

WILLIAMS HYBRID POWER CONTRACTS WITH PORSCHE AG FOR 911 GT3 R HYBRID



WILLIAMS
HYBRIDPOWER

Oxford, UK, February 11, 2010. Williams Hybrid Power Limited is pleased to confirm that the energy storage system as part of the new Porsche 911 GT3 R Hybrid, which was announced today by Dr. Ing. h.c. F. Porsche AG, Stuttgart, has been developed and supplied by Williams Hybrid Power. The 911 GT3 R Hybrid with innovative hybrid drive will make its debut at the Geneva Motor Show. Further details from Porsche follow in the attached press release.

The energy storage system was originally developed for use in Formula One by the AT&T Williams team but Williams Hybrid Power is now focused on applications in road vehicles. The technology will also be developed for larger, infrastructure applications by Williams F1 at its new research facility in the Qatar Science and Technology Park.

Ian Foley, Managing Director of Williams Hybrid Power said, "We are delighted to see our technology being adopted by one of the world's leading engineering companies and most prestigious automotive manufacturers in one of their racing cars. Partnering with Porsche on this project has been a very positive experience and we are grateful to them for choosing to work with us."

Alex Burns, Chairman of Williams Hybrid Power and Chief Operating Officer of Williams F1 said, "This is a milestone for both Williams Hybrid Power and Williams F1. Together we have worked to bring this technology forward to the point where it can be tested in a racing car and deployed in a road car. We hope that this will be just the start of the evolution of hybrid systems developed for Formula One moving across to applications where they can contribute to cleaner and more powerful vehicles."

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NOTES TO EDITORS

Williams Hybrid Power Ltd (WHP) has developed a novel, patented electromechanical composite flywheel system that provides a high-power, cost-effective and environmentally friendly solution for mobile or stationary energy storage and recovery, originally developed for Formula One. Through development of a flywheel for Williams F1's Kinetic Energy Recovery System, WHP has proved its world-class engineering capabilities in the composite flywheel field as well as radically improving aspects of the technology in the process. WHP is today making the technology available to meet the high-power energy storage needs in a variety of applications including hybrid passenger vehicles, hybrid buses, electric trains, diesel-electric ships and wind power generation. In November 2009, the company announced its involvement in a mild hybrid road car programme with Ricardo, CTG, JCB, Jaguar Land Rover, SKF and Torotrak. The project aims to demonstrate the potential of flywheel-based hybrid systems with the potential for 30 per cent fuel savings (and equivalent reductions in CO₂ emissions) at an on-cost of less than £1000, to enable mass-market uptake of hybrid vehicles in price sensitive vehicle applications. www.williamshybridpower.com

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PORSCHE

Press Release

February 11, 2010

No 13/10

Porsche Intelligent Performance makes Racing Cars even More Efficient

911 GT3 R Hybrid Celebrates World Debut in Geneva

Stuttgart. Exactly 110 years after Ferdinand Porsche developed the world's first car with hybrid drive, the Lohner Porsche Semper Vivus, Dr. Ing. h.c. F. Porsche AG, Stuttgart, is once again taking up this visionary drive concept in production-based GT racing: During the Geneva Motor Show, a Porsche 911 GT3 R with innovative hybrid drive is making its debut, opening up a new chapter in the history of Porsche with more than 20,000 wins in 45 years scored by the extremely successful Porsche 911 in racing trim.

The innovative hybrid technology featured in the car has been developed especially for racing, standing out significantly in its configuration and components from conventional hybrid systems. In this case, electrical front axle drive with two electric motors developing 60 kW each supplements the 480-bhp four-litre flat-six at the rear of the 911 GT3 R Hybrid. A further significant point is that instead of the usual batteries in a hybrid road car, an electrical flywheel power generator fitted in the interior next to the driver delivers energy to the electric motors.

The flywheel generator itself is an electric motor with its rotor spinning at speeds of up to 40,000 rpm, storing energy mechanically as rotation energy. The flywheel generator is charged whenever the driver applies the brakes, with the two electric motors reversing their function on the front axle and acting themselves as generators. Then, whenever necessary, that is when accelerating out of a bend or when overtaking, the driver is able to call up extra energy from the charged flywheel generator, the flywheel being slowed down electromagnetically in the generator mode and thus sup-

plying up to 120 kW to the two electric motors at the front from its kinetic energy. This additional power is available to the driver after each charge process for approximately 6 - 8 seconds.

Energy formerly converted – and thus wasted – into heat upon every application of the brakes, is now highly efficiently converted into additional drive power.

Depending on racing conditions, hybrid drive is used in this case not only for extra power, but also to save fuel. This again increases the efficiency and, accordingly, the performance of the 911 GT3 R Hybrid, for example by reducing the weight of the tank or making pitstops less frequent.

After its debut in Geneva the 911 GT3 R Hybrid will be tested in long-distance races on the Nürburgring. The highlight of this test programme will be the 24 Hours on the Nordschleife of Nürburgring on May 15th and 16th. The focus is not on the 911 GT3 R Hybrid winning the race, but rather serving as a spearhead in technology and a “racing laboratory” providing know-how on the subsequent use of hybrid technology in road-going sports cars.

The 911 GT3 R Hybrid is a perfect example of the Porsche Intelligent Performance philosophy, a principle to be found in every Porsche: More power on less fuel, more efficiency and lower CO₂ emissions – on the track and on the road.

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Note: Images of the new Porsche 911 GT3 R Hybrid are available to accredited journalists in the Porsche Press Database at <https://presse.porsche.de>. Footage is available to registered users at <http://thenewsmarket.com/porsche>.