



PRESS RELEASE

Magneti Marelli Motorsport in the 2015 Motor Season

The year 2015 confirms again the consolidated presence of Magneti Marelli Motorsport in the international two-wheeler and four-wheeler motorsport championships.

Also in the 2015 season, Magneti Marelli is supplying its high-end technology to the main teams in all the top world motorsport competitions.

This season, more than ever before, the competitions are a test-bench for a further development of the technological innovations consequent to the new regulations adopted, and an important stimulus to offer new solutions, able to create a technological bridge to their application on mass-produced vehicles.

In the **Formula 1** Championship, Magneti Marelli Motorsport strengthens its own presence in the connectivity systems, expanding the range of application of the V2X telemetry systems to eight racing teams.

The V2X system is made up of a control unit mounted on the vehicle, the size of two smartphones and weighing 400 grams, which transmits via an antenna positioned on the nose. The system is based on an infrastructure composed by 10 access points located along the race track, which allow creating the perimeter Wi-Fi network, inside which the cars may transmit a high quantity of data and voice traffic with a real-time, multi-directional communication of a very high quality. Every second about 300,000 'samples' are transmitted of about 1,000 parameters of the vehicle (some of which are transmitted every millisecond): this means transmitting 4 DVD's of data (about 20 Gigabytes) during every Grand Prix for each individual single-seater. The data are then processed by analysis tools and allow constant monitoring of all the cars without signal losses.

Magneti Marelli Motorsport technology is the best to give a support for the impartial monitoring of the performance and the reporting of danger situations, to the benefit of safety.

The telemetry system used in the competitions is a technology that, once transferred from the race tracks to everyday roads, lays the bases for the future evolutionary steps in mobility, for instance the self-driving, which can be implemented only if the car is connected to an 'intelligent system' of infrastructures which coordinates and regulates the flows of cars and the traffic.

Magneti Marelli also supplies several Formula 1 teams both with engine components, such as ignition coils, injectors and pumps specifically designed for direct injection engines with a gasoline pressure up to 500 bars, and with the relative control electronics (Powerboxes), designed to maximise the efficiency of the thermal engine combustion.

The DC/DC converter, an electronic device used to supply 12V and 48V electric power to the car, thus replacing alternator and voltage regulator, plays an important role in the context of the modern Formula 1 Power Units.

Magneti Marelli Motorsport solution stands out for its high power density, achieved thanks to the use of advanced technologies and solutions.

Again for Formula 1, but for other projects too, we are studying new solutions related to video capture at a higher frame rate, image processing, and the definition of innovative light sources to be mounted on-board for various alerts to support the Organisers and Federations.

Advanced technologies also in the **MotoGP™ Championship**, in which Magneti Marelli – thanks to the agreement with DORNA – is, for the second year, the only supplier of the **Electronic Engine Control Unit** for all the teams.

The control unit is characterised by the very high calculation capacity, a basic key for the development of high-level strategies for engine and vehicle control. The systems that Magneti Marelli makes available within the framework of the agreement with DORNA cover: solutions for the fine-tuning of the trim, data analysis tools, dashboards, buttons panel on the handlebar and the inertial platform for the dynamic control and for controlling the trim of the motorbike and the chassis with integrated datalogger.

In the **MotoGP™ Championship**, Magneti Marelli Motorsport is the official supplier of key components for Yamaha and Ducati. In particular, Yamaha mounts coils, injectors, speed sensors, alternators, gasoline pumps and pressure regulators (FIM). The Ducati team is supplied with injectors, coils and pressure regulators (FIM).

In 2015 Magneti Marelli Motorsport supports Suzuki for its re-entry in the MotoGP championship with the supply of engine components, dashboard and inertial platform.

For the fifth consecutive year Magneti Marelli is directly involved with the Federation (FIM) for the supply of the pressure regulator to all the MotoGP teams, in order to guarantee performance and compliance with the regulations, thanks to an appropriate certification of the item within the limits set by the regulations.

Again in the domain of the two-wheelers, in the **WSBK championship**, Magneti Marelli provides the main teams with a new engine control unit, developed to allow an extremely performing new-generation solution that keeps costs under control, in order to comply with the regulations that have imposed a budget cap since 2015. In this championship, Magneti Marelli is the official supplier for the Ducati team and supports the Kawasaki team with the data acquisition, dashboards, coils and the inertial platform. Magneti Marelli components also find application in the Aprilia and MV Agusta systems.

Magneti Marelli Motorsport components are used also in the Supersport category in the engine control field.

Again in the two-wheelers competitions, Magneti Marelli is present in the **American national championships in the AMA Superbike**, supplying the engine control unit, electronic modules and components for the KTM, Suzuki and Yamaha teams. In the **NHRA (National Hot Rod Association)** in the U.S.A., Magneti Marelli supplies engine control components and integrated data loggers in the **Pro Stock Motorcycle** category.

In the international four-wheelers championships, Magneti Marelli Motorsport confirms its presence alongside the main teams also in 2015.

In the WRC Magneti Marelli is the official supplier for the Citroën and the Hyundai teams. It supplies Citroën with the electronic engine control units, data acquisition modules and the Wintax analysis tool. The Hyundai cars mount electronic control units, data acquisition modules and Wintax software by Magneti Marelli Motorsport. Again in the WRC, it also supplies components for the car electronic control to Skoda, which is engaged in the ERC (European Rally Challenge) and to the PSA Group for cars used in various rally competitions at an international level.

In the FIA WTCC Magneti Marelli is the official partner of the Citroën team, which mounts on board its cars electronic engine control units, data acquisition modules and the data analysis tool.

Magneti Marelli technologies are used in the **Le Mans Prototype (LMP)** championship, where the top teams use telemetry, data acquisition systems and Wintax analysis tools. In the **FIA GP2 and GP3 Series**, Magneti Marelli shall provide all the teams, until 2019, with the engine control system, the shift hydraulic control, the data acquisition system and the data analysis tool.

In the national championships, Magneti Marelli provides Tatuus with the engine control unit and electro-actuated shift for the **Formula 4 Italia**, and with the electro-actuated shift for the **Adac Formula 4** (Germany), **BRCD Formula 4** (UK) and **SMP Formula 4** (Northern Europe).

The shift electric actuator developed by Magneti Marelli Motorsport is adopted by the **Supertrofeo Lamborghini** in Europe, Asia and North America while data loggers and data analysis tools for data analysis are supplied for all the teams of the **FIA GT Italia**.

Since 2012, **Magneti Marelli is present in China in the CTCC** (China Touring Car Championship) with the data logger chosen by the FASC (Federation of Automobile Sports of the People's Republic of China) and used by all the vehicles that participate in the championship for the analysis, the performance balancing and the fine-tuning control. Furthermore, Magneti Marelli supplies the standard ECU for the 'China Production' category. Again in China, Magneti Marelli supplies the shift electric actuator in the **Formula Master**.

In the U.S., in the **Verizon IndyCar Series**, Magneti Marelli supplies the teams involved in the competition, with components for the ignition and direct injection gasoline components. In this championship, also this year, the technological partnership has been renewed with the Schmidt Peterson Motorsports (SPM) team, the logo being present, in particular, on the side and on the nose of James Hinchcliffe's single-seater. Yesterday James Hinchcliffe won the inaugural Indy Grand Prix of Louisiana with his single-seater number 5.

A technical partnership exists also between **HPD (Honda Performance Development)** and Magneti Marelli, finalised to the development of powertrain and electronic components to be used in the Verizon IndyCar Series championship and in other championships for which HPD manufactures, prepares and develops the Honda engine.

In the **NHRA (National Hot Rod Association)** Mello Yello Drag Racing Series, this marks the 4th year of partnership between Magneti Marelli and Mopar in sponsoring the Funny Car and Pro Stock professional categories. In 2012, Magneti Marelli, was the primary sponsor of 2-time Funny Car World Champion Matt Hagan, of Don Schumacher Racing. In 2013, Magneti Marelli became a primary partner on Allen Johnson's "Magneti Marelli Offered by Mopar" Dodge Dart Pro Stock. In 2015, the Mopar/Rocky Boots Dodge Charger R/T of Matt Hagan and the "Magneti Marelli Offered by Mopar" Pro Stock team of Johnson & Johnson represent Magneti Marelli in the NHRA professional categories.

In the American TUDOR United SportsCar Championship Magneti Marelli supplies the engine control system, the display and data logger, for the Prototype Challenge category. Magneti Marelli Motorsport also supplies logger, telemetry and display systems to various Ferrari teams involved in the GTLM and in the GTD in the United Sportscar championship. Magneti Marelli Motorsport supplies the data loggers in the **Red Bull Global Rallycross**.

In Brazil, the Stock Car Brazil championship has chosen Magneti Marelli electro-actuated shift for all the vehicles and the engine control unit for the cars in the **Stock Car Lite** category. Also the Brazilian **Formula 3** adopts Magneti Marelli engine control units.

Finally, for the vehicles made by the University students who compete in the **Chinese Formula Student** and in the international **Formula ATA**, Magneti Marelli supplies motorsport components, data loggers, Wintax analysis systems and electronic engine control units (ECUs). The University of Brescia (Italy) has adopted Magneti Marelli Motorsport technologies for an educational kart lab.

The collaborations with the Universities at an international level have the significant goal of training those who shall be the new generation of future technicians and engineers, via the intensification of already existing relations and the creation of new methods of involvement, such as for instance **Magneti Marelli Lapttime Club** (www.lapttimeclub.com), the online innovation laboratory for motorsport technicians, operators and fans of technology, electronics and any discipline able to bring added technical value of innovation and creativity.

Lapttime Club combines social environment and passion for the motorsport, with the goal of stimulating creativity and innovation aimed to the development of ideas, efficient products and services for the racing world and to the exploration of potential contaminations from other sectors with an engineering content.

The first phase of the Magneti Marelli Lapttime Club was completed in December with the award of prizes to the best ideas developed and shared by all the Lapttime Club members. The winners, elected by the community itself, were Alessandro Sarcina and Cristian Cascetta. Alessandro Sarcina proposed an innovative system to imagine anew the way the information collected by Wintax – the telemetry analysis tool used in the races and developed by Magneti Marelli – are displayed, by using technological supports such as, for instance, the Google Glasses. Cristian Cascetta proposed instead the use of "Search Technologies" to identify and to extract, according to the specific needs, the data collected and processed by Wintax, in order to support and improve the decision making processes. Furthermore, Cristian Cascetta was elected by the community members as the "Lapttime Club Top Innovator", namely the community member who best distinguished himself for participation and activity.

***Magneti Marelli** produces advanced systems and components for the automobile industry. With 89 production units, 12 R&D centres and 26 application centres in 19 countries, more than 38,000 employees and a turnover of 6,5 billion Euro in 2014, the Group supplies all the major carmakers in Europe, North and South America and the Far East. The business areas include Electronic Systems, Lighting, Motor Control, Suspension Systems and Shock Absorbers, Exhaust Systems, Aftermarket Parts & Services, Plastic Components and Modules, and Motorsport. Magneti Marelli is part of FCA.*