Lightweight: The gear knob of the 908/03 Spyder

09/05/2025 In the Porsche 908/03 Spyder from 1970, a small component ensures the last few grams of weight savings: a gear knob made of mahogany.

Starting in the mid-1960s, the development credo at Porsche was that lightweight design is everything. One vehicle that took lightweight design to the next level was the Porsche 908/03 Spyder built in 1970, which caused quite a sensation in two prestigious races: the Targa Florio in Sicily and the 1,000-kilometer race at Nürburgring Nordschleife. A look inside the cockpit below the wind deflector reveals the sheer attention to detail: the filigree chassis tubes, the steering wheel, the tachometer, the seat shell, and the pedals. Lightweight materials like Plexiglas, aluminum, plastic, and a little leather have been used everywhere. And wood, in the form of a mahogany knob atop the gear shift.

Only 24 grams

“The car’s gear knob measured around 33.5 cubic centimeters in volume,” explains 92-year-old Peter

Falk, who was in charge of advance and motorsport development at Porsche in the 1960s. The material was selected on the basis of its specific weight. Aluminum (2.7 g/cm³), magnesium (1.8 g/cm³), and plastic (1.4 g/cm³) are much heavier than mahogany at around 0.7 g/cm³. The special structure of the wood also makes it a unique material. While the same gear knob in aluminum would weigh 90 grams, the mahogany gear knob of the 908/03 only weighs 24 grams, which represents weight savings of nearly 70 percent.

“Ferdinand Piëch was responsible for that, of course,” explains Peter Falk. “He introduced countless lightweight design measures.” Piëch joined the company in 1963 and was appointed Head of Development in 1965. In addition to optimized aerodynamics, he also firmly believed in the effectiveness of lightweight design, which always posed an enormous challenge for Porsche developers. A six-cylinder racing engine with an increase in performance of 80 PS and a drop in weight of around 50 kilograms? An ignition switch with a decrease in weight of 14 grams? Is the fuse box lid absolutely necessary? Regardless of the vehicle that Ferdinand Piëch presented for approval, every last gram counted. The same went for the 908/03, which he christened “Weasel” due to its light weight and agility. The mahogany gear knob is the perfect example of the lightweight philosophy of that time.

Ultra-lightweight design also for long-distance vehicles

The wooden ball was present in the cockpit of many race cars up to 1971. With the minimal weight eliminated in the European Hill Climb Championship in 1967, things began to heat up in the field of lightweight design. Developers of the 908/03 faced a unique challenge: to apply the ultra-lightweight design of the hill climb cars to long-distance vehicles. With a three-liter, eight-cylinder engine, the 545-kilogram and 257 kW (350 PS) 908/03 Spyder competed in the 1970 Targa Florio – and won. The nimble car was successful again at Nürburgring, thanks in part to the mahogany knob, which is much like a common thread through the history of Porsche and always appears in applications in which every gram counts.

The lightweight philosophy lives on to this day even off the racecourse. And time and again, Porsche places a wooden gear knob – now made of walnut – atop the manual transmission's gear shift as a distinctive feature. Take, for example, the Carrera GT, the mid-engine super sports car from 2002, or the current 911 Carrera T (992), which combines lightweight design and a performance-focused chassis with a manual transmission to create a highly emotional driving experience.

Info

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