

# The new 718 Spyder RS

Press kit

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### Chassis and suspension systems

## Optimized for driving pleasure and agility on country roads

The top priority for engineers in the development of the 718 Spyder RS was to deliver maximum driving pleasure on winding roads. The mid-engine roadster uses the same components, with inspiration from the GT racing world, as its closed-roof sister model, the 718 Cayman GT4 RS. The suspension, however, has been retuned. The final tenth of a second on the track takes a back seat, so to speak.

The front axle of the 718 Spyder RS is almost identical to that of the 911 GT3 RS (generation 991.2). The classic MacPherson strut-type axle is equipped with helper springs that keep the main springs under tension when they are deflected. The main spring maintains its original tension even under maximum load. This benefits the vehicle's controllability during particularly dynamic driving.

## Thirty millimeters lower, wider track, more camber

Compared to the 718 Boxster, the body has been lowered by 1.18 inches (30 millimeters). In addition, the front track is 0.27 inches wider, and the rear track is 0.31 inches wider than on the 718 Spyder, which reduces the vehicle's lateral inclination. At the same time, the rear axle camber was increased by a quarter of a degree, which means that the rear tires transfer greater cornering forces. The result is even better predictability when taking corners at speed.

Ball joints at all connection points of the chassis ensure a particularly tight connection to the body, which results in very precise and direct handling.

#### Adjustable PASM suspension as standard

Compared to the 718 Cayman GT4 RS, which is designed for the best possible lap times, the damper rates in the new 718 Spyder RS have been reduced to enable the car to adapt even more effectively to different road conditions. This provides the driver with confidence through predictable handling characteristics. Yet the suspension of the new 718 Spyder RS is also fundamentally track-ready and can also be set up for use on circuits. The ride height,

toe, camber, and anti-roll bars can be individually adjusted to the driver's preferences and the characteristics of the route.

The Spyder RS is equipped with Porsche Active Suspension Management (PASM) Sport as standard. This active damping system unites two chassis characteristics in one. In Normal mode, the dampers operate in a more comfortable state of tune, but they automatically switch to a more athletic mode when the car is being driven dynamically. In Sport mode, firmer damper characteristics are directly activated, supporting an agile driving style.

## Porsche Torque Vectoring improves cornering agility

The heart of the driving assistance systems is the Porsche Stability Management (PSM), which also combines three electronic control systems in the 718 Spyder RS: the anti-lock braking system (ABS), Electronic Stability Control (ESC) and Traction Control (TC). As one would expect from an RS, these control systems intervene very sensitively and only when the driver is close to the limit – drivers should not feel that control has been taken away from them on any surface. Porsche sets up its chassis so that it combines exceptional performance with predictable handling even without the use of electronic control systems. Therefore, if you want to drive without a electronic assistance, you can switch off the systems in two stages (ABS excepted): ESC OFF gives the driver sole responsibility for cornering stability, and the ESC+TC OFF setting additionally overrides traction control as well.

Porsche Torque Vectoring (PTV) is also available as standard for the Spyder RS as a further driving dynamics system. PTV works with an electronically triggered brake intervention on the rear wheels; in addition to this, the 718 Spyder RS has a mechanical limited-slip differential with RS-specific locking values (traction 30 percent / overrun 37 percent). In practice, PTV, which cannot be switched off, works in such a way that, in dynamic driving, the inside rear wheel is braked slightly as soon as the driver turns the steering wheel. This means that additional power is delivered to the rear outside wheel and, in a corner, gives the car a steering impulse in the direction in which the steering wheel is already turned. This extra steering effect makes the car feel more agile and direct.

## Lift system improves day-to-day usability

For the first time in an open-top 718, Porsche is offering an optional front axle lift system for the 718 Spyder RS. At the touch of a button, the nose of the car raises by more than an inch. The ground clearance at the front spoiler lip is therefore increased by a little more than 1.5 inches, which makes it easier to cope with speed bumps or steep ramps. The system can be used when the car is stopped or driving at speeds of up to 37 mph.

## Engine and gearbox

## Roadster + racing engine = driving pleasure

The naturally aspirated 4.0-liter flat-six engine is mounted between the seats and the rear axle, making the new 718 Spyder RS the most powerful model in the history of the popular mid-engine roadster. The car boasts the kind of figures usually only seen with racing cars: 493 hp at 8,400 rpm, 331 lb.-ft. of torque at 6,750 rpm and a maximum engine speed of 9,000 rpm. And the 4.0-liter 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 is also equipped with the same high-revving engine.

The naturally aspirated flat-six responds eagerly and sends the Porsche 718 Spyder RS to 60 mph in just 3.2 seconds. The 718 Spyder RS crosses the quarter mile mark after 11.3 seconds, and it hits its top track speed at 191 mph with an open top.

## 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 using rocker arms without hydraulic valve clearance compensation. This ensures the robustness of the valvetrain under harsh 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 fueling 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-engine 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 into a central airbox that's positioned behind the seats and below the trunk 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 sport exhaust, which shows off the distinctive tones of the car's flat six, especially at high rpm.

# 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), which shifts in milliseconds, and without interrupting the engine's drive. In the Spyder RS, the PDK has seven short-ratio gears. Top track speed is 191 mph, which the car is capable of reaching in seventh gear.

In PDK Sport mode, downshifting when braking is quicker and more acoustically prominent; during acceleration, the upshift points occur at higher rpm. The driver can also shift manually using 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 center console can be used to shift sequentially. The lever was adopted from that of the current 911 GT3. As in motorsport, the lever is pulled backwards for upshifting and pushed forward for downshifting.

## Body and aerodynamics

#### A roadster without compromise

Like its 718 Cayman GT4 RS sister model, the new Porsche 718 Spyder RS makes no secret of its high performance. With a distinctive ducktail spoiler, NACA ducts in the hood, and air intakes behind the soft top, the Spyder RS is unmistakably the range-topping performer among open-top 718 models.

The striking rear spoiler on the 718 Spyder RS makes an immediate impression. Porsche first used this feature in the iconic 911 Carrera RS 2.7. The Spyder RS deliberately dispenses with the adjustable wing of the Cayman GT4 RS. In a car without a fixed roof, aerodynamic development is less about the maximum downforce and more about achieving optimal driving stability and balance with or without the top. With the optional Weissach Package, there is also an additional Gurney flap on the rear spoiler.

### Optimal aerodynamic balance

The shortened front lip of the 718 Spyder RS complements the revised rear by keeping the car aerodynamically balanced. Otherwise, the front end is virtually identical to the 718 Cayman GT4 RS. The front fenders feature wheel arch vents with slats. These slats, a motorsport-derived design, were first used in series production in the 991-generation Porsche 911 GT3 RS. Particularly at high speeds, they reduce the excess pressure in the wheel arch caused by the rotation of the wheels. This reduces lift on the front axle. Two NACA ducts give the lightweight hood its characteristic appearance. The air intakes were originally developed by the National Advisory Committee for Aeronautics (NACA) — the predecessor of the NASA space agency — and combine two properties in the 718 Spyder RS that are normally mutually exclusive: they improve brake cooling but without impairing the drag coefficient of the vehicle, which is why NACA ducts are also frequently used in racing. In the front bumper and ahead of the CFRP hood, there is a central opening through which air is channeled out of the car. The front fascia features side blades that guide air effectively around the front wheels.

# Aerodynamically optimized underbody

The air flowing under the Spyder RS is greatly accelerated via new fins on the fully paneled underbody, creating a vacuum at the rear. This reduces lift on the rear axle.

There are also two further NACA ducts in the underbody of the Spyder RS. They are also used for cooling without a negative impact on the car's overall drag coefficient. Finally, the air flowing under the car exits through a rear diffuser. This component has been taken from the 718 Spyder and improved using aerodynamic fins on the sides. They provide additional airflow stabilization at the rear and improve grip.

## Lightweight design for enhanced agility

One classic roadster characteristic was particularly important to the engineers as they developed the 718 Spyder RS: lightweight design throughout. The 718 Spyder RS has a curb weight of 3,214 lbs. A hood and fenders made of carbon fiber-reinforced plastic (CFRP) plus and bi-xenon lightweight headlights without a headlight cleaning system help achieve the lightweight mission of this car. Reduced sound deadening material and lightweight carpets also save mass. And naturally, no RS model is complete without lightweight door panel trim with nylon door opener loops and nets for storage compartments.

The single-layer, fabric top in the new 718 Spyder RS also offers weight advantages. It is especially compact and consists of two parts: a 'sunshield' and a weather guard. Both are entirely removable and can be stowed either together or individually in the vehicle. The sun sail alone can also be used as a 'Bimini top' thereby protecting the driver and front passenger from intense sunlight. In this case, the passenger compartment remains largely open to the side and behind the passengers.

## 59 pounds lighter than the 718 Spyder with PDK

In bad weather, an additional weather guard with a glass rear window can be fitted to provide effective protection against rain when the side windows are closed. The entire roof, including mechanical parts, weighs slightly more than 40 lbs. That's about 16 lbs. lighter than the 718 Spyder top and roughly 36 lbs. lighter than the top of the 718 Boxster. Drivers

who wish to shave an additional 17.6 lbs. from the weight of the vehicle can leave the top at home entirely, weather allowing.

The optional Weissach Package gives the car a sportier appearance by replacing several body elements with parts made of visible CFRP including the hood, air intakes, mirror caps, an added Gruney flap on the spoiler, third brake light housing, and safety bar covers. Meanwhile, the top gains "Weissach Package" embossments and the exhaust pipes get titanium tips. Additionally, the Weissach Package allows allows the optional specification of 20-inch forged magnesium wheels, which save 22 lbs. compared to the standard forged aluminum wheels.

## New paint color: Vanadium Grey Metallic

Nine standard colors are available for the body of the new 718 Spyder RS: White, Black, Guards Red and Racing Yellow as solid colors, as well as Gentian Blue Metallic and GT Silver Metallic, plus the new Vanadium Grey Metallic – a color developed specifically for the 718 Spyder RS. Arctic Grey, Shark Blue and Ruby Star Neo complete the palette.

## Sporty-yet-functional feel

Functional, ergonomic and reduced to the essentials, the Porsche 718 Spyder RS is a driving machine for the purist – even on the inside. In true RS fashion, full bucket seats are fitted as standard. These were first installed in the 918 Spyder super sports car. They are made of CFRP and offer optimum lateral support with minimal weight. Drivers may also optionally specify 18-way Sport Seats Plus for a more customized ride configuration. A black Spyder RS logo is embroidered into the headrests.

### GT Sport steering wheel with a center marker

The GT Sport steering wheel has an especially sporty in-hand feel thanks to a small, 360millimeter diameter. As standard, it comes trimmed with Race-Tex and a yellow 12 O'Clock marker. The standard steering wheel can be adjusted for reach and rake. The seats are upholstered in black leather, with seat centers made of black Race-Tex.

#### **Classic GT gear lever**

As in the Porsche 911 GT3 and 718 Cayman GT4 RS before it, the PDK gear selector in the center console resembles a manual gear lever. It can be tipped left for manual shift selection. Pulling back triggers upshifts, while pushing forward triggers downshifts; a common setup with motorsport gearboxes. At the same time, drivers have shift paddles on the steering wheel at their disposal, with +/- symbols to indicate the shift direction: right to upshift, left to downshift.

Those who choose the optional Weissach Package get significantly more Race-Tex features in the interior. The visual highlight is the upper side of the dashboard, which is completely covered in anti-glare Race-Tex. The Weissach Package logo also features on the cupholder trim and is embroidered into the headrests.

#### Connectivity, navigation and silent alarm

Among the standard equipment on the 718 Spyder RS is Porsche Communication Management (PCM) and a navigation system that includes Porsche Connect. Car Connect Services with Remote Services, Safety Services, Security Services and Apple CarPlay<sup>®</sup> are also fitted as standard. The navigation system is capable of dynamic route calculation, can be operated by voice command and receives automatic map updates. The integrated LTE module helps with operation of the standard online functions.

# Exclusive Chronograph only for buyers of the Spyder RS

There is a matching chronograph for the 718 Spyder RS that bears the name of the new mid-engine sports car and which is exclusively offered to buyers of the Spyder RS and the Spyder RS with the Weissach Package. With its titanium case, the exclusive timepiece has the characteristic lightness of its namesake. The chronograph also takes after its automotive cousin in its high level of configurability: the customer can choose between natural titanium and black titanium for the case's appearance, while there's a matching bezel that features either a minute or tachymeter scale as desired. The band is available either in a smooth black vehicle leather with a Race-Tex accent or in titanium, and the dial is available in carbon or black. The hands are available in white, black or yellow. On the back, the Chronograph 718 Spyder RS features a rotor whose design echoes that of the wheels installed on the respective car. The rotors themselves can be ordered in six different colors, while the individual color ring around the dial can be in any of the colors available for the Porsche 718 Spyder RS – whether standard, metallic or special colors. Additionally, the colors of the Porsche Paint to Sample program are also available for the watch. This means it's possible to create a truly personalized timepiece including up to 12 characters engraved into the back of the watch, such as the VIN number of their own roadster.

The Chronograph 718 Spyder RS is an exquisite piece if craftsmanship and is made to exacting standards of precision in Porsche's in-house watchmaking operation in Solothurn, Switzerland. The COSC-certified 01.200 movement is the beating heart of the timepiece. One special technical feature is the flyback function: with just one button, the triggered stopwatch can be stopped, reset and restarted. Exclusively for customers of the new Porsche 718 Spyder RS, the Chronograph 718 Spyder RS can be ordered in Porsche Centers and online at porsche-design.com.