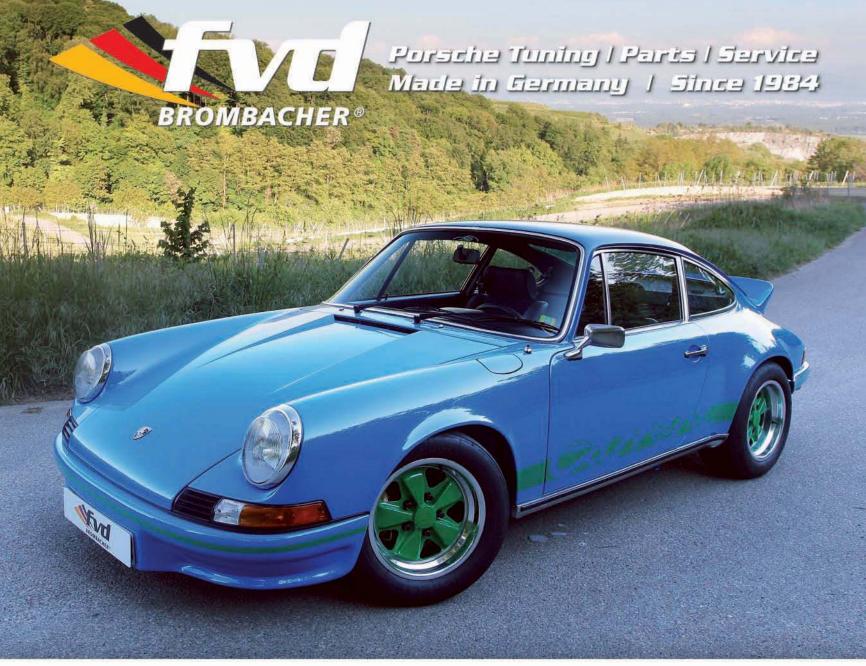




917-001 – PORSCHE'S LEGEND REBORN



THE FULL STORY OF THE BERLIN-ROME RACER HANS MEZGER BIO • THE TURBOCHARGED 917S









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I make no apologies for the heavy 917 bias in this issue – after all, like its kid brother the 914, the legendary endurance racer is celebrating its 50th anniversary this year.

To kick things off, we have an eight-page look back at the birth, life and rebirth of the original 917, chassis 917-001, which made its debut at Geneva in 1969, and reappeared this year at Stuttgart and Goodwood. Kieron Fennelly looks back on the life of Hans Mezger, the man responsible for designing the 917's complex engine and, finally, Karl Ludvigsen raids his archives

## "KARMANN, IT SEEMS, LOVES MID-ENGINED PORSCHES, AS DO WE..."

to uncover the story of how the 917's engine was turbocharged to enable Porsche to dominate the Can-Am series. I hope you enjoy the features as much as we did putting them together.

I've just returned from a 2000-mile round trip to Germany and Belgium to attend a couple of events, dropping in on the old Karmann works at Osnabrück, where my 914 was built. I was fortunate to be shown round the private museum, which houses an example of every car this historic coachbuilder has been involved with. As the company went bust some while ago, and was bought out by VW, it came as a surprise to learn that some modern Porsche Caymans were built there. Karmann, it seems, loves mid-engined Porsches, as do we...

Keith Seume

Editor, Classic Porsche classicporsche@chpltd.com

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#### **FEATURES**

**RETURN OF THE KING** 

The amazing story of the very first Porsche 917, chassis #917-001

**HANS MEZGER** 

We look back at the life of the man behind the 911 and 917 engines...

KING OF THE MOUNTAINS

Classic Porsche drives one of the Porsche Museum's star exhibits

**INTERCITY EXPRESS** 

As Otto Matthé's Berlin-Rome car comes up for auction, we tell the full story

THE CULT OF KÜHLT

Stephan Szantai at the show where Porsches get to feel like movie stars

**RSR, REIMAGINED** 

We track down a turbocharged homage to the legendary Targa Florio RSR

STRETCHING THE LIMITS

Robert Barrie reports on the 2-litre Cup races at Spa and Dijon

**GIVING IT BOOST** 

Karl Ludvigsen continues our 917 theme telling of the turbo Can-Am motors

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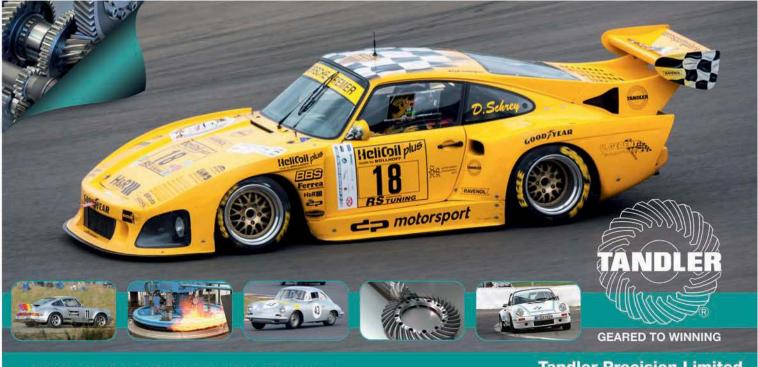












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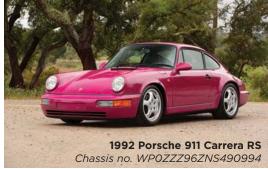
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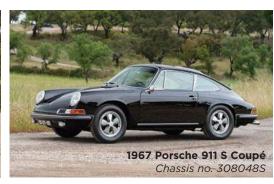
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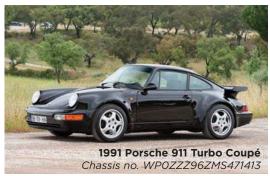




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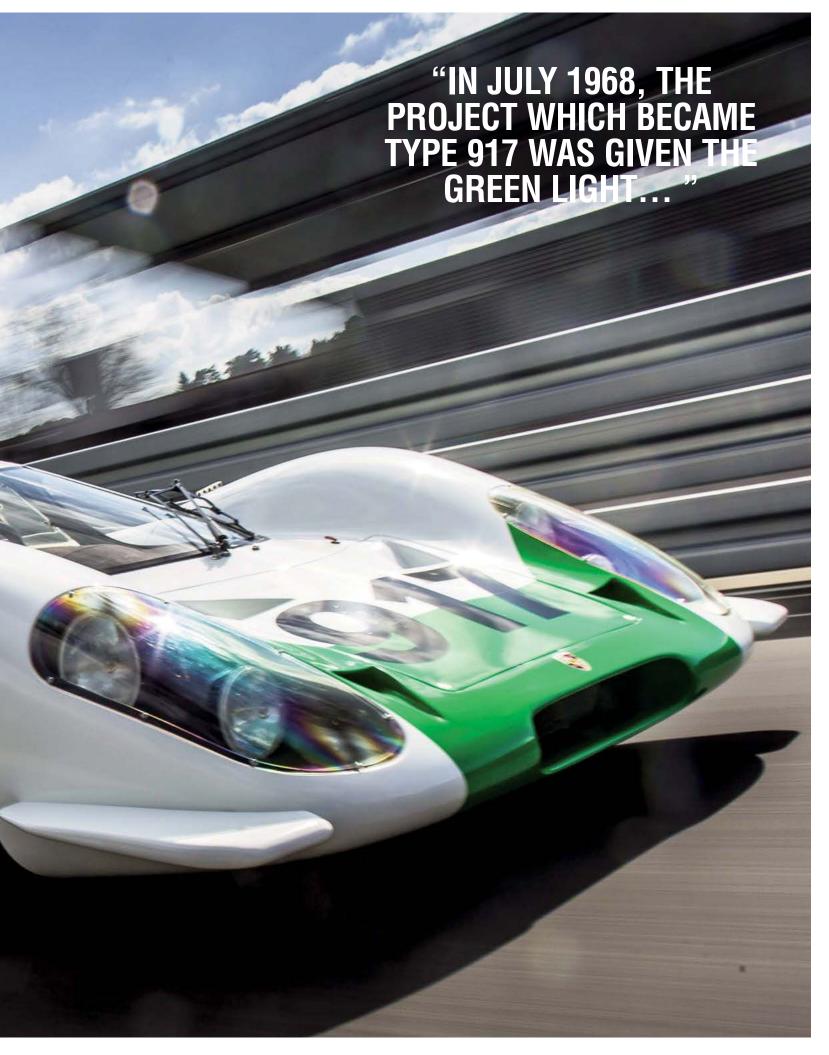
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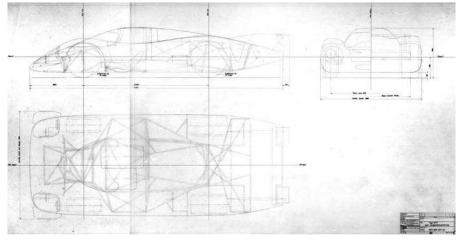
## RETURNOF THE KING

It seems almost inconceivable that Porsche's mighty 917 is half a century old. Iconic is a much over-used word, but surely there can be no more fitting epithet for this legendary machine? Following its recent restoration by the factory, we take a look back at the long and varied life of chassis #917-001

Words: Keith Seume. Photos: Porsche Archiv and Porsche AG









n 12th March 1969, as the clock over the entrance of the Geneva auto show ticked its way towards three o'clock, the air of anticipation was almost palpable. Journalists from all corners of the motoring world gathered at Porsche's lavish stand, waiting impatiently for the covers to be drawn off what promised to be the most important Porsche race car of all time – the car which would, hopefully, see an outright victory at Le Mans and maybe bring home a world championship, or two.

The FIA Sports Car class, in which Porsche had competed with the 908, had been intended to allow privateer entrants to compete alongside wealthier – and faster – factory entries. Since its introduction in 1966, the Sports Car class required that 50 examples of each competing model be built within a 12-month period. Porsche met the requirement in 1966 with its successful Type 906 Carrera 6.

However, it was Ford which dominated the series in 1966 and '67 with the mighty GT40, the era of the Ford v Ferrari wars set in motion by Enzo Ferrari's refusal to sell his company to Henry Ford. The situation made for some exciting racing but the crushing manner in which Ford now dominated at Le Mans did not go down well with the largely French-run FIA, who wanted more of a spectacle at the flagship event.

The board met late in 1967 and decided that, from the beginning of the new year, the Sports Car class would allow cars powered by engines of up to 5.0-litres. The requirement for 50 examples to be built in a year remained unchanged. The Prototype class was to be limited to 3.0-litres, this being the class which Porsche decided to concentrate on with its 907. In fact, Porsche won the first two events outright, outpacing larger entries from Ford and Lola, which ran in the Sports Car class.

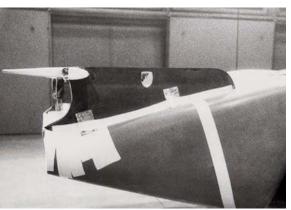
McLaren had pressured the FIA to reduce the number of cars needed for homolgation as it wished to enter a coupé Above left: Chassis drawing for 917-003 in long-tail form hints at how incredibly compact the 917 was

Above right: Construction of one of the first 25 cars underway at Work 1, home of the legendary Test and Racing Department



Left: 917-001 in the wind tunnel at the Research Institute for Automotive Engineering and Vehicle Engines at the Technical University of Stuttgart, 1969





Far left: Not your everyday engine-building workshop. Work begins on the first series of flat-12 motors

Left: First long-tail cars featured adjustable flaps, linked to the rear suspension





Above left: Construction well under way at Work 1

Above: Chassis #917-001 sees the light of day for the first time

Below left: Ferdinand Piëch (right rear) and Herbert Staudenmaier (left rear) oversee the FIA inspection held in April 1969

Below right: German ONS representative Herbert Schmitz (left) and the FIA's Dean Delamont take a close look at the interior

Bottom right: Following the FIA's acceptance of the 917, from left to right: Ferdinand Piëch, Helmuth Bott, Herbert Schmitz and Dean Delamont

version of its Can-Am entry, but there was no way they could build — or justify building — 50 cars in such a restricted timeframe. Amazingly, the FIA thought again and, after a rather lackkustre start to the season, announced that the required production number for the

Sports Car class be reduced to just 25 vehicles. The ruling had a profound effect on Porsche's thinking and marked the first step in a journey that ultimately led to the 917.

Although the 910 was now eligible to compete in the Sports Car class, rumours that Ferrari was to build a 5.0-litre engine suggested that Porsche's chances of taking overall championship honours

with its smaller 908 were fast receding. Both Ferdinand Piëch and Hans Mezger knew which way to go, but to pursue the design and construction of an all-new racing project would require access to funds which did not apparently exist.

Piëch met with the board, suggesting that the 25 cars could be sold to privateer customers throught the season, but that was not enough. It is not entirely clear where the funding did finally come from for the new project – maybe, but highly unlikely, from Volkswagen, Porsche's partner in the new 914 joint project, or perhaps from Porsche's outside consultancy work. There is even a suggestion, according to author Peter

Morgan, that it came from central government. Whatever the source, funds were suddenly at hand and, in July 1968, the project which became Type 917 was given the green light.

From July to the end of the year, Metzger and his team, under the ever-watchful eye of Piëch, who clearly regarded this as 'his' baby, designed what was to become one of the most dominant race cars of

modern times. The team was small which in some ways could be seen as a hindrance, but proved to be a blessing as it meant decisions could be made quickly, without long discussion.

Much had been learnt from the 908, where low-drag was a priority, but this car, with its 5.0-litre engine, was taking Porsche into uncharted territory. Ill-handling cars were nothing new at Porsche, and according to Hans Flegl, drivers were expected to













'get on with it'. Initial wind tunnel testing was carried out at Stuttgart University, suggesting that the new car was significantly more slippery than its predecessors but, as time would tell, low drag wasn't everything.

Ferdinand Piëche had a reputation for being a very singleminded individual and was determined the 917 should be the fastest car on the Mulsanne Straight. The projected top speed was in the region of just under 240mph, some 50mph more than the low-drag versions of the 907 and 908. To counter problems with rear end lift, the 917 was equipped with adjustable aero flaps across the tail.

Development of the new engine was in the hands of Hans Mezger who championed a 180 degree – or 'flat' – V12 engine. This resulted in a more compact and more efficient engine than the pure hoizontally-opposed 'boxer' engine one might have expected. The engine had a displacement of 4.5-litres – well under the 5.0-litre class limit – which meant the dimensions of

the cylinders, pistons, rods, valves and cam-train would be identical to those of the exisiting 3.0-litre race units.

The crankshaft of any V12 engine will, of necessity, be long and consequently prone to flex. To get round this, Mezger took drive from the middle of the crankshaft, a driveshaft passing below the crankshaft directly to the transmission.

In May 1968, the engine was given the designation Type 912 – clearly not to be confused with the production model of the same name! – but the project itself had not yet officially been allocated the '917' sobriquet – that wouldn't happen until the following month. First dyno tests resulted in a truly impressive 542bhp from the outset. Things looked promising.

To house the engine and five-speed transmission, a new aluminium tube chassis was built, based on lessons learned with the 908. The very first 'sample' chassis was made by Porsche itself, clothed in a lightweight glassfibe body from Waggonfabrik Rastatt, but this was solely a non-driving

Above left: 3 o'clock on 12th March 1969 at the Geneva auto show and the covers are pulled off the first 917 to be presented to the public

Above right: The last public appearance in period was at a display of historic Porsche race cars at a château outside Le Mans, coinciding with the 1970 24 Heures du Mans. After this, it became a museum exhibit and display car for the next 37 years...





Far left: 917-001 appeared at Geneva in the white and green livery it now wears once again

Left: At the London Motor Show at Earls Court, the same car was repainted in a unique Gulf Oil livery to celebrate the tie-in with John Wyer's JW Automotive



Left: As the intention was to sell the majority – if not all – of the first 25 cars, a brochure was produced giving the technical spec, and a price: 140,000DM (roughly 70,000 Euros...)



Above left: 917-001 continued in its role as a show car at the Frankfurt auto show, wearing an unusual gold 'block' design

Above right: Ready for London, resplendent in its Gulf Oil colours

Below: #001 spent many years disguised as a copy of the 1970 Le Mans-winner, #023. Then came the major restoration, returning it to 1969 Geneva show trim... reference source. Subsequent 'production' versions used frames built by Bauer, the first of which was scheduled for delivery late in January 1969.

Construction of the first running car, chassis # 917-001, began early in March that year, under the strictest secrecy, giving the team only a matter of days to ready the car for its debut at the Geneva auto show on 12th March. It was a deadline that could not be missed.

Even though the whole project had been cloaked in secrecy, rumours abounded about a new car from Zuffenhausen. Porsche's PR machine, under the guidance of the irrepressible Huschke von Hanstein, tried to head off any enquiring minds by issuing a carefully worded press release which only briefly mentioned the new car, referencing its 'attention-grabbing' design, but nothing more.

The race was on. The body and frame were united on 1st March, while the mechanics made a huge shopping list of parts



required to complete the car, picking from the components that had been accumulated at Zuffenhausen ready to build the series of 25 cars needed to gain homologation. The engine was delivered on 7th March. By the evening of 10th March, the first completed 917 was ready to make its debut at Geneva in just two days' time. That's called cutting it close...

The welcome was rapturous. As the cover was pulled off the car at 3.00pm, journalists and inquisitive show visitors broke into spontaneous applaus. Even Ferdinand Piëch was captured on camera smiling.

Now there was another race: to get the 917 homologated with the FIA so that it could compete in the WSC Championship. The first event on the Porsche calendar was the Monza 1000km on 25th April, just six weeks after the Geneva debut. In that time, Porsche had to complete no fewer than 25 examples of its new wondercar. There was no way that every car could be 100 per cent finished in the timescale, and











unsurprisingly the FIA ignored a request for just 18 cars to be put on show, the remaining seven to be completed as and when. No, 25 it had to be. Legend has it that some of the cars were fitted with most un-Porsche-like suspension and other details, just to make up the numbers.

Records show that only two of the cars were truly finished by the inspection date of 20th March, the remainder sitting in line in various states of incompletion. Porsche offered the FIA inspectors, headed by Curd Schild, the opportunity to examine any car, and it was soon obvious that insufficient cars were available for examination. As a consequence, a second date was agreed, this time four weeks later on 21st April. This time, FIA representative Dean Delamont and Herbert Schmitz of the German ONS gave the nod, and the 917 was go!

Chassis #917-001 never raced. Instead it continued its career as a motorshow car, following its Geneva star billing (in the now familiar white with green graphics) by an appearance at the Frankfurt auto show in September 1969, wearing fresh

white with orange graphics. Later in September, to highlight Porsche's new tie-in with JW Automotive Engineering, #001 appeared at the London Earls Court Motor Show resplendent in the striking colours of the Gulf Oil Company. Its last public appearance in period was at a display of historic Porsche race cars at a château outside Le Mans, coinciding with the 1970 24 Heures du Mans taking place at La Sarthe.

There will be few readers unaware that Porsche won Le Mans outright for the first time that year, the short-tailed 917 (chassis #917-023) wearing the striking red and white colours of Porsche Salzburg and driven by Richard Attwood and Hans Herrmann crossing the line after one of the most gruelling races in the event's history. It didn't matter that the attrition rate was high: Porsche had finally won this flagship event.

To celebrate this victory, the Porsche Museum understandably wanted a car in its collection to show off this momentous achievement. 917-001 was selected for the honour, being converted to short-tail specification (necessitating the

Above: Roll-out for the freshly-restored car took place at Weissach. Note the distinctive cut outs for the side-exit exhaust



Left: Hans Mezger approved of the restoration, stating 'It makes me happy to see this project is in such capable hands. I'm so impressed.'





Above left and right: First public view of the restored car was at the 2019 Retro Classics show at Stuttgart, while first race track appearance was at the Goodwood Members' meeting (Keith Seume)

Below: Driver of the car back in its early test days, Kurt Ahrens, attended the roll-out of the restored #001, and is seen here with Porsche works driver Marc Lieb removal of the rear chassis section), painted in the colours of the Le Mans-winning car and spending the next 37 years as a display car for use at sundry events around the world and pausing for breath in the Porsche Museum in between.

And there the first of the line could easily have spent a long and happy retirement, but it was not to be. With one eye on the 917's upcoming 50th Anniversary celebrations in 2019, it was removed from the Museum in January 2018 and an assessment made of the work required to return it to its original form. The rear long-tail frame needed to be reinstated, but a surprisingly large amount of the bodywork proved to be original, including the roof, windscreen, doors, side windows and door frames. The twin fuel tanks, with their cutouts for #001's unique side-exit exhaust system, were still in place.

Using modern CAD technology, new body panels were fabricated where necessary after referencing the original drawings, moulded from similar materials used back in 1969. At the rear, the unique adjustable aero flaps were reinstated, their

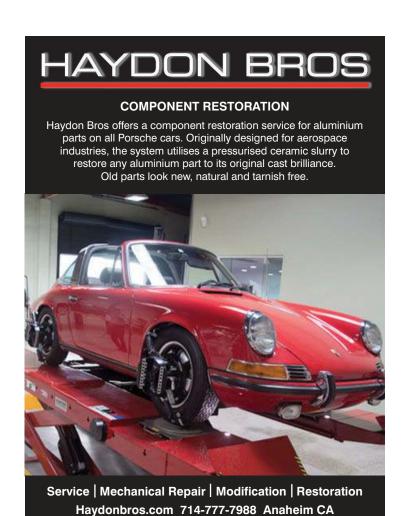
links to the rear suspension, as per the original design. Hans Mezger was called in to give his input and is reported as saying 'It makes me happy to see this project is in such capable hands. I'm so impressed.'

The roll-out of the freshly-restored car took place at Weissach, where it was driven for the cameras by Porsche works driver Marc Lieb. Many of the original team had assembled to witness the event, including Kurt Ahrens, who probably covered more miles in #001 than anyone.

Following its Weissach debut, the famous white and green 917 was put on public display for the first time at the Retro Classics show in Stuttgart, followed by its first public track appearance at this year's Goodwood Members' Meeting.

So, from prototype to test car, to museum exhibit and back again, chassis #917-001 has gone full circle. The king of the race track has returned once more, not to reclaim a crown but to stand as a permanent reminder of the glory days of Porsche's endurance racing in the 1970s. *CP* 











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### PORSCHE AT GOODWOOD FESTIVAL







As always, one runs out of superlatives when trying to sum up the automotive extravaganza that is the Goodwood Festival of Speed. 'Breathtaking' barely does justice to the cornucopia of historical treats on offer.

From the turn of the 20th century to today, and even tomorrow, there were over 600 road cars, off-road cars, sports cars, racing cars, rally cars, Nascars, drift cars, record cars, electric cars and the odd racing truck, as well as racing motorbikes of all ages.

This year's featured marque was Aston Martin, celebrating a 70-year association with the Goodwood racing circuit and presented on the central sculpture in front of Goodwood House.

Porsche, of course, featured prominently with a spectacular line up of a dozen 917s, including the ex-Count Gregorio Rossi road converted version, being perhaps the highlight for fans. The 1.4-litre 935 'baby' Porsche 935 was also a welcome visitor. The surprise of the 1977 season, it appeared only twice on track, and retired to the

museum after achieving its goal of winning a round in Division 11 of the DRM (Deutsche Rennsport Meisterschaft) Championship. Making the point that Porsche could win in the smaller class if it wanted to.

Amongst the many well know drivers attacking the Goodwood hill were ex-Porsche pushers, Le Mans winners Derek Bell and Richard Attwood, and the great John Fitzpatrick, now 'classics' in their own right.

For details of the 2020 FofS, www.goodwood.com

#### **MORE KK GOODIES FOR PORSCHE OWNERS...**

The hard-working crew down at Karmann Konnection in Southend have been, well, working hard again, this time developing two new products aimed squarely at owners of Porsche's 356, 912 and early 911.

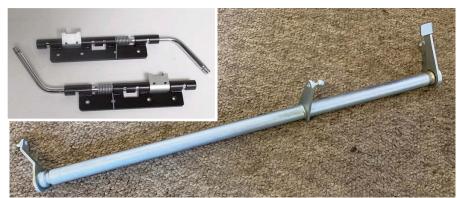
First up, and exclusive to KK, are these superb quality and beautifully made seat runner adjusters. These are made in-house and necessary when fitting Speedster seats to 356B T6, 356C and 911/912 models.

The left-hand and right-hand seat

runner/adjusters are supplied as a pair at £195.00, inc VAT.

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#### **LE MANS 934 MODEL**

New from Selection RS is this stunningly-detailed 1/18th-scale model of the 934 RSR which was raced at Le Mans in 1979 by Marco Vanoli, Herbert Müller and Angelo Pallavicini. The car won its class, finishing fourth overall in the process, and was a photographer's delight with its vivid colour scheme. In an amazing show of strength, the car finished 30 laps ahead of its class rivals! Limited to only 1979 examples, the model costs just £270, reduced from £450.

More information: www.selectionrs.com



#### BOXENGASSE EVENT CELEBRATES ALL AIR-COOLED PORSCHES!



The new Boxengasse business park in Oxfordshire, dedicated to all things Porsche, is up and running. Porsche specialist Autofarm is the best known resident of the 25,000sq/ft facility, which is holding a celebration of all things aircooled (or 'oil-cooled'!) over the weekend of 17th and 18th August.

The festivities kick off with a track day on the 17th on the Stowe circuit at Silverstone. Track support on the day will be provided by Autofarm, with tuition also available. A 105db flyby noise limit will operate on the day. That evening Boxengasse will host a 'drive-in' cinema at its new Langford Lane, Bicester facility. The film in question? Steve McQueen's *Le Mans*, of course. Food prepared via an open fire will be available.

The main event on Sunday the 18th, meanwhile, is a gathering of Porsche fans at Boxengasse. Highlights will include an opportunity to view a wide range of Porsches, to talk shop at Autofarm's new bespoke premises and enjoy a soundtrack of air-cooled machines and live music.

Tickets for the trackday are priced at £329.75, while the drive-in cinema is priced at £12 per person, with free entry for under 12s. The main event on Sunday is £15 per person. For details, head for www.boxengasse.com and www.autofarm.co.uk.

#### **MOTORSPORT TOOLS!**

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August 4: Yorkshire Porsche Festival,
Lotherton Hall, Yorks
www.porscheclubgb.com
August 17: Porsche KG Classics,
Goodwood Circuit, West Sussex
www.porscheclubgb.com
September 8: Salon Privé,
Blenheim Palace, Oxfordshire
www.salonpriveconcours.com
September 13–15th: Goodwood Revival,
Goodwood Circuit, West Sussex

www.goodwood.com
July 3-5 2020: Le Mans Classic,
Le Mans Circuit, France
www.lemansclassic.com

#### **JOIN THE WHEEL REVOLUTION**

Revolution Wheels International has recently introduced its new CR10 range of flow-formed wheels, suitable for most Porsche models, as a celebration of the 50th anniversary of the mighty 917. The wheels – which come in a range of sizes from 15-inch to 19-inch diameter and a wide variety of widths – are available in matt black or hyper silver and suitable for models 911, 914, 918, 924, 928, 944, 968, Boxster and Cayman. They can be viewed on the company's website: https://revolutionwheels.com/





#### **PORSCHES AT SONOMA**

Since 1987 Sonoma Raceway in Northern California has hosted in early Summer the Wine Country Classic/Sonoma Historic Motorsport Festival. Under new management this year and renamed the Sonoma Speed Festival, the organisers had a goal of creating a high quality, exclusive festival of motorsports. The paddock area had a "Goodwood" look to it with race cars aligned by race group in a series of white tents; a Sip & Savor wine tasting pavilion, guest viewing suites near the pit lane; a gourmet food court and drivers' lounge.

Limiting the entry list to 200 cars, only those with documented history were selected from a large list of entries. There were 10 race groups spanning the years from Pre-World War II up to modern day race cars. In addition there were several exhibition laps by the 2016, ex-Lewis Hamilton Mercedes F1 Championship car, the Pre-War Mercedes W154 Silver Arrow, the McLaren F1 GTR Longtail and several vintage dragsters taking runs on the drag strip.

In the list of entries there were a number of classic and historic Porsches to delight the crowd as they competed on track and viewed in the paddock during the three day event. By all accounts this inaugural event was quite successful and has the potential to become the best historic race meeting in the USA.

Words & Photos: Gary Horstkorta









- 1. Two classic 1967 911s driven by Ed Matsuishi (81) and Jeff Lewis (14). While Matsuishi placed 7th in the feature race, Lewis did not start 2. Cameron Healy is a well known Porsche collector and one of his favourite cars is this 1970 ex-Targa Florio 908/3. Healy finished 2nd in his race 3. Bruce MacAllister has owned this 917K-016 since 1996 and has raced it regularly. In the feature race on Sunday he finished fourth in his group 4. This 1979 935 with the Momo livery was driven to 5th place by Alan Terpins 5. The 1967 917K-015 is the 1970 Daytona 24 Hours winner and is owned and driven by restorer and collector, Bruce Canepa. He did not run in the feature race
- 6. Take a 911 engine and install it in a 1964 Bobsy SR3 chassis and you have Don Anderson's very clean and fast Bobsy Porsche, a rare combination













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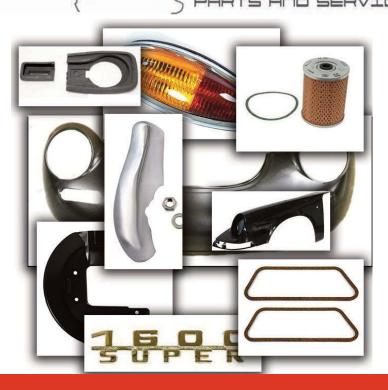
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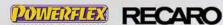














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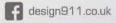
















## **DELWYN MALLETT**

WHAT COULD BE MORE ROMANTIC THAN A
HONEYMOON TRIP TO SPAIN IN A PORSCHE
SPEEDSTER? DELWYN CELEBRATES 50 YEARS
OF MARRIAGE TO THE LONG-SUFFERING CAROL

Many would describe
Delwyn Mallett as a serial
car collector – one with
eclectic tastes at that. His
Porsche treasures include
a pair of 356 Speedsters,
a Le Mans-inspired Pre-A
coupé and a 1973
Carrera RS. Some of
them even work...



nce again the chaos of ephemera that masquerades as the Mallett archive disgorged, for no apparent reason but appropriately on time, a long-lost memory-jogging gem. I was searching for something entirely different – to no avail – when the rather dog-eared photo below appeared from its hiding place. It shows my new wife and me departing in my Speedster for our honeymoon on 12 July 1969 – almost 50-years ago to the day at the time of writing.

We were heading for Estartit on the Costa Brava, in Spain. Before you recoil with horror this was before the massive explosion in tourism and expansion that has spoilt much of that part of the Spanish coast. Estartit was then still a small fishing village with no high-rise apartments, only a few hotels, and although it would be stretching the truth to describe it as idyllic it was still relatively unspoiled with lots of charm.

I had owned the Speedster for only a few months having sold my first Porsche, a 356A Coupé, to fund what then was my 'dream car'. For a short time I owned both cars and as the engine in the Coupé was a Super 75 and that in the Speedster a 'Normal', I swapped motors before the sale. Remember this was long before the fetish for matching numbers reared its irritating head and I've now had four different engine upgrades in the Speedster!

Preparations for the trip consisted of chucking a few tools in the boot and, being devoid of side windows, packing a canvas cover to offer a modicum of security overnight. As an afterthought – and perhaps indicating a lack of trust in my 12-year-old sports car – I threw in a very small tent. Both would save the day, or more accurately the night, during our first 'emergency'.

At the end of day one in France, a pattern began to emerge that has, I'm ashamed to say, persisted to so-called 'wide backs' that when reclined pro

Delwyn and new wife Carol head off on their honeymoon in Del's then recently-purchased RHD Speedster. Little did Carol know what excitement lay ahead on her wedding night...

## "DO NOT THINK EROTIC. THIS WAS SURVIVAL..."

this day. My wife wanted to find a hotel early for our first stop – I wanted to press on. Unfortunately, as Carol had predicted, there proved to be no room at the inns and the light was rapidly beginning to dim – as were my headlamps. Many miles in either direction from a town the Speedster's battery decided to stop supplying energy to the coil and with our last bit of momentum I managed to bump onto the grass verge. For a while the silence was broken only by the odd tick of a cooling engine and faint sobs from Carol.

Not a good start to our honeymoon but the situation was about to get worse. Being late and on a country road there was absolutely no passing traffic to flag down for assistance (where do the French go after sundown?) so there was no

alternative but to bivouac. However, pitching a tent in pitch darkness is no easy matter, made even worse when what appeared to be solid rock beneath a few centimetres of soil sent several tent pegs ricocheting into the darkness. The attempt was abandoned, as was the tent. I broke the news to Carol that now the only alternative was to sleep in the car – news that did not go well as the absence of side curtains left plenty of opportunity for a passing bogeyman to reach in.

But wait! You may recall that I had also packed a canvas cover for the car, the rubber bungee cords of which, with considerable contortions, I managed from the inside to secure on the outside. We were now as snug as bugs in a rug, if not as comfortable. Think Speedster today and you will invariably picture the flimsy bucket seats that virtually every one now has, but many were supplied with the fully reclining standard seats, as fortunately was mine. Indeed, my seats had the so-called 'wide backs' that when reclined provided a reasonably comfortable

sleeping platform. Comfortable, however, we were not.

Without ventilation the interior temperature soon exceeded sauna levels. Having retired fully clothed it now became necessary to jettison our outer layers, shoving them out of the car in the process. (Do not think erotic. This was purely a survival tactic.) After a number of fitful sweaty hours and unable to see watches in the absolute darkness I ventured a tentative peak out by releasing a bungee only to recoil in panic. 'Carol. We have a problem!'

What had hours earlier been a completely deserted road was now sporting a traffic jam stretching out of sight in both directions. The annual lemming-like exodus to holiday destinations in which the French still indulge had commenced. There was no alternative but to leap out seminaked, gather up our discarded clothes and get dressed as rapidly as possible.

To this day there must be hundreds of French citizens who at the anecdotal stage of a dinner party say, 'Have I told

you about the time we saw a British couple beside the road in an old Porsche who had obviously stopped for a bit of hanky-panky? It was a really funny sight.'

With a push the Porsche started and we motored on to several more breakdowns – but they're tales for another day.

In the ensuing half century Carol has had to endure sleepovers, breakdowns and running out of fuel in many, if not all of my automotive indulgences. Abarth, Bentley, BMW, Mercedes and Tatra as well as many further unscheduled Porsche 'delays' have all at some point left us stranded. Remarkably I still have the same Speedster and even more remarkably, and far more importantly, the same wife. Happy 50th Anniversary dear Carol. *CP* 

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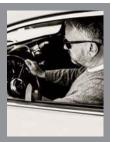




## ROBERT BARRIE

NOT LONG AGO, CLASSIC CAR VALUES ROSE AT AN INCREDIBLE RATE, BUT THOSE DAYS ARE BEHIND US, SAYS ROBERT. WHERE WILL THAT LEAVE US IN THE FUTURE? THE TIMES THEY ARE A-CHANGING...

Robert Barrie is a classic
Porsche enthusiast
through and through. As
well as competing in
historic events with a
variety of early Porsches
and organising track
days, he's also a
purveyor of fine classic
automobiles



do love a bit of research. I recently spent a ridiculous amount of time compiling a list of the first RHD 911Ss. I can't really remember why. I'm not even sure there was a point – just a pedantic need to know. Oddly, I have since met others who have done exactly the same thing. The Porsche Cars GB records suggest 35 such cars came to the UK in the second part of 1966 and the first part of 1967. I should thank Peter Cook, archivist at the Porsche Club, for letting me go through them.

I know of a further 10 cars that went to other RHD markets – it's possible there were a few more – making 45 or so in total. Here are the stories of the very earliest UK cars and some of the others with an

interesting ownership or competition history.

The first UK-delivered RHD 911S was a light ivory motor show and press car delivered to Isleworth early in August 1966 and registered LYY 911D. It was the subject of an *Autocar* road test and, as Delwyn Mallett noted in the last issue, a *Sunday Times* magazine feature complete with colour photography.

Autocar wrote, predictably perhaps, of oversteer. Jackie Stewart, test-driving the car for the newspaper, was unhappy with understeer. You can't please them all. LYY 911D sold at auction a few years back in a poor state, though with many original parts still present. It is currently awaiting restoration in Essex.

The next two cars arrived in September.
LYV 10D was – and is –
Aga Blue. It remains in good driving condition and is regularly seen at Porsche events. LYV 11D was Polo Red. It led a full life and, possibly, a brief

Jeremy Richardson lifts a wheel at Mont Ventoux in 1968. Photo credit: Archives Maurice Louche

## "IT REAPPEARED, REGISTERED AS OLL 8E"

one, as it appears no longer to be with us. It was first supplied to Alan Mann, who apparently disliked it, before it went rallying with Doug Harris and Mike Hayward, who shared it on events, including the Monte Carlo in 1969. I read they lost their passports on the way. I haven't found a third or fourth car in this initial group registered LYV 9D, contrary to what is typically claimed.

A general question in this sort of exercise is what do we mean by the first example of a particular car or model? Is it the first to be ordered? The first to be completed by the factory? The first to be delivered to a dealer? The first to be sold to a customer? Or, alternatively, is it the one with the lowest chassis number? The different questions typically have different answers. That said, LYY 911D ticks a lot of boxes, including having the

lowest chassis number. LYV 11D had a lower chassis number than LYV 10D and was delivered slightly earlier but, as its registration number suggests, it sold slightly later.

NAC 199E, another Polo Red car, has the second lowest chassis number – one lower than LYV 11D – but didn't come to the UK until December and wasn't sold until January. The car is now in Scotland. Meanwhile, another RHD car seems to have been collected directly from the factory in August, and the car with the earliest order number was none of the above!

It wasn't until later that some of the cars were bought and prepped for

competition by the enthusiasts of the time. Dickie Stoop collected a silver car – one of three in that colour – from the factory in April and promptly registered it YOU 4. He raced the car – with wider steel wheels replacing the standard skinny Fuchs – until his untimely death in 1968. The car is now under restoration in Suffolk.

Gordon Durham's
Bahama Yellow car, OLL
2E, was delivered in April
and fitted with a sport kit,
airport gearing and an
LSD, a big fuel tank and
sports seats. The car is
now in Australia.

Rob Mackie collected
Dan Margulies' similarlycoloured car from the
factory in May and drove it
straight to the Targa Florio,
where it competed on
German plates and steel
wheels. It came eleventh
overall and second in
class. There is a great
Maurice Rowe photograph
of it on the event with the
usual Ferrari-related graffiti
in the background. The car
was registered OLL 4E on

its return to the UK, but seems since to have disappeared.

The last UK order – and the highest chassis number – was a Polo Red car collected from the factory in June. It too was quickly put to work. Brian Joscelyne hillclimbed it at Mont Ventoux in the same month. Owner, Karl Richardson, did so at Ollon Villars in August. It reappeared in Jeremy Richardson's hands, and now registered OLL 8E, at Ventoux in 1968. There are fabulous pictures of this car and some of the others – including LVY 11D on the Monte and the Margulies/Mackie car on the Targa – in Maurice Louche's excellent photo archive. For those who like their registration numbers – and who doesn't – OLL 6E and OLL 7E were also 911Ss. The final few cars from the model year came to the UK in August 1967, almost exactly a year after the first. Special cars and special times. *CP* 







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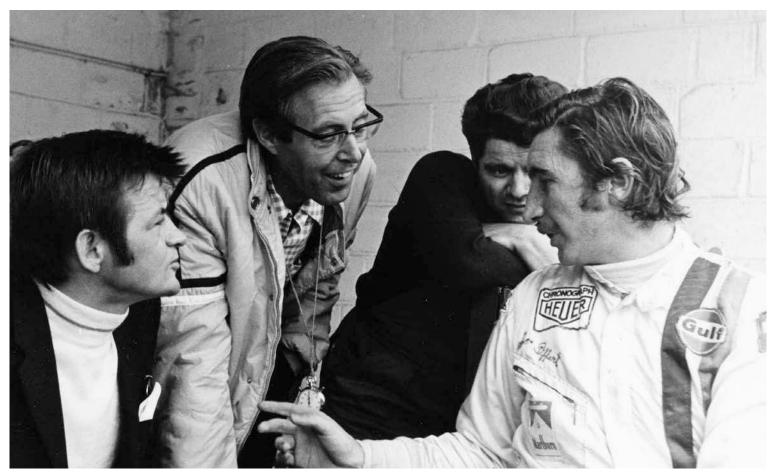
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Words: Kieron Fennelly Photos: Porsche Archiv

# HANS MEZGER

For enthusiasts the most revered figure at Porsche after Ferry himself, Hans Mezger gave his name to the flat-six and was at the heart of the company's motor sport triumphs for almost three decades. The racing car most associated with Porsche is of course the legendary 917, today celebrating its 50th birthday: this was Hans Mezger's greatest achievement





Above: Spa 1970, from left to right are Hans Mezger, Peter Falk, Fritz Spingler and Jo Siffert, who had just won the 1000km event in a Gulf 917 with Brian Redman

Left: 'At home' – Hans Mezger at the famous Porsche 'Werk 1' in Zuffenhausen in 1970 bright schoolboy with a penchant for maths and physics, after his Abitur (bac) he had to work for two years in a foundry before a place was available at his local university, Stuttgart. There his ambition was to study aviation, but of course in the Germany of the early 1950s this was not possible and the young Hans trained to be a mechanical engineer with a view to working in the automotive industry.

This was the time of the *Wirtschaftswunder*, the economic miracle, and mechanical engineers were in demand: Mezger says Opel in Cologne was interested in him and Timken Bearings offered to train him in the US. However, although it was a small company and he had seen no vacant positions, he had become aware of a sports car maker near his home by the name of Porsche: as he told Peter Morgan in 2010:

'When I was taking driving lessons, I used to drive past Werk 1 and I liked the look of the 356 and they were driven so fast that my driving instructor said Porsche drivers did not know how to go slowly! So as soon as I graduated from university I wrote speculatively to Porsche: after a couple of weeks I got a positive reply and I started there in October 1956.'

Mezger began in the

Calculations department under Egon Forstner where his early tasks involved stress calculations on valve gear components, springs and rocker arms. This suited him because he was soon involved with development of the four-cam 'Fuhrmann' engine, then proving difficult to tune because of valve gear wear: the master camshaft for the four-cam was machined by Schleicher in Munich, an expensive process made more so because for each batch of engines Porsche had to supply fresh cam profile data.

Mezger's intuitive understanding of the complexities of camshaft rotation geometry meant Forstner entrusted him to construct a mathematical formula so that Schleicher could standardise its machine settings. Within a few years, these calculations, which took Mezger weeks to complete, would be carried out by computer.

'The formula was very helpful,' he recalls. 'We used it (for the camshaft profiles) on the 804 F1 car, on the 904 and on the eight-cylinder 2.0- and 2.2-litre racers until 1968. It is also the basis of the air-cooled 911 engine.'

Mezger appreciated the way senior people like technical directors Klaus von Rucker or Ferry Porsche himself would spend time in the workshops of Werk 1, and he felt very much at home at Porsche. He was especially impressed by Ferry Porsche: 'I found him a quiet fellow, but it was always very good if you could talk to him: he knew better than anybody what had to be done to make competitive, reliable sportscars and he had a way of getting his staff to follow him. He was an example to everybody.'

"AS SOON AS I GRADUATED, I WROTE TO PORSCHE..."

By 1960, Mezger was already a central figure in engine development at Porsche. His natural curiosity led him to think laterally – looking, for example, at an MV Agusta racing motorcycle because this had the highest power/litre of any engine and exploring such areas as velocity of exhaust gases, the angle of valves and the shape of combustion chambers. This would be vital in the development of the 901 flat-

six and this became urgent in 1963 when the initial six-cylinder design for the forthcoming new model struggled to produce 110bhp when 130bhp was required.

Until then, Mezger's main task had been the grand prix car, but abruptly at the beginning of February 1963, he and others were instructed to cease all work of the eight-cylinder racing engine (which had taken Gurney to two wins and fifth place in the world championship). They were to work on the 901. Mezger told Peter Morgan:

'It was my responsibility to redesign the 901 engine. I did the general layout, the seven-bearing crankshaft, the combustion chambers with larger valves and (unlike the 356) a dry-sump oil system. We wanted a car that would be good



He says a group of six or so engineers was involved, including new Zuffenhausen recruit Ferdinand Piëch: 'He could open doors to make things happen. He was a visionary and he had many good ideas.' He says it was Piëch who wanted the basic design to allow scope for expansion (in ten

years the 1991cc would reach 2993cc), and a design life of at least eight years was envisaged. The unit also had to be reliable. Mezger described how they used chains to drive the camshafts rather than the complex, bevelled gear camshaft drive of the four-cam.

'It was much simpler and less expensive and it took less time to build them. Later I would carry the chain drive over to the 917.

The 911 launched, Mezger's efforts turned towards competition engines and hill climbing. That was Porsche's speciality and it allowed Porsche to experiment: 'We tried out ideas such as pressurised fuel tanks and bervllium disc brakes that we couldn't test on endurance cars.' With its simple rules - two litres maximum capacity and absence of minimum weight limit, the Bergmeisterschaft was made for the light, agile Porsches and it particularly appealed to Piëch: in 1965 he became technical director, bringing immense energy to the racing department.

Seven racing cars, starting with the 906 and culminating

in the 917, would emerge under Piëch's leadership in the next five years. Says Mezger: 'Piëch was much more driven and ambitious than Ferry, he worked long hours and never relaxed, but it was always Ferry who had the best ideas about how the Porsche road car had to be.'

Mezger had been at Zuffenhausen only four years when

he acquired his first Porsche, a nine-year-old Pre-A. Later he bought Piëch's former 901, chassis No.06. 'I recall it was suddenly terrible to drive through Munich traffic (on the way back from Austria). Below 2500 rpm it was horribly noisy. (It was the chain tensioner failing because it had run out of lubricant.) We had been so busy in the early years that we never found a solution.

#### All the Reparaturwerkstatt could do was to replace the tensioner, so in 1968 I was asked to investigate.

"PIËCH WAS MUCH

**MORE DRIVEN AND** 

**AMBITIOUS THAN** 

FERRY..."

'I devised a repair to seal the oil in the tensioner and we thought we would make about 100 pieces to repair customer cars. This worked well, in fact it lasted about 25,000km, but somehow it went into production which we never intended! It was not until the 3.2 Carrera (and the intervention of Peter Schutz) that Zuffenhausen started lubricating the cam chain tensioner from the engine oil supply."

As the 2.0-litre 906 evolved into the 2.2-litre 907, Piëch made known his ambition to win the 1968 Manufacturers'

Above: Hans Mezger, left, with Helmuth Bott and Julius Weber at Zandvoort in 1983





Above right: Hans Mezger with Ferry Porsche in 1986

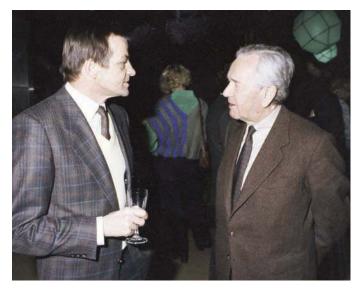
Below: The 901 design team at Zuffenhausen. In front is Ferry Porsche, behind him Hans Tomala, Ferdinand Piëch and Ferdinand Alexander 'Butzi' Porsche. Hans Mezger is on the left side of the right-hand group

World Championship and a flying start was made at Daytona when 907s took the first three places. Later the 3.0-litre engine was ready. Mezger says:

'We did make two experimental eight-cylinder engines with four valves per cylinder, one air-cooled and the other water-cooled. We quickly found air cooling with four valves was not possible – the upper pair of valves stops the cooling air reaching the lower pair. But we abandoned further investigation of this in June 1968 to concentrate on a 12-cylinder motor which gave far more power than an eight.'

This of course was the motive power of the 917, a racing car developed at incredible speed to the point where Porsche could present 25 'finished' cars for FIA inspection in March 1969 and therefore be eligible for Le Mans, the winning of which was Piëch's ultimate goal (see *Return of the King*, page 8). Mezger reflects that it was an immense task to configure and build the cars in such a short time:

'To be asked to build 25 cars just for homologation like that surprised us. Nobody else had been asked to do it and nobody was ever asked to do it again. We were also



surprised that Ferrari, too, was not asked to do this as well."

Mezger's design for the 4.5-litre engine was based almost entirely on his experience building the 901 and subsequent racing engines. As he told Peter Morgan, 'The chassis and engine were an evolution of what we had been doing before: what we learned on the six-cylinder engine we used on the eight-cylinder and again on the twelve (of the 917). This used the same head and valve angles because there was no time to do anything else, and in any case it would probably produce enough power to win Le Mans.'

As well as power, reliability would be crucial and one of his first moves was to design a crankshaft which transmitted its power through a drive from its centre rather than at the end: he knew from experience of the eight-cylinder engines that crankshaft vibration on such a long engine would otherwise cause it to fail. At Le Mans only ten weeks after that presentation to the FIA, the works 917 driven by Attwood and Elford was leading until the 23rd hour when the gearbox bell housing cracked and the clutch failed. They had simply not had time to test it properly, says Mezger.





The following year the now 5.0-litre 917 was unstoppable and when in 1971 it proved so again, the FIA intervened with the 3.0-litre rule to ban it. It was a frustration for Porsche, but Hans Mezger's reputation was made: he wrote a paper for engineering associations and the Institute of Mechanical Engineers was one of several professional groups to honour him. Indeed, even after his retirement in 1993, he remained a popular speaker and addressed among others the *Société Ingénieur Automobile* in Lille.

But in 1972, Mezger was only 41: there was still plenty to do: excluded from Europe, Porsche looked to the American Can-Am series. Here huge engines and 6–700 horsepower were the norm. Piëch had already asked Mezger to investigate a larger 917 engine, but expanding it to 16 cylinders still did not match the power of the fastest Can-Am cars and the extra weight made the 917 more difficult in corners. So Porsche turned to turbocharging. The great challenge was controlling the turbo boost: the sudden surge of power when the turbochargers took effect could throw the car off its trajectory (see *Giving it Boost*, starting page 72).

This problem was eventually resolved by his colleagues, Valentin Schäffer and Helmut Flegl, but Mezger himself

worked to modify cylinder heads which became much hotter on turbo engines with additional oil flow. He also designed a water-cooled, 4.2-litre, 12-cylinder naturally-aspirated 'Indianapolis' engine, 'but we abandoned that project. There was no justification when turbocharging was working so well for us in the Can-Am.' Porsche would win this championship in both 1972 and '73.

The oil crisis caused a refocus. Porsche abandoned top level sports car racing competition, which was also very expensive, and concentrated on making a production turbo 911 as a basis for GT racing. From this came the 934 and 935 series of turbocharged 911s which would dominate Groups 4 and 5, and the 936, its chassis based on the Can-Am 917. This model won at Le Mans in 1977 and 1981, and was the basis for the immensely successful 956/962 sports racers which dominated the 1980s.

In his descriptions of the 1950s and '60s, Mezger talks mostly in the first person, but by the mid-1970s, 'I' has become 'we' and clearly his role had become more that of the director than engineer. He nevertheless remained intensely involved: Porsche's mastery of turbocharging attracted a lot of attention, not the least of which came from

Above: Hans Mezger (in suit) behind the Porsche TAG engine. From left to right are Hans Bischof, Bruno Anklam, Joachim Kelm, Hans Mezger, Dieter Nowack and Peter Schmid. Photo taken in September 1983





Left: Hans Mezger with the TAG turbo engine he designed for McLaren

Far left: In discussion with the late, great Niki Lauda



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Formula 1, especially when Renault entered grand prix racing in 1977 with a turbo car.

When Ron Dennis of McLaren approached Porsche with a view to buying a turbo F1 engine, once agreements had been reached, it was Mezger who managed the relationship. He says despite what he had heard about Dennis, he found it easy to get on with the Briton. The impression was evidently mutual for subsequently Dennis has said 'I had complete faith in Hans Mezger and his technicians because he was such an assured, natural engineer.'

Successful though the relationship was – McLaren won three championships – Mezger believes that 'although we were paid for this, I don't think Porsche earned a lot of money from the project.' He describes a relationship which rather faded away in the end:

'In Porsche things were beginning to change...and it was a disappointment when Dennis decided to change direction (for 1988 McLaren turned to Honda), and I had to reassign the people I had working on the McLaren engine.' Nevertheless Porsche did again enter the F1 hothouse, building a naturally-aspirated V12. Mezger describes this venture as a 'step too far: I don't believe we even had a

customer for it.' Eventally Jackie Oliver's Arrows team took the V12, but Mezger says he never achieved the rapport with the Arrows people he had had with McLaren; then Porsche closed the project down before the V12 was properly developed.

This was a very controversial decision (PR director Manfred Jantke resigned in protest), but given Porsche's difficult financial position in 1991, Mezger, who was becoming disillusioned at Porsche, could understand the logic. His long time colleagues Helmuth Bott, Peter Falk and Valentin Schäffer with whom he had worked since the 1950s had all left. However, when in 1992 the newly appointed Wiedeking announced to senior managers a new water-cooled engine and two new cars, the Boxster and the 911, 'I decided to stay on to look after the young engineers promoted for this project before I retired.'

Mezger's farewell party in 1993 was probably the last occasion which brought together the surviving members of the team which built the 911 and the 917: although Hans Mezger worked tirelessly for Porsche for another two decades, these cars, and especially their flat-six and twelve cylinder engines, are his great legacy. *CP* 

Above: Porsche Type 804 at the Nürburgring in 1962. Jo Bonnier (left, in helmet), Wilhelm Hild and Hans Hönick (both behind the vehicle), right, facing camera. Hans Mezger

Below left: Le Mans 1966; From left to right, Helmuth Bott, Ferdinand Piëch, Huschke von Hanstein, Hans Mezger and Peter Falk

Below right: Rollout of the McLaren F1 car on the test track at Weissach. The vehicle is fitted with the V6 bi-turbo engine developed by Porsche. At the wheel is John Watson, with Hans Mezger on the far right

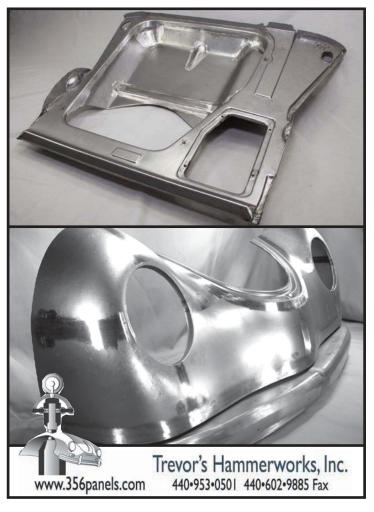






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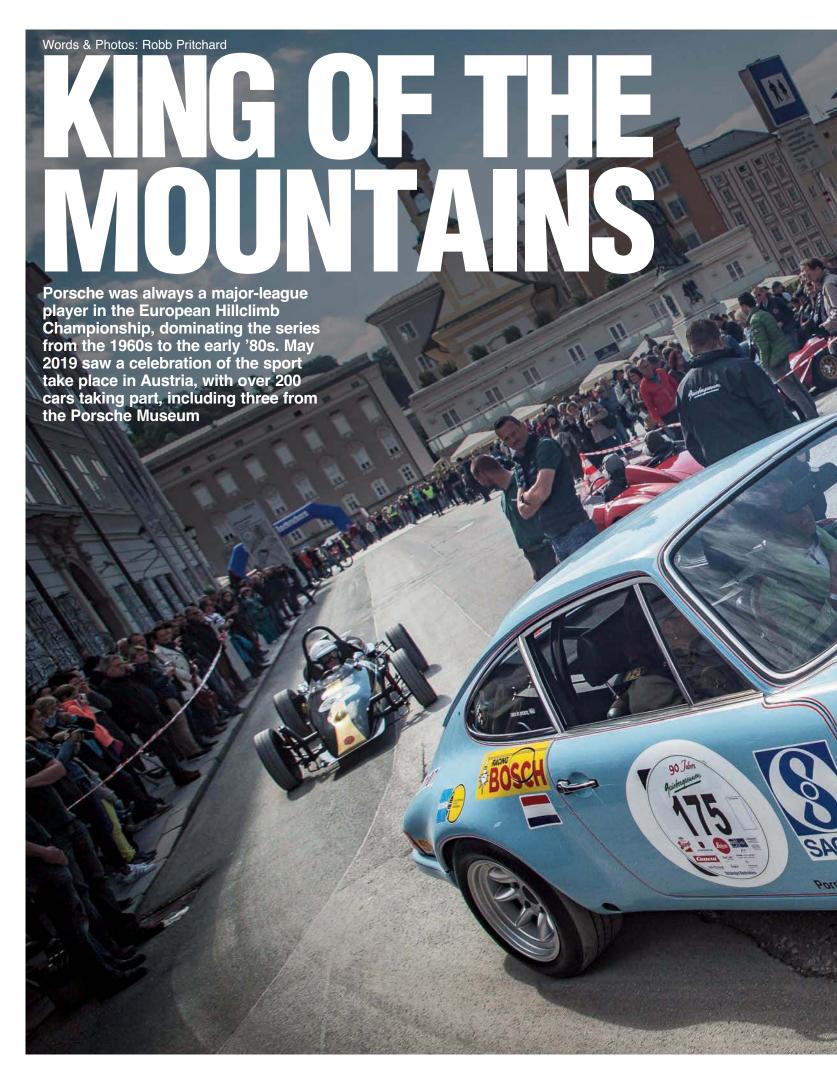




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lists allowed out-and-out prototypes and this created fertile ground for Porsche engineers to push themselves to the technical limits of the day. The 440kg 275bhp 910/8 Bergsypder was driven to the title by Gerhard Mitter in both 1967 and '68.

But although it appeared at only two races in 1968 it is the engineering marvel that is the 909 Bergspyder which marks the zenith of the hillclimb years. Weighing just an incredible 430kg, including fuel and oil, with 275bhp from the 2.0-litre flat-eight it had a power to weight ratio of just 1.4kg per bhp. With an aluminium chassis, beryllium brake components and titanium suspension springs, as well as rear wings that

moved with the suspension, at the time it was one of the most advanced race cars ever seen. To save as much weight as possible it didn't even have a fuel pump, instead, a small tank pressurised to 10 bar was used.

The cutting-edge car never got to see its full potential

though as, at the end of '68, Porsche pulled their resources away from hillclimbs to concentrate on the World Sportscar Championship and the brave new 917. It was only ever seen in two races, where Rolf Stommelen raced it to two podiums. One of those was a 2nd here at Gainsberg, which was the

same race Mitter won Porsche's last championship as a manufacturer team.

In the hands of privateers in the GT and Production classes the championship wins carried on until the '80s, when France's Almeras brothers had three years of domination in their 934 and 935 racers.

#### HARD CHOICE

Actual museum pieces they may be but the 718 RS 60,

the 356 B Abarth GTL and 1972 911 2.5 S/T were, like most of the cars in the 'warehouse' collection, fully road (or track) worthy, and to get a proper understanding of just what they are like from behind the wheel they were all available to be driven at the Gaisberg Classic Hillclimb. But which one?

Above: Over 200 cars of all makes and models took part in the celebration of the old European Hillclimb Championship. The streets of Gaisberg were jammed!

Below left: Carrera 3.0RS fills the square with noise as it blasts past the crowds

Below right: Featherweight (430kg!) 909 Bergspyder was the ultimate hillclimb machine. 2.0-litre flat-eight engine produced 275bhp









Above left: Our man Pritchard enjoyed the opportunity to drive the Gulf blue 911 S/T from the Porsche Museum collection

Above right: The 440kg 275bhp 910/8 Bergsypder was driven to the EHC title by Gerhard Mitter in both 1967 and '68

Below: Eberhard Mahle with his 911 2.0 Coupé at the Eberbach hillclimb in early May 1966 The 1960 718 RS 60 was a reverential old girl and needed someone with the guts to be very heavy with the right foot to get it to run properly, someone like Derek Bell in the Petrolicious video, for example. Then Porsche tasked Abarth, renowned in the 1950s and '60s for making small and lightweight racing cars, to redesign the 356's body for better aero-efficiency. Made especially for the EHC GT class with lightweight aluminium the 356 B Abarth GTL weighed just 778kg and was technically a works car.

The third option, the Gulf blue Ex-Willi Bartels 1972 911 2.5 S/T on the other hand was 'only' a privateer car, and although it was raced by the then current champion he finished runner up in 1972. And so it was a decision between the flat-four and the flat-six. Actually, it wasn't that much of a choice to make!

#### **HISTORY**

In the 1970s, if you were a privateer hillclimb driver with any aspirations at all, it was a 911 you wanted. For the new FIA Group 4 rules that covered GT racing and hillclimb regulations alike, Porsche built a series of 21 lightweight, fuel-injected, wide-wheeled, 270bhp Ss. This particular Gulf

blue, 13th of the 21, chassis #0987, was bought by German hillclimb racer Willi Bartels for the 1972 season so he could defend his GT class title, won the year before with a 2.4 911S. With a season full of podiums and two wins at the end of the year, unfortunately it wasn't enough to stop fellow Porsche racer Anton Fischaber taking the crown.

The car was then shipped over to America where it was run in the 1973 Daytona 24 Hours by Joest Racing. Piloted by Sepp Greger, Kurt Hild and Dieter Schmidt they finished a creditable 9th overall, although some 100 laps behind the winning Brumos RSR. Back in Europe for the 1973 EHC, Bartels won the first three races in this car but then upgraded to a new RS which brought the car's serious competition years to an end half way through the season.

It spent the next four decades passing through a few long-time owners, one of whom gave it a full rebuild by Porsche restoration specialist Marko Linke in the early 2000s. Only rarely seen at the odd retro event over the years, in 2016 it was put up for auction by Sotheby's. Being a matching numbers car as well as having race-winning pedigree, Porsche Classic decided it would be a perfect example of a hillclimb racer to bring back into the fold.





Once settled in the gorgeous Recaro driver's seat, fourpoint harness fastened, the son of the late Gerhard Mitter next to me in the passenger seat, we trundled past the cafés and fountains of Salzberg's historic centre. With the Austrian flag waving us off under the

inflatable Red Bull arch we passed throngs of people lining the street.

I have raced a few times in big events and so know the thrill of performing in front of an appreciative audience, or knowing that you are on a live feed with your friends watching. At the wheel of one of the Porsche collection's cars there was also the added element of representing Porsche as one of their drivers.

So as well be being imbued with the absolute privilege of being allowed behind the wheel of such a car in such a place, I also felt a distinct need to show the car off as best I could. Not with outright speed of course, as the demonstration track was lined with spectators, but the sound of that engine...

Ahead was former EHC champion and 917 works driver Rudi Lins in the spectacular low-bodied 909 and the sound of the flat-eight must have been quite impressive. The 356 Abarth in front was fitted with an ear-splitting Sebring

exhaust...but the sound of a tuned flat-six running a competition exhaust is something very special indeed. Especially when it's your right foot creating it. I could hear it reverberating off the Hapsburg era-buildings.

Just before the first chicane I missed third gear as it was a lot further over than I thought (it was my first time driving a left-hand drive 911 of such vintage!) and the others

disappeared around the corner. Back in second, foot hard down, the semi slicks approaching the limit of their adhesion on the cold and damp Tarmac, revs peaking as we rode the bumps in the road, the sensation was one of the most glorious I've ever felt behind the wheel. Three laps of the 2.5km circuit is an experience I certainly won't soon forget.

Above: Race Trento Bondone, Wolfgang Seidel in Porsche 718 RSK, 1959

Below left: Gerhard Mitter in the Porsche Ollon Villars Coupé in the 1966 Trento Bondone event. It ran Lotus suspension and wheels

Below right: Porsche Museum's trio of cars







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#### 909

Undoubted star car of the display, though, was the 909 Bergspyder. Half a century after last racing at Gaisberg it was the affable and always smiling Rudi Lins at the wheel, although with a career that began fixing up battered 356s to race in hillclimbs and culminating as a works driver that included a third place at Le Mans, there is nothing you can do behind the wheel that could surpass that, although getting to play with the one hillclimb car he never got to drive in period was pretty high on the list.

After retiring in 1971 he has only driven a handful of demonstration events over the past 50 years, and climbing out with a beaming smile he asked, 'Could you hear my engine? Wow! It was great! I never imagined I could drive a car like this again. But of course it was just a demonstration run, I wasn't pushing, so can't give a real comparison. These types of cars are special when they are right at their limit, that's when the extra kilos saved the tenths of seconds.'

Also on display, albeit static, was Mitter's 910/8 '68 and '69 EHC-winning car. Wheeled away into the Zuffenhausen warehouse after its last race and left untouched for fifty years

it was seen for the first time since. But as well as special cars, Porsche also invited some special people. The venerable Eberhard Mahle, the 86-year-old winner of the 1966 GT class was one of the first people to win a championship in a 911...despite Porsche's racing manager Huschke von Hanstein telling him that he had no chance against the more powerful Ferrari 275 GTBs and Shelbys.

Gerhard Mitter was killed in 1969 testing an F2 BW at the Nürburgring, but also honoured was his son Gerhard Mitter Jnr who got to see his father's car, exactly as he left it, in the sun again. Hearing their stories was honestly as much of a privilege as driving the 911.

Although it's not exactly that old, or air-cooled, the 981 Bergsypder that they chose this moment to show to the world is an instant classic. For the first 20 years of their racing existence Porsches were generally much smaller than their rivals, and so power-to-weight was the maxim the engineers aimed for. The 910/8 and 909 Bergspyders were the absolute epitome of this, and half a century later the 981 is once again a showcase of exactly what Porsche engineers are capable of. *CP* 

Above: An amazing backdrop as Robb Pritchard and Gerhard Mitter Jr head a 904 out of town

Below left: Known as the 'Thirteen-inch' car on account of its small Lotus front wheels, the Ollon-Villars coupé was a seriously slippery hillclimb contender

Below right: Heini Walter (running in the sports car 1600-2000cc class) in the Porsche 718 W-RS Spyder







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# INTERCITY EXPRESS

Is it the Volkswagen 60K10 or Porsche T64? The media fever and PR hype surrounding the imminent sale of the Berlin-Rome car has described it variously as the 'first Porsche', 'the oldest surviving Porsche', or 'the missing link', but are any of these descriptions actually true?

Words: Delwyn Mallett Photos: RM Auctions, Delwyn Mallett and Porsche Archiv



ithout in any way wanting to diminish its importance, the car you see here – the surviving Berlin-Rome race car, is what it is: a special-bodied Volkswagen, paid for by the German State, built entirely on a Volkswagen chassis and, although it could be accurately described as a 'link' in the evolution of the 356, it has never been missing. What is true is that in the eyes of many it is the most important Porsche-designed car to come on the market this millennium.

During the First World War, Italy fought alongside France and Britain against Germany, but post-war frustration at the lack of what they considered a fair share of the reparations imposed on the defeated enemy and the country's dire financial circumstances led to Italy in 1922 becoming Europe's first Fascist dictatorship, ruled by Benito Mussolini,

On 1st November 1936, Mussolini gave a speech declaring that Italy now shared the political aims of his admirer to the north and Europe's most recent dictator, Adolf Hitler. In it he stated that, 'This Berlin-Rome protocol is not a barrier, it is rather an axis around which all European states animated by a desire for peace may collaborate on troubles.' The former enemies were now officially declared friends and international press reports soon began to paraphrase this new alignment as a 'Rome-Berlin-Axis'. Without this alliance it is unlikely that Porsche's sensational Volkswagen racer

would have left the drawing board.

Incidentally, the following year Mussolini embarked on a heavily publicised and symbolic rail journey from Rome to the German capital, where Hitler entertained him like a visiting Roman emperor.

Following the announcement of the new alignment, SS Major Adolf Hühnlein, head of the NSKK (National Socialist Motor Corps) the organising body for all German motor sport activity, in June 1937 announced a propaganda spectacular – a road race between the Axis capitals.

The race would be a taxing 1300km high-speed top-gear blast from the German capital down the new autobahn to Munich, a traverse of Austria via the Brenner Pass into Italy and another flat-out dash down Mussolini's autostrada to Rome. With Mercedes and Auto Union blitzing the opposition on the Grand Prix circuits,it was hoped that the race would be another opportunity to demonstrate Germany's technological superiority.

Originally planned for 1938, the race was postponed

Originally planned for 1938, the race was postponed several times before eventually being rescheduled for September 1939, which, as it happened, coincided with the date that the much-anticipated Volkswagen was due to enter full production. It was suddenly all systems go for a publicity-building racing version of the VW.

Porsche had met Hitler in May 1933 shortly after he was declared Chancellor of Germany, when he persuaded the





Fuhrer to split the 500,000 Reichsmarks subsidy that the state had offered Mercedes to build a Grand Prix winner with his own Auto-Union Grand Prix design.

Soon after, and angered by the lack of enthusiasm from the German auto industry for his own pet project, Hitler tasked the Professor with turning his idea for a 'people's car' into steel at the State's expense. In the Porsche bureau's ledger it was assigned job number 60.

As so often with his projects, and with an eye on eventually building his own car from VW components, Porsche also had his team draw up plans for a sports version, and it was allocated the job number T64. However, in 1937 the whole Volkswagen project, car and new factory, came under the overall control of the Deutsche Arbeitsfront (DAF), a wing of the Nazi Party, which had no time

for a sports car and vetoed the idea. Plus, much to the Professor's dismay, his beloved Volkswagen was for propaganda reasons to be renamed the KdF-Wagen, for Kraft durch Freude – Strength through Joy Car – KdF being the massive state-run leisure organisation.

Disappointed but undaunted, Porsche commissioned a selffunded in-house project for a 'sportswagen'. Given work number T114 and known by staff as the F-Wagen – for Ferdinand – the dramatic design featured a mid-mounted water-cooled 1500cc V10 engine in a super streamlined two-seater body. (A centresteered three abreast version was also on the drawing board.) Yet another parallel project was number T116, a sporting

development of the VW theme, actually commissioned by Volkswagenwerk. Neither project progressed beyond the drawing board but a wind tunnel model of the T114 was made that would soon prove significant.

With a racing version of the KdF now officially sanctioned by the DAF and the pressure on, the Porsche team – Karl Rabe, Erwin Komenda, Franz Xaver Reimspeiss, Karl Fröhlich and

aerodynamicist and mathematical wizard Josef Mickl (most of whom would go on to work on the 356 and other Porsches up until the 1960s) – rapidly reappraised their various sports car designs and amalgamated them into the dormant T64 project. For obvious reasons the DAF stipulated that the racing KdF be

Above: Increased compression ratio, bigger valves and twin carburettors resulted in lifting power from 23.5bhp to 32bhp at 3500rpm. Later, new pistons and barrels increased the capacity from 985cc to 1131cc, giving 40bhp

Below, left and right: Delwyn Mallett was at the Nürburgring in 1981 to capture the 60K10 in action. Matthé had retired from racing in 1958, but brought the car out several years later to attend a limited number of events

### "WITHIN PORSCHE, IT IS GENERALLY REFERRED TO AS THE T64..."









Above left: It's a tight squeeze accommodating two people in such a narrow cockpit, so passenger seat is set back to allow the driver some room

Above right: It was a tight fit, too, installing the speciallytuned twin-carburettor engine

Below: KdF steering wheel, pedals and instrument pod hint at the car's origins. Note the fabric-covered doors to give extra elbow room – and to save weight identified as such and as a consequence it was also allocated a Type 60 job number. As the tenth variant of the VW body it was designated the VW-60 K 10- where K stood for Karroserie. Within Porsche however it was generally referred to as 'the T64'.

By 1938 the original 12 Porsche disciples had grown to nearly 200 and had recently moved to a purpose built factory in the Zuffenhausen suburb of Stuttgart, where their immediate task was to build a series of 44 pre-production Volkswagens (or rather, KdFs) for final testing. Reutter, the long established and well-respected coachbuilder, were given responsibility for constructing the bodies, which were all given VW38 chassis numbers. Three, 38/41, 42 and 43 with matching engines, were selected for the racers, and a fourth engine, 38/46, was set aside as a spare. (In 1950 Reutter would build the first steel 356 bodies after the Porsche personnel returned from their wartime relocation to Gmünd).

Unlike the Volkswagen, whose body was bolted to a simple pressed steel floorpan attached to a central spine, the lightweight aluminium K10 bodies were constructed along the lines of a contemporary aircraft fuselage. The extravagantly curvaceous outer skin, as smooth as a jelly mould, swells outwards from the narrow cockpit down to sill level where it continues under the car in a completely flat under surface. The floor is in fact a deep sandwich with the outer separated from the inner by a trellis of triangulated perforated spars radiating

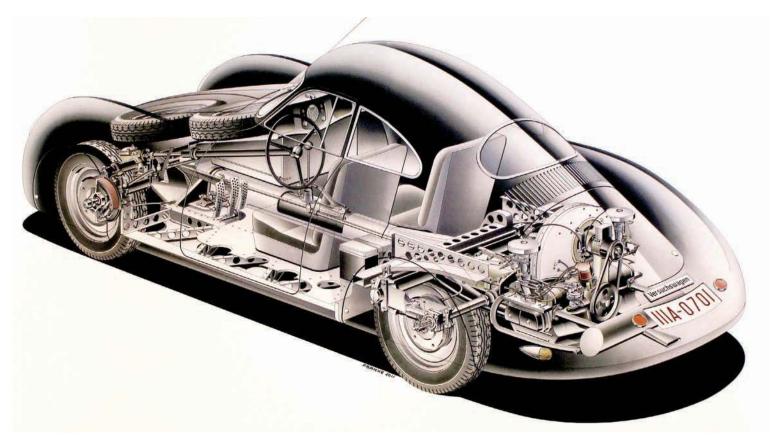
from a central tunnel that sits over the VW backbone chassis. The body is in fact a completely independent, self-supporting shell of considerable strength.

In plan the shape adhered to the principles of Hungarian pioneer vehicle aerodynamicist Paul Jaray, being two tapered aerofoils superimposed on each other, with the width of the cockpit so dramatically cut to reduce frontal area that it is hard to imagine there is room for two within.

To achieve shoulder room, the passenger seat is staggered a foot to the rear of the driver's. This also creates space ahead of the passenger's knees for the intrusion of a 60-litre (13.2 gallon) long-range fuel tank. To create more elbowroom the deeply curved doors are lined simply with fabric. Having driven the Prototyp Museum's fabulous recreation of the 2nd car (*Classic Porsche* issue #6) I can vouch that the proximity of driver and passenger gives new meaning to the term 'close-coupled'.

Through the windscreen the steeply sloping front bonnet plunges from sight between the tops of the swollen front wings, a feature that has endured through rear-engined Porsches to this day. Under that bonnet, with the prospect of 800 miles of flat-out racing, two spare wheels lie flat in tandem, and not much else, the battery being located behind the driver. At the rear the engine cover is side-hinged and sits beneath a swash of vertical air inlet slots as featured on the production KdF.





"THE FIRST

**BERLIN-ROME CAR** 

**WAS FINISHED IN** 

**AUGUST 1939**"

Inexplicably, given the brief to look like a KdF, the curved rear window is not the famous 'pretzel' that characterised Volkswagens up until 1952 and which also featured on the T114 and T116 models! A centrally-mounted KdF speedometer is calibrated to 160kph but there's no rev counter – one presumes that in top gear you would simply press the pedal to the metal and let the engine rev until it ran out

of breath. Unlike the proposed T114, the 60K10 wheels are fully enclosed rear and front.

While the Reutter artisans were busy the Porsche technicians set to work upping the horsepower of the engines. Increased compression ratio, bigger valves and twin carburettors resulted in lifting power from 23.5bhp to 32bhp at 3500rpm, at which a new higher rear axle ratio was calculated to give the tiny projectile a theoretical top speed of

94.5 mph (152kph) – 30 mph more than the standard car. The light alloy engine was lightened further by reproducing many of the ancillaries, such as the fan housing and valve covers, in lightweight alloys. Later, new pistons and barrels increased the capacity from the KdF's 985cc to 1131cc, giving 40bhp.

The first Berlin-Rome car was finished on 19th August 1939,

only a few weeks before the start date of the race. However, in a fateful move, Hitler decided to send his troops storming into Poland rather than his cars dashing south to Italy.

Presumably optimistic, as most Germans then were, that the war would be a short affair, Ferry Porsche pushed ahead to finish the other two cars. The second was finished in December

1939 and the third in June 1940 – as British and French troops were being pushed into the Channel at Dunkirk and Göring's Luftwaffe was massing for its assault on Britain.

With the nation now on a war footing the K10s were racers with nowhere to race. (Curiously they were not entered in the last major competition of the era, Italy's Mille Miglia, held in April 1940 and won by a special-bodied

aerodynamic BMW 328 coupe.) It would be another decade before a K10 turned a wheel in anger.

The first K10 was presented to Volkswagenwerk board member Bodo Lafferentz who promptly damaged it in an accident and returned it to the Porsche works. Lafferentz never repossessed the car, perhaps the unusual handling of a rear-

Above: 'Ghost' illustration gives an idea of the complexity of the 60K10's construction. Light weight and good aerodynamics meant the 40bhp engine could push the car to well over 90mph

Below left: During the restoration, a significant amount of the original floor structure was replaced, along with the early 'backbone' chassis. It's easy to see how Porsche followed aircraft principles when creating the 60K10

Below right: While the car initially ran five-lug KdF wheels, the post-war brake upgrade saw it fitted with fourlug rims, possibly from a Fiat









Above left: Ferry Porsche upgraded the brakes sometime in the immediate post-war period. During the 1990s rebuild, the Fiat braking system was replaced with VW components...

Above right: Original KdF transmission has also been replaced, but fortunately it has been retained

Below: 26th June 1950 and Otto Matthé pushes the slippery coupé hard as he tackles the Grossglockner hillclimb. He won the class for 1100cc cars engined car was a bit too much of a novelty for him, but at some point, for reasons still unexplained, the chassis found its way under the body of car number three. The other two Berlin-Rome coupés remained with Porsche throughout the war and were used as experimental test beds, and by both father and son as high-speed transport.

Towards the end of the war, most of the Porsche personnel were relocated to the remote Austrian village of Gmünd to avoid the intense bombing of Stuttgart. At the capitulation the Porsche clan gathered at their family estate, 90 miles to the north in Zell am See, to await their fate, hoping it would be at the hands of the Americans rather than the Russians.

The two remaining K10s accompanied the Porsches, with one of them stored at a local gliding school and the other at the Porsche villa. Having survived the war, car two failed to survive the peace. Discovered by American troops it was used for joyriding around the airstrip – made easier by hacking off the roof! The engine finally seized and Ferry Porsche in his autobiography recalled the remains ending up on 'a dung heap'. It would take another 70-odd-years to discover that the mechanical components of the car were actually salvaged and passed to Otto Mathé when he bought car number three and eventually to Hamburg's Prototyp Museum where they were reincarnated in a new body.

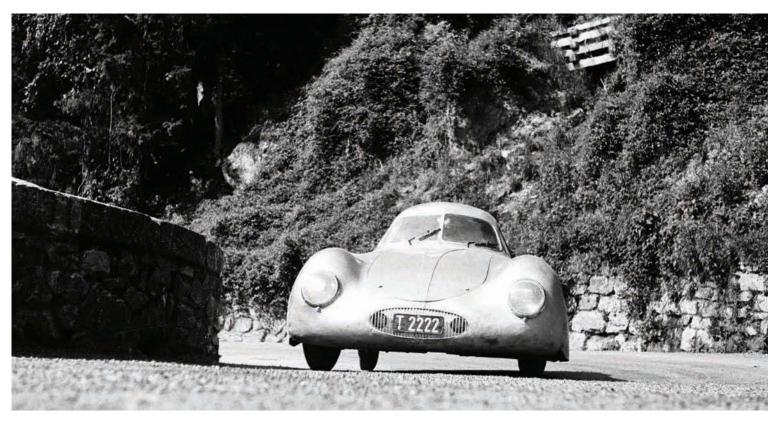
Ferry Porsche continued to use car three, now converted to hydraulic brakes, and in 1947 it was finally driven to Italy – not to

Rome but to Batista 'Pinin' Farina's Carrozzeria in Turin, for a refurb. It is presumed that this was where the nose was modified with the larger oval horn grille.

The Porsche 356 was born in Gmünd in 1948 as non-identical twins. Chassis 356-001 emerged first, a mid-engined tubular space-framed roadster. The Porsche drawings are titled 'VW Two Seater Sports Car' but by the time it came to be registered for the road it carried the now famous Porsche letters on its nose and was registered as such. Chassis 356-002, completed shortly after 001, was a coupé and quite clearly an evolution of the 60K10 but with considerably more interior space. It retained the rear-engine location and VW suspension but dispensed with the VW backbone frame, replaced by a built-up box chassis.

In July, Ferry took the roadster and the 60K10, now also sporting the Porsche name on its prow, for a publicity-building debut at the Rund um den Hofgarten, a street race-cum-parade in Innsbruck, home town of racer Otto Mathé. Competing in the same event, Mathé was immediately smitten by the Berlin-Rome car. A year later it was his.

Mathé was born in Zillertal in the Austrian Tyrol in 1907 but grew up in Innsbruck. He started racing motorbikes at the age of 16 but a bad crash in 1934 badly damaged and paralysed his right arm. The handicap did not, however, stop him racing and a condition of the 60K10 sale was that Porsche should convert it to right-hand drive so that he could change gear with his left





hand – while steadying the steering wheel with his chest. On 11th July 1949 the 60K10 was registered in Mathé's name, receiving the now famous Tyrol number, T2222. (The number was later transferred to one of Mathé's Gmünd coupés, which is now in the Jerry Seinfeld collection.)

Mathé raced and hillclimbed the K10 until well into the 1950s and photographs of his exploits reveal that its beautifully contoured nose was quite severely put out of joint on several occasions. Although judging exactly where those extravagantly curved wings finished and the landscape started presented a challenge, he does seem to have avoided leaving the road backwards, the fate of so many early 356 enthusiasts.

Mathé retired the K10 in 1958 but after sprucing it up with a fresh coat of paint he made several appearances with it decades later at classic events, racing at the Nürburgring in 1981 and even travelling to California to appear at a Porsche Parade at Laguna Seca in 1982.

Mathé died in 1995 and the T64 and his two Gmünd-built 356s eventually found new owners, with the Berlin-Rome car passing to fellow Austrian, Porsche connoisseur, and co-author of the definitive work on the 911 RS, Dr Thomas Gruber.

In 1998 Gruber placed the car in the hands of Porsche expert and restorer Michael Barbach, based in Kottingbrunn, Austria, for conversion back to left-hand drive and a structural restoration but carefully retaining the patina accrued over the years. Photos of the car under restoration suggest that the chassis has been updated with that from a post-war VW.

After Gruber's stewardship the 60K10 passed into the collection of German billionaire businessman, philanthropist and art collector Stefan Schorghuber, who died tragically young in 2008 at the age of 47.

At dinner with Ferry Porsche in the early 1980s I expressed surprise that they had not persuaded Otto Mathé to relinquish the Berlin-Rome car and return it to their then tiny museum. Ferry said that it would eventually return as Mathé had 'promised' it to them. Somehow in the following years the Mathé Porsche relationship changed and when Mathé died Porsche failed to secure it.

If there is any one of the many vehicles designed by the Professor and Ferry that should rightfully return to the ownership of Porsche this is surely it. One can only hope that they may be bidding, and that their coffers are deep enough... *CP* 

Above: The car underwent several rebuilds and revisions while in Matthé's tenure. Clearly it was destined to head to the bodyshop once again following this altercation with a solid object

Below left: Bardahl Oils used Matthé's racing successes in the K10 as a springboard to promote their range of oils. This advert appeared in Holiday magazine in 1955

Below right: Otto Matthé with the famous car at the Nürburgring in 1981. Alongside is Porsche No1





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## THE CULT OF KÜHLT

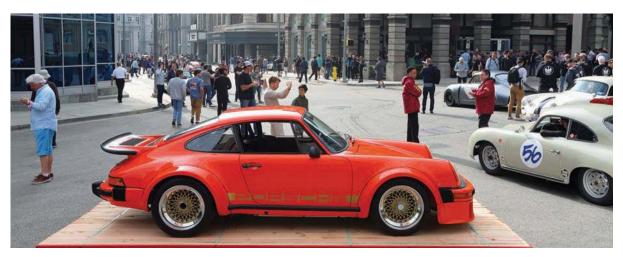
Luftgekühlt has arguably become the Porsche scene's favourite annual get-together in the United States. Not without reason... It brings together some truly amazing pieces of air-cooled machinery, displayed in cleverly picked venues, always different from one year to another. The 2019 show had everybody talking, being held at Hollywood Studios!

Words & photos: Stephan Szantai

certain sense of mystery surrounds Luftgekühlt. For a start, the folks behind the Californian one-day meet – which name translates into 'aircooled' – purposely leave doubts about the venues of choice. Would you believe nobody knew about this year's setting even five weeks before the event date?

The same organisers also show little interest in heavily promoting their get-together, as they aim at gathering the hardcore Porsche aficionados. And if you're one of them, you know it's happening... Besides, the fantastic sites picked by the Luft team can only welcome a limited number of both participants and visitors, hence the lack of advertising serves de-facto as 'crowd control'.

To illustrate the subject, we should mention that the 5000 online spectator tickets sold in no time, while promoters faced the daunting task of choosing between hundreds of aircooled Porsches – their owners registered online as well.



Left: Canepa unveiled its freshly-done 934, aka RSR Turbo, one of 31 built – what a car! This photo gives you a good impression of the stage set environment for the show





Far left: Back in 1967, a BP-sponsored 911 R broke several long-distance records at Monza. This is the very car

Left: Barbour, Stommelen and (Paul) Newman finished second overall at Le Mans in 1979 in this 935

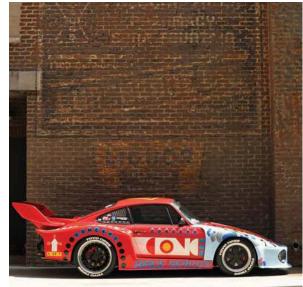


Left: Building housed a handful of famous race cars, such as this duo of 917s, dated '69 and '73 Right: Each of the five 935s selected had a special place to exhibit within the site

Far right: CPR (see Classic Porsche #52) showed this beautiful 906, which proved to be a true crowd pleaser

Far right: From the Nürburgring to Brands Hatch, the Gulf 917K No.9 proved highly competitive in 1969

Below: Among the few historical race cars from Canepa's stable, Bruce's own IMSA Camel GT 935







Far right: An IMSA-spec'd 962 in a western town: a sight only seen at Luftgekühlt 6!



Right: Rally racing entries were appropriately parked in the unpaved Hispanic village







Only about 360 of them made the cut, resulting in an impressive selection of vehicles on show.

Several local players of the Porsche scene have been instrumental in putting Luftgekühlt on the map. You might know Patrick Long as a Le Mans 24-hour race class winner he also happens to be the only American hired as a racing driver by the factory. Howie Idelson is another key individual in the Luft saga, though less of a Porsche household name. But as a successful designer and creative director, he's been essential in the event's aesthetics.

The Southern Californian duo teamed up with other enthusiasts, such as TV commercial director Jeff Zwart, who proved crucial in getting the affair to run smoothly. Jeff, a renowned Pikes Peak winner, blames his father for his keen interest in the German brand; indeed, dad purchased one of the elusive 1964 901s in '67! The factory built less than 100 of them before changing the model's designation to 911.

Five years ago, you can bet none of these protagonists envisioned Luftgekühlt turning into one of the most revered Porsche gatherings in the world. The first get-together (2014) drew a dozen vehicles in the small parking lot of Deus Ex Machina, a coffee shop that doubles as a motorcycle store in Venice Beach, California. Slowly the annual meet took on momentum, each invading different sites, with some recent iterations taking place in a warehouse district near the port of San Pedro, followed by a lumberyard, in 2017 and 2018 respectively.





But the Luft crew truly dropped a bomb when they announced the choice of venue for 2019: the backlot of Hollywood's Universal Studios, a mythical setting normally closed to visitors on foot, being reserved for filming. Pulling it off certainly wasn't easy, as it called for extensive logistics, from fencing to catering, not forgetting the shuttle buses carrying thousands of guests.

Once dropped off, they experienced a show like none before. The backlot's main stretch, New York Street, welcomed a limited number of rare and/or historically significant vehicles, all cleverly parked. The nearby square used in the Back to the Future movie was another crowd favourite, with the city hall at one end, and a vintage gas station at the other. A different part of the venue with an old Mexican village atmosphere showed mostly 911s involved

in rallies and off-road adventures. The adjacent area, used for western movies and TV series, mixed a variety of 356s and early 911s, plus a handful of track cars (906, 962) for good measure.

Speaking of circuit racers, one building housed a few legendary beasts: Can-Am '69 917 P/A (the two letters standing for sponsors Porsche and Audi), Nürburgring- and Hockenheim-winning '72 917/10, '73 917/30 etc. Walking through the streets and alleys divulged no less than five 935s, including the '79 Le Mans class winner campaigned by Barbour, Stommelen and Paul Newman, not forgetting Bruce Canepa's well-used IMSA Camel GT '79 model. Thumbs up to Bruce who brought several famous Porsches from his stable, such as a recently completed 934 (aka Turbo RSR), a highly-tuned 959, plus a '69 Gulf 917K.

Above left: Emory Motorsports built this 356B Outlaw for artist John Oates of Hall & Oates fame

Above: Participants lined up on New York Street, ready to be directed by the crew



Left: Check out these colours... What a terrific way to celebrate the 50th Anniversary of the 914!

Below left: Brumos was part of the 914 believers back in the day, entering this 914/6GT in IMSA competition

Below: Rod Emory's latest project is this insane '60 356 RSR with twin-turbo flat-four





Right: The team of Emory brought a handful of 356s and the company's 911 K project

Far right: 'Monster' wall looked great behind a sea of Porsches, in this instance mainly 914s





Right: The Outlaw trend is here to stay – got to love this neatly executed example. Check out the aluminium long-range tank



Right: Stored in a container, this dusty pre-'57 coupe came out of a 34-year nap last April. Who's going to be brave enough to give it a wash?

Far right: Recognise the City Hall? It was used in the Back to the Future movie!







Right: Old Porsches found a spot in every single nook and cranny of the mind-boggling venue. How is the Luftgekühlt crew going to top this?





Far left: The highly-tuned 959 developed by Canepa could be considered the ultimate version of the model

Left: For a day, the local gas station was converted into an 'air-cooled-only' facility



Fans of race cars enjoyed more historical survivors, in the shape of the 1967 911 R which broke various FIA long-distance records in Monza. Rod Emory of Emory Motorsports, a shop located just a few miles away, unveiled his latest project as well: the 356 RSR, a coupe running a twin-turbo flat-four engine. Insane! He and his dad Gary lined up a handful of other Emory creations inspired by the Outlaw trend they created, including a 356B for artist John Oates of Hall & Oates fame.

914 fans were treated to a killer display of models, too, as part of its 50th Anniversary. It combined race survivors (which competed in IMSA, the Rallye Monte Carlo, etc) with a selection of cars restored to the highest level. Among the





most unusual: a six-cylinder-powered orange coupé morphed into a pickup truck, its bed carrying tools and safety equipment. Its concept revolved around the idea of mimicking a support vehicle that could have helped at the Nürburgring during the 1970s.

More surprises awaited the crowd, such as a pre-1957 356A coupé that came out of a long slumber last April, having been last driven in '79 and locked in a container in '85.

Walking through the studios' streets and alleys surrounded by 'fake' buildings was an experience no visitor will forget, with the whole air-cooled gamut on display, from early '50s 356s to the last of the breed in 1998. It was simply glorious. *CP* 

Far left: New Mexico? Nope, Hollywood, California with a handsome Outlaw on Minilites

Left: Custom 914 was inspired by the support vehicles used at tracks such as the Nürburgring in the '70s

Below left: Dozens of vehicles parked in front of a 'fake' wall depicting a vintage building

Below: The show's aesthetics were second to none – note matching colours on building and 911

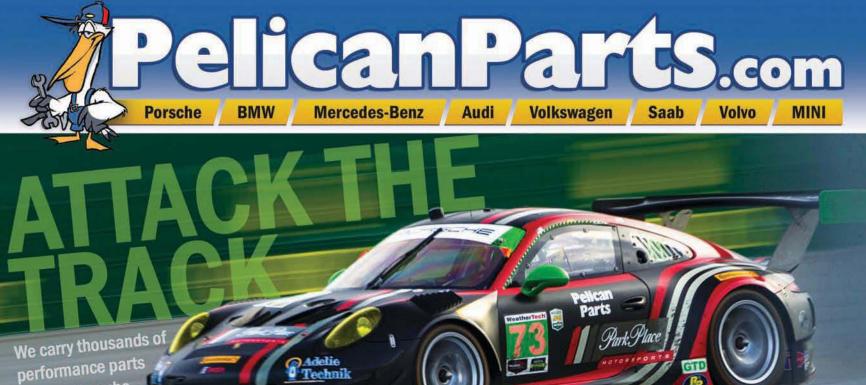
Bottom left: Herb Wysard cruised in in his well-known Glöckler Special, seen in Classic Porsche #57

Bottom right: Jason Lightner's functioning 911 'snowmobile' was one of Luft's most unusual entries!



















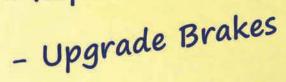
























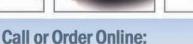












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# RSR, REINAGINED

Porsche's Martini Racing era might have inspired countless homages, but the work behind SV Automotive's 400hp RSR is anything other than skin-deep...

Words: Alex Grant Photos: Andy Tipping



n a race career spanning more than 50 years, generations of 911 have worn some of the most memorable liveries in motorsport, but none are quite as recognisable as the red, blue, navy and white of Martini Racing. Synonymous with Porsche's proliferation in 1970s endurance

championships, this was the war paint of a new era.
Changing regulations had driven a shift in focus from prototypes into the GT classes, and homologation rules would spawn a new generation of 911s – the high-performance precursors to the supercar it is today.

So the 911 would have been a very different machine when, in 1973, Gijs van Lennep and Herbert Müller took their Martini-branded 3.0 RSR to victory at what would become the last ever World Championship race at Targa Florio. Their number 8 car — an interpretation of which appears in the Porsche Museum in Stuttgart — was a big part of the final fling for naturally-aspirated works 911s before the turbocharged fury of the 934 and 935. But the resulting swell in power for their roadgoing counterparts means modern homages to the RSR can be just as potent as the real thing.

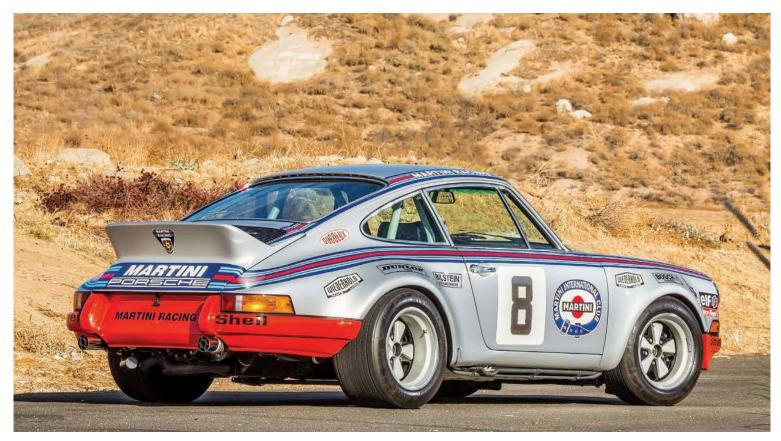
'The concept was to build something as close to the museum RSR as possible, but with the advantage of modern

technology,' explains Tim Kretzschmar, pointing the Martiniliveried nose of his 911 at a near-deserted stretch of Southern California's canyon roads and spooling the turbo into life. 'It's extremely accurate visually, but with the suspension and drivetrain parts Porsche might have used if they had them on the shelf at the time.'

Like most builds of this calibre, it's been a convoluted process to get it where it is today. Serial Porsche owner Tim had been directed to SV Automotive through a friend, having hinted that he wanted a vintage model to replace his 996 Cup and 997 RS. But it wasn't the cars for sale on the Ontario forecourt that would leave the biggest impression. The workshop takes on everything from servicing work and restorations to one-off custom builds, but owner Simo Veharanta had been struggling to get the time to bring his own project to life. Tim fell for the concept straight away.

'Simo was planning to build this car for his own personal use, and he had no intention of selling,' he explains. 'But I was so impressed with his work, and the attention to detail with this car and others he was working on that I bugged him for months to let me get involved. Eventually I won him over, and we collaborated on the rest of the build. It took another





three years, almost to the day, to finish.'

The foundations were solid. Simo had the contacts to source exactly the donor shell he wanted – a Euro-spec '78 SC with manual windows and no sunroof, ideal for a motorsport-themed build, and also free from rust and accident damage.

Tim stepped into a project which was already underway, taking on a soda-blasted and media-blasted bare metal 911 body and a growing stockpile of parts to streamline its eventual assembly.

That it would take another three years to see the road speaks volumes for the meticulous eye for factory-correctness worked into what is primarily a custom build. The body is still 100 per cent metal, restored and upgraded as it

would have been at Weissach, regardless of the associated cost or time it took. Its front end is backdated to '73 spec using a full set of genuine parts, painstakingly seam-sealed and coated with rock guard underneath to reproduce the original finish. Simo even went to the effort of flying an artisan Finnish

restorer to California to butt weld, hammer-finish and lead-fill the flares to the body – the same methods used by the Porsche factory until 1985. Search all you want for half measures, even a bare-metal respray won't uncover them.

While the chassis offered opportunities for shortcuts, none

were taken. RSR-style rear shock tower gussets add strength for the coil-over conversion, while a 930 Turbo donated its front and rear suspension to the project. It still has its redundant torsion tube at the back, which means it can easily be put back to the torsion bar setup at a later date. Up front, the anti-roll bar was backdated to the through-body setup Porsche would have used on its earliest 911 racers, while 930-spec brakes give it

RSR-like stopping power to go with the seven and eight-inch Fuchs wheels and vintage Michelin slicks.

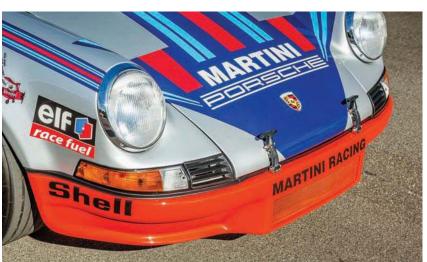
'Perfection takes time, and we weren't compromised by a schedule, so Simo and the team could pay attention to details overlooked by most builders,' says Tim, as he pulls over to Above: Positioning of the dual tailpipes hint at something 'different' under the deck lid and, as the photo opposite shows, this is no ordinary backdate.
400bhp of 3.3-litre turbo motor gets the job done

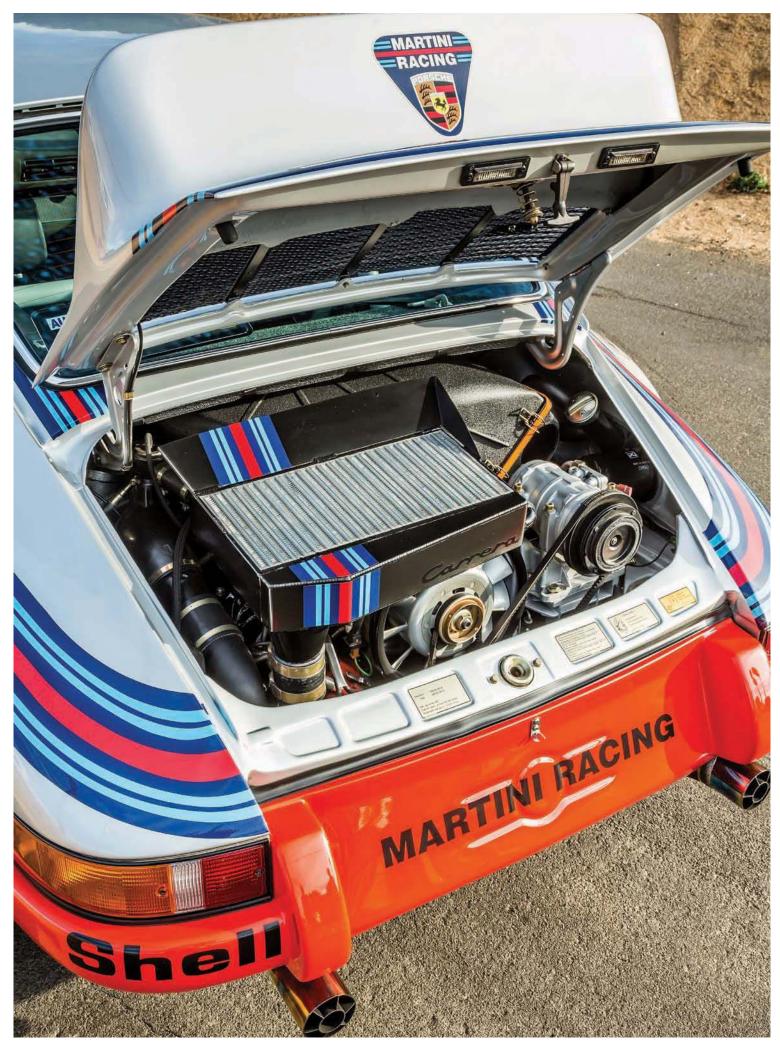
Below left: It took Tim Kretzschmar several months to persuade SV Automotive's Simo Veharanta to sell him the project, but he's never looked back...

Below right: Graphics are based on those of the RSR in the Porsche Museum

### 'PERFECTION TAKES TIME. WE WEREN'T COMPROMISED BY A SCHEDULE...'









point out the minutiae of the build. 'His Porsche knowledge and contacts are incredible and he had obviously spent many months collecting parts for the car - there was a 13-month back order to get the RSR-style Fuchs wheels made by Harvey Weidman, but that didn't

hinder us at all.'

For all that faithfully backdated engineering, the 911's race-ready straight-line pace would have been the stuff of dreams for the engineers behind the RSR. A subtle badge on the tailgate grille - '3.3' in the period-correct script - hints at the late-spec intercooler-equipped 930 engine beneath, chosen for its ability to handle the planned increase in power. Rebuilt by Foreign Machine Service in

Pasadena, it's paired with a modified Kokeln turbo pushing 1.1 bar of boost through the Martini-striped intercooler custommade to slot in under a ducktail spoiler. The soundtrack might be different to the naturally-aspirated muscle of the RSR but, with a 400bhp surge of boost under Tim's right foot, it's got the performance to go with the livery.

Deviating from the original spec sheet also meant the car could be tailored to suit Tim, rather than being limited to periodcorrect transmission parts. The G50 transmission was sourced from an '88 911 and offers five gears instead of the 930's four,

> offering some saner road manners when it's crawling through traffic, while the Wavetrac limited-slip differential dials in some predictability once it's out of the city. Focused on usability, Patrick Motorsports carried out a full rebuild and supplied a dedicated oil cooler setup, while the Hargett shifter puts the stick within easier reach of the driver.

With a bank of classic Porsche knowledge to call

upon, Tim says this pick-and-mix of mechanical parts threw up surprisingly few hurdles. 'The transmission swap gave us our only real teething issue. It fitted correctly but the nose ever so slightly touched the torsion tube, which caused the transmission to drop out of gear while accelerating. We made a notch in the torsion tube to cure the issue.'

Above: Hargett shifter raises the gear lever, bringing it close to hand. Its rifle-bolt action makes for some slick gear changes

Below, left and centre: Interior features RS-style seats from Italy. Factory airconditioning adds a touch of refinement

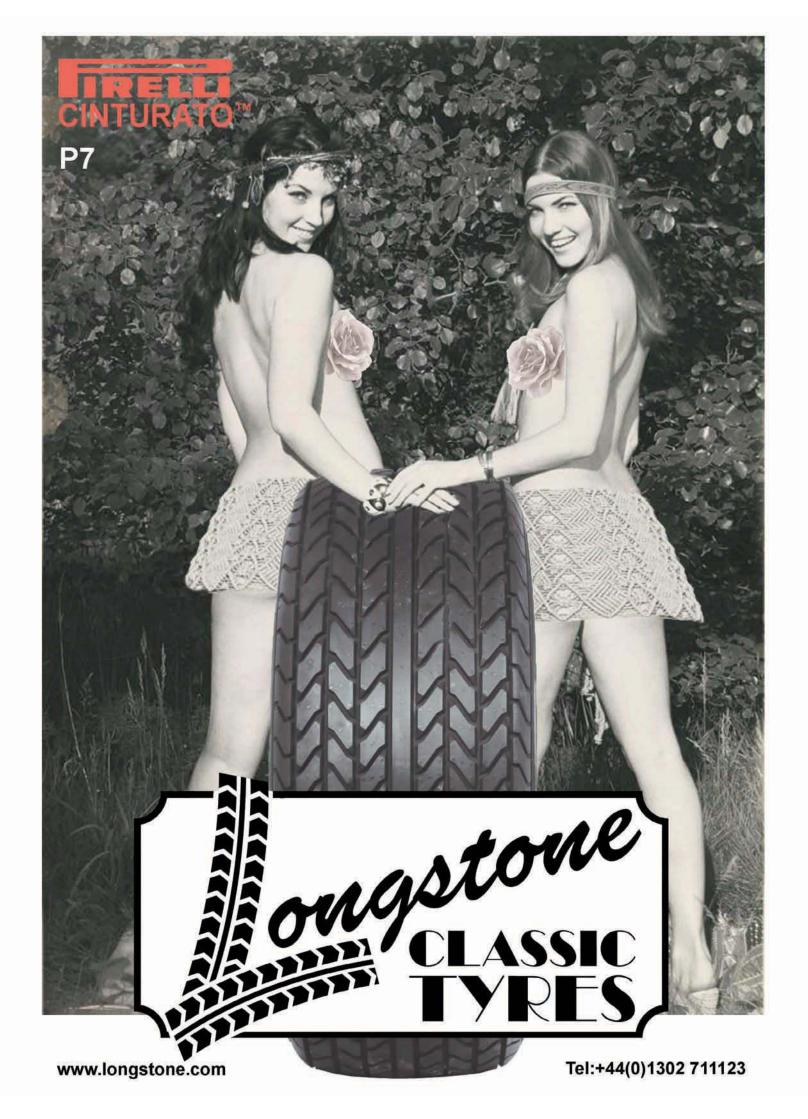
Below: Harvey Weidman once again came up trumps with the widened Fuchs rims

### **'HINTS AT THE** INTERCOOLER-**EQUIPPED 930 ENGINE...**'











By this point, a lot of what was left was cosmetic, albeit just as open to an injection of modernisation. The RSR bumpers and ducktail are glassfibre replicas from Getty Racing, painted and adorned with sponsor graphics to match the Martini-branded RSR of the Porsche Museum.

A full set of chrome trim and body fixings also helps hide this car's late-Seventies origins, right down to the early-spec round washer nozzles on the bonnet and the centre-mounted fuel filler. But, behind the front bumper, the Setrab oil cooler runs electric fans large enough to require modifications to the aperture — a requirement both of the extra power, and the local climate it was built for.

As it's essentially designed for fast-road use, the cabin was inspired by the lightweight RS rather than being stripped to the bare essentials. Its reproduction corduroy-trimmed RS bucket seats were imported from Italy and are matched to the lightweight carpets, pared-down door cards and minimal sound insulation. There are nods to the RSR in here, too – the

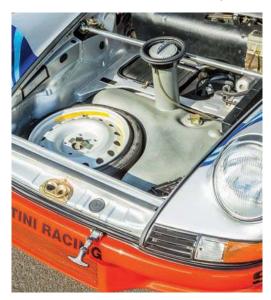
10,000rpm tachometer and 1973-dated Repa harnesses bolted into the correct parcel shelf reinforcement among them – but they're juxtaposed with a 1.5 bar boost gauge, Alcantara headlining and modern air conditioning. It's not like it's short of the power needed to move any extra weight around.

'She's beyond fun to drive,' says Tim, a smile creeping across his face. 'She's a jump-in canyon-carver with a Jekyll and Hyde driving experience that's way beyond my expectations. Comfortable and easy to drive on city streets and in traffic, but an adrenaline-raising, nerve-building experience over 4000rpm which forces you to participate and be totally involved every second you're behind the wheel.'

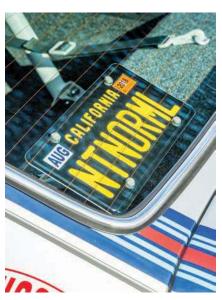
In many ways that all-round ability makes this as much a tribute to the 911's supercar evolution as it is to the motorsport era that underpinned the whole process. A serving of high-octane Targa Florio spirit made all the more usable with modern technology, and entirely deserving of its unmistakeable Martini war paint. *CP* 

Above: At its happiest out on the open road, the RSR lookalike has proved to be a great all-rounder, never complaining about getting stuck in city traffic...

Below, left to right: The whole car is beautifully detailed from stem to stern. The licence plate sums it up! This is a 911 that's far from normal...









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### 2-LITRE CUP: SPA & DIJON

# STRETCHING THE LIMITS

The highly-competitive 2-litre Cup heads for Spa and Dijon for some more close racing, but things kick off with a warning to competitors about exceeding track limits... Regular columnist Robert Barrie was behind the wheel to wave the Classic Porsche flag

Words: Robert Barrie Photos: Peter Auto









he 2-Litre Cup returned to the Spa-Francorchamps circuit at the Peter Auto meeting in May with almost 40 cars entered. It was good to be back with some new faces, some familiar ones and the same friendly atmosphere in the paddock. As usual, the format for the weekend was free practice followed by qualifying and then the 90minute race itself.

All was fine – or seemed so – until a red flag cut qualifying short. Oh no! That normally means someone has gone off or suffered a failure. It turned out to be neither. The race director had brought us all in for a lecture on track limits, which has become a big issue. Not long ago there were gravel traps at many of the corners. If you went off you probably weren't coming back. We all took care and track limits were respected. Nowadays, the old hazards have gone and the same discipline has to be imposed by different means.

It's typically a board with the offending car's number, but if most of the grid misbehaves race control has the choice of ignoring it or, as on this occasion, throwing a red flag. I got short shrift when I briefly protested my own innocence, but

did nonetheless discover that the corner I have always known as Eau Rouge should really be called Radillon! Thank you race director.

If you have been following our fortunes in the series, you'll know the car's owner and I typically race better than we qualify. It was the same again at Spa. To be fair, I was on a hot lap when the flags came out. That's my excuse, anyway. We were two-thirds of the way down the grid as we lined up on a wet-but-drying Sunday morning.

I set about making up places and, after the driver changes, we were running in the top ten. That was more like it. The owner took over and it started raining again. It was Spa, after all. We gave back a couple of places and finished in the low-teens – not brilliant, but not too bad, either. The race was won by the Historika-prepped solo-driving Andrew Kirkaldy with the Jordan Racing-supported Mark Sumpter second and the experienced pairing of Danielle and Egidio Perfetti third.

The leading non-elite team was the Tuthill-prepped Richard Cook and Harvey Stanley in fourth. The previously invincible combination of Andrew Smith and Olly Bryant dropped out to a rare mechanical failure. For all the kerfuffle

Above left: Class winners Richard Cook/Harvey Stanley in car #72 at Spa

Above top: George Verquin #94 and Gerard Marcy (#62) in action at Spa

Above centre: Bertrand Chapuis/Henrique Gemperle (#12)

Above: Pole-sitters Jose Ruben Zanchetta/Julian Lepphaille (#19), followed by Andrew Smith/Olly Bryant {#64} and race winner Andrew Kirkcaldy (#99)









Top: Race winners Andrew Smith/Olly Bryant in car #64, prepared by Historika

Above left: Our man Robert Barrie shared driving with car owner Steve Jones

Above centre: Didier Denat (#12) and Steve Winter/Robin Ellis (#36) crest the hill...

Above right: Steve Jones/Robert Barrie (#84) pursued by Gaby von Oppenheim/Andreas Middendorf (#54) in qualifying, nine cars were given further track limit penalties in the race and five others received a pit stop window penalty. Tricky conditions and an eventful race.

On to the next round at Dijon. Instead of turning up at the last moment in some disarray – I am describing my approach, not that of the owner – we got there early and did some testing. Hurrah! We hoped to qualify better with seat time and track familiarity at the start of the weekend rather than the end. Interestingly, we were immediately on the pace. Duel Motorsport had gone through the car over the winter. It felt better at Spa, but the conditions made the improvement difficult to quantify.

The answer at Dijon was almost two seconds a lap. That's a lot. We were inside the top ten in free practice and just outside in qualifying. I thought there might be more to come in the race, but we weren't the only car going faster. Olly Bryant's pole time was well under 1.40. That's quick.

As at Spa, I took the first stint and we planned our driver swap for the middle of the pit window. I didn't make a great start. Four or five cars wriggled past in the first few turns. No worries. I pulled some places back, but it wasn't as straightforward as I hoped. The car felt less settled on a full

fuel load than it had earlier in the weekend. I then made a total mess of my pit entry at the handover.

I was tempted not to say anything, but the owner went through the data and discovered our stop was long. I had to hold my hand up to an awful in-lap. We traded places in the latter part of the race to finish on track in the low-teens. We could, and should, have done better. Does that sound familiar? That wasn't the end of it, however.

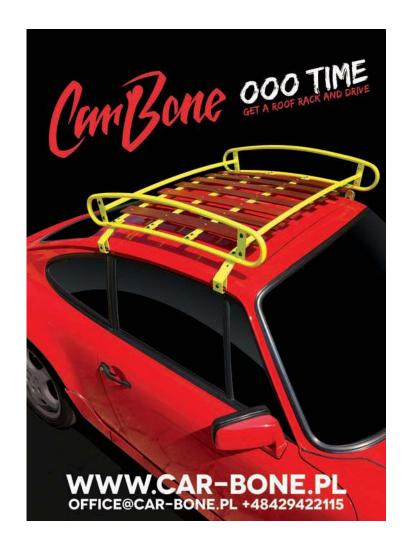
Meanwhile, normal service resumed up front. After a close race, Andrew Smith and Olly Bryant pipped Andrew Kirkaldy to the win, with Mark Sumpter and Andrew Jordan third. The leading non-elite driver was Philippe de Craene in fourth. But back to our race...

The timing screens had carried track limit penalties throughout the race and, when these were totted up and added on, three cars that had been ahead of us on track ended up behind us in the results. We had beaten them on penalties – quite literally! It was track limits again.

In the end, we were classified tenth – not the way we would have wanted, but we'll take it. So, on to Budapest and the Hungaroring. Let's see what I can screw up this time. All to play for! *CP* 







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# GIVING IT A BOOST

The problem was simple enough: Porsche wanted to enter the prestigious Can-Am series in 1972 with its Type 917 but it didn't have enough power. With their modified Chevrolet V8 engines as big as 8.2 litres the dominant McLaren team had access to 730 horsepower and 600lb ft of torque. Even when others had similar power they couldn't match the McLarens. What was the answer?



"THE PRINCIPLE

IS SIMPLE,

**PUTTING IT TO** 

**WORK IS NOT...** 

he 917's flat-12 engine was no slouch in power production. Porsche enlarged it to 5.4 litres, from which it generated 660bhp at 8300 rpm and 470lb ft of torque at 6400 rpm. Good, but only for also-rans. For Ferdinand Piëch, Hans Mezger built a flat-16 version of the 917's Type 912 engine that produced 755bhp and 542lb ft of torque. In the car, however, it was a disaster. Engineering director Helmuth Bott decided: Porsche would build a turbo-supercharged engine for the Can-Am series.

Porsche's engineers understood supercharging. What was not certain, however, was whether it would produce controllable

power without excessive fuel consumption and without turning the air-cooled Type 912 engine into a bomb with a short fuse.

In most classes of auto racing supercharging in any form was either prohibited or penalised. Can-Am racing had no such restriction. Apart from a ban on gas turbines, Can-Am cars could have any sort or size of engine that could be packed aboard. Such rules were an engraved invitation to those who knew how to use supercharging — or thought they did.

Supercharged entries came to the starting line in the first Can-Am season, 1966. Among the Lolas fielded by the John Mecom team were some with Ford power and belt-driven Paxton centrifugal compressors. Jackie Stewart drove such a car in several of the West Coast races with no special success, after which the idea dropped from sight.

Boosting returned to the Can-Am in 1969 in the form of special

Oldsmobile V8 engines with twin turbo-superchargers installed in two chassis built by Bob McKee of Chicago. One had a tubular frame and the other had a monocoque structure. Funds were insufficient even to race the McKee creations, let alone develop them properly.

In Europe, in the meantime, the art of exhaust-driven turbosupercharging was being advanced by Swiss engineer Michael May. He liked the way a turbocharger used otherwise wasted exhaust gas energy to increase power. In such devices the engine's exhaust gas is passed through a small turbine wheel which it sets spinning. A shaft from the turbine wheel turns an

adjacent impeller – a small centrifugal blower that can run at very high speed, to 100,000 rpm and more – to pump more air into the engine. When mixed with the proper amount of fuel, this extra air boosts an engine's output.

The principle is simple, but putting it to work is not. The two turbine wheels on their common shaft are in delicate balance between the flowing columns of gas entering and leaving the engine. If the boost is high

enough at low speeds to give good throttle response, it can soar to excessive pressures that will destroy the engine at high speeds. Temperatures on the exhaust side can rise perilously. With the right boost pressure for peak power, mid-range performance can be slack. Because the turbocharger is not mechanically connected to the engine, its response to the throttle tends to be delayed. Adjusting fuel delivery to the engine's appetite is harder.

Above: Porsche's ultimate Can-Am expression of its turbocharging expertise, the 917/30 never needed all its potential power to dominate the Can-Am series in 1973



Above: As revised for the 1973 season the 917/30 chassis had a 7.2in-longer wheelbase of 98.4ins, a front track almost two inches wider and rear track nearly three inches narrower

Starting with May's initiative, BMW fitted a turbo to its 2002 model to compete in the European Touring Car Championship. In both 1968 and '69 the boxy BMW beat the Porsche 911T and others to win overall. It was the first time that a turbocharged car had won an important road-racing championship.

Porsche could not and did not overlook this example. By 1970 experimentation with turbocharged engines was under way at Zuffenhausen. The first tests were carried out on a 2.0-litre Type 901 engine with the Bosch fuel injection system. Soon thereafter, as interest in the Can-Am series grew during 1970, turbocharging was applied to the twelve-cylinder Type 912 at the express instruction of Ferdinand Piëch.

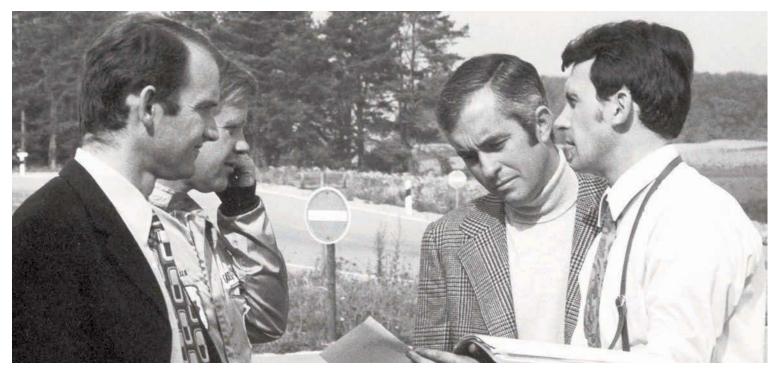
These early trials were mounted to see whether the engines' air-cooling systems could handle the higher heat loadings imposed by turbocharging. Water cooling was weighed as an alternative if heat loadings exceeded the ability of Porsche's traditional fins and blowers to dissipate excess heat. No insuperable problems arose.

In 1971, when Porsche confirmed internally its plans to go Can-Am racing, the development of a turbocharged 912 engine

was shifted into high gear in parallel with work being done on a new Type 917/10 chassis and body. Each of the cylinder banks of the Porsche flat-twelve was given a separate turbocharging system. This duplication was not required because a single large turbocharger was unavailable; suitably large units existed. It was implemented because the rotating inertia of each of the two small blowers was much less than that of a single large one. Their inertia needed to be as low as possible so the turbochargers would spin quickly up to speed to increase boost as soon as exhaust gas flow started increasing — or sooner.

The turbochargers were supplied by Eberspächer, which began its work on such devices in 1947. Based in Esslingen, it had design links with the American AiResearch company, which made most of the turbochargers being used by USAC racing cars. Under Hans Mezger's supervision their units, adapted from their designs for trucks, were applied to the 912 engine by Valentin Schäffer, a stocky, broad-nosed fireplug of a race mechanic who, said Mezger, wanted 'to work more like an engineer. He became involved in all the experimenting that we did on the turbo.'

Schäffer's first system was as simple as he could make it. Two



turbos pumped air into straightforward log manifolds feeding the inlet ports of a fuel-injected 4.5-litre twelve. Maximum boost pressure was limited the same way it was in the USAC cars—by a single AiResearch pressure-relief valve or 'waste gate' attached to the exhaust pipes of both banks at points upstream from the supercharger turbines.

The valve of the AirResearch unit was controlled by a diaphragm that was fed pressure, on one side, from one of the inlet manifolds. When that pressure rose to the desired level of maximum boost, the force on the diaphragm was enough to overpower an adjacent spring and thus open the valve in the exhaust system, dropping the exhaust-gas pressure and preventing the turbocharger speed and pressure from climbing further.

Even with boost control, durability of the first blown 912 engines was not the best. By early summer of 1971 the first such engine was installed in one of the new chassis and taken to Weissach to see how it behaved. Tester and racer Willi Kauhsen recalled what happened. 'When I settled into the car and started to warm up the engine, the windows shot up in the nearby buildings and the Porsche people waited eagerly for the 'turbo' to appear. But the first times out I rarely covered more than 500 metres!'

Valentin Schäffer's battle to build reliability into the blown engine was not made easier by a fire in the test cells that caused serious damage to the area where he was working. This put a three-month kink in the progress chart of the turbocharged twelve.

Nevertheless, that summer of 1971 the engine was running reliably enough for Jo Siffert to try it in the first 917/10 both at Weissach and at Hockenheim.

These tests were traumatic for Siffert and Porsche. The engine's response to the throttle was far too slow. When the throttle was pressed coming out of a turn, long seconds elapsed before a swelling sense of propulsion against Siffert's back told him the turbochargers were revving up. When he backed off for a turn those seconds seemed even longer, the engine roaring away at high boost even although he'd long passed the last braking point. More than once the white Porsche test mule bounced off the track into the boondocks with an all-but-helpless Siffert behind the wheel. Power was impressive but its controllability was not.

On 2 August 1971 Porsche broke the news that it would bow out of Manufacturers' Championship racing in 1972 and race instead in the Can-Am and Interserie with cars based on the 917. On 16 November Porsche and Porsche+Audi announced jointly that Roger Penske's team was their chosen ally in the Can-Am and that their agreement covered the 1972 and 1973 seasons.

While the negotiators dotted Is and crossed Ts and while Jo Siffert campaigned the 917/10 in North America, the technicians were hard at work developing the car over which all the fuss was being made. Since the Siffert car represented the state of the Porsche Can-Am art at that time, and since it was not capable of winning in the 1971 Can-Am, let alone facing against the even tougher competition the next season would bring, it was obvious that a lot of work remained to be done.

Above: From left Ferdinand Piëch, Mark Donohue, Roger Penske and Helmut Flegl reviewed test findings of the Can-Am 917 at Weissach

Below left: Cut away for display, the turbocharged flat-12 of the Type 917/10 revealed its central gear drive, bevel gears to its cooling blower and multi-oilpump array in its dry sump

Below right: The initial package of changes to the flat-12 engine for turbocharging showed twin turbos, each one serving its side of the engine





After the first alarming track tests turbocharged engine development went back to the design office and the dynamometer. The test 917/10 was wearing higher-downforce bodywork in late October 1971 when driver Mark Donohue and Penske's racing engineer, Don Cox, visited Weissach for the first time. In his book, The Unfair Advantage, Donohue told how a first encounter with that car for picture taking and ceremony on 26 October turned into a do-or-die challenge to improve on the 50.5second lap record for the Can-Am track set by Willi Kauhsen after exhaustive testing.

'Germans are very tough people,' Mark learned that day. 'They expect the maximum from everybody at all times.' In spite of a nagging hangover, he more than met their expectations. After

extensive changes were made in the chassis setup to moderate a high-speed oversteer at his specific request, Donohue sliced the record to 49.7 seconds.

A visit to Stuttgart originally

the car the other Can-Am competitors derided as 'junk' was 'like a

was made Can-Am project engineer and technical liaison to the Penske team. Donohue and Flegl worked methodically on the large and small Weissach skid pads to explore all the chassis variations of the existing unblown 917/10. By 12 November Mark further reduced the lap record for the Can-Am Track to 49.3 seconds.

FlegI was 'one of the smartest "in-between" guys there is. He thinks exactly the same way I do, only he can't drive the car. But because he can't drive the car he can keep an open mind and because he is familiar with a lot of other drivers and other cars, he has insights that I don't have.' For their part the Porsche men rated the collaboration with Donohue 'fantastic' and added, 'He

was clearly the best test driver for this project.'

While Donohue was in Germany in November, his chosen chief mechanic for the Can-Am effort came to Weissach for six weeks of indoctrination into the mysteries of the 917/10. 'I learned about the engine, transmission, suspension and even welded on one of the chassis,' recalled John 'Woody' Woodard. As nursemaid to the complex Can-Am Porsche he was assisted by Heinz Hofer, Greg Syfert and the manager of the Penske shop, Chuck Cantwell.

After the October-November tests at Weissach, Porsche decided to continue the development of the 917/10 in unsupercharged form so the car would be in ideal trim when the blown engine was judged ready. Since the frustrating failures of

the summer of 1971 Mezger and Schäffer succeeded in making the 'turbomotor' much more reliable.

One area that had not given trouble was the bottom end. This was as Mezger's group had calculated it should be. 'In the case of the 5.0-litre engine,' Mezger reported, 'the maximum connecting-rod bearing load of the naturally aspirated version at its power peak of 8300rpm is at about the same level as that of the supercharged engine at its

8000rpm peak power speed.'

"THEY EXPECT THE

**MAXIMUM FROM** 

**EVERYBODY AT** 

ALL TIMES...'

No changes had to be made to the forged one-piece crankshaft, the bearings or the connecting rods. The steel shaft that took the power from the central drive gears to the clutch had to be enlarged from 22 to 24 mm in diameter. Even so, it twisted 20 degrees under the impact of the peak torque of the turbocharged engine. New pistons with almost flat crowns reduced the compression ratio to 6.5:1 to prevent detonation at the high combustion pressures reached at full boost.

For the first time in the history of the 912 engine, its cooling had to be increased. This was done by exchanging the two bevel gears in the blower drive so the fan turned at 1.12 times engine speed instead of the previous 0.9 of crank speed. This elevated its air-pumping capacity by 30 per cent to 6600 cubic feet per minute at the cost of an 80 per cent rise in the amount of power required to drive the fan.

To improve the engine's mid-range running when the

scheduled to last three days extended to three weeks for Donohue. Immersed in their own worlds of business and racing in America, neither Penske nor Donohue had been aware of the engineering advances Porsche had made under Piëch, Bott and Mezger. They discovered that

Below: After Donohue injured

a knee in a test at Road

Atlanta, George Follmer

stepped in as driver of the

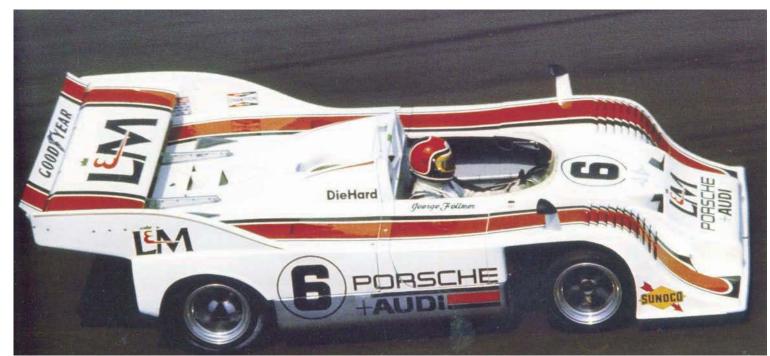
917/10. He took the 1972

wins in five races

Can-Am championship with

fairytale,' as Donohue said. 'From an engineering standpoint it's really clever and the pieces in it are fantastic.' Under Peter Falk, the head of vehicle testing, Helmut Flegl

After that session Mark told Pat Bedard of Car and Driver that





turbocharger was off boost, its inlet timing was made milder by using the same cam lobe form and the same 10.5mm lift for the inlet valves as already used for the exhausts. 'On a turbo,' said Hans Mezger, 'we found that you didn't need that wide opening period for the intake valve. You got the air in with pressure, not just by tuning the opening time.'

With the new valve timing of 80°/100°/105°/75° the reduction in the effective overlap at top dead centre was much greater than the small difference from the unblown timing data would suggest. Mezger: 'The smaller valve lift and less overlapping helped to improve the throttle response.'

The blown engine's cylinder heads and valve sizes were the same as those of the unsupercharged Type 912. Porsche successfully introduced inlet valves made of titanium for the first time, each of the 47.5 mm valves weighing only 2.4 ounces. The stems of both inlet and exhaust valves were hollow for sodium cooling. Exhaust-valve stems were chromed to reduce the seizing in their guides that resulted in many destroyed test engines. The exhaust-valve guides were shortened so they would absorb less heat, increased in running clearance and given direct delivery of lubricating oil through a special drilling.

Fired by the same ignition system used on the earlier twelves, the two spark plugs per cylinder were of a platinum-tipped Bosch design. Bosch also provided the fuel-injection system. The diameters of its twelve pump plungers were enlarged to satisfy the blown engine's greater appetite. The pump's control mechanism

was made responsive to boost pressure as well as to engine speed and throttle position.

No part of the turbocharged 912 was subject to more changes than its inlet manifolding. One feature that eventually stabilised was the positioning of the injection nozzles as close to the inlet ports as possible. Slide-type throttles were replaced by butterfly throttles. Some test engines had one big throttle for each cylinder bank and in others – eventually in all – each inlet tract had its individual butterfly. At the forward ends of the two log manifolds a small pipe between them balanced their pressures.

Long feed pipes came forward to the manifolds from the two turbochargers, were placed above and flanking the gearbox. Carried by a structure composed of the exhaust pipes between them and some additional bracing, they were suspended from the frame at the rear. The turbochargers were like those made by Eberspächer for diesel truck engines with one exception — their shafts ran on ball bearings instead of bushings. Each had its own oil supply from the engine. Exhaust gases entering the turbine side were as hot as 1800° F at full load. The compressed induction air fed to the engine reached a 300° F temperature in the absence of any form of intercooler.

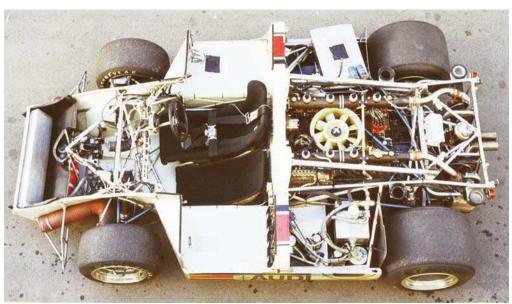
A key variable in any supercharged engine is the amount of boost pressure used. This is the pressure achieved in the inlet manifolds, through supercharging, over and above that of the atmospheric pressure. In the early engines the boost was moderate for a racing unit – between 13 and 15 pounds per

Above: Mark Donohue poses thoughtfully by the cockpit of the Porsche 917/30 that he considered 'the perfect race car'. After his successful season he retired from racing

Below left: The 1973 inlet manifolds were carried over from the 1972 season but caps covered the apertures for the air inlets that were no longer thought necessary

Below right: Thorough testing at Weissach determined the final chassis of the 1972 917/10 Porsche, which carried 87 US gallons in its two tanks athwart the cockpit





square inch. Still, this was enough to extract more than 800 horsepower from the 4.5-litre 912. At about this level, an eighthour durability run at full power was successfully completed in early December 1971. It was successful as far as the engine was concerned but one heard that the dynamometer was not in the best condition afterward!

Thus it was not without confidence that Porsche shipped Team Penske one of its latest turbocharged 4.5-litre engines at the end of January 1972 for installation in their car. This, Donohue felt, had to be the solution to their lack of convincing speed. It was an awesome presence, said Woody Woodard: 'I was stunned by the monster size and complexity of the flat twelve-cylinder with twin turbochargers. It looked like it would be more suited for an airplane racer than a race car.'

By the time they returned to Road Atlanta it was the last week of February and it was cold. They had to tow the car to get the

engine started and then, wrote Donohue, 'We damn near couldn't keep it running. I tried to drive it a few laps and discovered that the throttle worked like an ignition switch – it was either wide-open power or off. It wouldn't run at any part-throttle condition.' 'The boost was very sudden,' Flegl confirmed. 'Coming out of a turn, if Mark stepped on the throttle too early he'd lose the car.

sometimes we had to tow the damn thing for 40 yards!'

Only by taking terrible risks on a lap that he could not duplicate was Donohue able to lap as fast as he had a month and a half before with the unsupercharged engine. Finally a turbocharger impeller failed and its pieces went into the cylinders, wrecking the engine. 'Mark wanted to know how turbocharging could work on the Offenhauser but not on the 917,' said a frustrated Flegl. 'How could we control the boost?' Their cooperation faced its first major challenge.

Another engine was shipped over, together with Flegl and Schäffer, in time for the car's first showing to the press and its sponsors at Road Atlanta on March 20. It had what Donohue called a \$3000 paint job and it looked magnificent. But the engine, though improved, started and ran little better than it had in February.

Donohue and Flegl agreed that the driver should come to Germany for further tests at Weissach, which he did starting on 9 April 1972. On the less demanding track there Willi Kauhsen had lapped at 49.1 seconds with the turbocharged test 917/10, which was 0.2 seconds faster than Donohue's best with the unblown car. Yet Donohue, struggling with its balky throttle response, could do no better than 49.7. To Porsche it seemed that the driver had to try harder to adapt to the engine, while to Donohue and to Penske, who watched some of the tests, it seemed that the engine should be improved.

In April the fuel-injection system was completely recalibrated from scratch. 'On a naturally aspirated engine,' explained Helmut Flegl, 'fuel feel is determined by throttle position and engine rpm, but turbocharging adds a third element which we realised we weren't taking into account. I had to force the engine guys to run the dyno to show fuel input right through the rev range, not just above 5000rpm. From these readings we shaped a cam to control fuel admission according to boost level.'

The engine's fuel requirements were determined in both its blown and unblown modes of operation through its full speed

range. Based on these findings Bosch supplied a new space cam that supplied the fuel dosages needed. Taking advantage of the pump's fitting that normally sensed atmospheric pressure, its control mechanism was made responsive to boost pressure as well as to engine speed and throttle position.

'This was the breakthrough we'd been looking for,' said Flegl. With this, he and his colleagues

the Porsche crewmen felt, they surely had something that would satisfy the demanding American, the man they called 'a real driver-engineer.' They put the pump on an engine, the engine in the car and went back to the Weissach track.

After some initial adjustments, Donohue wrote, 'Suddenly, it was right! It started, idled, accelerated and had immense torque over a wide throttle range! Almost immediately I was down to 48.9 seconds. I came in and said, "I am quite happy with this fuel pump." They were elated.' 'It was only six weeks before Mosport,' Flegl recalled, 'the 1972 season opener. Mark leaped on the telex to tell Penske.'

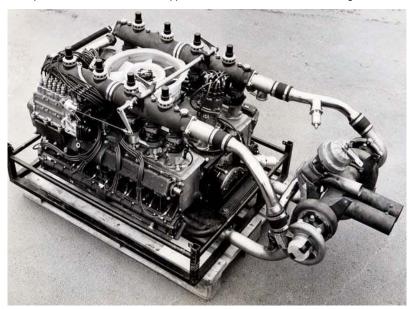
'They were so pleased they never let go of that pump,' Donohue recalled, 'which became known as the "happy pump". They kept it at Bosch and it was used for the calibration of all other fuel-injection systems we used. Whenever there was a problem, they would always go back to the "happy pump".'

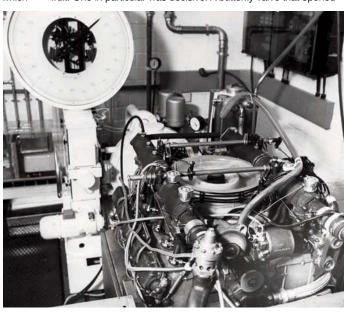
Now some of the other improvements that Valentin Schäffer made to get faster response from the turbocharger began to bear fruit. One in particular was decisive. A butterfly valve that opened

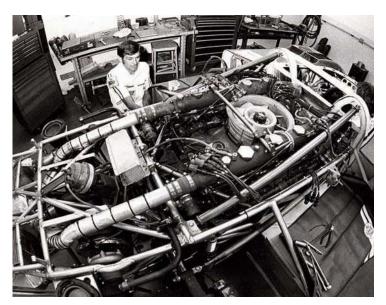
"I DISCOVERED THE THROTTLE WORKED LIKE AN IGNITION SWITCH..."

Below left: This was the flat-12 as developed for the 1972 Can-Am season. Visible atop the inlet plenum chambers were the inlets requested by Mark Donohue to ensure an air supply at low boost

Below right: This was the dynamometer that had to cope with the power delivered by the turbo Can-Am flat-twelve, the first Porsche to give four-figure horsepower









to the atmosphere was installed between each log manifold and the delivery pipe that brought compressed air from its turbocharger. This valve was connected to the throttle linkage in such a way that it opened fully just when the throttles closed. This system vented the pressure in the manifolds so the impellers of the turbochargers would find it easier to keep spinning because they wouldn't be pumping against a dead end. In this manner turbocharger speed was kept higher through a turn and more ready to rev up when the throttles were opened again. Each delivery pipe was fitted with a small pressure-relief valve to vent any excess boost.

Before the first Can-Am race another novel device was fitted at the suggestion of Mark Donohue. Four suction-operated air valves, looking like tiny top hats, were fitted to the top of each log manifold. Because the throttles were quite a long way from the blower air inlets, the driver was concerned that the engine's low-speed response might be hampered by a lack of atmospherically inducted air. These valves admitted extra air for that purpose. When the boost pressure rose, the eight valves automatically snapped shut.

Supercharging pressures were raised during development. Normal boost was stepped up to between 18 and 20 pounds per square inch. At that level the 4.5-litre engines used in the Interserie in 1972 produced 840 to 850 horsepower. The lack of mechanical troubles with this engine encouraged the engineers to try the turbo-blowers on the 5.0-litre version. This worked sensationally well. Visitors in May saw such an engine taken momentarily to a power reading of more than 1000bhp on the dynamometer.

Durability testing reassured Porsche that the 5.0-litre was sound enough to be relied on in the Can-Am series. Three of the engines used in the Penske cars in 1972 registered peak outputs between 894 and 918bhp at 8000 rpm. 'That doesn't mean,' cautioned Ernst Fuhrmann, 'that it developed the same power

when installed in the car, where for the entry of the induction air is not so ideal as on the test stand. Thus effectively it was rather less than 900 horsepower.' One curve published by Porsche showed 910bhp at 7800rpm on a boost of 19psi and a peak torque of 707lb ft at 6400rpm. Such an engine weighed 617 pounds.

The 5.0-litre's performance in the car was even better than its sensational specifications because the larger displacement further reduced the turbocharger response time. Said Fuhrmann, 'With a lot of detail work we have been able to reduce the delay to a few tenths of a second, but it is not yet quite so precise as an unsupercharged engine. That means that the driver must still take into account a small delay.' In the 5.0-litre size the base engine also had more power to offer at part throttle when the boost level was low.

One of the revised turbomotors was airlifted to Philadelphia for installation in the Penske test car at Newtown Square. The 917/10 then went to Riverside for evaluation. 'It was an unbelievable transformation,' said Woody Woodard. 'The car was a rocket right out of the box, so we were feeling very good.'

Also feeling good were the Porsche designers and developers, who moved during 1972 to new quarters at Weissach. Although farther from the production lines where their creations were made, they were now nearer the proving grounds where their brainstorms met their nemesis – or went on to glory.

In this case glory was the result. Equipped with a more rugged transaxle that had four forward speeds and no reverse, the turbocharged Porsche 917s went on to overpower the opposition in both 1972 and 1973, Porsche's final year in the Can-Am series.

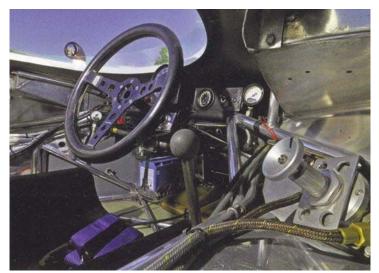
After Donohue was benched by a crash in the first season George Follmer became champion, while Mark recovered to win that honour in 1973 with a Porsche that Woody Woodard said 'had 1550 horsepower on tap if we wanted it. However, in the race we'd dial it to 1100 horsepower and leave it there or maybe dial it down some more.' That got the job done. *PW* 

Above left: In 1975, Donohue set a new world closedcourse record of 221.120 mph in this 917/30 equipped with dual intercoolers

Above right: In the 1980s
Porsche's R&D chief was
curious to know whether his
Group C 956 would be faster
than the 1973 Can-Am car at
Weissach. Driven by Derek
Bell, here in the 917/30
cockpit, it was. From left are
Ferry Porsche, Jerry Sloniger,
Jürgen Barth, Paul Frére,
Peter Falk, Valentin Schäffer,
Helmuth Bott, Norbert Singer
and Peter Schutz

Below left: In the workmanlike cockpit of the turbo-Porsche were the big knob of its heavy gearshift and the knurled wheel the driver could use to adjust the boost level

Below right: Valentin Schäffer started work on turbocharged Porsche engines in 1970. A hands-on engineer, Schäffer was the heart and soul of the turbo development of the 917





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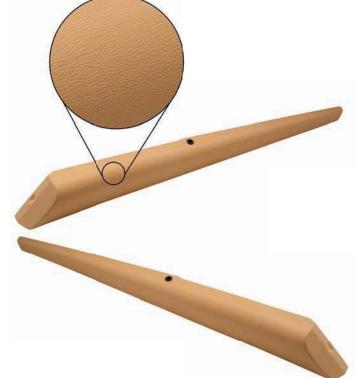


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# VINTAGE FORAGE

Talk about a great American success story... Starting as a humble mechanic, Mike Malamut embarked on a successful career in the automotive industry, allowing him to indulge on, well, more than a handful of vintage cars. His collection located in an inconspicuous building near LA now hosts about 125 vehicles, including a fleet of collectible Porsches!

Words & photos: Stephan Szantai





Left: Standing alongside his '51 356, Mike Malamut has a lot to smile about – how about 125 cars in his collection? Barney the dog looks more interested in when his next meal is due...

Above: There are plenty of 356s to choose from, along with this great '57 Samba and a host of 911s/912s

Below left: Mike's main helper is Neil Torey

Below right: Rare '55 Continental was formerly owned by Eric Meyer ince its inception in 2010, *Classic Porsch*e has featured its fair share of private car collections, all memorable in their own way. And then there's Mike Malamut's shrine... About 125 vehicles fill his tastefully decorated building, using period-correct goodies, making it one of the most impressive collections we've ever unveiled.

To be fair, the fleet isn't only about Porsches, though over 20 vehicles representing the marque is nothing to sneeze at. 'Some folks only collect Porsches, but I see an interest in a variety of cars,' Mike comments. Indeed, these grounds are home to a vast range of automobiles, both domestics and foreign, with German offerings in large numbers – from Volkswagens to tiny Messerschmitts. Add to the list a bunch of rare Fiats, early SUVs and Jeeps, a line up of Brits, a handful of desirable Toyotas, such as a 1968 2000GT... Getting dizzy yet?

You could certainly say that Mike's career perfectly fits within the boundaries of the often-mentioned 'American success story'. When growing up in California during the

1950s and '60s, he took a liking to automobiles and 'anything mechanical'. His ability to tinker came in handy one day, when his mum's 1951 Ford suffered a flat tyre; in no time, he changed the wheel to his mother's amazement, as she had no idea her very young teenager had such aptitude.

Back in those days, cars played a huge role in the social fabric, hence Mike bought his first vehicle, a 1958 Ford, aged just 14. But he replaced it with a '54 Porsche a couple of years later! Not bad for a kid; then again, his 400-dollar Pre-A had seen better days, including a slipping clutch. By then, his mechanical talent had already gained attention from his neighbours, who often asked him to fix their cars. So, he felt confident about changing the 356's clutch on his own, with help from a few technical books. 'The repair proved easy,' he remembers. 'And that's when I got hooked on Porsches.'

Computer technology appeared to be an avenue with a promising future during the late '60s, thus Mike went to college to study the subject. Yet, a conversation with a neighbour who worked at Bob Smith VW Porsche – a Hollywood-based dealership – led to a new direction in life...







This gentleman made great money there as a mechanic, twice what Mike might expect after graduating. Malamut thereby made the bold move of quitting school and knocked at the door of the aforementioned dealership. Sure, he had some self-taught mechanic skills; on the other hand, his lack of factory training played against him. He didn't get the job,

but was advised to contact another dealership that was hiring, hence he quickly went to work for Foothill Volkswagen.

Six months passed and Bob Smith VW Porsche finally agreed to take him in. From then on, Mike moved up the ladder, ultimately running the new Diagnostic Department. It entailed dealing in part with fuel injection systems, at a time when they began to creep into modern automobiles, pushed by anti-smog regulations. Mike

enjoyed this position, when most of his colleagues saw it as a nuisance.

His job at the dealership led to interesting human interactions, including a gentleman who worked for a major oil firm. Malamut soon quit Bob Smith VW Porsche and joined the team with no formal training, but learned quickly and became the company's top producer in the USA a year later.

His next career challenge presented itself in a rather peculiar way. You see, Mike went to a Chevrolet dealership with his wife Barbara to buy a new car, though this

> experience proved rather frustrating for the young create his own car financing and sales company, which he baptised Autoland - the year was 1971.

Business blossomed as time passed, therefore allowing him to purchase office buildings, shopping centres and 10 car dealerships, including two selling VWs as the brand

remained close to his heart; in fact, he has well over twodozen air-cooled Volkswagens in his collection today. By the turn of the century, he sold Autoland and its 60-plus locations, which had generated three-quarter billion dollars in Above: Your choice - 1959 and '65 356s. Behind them, a '53 Dannenhauer & Stauss and a '55 Rometsch

couple. It inspired him to

Below, left and right: The garage, museum - call it what you willl - is packed with memorabilia. How about this 1950s-styled kitchen? Everything is year correct...







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car sales. He could finally indulge on the ride of his dreams, a 1955 Mercedes 300SL 'Gullwing' he still owns to this day.

Mike also bought a sizeable building in 2002 that allowed him to house his growing collection of vintage cars, thus replacing the museum that he had opened five years earlier – it used to reside on the bottom floor of one of his office structures. With this new 20,000 square-foot facility, he seemed to have finally found a safe and large enough haven for his fleet. Well, not quite, as he continued buying more vehicles, hence the purchase of a warehouse next door, followed by a second one nearby. And Mike is not quite done yet, as work continues on a new building mixing rare automobiles and living spaces.

Our host now owns over 200 cars, including 125 in the main structure, while the rest await being pampered in the other storage units. So, what's going on the Porsche front? Quite a bit it turns out, starting with about ten 356s, a few rarities included. After all, how often to you see a 1955 Continental coupé, a one-year-only model strictly built for the US market? Featuring a long list of rare period accessories, it resides next to one of Mike's prized treasures, a matching-number '51 Pre-A coupé (chassis number 11111), a recent

addition to the collection.

He also purchased one of 27 Porsche Carrera 2/2000GS Cabriolets, a red 1963 beauty equipped with a four-cam engine. Several other topless 356s complement the selection, ranging from 1958 (a Speedster) to '64 (a 'C' Cabriolet). They keep company with a vintage Porsche tractor and two air-cooled, rear-engined coachbuilt vehicles: a blue Porsche 1500-powered '53 Dannenhauer & Stauss and a black '55 Rometsch Beeskow with a VW engine.

The area next to it caters to 911s and 912s, the latter being represented by a 1965 coupé, an original paint '69 coupé and two '69 Targas. On the 911 front, Mike gathered a trio of coupés dated 1965, '66 and '70 – an 'S' version incidentally. He also often hits the road with a Signal Yellow '78 911SC backdated to look like a '73 RS Touring. This hot rodded tribute car runs a stout 3.0-litre engine with dual 40IDA Webers, in addition to a 915 5-speed gearbox and nicely tuned suspension.

Mike is quick to point out he does not have a favourite automobile because, after all, 'How do you compare a Mercedes Gullwing to a Messerschmitt?' Now, don't be led into thinking that his cars are "museum pieces' that remain Above: Porsche 911 RS clone runs a 3.0-litre engine. Collection includes all kinds of micro-cars, as well as a Zagato-bodied Lancia

Right: These are just some of the 1965–69 911s and 912s in the collection, all of which are stock

Below, left and right: More memorabilia, including a huge display of items relating to the Pep Boys chain of stores, founded by Manny, Moe and Jack...









idle... Not quite so, as he has two fulltime employees, Neil Torey and his son Luke, a talented duo which keeps the vehicles in tip-top shape and ready for outings. They include the Porsche-oriented Ramhorn Rally, California Mille, Rally Nippon and even a rally in Tokyo, Japan where he recently drove his green 1965 356C coupé.

Neil and Luke spend plenty of time in a large corner of the building converted into a clean shop area. They have all the tools necessary for most mechanical interventions, while occasionally embarking on a complete restoration. These might account to a couple a year at the most, due to their labour intensive nature.

Being a private museum, this place is not open to the public on a daily basis; yet, Mike is keen to share his collection during specific events, six to ten times per year. Some of them are hosted for charities and most involve car clubs. Visitors typically rave about the cars of course, but also their environment. Mister Malamut wanted his building to feel warm and cosy, with plenty of colours and memorabilia complementing the vehicles' eras. Gas pumps, neon and enamel signs, jukeboxes, radios, televisions... It's all there and everything works, quite a treat considering most of these appliances were manufactured long ago.

'I try to turn back the clock,' he admits with a smile. This statement certainly rings true when looking at the '50s kitchen he recreated, using period-correct decor that he remembers from growing up. One area also houses antique car products found at Pep Boys stores, whilst another corner gathers goodies from Bob's Big Boy restaurants – these two chains have been around since 1921 and 1936 respectively. Mike bought both these sets as complete collections, although everything else in the building was purchased by him and his always supportive wife Barbara, one item at a time, mostly via antique outlets and auctions.

You could literally spend days looking at the bits and pieces sprinkling this shrine. Alright, it would be difficult to miss the larger artefacts such as the cars, of course, or the gorgeous 1941 Chris-Craft motorboat... But there are hundreds, if not thousands of smaller objects, which tickle people's curiosity. Visiting Mike Malamut's museum is an absolute delight – a huge thanks to Mike for allowing us to discover what could be one of the most incredible private car collections in the United States. *CP* 

For further info, visit malamutautomuseumfoundation.org

Above: For the military fans, how about a 1944 Schwimmwagen or a 1942 Kübelwagen – or a 1945 Beetle? Or perhaps you'd prefer a Woodie?

Below left: 1941 woodenhulled Chris-Craft boat with its own unique display

Below right: If you're a fan of American muscle, how about some Corvettes, comprising a '67 roadster and two '63 split-window coupés?









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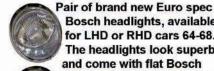






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Words: Alex Grant Photos: Andy Tipping

# KEPINGIT PERSONAL

Situated amidst one of Scotland's most breathtaking landscapes, Border Reivers is forging a global reputation for impeccable classic Porsche builds. And CEO, Tom Fitzsimmons, says there's plenty more on the horizon





Above: Kremer-prepped 911 is just one of several highend 911s that have passed through the workshop. CEO, Tom Fitzsimmons (left) has launched a global business from what is an idyllic location alongside Loch Lomond in Scotland

here's a long-established rule with classic cars that the most interesting machinery will often turn up in the places you're least expecting to find them. Those priceless collections hidden in old barns, the leading global specialists operating out of a tiny industrial unit, or perhaps – as is the case with Border Reivers – world-class custom and restoration work, against the backdrop of the stunning Loch Lomond shoreline.

Even with the postcard scenery, the contents of the workshop offer plenty of distraction. Row upon row of Porsche silhouettes, a spectrum of vivid colours and equally vibrant motoring histories, carefully curated by CEO, Tom Fitzsimmons. It's a business built on a life-long passion for cars, a meticulous eye for getting the tiniest details right, and the knowledge and relationships to attract clients from all over the world.

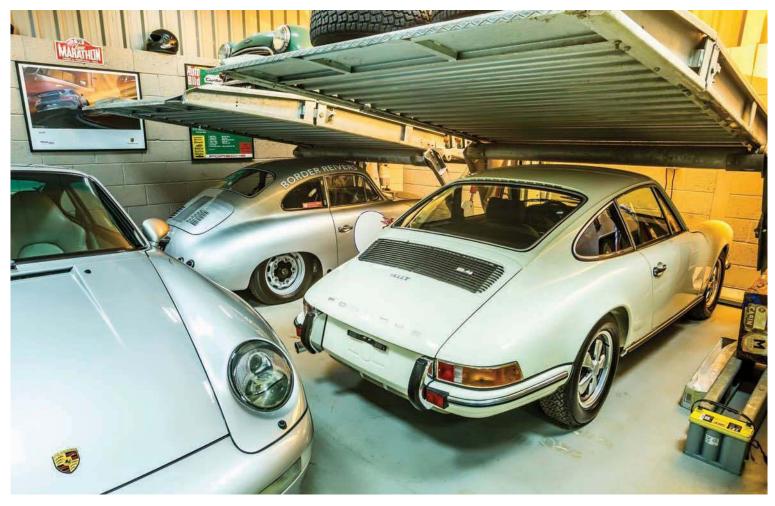
'We only buy the cars we love,' he explains. 'It's a consultative process, it's not just saying I've got such and such a car here. That's never interested me.'

Like a lot of classic Porsche enthusiasts, Tom's love of

air-cooled machinery is rooted in the Volkswagen scene, growing up building beach buggies and Baja Beetles while working as an apprentice coachbuilder at a high-end bodyshop in his home town of Glasgow. It was a formative job, giving him hands-on experience of the engineering that went into those early cars, but also fuelling aspirations to buy into Porsche ownership himself.

With an eye for quality, it's no surprise that his career choice would take him places. Having completed his apprenticeship, Tom took a three-year sabbatical with Porsche of Australia, before returning to Glasgow to take up a position with an independent repairer. Realising there was a gap in the market locally for the level of finish he could offer, he branched out and opened his own bodyshop in 1988, and quickly attracted some high-level interest.

'Within three years Porsche approached me, because we were buying more parts from them than their own bodyshop, and we were doing better work,' he says. 'They wanted to appoint me as an independent. We were good at what we did, but we didn't have all the trappings, so I met them at the Hilton and wined and dined them there. It was obvious that I



knew what I was talking about, and that was enough.'

Predictably, this fuelled rapid expansion. The business moved into a much larger workshop shortly afterwards, installing ten jigs and four paint booths and adopting what Tom says was a quality-focused, but almost production line way of working. At any given time, two cars could be painted, two more baked, while another pair were being unmasked ready for reassembly. By the time he parted ways with the company ten years later, it was an award-winning operation, and the largest Porsche-approved independent repairer in Europe, employing some 65 staff.

Aspirations to own a 911 had long since become reality; the Porsche crest has been a permanent fixture on his driveway since he bought his first, a 944, in the mid-1980s. While the business had been growing, he'd been restoring, racing and displaying classic cars in his own time. Shedding the day-to-day responsibilities of a major bodyshop allowed him to indulge even further.

In the early 2000s, Tom was becoming known for uncovering rare, climate-preserved European cars in the United States, and bringing them back across the Atlantic – hardly surprising when, in one case, be bought three 356 Speedsters at once. He'd formed the relationships to help source, inspect and ship them to Europe, and realised that there was potential to combine that strong contacts book with his factory-trained eye for flawlessly restored bodywork. And that's when Border Reivers was born.

This is a name steeped in history; derived from border-crossing medieval looters in the lawless lands between Scotland and England, later shared with Jock McBain's brutally successful race team of the 1950s, and now increasingly becoming synonymous with world-class restorations and custom builds, too. Bodywork takes place at a unit in East Kilbride, linked with trusted partners for trimming, chrome restoration and specialist parts. The private, consultative, sales and ordering process happens at a

Above: Stacking system allows Border Reivers to maximise space. No matter how much floor area you start with, you always end up needing more!

Below left: Tom Fitzsimmons founded Border Reivers in the early 2000s

Below right: Attention to detail is a number one priorty







Above: Tarmac rallying is big north of the border, so it comes as no surprise to find rallly cars tucked away, from 911s to an ex-Colin McRae Escort... separate location, opening out onto Loch Lomond National Park.

Customers are as diverse as the cars themselves. The showroom has hosted CEOs, motorsports engineers, sports stars and museum curators from all over the world, united in little more than a love of classic cars. Viewings are by appointment, and Tom prides himself on an ability to match drivers to the sort of Porsche that'll fit their expectations – this is not always the car they've come to look at, he says. Notable among its

clients is Mercedes-Benz World in Brooklands, which has a W111 220SE cabriolet on permanent display, following a full restoration at Border Reivers. Previous projects have been shipped as far as Australia.

For Tom, it's never just been a business, nor is it a case of

buying and selling vehicles and services carelessly. Get him talking about any car in the workshop and his affection for the

engineering and the tales it can tell is obvious. Everything that's sold here is passed on to its new owner with all of the relevant paperwork filed and presented in a branded leverarch folder – the idea, he says, is to provide a foundation for future owners to keep adding to. As the business has matured, customers are coming back to trade vehicles, add to their collections and to draw on Tom's advice.

'You can bring anything to me, and we can cover everything here' he says, lifting the decklid on an impeccably restored 911SC. 'We do full restorations, and if we can't do it in-house then I've been around long enough to have relationships in place with people who can. We want people

## 'PROJECTS HAVE BEEN SHIPPED AS FAR AS AUSTRALIA...'



Below: Variety is the spice of life. From 356s to G-Series 911, modern Turbo to, well, Land Rover and Saab. Border Reivers has it all...



to say we've done a nice job with their cars, but it's about getting it right. I'll always talk to a client – if it has an original engine, I'll explain why they should leave it.'

If anything, the business's workload is only likely to become more diverse. Having owned hundreds of Porsches between his own collection and the Border Reivers stock – countless 911s, a 550, and 14 356 Speedsters including his concours-winning right-hand drive '57 among them – the company is bringing its own sense of style to the global community. Tom recently shipped the company's first outlaw-style 356 to a client in Ireland, and a second is now underway. The aim is to provide the same concours-standard work, carefully preserving the original car but co-developing a bespoke design for each customer.

'In America, because (356s) are readily available and still reasonably cheap, they can take chances and cut them up whatever way they like. If you get a UK matching numbers

car then you're very reluctant to do that. So with that first car we had to be very clever with it – there's a body number on the bootlid, so we fitted a new skin to the original frame to preserve that.'

Tom is also looking to make use of the incredible scenery on his doorstep. The showroom is half an hour from Glasgow Airport, surrounded by winding local roads and breathtaking backdrops. There are few better places in the UK to get to know your new purchase, visually and dynamically. There's even on-site accommodation with secure parking and a view of the Loch to make a weekend of it. This is classic car buying as it should be.

From that perspective, the backdrop couldn't make more sense. Loch Lomond might well be famed the world over for its postcard views, but Border Reivers is making all the right moves to find just as prominent a spot on the global Porsche community's map. *CP* 

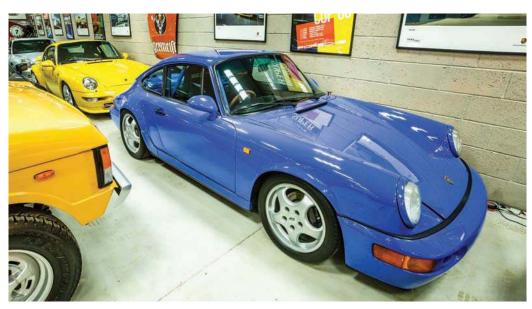
Above: With their own bodywork and paint facilities, Border Reivers can tackle every aspect of a restoration, from rebuild to panel repaint

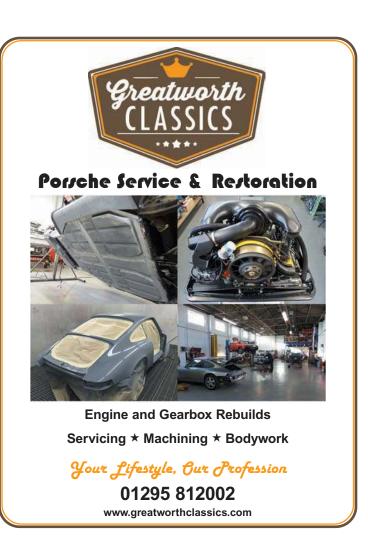
#### **Contact:**

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Below left and right: Like any good sales and restoration establishment, Border Reivers has its fair share of wall art... And some colourful stock, such as this 964 RS









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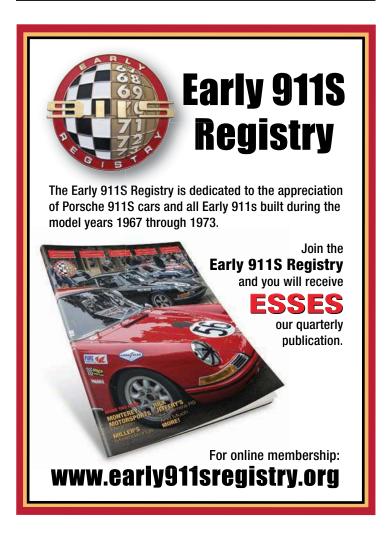
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#### 911



#### 1976 Turbo Carrera 3.0 LHD,

63,000 miles since new, 3 owners, full records, all original car, will work with a foreign buyer on shipping, PPI etc. This is a lovely car and I wouldn't hesitate to drive it anywhere, the car is located in Alberta, Canada, it runs and drives like new, more details and photos at turbocarrera.com, £135,000. Tel: 1 403 998 5006. Email: scott@turbocarrera.com (Canada). C64/022



964 RS Lightweight, 1992, GP White, triple grey/black interior, genuine 59K miles, concours condition, full service history, owned by me for 23 years, original paintwork/glass, original radio/tape player boxed, the original 17" mags (refurbished) boxed and never used, runs on 18" Speedlines, three volumes of history, one of only 71 RHD 964 RSL, 964 RSL Register, Porsche Certificate of Authenticity, Porsche club member 40 years, price £225K. Email: info@zorinenergy.com (Marlow, Bucks). C64/021



911 930 935 SC RS project VIN

9114101\*\*\*, 911 Coupe 2.7 of 1974 (first reg Nov '73), with huge stock of spares to choose from to build SC RS, 930, 935 etc. Engine 2700cc K-jetronic, gearbox 915. Started 13 years ago, completely dismantled, welded, sandblasted, prime coated, all parts are in boxes, some new parts (front wind shield, rubbers,

brakes, gaskets, etc), £19,935, please feel free for any further questions or pictures, 1 hr to airport. Tel: +49 16098 985969. Email: andgo@web.de (Germany). C64/010



911 (993) Turbo, 125K mileage with good service history. In Midnight Blue with Marble Grey ruffled leather interior, it's just had a major service and went through massive maintenance work on 2 February 2019, invoice costing a total of £13,249.20. It comes with every option on the list, full bookpack and toolkit etc, no advisories on last MOT test certificate, MOT till 10/10/2019, £89,995. Tel: 07435 454645. Email: kamgills@hotmail.com (Leeds). C64/011



911 3.2 Targa 1987 model, 73,400 miles, G50 gearbox, special order colour Cassis metallic, all old MOTs, 2 owners from new, present owner 16 years, full service history. Tel: 01582 472509, £41,950. Email: fishingsteve@hotmail.co.uk (Bedfordshire). C64/023



911 Carrera 3.2 Sport convertible, in excellent unrestored condition, for example the headlight bowls are perfect, no issues with the kidney bowls. G50 gearbox, Marine Blue with Linen leather interior, only 45,000 miles from new. Full service history, all MOT certs, Porsche CoA. I have owned the car since 2007, £44,000. Tel: 01245 223262 (Chelmsford). C64/009

912

# PORSCHE **912**

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Rare '68 912 5 speed with sunroof, ground up restoration, less than 2K miles on rebuilt engine, trans, gearbox. Exterior and interior near perfect, wooden steering wheel, Becker radio with 'wonder bar', California car, \$55,000. Tel: 818 599 5591. Email: alan@sbmco.com (USA). C64/027

#### 914

#### 914 GT perfect rustfree project car

+ spares, 916 steel flared fenders with huge stock of spares, car is 1972 and comes with US title and German customs' confirmation. Engine flat 4 cyl 'W' dismantled, gearbox not complete, some set of axles, second set of doors, lots of other spares double. Car and parts are located one hour to Munich airport in Germany, please ask for pictures, £6640, will help with shipping. Tel: +49 160 9898 5969. Email: andgo@web.de (Germany). C64/004

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#### 924

924S, 1986, 95,200 miles, MOT July 2019, serviced July 2018, Terra cleaned, Certificate of Authenticity, registered and valued by PCGB, all MOTs, new tyres 2017, always garaged, Coverdale Platinum Cover included, £7900. Tel: Julian, 07917 682770. Email: jooolsr@gmail.com (Derbyshire). C64/024



**924 Turbo,** one owner, non sunroof model, 1st January 1980, matching numbers, original bill of sale, extensive history file containing the original order acknowledgement letter from Porsche, 123,000 miles, Pasha interior, HPI clear, contact for more details and pictures of this 924. Tel: 07779 911911. Email: info@ paulfrench.co.uk (Warks). C64/029

#### **Parts**

Rare original steering wheels, wood rim, dished Nardi, 420mm, Porsche mushroom button horn push; black SWB 911 from '66. Also Becker Grand Prix radio 356B/C, contact for details. Email: theporscheanorak@yahoo.co.uk. C64/005

#### Miscellaneous



Number plate for sale, 'WAV 911X' number on retention, available now for £995 including transfer fee. Tel: 07801 077017. Email: thecarbarn8@gmail.com. C64/017

Porsche books, Porsche Road Tests Collection No.1 1965-1975, Brooklands Books; Porsche by Motorbooks Library by Shotaro Kobayashi, both in good condition, £20. Tel: 01590 670813. Email: robroberts7@hotmail.com (Hampshire). C64/006

Registration, 'JJI 9115' number on retention, £2000. Tel: 07810 058297. Email: s-blakeley@sky.com. C64/012 'JND 911', original 1948 registration number, ready for immediate transfer, £2880 inc transfer to your car. Tel: 01289 309930. Email: grahamedmundson@gmail.com.

Clearout by former Porsche 356A racer, see Keith Seume Oct 2002 'The Money Pit' article in 911 & Porsche World, clears barn of Porsche auto jumble and memorabilia. Email wayne.hardman@ btconnect.com for extensive list of items available. C64/026



911 & PW number 1 to current issue, all the magazines are within hardback binders and as such are in excellent condition, £150. Prefer collection from Bishopton but could deliver within 50 miles. Tel: 07980 455804. Email: j.knowles968@ yahoo.co.uk (Scotland). C64/020

911 & Porsche World issue no1 to current, 911 & Porsche World magazines, from the very first issue number 1 to June 2019, 300 issues. I have subscribed from the very start, house move necessitates sale, collection only from North Worcestershire, £100. Tel: 07971 573388. Email:

steve.plant@hotmail.co.uk. C64/019 'LEZ 911' registration for sale, until recently on my 964 but have now decided to sell the registration, on retention certificate, £3500, no VAT or other charges to pay. Telephone with offers. Tel: 07425 153194. Email: lezdawes@gmail.com. C64/015



Porsche medal - 956C, genuine factory issue medal to commemorate the fabulous 956 Group C sports racing car. Struck in heavy metal, weighs 23grms with a diameter of 40mm, with car image and model number on one side, the date 1984 and inscription Zu neuen zielen ('To aim for new') is on the obverse. Add it to your collection for £15, free postage in UK. Contact: Paul Davies at auto.writer@btinternet.com. C64/008



911 Targa 'TAR66A' registration no, 1963 private registration number to suit your new or classic 911 Targa model, 'TAR66A', £3500, sensible offers will be considered. Tel: 07786 021882. Email: bristolgs@virginmedia.com. C64/014



Porsche repro garage wall signs, 2ft repro garage wall sign for display on your garage or showroom wall, £50, I also have the same in 3ft x 28-inch. Tel: 07704 466754. Email: smithbarrington@gmail.com (Leics). C64/013



'TEL 993' registration for sale, Immediately available on retention certificate, £2500. Tel: 07885 108955. Email: john@ selectshopfitters.co.uk. C64/016

**911 & Porsche World,** from Jan '05 (#130) to Dec '08 (#177), excellent condition, £55 plus post, or buyer collects. Tel: 07958 126801. Email: suzukirigger17@yahoo.co.uk. C64/018



**'VFW 911'**, dateless classic registration number, on retention for immediate transfer, £2700. Tel: 07956 588819. Email: davidjoconnor@sky.com. C64/028



Porsche medal - 959, genuine factory issue medal to commemorate Porsche's first 'supercar', the 959. Struck in heavy metal, weighs 23grms with a diameter of 40mm. One side is an image of the car and the model number, the Porsche crest and the date 1985 is on the obverse. Add it to your collection for £15, free postage in the UK. Contact: Paul Davies at auto.writer@btinternet.com. C64/007

## PORSCHE RELATED CHERISHED REGISTRATION NUMBERS

**98 RSR 35 SYX** 300 RS 911 PYT 987 MD 911 FEG **J911 GTN** 911 MSD **REG 911E** CAR232A **S911 LER** 911 FJX **0005 CAY** 930 FF **POR 997T** XXX 911C P911 SCH **POR 911K** 911 RWS **POR 911N** 911 MPY **POR 911Y** 918 MHH 5918 POR 993 POR 993 RUF A993 XXX TON 997X 997 CSS **VNZ 911** 964 MC **WBZ 911** 964 GC RED 911H RSR 911T P993 POR CAB 911X **VOP 9115 RSR 911X B911 RSR E944 POR RUF 911T A911 DPG** 911 SCR **WAG 944S** RS18 POR RS68 RSR GT68 RSR RS68 POR All on retention certificates

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# **POR 82T**

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