Roadster + racing engine = driving pleasure

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The heart of a Porsche beats right behind the driver: The naturally aspirated 4.0-litre flat-six engine is mounted between the seats and the rear axle, making the new 718 Cayman GT4 RS (**718 Spyder RS (WLTP)*:** Fuel consumption combined: 12.7 l/100 km; CO_2 emissions combined: 288 g/km; CO_2 class: G) the most powerful sports car in the history of the popular mid-engined range – and the final newly developed Porsche 718 with a combustion engine. The car boasts the kind of figures usually only seen with racing cars: 368 kW (500 PS) of power at 8,400 rpm, 450 Nm of torque at 6,750 rpm and a maximum engine speed of 9,000 rpm. And the 4-litre boxer engine is indeed a thoroughbred racing engine: in the Porsche Mobil 1 Supercup, the Porsche 911 GT3 Cup will compete with the same engine with almost identical performance data. And the road-approved 911 GT3 model (**911 GT3** (Predecessor model)) is also equipped with the same high-revving engine.

The naturally aspirated flat-six responds eagerly to the accelerator pedal and catapults the Porsche 718 Spyder RS to 100 km/h in just 3.4 seconds. This makes the Spyder RS half a second faster than the

718 Spyder () with 420 PS (309 kW) and PDK, which was available to order until mid-2023. The 718 Spyder RS hits the 200 km/h barrier after just 10.9 seconds, which puts it a full 2.5 seconds ahead of the 718 Spyder with PDK. And it hits its ultimate top speed at 308 km/h instead of 300 km/h – and with an open roof.

Engine technology derived directly from racing

The high-revving boxer engine in the Spyder RS is a prime example of how motorsport technology brings out the best, even in road-legal series production vehicles. The 24 valves of the six-cylinder engine, for example, are actuated via a rigid valve drive with rocker arms with no hydraulic valve clearance compensation. This ensures the robustness of the valvetrain even in the harshest of conditions – even if the engine is frequently run at high rpm. In addition, the proven VarioCam technology ensures that the camshaft control is adjusted precisely to the engine speed and load conditions.

The individual throttle body set-up is also an idea derived from motorsport. Each of the six cylinders has been provided with its own individual throttle body at the end of the variable-resonance intake system. It is particularly close to the intake valves and improves the air supply as well as the precision of the fuelling and therefore the engine response. The engine responds to throttle input almost without delay because there is hardly any volume of air between the throttle valve and the intake valves – this applies equally to pressing the accelerator pedal as it does to lifting off it. The central throttle valve remains as a backup solution, but is permanently open during normal operation.

Given the high degree of longitudinal and lateral forces produced by the new 718 Spyder RS, the oil supply to the high-revving engine is of particular importance. Like in motorsport, this is carried out by a dry-sump lubrication system with a separate oil tank. With a total of seven suction stages, this system routes the engine oil back into the external reservoir quickly and efficiently, while the heavily loaded connecting-rod bearings are lubricated directly via the oil pump through the crankshaft.

Innovative process air routing

Instead of the two rear side windows, like those found on the fixed-roof 718 Cayman GT4 RS, there are additional intake ports that supply the engine with air. As the mid-engined roadster by definition has no fixed rear windows, the engineers had to find an alternative solution for the 718 Spyder RS. The air intakes are now set up as channels that are integrated in the body behind the roll-over bars. These direct the air, as in the 718 Cayman GT4 RS, from both sides of the car directly into a central airbox that's positioned behind the seats and below the rear lid. The result is not only an optimal air supply to the engine even at times of maximum power demand, but also a clear bonus when it comes to sound: both the passenger and the driver can clearly hear and enjoy the intake noises of the six-cylinder engine, whether the top is open or closed. This aural experience also changes, depending on engine revs and the position of the accelerator pedal.

This soundtrack, which varies considerably depending on load conditions and the engine speed, is rounded off by the lightweight stainless steel sports exhaust system, which shows off the distinctive tones of the car's flat six, especially at high rpm. At the same time, the Spyder RS complies with the current Euro 6 emission standard. Two separate gasoline particulate filters (GPFs) as well as a stereo Lambda control circuit for both catalytic converters, are responsible for carrying out the all-important emission-control functions.

Short-ratio, seven-speed PDK transmission

Like every modern RS model, the new 718 Spyder RS is exclusively available with the Porsche dual-clutch transmission (PDK). PDK allows gear changes to be made in the same way as in racing: within milliseconds and without interrupting the engine's drive. In the Spyder RS, the PDK has seven short-ratio gears. Top speed is reached in seventh gear.

In PDK Sport mode, downshifting when braking is more instantaneous and acoustically prominent; during acceleration, the upshift points occur at higher engine speeds. If you do not want to leave shifting to the electronics, you can also change gears via gearshift paddles on the steering wheel. The right paddle is responsible for upshifting and the left paddle for downshifting. The driver gets precise feedback from the shift action even when they are wearing racing gloves. In addition, a selector lever in the centre console can be used to shift sequentially. The lever was adopted from that of the current 911 GT3 and is visually similar to a gated manual gear lever. As is usual in motorsport, the lever is pulled backwards for upshifting and pushed forward for downshifting.

MEDIA ENQUIRIES

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Consumption data

718 Cayman GT4 RS (WLTP)*: Fuel consumption combined: 13.0 l/100 km; CO_2 emissions combined: 295 g/km; CO_2 class: G

911 GT3 (Predecessor model)

718 Spyder RS (WLTP)*: Fuel consumption combined: 12.7 l/100 km; CO_2 emissions combined: 288 g/km; CO_2 class: G

*Further information on the official fuel consumption and the official specific CO_2 emissions of new passenger cars can be found in the "Leitfaden über den Kraftstoffverbrauch, die CO_2-Emissionen und den Stromverbrauch neuer Personenkraftwagen" (Fuel Consumption, CO_2Emissions and Electricity Consumption Guide for New Passenger Cars), which is available free of charge at all sales outlets and from DAT (Deutsche Automobil Treuhand GmbH, Helmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen, www.dat.de).

Video

https://newstv.porsche.com/porschevideos/newstv.porsche.com_242104_en.mp4

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