



# PERFECTING A PORSCHE

MOST WOULD BE HAPPY WITH THE PERFORMANCE OF A STOCK-STANDARD PORSCHE – BUT THE OWNER OF THIS MUCH-MODIFIED 993 FELT HE COULD GO ONE BETTER THAN THE FACTORY

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MARK'S ABSOLUTE PASSION, COMMITMENT AND TREMENDOUS KNOWLEDGE OF THE BRAND BEGAN WHEN HE WAS ABOUT 12 YEARS OLD

**W**ith a history stretching back almost five decades, the incredible 911 has prospered in the face of its most scathing critics, rewarding its owners and remaining in demand through its various guises — the 930, 964, 993, 996 997 and now, 991. The quirky rear-engined coupé is one of the most recognisable car shapes on the planet, and has amassed a global, cult-like following — whilst its unique body style, chassis layout and racing pedigree remain the heart and soul of Porsche's brand image.

Today, the debate continues as to which is the best of the breed, but the one 911 model that clearly stands head and shoulders above the rest is the 993. Porscheophiles around the world agree that Porsche got the 993 generation just right, with an ideal mix

of technology and the classic, 911 air-cooled heritage — in this instance, in the guise of a 3.6-litre flat-six.

**IMPROVING PERFECTION**

Improving on perfection is not a task for the faint-hearted, but when the owner of our featured Porsche 993, Mark Saville, embarked on that journey, he was not to know he would end up with one of the finest 993s to be found anywhere. Mark's quest for perfection included 100 series changes and 400 individual component changes, culminating in a Porsche that fits his exacting requirements for spirited driving or light touring. Mark's absolute passion, commitment and tremendous knowledge of the brand began when he was about 12 years old. His best friend's father owned a (then-new) 924T, which he imported from the UK. Later he replaced this with a 911 Carrera 3.2, which he

raced, and he won the very first Porsche Bridgestone Series in it (back when that was a largely casual event). This all took place during Mark's most impressionable years, and the experience of riding in the Porsches etched themselves well and truly into his mind — he made a promise to himself that one day he would own his own Porsche.

In the mid 1990s, Mark distinctly recalls walking down Kings Road in Chelsea and seeing his first 993. Living in London for a few years, he had, of course, seen many 911s, but somehow this one was different, and it immediately took his interest. The flowing organic lines, coke-bottle shape and wide, muscular rear fenders all worked so well with the metallic dark blue paint that Mark instantly knew he needed to find a 'proper' job and start saving! He eventually returned to New Zealand, and after six years of hard work saving was finally in a position to purchase his first

993. Interestingly, none of Porsche's subsequent developments — leading to the 996 generation — had interested him in the least. So, in early 2001, a suitable 993 was identified and purchased from Continental Car Services. The car was one of the first half-a-dozen RHD production vehicles produced by the factory, and was built in November 1993. It was first registered in February 1994, and interestingly, as New Zealand was still selling leaded fuel at the time, the car was fitted with the M150 option from factory — meaning it had no lambda sensors or catalytic converter.

The 993 became Mark's daily driver for the first few years, but was eventually relegated to the status of weekend warrior. During a stint in Wellington the Porsche was exercised regularly through the Rimutakas, over to Greytown and Martinborough. As he was single back then, the car was also used for dating his future wife, and Mark remembers that their first weekend away together was in Martinborough via 911!

Holidays in the 993 were encouraged, and over the years it has travelled the length and breadth of the North Island on more than one occasion, even having been driven along Hicks Bay Beach in the East for a picnic, and Coopers Beach in the north for a wedding proposal!

The upcoming wedding seemed like an ample excuse to get the car tidied up in anticipation of using it as 'getaway' transport, so in 2005 it was repainted by Ray Hasler. Whilst the car was off the road, Mark decided to incorporate a few little extras — including a factory carbon-fibre three-spoke steering wheel, gear shifter, parking brake and interior door handles. The 993 was completed prior to the big event, and ended up featuring as part of the invitation and in a number of the staged wedding photographs. >



## RED SPLASHES WERE USED TO MAKE THE CAR 'POP' AND ADD AN INTERESTING DIVERSION TO THE MONOCHROME BASE COLOURS

Like marriage, Mark's commitment to his 993 is complete — and he intends to own it for the rest of his life. His emotional equity and investment in this car was such that even his experiences with the other hard-core machinery he also owned during this time, such as a 993RS and 996.1 GT3, only lent him perspective for when it came time to plan what he would term his 'Anniversary Carrera' project. Mark says, "It's the complete enjoyment from owning the 993 that means every time driving it seems an occasion to celebrate, thus the 'Anniversary' designation that's my on-going currency in the ownership experience."

### TRADITION — FUTURE

Mark's brief for his 993 was simple, yet undeniably challenging. The ultimate goal was to build a lightweight, naturally-aspirated car, which retained the lines of the factory 993 Carrera coupé, whilst enhancing the performance and handling to beyond the limits set by the RS variant of the same machine, plus affording passengers the luxury of a 993 turbo. In contrast to performance, his requirements for such a machine also included visual enhancements both externally and internally to a standard commensurate with the factory's Exclusive Programme, whilst remaining tastefully executed and unique.

Mark's vision projected a driving experience as organic as the

car's sculptured lines — providing the driver and occupants with not only a pleasant environment for long-distance travel, but also the thrill and exhilaration of a race car when presented with fast and demanding back roads.

Appropriately, the project was initiated on the tenth anniversary of Mark's ownership of the vehicle, and a team of more than 20 specialists would be involved over a two-year period to complete the task.

Aesthetic elements of the 1993 Porsche Boxster Concept car largely influenced Mark's design philosophy for the Anniversary's exterior. Grey, colour-coded, three-piece Speedline-style road wheels complement elements painted the same colour at both the front and rear of the car which, combined with a low and aggressive stance and the use of unique but discreet badging, are all key elements in the final look of the project.

Subtle and tasteful became the mandate. Steel Grey metallic, taken from the factory C2S Anniversary Edition colour palette, was chosen to contrast against the factory Midnight Blue metallic paintwork. Red splashes were used to make the car 'pop' and add an interesting diversion to the monochrome base colours. The door mirrors were colour-coded Steel Grey to bring the design language up to date, and the Classic Grey interior was treated to highlights of carbon fibre and aluminium. Finally, a unique 'Anniversary' decal was applied. >



THE CONCEPT OF A MECHANICAL SPORTS WATCH WAS USED AS THE DESIGN THEME — TECHNICAL WHILST GIVING THE IMPRESSION OF QUALITY AND DURABILITY

### UPGRADED PERFORMANCE

To enrich the driver experience, and in keeping with the Porsche's subtle but aggressive new exterior styling, the car's standard flat-six 3.6-litre engine received a host of high-tech upgrades, including such items as sports camshafts with 1.8mm lift, plus solid lifters and adjusters to support higher rev limits. The injectors were upgraded to higher-capacity Bosch units and the vehicle was fitted with a MAP sensor and dual cone air filter on a custom intake pipe. Mark also decided to replace the factory computer with a Link G4 Xtreme ECU to control all engine management functions, allowing infinite tuning of engine characteristics via an intuitive PC interface.

The engine is cradled in a reinforced carrier, and power is transmitted by a 993RS lightweight flywheel and clutch to the rear wheels via a Porsche Motorsports 40/65 limited-slip differential. Power is conserved by the use of an RS dual crank pulley and single-belt alternator hub.

These engine performance upgrades push the Carrera Anniversary to 230kW (308bhp SAE) at 6400rpm — 30kW more than the factory engine and 300rpm higher up the rev range. The engine is now limited to 6800rpm (an increase of 100rpm). Peak torque of 366Nm arrives at 5500rpm, 37Nm more at 500rpm higher than the factory specification.

For a more performance-enhanced gearshift, the unit was shortened and made more direct by the use of 993 RS Cup ball-jointed shift components. The engine mounts are from the 993 RS, while the transmission mounts are from the 993RSR,

thus ensuring that with the LWFC package the driver experience through the major controls is very vivid and involving. The front bumper of the Anniversary is the same item fitted to the 993 Turbo/S models to provide superior component cooling.

The exterior aesthetics are further enhanced with colour-keyed Techart brake ducts and integrated HID fog lights in addition to upgraded HID headlights. Aerodynamics have also been improved with the use of RUF A-arm pillar aero inserts, which also drastically reduce wind noise at cruising speed. The Carrera emblem has been painted Steel Grey and the wheel centres feature coloured centre caps with custom hand-laid silver and red crests and, to finish off the exterior, Mark installed a custom silver bonnet crest and Porsche Motorsound exhaust tips.

### FINAL EMBELLISHMENTS

In keeping with the car's overall theme, Mark lavished the same exacting attention to detail to the interior of the 993. The concept of a mechanical sports watch was used as the design theme — technical whilst giving the impression of quality and durability. Carbon and aluminium were chosen as the key elements. Leather, Alcantara and vinyl were finished in Classic Grey, and the instruments were customised by VDO in Classic Grey with the Anniversary logo, and wrapped in billet alloy. Custom-built carbon-fibre seats were specially built for the car, weighing only 12kg each and trimmed with deviated stitching.

This was an interior makeover so comprehensive and detailed that over 50 additional items were tailored or changed, with over



100 man hours invested to get the interior perfect. For example, Mark explained that all interior lighting — including gauges, controls and instruments — have been changed to modern 'warm white' LEDs especially selected to ensure improved illumination, durability and performance.

A fire extinguisher was also fitted on a quick-release alloy mount attached to a Bray Krause bar under the passenger seat. The factory air conditioning remains, along with the sunroof, and rear seats for luggage and occasional small passengers. The stereo head unit has been upgraded to a limited-series audiophile unit by Kenwood, and drives upgraded Boston Acoustic speakers and crossovers, which are housed in factory apertures.

Final embellishments include factory red seatbelts which key into other elements of red present inside and outside the vehicle, including the custom enamelled crest on the upgraded three-spoke carbon and leather steering wheel. Drilled, black-anodised driving pedals complete the tastefully upgraded appointments.

Another extremely important feature for Mark's 993 was the handling department, and this also received the attention to detail befitting such a build, providing adjustability and flexibility of use for both highway and track use.

For starters, the rear subframe bushes were replaced by a solid billet alloy shim tilt kit, which removes some of the ambiguity inherent in the factory configuration when cornering or under load at the limit. The A-arms were re-bushed with urethane items, and the front factory tie rods were dowel-pinned to reduce flexing and provide endurance and improved tracking. The suspension

was further revised, with Bilstein PSS10 adjustable coilovers allowing a variety of rebound settings to be easily set. Further tailoring of understeer and oversteer can be accomplished via the factory 993RS adjustable front and rear sway bars. A carbon-fibre strut-brace reduces chassis flex and, finally, the unsprung mass was reduced by fitting custom lightweight 18-inch Kerscher RS three-piece racing wheels shod with the latest Bridgestone ultra-performance tyres, and by removing the brake backing plates.

On the subject of braking, Mark chose to retain the factory hardware, including the calipers. Stainless steel braided brake hoses were deployed, and additional ventilation for the front units via a front bumper was installed by way of a TechArt brake cooling kit. According to Mark, this configuration, in conjunction with the car's reduced weight, proves more than adequate for fast fade-free road and track duties.

During the build, Mark was only too aware that a large contributor to the performance index of any vehicle is weight — and his 993 had 90kg removed to improve handling, braking and acceleration. Key areas addressed included the use of carbon-fibre seats, carbon transmission and fuel pump covers, the removal of the engine heater blower unit and its replacement with carbon bypass pipe, exhaust weight reductions and a variety of other weight-saving measures. The Anniversary is also fitted with a lightweight AGM-type battery enclosed in a Rennline billet alloy frame with a race-style power cut-off switch.

### PORSCHE PARADE

The project was finished in time for the 993 to take part in the 2012 Porsche NZ Parade — a milestone in the car's life and, indeed, for Mark. Having completed the Porsche to his satisfaction, it seemed such a waste not to thoroughly road test the car's many trick performance parts — so the decision was made to enter the 2012 Targa NZ Tour. The Porsche acquitted itself well on this endurance event, and subsequently was set up for track work at Hampton Downs.

To date, Mark's 993 has demonstrated itself to be a great tourer as well as a competent competition-cum-fast-drive car. It has also proven to be reliable and effective — although Mark quips that it is definitely the driver who is holding back the car's full performance — but he reckons he's starting to do something about that. >



He is in no doubt that his 993 has met and exceeded the original brief whilst still leaving room for further improvements or enhancements, and I wasn't surprised to learn that, since our photo shoot, he has embarked on a further stage of development. That involves such

items as a bolt-on Heigo half roll cage, monoball top mounts, front camber plates, lightweight carbon-fibre door cards and RS front uprights and brakes with an auxiliary oil cooler. Some projects, it seems, never end.



### PORSCHE'S AIR-COOLED ROAD WARRIORS

The Porsche 911's line of development is so long and convoluted, that beginners often find themselves somewhat confused by all the changes in model designations since the original incarnation of the Butzi Porsche-styled 911 appeared in 1964. So, pay attention — here's a quick rundown of the 911's air-cooled evolution:

1964-'67: 911 and 911N	The original, classic 911, powered by 1991cc flat-six. The 911N was stripped-out home-market model
1967-'69: 911L	Replaced earlier models, Sportomatic became option
1965-'69: 912	Poverty pack 911 with old 356 four-banger
1966-'73: 911S	Early high-performance derivative, engine progressively enlarged from 1991cc to 2195cc, then 2341cc along with remainder of the 911 range
1967-'73: 911T	The 'T' stands for Touring — not Targa; the open-top Targa model was an option since the original 911; detuned engine with carbs rather than fuel injection
1968-'73: 911E	Superseded the 911. Self-levelling suspension
1972-'73: Carrera RS	The first 911 with the 2.7-litre flat-six and made as a homologation special; most come with distinctive ducktail spoiler
1973-'77: 2.7 Carrera	All 911s received 2.7 engine in 1973 — three-car range of 911, 911S and Carrera
1975-'89: 930 Turbo	Extended wheel arches, massive rear wheels and whale-tail spoiler. Turbocharged 2993cc flat-six allowed prodigious performance; engine up to 3.3-litre from 1978.
1975-'76: 912E	Upgraded entry-level model, only briefly available in the US
1976-'77: 3.0 Carrera	Effectively, the 930's 2993cc engine — minus turbo — became standard for all 911s
1978-'83: SC	Revised 911 reviving the 356's old SC designation
1984-'89: 3.2 Carrera	The final version of the original 911 series, now with a 3.2-litre flat-six
1989-'93: 964	All-new body — although 911's ancestry still plainly evident; initial 3.3-litre engine enlarged to 3.6-litre in 1991
1990-'94: 964 Turbo	High-tech, 3.3-litre flat-six, turbocharged and rare
1994-'97: 993	3.6-litre engine — the last of the air-cooled cars
1995-'97: 993 Turbo	Twin turbos and all-wheel drive

[The water-cooled 996 Series cars were introduced in 1998]

