves to rev, and as I become more accustomed to the manner of its power delivery, the better I know how much throttle to apply. Performance is vivacious, and even though the steering is non-assisted, there's a lovely weight to it — this car is easy to control in a tight turn-in situation.

FOLLOW YOUR NOSE

Things get more exciting the more familiar I become with the Porsche — the more compliant and in-tune it seems to be with what I want to achieve from my time behind the wheel. It's light, it's tight, it's alive, and it takes the slightest flick of the steering wheel to minutely alter

course, to nudge into turn-in mode. The merest on-off pressure on the throttle pedal also brings the nose in or out as necessary.

There's no need for any hard braking, except ahead of entry to the sharpest of corners, or when cresting a blind rise. On balance, it feels more planted than the daintier Carrera RS 2.7. This is nowhere more true than on the Dukes Pass (the A821) between Aberfoyle and Brig o' Turk, which must be the closest we've got in the UK to the Black Forest's exhilarating Schauinsland hillclimb. I fling our Green Goddess this way and that through the fabulous cambered ess-bends, falling deeper in love with every corner. This may be a fifty-year-old car, but because it's so taut in every respect, it feels as though it's fresh straight out of the box. Definitely one for me, had I pockets deep enough. Or, indeed, a sporran, given our location. **CP**

Above The direct successor to the Carrera RS 2.7, but subject to lower-volume production and a higher sales tag, though the current cost of ownership is roughly half that of hopping into an RS









1956 Porsche 356A right-hand drive

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KEEP ON TOP

Porsche's first space framed Spyder, the 550A, competed at Le Mans in coupe form to win its class, marking the only time the model raced as a hard-top. One such car has survived an interim American body to be reborn through a sparkling restoration...

Words Karl Ludvigsen Photography Porsche Corporate Archives, Julio Palmaz

EXTRA (ESSO) BARO

CHAL PROJECTEURS

GOL BP TOOL A TOUTULE PAR

550A COUPE

ith competition in the popular international 1.5-litre class hotting up in the mid-1950s, Porsche had no alternative to improving its Type 550 Spyder when attempting to maintain the enviable leading position this breakthrough motorsport machine had afforded the Stuttgart concern. Porsche's success was so sweeping, its four-cam air-cooled racers became challengers for outright victory in some of the world's greatest endurance races.

Two different approaches vied for consideration in the engineering ranks at Zuffenhausen. One was the

Type 645, a completely new car proposed by Egon Forstner, Ernst Fuhrmann and Heinrich Klie. With a stiffer space frame, reduced frontal area and double-wishbone rear suspension, this 'new Porsche for a new era' was designed around the existing four-cam engine. It may have been fast, but as a complete automobile, it was challenging to control, leading the Type 645 to be considered a technical dead end.

Surviving from the 645 was the idea of its space frame of small steel tubes, widely spaced and braced to give high stiffness with light weight. The idea had been on prominent display in Germany since 1954, when Mercedes-Benz introduced space frames for its



production 300 SL and W196 Formula One car. Forstner's frame was adapted to the parameters of the existing 550 Spyder. All it had in common with the previous ladder-type frame were the transverse tubes containing its torsion-bar springs.

Between the transverse tubes housing the torsion bars for the front and rear suspension, the frame of the Type 645 was virtually duplicated. A cautionary decision was to make the bottom tubes significantly larger than those at the top. This was unlike the 645, which had a difference in tube diameters, but to a smaller degree. Stiffening webbing was added to the corners of the quadrilateral of large tubes which formed the cowl structure. While the cross-bracing through the cockpit was identical, the side bracing of the front box was reversed in its angularity.

PYRAMID SCHEME

The greatest difference was behind the cockpit. While the 645's rear frame was scanty, the 550A's was elaborate and much heavier due to an additional box and two large lower crossmembers supporting the engine and gearbox. A pyramidal extension carried an outboard mount for the rear of the gearbox. Only in some crossmembers was the wall thickness of the tubes as great as 1.5 to 2mm — most of the tube walls were 1mm thick. Three times stiffer in torsion than the old design, the new frame was fully five times stiffer when stressed as a beam. In spite of this, it was sixteen kilograms lighter than the 550 frame, weighing only forty-five kilos.

The other major improvement to the 550A affected its rear suspension. Although actually very effective — too effective, as it turned out — the 645's rear springing had not passed muster. Instead, Porsche took note of the success Daimler-Benz had been enjoying with its low-pivot swing-axle suspension, used on both racing and production cars from Stuttgart-Untertürkheim since

early 1954. In previous Porsche swing axles and in all the 356-series rear suspensions, the location of the axle pivot point was determined by the position of the universal joints at the inner ends of the axle shafts, not by the suspension's kinematic requirements.

What Daimler-Benz had done, and what veteran racing engineer, Wilhelm Hild, did with his suspension design for the 550A, was to keep the swing-axle principle while relocating the axle pivot point both downward and inward to the car's centreline. This lowered the rear roll centre, which shifted more of the roll couple to the front wheels to add understeer. The lower pivot also reduced the jacking effect of the swing axle, the reaction from the

Above Painted white and given an Italian flag to confound the mountain brigands, 550A chassis 0101 won the Targa Florio outright in Umberto Maglioli's epic solo drive

Below The Porsche coupe chasing down a 550 Spyder at Le Mans in 1956







Above Harking back to its 1953 Le Mans success with hard-top coupes, Porsche added fixed roofs for the 24 Hours of Le Mans in 1956

Top right The restoration of 550A chassis 0104 by Julio Palmaz's team is impeccable and a new chapter in one of the most remarkable stories in historic motorsport

Previous spread The classwinning Porsche coupe approaching Tertre Rouge corner in the 1956 Le Mans race, ahead of the handsome Maserati-powered Talbot-Lago Sport 2500 driven by Jean Behra and Louis Rosier

Below Bearing chassis numbers 0104 and 0103, the two entries had minimal — but adequate — rear vision grip of whose outer wheel on the road tends to lift the back of the car. At the same time, the amount of camber change with jounce was reduced by the significantly greater length of the rear-wheel swing arms. With this sophisticated fully independent rear suspension, Porsche was one-up on its class competitors, which used either live rear axles (OSCA) or rigid de Dion axles (Borgward, AWE, Maserati).

The 550A/1500 RS Porsche was much lighter than its predecessor, weighing in at 529 kilos with its spare

wheel and an empty fuel tank. Although it was officially the 550A, this first space frame Spyder was known by its RS nickname. "The sum total of the various modifications,"

wrote racing driver, Ken Miles, in *Sports Car Graphic*, "was an almost unbelievable improvement in handling. Gone was the excessive oversteer. The RS was about as forgiving a car as one could possibly wish to meet."

THE DRIVER'S DOOR WAS
EXTENDED INTO THE CURVE OF THE
ROOF TO MAKE ENTRY AND EXIT
LESS OF A CONTORTIONIST'S ACT

was one of the drivers, Umberto Maglioli, the factory team was persuaded to enter man and machine in the year's Targa Florio road race in Sicily, which took place on June 10th, just two weeks later. After a single-handed drive of almost eight hours, Maglioli won

Initially, Porsche produced a batch of four of these

two were traditional open Spyders and made their debut

They finished first and second in their class, ranking

fourth and sixth overall. So taken with the new Porsche

550As, numbered 550-A-0101 through 0104. The first

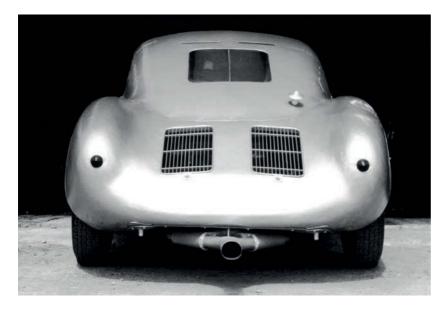
at the 1,000km of Nürburgring on May 27th 1956.

drive of almost eight hours, Maglioli won the Targa outright. He was obliged by problems suffered by hot shots driving Ferraris and Maseratis, but the white-painted

Porsche had shown its immense speed by averaging a faster pace over a longer distance than that of 1954 victor, Piero Taruffi, who was competing in a Maserati 300S. Maglioli's win was rightly hailed as "Porsche's greatest victory" since the company started competing in top-flight motorsport.

Porsche set aside two of the new chassis (0103 and 0104) for the 1956 24 Hours of Le Mans, held that year at the later weekend of July 28–29th. Each of the new 550As had a special feature designed to give extra speed on the fast Sarthe circuit. Reaching back to his 1953 experience, Wilhelm Hild arranged to fit his cars with fastback coupe roofs.

The design of the 1953 coupes had been no casual affair. Their deeply curved windscreens and tapering coupe hardtops — conceived as being especially suitable for Le Mans — were part of their original design. Taking a close interest in the shape's details were Ferry Porsche and his head stylist, Erwin Komenda, who filed jointly for a patent on its configuration on May 23th 1953. Features of note were the built-in rollover bar (anchored to the tubular frame), strategic venting and the combined firewall and noise barrier.





Revival of the idea for the 1956 entries was encouraged by the decision of the Le Mans organizers to require all participating cars to make use of full-width windscreens. Porsche's wind-tunnel testing of one-fifth-scale models of potential body shapes for the 550 in 1953 had shown the clear drag advantage of the car's closed version, coming close to compensating for its greater frontal area.

Tapering roofs were riveted to the tail panels of the two Le Mans 550As. The whole assembly was removable as a unit, leaving the sturdy-looking curved windscreen in place. Plexiglas door windows had ventilation louvres. Just behind the seats, a sound-damping bulkhead had its own window. Behind it, a second window was fitted in the rear deck. The driver's door, on the left, was extended at the top into the curve of the roof to make entry and exit less of a contortionist's act. Small wire loops were tugged to open the doors from the outside.

The two ventilation grilles in the rear deck hinged up and forward for access. Routine servicing of the engine's carburettors, spark plugs and distributors was through an opening flap at each side, taller than the similar flaps on the roadsters. Anything more major required removal of the entire rear of the bodywork, as was done during practice at Porsche's Teloché garage. "Supreme confidence?" was Denis Jenkinson's comment on this arrangement. On the right side of the roof was a recognition and pit-signalling lamp. This year, for the first time, signalling was after the slow turn of Mulsanne Corner instead of at the pits. A vast improvement.

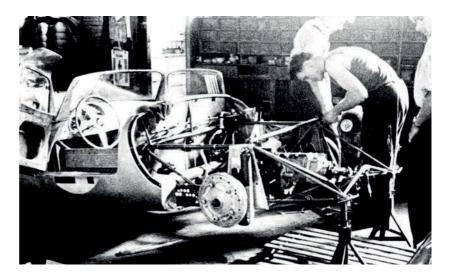
Although some observers at Le Mans carped at signs

of hasty construction of these coupes, the cars were at least painted and fitted with chromed wheel rims. Weight was naturally increased, scaling 595 kilos at the official pésage. Compression ratio remained at 9.5:1 on the Le Mans engines, which developed 127bhp at 7,500rpm. With the slippery new roofs, the speeds recorded on the Mulsanne Straight were very satisfactory: 137.57 and 138.08mph, faster than in 1955, despite the full-windscreen rule. In the tradition of their 1953 counterparts, the coupes were referred to as "hot, stifling and ear-shatteringly loud" by their drivers.

"The filthy weather made the circuit very treacherous," wrote Denis Jenkinson, "especially where it had been resurfaced and on the white and yellow safety

Above Pictured on their arrival for the technical inspection at Le Mans in 1956, the two 550A coupes carried racing numbers 24 and 25

Below During practice and preparation at Le Mans the coupes showed their 'gullwing' flaps for engine access and their completely removable roof, allowing major work on the rear of the chassis to take place



550A COUPE







Top Entering the bend at Tertre Rouge, about to embark on the Mulsanne Straight, the 550A coupe of von Frankenberg and von Trips was on its way to a class win and overall placing of fifth at Le Mans in 1956

Above Comparing the two Spyders reveals how tightly Bourgeault wrapped the new body around the Porsche to reduce frontal area as a means of adding speed

Top right Wilhem Hild personally handled the refuelling of number 25 Porsche, his only candidate for a finish after number 24 retired two-thirds of the way through the race

Below Viewed from the front, the stiff and efficient multitube space frame of the new 550A shows the transverse tubes carrying its torsion bars lines, which had become like strips of ice in the rain. Throughout the night, conditions were terrible with rain and mist. Driving at all, let alone racing, was a nightmare — drivers came off duty soaked through and with their eyes extended on stalks." In a race which suffered many wrecked cars, only fourteen from forty-nine starters reached the finish.

Here, at least, the coupes gave their drivers protection from the elements.

These Porsches left the works and were presented at technical inspection with two screen wipers. Chassis 0103 (the coupe of

Umberto Maglioli and
Hans Herrmann) started with only a single wiper for the driver. During the race, the other car adopted this style, which halved the stress on the motor and linkage. Covers fitted to the front-brake cooling ducts during the race

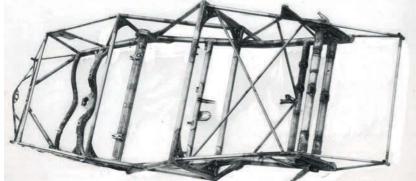
"Le Mans could have been a great success for Maglioli and I, who earlier in the year had already won the Targa Florio for Porsche," said Hans Herrmann after the event. "After around half the race, about four in the morning, we were leading our class by a large margin and were fifth in the overall standings when my colleague arrived at the pit. He reported that there was a bang, after which the car vibrated. Soon, our retirement followed."

The fault lay in a valve head which came adrift and damaged its piston. The failure's likely origin was the engine's over-revving to 8,900rpm, when third gear jumped out during practice.

Surviving to the finish, coupe 0104 (driven by Richard von Frankenberg and Wolfgang von Trips) overcame Lotus, Gordini and Maserati opposition to win its class, finish fifth overall and place second on the Le Mans Index of Performance. Average speed was 98.19mph.



helped them maintain working temperature.



CHOP THE TOP

A ROLLOVER ACCIDENT

AT KENT, WASHINGTON,

DESTROYED THE PORSCHE'S

BOURGEAULT-BUILT BODY

After Le Mans, the coupe tops were removed and never used in competition again. Nevertheless, their image endured. It is this author's contention that when the Weissach designers thought of putting a roof on the Boxster, someone remembered the 1956 Le Mans coupes. The resulting first-generation Cayman had much the same jaunty look, complete with similar high forehead and sloping tail, plunging down between its rear fenders. As a sample of enduring Porsche DNA, it was (and is) exemplary.

The cars themselves saw much more racing. In late 1956, the Porsche which finished at Le Mans, 550-A-0104, was sold in roadster form to California's John Edgar, a wealthy entrant of the best sports-racing cars. It first raced in the USA at Palm Springs on November



4th 1956, where it was driven by Pete Lovely. Entered for Sebring in 1957, the red Spyder was handled by regular Edgar driver, Ken Miles, as well as Jean Pierre Kunstle, whose racing career was heavily Porsche-biased. The pair finished ninth overall in the twelve-hour race and second in class, a lap behind another Spyder.

Having bought 0104 from Edgar, Kunstle campaigned it successfully through 1957. He and Miles teamed up again for Sebring in 1958, but the Porsche, now in silver and headrest-equipped, failed to finish. Kunstle sold the car to Seattle's George Keck. "As I was given to understand," Keck recalled, "while being trailered, the car experienced a rollover. You can guess what the body looked like when roughly straightened. I picked her up at von Neumann's in Los Angeles, meeting with Rolf Wütherich and Vasek Polak, who were minding the pieces — a car with misshapen body, engine in boxes, a pile of new essential parts and a five-speed gearbox which didn't fit the existing tubular frame."

UP AND RUNNING

"Returning to Seattle," he continued, "I set about reengineering what laid before me. After the poorly repaired body was stripped away, the tubular frame was modified to accept the five-speed gearbox. The steering was reoriented along with the fuel cell, located outboard of the frame on the passenger side with the spare tyre forward and lower in place of the tank. These, plus a few other innovations, were pursued to realize a four-inchlower overall height for less frontal area and a couple hundred less pounds. Nade's and my ideas included induced airflow for better engine and oil cooling."

This was reference to master metalworker, Nadeau 'Nade' Bourgeault, who built the entire body to meet Keck's and his requirements. Their beautiful new shape shrank the Spyder's frontal area and wrapped a screen around the driver. The red-hued Spyder was ready just in

time for the big two-hundred-mile race at Riverside, held on October 12th 1958.

Already an experienced driver of the 550 Spyder, Keck and his new-look 0104 finished fourth in class at Riverside, clocking nineteenth overall. "We were elated when the car finished, considering this was her first time out," he recalled. "A lot of well-seasoned vehicles didn't make it to the end of the race." After a few successes early in 1959, he sold the car to Bill Hofius, who raced the Porsche briefly before passing ownership to Tad Davies, who enjoyed good placings with the car through 1960 and into early 1961.

In 1963, the Porsche was offered without a functional drivetrain to SK Smith in Medford, Oregon. "I understood the motor had blown up," Smith told the Tam's Old Race Cars website. "I arranged for both the engine and transmission to be shipped to Vasek Polak for a repair estimate. He suggested required remedial work was likely to cost \$2,800, which was a long way beyond my budget. I began watching the Yenko Corvairs on the East Coast. They seemed to be peppy enough." Smith

Above Further examination at the 24 Hours of Le Mans

Below The usual side ports for access to the engine became more substantial flaps on the coupes









Top The rakish profile of the 550A coupe — a clear precursor of the Porsche Cayman — was on display during the pre-race technical inspection at Le Mans

Above Hidden under the entirely new bodywork of George Keck's Porsche special, chassis 0104 belied its history both at Le Mans and in American racing

Top right and below At the finish, 550A coupe no.25 drew enthusiastic attention, as did its crew (von Frankenberg on the left, von Trips on the right)

Bottom right On the Le Mans scales, each Porsche was weighed during prerace inspection — pictured standing on the right is Wilhelm Hild in his fedora was inspired. "My business was across the street from a Chevrolet dealer. I got to measuring and discovered I could put a Corvair engine in the Porsche." A 356 coupe transaxle gave suitable gear ratios for his tuned Corvair six, while wider rear rims accepted bigger tyres.

Competing in SCCA National races in 1965, Smith was doing well until a rollover accident at Kent, Washington, destroyed the Bourgeault-built body. For the second time, Spyder 0104 had its body judged beyond repair.

With the next race only three weeks away, Smith had to act quickly — in just a few days, a friend laid up a fibreglass replacement body, even lower than the Keck shape had been.

"As I recall," said Smith, "I placed first in the SCCA Western Division's D Modified class and mine was the only modified car from the SCCA's north-west or Oregon Region to finish in the modified event at the national runoffs. We placed third in class." Circa 1967, he sold the Porsche — by then on its third body — to Bruce Larson, also residing in Medford.

Later owners, Dick Coyne and Warren Weiner, found no racing opportunities for the unique Porsche-Corvair.

Subsequently, in 2004, it came into the hands of Julio Palmaz, who trained as a doctor in his native Argentina and moved with his family to California in 1977. His coinvention of the balloon-expandable stent to treat heart conditions gained him the freedom to invest in other passions, including wine-making in the Napa Valley and his collection of significant Porsche racing cars. Palmaz took a keen interest in this unusual car's history.

At his property on the outskirts of Napa town, Palmaz created not only a cutting-edge winery, but also space to display more than a dozen of his Porsches, each with a racing story to tell.

His in-house restoration workshop took on the huge task of bringing 550A-0104 back to the condition it was in when tackling Le Mans in 1956. The result, which won kudos at the Amelia Island Concours, is nothing short of magnificent.

Also in the Palmaz stable is 550-A-0101, the Targa Florio winner, which provided a good model for its sister's restoration. These are two great icons of the first season of the 550A Spyder, one of Porsche's finest creations. Take it from us, they are in good hands. **CP**





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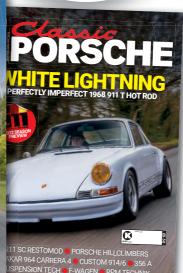
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THE LAST LEG

Continuing on from last issue's account of Johnny Tipler's experience competing in La Carrera Panamericana, he and navigator, Sarah Bennett-Baggs, push on through the event's final stages in their race-prepared 914...

Words Johnny Tipler Photography Sarah Bennett-Baggs, Johnny Tipler, Andreas Beyer, Jared Sindt







n one of the tight speed stages, we came upon a terrifying head-on collision between a racing Mustang and a local car, which was on a school run and had inadvertently strayed onto a stage. A bevvy of ambulances indicated casualties. Mercifully, we later learned nobody had died. As the event progressed, spotting race cars in the scenery became a fairly regular occurrence. At one point, buried in the yuccas, was a 911 Targa. Maybe its driver had been distracted by the sight of Popocatepetl's eerie snow-capped volcanic cone (17,000ft) seemingly floating above another mountain range?

A long transit section on new dual carriageway, taken at a steady 110mph in the clean, high-altitude air, brought us to the Free and Sovereign State of Queretaro, one of the thirty-two federal entities of Mexico. It was Sunday afternoon and the zocalo was relaxed, but a lack of open bars necessitated a visit to a nearby hotel for the mandatory cervezas and debrief. I'd been finding the 914's brake pedal go long so often that my navigator, Sarah Bennett-Baggs, advocated a bleeding session. The Porsche's owner, Bill Hemmer, and our mechanic, Jared Sindt, dutifully obliged.

On the way out of Queretaro next morning, a 911 which had earlier stormed past us in a spot of bad-boy lane-switching mayhem stood forlorn at the roadside, its nearside front wing missing, the victim of a self-inflicted truck swipe. Another reminder of how important it is to keep your wits about you on events like this.

Day four's pièce de résistance was the notorious Mil Cumbres, a two-stage speed section, high in pine-forested mountains above Morelia. Nowhere else on the itinerary was the road system more winding or more intricate than Mil Cumbres. It is literally a thousand corners, flowing from one to another, often banked, with differing apexes and cambers, no two the same. Totally

fabulous! The 914 excelled itself, driver and navigator in total harmony, Sarah calling the corners, me driving them as directed. Often, bends were so close together it wasn't difficult to drive what I could see, but Sarah's call gave me confidence to push hard — she did well not to lose her place among the roadbook tulips. We even overtook a Ford Falcon and, for a change, nothing passed us. Without doubt, this was the zenith of the week's special stages. There's no gain without pain, though — taking all those turns in second and third gear between 5,000rpm and 7,000rpm was fine (up to a point) thanks to high-lift cams, but after Mil Cumbres, oil leaks became an issue.

Well-earned cervezas in Morelia's cool plaza and, a few hours later, the Panamericana's nightly reception and dinner, was followed by a hardcore session underneath the elegant colonnaded arches with the other British contingent, Fraser Stevenson and Richard Upton, accompanied by their buccaneering Mk II Jaguar service

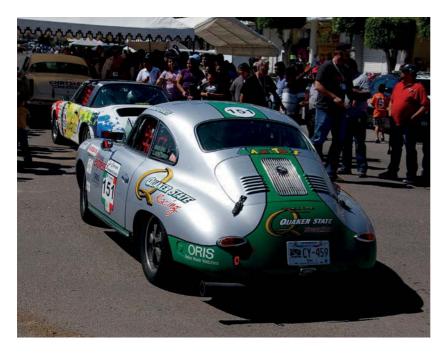
Above Placed forty-fourth overall, Mercedes-Benz 280 SE follows 911s to San Miguel Allende servicio

Below Bill and Jared curing oil leaks from the 914's crankcase breathers

Previous spread The 914 tackling Sierra Gorda curves



CARRERA PANAMERICANA







public roads, through which the Carrera Panamericana

street life was in full flow and we consumed pasta

on the terrace of a trendy restaurant, serenaded by

buskers. "Mariachi?" queried Sarah. "Has he proposed,

then?" I suggested. Her eyes rose heavenward. Another

tumbleweed moment, though not as realistic as the

entourage roared with an almighty cacophony. Nocturnal

Above 356 and 911 Targa queue at Villa Hidalgo or a time check

Top right Cosme and Albert Torado placed forty-first in their 911 seen, here at San Miguel Allende on day five

Above right 911s in the Aguascalientes plaza at dusk

Below Despite a fried clutch. the 914 made it to Zacatecas

Bottom right Bill, Sarah and Jared at Aquascalientes

crew, sporting cloth caps, braces and pipes as the evening's sartorial statement.

After next day's re-run up Mil Cumbres, we discovered the back of the 914 was covered in oil. Not wishing to risk mechanical seizure, we consigned the Porsche to another competitor's service trailer and brought it into servicio at San Miguel de Allende. It quickly became evident the return

hoses to the crankcase breathers were absent. Bill and Jared installed new ones and replenished the system with Motul's viscous finest.

THE CAST OF RACE ORGANISERS. **DRIVERS, NAVIGATORS AND** CREWS SWAYING AND DANCING THROUGH BACK ALLEYS

Apart from some Swedes carrying out an unplanned Mustang engine swap, by that time, ours was the only car left in the parking lot. We thus arrived late that night at Guanajuato, another fine colonial city, built above a labyrinth of vaulted mining tunnels now serving as

so earlier. Highlight of day five was a few laps of the local Óvalo racetrack. host to the Mexican NASCAR series, which

tumbleweed we'd

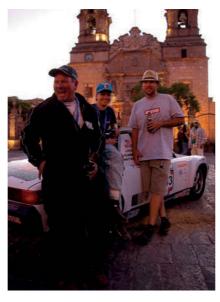
narrowly missed rolling

down the road a day or

proved nothing except for the fact our 914 was out of its depth when pitched against the competition. As dusk fell, the entourage chilled in the main plaza of Aguascalientes, before repairing to a particularly swanky hotel. The final day's run, from Aguascalientes to Zacatecas, culminated in the high-velocity, high-altitude La Bufa stage, which I'd been especially looking forward to, hugely dangerous as it is, with vast, unfathomable drop-offs alongside un-barriered bends. And they do go off, too. Trouble was, the Porsche was almost spent, and there was no option but to nurse it home, else risk skewering it on the prairie. The clutch was nearly fried, the flat-four's exhaust manifolds were blowing, its power output was on a par with a 1200 Beetle. The big V8s simply rocketed past, probably doing 150mph, and we had no response. The best I could do was shadow the Mexican president's brothers in their Giulietta Sprint, taking care not to look over the unprotected drop-offs in this race, you often end up where your eyes gaze.

Negotiating a steep hill in the suburbs of Zacatecas, we faced the nadir: the clutch was done, and we sat on the car's front wings, momentarily dejected. Much like the earlier Carrera Panamericana experiences I documented in last month's issue of Classic Porsche,







we were saved by a policeman, who understood our plight and bade us follow him downtown via the flattest possible route. Any sense of anti-climax was assuaged by the fantastic reception we received on reaching the inflatable finishing arches by Zacatecas' cathedral. Bill and Jared were waiting among the hordes of spectators and were ecstatic we'd brought the car home in one piece. After the obligatory ligging, we leapt into the fray for the traditional end-of-race procession. This meant the entire cast of race organisers, drivers, navigators and crews, plus attendant locals, swaying and dancing through the back alleys, following ad-hoc brass bands and frequently fuelled by tots of mescal generously dispensed by the Carrera Panamericana administrators from a burro-borne barrel.

The parade seguéd unsteadily into the bullring at the heart of the magnificent Fiesta Americana hotel for the closing dinner and awards presentation. Everyone was in their glad rags, topped off with a sequined sombrero. The drinks flowed copiously.

Overall winners were Ricardo Triviñoa and Marco Hernández in their Studebaker Champion Starliner, only four seconds ahead of regulars, Doug Mockett and Angélica Fuentes, in their Oldsmobile Super 88. This was an amazingly close result after seven days of hardfought racing. Hilaire Damiron and Horazio Chousal Jnr took third place in a Buick Riviera.

Sarah and I finished ninety-fifth, the same placing as we'd started out. Importantly, we weren't last $-107\,$ cars were classified finishers, including several regulars rounding out the bottom ten in more potent machinery. It was gratifying to know on one stage we were up to twenty-seventh and, for a while, in the low sixties. The late finish at Guanajuato tipped us back down the order, but to dwell on such matters is to almost miss the point of La Carrera Panamericana: it is, without question, the world's most fun road race, where you can drive whatever you like as fast as you can, on demanding backroads through really amazing landscapes. I won't have to be asked twice to do it all over again. $\bf CP$

Above Miguel Granados and Ricardo Puente in their 911 at Villa Hidalgo

Below 550 Spyder replica driven by Bill Hemmer and Adriana Robles, pictured at La Bufa service area

Below left Tipler catches the president's brothers' Alfa

Bottom left The 914 following a 911 and Ford Mustang











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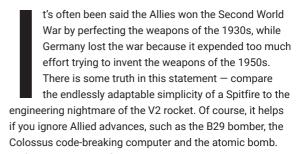
BYTHETAIL

Ferdinand Porsche didn't design the fearsome Tiger tank, but he certainly came close...

Words Neil Briscoe Photography Porsche



TIGER TANK



If there's one specific area in which the sentiment is most definitely true, though, it was in the development of tanks. For the western Allies, there really was only one tank: the M4 Sherman. A technologically simple, reliable machine, the Sherman was designed to work in close co-operation with infantry and wasn't specifically a tank-versus-tank weapon. By contrast, the German army leaped ahead several decades and started to design bigger, heavier thanks with massive cannon, which presaged the creation of what we would now refer to as a Main Battle Tank. The most famous - indeed, infamous - of these was the Tiger.

Of course, everyone knows Ferdinand Porsche designed the Tiger. Hang on a minute - everyone is wrong! You see, Porsche didn't design the Tiger tank which saw combat in the Second World War. He did, however, design a Tiger, which could have seen action. And he did design a tank based on his original Tiger layout. This tank very much entered into battle. In other words, while he didn't design the Tiger per se, Porsche very much influenced the design of the tank which eventually became a byword for terror on the battlefield.

Legend suggests nobody had thought of using the powerful 88mm anti-aircraft cannon as an anti-tank weapon until a lone Soviet T-34 tank broke through German lines on the eastern front and started blasting at targets with its 76mm gun. With the T-34's thick armour seemingly impervious to conventional anti-tank weapons, a flak gun was pointed away from the sky and began firing at the Russian invader. Apparently, doing so worked - the 88's 840 metres/second muzzle velocity fired a 9.4kg shell right through the T-34's armour, ending the battle.

STRANGER THAN FICTION

This story is almost certainly utter rubbish. The 88 was in use as an anti-tank weapon as early as the Spanish Civil War. while the first call for designs for what would become the Tiger I was issued in early 1941, before the German invasion of Soviet Russia. In fact, the genesis of the Tiger wasn't anything to do with Russia nor the T-34. It was an insistence made by Hitler. "We have clear superiority over the English armoured weaponry. This superiority must never be lost," he wrote. While British forces generally moaned about their equipment, the German Wehrmacht was suitably cautious about engaging UK armoured columns. Even those equipped with obsolete Matilda tanks could pack a surprising punch, as well as absorb more fire than might be expected.

To maintain its lead, the Heereswaffenamt (often referred to as the HWA, the German government agency which looked after weapons procurement) issued design specification VK4501 for a heavy tank, with 100mm frontal armour and a turret big enough to both hold the massive 88mm cannon, as well as cope with its recoil. Ferdinand Porsche was, by then, unquestionably the favourite to design this new tank.



Not only was he "Hitler's favourite engineer", but Porsche had by this time also been appointed chairman of the Panzer Commission of The Armaments Ministry. This appointment had come about because of Porsche's friendship with Fritz Todt, the Reich Minister for Armaments and Munitions and a man who had Hitler's ear. Indeed, so deferent was Hitler to Todt's expertise, as early as November 1941, he was able to tell the Führer "the war can no longer be won militarily." Rather than being shot for defeatism – as popular thinking might cause you expect – Hitler simply told Todt such a course of action couldn't be considered politically. They'd have to "discuss it another time."

At the sprawling works at Nibelung, near Linz in what is now Austria, Porsche had a ready-made factory for this new tank. According to Porsche historian and regular *Classic Porsche* contributor, Karl Ludvigsen, this vast factory was "laid out for automotive-style flow-line production" and was "the only facility Germany built expressly for tank production during the war."

Porsche would design for this new tank a powertrain of almost breath-taking complexity. While the majority of M4 Sherman tanks — eventually the Tiger's great rival — would use either a nine-cylinder radial petrol engine or a big General Motors diesel, Porsche's design for the Tiger would use a V10. In fact, it would use two V10s. To put

this into greater perspective, it's important to emphasise how uncommon V10 engine design was in the 1940s.

In 1941, Porsche based his tank engine design on a racing engine, which existed only in sketch form. The tank's V10 would displace fifteen litres and use air cooling, which was thought to be especially useful for combat in desert locations. According to Ludvigsen's research, each engine would produce up to 320bhp. They wouldn't drive the tank directly, though — these mighty V10s were simply generators for a hybrid electric drive, using two 230kW electric motors supplied by Siemens. Each of these motors drove one of the tank's tracks.

CARRY THAT LOAD

Why pick such a complex engineering solution? The answer lies in the fact Porsche was worried tanks — especially this tank — were becoming too heavy. He reasoned conventional engines would no longer be enough to allow these vehicles to cope with challenging terrain. Somewhat supporting his viewpoint, by the time of the Tiger's early development process, the Wehrmacht had already been through a dreadful autumn of combat in Russia. When the September rains fell, the vast steppes of western Russia and Ukraine turned to an almost impassable quagmire.

With the all-up weight of this new tank approaching

Above and previous spread With desert combat in mind, the Type 101 was tested with dust distribution, as seen in this photograph, taken September 11th 1942





Above The Type 131 (pictured in 1942) operated in Africa and in the Soviet Union, usually in independent heavy tank battalions

Top right While developing tank designs, Ferdinand Porsche was also busy with the Volkswagen prototype, seen here in 1940 fifty-seven tonnes (a combat-ready Sherman weighed thirty-eight tonnes, depending on specification) Porsche figured only an electric motor's huge, instant torque could pull it out of deep mud if it were to become stuck. A stuck tank is, after all, a very expensive way of providing the enemy with target practice.

Not one to put all his eggs in one basket, Porsche designed an alternative drivetrain using a more conventional hydraulic transmission developed by Voith, but only one prototype was built using this system.

The deadline for the development of the new tank was tight — the HWA insisted the prototype enter a face-off against a rival design by no later than the 20th April 1942, Hitler's birthday.

At this point, Porsche's plans became somewhat unstuck. For a start, his friend and political protector,

Todt, was dead, the result of an aircraft crash in February. This meant a new armaments minister, Albert Speer, was in post. Where Porsche was Hitler's favourite engineer, Speer was

THESE MIGHTY V10S WERE GENERATORS FOR A HYBRID ELECTRIC DRIVE, USING TWO 230KW ELECTRIC MOTORS

Hitler's favourite architect. He was also a man often found seated at the right of the dictator. Speer loathed Porsche and the feeling was mutual.

Karl Ludvigsen details a spectacularly petty, school-boy exchange between the two men at a ministerial meeting to discuss future tank designs. By this point, Porsche had become convinced his advanced electric hybrid powertrain was too complicated for the period's production lines. Upon hearing this, Speer instantly announced the transmission was to be installed as planned.

Porsche was also having to face off a rival design from the Henschel corporation. Henschel und Sohn, of Kassel, was a traditional German heavy industry manufacturer. It made railway locomotives, for instance. Working with heavy steel and iron was second

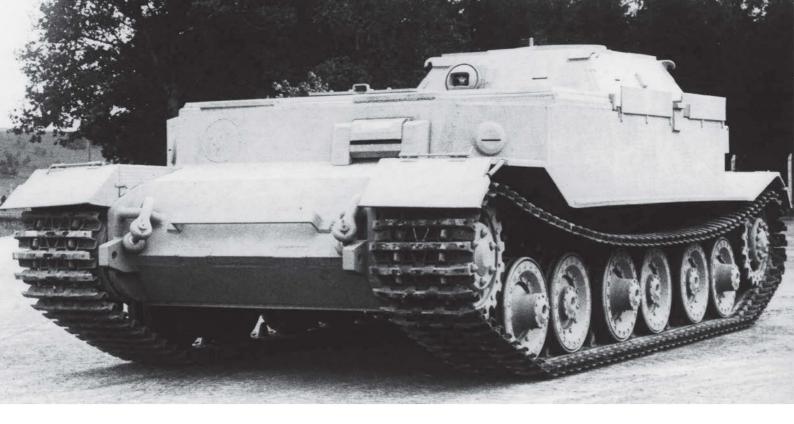
nature. Henschel's design for the Tiger tank was more conventional than Porsche's, using a massive twenty-three-litre Maybach-designed V12 petrol engine developing 690bhp.

It was this version of the Tiger design Speer liked best. Was his favour for the Henschel design driven by his animosity towards Porsche? It's highly likely — the Nazi way of man-management was to pit people against one another in a high-stakes Darwinian battle to see who would come out on top. It was often a self-defeating process, but was this the case here? After all, Henschel's design would go on to become a byword for panic among Allied soldiers. Later, Pink Floyd would record When the Tigers Broke Free, referencing the might of this extraordinary tank. When battle reached Italy in 1943 and the beaches of Normandy in 1944, almost every

Allied engagement with the enemy was punctuated by breathless reports of being attacked by Tigers and their colossal 88mm guns.

Most such panic was just that —

panic. The Panzer MkIV, the tank initially intended to be replaced by the Tiger, looked broadly similar in silhouette, but weighed a 'mere' twenty-five tonnes and used a 75mm main gun. To a Tommy or GI sheltering in foxhole, it probably didn't make much of a difference whether they were being fired on by a 75mm gun or something bigger. Soon, all German tanks became known as Tigers and all cannon became 88s. It didn't help that the British had captured an early Tiger I in Tunisia and, once it had been assessed, displayed it across the UK as a trophy of war, including a stint on Horse Guards Parade in London. While this exhibition was meant to be a symbol of how the Germans were being defeated in the field, the sight of the fifty-seven-tonne monster sitting in the middle of Whitehall gave more than a few servicemen pause for thought before they were shipped out to fight.



Incidentally, Tiger 131 is still going strong — it's one of the star exhibits at the Tank Museum in Bovington and is the only working Tiger still in existence. You can see its cameo in the 2014 Brad Pitt film, *Fury*.

For all the terror it caused, the Tiger was a busted flush. Germany simply couldn't make enough of them. Ultimately, fewer than two thousand Tiger Is and Tiger IIs were built. For all their fearsome firepower, it simply wasn't enough to have influence on the broader battlefield. In contrast, the Allies built almost fifty thousand Shermans. No matter how well-designed an individual Tiger tank might be, the math of the battlefield doesn't lie.

MAKE A MOVE

Having said all this, you might be of the opinion the Tiger was vastly superior to the Sherman. Not so. Quite apart from the later 'Firefly' upgrade for the Sherman, which used a British-designed eighteen-pounder main gun (easily the equal, and, later, superior to the German 88), the standard 75mm-gunned Sherman could take on a Tiger and win. The Sherman could fire faster and its gyro-stabilised gun meant it could fire more effectively on the move, too.

In James Holland's book, *Brothers in Arms* (an account of the Sherwood Rangers armoured division's advance through Normandy and into Germany in 1944-45), we are told of an encounter between a Sherman and a Tiger at a range of just 120 yards.

"The gun boomed, the tank rocked, and the shell hurtled towards the Tiger at more than two thousand feet per second, at point-blank range," reads the 592-page tome. It goes on to quote the Sherman's commander, John Semken, who explained how the road was filled with smoke from the tracer. He couldn't see a thing, so kept firing. "Round after round was pushed into the breech, empty cases clattering onto the turret floor as each shell slammed into the Tiger." With each shot, Semken adjusted the lay of the gun. Within little more than half a minute, the Sherman had fired ten rounds.

Over the net, he heard the enemy crew were bailing out.

Would Porsche's Tiger design have fared any better on the battlefield? It's possible. The Henschel Tiger used a pre-selector gearbox, which proved maddeningly troublesome in use. It seems likely Porsche's electric powertrain, with its air-cooled V10 engines, may have fared a little better. It's true to say Porsche's 'knee-arm' torsion bar suspension design was more sophisticated than Henschel's setup, but critics said it would become clogged by mud too easily.

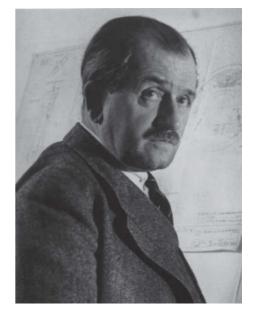
Then again, we have an inkling of how Porsche's Tiger might have performed. The basic chassis design proposal was eventually used to build ninety Sd/KfZ.184 heavy tank destroyers. This vast seventy-tonne monster wasn't a tank — it had no moving turret — but was a mobile gun, housing a long-barrelled 88mm cannon in a fixed hull and designed as a stand-off 'tank killer', able to wipe out enemy armoured vehicles at long range. While it didn't get the Porsche V10 hybrid drive (a pair of Maybach V12s was substituted), this massive creation

— dubbed the 'Ferdinand' in honour of its designer — was relatively successful in the field. Put it this way, there are reports of a pair of Ferdinands fighting in a suburb of Rome. Between them, they are thought to have accounted for the destruction of between forty and fifty Allied tanks and other vehicles that day.

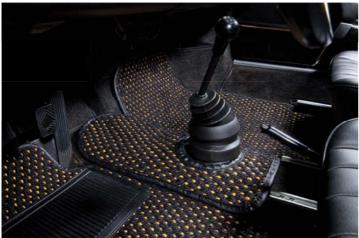
As ever, German industry was overstretched and under-resourced. Ferdinand Porsche's designs for the Tiger tank were potentially revolutionary and would have made for a terrifying weapon of war. Thankfully, for all of us, the Nazis simply didn't have the resources to put his ideas into proper mass-production. **CP**

Above A Type 131 (Tiger I) heavy tank was captured by the British 48th Royal Tank Regiment in Tunisia during World War II and is now preserved at The Tank Museum in Bovington, Dorset, England, where it sits as the only operational Tiger I anywhere in the world

Below Porsche lost out to Henschel's design, which would go on to be built in Kassel, Germany — the hull was constructed by Henschel, while the turret was made by Wegmann Automotive









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LOOK OF LOVE

Want the looks and handling of a classic 911 Turbo without massive lag and the threat of leaving the road in corners? The Carrera 3.2 Supersport could be just the Porsche for you...

Words Dan Furr Photography Dan Sherwood

f you happen to be enjoying this magazine with a cup of coffee in hand, I suggest you put your drink to one side before continuing to read this paragraph — I fear you may experience hot brown stuff ejecting from your nostrils at warp speed by the time you get to the end of the next sentence. Not everybody wants to own a 911 Turbo. There, I said it. It's out there. Sure, we all love the aggressive, widehipped 930's looks, and there's absolutely no denying it's a bucket list car for many Porschephiles, but the truth of the matter is the forced-fed classic 911 is too boisterous for the majority of drivers who simply want to enjoy a

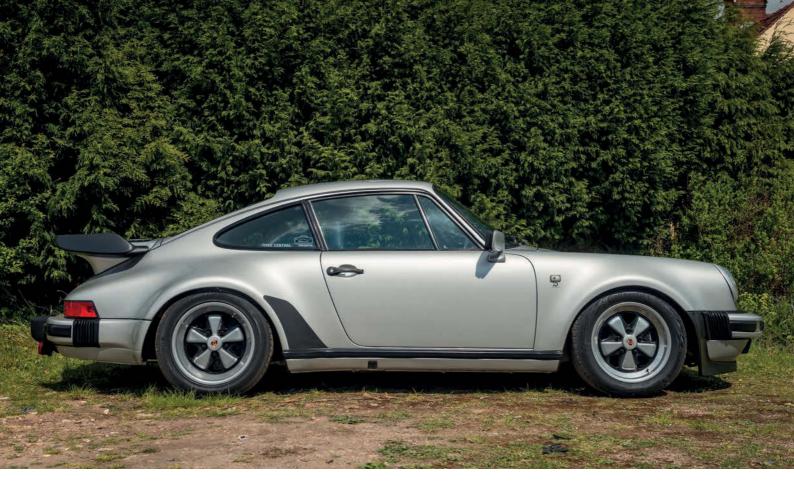
ride out in an air-cooled Porsche, ideally without ending

up in a hedge when putting their foot to the floor. Well, we are talking about the 'Widowmaker', after all.

That said, just because a punch in the back after a couple of seconds of apparent engine inaction doesn't necessarily appeal to you, none of this means you don't want a 911 exhibiting the same mean aesthetic as a 930. Perhaps a narrow body is too tame for your tastes? It's a sentiment I can appreciate — among Furr's Fleet resides a first-generation 997 Carrera 4S. This late 2006 build shares the wide rear end and muscular haunches of the same-age 997 Turbo, but the flat-six powering my car is a 3.8-litre normally aspirated unit developing 350bhp and 295lb-ft torque. Compare this with the 997







Turbo's thundering 473bhp and 457lb-ft, rising to 502lb-ft on overboost. On paper, the twin-turbocharged 911 is a dream machine easily outgunning my Carrera 4S, but in reality, on UK roads at least, the Carrera 4S is, in my opinion, a far better proposition. Put it this way, on the public highway, the majority of drivers are far more likely to explore the full range of the Carrera 4S's capabilities than they are those of the Turbo, which will rarely get driven anywhere close to its potential by all but the most experienced of 911 drivers and trackday enthusiasts. Put simply, on the road, you're unlikely to find the Turbo's limit, but it will certainly find yours.

BEST IMITATION

Where my 997 Carrera 45's vast rump echoes that of the same-generation Turbo, the earlier 996 Carrera 4S (arguably the best-value 911 money can buy right now) took things a step further, inheriting the 996 Turbo's wheels, side skirts and vented bumpers, alongside its fatter dimensions. In fact, save for the absence of the Turbo's rear-quarter-situated intakes and its engine lid adornment, there's very little to visually separate these two 996s. The gap becomes even more blurred with the 992, which eliminates the narrow body altogether, ushering in "generously proportioned" shells across the entire 911 range.

Clearly, even if the edge-of-your-seat driving experience delivered by a 911 Turbo doesn't appeal to everyone, there's huge appetite for Turbo looks among Porsche owners, irrespective of their 911's mechanical make-up. It's something Porsche was aware of as far back as the mid-1980s, when the manufacturer's Sundwerwunsch (Special Wishes) department released the Turbo-look Carrera 3.2 coupe into the wild. A Targa variant followed and, by 1985, these intriguing offerings — complete with the contemporary 930's bodywork, wide

wheels, rear spoiler, brakes and suspension — became regular models, initially known in the UK as 'Carrera with Sport Equipment'. In advanced of the 1987 model year, the Turbo-look Carrera 3.2 was relabelled 'Carrera Supersport'. Thanks to the non-availability of the 930 in the USA from 1984 through 1986 (due to strict Stateside emissions regulations), the wide-hipped, big-tailed Supersport was particularly popular in the land of Uncle Sam, becoming an unmistakable 1980s cultural icon. A separate Sport pack comprising a reduced equipment list was offered in the UK under the '911 with Sport Equipment' banner.

The silver machine on these pages is a Carrera 3.2 Supersport built for the 1987 model year. Only a handful of right-hand drive examples were supplied to the UK. This particular example holds the distinction of being the very last equipped with a 915 gearbox. "It was an

Above Officially known as the M491 option and initially available for an extra DM25,590 through Porsche's Sonderwunsch (Special Wishes) department, the Carrera 3.2 Supersport gained Turbo-aping wide wheel arches, a 'whale tail' wing, a wraparound front spoiler, the 930's stiffer suspension, its superior braking system and wider wheels



911 SUPERSPORT









Above Air-conditioning was a rarely optioned extra, but Linsday's car includes the system, as well as sunroof

Below It's not the black interior Lindsay was hoping to be sat in, but the silver paintwork and oh-so-blue cabin work well together order away from being loaded with a Getrag G50!" laughs owner, Lindsay Brown, one of The Independent Porsche Enthusiast Club (TIPEC)'s regional officers. He's owned the car for twelve years and 'traded up' from a 944 S. "I loved the 944, but I couldn't escape the want for a 911. I spotted this car featured in the dealer showcase pages of 911 & Porsche World magazine and knew I'd found 'the

one'." The glowing fivestar review filled him with encouragement. "Without much in the way of delay, I contacted the seller and arranged a test drive."

For many, the idea

of owning a classic 911 — or any retro ride, for that matter — is as much about the romantic notion of being in charge of a car like this, as it is the promise of a thrilling driving experience free of the trappings (read: driver aids) of modern motoring. Did the Turbo-bodied

LACK OF POWER STEERING AND HAVING TO PUSH THE BRAKE PEDAL WITH FORCE TO ACHIEVE BITE

Supersport live up to expectation? "Not exactly," Lindsay grins. "I'd loved the six years I'd spent driving the 944, which was a standard 2.5-litre S, save for Cup sixteeninch wheels. I probably wouldn't have sold it if I'd had sheltered storage to take advantage of. The 911, though, was completely free of rust and boasted excellent specification, including a sunroof, Sport seats and air-

conditioning, along with the Turbo body. I was holding out for a Guards Red Carrera 3.2 with black leather, but this silver Supersport was too good to miss out on. In

no way, however, did I anticipate not enjoying my time behind the wheel."

Along with Lindsay's request for a 50mm drop in ride height, a dink in the front valance was sorted before he welcomed the car to his home in Tamworth. Immaculate and riding on Fuchs finished in black, the sparking silver tin-top looked every bit as menacing as a full-fat Turbo. What, then, was the problem? "I just couldn't gel with it," he sighs. "In fact, I was considering selling up and going back to a front-engined, water-cooled, four-cylinder Porsche. The 944 was an effortless drive with near equal front-to-rear weight distribution. It handled brilliantly and its hatchback made for a very practical Porsche. I began to wonder if I'd be better suited to a 968 than an air-cooled 911."

Chief among his complaints were the Supersport's lack of power steering and having to push the brake pedal with force to achieve bite, preventing him from driving the 911 as hard — and with as much confidence — as he'd pushed the 944. Looking back, however, he recognises the fault lay with not getting enough time to really familiarise himself with the quirks and character of the air-cooled Porsche. "I decided to take it on a trip to Le Mans and back. Concentrated seat time driving this





911 over long distance provided me with the opportunity to really get to know the car and work out how to get the best from it. You could say we returned from Le Mans as a happy couple!"

Obviously, it's a lasting love, so what advice does he offer prospective Supersport purchasers reading this article? "If, like me, you cover many miles in modern cars in regular driving conditions, it's important to remember the Carrera 3.2 is a comparatively basic car, even though you can take advantage of electric windows and power seats. You really need to *drive* the thing. Take it by the scruff of the neck, else it will bite back. And take it from me, the more time you spend driving a 911 like this, the more you'll discover its true potential, encouraging confidence in your driving and resulting in more enjoyable journeys."

SYMBOL SHIFT

His Supersport's typically notchy 915 gearbox was soon discovered to need an overhaul, necessitating the installation of new synchros and dogteeth ("it was crunching in and out of first and second"). Later, after the engine began 'sweating horsepower' by way of oil mist in the engine bay, Paul and Mike Chare, owners of Worcestershire-based independent Porsche specialist, Zuffenhaus, were called upon to carry out a top end engine rebuild. "They did an excellent job," Lindsay confirms. "The car was using a litre of oil every five hundred miles, but since Zuffenaus worked their magic, it hasn't lost a drop between service intervals."

The 'leaves' of the black Fuchs were painted silver, a strut brace was added and chassis tuning was carried out by Pete Leason and Chris Franklin at Center Gravity, giving the car more responsive handling, complemented

by sticky Continental rubber. "The rears feature a 245/45/16 profile, which is becoming increasingly difficult to get hold of. Choice is very limited," Lindsay warns. Indeed, a glance at *blackcircles.com* illustrates only four options (Nankang, Yokohama, Pirelli and Michelin), where once there were many more to choose from, including the Contis his Porsche currently wears. He also suggests Turbo body panels are proving to be in short supply right now, though has no plans to put his car in a position where it might need them! "On the plus side," he continues, "independent Porsche parts retailers, such as Design 911, stock lots of spares for the Carrera 3.2 and 930, meaning would-be owners shouldn't have any trouble getting hold of most other repair and maintenance items."

Above Is the Carrera 3.2 Supersport the most usable 911 to roll out of the 1980s?



911 SUPERSPORT





to buy, run, insure and maintain than a Carrera 3.2, let

alone a Supersport, but the reward for buying the 911 is

a more engaging Porsche. Moreover, he says it's a car others seem to appreciate just as much as whoever is

in the hot seat. "At the lights, other road users would

want to race the 944, revving their engines as a signal

Above An owner's choice of tyres for the rear are becoming increasingly narrow

Below Top-end rebuild was carried out by Zuffenhaus

At its original point of sale, a Supersport (option M491, as indicated on the VIN/options sticker fixed to a genuine example's inside front lid) commanded close to ten grand more than a standard Carrera 3.2. Today, you can expect to pay a twenty grand premium. "You're obviously getting a raft of 930 equipment, even though

the engine remains a 3.2-litre normally aspirated flat-six producing 230bhp," Linsday stresses, "but this is a largely unburstable engine and provides satisfying

WITH THE PRICE OF OWNERSHIP **CURRENTLY HOVERING AROUND** £90k, TURBO LOOKS CARRY A FINANCIAL COMMITMENT

levels of torque low down the rev range. The Carrera 3.2 isn't as quick as the 944 point to point, but it's much more fun, requiring you drive harder to cover ground at the same rate."

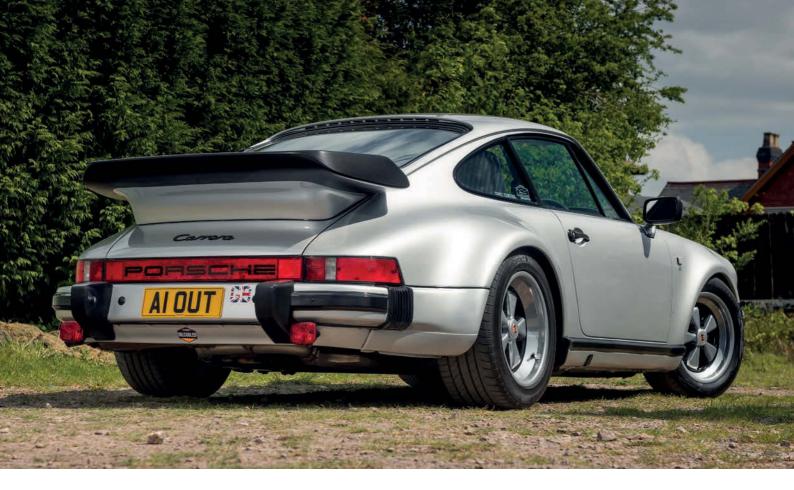
He goes on to highlight out how the 944 is far cheaper

of intent. In contrast, when I'm driving the 911, people smile, wave, wind their windows down and tell me how much they like the car." I admit, comparing a 944 S and a

Carrera Supersport is a tad like pitching apples and oranges against one another, but when so many marque enthusiasts view the 944 as the 'gateway' Porsche to an air-cooled 911, it's worth hearing from someone who has ownership experience of both cars. "They're very different Porsches offering very different driving experiences," Lindsay advises. "The 944 is, in many respects, a far more comfortable Porsche, certainly in right-hand drive guise, where your legs are straight on the pedals, unlike the 911, where they're to one side. The best advice I can give is for people try both and see which suits them best, keeping in mind the 911's true performance potential might take time for a new owner to fully appreciate," he adds, knowingly.

The keen-eyed show-goers among you might recognise this Turbo-bodied beauty from its star turn at the Lancaster Insurance Classic Motor Show, where it lined up alongside a 944, 996 Turbo and a Chesil 356 Speedster - all dressed in silver - on the TIPEC stand to mark the club's twenty-fifth anniversary. Lindsay uses his Supersport most weekends ("I'm not afraid to drive it") and has followed his decisive Le Mans trip with TIPEC outings to visit classic car shows all over France, as well as various breakfast meets across the UK.





With the price of Supersport ownership currently hovering around the £90,000 mark, Turbo looks certainly carry a financial commitment from buyers, but where the yet-more-expensive 930 delivers a drive in most cases unlikely to be fully appreciated (thanks to limitations of the majority of weekend drivers' capabilities behind the wheel, questionably maintained roads and a sharp increase in the amount of traffic in recent years), the Supersport's normally aspirated 3.2-litre beating heart works brilliantly to provide a linear delivery of power capable of being brought under control far easier by most drivers, thereby allowing them to become more engaged with the 911 they're in charge of.

One might go a step further by arguing how a combination of the Turbo's chassis equipment, styling and the Carrera 3.2 powertrain does, in fact, make the Supersport the most *usable* of all 911s produced in the decade of red braces and filofaxes.

1989 marked the end of the G-series 911, but Porsche continued to develop the Carrera 3.2 until the bitter end. The Speedster variant (option M503) borrows its inspiration, name and style from the similarly styled 356 Speedster, as featured elsewhere in this issue of *Classic Porsche*.

Essentially a low-roof version of the Cabriolet, the Carrera 3.2 Speedster features a cut-down windscreen and a pair of body-coloured polyurethane 'humps' covering an unlined, manually operated hood. Buyers could choose narrow-body or Turbo-look versions, each benefiting from a model-specific front valance.

The Carrera 3.2 cemented the 911's reputation for quality of build and reliability. Today, it offers lucky owners performance and panache with few drawbacks. Add the Turbo body, brakes and suspension, and you've got the best normally aspirated 911 from the 1980s. Supersport — who needs a turbocharger anyway?! **CP**

Above All the Turbo looks and chassis kit, but in a more user-friendly Carrera 3.2 performance package





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ROOCK STAR

The Roock family name is well established in the Porsche firmament, but Roock as a business began modestly enough in the mid-1980s, propelled by youthful enthusiasm, a stroke of luck and then sustained by dedication and competence...

Words Kieron Fennelly Photography Glyn Fennelly

ichael Roock emerged from college as a coachwork master craftsman. As a youngster, he had always enjoyed mechanical things, building his own motorcycle not long after his fifteenth birthday. With his brother, Fabian, he opened a tuning and repair shop in Leverkusen. A third brother, Roland, would soon join them.

Initially, the Roocks covered all makes, but quickly specialised in Porsche. Before long, a client based a few miles away in Cologne came to them with a damaged competition-readied 944 Turbo, which he'd crashed in the 944 Turbo Cup series. He'd consulted with his local Porsche main dealer, but the astronomical estimated cost of repair work put paid to further engagement. In contrast, a damaged race car was just the kind of challenge which appealed to the Roock brothers — they already had a chassis rig and a reputation for rebuilding suspensions. As it turned out, the work they applied to the 944 Turbo introduced huge improvements — from

his previous starts at the back of grid, the turbocharged transaxle's owner was now on the front row. The following year, he entrusted the Roock squad to maintain his 964 for a Carrera Cup campaign.

For the 1991 season, the Roocks bought their own 964 Cup car and hired a Swiss driver, Bruno Eichmann, who finished tenth in the championship despite a series of crashes. The team was far from discouraged — racing exposure was doing wonders for their tuning and repair business. In 1992, they fielded two 964s, Eichmann finishing second in the championship. Michael could see the man to beat was future touring and sports car ace, Uwe Alzen — for the 1993 Carrera Cup season, he persuaded Alzen to join Roock Racing. It was the beginning both of the immensely talented Alzen's professional career and a remarkably successful partnership: Roock Racing won not only the 1993 Carrera Cup, but the 24 Hours of Spa, aided by Alzen, Jean-Pierre Jarrier and Christian Fittipaldi at the wheel.

Moving up a class for 1994, the Roocks prepared a 964 RSR for GT racing, winning the ADAC German







Above and below Today's Roock Sportsystem operation is less concerned with tuning and more focused on restoration of classic Porsches, as well as preparation of air-cooled cars for historic motorsport

Facing page Following their huge success as a team in GT racing, Michael and his brothers now operate separate businesses carrying the Roock name championship as well as the now Europe-wide Porsche Supercup. Four more seasons with victories at this level brought FIA GT championships and a series of podium finishes at Le Mans, culminating in winning the GT class in 1996. By 1998, they had, as Michael puts it (while

gesturing to an entire showroom wall covered in trophies), won everything. Thus, they turned their attention to the US, going on to win the GT2 class and scoring seventh

overall at Daytona in 1999. This whetted the Roock concern's appetite for further Stateside racing and, in 2000, they finished second with the 993 GT2 in the American Le Mans Series (ALMS), achieving the same feat a year later, this time in the LMP 675 class.

After a decade spent racing, during which Michael and his brothers had won just about every championship they could realistically aspire to, he felt it was time to stop. Besides the long periods of living out of a suitcase, the cars themselves were becoming more complex.

HIGH ON HIS WORKSHOP WALL HANGS THE DAMAGED BODYWORK OF THE GT1 ROOCK ENTERED INTO LE MANS

For example, a G50 gearbox, he recalls, was usually repairable, but when PDK goes wrong, today's teams have to buy new from Porsche. Even with the 993 GT2, cost and complexity were

increasing rapidly. The latest Porsche GT competition cars take this to a whole new level.

Michael points to the intercooler on a GT2 engine on the bench beside us. It's a beautifully finished item featuring flawless welding and is extremely effective





in operation, dropping induction air temperature by 50°C. "Expensive," he says. "Porsche was charging us DM30,000!" Racing at top level also involved much discussion, not always productive, with sponsors prone to change their minds, which became tiring. Consequently, in 2000, the brothers agreed they'd done enough. Roland set up shop as a Piaggio dealer, Fabian stayed on in the US for a season in LMP and founded Roock Autosport in Atlanta. Michael, meanwhile, established Roock Sportsystem, dedicating his work to Porsche car sales and the preparation of competition 911s for keen customers. Over the last few years, he has concentrated his focus on air-cooled Porsches. In the case of the 964 and 993, these are cars the

Roocks campaigned when new, but are now passing through Michael's door as candidates for restoration or preparation for historic motorsport.

High on his workshop wall hangs the damaged bodywork of the GT1 Roock entered on behalf of Porsche at the 1997 24 Hours of Le Mans. "Yannick Delmas crashed it," says Michael with a wry smile. "It was our most expensive weekend racing!" Perhaps unsurprisingly, his favourite 911 is the Carrera RS 2.7. He is understandably proud Porsche made him an offer for his personally owned yellow example when the factory media team needed an original RS as part of promotion for launch of the 997 GT3 RS. "The guys at Porsche told me my RS 2.7 was the best example they could find

Above At any given time, a wide variety of air-cooled Porsche road and race cars occupy the Roock workshop

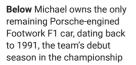
Below Spare parts and motorsport paraphernalia live happily alongside race car rebuilds and a selection of Volkswagen buses











anywhere. It was featured in *Christophorus* magazine and now resides in the Porsche Museum."

He appreciates he was fortunate to be well established with historic Porsches before their astronomic rise in value. "I was also trading modern

Porsches, but you don't really make a lot of money on second-hand Boxsters. I was selling well over a hundred cars a year, but with the classics, I'm happy to move

closer to forty." In truth, his heart was never in selling water-cooled cars. Needless to say, the opportunity to specialise in air-cooled 911s proved irresistible.

At the time of our visit, Roock Sportsystem's streetfront showroom featured eight mostly 1970s 911s,





including several RS 2.7s and a 1968 T/R. All were immaculate and all accompanied by written histories. Michael's busy workshop also contained an RSR 2.8 and a 718 RS 60 on axle stands. Taking pride of place in his personal garage is the only remaining Porsche-engined

car, living alongside
a splendid 356

Speedster loaded with
a GT chassis and other
desirable equipment,
including alloy wheels.
He is equally proud of
his Volkswagen bus

Footwork Formula One

from 1981, the last year of the air-cooled flat four. The vehicle is appropriately liveried in Roock Racing colours.

Tuning and parts have become less important over the years: "You've got operations like Porsche Tequipment, AMG and BMW Motorsport on the go as in-house

HE AND UWE ALZEN WON THEIR CLASS WITH A 911 RSR AT THE LE MANS CLASSIC IN 2016 AND AGAIN IN 2018





entities for major German carmakers," he says. "OEMs have captured a significant degree of the aftermarket and, frankly, tuning doesn't excite me anymore."

Modest about his ability as a racing driver ("I never did any serious racing"), Michael has nevertheless discovered the pleasures of historic competition — he and Uwe Alzen won their class with a 911 RSR at the Le Mans Classic in 2016 and again in 2018. Michael readily acknowledges Alzen, who placed second at the 1988 24 Hours of Le Mans in a works GT1, did the lion's share and all the night driving. A Roock-prepared 911 T/R in the hands of former professional and Roock team driver,

Claudia Hürtgen, finished sixth in the Le Mans Classic's 1967-71 category.

Once boasting more than thirty staff, today's Roock operation in Leverkusen comprises only nine employees. Michael appears to have the work-life balance nicely in equilibrium. "I love driving my old Porsches, especially the Speedster. I travel many miles touring during the warmer months, with the Le Mans Classic and Goodwood serving as highlights of my summer calendar." With a wry smile, he tells us that best of all, he can return home at night without having to worry about sponsors, drivers and races. **CP**

Above and below A bulging cabinet full of trophies demonstrate the Roock Racing success story

Bottom left Damaged GT1 bodywork hangs high on the workshop walls









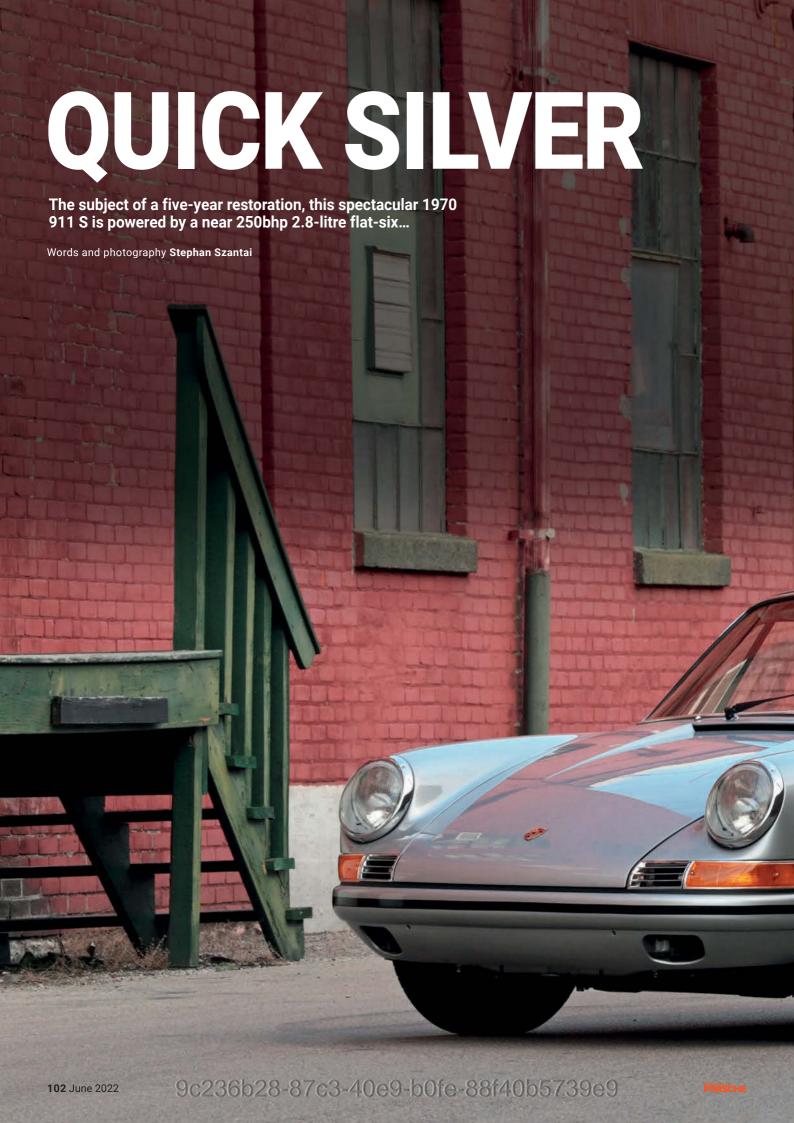
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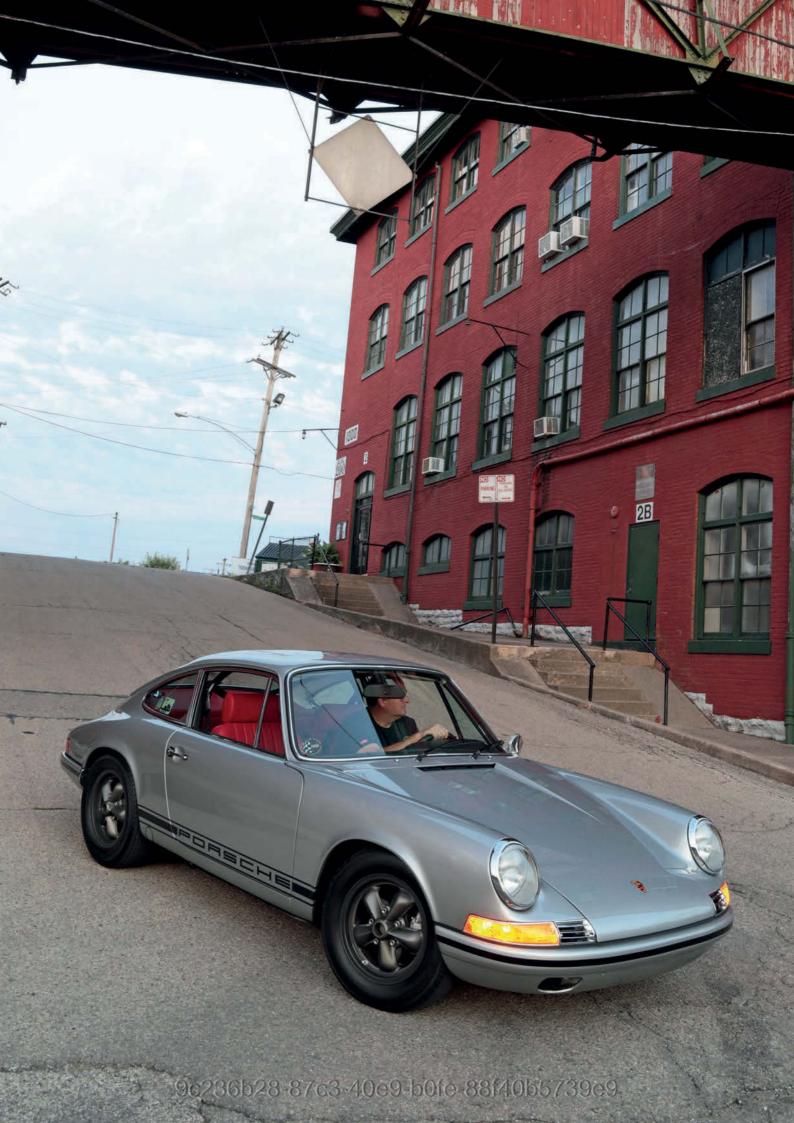
911 S RESTOMOD

ould this be real? While driving through a remote rural Ohio town during a business trip twenty years ago, David Conklin spotted the familiar shape of a classic 911 sitting on a small used car lot. A bright pink tag emblazoned with the word 'sale' swung from the rear-view mirror of the black coupé, encouraging him to stop and look at the Porsche, resplendent in shiny paint over a fairly straight body. To his surprise, when walking around the rear of the car, he saw the engine lid was wearing a 911 S badge. Understandably, the asking price of \$10,000 led him to believe someone had hung an S badge on a 911 T.

"When I lifted the decklid, I was shocked to find a genuine 2.2-litre mechanical fuel injection motor looking back at me!" David remembers. He didn't waste time in requesting a test drive. "It ran a bit rough, but generally drove well. The salesman even provided me with contact details of the previous owner, who was in possession of

the car from the mid-1970s until the late 1990s. When I subsequently got in touch, he assured me the 911 which had caught my eye was a numbers-matching 911 S 2.2. Furthermore, he told me that if I didn't buy the car, he'd head over and buy it himself! Based on this information, I offered five-hundred dollars less than the asking price and promptly drove home in my 'new' 911 S." The year was 2002. The very same 911 graces the pages of this Classic Porsche article, though a lot has happened to the now silver machine during the course of the past two decades. Before delving into the details, let's introduce the Ohioan hero of our tale.

Thanks to his father's love of German air-cooled engines, David had the good luck of wrenching cars from an early age. "By the time I was ten years old, I was pulling fenders and engines from the old Volkswagen Beetles my dad would buy to restore," he tells us. Unsurprisingly, his first car was a 1969 Bug, followed by a 1967 build, which he still owns today. It's a veritable









Beetle beast, propelled by a stout Turbo engine and running high tens over the quarter mile.

By the late 1990s, David began noticing early 911s. A trip to Southern California in 2001 and time spent in the company of the late Roger Grago, co-founder of R Gruppe (a famous club devoted to 911 hot rods), led to a ride in Roger's gorgeous Aubergine-coloured 1973 Carrera RS 2.7 evocation. From then on, David knew he simply had to own an air-cooled 911.

Finding a solid classic Porsche in the damp-ridden Midwest, however, proved to be something of a challenge. Enter Lady Luck and presentation of the aforementioned black 1970 S. David managed to trace the car's history to its first custodian, the late John Fergus Sr., who owned the Porsche-Audi North dealership in Columbus. A special order 911, it rolled out of the factory with silver paint, a red leather interior, a projected (extended) hub steering wheel and a limited-slip differential. The transmission featured a 904 mainshaft with close ratio gears, but it is currently unclear whether this was supplied as a factory option or was later installed at the Fergus dealership.

In 1972, the car passed to one of the dealer's sales operatives, a lady named Mimi Geisler, who kept the Porsche four years until Harry Mullins took ownership. Harry is the gentleman David spoke to when he was deciding whether to buy the car. During Harry's time in charge, the 911 was repainted (twice) in black and made regular appearances at Porsche Club of America concours and local autocross events. In the late 1990s, a new caretaker – an Ohio firefighter – enjoyed the Porsche until he sold it on consignment via the used car lot David visited in 2002.

Thereafter, David made a few tweaks, such as replacing the car's Fuchs sixteens with a set of fifteeninch 'deep' sixes. Having been accepted within the R Gruppe in 2003, he joined numerous outings with the

club's Midwestern chapter, venturing all over the United States. In fact, he estimates covering nearly fifteen thousand miles in his 911 on R Gruppe events alone.

In 2010, David decided to give the car (named *Olivia* by his wife, Melissa) additional grunt, introducing a 2.8-litre (95x66mm) flat-six to proceedings. Former Stoddard engine builder, John Truman, assembled the engine using a valuable 1977 911 Turbo (930) engine case, sourced by David at a decent price.

Wiseco pistons, Mahle cylinders and LN engineering connecting rods complement the long block, along with ported 911 SC twin-plug heads, refurbished by Burnham Performance, a Californian air-cooled engine specialist founded by former Supertec engineer, Aaron Burnham, who also supplied the custom distributor and rebuilt the extremely rare 41mm ST high-butterfly injection system. A pair of MSD 6AL ignition boxes hide under the driverside bucket seat.

Top left Despite what the window sticker says, the flat-six propelling this red-trimmed restomod is a tuned 2.8 producing near 250bhp

Above left Halda Twinmaster was a must-have tool for rallying in period





With the near 250bhp engine running like a champ, David contemplated the next upgrade, inviting his friend, Dale Oakes, owner of Dayton-based German marque import, repair and paint specialist, Euro Classics, over to his garage for a beer and to discuss spot-painting areas of the car looking a little tired. It dawned on the pair of Porschephiles how each panel had imperfections - rust spots, paint cracks and dings reigned supreme. Dale suggested a respray in black, but David reasoned this was the perfect time to reinstate the original silver. "Dale tried to talk sense into me, saying the car would become a full restoration and would snowball into a huge and potentially expensive project," he smiles. "I dismissed the notion, of course, but he was right. Five years later, I drove my restored 911 for the first time. That garage beer cost more than I could have ever imagined!"

BARGAIN HUNT

After David dismantled the car, Euro Classics dove into resurrection of the body, discovering a damaged right-front corner, which Harry Mullins later confirmed was the result of him hitting a concrete centre island in the 1980s. This led to the search for an elusive front inner quarter panel, which David found at a great price at a time genuine spares weren't at the same level of supply as they are today. "My goal was to use as many factory replacement components as possible," he confirms. Mission accomplished: ninety percent of the parts used were genuine period Porsche, the remaining ten percent were modern reproductions.

His quest for what was, back then, 'unobtanium' brought additional rare and NOS components: 1970-dated bonnet and decklid lift struts, 1970-dated Koni front struts and rear shock absorbers (rebuilt by Koni USA), Cibié Biode headlights and glass covers, Bosch turn signal and taillight lenses, tow hook, vintage orange-

bar bonnet badge and many other rare finds. The rally-spec hundred-litre fuel tank came from France, while the decklid is the stock aluminium piece. Beneath it resides an OEM aluminium rear valance modified for the 911 ST-style Dansk muffler. David even went to great lengths recreating the finish of the original hardware, with zinc and passivate coating.

Recreating the correct Silver Metallic (code 8080) paint proved to be quite the ordeal. "Modern metallics are much coarser and bolder when compared to metallics of the 1960s and 1970s," says David. Finding factory silver fog-lamp covers removed from the 911 the very week it was delivered solved the conundrum. PPG's engineering laboratory in Pittsburgh even got involved, developing a special blend to match the colour and texture of the paint covering the unused parts.

As you can tell, David is a stickler for details. He dug

Above The car has come a long way since David first encountered it at the back of a sales lot in rural Ohio



911 S RESTOMOD







Below David was sure he as looking at a 911 T rebadged as a 911 S, but soon discovered he was in the presence of the real deal

for accurate information wherever possible, defining the areas previously painted over, undercoated, brush painted or unmasked. He deliberately elected to replicate these intricacies. "Many people have questioned why I was so obsessive with these details, yet didn't restore

the car to its factory specification," he reveals. "Yes, I'm obsessive, but I'm also a hot-rodder at heart. I prefer my cars to be a little brash, louder and faster than stock. Besides, from the day I

AUTOGRAPHED BY THE RECENTLY DEPARTED VIC ELFORD AND NO FEWER THAN SEVEN LE MANS WINNERS

of the lightweight 1970 911 S only available in Europe." All North American 1970 S models were required to have the M470 comfort package, which included heavier carpet. A European 911 S from the same year, however, could be ordered without this package, essentially

shook the first bolt loose, I wanted to replicate elements resembling an ST sans wing flares - the rare 911

featured no thick bumper trim or stainless deco strips, and could even be ordered without undercoating. Heater boxes around the exhaust system were also absent, replaced by Webasto gas heaters. David wanted to mirror this specification. It took him several years to locate all

of the pieces and assemble them into the car. though.

He is also justifiably proud of the interior, starting with the driver's Recaro ST seat originally found in

the works Richie Ginther 914-6. It affixes to a rare pair of racing Scheel sliders, which move the slider release handle to the side (instead of in front) of the seat. "A racing driver, safely secured in a harness, could not reach the typical adjustment lever," David clarifies. "The Scheel pieces move the release within reach of a safely fastened driver." Notice the Auto Total fire bottle (shipped from Austria) located in the backseat area. as used by Porsche in the factory race cars of the era. Personal connections also allowed David to find other desirable pieces, such as the thick-grip 380mm 911 ST steering wheel, date-coded November 1969 and taken straight from Chuck Stoddard's personal collection.

By the time David bought the car in 2002, it had lost its factory red interior, hence the decision to replicate it, a job beautifully carried out by Tony Garcia at San Diego-based classic Porsche cabin specialist, Autobahn Interiors. The oft-seen lightweight side door panels received improvements, chiefly in the form of grooved leather release straps made with old tooling by a horse tack shop. Additional details contribute to the cockpit's great vibe: a pristine dash cover, NOS headliner, replica lightweight carpet and ST-style roll bar all add to the aesthetic. Let's not forget the sun visors - the left side is autographed by the recently departed Vic Elford, the right by no fewer than seven Le Mans winners.





David has something of a Porsche wheel fetish, having bought and sold dozens of the brand's rims over the years. For his 911 S, he mostly runs the previously mentioned 'deep six' Fuchs or 7Rs with Pirelli CN36 tyres, but many local enthusiasts will know his car for its rare fifteen-inch American Racing GT wheels, making use of 185/70 and 215/60 Avon rubber. Having a pair of eighteen-millimetre anti-roll bars and 930 rear torsion bars helps the tyres stay glued to the asphalt.

GRUPPE EFFORT

Another treasured item is the first-edition R Gruppe decal given to David by R Gruppe co-founder, Cris Huergas, back in 2003. Instead of a membership number, this decal displays the special number 0911. "R Gruppe has been very important to me," David continues. "Members use their Porsches extensively. I want to drive my 911, feel the thick-grip wheel in my palms and hear the highbutterflies open on the highways of America. Each trip

reminds me of the friends I've met because of this car, not to mention the many adventures we share. I'm not interested in a garage queen."

During the vehicle's resurrection, David stayed focused on building the best 911 he could afford. Besides doing a lot of the wrenching himself, he traded work and flipped a few cars to help raise funds for the project, but he also scoured swap meets and bought out old used inventory from specialist shops. Reselling his finds at a profit helped finance additional parts and labour.

He also undertook freelance journalist work for various car magazines, including *Classic Porsche*. And, of course, many friends contributed along the way – in addition to those we've already mentioned, David's pal, Mark Francis, kindly handled the plating. The end result of the combined efforts of all involved is a sensational 911 S with extra grunt and a first-class finish. Not bad for a sub-\$10k chance find on an unassuming Midwest sales lot, eh?! **CP**

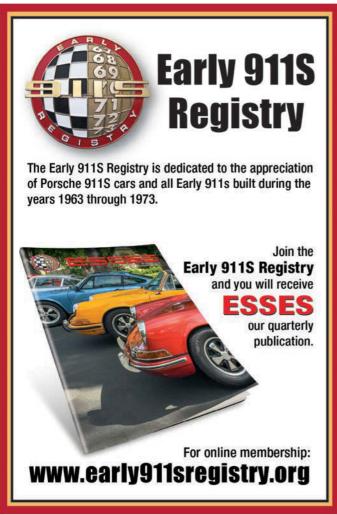
Above This magnificent 911 has been a true labour of love, with the results taking the form of a beautifully personalised Porsche













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PORSCHE 911

113397



1996, £125,000. Porsche 911 Carrera (993) 1996 road/race car, N reg., 3.6 It twin turbo, 6 speed gearbox, turbos recently rebuilt and fuel lines replaced. Engine 500 bhp (approx.) Brembo race brakes (road units also supplied). Gt 2 wide body kit fitted with 8x10x18" BBS alloys. Welded custom cage, fire eater system, air jack system (as per Brit car). Variety of race springs available, variety of split rims and spare set BBS alloys available at separate extra cost. Competed in AEMC and ASEMC sprint championships and DOMC North Sports Saloon Championship and recently on display at the Porsche Colchester showroom. Please call 07860379440, East of England.

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PORSCHE 911



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PORSCHE 911



2003, £69,950. The vehicle has a service record full of stamps from both Porsche Main Agents and independents. The vehicle will be reserviced and inspected at Jasmine Porsche prior to delivery to the lucky new keeper. The car has just sailed through an MOT with no problems at all. Please call 01229 486315, North West.

PORSCHE 911



1972, £119,995. The Viper Green paint is first class, the chrome work exceptional and the interior is outstanding and incredibly sharp. Please call 01944 758000, Yorkshire and the Humber. (T) 110061

PORSCHE 911



£107,950. This car has just been released from the private collection of one of our very best clients and friend of the business. The car must be viewed in order to fully appreciate. The history file is just enormous and contains receipts for recent works carried out by our client totalling £40,000. As such, this is a turn key operation, nothing to sort, nothing to do but just drive and enjoy. The driving experience is superb to this day. Please call 01229 486315, North West.

PORSCHE 912



1967, 132853 miles, £45,000. Porsche 912. I am selling my 912 after 12 years of ownership. The car is a 1967, left hand drive short wheelbase car with matching numbers. The car was originally from California and was imported into the UK around 2000 where it underwent a restoration. Please call 07773772474, North West.

PORSCHE 924



£4,750. Very Tidy Porsche 924 with 1 years MOT and ready to drive away. Its only done 53000 miles with mots to back up the mileage. The car has had a good bit of money spent on it since 2019 and it runs and drives very well. We have one set of keys, the V% and lots of old MOTs and receipts and a service book with stamps at 48500. 48600, 49000 and 50000 miles. Please call 01875 820527, Scotland. (T)

PORSCHE 928



1990, 165000 miles, £29,928. Porsche 928 S4 auto 1990. Restored by Porsche Portsmouth and Porsche approved Poole body shop for Porsche UK 40 YEARS AT THE FRONT DEALER COMPETITION IN 2016. Very rare in special order Tahoe blue, even more rare is having in excess of £55000 spent in restoring it bodily and mechanically. Done 165k with a large documented service history, all books and receipts showing over £55k being recently spent in bringing the 928 back to its former glory. Everything works on car as you would expect! Full extensive photographic record of epic restoration . Been mainly looked after by Porsche main dealers for the last 5 years, done several hundred miles since restoration . Paint and underside are immaculate. Drives great . Far too much to list that has been replaced on the car., Scotland.



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PORSCHE 928



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PORSCHE 944



1990, 133000 miles, £12,950. 944S2 Cabriolet, Guards red, black interior. Lovely condition, total 3 owners, doting last one for 29 years. Every document for that period. Serviced at Northway Porsche, always garaged. MOT to February 2023. Spent £3,800 over last 1,500 miles including mega service. Very original. Please call 07711703542, South East.

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PORSCHE 944



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PORSCHE 944

113444



1989, £13,950. 944 S2 Cabriolet. Lovely Looking Appreciating Classic in Black over Cream Leather Interior. Newly Restored, MOT'd until August 2022. Please call 07835 877345, South West.

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Benton Performance	95	Restoration Design Europe 33
Beverly Hills Car Club	5	Roger Bray Restoration 4
Border Reivers	65	Roock Sportsystem 101
Car Bone	109	Sportwagen Eckert 31
Coco Mats	87	Stoddard 23
Dansk	116	Tandler Precision 4
Design 911	25	Webcon UK 20
Early 911S Registry	109	
Elephant Racing	51	
Export 56	41	Classifieds
FVD Brombacher	2	Classic Passion 911
Gaswerks Garage	57	Eisenbrandt
Go Classic	29	Lancaster Insurance
Group 4 Wheels	29	Related Registrations
Joma-Parts.com	57	Revival Cars
Karmann Konnection	95	Rose Passion
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ı		Output	Dia.		
ı	Model	Current	(mm)	exc.VAT	inc.VAT
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ı	MMA140	20A-140A	1.6-3.2	£104.99	£125.99
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ı	AT162	10A-160A2			£185.99
ı	MMA200		1.6-4.0	£145.00	£174.00
l	AT135	10A-130A		£175.00	£210.00
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