



50 years of the Porsche 911 (G-Series) – the evergreen Porsche sports car

30/07/2024 Porsche had been producing the first-generation 911 for 10 years when, in 1973, the engineers in Stuttgart radically revamped the sports car

1973 was an eventful year with the oil crisis, the Watergate scandal and the Yom Kippur War. Yet there was some good news to be heard precisely 50 years ago: the Bahamas celebrated their independence from the UK – and Porsche unveiled the second generation of the 911 ...

Porsche had been producing the first-generation 911 for 10 years when, in 1973, the engineers in Stuttgart radically revamped the sports car. Beyond the modified design, it was the technology in the G-Series, as the new 911 generation was dubbed, that set it apart from its predecessor. What no one could have guessed 50 years ago, though, was that Porsche would go on to produce the G-Series all the way through to 1989, for almost 16 years. Indeed, it turned into a record-breaking run to add to the already record-rich annals of Porsche history.

The most striking features of the redesigned body were the bellows-style sections on the sides of the bumpers. These were a technical solution to stricter safety regulations in the US that required all new vehicles to be able to withstand an impact at 5 mph (8 km/h) without sustaining damage, whether travelling forwards or backwards. Porsche was obliged to react to these new rules and developed the characteristic bellows bumpers, plus the rubber lip on the car's nose. These could be compacted by up to 50 millimetres without damage occurring to any important vehicle components. In the US versions, the impact energy was absorbed by elastic impact absorbers that Porsche offered as an option in all other markets. Porsche slightly modified the characteristic rounded front wings with their integrated upright headlight. At the back of the car, a red light-strip with the Porsche logo between the rear lights distinguished the new 911 model. Standard three-point seat belts and front seats with headrests built-in offered front passengers greater safety in an interior that was now also more spacious. Porsche integrated a large impact surface into the new sports steering wheel, while new storage compartments with hinged lids were fitted in the doors. The 911 Carrera featured a three-spoke leather steering wheel and electric windows.

Although the more modern design and wide bumpers were not initially well received by all Porsche fans, the changes were overdue. The considerable number of chrome parts on the first-generation 911, in production since 1963, had come to seem rather outdated. The 1970s called for a more dynamic, contemporary look instead of chrome. In addition to the front and rear bumper bellows, the update was underscored by the 4,291-mm-long body – 144 mm longer than its forerunner. Changes notwithstanding, Porsche managed to retain the classic 911 silhouette for the new generation. Evolution, not revolution.

The new 911 benefited particularly from technical changes under the engine cover. From August 1973, Porsche equipped every 911 destined for Europe with a 2.7-litre six-cylinder engine, with power outputs from 110 kW (150 PS) or 129 kW (175 PS) to 148 kW (210 PS), depending on the variant. The price: 26,980 Deutschmarks for the 150 PS 911. By comparison, the standard 34 PS VW Beetle cost 5,650 Deutschmarks at the time. From 1975, Porsche also produced a four-cylinder version for the US called the 912 E, starting at 10,845 US dollars. The Porsche 911 Turbo, available from 1974, was in a league of its own when it came to horsepower, with 191 kW (260 PS). It cost 65,800 Deutschmarks.

The market launch of the second-generation 911 came at an inauspicious time, with the oil crisis in full swing in the autumn of 1973. Porsche's overall orders declined by 40 per cent in 1974 as the German automotive market collapsed. The 911 posted a slightly less precipitous decline of 30 per cent year-on-year – but this was still a grave challenge for the sports car manufacturer. To make matters worse, the German federal government imposed a 100 km/h speed limit on autobahns, and banned driving on Sundays. Customers and potential buyers were skittish and uncertain about the future on German roads.

Yet Porsche was undeterred with its plans for the 911, modifying the car in carefully considered steps over the following years. The 911 Turbo, the next technological highlight and the forthcoming flagship model, was presented in October 1974 at the Paris Motor Show. The 3.0-litre fuel-injected

turbocharged six-cylinder generated 260 PS and was released onto the road as a coupé in March 1975. In the years to come, 'Turbo' would come to be synonymous with Porsche, sports cars and power. Visually, the new car was distinguished from the other 911 models by bodywork that was 12 centimetres wider, and a distinctive wide rear wing on the glass-fibre reinforced engine cover.

Porsche modified, or rather further optimised, the 911 on an almost yearly basis. In 1975, Porsche enhanced the durability of its cars. In addition to the cavity preservation measures in place since 1969, the body and floorpan of the 911 were now made of hot-dip galvanised sheet metal – ideal rust-protection and a major step towards sustainability.

In 1976, the 911 Carrera 3.0 and 911 Turbo came with automatic heating control as standard, which was also offered as an option on the base 911. Porsche also improved theft protection and equipped the Carrera and Turbo with power brakes. Until August 1977, Porsche sold the 911 with a 2.7-litre six-cylinder engine and a narrow body. With the introduction of the 911 SC in 1977, Porsche adopted the widened wings of the previous range-topper of the naturally aspirated 911 models, the Carrera. The Carrera name was then discontinued. At least it was in its full form as the SC designation was short for 'Super Carrera'. Some media, assessing the two remaining 911 variants, heralded the end of the sports car. How wrong they were ...

Despite the difficult economic situation, Porsche remained committed to the 911, continuing to develop new model variants. In addition to the 911 coupé, in 1973 Porsche presented the 911 Targa as a safety-conscious cabriolet, and a year later Porsche unveiled the 911 Turbo coupé in Paris. In addition to the second oil crisis in 1979, the rear-engined model was also beset by internal competition. A new generation of Porsche sports cars based on the transaxle principle, where the engine is mounted at the front and the transmission sits on the driven rear axle, was set to succeed the 911. But the four-cylinder 924 and 944 model ranges, and the eight-cylinder 928, could not convincingly replace the charisma of the 911 and its air-cooled boxer engines.

So Porsche opted for a change in strategy and the future of the 911 was safe for now. In 1982, a Cabriolet version joined the coupé and Targa for the first time, an important step for the high-volume US market. This was followed in 1989 by the 911 Carrera Speedster. This was a farewell to the second-generation 911 and 2,103 examples were built with a Turbo-width body, with just 171 export models featuring a narrower body design.

The G-Series was built between 1973 and 1989 and, during that 16-year run, Porsche manufactured 198,496 of them. Technically, the G-Series designation actually only applies to the 1974 model year. A year later, the 911 was called the H-Series internally, the J-Series in 1976, the K-Series in 1977 and so on. From 1980, Porsche internally designated the cars as the A-Programme, followed by the B-Programme in 1981, with the letters increasing alphabetically for every new model year. But the G-Series name took hold to signify the second of what has become eight generations of 911.

The end of the G-Series also brought an end to Porsche's body production in the former Reutter plant, where final assembly of the Mercedes-Benz 500E would shortly commence. A successor to the G-

Series was already on the stocks in the form of the 964.

Engines and gearboxes

To power the cars, the Stuttgart-based manufacturer opted for a 2.7-litre, air-cooled petrol flat-six. This was the engine that had previously been used exclusively in the hardcore 911 Carrera RS 2.7 version of the original 911. The initial power figures for the 911 were 110 kW (150 PS), 129 kW (175 PS) for the 911 S, and 154 kW (210 PS) for the 911 Carrera. A four-speed manual gearbox was fitted as standard, with a five-speed gearbox available as an option.

For the 1976 model year, the displacement of the 911 Carrera 3.0 grew to 3.0 litres, and the engine now produced 200 PS. Porsche sold the 911 SC as a 3.0-litre car from 1977 onwards. Initially, the engine generated 132 kW (180 PS), increasing to 138 kW (188 PS) from September 1979 and reaching an impressive 150 kW (204 PS) in 1980.

Fitted with the base engine, the 911 could hit speeds of up to 210 km/h in 1974, and went from 0 to 100 km/h in 8.5 seconds. The 175 PS 911 S sprinted to 100 km/h in 7.6 seconds, topping out at 225 km/h. The flagship model, the 911 Carrera, boasted a maximum speed of 240 km/h and took just 6.3 seconds to reach 100 km/h from a standstill.

From 1974 onwards, the 3.0-litre boxer engine in the rear of the 911 Turbo (the internal designation for which was 930) set the performance bar significantly higher still. The turbocharging technology, borrowed from the world of motorsport, initially gave the super sports car 260 PS. From 1977, it was boosted by an additional intercooler and an enlarged displacement of 3.3 litres. As a result, it then pushed out 300 PS. This resulted in performance figures that were all but unprecedented in the mid-1970s. 5.4 seconds from 0 to 100 km/h sounded just as incredible as its top speed of up to 260 km/h. The 911 Turbo was equipped with more powerful brakes derived from the 917 racer. Porsche used the four-piston fixed-calliper lightweight-alloy brakes for the first time in a series-production vehicle in the 911 Turbo.

For the 1984 model year, Porsche reverted to calling the 911 SC the 911 Carrera as it had done in the early 1970s. The six-cylinder engine, meanwhile, was enlarged to 3.2 litres and produced 231 PS when not fitted with a catalytic converter. For the US models, with their stricter emissions regulations, Porsche installed a catalytic converter, resulting in a power figure of 207 PS. For reliable and clean fuel injection, a digital engine electronics system with L-Jetronic injection and a mass air flow sensor replaced the previous K-Jetronic set-up. A resonance intake manifold was fitted to achieve better filling of the cylinders at high speeds, which also reduced fuel consumption. With proper care and regular maintenance, the 3.2-litre engine was considered almost indestructible. Cars doing well over 300,000 kilometres without an engine overhaul were the rule rather than the exception.

Drivers in the 911 changed gears manually with four- or five-speed gearboxes as standard, while the 911 Turbo had a four-speed gearbox. As an optional extra, Porsche offered the three-gear Sportomatic

semi-automatic from August 1975. The G50 gearbox and a hydraulic clutch were the biggest powertrain innovations in 1986. Shifting into reverse was now done with a movement of the shift lever to the front left instead of the bottom right as was the case previously.

Model variants

During the G-Series' 16-year production run, Porsche offered a range of variants for the 911. In the early years, the models were called the 911, 911 S and the 911 Carrera (initially the top of the range). The 911 Turbo joined the ranks in 1974. In July 1976, Porsche changed the designation of the 911. From then on, there were two variants, the 911 SC and the 911 Turbo. A third variant followed in September 1981, when Porsche presented the concept study of the 911 Cabriolet. Customer deliveries in the form of the Porsche 911 SC Cabriolet followed in January 1983. It was the first time in 18 years that the Porsche line-up had featured a convertible.

Six months later, Porsche renamed the 911 SC as the 911 Carrera, while the 911 Turbo retained its name. Porsche offered an optional rear spoiler for the 911 from the 1983 model year onwards – a standard feature on the 911 Turbo. In conjunction with the popular, and often retrofitted front spoiler, the rear wing was recommended for aerodynamic reasons.

Starting in the 1983 model year, the Porsche repair department offered the Slantnose version for the turbo-width body. Instead of the rounded wings with integrated headlights, the new front end featured flat wings with the pop-up headlights from the Porsche 944. The conversion was carried out at the factory on the body-in-white of newly ordered vehicles, thus preserving all vehicle warranties.

From February 1987, particularly power-hungry customers could also order the Porsche 911 Turbo in the Targa and Cabriolet body variants. In September 1987, Porsche presented the prototype of the 911 Carrera Speedster at the IAA motor show in Frankfurt. It would be produced from the beginning of 1989 until the end of G-Series production in July 1989.

A number of special editions celebrated the brand and model over the car's long production run, including the '25 years of Porsche Stuttgart-Zuffenhausen' model, the '50 years of Porsche' model, the '250,000 911s' model and the 911 Carrera Club Sport model.

Innovations

G-Series innovations included the bellows-style bumpers, which could absorb an impact speed of up to 8 km/h. From 1975, Porsche protected the body and floor panels against rust by using hot-dip galvanised sheet metal. Along with the cavity preservation introduced in 1969, extensive rust protection became a standard feature. From the 1981 model year, Porsche extended the long-term warranty against corrosion to seven years, and increased it further to 10 years with the 1986 model year. This made Porsche the first manufacturer to offer a 10-year warranty against corrosion. Porsche

presented another innovation with the Group B concept at the IAA Frankfurt motor show in 1983 – a super sports car with a turbo engine and all-wheel drive. Porsche manufactured the series-production version of this as the 959, starting in 1985. For the 911 Cabriolet, Porsche developed an electric convertible roof and offered it from April 1986. For the same model year, Porsche also sold an engine with a catalytic converter for the German market, which ran on unleaded petrol and generated 207 PS. From the 1987 model year onwards, this engine produced 217 PS.

Design

Rounded wings, upright headlights and a stylish rear to the car. The Porsche G-Series, built between 1973 and 1989, still featured the classic overall shape of the original 911. With a length of 4.29 metres and a wheelbase of 2.27 metres, there was room for two adults in the front and space for kids or plenty of luggage in the back.

Porsche's head of design at the time, Anatole Lapine, head of the Style Porsche design studio from 1969 to 1988, was not a fashion follower, but a serial trendsetter in his own right. The chief designer designed the bellows bumpers and impact surfaces of the American version. Under his influence, the 911 changed: less decorative chrome, matt black window frames and door handles, and a rear spoiler framed by deep black rubber.

As with its predecessor, the body of the new Carrera had been widened by a total of 42 millimetres across the rear wings to accommodate the larger tyres. Where regulations allowed, the Carrera was also equipped with a front spoiler lip and a distinctive wing on the rear engine cover.

Porsche 911 G-Series in motor racing

Ever since it was founded, Porsche has focussed on motorsport and dynamic driving. For the second generation of the 911, engineers also planned competition cars for the track and for rallying. After the successful 911 Carrera RS 2.7, Porsche once again developed 911 racing cars based on the G-Series, with a wide rear end, wide track and large spoilers, such as the 911 Carrera RS 3.0 and 911 Carrera RSR 3.0.

Two works-team Porsche 911 SC models started in the 1978 East African Safari, the third rally round of the 1978 World Rally Championship. The rally cars took second and fourth place, putting Porsche in the lead in the manufacturers' standings.

In years to come, some private teams would continue to rally the G-Series. Walter Röhrl entered the 1981 San Remo Rally with a 911 SC and put in a sensational run until a broken driveshaft took him out of action. In 1983, Jürgen Barth competed in the Monte Carlo Rally with Roland Kussmaul in a 911 SC and finished 11th overall.

In 1983, Porsche issued specifications for a new competition vehicle, the 911 SC/RS 3.0, internally designated the type 954. Description: "Based on the 911 SC vehicle, a road-legal competition vehicle was to be developed as an evolutionary series. This vehicle served as the base type for motorsport use. The homologation requirement for evolutionary series such as Group B vehicles had to be taken into account." Since 1982, Group B had been regarded as the cutting edge for GT cars within the FIA regulations for rally cars.

In 1984, Porsche therefore introduced the 911 SC/RS specifically for rallying rather than the track. And with success: Porsche won the Middle East Championship in 1984 and 1985. Henri Toivonen drove the 911 SC RS to victory on the Costa Smeralda and in the Ypres 24 Hours Rally in Belgium. The 911 Carrera 3.2 4x4 Paris Dakar scored its biggest victory as a Type 953 at the 1984 Paris-Dakar.

But the rear-wheel-drive six-cylinder naturally aspirated boxer had no answer for the superiority of the Group B vehicles with all-wheel drive and turbochargers. So Porsche developed a super-911, the Porsche 959. It competed in the 1986 Paris-Dakar desert rally and won. But the rally car came too late for use in Group B, which came to an end in 1986 in the wake of serious accidents. A total of 292 of the technology platform and super sports car, the 959, would be built through to 1988.

MEDIA ENQUIRIES



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