

Toyota Motorsport GmbH Brings Electric Technology to Pikes Peak

June 07, 2012

Toyota Motorsport GmbH (TMG) will demonstrate its high-performance electric powertrain technology on one of North America's most demanding motorsport events; the Pikes Peak International Hill Climb in Colorado on 8 July.

Last year TMG set a new electric lap record at the Nürburgring Nordschleife with the road-legal TMG EV P001 car, a record which still stands today.

TMG's advanced electric and electronic department has spent the past months developing on an updated electric powertrain, which is more powerful and more durable than its predecessor.

That high-performance electric powertrain is the heart of the new TMG EV P002 car, which will compete at Pikes Peak as part of a project from Japanese company RK1 Inc. Multiple Japanese rally champion Fumio Nutahara will drive the car which features prominent branding from Yokohama.

Based on a Radical chassis, the TMG EV P002 has a predicted top speed of 240km/h in Pikes Peak configuration, with combined maximum power of 350kW from its two axial flux motors.

The hillclimb, which begins at an altitude of 2,800m and reaches the summit of 4,300m, is an ideal environment to showcase the strengths of an electric powertrain. TMG's high-performance electric powertrain maintains full power despite the thin atmosphere at high altitude while delivering an impressive 900Nm of torque through its single-speed gearing.

The TMG EV P002 underwent a successful three-day testing session at the Paul Ricard circuit in southern France in May to verify car and powertrain performance.

Ludwig Zeller, General Manager Electric & Electronics: "Pikes Peak is a great showcase for TMG's electric powertrain technology. We already proved at the Nürburgring that TMG is leading the way in developing such powertrains for motorsport and this is another sign of our commitment to this technology. TMG wants to be increasingly involved in electric motorsport and we believe our powertrain technology is an industry-leading combination of performance, durability and packaging. Electric powertrain technology in motorsport is still in its development phase but through projects like this one, TMG is laying the foundations for the future of high-performance and motorsport cars."

TMG EV P002 Technical Specifications	
Performance	
Top Speed	240km/h (Pikes Peak configuration)
Maximum Torque	900Nm
Maximum Power	350kW
Maximum Revs	5000rpm
Powertrain	
Electric Motor	2 axial flux

Inverter	2 x TMG inverters
Gear Ratio	2.5
Transmission	Single-reduction gearing
Battery	Lithium ceramic
Battery Capacity	42 kWh
Charging Technology	Off-board DC charging
Dimensions	
Length	4.10m
Height	1.04m
Width	1.79m