PRESS RELEASE

Magneti Marelli at Auto China Beijing 2014: focus on eco-sustainable technologies.

Solutions for hybrid-electric propulsion and transmissions, GDI 600 bar systems, LED lighting, evolved instrument panels and lightweight materials for suspensions will be among the main technologies on display at stand W01 in Pavilion W1.

The 13th edition of **Auto China** opens to the public on 23rd April at the Motor Show held every two years in Beijing. Magneti Marelli is also taking part in the event this year with an exhibition area demonstrating the ability to supply the car makers worldwide and highlighting the cutting-edge technologies in all areas of the company's business: lighting, powertrain control, electronic systems, suspensions, shock absorbers, plastic modules, exhaust systems, motorsport and aftermarket.

At Auto China, Magneti Marelli offers its services as supplier of value-added technology solutions in a steadily growing automotive market, with a production volume of nearly 21 million vehicles in 2013, an increase of 14.7% compared to 2012 (source: IHS). Magneti Marelli in this scenario, **ended 2013 with a turnover of 358 million Euro,** an increase of 24.5% compared to 287.4 million in 2012 (240.7 million in 2011, 232 million in 2010 and 162 million in 2009). Over the years the company has built up a major presence in the key strategic areas of the Chinese automotive market (Shanghai, Jiading, Guangzhou, Wuhu, Hangzhou, Changchun; Changsha, Hefei, Foshan and Xiaogan), with 9 industrial sites - both directly and with Joint Ventures - currently employing approximately 3,000 staff (including the Joint Ventures), of which more than 10% are employed in R&D.

Once again, the dominant theme of the exhibition in Beijing will be **"green" technologies for sustainable mobility, i**n view of a regulatory framework in China that will, in the near future, impose more stringent limits on vehicles in terms **of pollution and emissions.**
Among the various technological advances designed to offer solutions to the environmental sustainability issue, **hybrid-electric propulsion** solutions will take on increasing importance, albeit with relatively low percentage rates compared to the overall market. The average annual growth for electric or hybrid propulsion vehicles is estimated to increase by 96% in 2016 (source: IHS data April 2014), starting from production volumes that in 2013 amounted to over 31,500 units.

In this context, Magneti Marelli will exhibit at Auto China its cutting-edge solutions representing "long term" technological principles and methods, tested in motor sport with **KERS (Kinetic Energy Recovery System)** and other electrical solutions for energy recovery, applied for the first time in "series" with the solutions provided by the HY-KERS hybrid system of "LaFerrari".

In particular, Magneti Marelli is aiming at the market areas of the highest growth rate for hybrid-electric solutions, those of medium and low voltage: the **"medium" hybrid solution with 350 volts and 60 kilowatts of power and the 48 volt "compact"** will in fact be exhibited at stand W01 in Pavillon W1, low-voltage solutions with a power of less than 16

kW, extremely flexible and easily applicable to internal combustion engines, with limited impact on the system.

In addition, a technological solution will also be displayed that represents the ideal synthesis of the technological transfer process between “racing” and the “road”, combining two innovations tested by Magneti Marelli at different times on the world's most important tracks: **the electro-actuated gearbox and the KERS**. Magneti Marelli has in fact developed a solution for standard production cars **that connects an electric motor generator to an automatic gearbox**: the electric motor produces torque during the gear change and at the same time helps to reduce fuel consumption. This prototype represents Magneti Marelli cutting edge technology with regard to **Automated Manual Transmission (AMT)** which for nearly two decades has been an effective solution for transmission, combining ease of use, reduced fuel consumption and emissions, the application of any manual transmission and production costs that are lower than the conventional automatic transmission systems.
In Beijing, the latest generation **AMT aimed at the Chinese market** will also be presented.

Following in the wake of track-road osmosis, **GDI** direct injection systems (Gasoline Direct Injection) complete the powertrain technology field and will be presented at Auto China. With their recent application in Formula 1, they see the prospect of fuel pressures raised even further - with a limit of up to 600 bar - and they are therefore even more effective in the reduction of particulate matter, as well as contributing to downsizing of the engine coupled with the turbo.

The **automotive lighting** technologies will also be more and more able to make a contribution in terms of eco-sustainability, as well as safety and design. Within this framework, Magneti Marelli, with its dedicated **Automotive Lighting** area of business, also brings **“E-Light”** technology**,** recently recognised as “Eco-Innovation” by the European Union, to Beijing. **“E-Light”** is a low beam LED module that allows energy savings with a superior lighting performance: consuming about 1/6 less than a regular halogen bulb (11 Watts instead of 68 Watts). The European Community has recognised **“E-Light”** as Eco-Innovation, able to ensure car maker that will be adopting it a saving of 1 g CO_2/km, in view of the stringent European emission regulations which will come into effect in 2020 and which will impose a limit of 95 g CO_2/km on Manufacturing Companies.

In addition to E-Light Automotive Lighting displays the best of its technological leadership in terms of automotive lighting. Among the various applications exhibited there will be the **Matrix Beam** module, a high beam LED with an adaptive system for directing the light beam through the selective activation of six LEDs; the adaptive full-LED headlamp for the new **Mercedes-Benz C-Class**; the full-LED headlamp adopted by **Peugeot** for the new 308, European “Car of the Year 2014”.
As in previous editions, a **darkroom** will also be set up at the Magneti Marelli stand where, in an environment that recreates a night road situation, various lighting technologies for cars may also be viewed with a simulator and a 3D video that visually displays the characteristics of the Matrix Beam module.

Completing the field of “sustainable mobility” at the exhibition area there will also be two simulators with the **“Electronic Horizon”** and the **“Fuel Economy Assistant”** applications, both of which are aimed at optimising consumption. “Electronic Horizon” is a driving assistance technology that acts as a “cruise control” with variable speeds, continuously optimising engine management and gear change. In fact the simulator exhibited in Beijing will illustrate the electronic horizon function as a facilitator for vehicle-functions aimed at safety and reduced consumption. On the other hand, the simulator dedicated to the “Fuel Economy Assistant” illustrates a set of strategies for powertrain management in real driving conditions, aimed at achieving significant energy savings.

Moving on to the other Magneti Marelli technologies present at Pavilion W1 (stand W01), the field of **electronic systems** will see for the first time a full range of **analogue and digital instrument panels** to satisfy, in a targeted and customised manner, the technological requirements for all car models, from budget to premium versions.
At the stand there will be two **multimedia totems** dedicated to the **infotainment** systems developed by Magneti Marelli for BMW and Peugeot and adaptable according to the demands of car manufacturers. **Another totem** will be dedicated to telecommunications with technologies that allow for the connection of a car to the wide world of communications networks, internet and services, mainly in order to regulate and monitor their use and flows, optimising operating costs and emissions and to bring on board value-added information and entertainment.

The **Suspension Systems** area brings to Beijing, **composite fibres technology**, presenting examples of ultra light materials used in the manufacture of suspension components. Among these is the use of **Hybrid FRP** (Fibre Reinforced Plastic) for construction of the frontal suspension arms. In the field of **shock absorbers,** the 35 mm system used on the Maserati Ghibli will be exhibited, which allows for greater flexibility in defining the correct damping curve of the ruggedness of terrain, and the **Dual Stage Valve Piston Rod Assembly** technology, an adaptive valve system implemented electronically to harden the response of shock absorbers, according to the driver's preferences.

To reduce emissions, the **exhaust system** area has a **module** for **the injection and mixing of exhaust gas** for the Selective Catalytic Reducer (SCR) system as well as solutions for sound customisation according to the needs of the car manufacturer.

Together with the GP F1 in Shanghai, the commitment of Magneti Marelli in **Motorsport** sees its highest expression in Formula 1, which represents the ideal bridge for the development of large series technologies. Powertrain innovation, with **Kinetic Energy Recovery System (K-ERS)** and Heat Energy Recovery System (**H-ERS**) systems and the **Gasoline Direct Injection** (**GDI**) high pressure modules in addition to the management of communications between box cars thanks to the use of **telemetric** systems with transmission via **WI-FI**.
At Auto China are also exhibited the components used during the **China Touring Car Championship** (CTCC) which sees Magneti Marelli Motorsport **as the sole supplier of the data acquisition system used by all the cars in the race**. The data acquisition kit consists of an electronic control unit (Data Logger), by a series of sensors installed on the engine and

on the chassis of the cars that allow the collection of data for analysis balancing of the performance of the car as well as control of compliance with the technical regulations.

Exhibition of technologies also in the **Plastic & Modules** areas, with **Pedals and Components**, and **Aftermarket** which in 2013 saw the official launch in China of the Magneti Marelli Aftermarket Parts & Services business area and the start of production of Magneti Marelli batteries made in China for the local market.

Magneti Marelli in China

Magneti Marelli has had a presence in the country since 1996 with factories and R&D/Engineering centres in **Shanghai** (Powertrain in JV with Shanghai Automobile Gear Works - SAGW - and Exhaust Systems), **Foshan** (Automotive Lighting), **Wuhu** (Automotive Lighting and Powertrain), **Guangzhou** (Electronic Systems), **Hangzhou** (Dampers in JV with Wanxiang Qianchao Company), **Changsha** (exhaust systems with Fiat/GAC), **Changchun** (Powertrain in JV with FUDI) and at **Hefei** (exhaust systems with JAC and Lingdatang). In November 2013, an agreement was signed with China South Industries Group Corporation (CSI) for the production at **Xiaogan** (Hubei Province) of headlamps and rear lamps for motor vehicles.

Magneti Marelli will be present in Pavilion W1, Stand W01.
Milan - Beijing, 21th April 2014