



# *Trial by Fire*

*In the austere landscape of the State of Nevada, the control, air-conditioning, and cooling systems of the future 918 Spyder demonstrate that this two-door mid-engine sports car with plug-in hybrid drive is a thoroughbred Porsche, even in the discipline of everyday driving.*

**By** Lawrence Dietz and Elmar Brümmer **Photos by** Christoph Bauer





The 918 prototype in the red range—but only with respect to the landscape



**A** *discreet hum.* There's nothing more to be heard at the moment. The twitching needles on the instrument panel are the only indication that the prototype of the 918 Spyder has come to life. It is a suspenseful calm, for this future (and futuristic) super sports car is expected to bring a system output of close to 795 hp (585 kW) onto the roads. Eighty kilometers north of Las Vegas, we roll purely electrically in e-power mode out from the parking lot of the Valley of Fire State Park, past bizarre red rock formations. The cliffs appear to glow in the midday heat, but we don't have eyes for the sandstone. Our gaze is directed straight ahead, and we're trying to keep our cool. We're zooming down the long straight stretch which is unfolding from underneath the Spyder's striking front fenders. The Porsche engineer in the driver's seat switches the car to sport-hybrid mode. He floors the pedal.



The 918 has to demonstrate under conditions on the road that it can master a very wide range of climatic conditions, most of them extreme. The testing team led by 918 project director Dr. Frank-Steffen Walliser has thus far clocked a three-week marathon through Arizona and California, making optimal use of the eleven hours of sunshine a day. The trial by fire took place in Death Valley, where the electric motors and combustion engine had to show that their sophisticated interplay also works in scorching heat. In concrete terms, this means taking extended drives at air temperatures above 42 degrees



Testing takes precedence by day and night, with the beauty of nature in the background



Compiling miles and data—the everyday task of the team led by 918 project director Dr. Frank-Steffen Walliser (left)

Celsius, or triple-digit figures in Fahrenheit. As might be expected, the asphalt is blisteringly hot, too. Going to the limits—that is the underlying aim of these test drives. And while we're in the USA, another objective is to see how the 918's drive assembly handles American fuel, which can vary wildly in its composition.

Gasoline engine, battery, electric motors, and transmission—project director Dr. Frank-Steffen Walliser can sketch the layout of the 918 Spyder's hybrid components in record time on a notepad. Walliser has left his suit and tie in the closet, opting for more practical work clothes, including an orange Hollister California Surf T-shirt for this day of tests. He also quickly scribbles down the four-button control on the steering wheel that lets drivers select among the driving modes of E (e-power), H (hybrid), S (sport hybrid), and R (race hybrid). The layout elicits eagerness in the passengers, three American automotive journalists who are being given a taste of this work in progress—but only Porsche professionals may take the wheel for these test drives. While this theoretical background on the parking lot is interesting, what really interests us is the practical demonstration.



Back to the cockpit. It is time for the acceleration phase. The car is no longer quiet, and anything but than discreet. The three-pack of the combustion engine and two electric

motors shoots the super sports car and its occupants forward. A V8 fanfare gives the entire enterprise a backdrop of high-spirited resolution. The Porsche seems to hug the road with a nearly mystical union arising between the car and the highway, even over bumps and through narrow curves. It's not for nothing that the engineers have devoted special attention to the suspension system. On a free stretch of road, Walliser jerks the steering wheel brutally back and forth to show that this Porsche of the near future cannot be easily dislodged from its equilibrium. We passengers are repeatedly impressed by the deceleration, the car's extraordinary braking capacity. That is another core area of expertise at Porsche. Of course we cannot take the 918 Spyder anywhere close to its limits on our excursion through a State Park, but sometimes mere suggestion will help create true attraction.

The all-terrain vehicle of a park ranger comes into view. When the driver raises his foot from the accelerator, the hybrid module switches off the gasoline engine. The prototype cruises, again purely electrically and nearly soundlessly, past the custodian of the law. The Spyder prototype is expected to reach just about 150 km/h in electric mode, with a range of more than 25 kilometers.

Drivers will be able to fuel their Spyderys at electrical sockets, plug-in function that will enable them to charge the high-voltage lithium-ion battery within a few hours. But while driving, as a Porsche engineer explains, the gaso-

line engine and the brakes do this job in just about five minutes. This means that the electric drive is essentially always ready for another short trip. It's a powerful concept representing a symbiosis of efficiency and emotion, so to speak, combining the performance figures of a racing car with the fuel consumption of a thrifty compact.

An unusual park visitor like the 918 Spyder naturally attracts the attention of tourists who have come to Nevada's oldest State Park to view its impressive scenery. Their astonished expressions when the 918 zooms by indicate that the Weissach design team have done a successful job on the Spyder. The contrast with the rock formations created by nature over the course of millions of years gives the technical sculpture made by human hands an added degree of vibrancy. Onlookers are cap-

tivated by the spectacle of how the 918 is transformed in no time at all into a real Spyder, with both halves of the roof stowed in the luggage compartment. But in the desert heat of late summer, the pleasure of driving with the top down is somewhat lessened.



Having returned to the starting point of today's test drive through the valley, we peel ourselves out of the monocoque. Porsche staff members immediately plug in their laptops to gather and evaluate the day's data. If our adrenaline levels were registered as well, they would be well within the red range, a real compliment for the ability of this 918 prototype to bring the excitement and enjoyment of driving to a new level. ●

*Suspension, deceleration, acceleration—many individual strengths contribute to the positive overall impression of the test drives, especially the interplay between the combustion engine and the two electric motors.*