

## **New electric lap record for Toyota Motorsport GmbH at Nürburgring Nordschleife**

Tuesday 30 August 2011

COLOGNE (Germany) - Toyota Motorsport GmbH (TMG) has set a new lap record for an electric vehicle (EV) at the legendary 20.8km Nürburgring Nordschleife circuit in Germany.

The TMG EV P001, with 100% electric powertrain and Jochen Krumbach at the wheel, set a new lap record of 7mins 47.794secs to beat the previous lap record, which stood at 9mins 1.338secs, by a very substantial margin.

Using two electric motors, the TMG electric powertrain has a top speed of 260km/h which combined with 800Nm of torque to achieve impressive speeds on the extremely challenging Nordschleife track, which includes significant elevation changes and lengthy flat-out sections.

TMG's target prior to the 29 August record run was to become the first electric vehicle break the eight-minute barrier and this was achieved comfortably on a day when the notoriously changeable Nürburgring weather stayed fine, although track temperatures were relatively low.

Such performance shows TMG's electric powertrain is ideal to power any future single-make electric motorsport series and TMG will begin commercial sales of this technology in 2012. TMG continues to advance its electric vehicle capability for motorsport applications with in-house development of the electric powertrain and ongoing investigations into alternative chassis solutions.

Pascal Vasselon, TMG's Technical Director, said: "The goals for this project were twofold: obviously we wanted to set a new EV lap record and I am very pleased we could achieve that so comprehensively. On the other hand, we also wanted to learn more about the operation of our electric powertrain in extreme circumstances; in motorsport there is no more extreme circuit than the Nürburgring. On the record lap the TMG EV P001 performed better than in testing due to the improvement we already could make based on that experience. We have enhanced our electric powertrain development thanks to the information our engineers have gained and our future EV products will benefit from this project."

Rob Leupen, TMG's Director Business Operations, said: "This is a very impressive achievement which really shows the huge potential for electric powertrains to deliver fast, exciting action on the race track. There's no doubt that electric motorsport can be every bit as thrilling as traditional racing and it was an amazing sensation to watch the TMG electric vehicle fly past on the Nordschleife, with only the sound of wind rushing past and tyres squealing. To achieve a new lap record at the first attempt, and by such a huge margin, is a great achievement and I am very proud to see TMG's name in the record books. But this is not the end of the story for TMG and I hope we will see our electric powertrains in action on the track again soon."

The new lap record was completed on road-legal tyres, using the complete Nordschleife track. It was verified by independent lap timing.

TMG extends its thanks to its partners in this achievement: Aguti created and implemented the livery concept while rational motion integrated the electric powertrain, traction battery and control strategies. EVO Electric motor technology delivered the power. The TMG EV P001 is based on a Radical chassis as modified by TMG for e-WOLF.

An onboard video of the new lap record lap and high-resolution photos are available to download at <http://corporatemediatoyota.eu/>.

Keep up to date with all the latest TMG photos via our Flickr page at [www.flickr.com/toyotamotorsport](http://www.flickr.com/toyotamotorsport).



TMG Electric Vehicle with High-Performance Electric Powertrain		
Performance	Top speed	260km/h
	0-50km/h	1.8 seconds
	0-100km/h	3.9 seconds
Motor	Max. torque	800Nm
	Max. power	280kW (375hp)
	Max. rpm	5,000
Battery	Type	Lithium ceramic
	Voltage	520V
	Capacity	41.5kWh
	Weight	350kg
Dimensions	Total length	4,190mm
	Total width	1,785mm
	Total height	1,070mm
	Wheelbase	2,368mm
	Weight	970kg

#### **About Toyota Motorsport GmbH:**

Toyota Motorsport GmbH (TMG) has been based in Cologne, Germany since 1979 and built its reputation in the World Rally Championship, winning four drivers' and three manufacturers' title during a long participation which ended in 1999. TMG was also the home of Toyota's works Le Mans 24 Hours (1998-1999) and Formula 1 (2002-2009) teams, both of whom achieved pole and podium positions, and a tuning and sports conversion subsidiary (established in 1994). Since November 2009, TMG has transformed into a specialist engineering services supplier, providing design, development and manufacturing for high-performance sectors. [www.toyota-motorsport.com](http://www.toyota-motorsport.com).

**Partner Profile - Aguti:** Aguti began in 1992 as a design house specialising in the development and sale of automotive seats. In 1995, the company expanded its range of products and established itself as a systems supplier providing customers with a complete package deal from conception through to production, sales and marketing. Seat technology remains the main focus of the Aguti company and seating is developed for various vehicles, such as motorhomes, minibuses and emergency vehicles. Located in Langenargen am Bodensee, Aguti continues to increase its turnover and add to its portfolio of innovative designs with ventures in yacht and other transportation design. For several years Aguti has cooperated with TMG on design projects, including wheel rims, body parts and graphics. [www.aguti.de](http://www.aguti.de)

**Partner Profile - rational motion:** Founded in December 2009, rational motion GmbH are specialists offering turnkey development solutions and system integration in the field of alternative fully-electric and hybrid powertrain systems. Services provided by the Cologne-based designers and engineers range from conception to prototype and near-series development through to design reviews, with in-house implementation of all components and processes, on both the hardware and software level. With its roots in the Formula 1 development environment and having accumulated years of expertise and experience, the design team has a proven record of bringing forth excellence in even the most competitive and at the same time most advanced areas of application for automotive vehicle integration. [www.rationalmotion.de](http://www.rationalmotion.de)

**Partner Profile - EVO Electric:** EVO Electric Limited develops and manufactures advanced electric machines, drive systems and other integrated products for a wide range of transportation and mobile power applications. Its core competence is the development, design and integration of high-torque, high-power electric motors and generators based on proprietary Axial Flux technology. EVO is backed by Imperial Innovations Group plc (AIM: IVO), the UK's leading technology commercialisation and investment company, and by GKN (LSE:GKN), the world's leading supplier of automotive driveline components and systems. [www.evo-electric.com](http://www.evo-electric.com)

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