

MAHLE positions itself for the future

- Sales rise to EUR 12.3 billion in 2016
- Significant increase in organic growth
- 2016 business year characterized by strategic decision-making

Stuttgart, April 26, 2017 – The MAHLE Group increased its sales to around EUR 12.3 billion in the 2016 business year, which corresponds to growth of more than seven percent. “Our 2016 business year was heavily characterized by the implementation of our dual strategy for the parallel development of combustion engine and e-mobility products,” said Wolf-Henning Scheider, Chairman of the MAHLE Management Board and CEO, during the press conference on the Financial Statements in Stuttgart/Germany.

Changes in the consolidation group to the amount of EUR 529 million contributed to the substantial growth in sales in 2016. “This is because the full-year sales from Delphi Thermal and Kokusan Denki—now called MAHLE Electric Drives Japan—which were acquired on June 30, 2015, were disclosed for the first time in the period under report,” explained Michael Frick, MAHLE’s CFO. Exchange rate effects had a negative impact of EUR 104 million.

Even excluding acquisition and exchange rate effects, the group recorded significant growth of 3.4 percent, thus exceeding the growth rates of the past few years. The EBIT ratio was 3.8 percent, which corresponds to income before taxes and interest of EUR 473 million. The net income for the year amounted to EUR 63 million. The substantial difference between EBIT and the net income for the year is mainly attributable to special effects. Therefore, the financial result includes effects from the initiation of the sale of the joint venture Bosch Mahle Turbo Systems (BMTS). Moreover, depreciation resulting from new acquisitions in previous years also had an adverse effect on profit.

2016 business year characterized by strategic positioning

Investments in the future—that is to say, in the expansion of existing business segments and the establishment of new ones—had a particular impact on profit. “We have considerably increased our investments in research and development in order to tap into new product segments for MAHLE,” said Scheider. In 2016, R&D expenditure amounted to roughly EUR 750 million, which corresponds to a rise of around EUR 100 million (+14.7%) compared with the previous year and a new record ratio of 6.1 percent. The number of employees in research and development has more than doubled over the past five years; today there are 6,000. “We will increase these investments again in 2017,” added Scheider.

Depreciation resulting from the strategic investments made within the context of corporate acquisitions in previous years also had a negative impact on profit. Because in accordance with our obligation, hidden reserves were disclosed during the course of the acquisitions, giving rise to goodwill. The resulting standard depreciation negatively impacted results by a three-digit million amount in the year under review, reducing the margin by more than one percentage point. When adjusted, the EBIT amounted to five percent.

Strong first quarter of 2017

The current market forecasts for 2017 are good and the first quarter has exceeded MAHLE's expectations. The driver of this pleasing development is the positive development in Europe, Asia, and North America. A certain degree of recovery can be seen in South America, albeit at a low level. The expected stagnation in China has failed to materialize so far; the reduced promotion of vehicles with a displacement of up to 1.6 liters brought about anticipatory effects. The development in India also continues to be dynamic.

"Nevertheless, we have been cautious with our forecasts for 2017, because the political uncertainties are greater than they have been for a long time," said Scheider in describing the current situation. The trend toward trade barriers and protectionism is of particular concern. In view of the current situation, the importance of maintaining a balanced presence in the world regions is evident. MAHLE is therefore continuing its strategy of evenly distributing sales across the core markets of Europe, North and South America, and Asia/Pacific. One measure in this regard will be the further expansion of the group's presence in Asia. In May 2017, a new plant for air conditioning compressors will open in China—also on account of the continued excellent opportunities for growth this region has to offer.

Looking to the future with a parallel approach

By taking the systematic approach of continuing to develop the combustion engine as well as devising solutions for e-mobility, the group is making an important contribution to sustainably lowering CO₂ emissions. MAHLE is a technology driver in both fields.

MAHLE continues to exploit the potential of the internal combustion engine

The combustion engine still offers significant optimization prospects, which MAHLE also intends to exploit in order to achieve the CO₂ targets for the large number of vehicles with this drive technology. After all, with the MAHLE portfolio alone, a further reduction of around ten percent can be achieved in CO₂ emissions. This number is based on the new WLTC (Worldwide Harmonized Light-Duty Vehicles Test Cycle).

The further optimization of engine mechanics is part of the approach taken by MAHLE. The group's focus here is on reducing frictional loss. This approach also addresses real driving conditions, irrespective of cycles and standards. To this end, MAHLE is developing extremely resilient and also weight-optimized engine components, which are ideally coordinated in the networked system and ensure maximum efficiency. For example, MAHLE's latest generation of lightweight pistons in conjunction with friction-optimized piston ring packs bring about a reduction in CO₂ of more than two percent. At the same time, MAHLE engine components facilitate the use of low-viscosity engine oils, which further reduce frictional resistance and the need for lubricating oil. This involves a significant alleviation of the burden on the oil system, which is reflected in improvements in consumption. All in all, by combining low-viscosity oils with MAHLE solutions for reducing friction on the engine components and an optimized oil circuit, it is possible to reduce CO₂ emissions in gasoline engines by up to five percent.

Further measures taken by MAHLE for the ongoing development of the combustion engine powertrain include, for example, innovations in the air pathway, which can save up to three percent of CO₂, as well as intelligent thermal management, which can generate additional savings of around two percent—in each case relating to the gasoline engine.

Alternative fuels make CO₂-neutral combustion engines possible

MAHLE is also committed to the development and use of alternative fuels. These already offer considerable potential for reducing CO₂ in the short term. In 2016, the company developed a CNG engine and installed it in a demonstrator vehicle. This monovalent CNG engine demonstrated a savings potential of more than 25 percent CO₂ (WLTC) in comparison with a gasoline engine of the same output.

Consequently, there is already a means of reducing CO₂ that is ready for series production and can be used immediately in the vehicle population. "The German government also sees the advantage of natural gas and therefore extended the tax concession to 2026 in February," stated Scheider during the press conference.

Further improvements can be achieved if alternative fuels are added to conventional fuels. A nationwide upgrade from E10 to E20 is conceivable. Synthetic production

using electricity from renewable sources would save up to ten percent of CO₂ emissions for gasoline engines. Technically, it is already possible to design a suitable engine today. In the long term, synthetic fuels even facilitate CO₂-neutral individual mobility with the combustion engine too, since they bind just as much CO₂ during production as they later emit during combustion. MAHLE is therefore making the case in the industry and in politics for the effective promotion of alternative fuels—that is to say, synthetically produced fuels, ethanol, and CNG. Alternative fuels constitute the fastest route to reducing CO₂ in the transportation sector.

MAHLE is an innovation driver in e-mobility

E-mobility is the key to CO₂-neutral individual transport in the long term. In this field, MAHLE is—once again—one of the innovation drivers. But before e-mobility can become a mass product, numerous issues still need to be addressed. These include infrastructural measures and solutions—particularly the availability of fast-charging stations. The generation of electrical power is also a central aspect of the carbon footprint of electric vehicles. Only once electricity can be largely generated in a CO₂-neutral way will e-mobility make a sustainable contribution toward the climate targets beyond achieving zero-emissions locally.

At MAHLE, two key topics are aimed at improving the electric vehicle in order to make it competitive in the medium term and attractive to the end customer.

- On the one hand, there is the issue of thermal management. This encompasses both interior air conditioning, which directly influences the cruising range, and the temperature control of sensitive components, such as the battery, drive motor, and power electronics.
- On the other hand, there is the issue of the electric powertrain and electric auxiliary components.

Thermal management as an enabler for e-mobility

When it comes to electric vehicles, the optimization of hot and cold currents provides the basis for power output, cruising range, and service life. Integrated and intelligent thermal management is therefore a prerequisite for establishing e-mobility. MAHLE has already developed numerous innovations for the thermal soaking of batteries in electric vehicles and plug-in hybrids. These have since gone into series production. In 2016, MAHLE received orders for its solutions from customers all over the world. The requirements placed on battery thermal management will continue to increase significantly in terms of more powerful batteries or fast-charging functions. Added to this is the fact that the drive motor and power electronics in electric vehicles will also need to be cooled and integrated in a holistic thermal management system. This is yet another area in which MAHLE's expertise pays off.

Electric drive solutions from MAHLE are in demand worldwide

In the field of the electric powertrain and electric auxiliary components, MAHLE develops highly efficient drive systems, power electronics, and electric auxiliary components. Solutions for every kind of vehicle: from e-scooters and machinery to commercial vehicles and passenger cars. In this area, the group was able to win a series of orders in 2016. From as early as 2017, MAHLE will be supplying new cooling systems, electric compressors, and electric drives to several manufacturers of battery-powered electric vehicles—including some entirely new vehicle manufacturers. In 2018, complete MAHLE drive units for pedelecs will go into series production. The company has gained new customers in this area too in the last twelve months. MAHLE thereby covers the entire e-mobility spectrum.

MAHLE expands its holistic systems competence for e-mobility

“Strategically, we have taken a major step toward achieving our goal of having the holistic systems competence for electrification and e-mobility within our company,” said Scheider, summarizing the activities of the business year relating to the group’s technology strategy. With the acquisition of Nagares in 2017, the group is gaining access to additional skills in power electronics and control units, for example. The company is represented on the market with voltage converters, components for charging electronics, battery management systems, and control systems for thermal management solutions, among other products. Nagares also has a great deal of experience in the development of electric vehicles and operates a competent development center in Valencia. MAHLE aims to expand this location as there is a large number of qualified engineers in the region. Nagares maintains excellent relations with the two local universities and has established a joint chair and several cooperation projects for research and advanced engineering with the university in Valencia (Universidad Politécnica de Valencia).