

MAHLE

Driven by performance

2012 //

ANNUAL REPORT

ANNUAL CHRONICLE—HIGHLIGHTS 2012 //

JANUARY

MAHLE acquires InnoWa Membrane GmbH

The company specializes in the development, application, and manufacture of high-performance filter systems based on membrane technology. It now trades under the name MAHLE InnoWa GmbH with headquarters in Stuttgart/Germany.

MAHLE at Auto Expo 2012 in New Delhi

At Auto Expo 2012 in New Delhi/India, MAHLE presents innovative technologies and new products to industry professionals.

First high-volume order for passenger car steel pistons in Europe

MAHLE receives a high-volume order for passenger car steel pistons from a major European manufacturer: the first passenger car steel piston project for MAHLE in Europe.

Series order for transformer and converter cooling systems

MAHLE is commissioned with the delivery of a total of 560 transformer and converter cooling systems for the new high-speed train from Deutsche Bahn.

High-volume order for sulfur filters

Office Chérifien des Phosphates (OCP) based in Morocco, the largest producer of sulfur in the world, orders more than ten horizontal sulfur filters from MAHLE.

Supplier award from SGMW

The Chinese automotive manufacturer SAIC-GM-Wuling (SGMW) presents MAHLE Shanghai Filter Systems Co., Ltd. with the award for "Best Quality Supplier."

Supplier award from Nissan China

MAHLE Shanghai Filter Systems Co., Ltd. receives the award for "Excellent Supplier" from Nissan China.

FEBRUARY

Order for air intake modules

MAHLE will be supplying a major Japanese passenger car manufacturer with air intake modules for its four-cylinder gasoline engines in future.

Development contract for power cell units

A large European manufacturer of large engines commissions MAHLE to develop the complete power cell unit of a high-speed diesel engine.

Supplier award from Shanghai Volkswagen Automotive

Shanghai Volkswagen Automotive Co., Ltd. presents MAHLE Engine Components (Yingkou) Co., Ltd. in China with its "Excellent Quality Gold Award."

Supplier award from CNHTC

MAHLE Tri-Ring Valve Train (Hubei) Co., Ltd. in China receives the award of "Best Supplier" from China National Heavy Duty Truck Group Co., Ltd. (CNHTC).

MARCH

MAHLE Innovation Day at PSA Peugeot Citroën

Accompanied by technical lectures, MAHLE presents its product highlights at the PSA Peugeot Citroën production site in La Garenne/France.

High-volume order for air intake modules

In the future, a major American passenger car manufacturer will be equipping all of its six-cylinder engines with MAHLE air intake modules.

Development contract for composite steel pistons in gas engines

MAHLE is awarded the contract to develop a composite steel piston for a medium-speed, two-stage turbocharged gas engine.

Long-term supply agreement for high- and low-pressure hydraulic filters

A leading manufacturer of forklift trucks concludes a long-term supply agreement with MAHLE for high- and low-pressure hydraulic filters.

Supplier awards from Toyota

Toyota awards the "Regional Contribution Award" to the MAHLE Group, and recognizes the work of MAHLE Engine Components USA, Inc. in Morristown/USA with its "Excellent Quality Performance Award."



Supplier award from Hino Motors

MAHLE Engine Components Japan Corporation in Okegawa/Japan receives the "Excellent Quality Award" from Hino Motors.

Supplier award from PSA Peugeot Citroën

The MAHLE Group is presented with the "Core Supplier" award by PSA Peugeot Citroën.

APRIL

MAHLE at the Beijing International Automobile Exhibition

MAHLE presents innovative technologies and new products at China's leading automotive trade fair, the Beijing International Automobile Exhibition.

High-volume order for aluminum diesel pistons

In future, MAHLE will be supplying a leading American customer with aluminum diesel pistons, including rings and pins, for a new generation of diesel engines that will be in use in Europe and India.

Series order for welded steel pistons

A European commercial vehicle manufacturer commissions MAHLE with the supply of welded steel pistons with rings and pins as well as the corresponding cylinder liners. MAHLE thus sustainably consolidates its position as the customer's main supplier for power cell units.

Supplier award from Isuzu

MAHLE Engine Components Japan Corporation receives the "Delivery Award (Excellence in OES Delivery)" from Isuzu.

Supplier awards from Mitsubishi Motors Thailand

Mitsubishi Motors Thailand presents MAHLE Engine Components (Thailand) Co., Ltd. with the "Award of Quality—Excellence in Zero Defect," and MAHLE Siam Filter Systems Co., Ltd. in Samutprakarn/Thailand with the "Award of Quality."

MAY

Series order for assembled commercial vehicle camshafts

MAHLE receives the first series order for assembled camshafts from a major European commercial vehicle manufacturer.

MAHLE environmental protection technologies for the developing market of renewable energies

MAHLE supplies the first oil separation system for processing waste water containing oil from thermosolar power plants to the solar power plant Orellana 1 in Spain.

JUNE

Audi achieves outstanding triple victory at Le Mans with MAHLE steel pistons

All four Audi vehicles started the race with the latest version of the compact V6 TDI engine with MAHLE steel pistons, which was first used at Le Mans in 2011. Audi's eleventh success at Le Mans shows that motorsport steel pistons by MAHLE achieve top performance in the most challenging conditions.



MAHLE presents the range extender demonstrator vehicle to the press

In order to further test the range extender and prove its suitability for everyday use, MAHLE has installed it in a demonstrator vehicle based on a common series vehicle. With comparable driving dynamics and cruising range, it achieves extremely low CO₂ emissions of 45 g/km in the NEDC (New European Driving Cycle).

MAHLE consolidates headquarters for North America

MAHLE Industries, Incorporated completes the acquisition of the Nailco facility and consolidates its Group activities in Farmington Hills, Michigan/USA. An additional 4,500 square meters of office, test bench, and warehouse space are now available to the Company. On completion of the necessary conversion work, the external divisions of MAHLE Powertrain and MAHLE Aftermarket—previously located in Novi and Ann Arbor—relocate to Farmington Hills.

Logistics center planned for MAHLE Aftermarket in Russia

With the purchase of a 50,000-square meter estate in Obninsk/Russia, MAHLE has inaugurated a new phase of its aftermarket strategy for eastern Europe. The 10,000-square meter logistics center for the spare parts market in Russia and Belarus will be built in 2013 and commissioned at the start of 2014.

Steel innovation award for the MAHLE Torqueboost CamInCam®

The MAHLE Torqueboost CamInCam® camshaft has received the steel innovation award for the category "Products made of steel." It is only awarded to products that are ready for series production and made completely or predominantly of steel; they must also allow for new applications or improve existing ones for this material. The focus is primarily on functionality, economic efficiency, and environmental compatibility.

High-volume orders for gasoline engines

In the future, MAHLE will be supplying locally produced valves, assembled camshafts, air intake modules, cylinder head covers, and oil pumps for a European passenger car manufacturer in China.

First high-volume orders for exhaust gas coolers

For the new engine generation complying with the Tier 4 exhaust emission limits, MAHLE has received series orders for exhaust gas coolers from two major engine manufacturers.

Additional series order for railroad vehicle cooling systems

A key manufacturer of EMUs and DMUs commissions MAHLE with the development for 230 underfloor cooling systems for a new regional train in Great Britain.

Supplier award from MAN Trucks India

MAN Trucks India presents MAHLE Engine Components India Pvt. Ltd. with the "Best Quality Award."

Supplier award from Isuzu Philippines Corporation

MAHLE Filter Systems Philippines Corporation in Cavite receives the "Excellent Parts Quality" award from Isuzu.

JULY

Order for Ocean Protection System

Hyundai Heavy Industries (HHI), the world's largest ship-builder with its headquarters in Ulsan/Korea, commissions MAHLE to equip six new 9600 TEU ships operated by the shipping company Hamburg Süd with the OPS (Ocean Protection System) ballast water treatment system.

Supplier awards from Nissan Motor

Nissan Motor presents MAHLE Siam Filter Systems Co., Ltd in Samutprakarn/Thailand with the "Nissan Supplier Quality Award—ASEAN Regional Quality Award," and acknowledges the work of MAHLE Guangzhou Filter Systems Co., Ltd in China with the presentation of the "China Regional Quality Award."

Volkswagen Group Award 2012 for Bosch Mahle Turbo Systems

The Volkswagen Group honors Bosch Mahle Turbo Systems (BMTS) as one of the best suppliers with the Volkswagen Group Award 2012. The outstanding reliability and innovative working methods at BMTS are particularly valued.



AUGUST

New MAHLE headquarters in Tokyo

The building complies with Tokyo's latest earthquake-resistant building directives. Across an area of around 2,300 square meters, 140 employees from sales, finance, controlling, IT as well as management for the filtration business work in Japan. In addition, the Aftermarket business unit, which was previously located at another site because of a lack of space, has been integrated.

High-volume order for air intake modules

MAHLE receives a high-volume order from a large European automobile manufacturer for air intake modules with indirect integrated charge air cooler. Both the European and Chinese engine production sites are being supplied as part of this order.

First customer order for counterflow staggered blade charge air coolers

MAHLE has developed a counterflow staggered blade charge air cooler that offers significant benefits in terms of weight and package constraint over the technology currently in use. A major German manufacturer is installing these for the first time in its latest generation of engines.

Order for equipping an offshore transformer station for wind power plants

MAHLE is awarded the contract to equip an offshore transformer station for wind power plants with oil separators, automatic filters, and fuel treatment systems. Part of this process includes the first ever usage of a reverse osmosis system that produces drinking water and treats it.

Supplier award from FAW-Volkswagen Automotive

MAHLE Donghyun Filter Systems (Tianjin) Co., Ltd. in China receives the "A Class Supplier" award from FAW-Volkswagen Automotive.

SEPTEMBER

Plant expansions in Thailand

MAHLE is extending both plants in Thailand. The location in Bangkok mainly produces pistons. Here, the extension has created space for an assembly line and test facilities. Machining and coating lines will be added at a later stage. Buildings for storage areas and offices will be constructed in Samutprakarn. The areas that will be cleared will then provide space for two new production plants for heat exchangers and capacity for the production of air intake systems and cylinder head covers.

New filter plant commissioned in Japan

Air intake and filtration systems are produced at the new plant in Kyushu/Japan with a production area of initially 7,500 square meters. Following the earthquake and tsunami in March 2011, having production plants on two islands (Honshu and Kyushu) is an effective way of minimizing risks.

Series order for assembled camshafts

MAHLE receive a series order for assembled camshafts for the North American engine production of a European premium passenger car manufacturer.

Additional high-volume order for passenger car steel pistons

MAHLE is awarded an additional high-volume order for passenger car steel pistons from a large European passenger car manufacturer.

Appointment to supply prototypes for a large exhaust gas cooler for a locomotive engine

An American engine manufacturer concludes an agreement with MAHLE for the development and supply of a large exhaust gas cooler compliant with the new Tier 4 emission level.

Second series order for wind power plants

The European market leader for wind power plants awards MAHLE with an additional series order for a cooling module.

International Motor Show (IAA)

With innovative products that will pave the way for future combustion engine technologies, MAHLE follows the theme of this year's IAA in Hanover/Germany: continued fuel optimization in commercial vehicles. This is illustrated by a new bearing coating that can also cope with an engine's stop-start function. The manufacturers are increasing their focus on fuel consumption, as this is becoming a customer demand, and CO₂ emissions for commercial vehicles will also be subject to statutory regulations in the foreseeable future.



OCTOBER

Series order for transmission oil coolers

A European passenger car manufacturer commissions MAHLE with the supply of transmission oil coolers for various automatic transmissions.

Order for equipping a deep-sea research ship

MAHLE receives the order to equip a deep-sea research ship from Germany with a membrane filtration oil separator, a ballast water treatment system, and a fuel treatment system.

NOVEMBER

Second place in the World Constructors' and World Drivers' Championships in Formula 1

Ferrari banks second place in the World Constructors' Championship in Formula 1. In the process, Fernando Alonso becomes second overall in the World Drivers' Championship in a dramatic finale. Scuderia has been competing in Formula 1 for more than 30 years, using exclusively MAHLE pistons and engine components.

Extended research and development center commissioned in Shanghai

With around 100 guests from the worlds of politics and business, MAHLE celebrates the opening of a 16,000-square meter new building in the Fengpu Industrial Park in Shanghai/China. Located alongside the research and development center, the building of the regional headquarters of our eight Chinese production locations houses centralized functions such as research and development, sales, finance, purchasing, IT, and personnel.

High-volume order for valve seat inserts and guides

MAHLE receives a high-volume order for valve seat inserts and guides for the Chinese engine production of an American customer.

Development order for an automatic filter for refineries

MAHLE is awarded the development of an automatic filter for the filtration of light hydrocarbons in refineries. MAHLE is setting new standards in this market.

DECEMBER

MAHLE concludes agreement for the acquisition of RTI Technologies

MAHLE announces that a binding agreement has been reached with Robert Bosch GmbH to acquire all assets and associated business dealings from RTI Technologies, Inc. RTI Technologies specializes in the development and distribution of automotive maintenance equipment, including notably air conditioning service units.

MAHLE acquires a 30-percent share in Kokusan Denki

At the beginning of December, MAHLE acquires an estimated 30 percent of the shares in the listed Japanese company Kokusan Denki as part of an over-the-counter transaction. The company generates sales of approximately EUR 230 million from mechatronic, electric, and electronic products for the Japanese automotive and motorcycle industry.

Award from Ferrari

Scuderia Ferrari thanks MAHLE for the support and excellent cooperation provided for the development of the new V6 turbo engine generation. The racing team regards the extension of the MAHLE development sponsoring agreement as crucial in light of the regulation changes planned for 2014.

MAHLE GROUP //

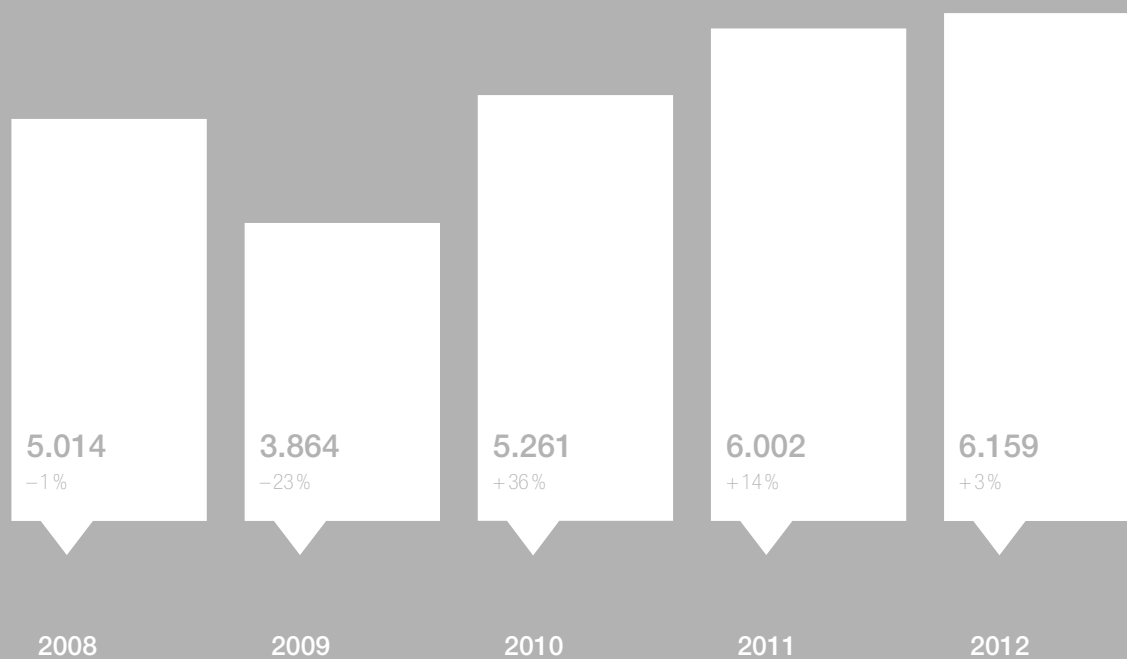
FIGURES //

million EUR

Business year	2008	2009	2010	2011	2012
Sales	5,014	3,864	5,261	6,002	6,159
EBITDA	498	264	641	759	725
EBIT	160	-100	287	425	401
Income from ordinary business activities	85	-165	252	351	267
Net income/loss	22	-379	177	231	149
Tangible fixed assets	1,569	1,491	1,522	1,562	1,561
Capital expenditure on tangible fixed assets (without first consolidation)	415	172	199	319	324
Equity	1,511	1,157	1,464	1,696	1,775
Dividend paid by MAHLE GmbH	3.0	3.0	5.5	7.0	5.0
Headcount (as at Dec. 31)	49,262	43,489	47,457	48,818	47,662

DEVELOPMENT OF SALES //

million EUR



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THE COMPANY

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MANAGEMENT REPORT

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Dear readers,

Already at the end of the last business year, we did not have an optimistic outlook for growth in 2012. High national debt in the USA and Japan combined with the euro and financial crisis in Europe did not offer the ideal conditions for solid growth forecasting. Despite this, the economic situation in the global automotive industry responded quite positively for the first six months of 2012, which meant that MAHLE was able to record additional growth of eight percent in this time period. However, it already became obvious that both the global weakness of the commercial vehicle market and the dwindling demand of the majority of European high-volume passenger car manufacturers would lead to weak sales and profits in the second half of the year. It was left to the North American market and parts of Asia to have a stabilizing influence on the overall development for the latter half of 2012. This allowed us to record a slight growth in sales of approximately three percent to nearly EUR 6.2 billion for 2012 as a whole, while this already includes positive exchange rate effects.

As a result of the markedly weakened sales figures for the second half-year, we were unable to maintain our headcount as at the end of the year, particularly in South America and Europe. This is reflected in the slight reduction in the total number of employees to just under 48,000. In addition, some plants in Europe had to resort to short-time work.

By introducing cost adjustments at an early stage and further productivity improvements, we were able to post a slight increase in operating profit in the year-on-year comparison despite the weakened market, and achieve the target corridor of our operating profit margin. Combined with stringent management of the working capital, it was thus possible to further improve key balance sheet criteria as well as the Group's solid financial position, despite a considerable volume of capital expenditures.

Another positive achievement is that we succeeded to generate positive contributions to profit in all business units and world regions.

We formulated our strategic objective to reinforce our non-European activities already several years ago. In 2012, we continued to systematically pursue this objective. Asia's share in sales for our automotive OE activities already accounts for 26 percent and this region's contribution to sales and profit will increase in the future. We set new key prerequisites to this end in 2012. The "Special" section of this Annual Report is, therefore, dedicated to our activities in this region.

We have had to delay exercising our call option to acquire the majority share in the Behr Group scheduled for 2012. In May 2012, MAHLE was informed in its role as shareholder by Behr's Management Board that antitrust authorities in both Europe and the USA had launched investigations against manufacturers of thermal systems for the automotive industry, including Behr. Therefore, MAHLE has delayed the majority acquisition until all potential implications have been clarified and assessed both in legal and commercial terms. As a result, MAHLE's holding in the Behr Group has remained unchanged at 36.85 percent. Nevertheless, our positive strategic evaluation of a complete integration of Behr into the MAHLE Group is unaltered.

The Behr Group itself generated sales of approximately EUR 3.6 billion for the 2012 business year. Considering the restrained market situation, the development of operating profit was satisfactory. Once again, we have included the Behr results in the annual financial statements using the equity method according to the percentage of our holding. The collaboration of the MAHLE and Behr development and sales teams has led to the acquisition of additional large customer projects for systems and module solutions, which is to be regarded positively.

Similarly, the market success recorded by Bosch Mahle Turbo Systems (BMTS) is a welcome development. This 50:50 joint venture with Robert Bosch GmbH was able to acquire additional orders for global customer projects after a successful start of production in the past business year.

At the end of the year, MAHLE acquired a 30-percent share in the Tokyo-listed company Kokusan Denki Co., Ltd., a specialist for mechatronic products. We intend to use this investment to gain a firm foothold in this growth market in the long term.

As in previous years, we continued to invest large sums in research and development in 2012, with the goal of broadening our product portfolio. Consequently, we are confident that we will be able to continue expanding in the coming years thanks to new technologies improving efficiency in modern powertrain configurations. This is the case for highly stressed mechanical engine components fitted in downsizing engines as well as for filtration, thermal management, and mechatronics.

We believe there is also considerable growth potential in the Aftermarket and Industry business units by tapping new markets with new technologies and products.

For 2013, we expect further market restraint in Europe; this will present a challenge for the full utilization of our capacities in this region. We share subdued growth forecasts for the other regions of the world. Thanks to the strong market position held by MAHLE in these regions, where more than 50 percent of Group sales are generated, we are starting the new business year with cautious optimism.

On behalf of the whole Management Board, I would like to thank all our customers and suppliers for the good collaboration we have enjoyed. The Management Board would also like to express its sincere thanks to all of our employees throughout the world for their strong commitment and flexibility. The positive development achieved by the MAHLE Group in the 2012 business year is once again characterized by the dedication unique to our employees. Finally, I would like to extend my thanks to all shareholders and the Supervisory Board for their constructive assistance with the long-term, sustainable corporate policy.



A handwritten signature in blue ink that reads "Heinz K. Junker". The signature is written in a cursive, flowing style.

Heinz K. Junker

01 // THE COMPANY

MANAGEMENT COMMITTEE
MAHLE WORLDWIDE
REFERENCES
CORPORATE CITIZENSHIP
HUMAN RESOURCES
QUALITY

ENVIRONMENT
RESEARCH & DEVELOPMENT
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BUSINESS UNITS INCLUDING
THERMAL MANAGEMENT
PROFIT CENTERS
SPECIAL

02 // MANAGEMENT REPORT

GLOBAL ECONOMY
BUSINESS DEVELOPMENT
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FINANCIAL POSITION
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OUTLOOK



01 //

THE COMPANY

// MAHLE OFFERS ITS EMPLOYEES ATTRACTIVE PERSONNEL DEVELOPMENT PROGRAMS AND THE SECURITY OF A LARGE GROUP. I AM WORKING IN A SMALL PLANT BUT AM ENTRUSTED WITH A WIDE RANGE OF RESPONSIBILITIES. SHORT PATHS AND AN INFORMAL ATMOSPHERE CHARACTERIZE MY WORKING ENVIRONMENT. AT THE SAME TIME, I AM LINKED TO OTHER COLLEAGUES ACROSS THE WORLD AND HAVE ACCESS TO A WEALTH OF KNOWLEDGE AND EXPERIENCE AS WELL AS CONCRETE SUPPORT. FOR ME, BEING AN ENGINEER IS MUCH MORE A CALLING THAN JUST A JOB. IT IS A GOOD FEELING TO WORK FOR THE FOUNDATION-OWNED COMPANY MAHLE, AS MEANINGFUL SOCIAL PROJECTS SUCH AS THE FILDERKLINIK BENEFIT FROM THE COMPANY'S PROFITS.

Dr.-Ing. Eike Stütterich, participant in the MAHLE PhD program, now Head of Product Group III in the pumps development segment at the Auengrund location in Thuringia/Germany

MANAGEMENT COMMITTEE //

Michael Glowatzki
Member of the Management Board
Human Resources, Legal

Prof. Dr. Heinz K. Junker
Chairman of the Management Board and CEO
Profit Centers Engineering Services,
as well as Motorsports and Special Engines;
Research and Advanced Engineering,
Corporate Planning, Corporate Communications



Wilhelm Emperhoff
Member of the Management Board
Business Unit Filtration and Engine Peripherals,
Profit Center Mechatronics
(effective October 1, 2012)

Dr. Rudolf Paulik
Member of the Management Board
Business Unit Engine Systems and Components,
Profit Centers Small Engine Components
and Sintered Components;
Corporate Quality Management



Arnd Franz
Member of the Management Board
Automotive Sales and Application Engineering
(effective February 1, 2013),
Business Unit Aftermarket

Dr. Bernhard Volkmann
Member of the Management Board
Chief Financial Officer,
IT Services, Insurances, Internal Audit

Dr. Jörg Stratmann
Member of the Management Committee
Automotive Sales and
Application Engineering
(until January 31, 2013)

Dr. Michael Matros
Member of the Management Committee
Business Unit Industry

MAHLE WORLDWIDE //



EXPLANATION //

Locations as at April 2013

Production locations
R&D centers



REFERENCES //

// All automobile and engine manufacturers worldwide are customers of MAHLE.
 Here are some of our original equipment references.

ABB	Chevrolet	Fendt
AGCO	Chrysler	Ferrari
Alfa Romeo	Citroën	FIAT
Alpina	CLAAS	Force Motors
Alstom	CNHTC	Ford
AMG	Conti Temic	Freightliner
Ashok Leyland	Cummins	Fuso
Aston Martin	Dacia	Gamesa
Audi	DAF	GAZ
AvtoVAZ	Daihatsu	GE Jenbacher
BAE Systems	Daimler	GE Transportation
Bajaj	Dalian Diesel	Geely
Beiqi Foton	Detroit Diesel	General Dynamics
Bentley	Deutsche Bahn	General Motors
BMW	Deutz	GMDAT
Bombardier	Dodge	Great Wall
Bombardier-Rotax	Dongan	Harley-Davidson
Bosch	Dongfeng	HATZ
Breda Menarinibus	Doosan Infracore	Henan Diesel
Brilliance	DPCA	Hindustan Motors
Bugatti	Ducati	Hino
Buick	EADS	Hitachi
BYD	Eicher Motors	Holden
Cadillac	Embraco	Honda
Case	EMD	Hummer
Caterpillar	Escorts	Husqvarna
Changan	EvoBus	Hyundai
Chaoyang Diesel	FAW	Hyundai Heavy Industries
Chery	FAW-Volkswagen	Infiniti

Irisbus	Navistar International	SsangYong
Isotta Fraschini Motori	Neoplan	Star
Isuzu	New Holland	Steyr
IVECO	Nissan	Stihl
Jaguar	ÖBB	STX
JCB	Opel	Subaru
Jeep	Otosan	Sullair
Jinan Diesel	Paccar	Suzuki
JMC	Perkins	SVW
John Deere	Peugeot	Tata Motors
KAMAZ	Piaggio	Tecumseh
Kia	Polaris	Teledyne Continental Motors
Komatsu	Pontiac	Temsa
Krauss Maffei	Porsche	Terex Demag
Kubota	Prevost	Tognum
Lamborghini	Proton	Toyota
Lancia	Qingling Motors	Triumph
Land Rover	Renault	UD Trucks
Lexus	Renault Trucks	Vauxhall
Liebherr	Renk	Vestas
Liuji	Rheinmetall	VM Motori
Lycoming Engines	Rolls-Royce	Volkswagen
Mack Trucks	Rotax	Volvo
Mahindra & Mahindra	Saab	Volvo Penta
MaK	SAIC	Volvo Powertrain
MAN	SAME	Volvo Trucks
MAN Diesel & Turbo SE	Samsung	Vossloh
Maruti Suzuki	SBB	Wärtsilä
Maserati	Scania	Waukesha Engine
Maybach	Scion	Weichai Power
Mazda	SEAT	Wuxi Diesel
McLaren	SEMT	Yamaha
Mercedes-Benz	SGM	YaMZ
Mercury	SGMW	Yangzhou Diesel
Mini	Shanghai Diesel	Yanmar
Mitsubishi	Siemens	Youngman
Mitsubishi Heavy Industries	Sisu	Yulin Diesel
MTU	Škoda	Yunnei
MWM	Smart	ZF
MWM International	SNCH	ZMZ

CORPORATE CITIZENSHIP //

// As social responsibility was very important to the company founders, they transferred their company shares to the MAHLE Foundation in 1964. Since then, the dividends of the MAHLE Group have been used to sponsor a multitude of social projects.

By transferring their MAHLE Group shares to the MAHLE Foundation in 1964, Dr. Ernst Mahle and his brother Hermann succeeded in uniting entrepreneurial foresight with social responsibility and commitment. As a privately held foundation-owned company, the MAHLE Group has evolved very successfully. The principles formulated when the MAHLE Foundation was originally set up still apply to this very day. Be it education, medicine, or agriculture—for more than 40 years, the Foundation has predominantly supported worldwide innovative projects and initiatives true to the principles of anthroposophy. Although the MAHLE Foundation has taken a reactionary funding role thus far, it is now formulating goals to be achieved in conjunction with cooperation partners.

Between tradition and innovation: integrative medicine at the Filderklinik

Ever since its inception, the Filderklinik—situated south of Stuttgart/Germany—has been a key funding project of the MAHLE Foundation. As one of the three largest public-service anthroposophical acute care hospitals in Germany, the Filderklinik is renowned for supplementing state-of-the-art conventional medicine with complementary procedures. In the field of obstetrics, the clinic's facilities are among the top 40 of the approximately 800 hospitals with obstetric departments in Germany. Every year, more than 1,700 children are born at the hospital. The center for integrative oncology, where a holistic approach for the treatment of can-

cers is pursued, and the department for internal medicine are two additional specialist practices at the Filderklinik. With innovative technologies and methods in the fields of gastroenterology and abdominal surgery, another specialist area has been established, which is currently being expanded to become a certified intestinal center. Since 2012, the Filderklinik, in conjunction with the City Hospital of Esslingen and the district hospitals, has become the oncological center of excellence in the region.

Beyond borders: commitment in Brazil and the rest of the world

As part of the globalization of the MAHLE Group, the MAHLE Foundation has also expanded its sphere of activity further at

an international level. This has led to the establishment of the Brazilian subsidiary, Associação Beneficente MAHLE (ABM), headquartered in São Paulo in May 2007. The Foundation's objective is to promote projects that humanize medicine and establish anthroposophy in the state health system. An excellent example of this is Casa Angela. Located in the middle of a slum, this is the first birthing clinic in São Paulo to be recognized by the state.

An example of the joint commitment shown by the MAHLE Group and the MAHLE Foundation is the hospital Santa Casa de Misericórdia in the Brazilian city of Itajubá, where one of the major MAHLE production plants is located.



Since its inception, the Filderklinik, situated south of Stuttgart/Germany, has been a key funding project of the MAHLE Foundation.

Funds from the Group and the Foundation, as well as the volunteer work of numerous MAHLE employees have made the renovation and modernization of individual areas in the hospital possible in recent years. Additional extensive renovations are planned for the coming years.

For ten years already, at the MAHLE Formare School, MAHLE employees have been assisting and teaching on a voluntary basis technical subjects for around 130 young people per year at six locations. Most of the young people originate from socially disadvantaged districts. Following the program accredited by the Brazilian Ministry of Education, a total of nearly 1,000 young people have been assisted with career orientation and apprenticeship. 75 percent of the MAHLE Formare students have obtained a job, many of them at MAHLE.

MAHLE funds other social projects across the world. In Poland, indigent children receive school lunches, food and clothing, and presents at Christmas thanks to donations. In Germany, MAHLE apprentices developed

and built a semiautomatic assembly jig for a workshop for the disabled. In North America, MAHLE provides organizational and financial support to the United Way relief campaign thanks to extensive fundraising and activities. In China, MAHLE employees regularly help international aid organizations by donating blood and stem cells. They also volunteer in children's and nursing homes. Moreover, fundraising campaigns have been undertaken to help areas affected by earthquake and flood catastrophes in Japan and China.

Eurythmy— a young, emotional, and evocative performing art

Eurythmy plays a vital role in anthroposophical medicine as eurythmical therapy and an artistic form of treatment. Numerous events were held to mark the 100-year anniversary of eurythmy in 2012. One highlight of the festive program was the youth eurythmy festival, "What moves you?," a unique project of international importance sponsored by the MAHLE Foundation. Dedicated young people aged between 17 and 23 from 14 nations performed to the works of Ludwig

van Beethoven and Arvo Pärt, and captured the attention of their audience with their exceptionally authentic, exciting, and high-contrast mastery of eurythmy.

In addition, both the MAHLE Foundation and the MAHLE Group participate in numerous initiatives with a high level of social commitment. Charitable projects, donations, and nonprofit campaigns are frequently initiated at local level and are a core component of the MAHLE culture. The MAHLE Management Board would like to express its heartfelt thanks and high regard to MAHLE employees for their commitment.



Claus Hoppen, CEO of MAHLE Metal Leve S.A., surrounded by MAHLE Formare students from Limeira/Brazil.

HUMAN RESOURCES //

// MAHLE operates a comprehensive personnel marketing and employee development program to promote young talents and provide further training. Reconciling family and career is also of central importance for the Company.

As at December 31, 2012, 47,662 people were employed in the MAHLE Group throughout the world. This equates to 1,156 fewer employees or 2.4 percent less than in the previous year. As the markets in the individual world regions developed unevenly, MAHLE was not able to maintain the number of employees at several locations. However, at other sites, the Company increased the headcount. In comparison with the previous year, the number of employees across Europe fell by 646 to 20,084 due to the economic slowdown. The headcount in Germany accounts for approximately 45 percent of this figure. The number of employees in Germany remained largely stable. In Poland, Turkey, and Great Britain, the staffing level had to be adapted due to declining sales.

The sustained recovery of the automotive industry in North America is reflected in the increased headcount within the region. MAHLE recorded a total of 100 new employees in North America as at the end of 2012. In South America, new exhaust emission levels were introduced for commercial vehicles in 2011. As a result, many customers brought acquisitions forward by a year and consequently demand dropped considerably in 2012. This development forced MAHLE to cut back 861 jobs.

In contrast, MAHLE hired new employees in Asia/Pacific. The number of employees rose by 251 to 9,505. This development was a result of the economic recovery following the natural disaster in Japan. Another reason was that MAHLE extended both of its plants in Thailand, and a new plant for air intake and filtration systems was constructed in Japan that started production at the end of 2012.

The high level of expertise combined with the commitment and creativity of MAHLE employees are crucial cornerstones for long-term corporate success. By pursuing intensive training and further education measures, as well as targeted national and international development programs for specialists and futures managers, MAHLE is ensuring that this continues to be the case.

Comprehensive recruitment concept developed

In recent years, MAHLE has been making concerted efforts to establish and develop its image as an attractive employer. The Group has therefore made it its main focus to hire and bind young, highly qualified engineers to the Company. This involved developing a comprehensive marketing concept that enables direct contact to graduates at universities throughout the world. Integral elements of this concept are the participation at recruitment events and student initiatives at colleges and universities, a now well-established program to bind interns, as well as the sponsorship of five teams from Formula Student Germany, a global engineering competition for students. In addition, MAHLE has been a sponsor of the SAE team at Lawrence Technology University in Michigan/USA since 2012.

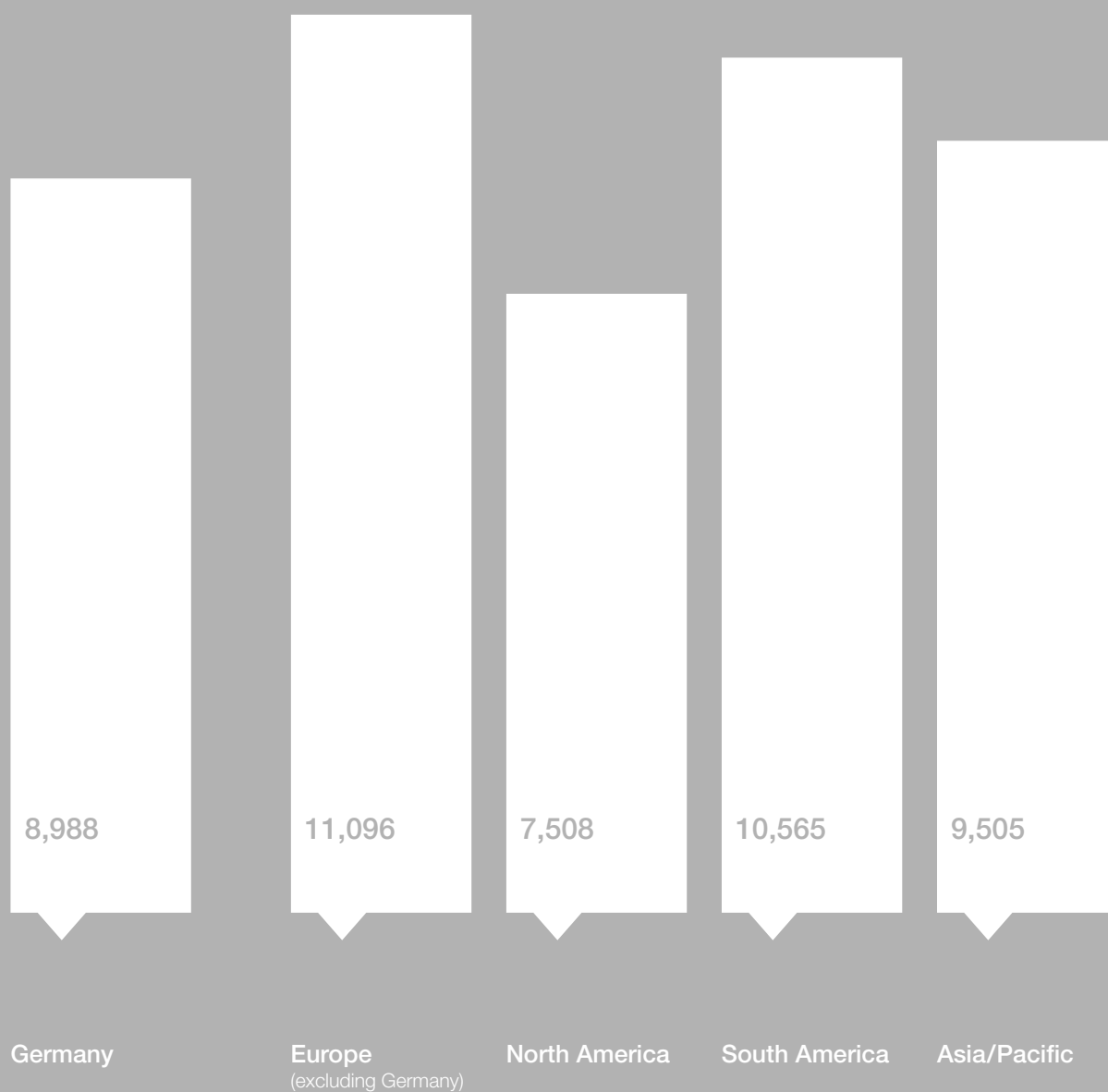


The SAE team at Lawrence Technology University in Dearborn, Michigan/USA, with professors and MAHLE colleagues, at the official kickoff meeting for the cooperative partnership.

47,662

EMPLOYEES WORLDWIDE

as at Dec. 31, 2012



Special focus has been placed on cultivating contacts with selected key universities in Europe, the USA, and Asia. MAHLE experts hold technical lectures for students and teaching staff; students are invited to special events. In China, MAHLE has launched a scholarship program, which supports 30 students at the renowned Jiao Tong University in Shanghai and Jilin University in Changchun. Furthermore, MAHLE is involved in scholarships for supporting young academics in various countries, and presents MAHLE Performance Awards for exceptional academic achievements.

In line with the motto "Climb in, buckle up, and take off," the first MAHLE Career Day for graduates of technical colleges and young professionals took place in Stuttgart/Germany in 2012. 55 selected candidates were given an insight into the Company thanks to one-to-one conversations with specialists and managers, alongside tours and presentations. Approximately one fifth of these applicants are now among our employees.

With its recruitment portal "eMploy," MAHLE expanded the classical application path to include a modern e-recruitment system, and thus further professionalized its online application processes in 2012. Since then, a deliberately user-friendly tool assists applicants with the submission of their résumés for open vacancies in Germany and Austria. It is planned to introduce this system in other countries too. Furthermore, the Group has developed country-specific MAHLE career pages to further increase effectiveness in addressing qualified specialists across the world via the Internet. China and Austria have been online with their own respective pages since 2012, with other countries to follow soon.

Competition for talent is not only fierce for college graduates, but also when recruiting apprentices. The apprenticeship training has always been a high priority at MAHLE. In 2012, professional education was offered at the German Group companies to 335 apprentices in 16 occupational profiles, to 93 students of cooperative studies in sev-

en courses of study, and to 16 retrainees. This is how the Company takes its social responsibility seriously, while ensuring that in-house specialists have excellent qualifications. The demographic shift highlights the need to address pupils at an early stage by means of educational partnerships with secondary schools or other targeted activities. In this context, MAHLE has thus invited school classes to visit training workshops, youngsters interested in science to special events, and girls to Girls' Day. In 2012, MAHLE participated for the first time in the Girls' Day Academy, an initiative of Bildungswerk Baden-Württemberg (vocational training organization) for girls aged between 14 and 16 interested in technology. However, the Company focus is not just on pupils and teenagers alone. Participating in projects such as Technolino, the Company aims to stimulate interest in technology in children as young as kindergarten age.

Qualifying and training employees

The increasing internationalization means that specialists and managerial staff are

constantly confronted with new challenges. A broad-ranging further training program ensures that MAHLE can maintain and continually improve its high level of qualification. Thus in Austria, an innovative path for advanced qualification was found, which conciliates the needs of operational shift models, and was transferred to other training programs during 2012.

Thanks to the "Learning@MAHLE" online learning platform introduced in 2012, the latest generation of e-learning software is now globally available. Its first deployment was a complete success: 644 employees from 28 countries were trained in antitrust law and corruption prevention.

Promoting talents from within the ranks

A key factor for the Company's success is developing and promoting managerial staff proactively and in a targeted manner from an early stage. MAHLE trains up junior employees worldwide by means of coordinated, modular development programs. Managers at all levels are globally networked to



The two MAHLE apprentices Fernando La Mela and Thomas Cermann visited children at the MAHLE day-care center in Stuttgart/Germany and were shown, which experiments had been carried out thus far as part of the Technolino project.

afford them the opportunity to continue their development. 2012 also marked the start of the interlinked further training and personnel development activities of MAHLE and Behr. Managers and high-potential employees from both companies now jointly use the development and further training programs. With the MAHLE Talent Management System, the Group has implemented a software program, with which all relevant information from across the world can be bundled: from the assessment of individual potential to the management appraisal all the way to the succession planning for senior management.

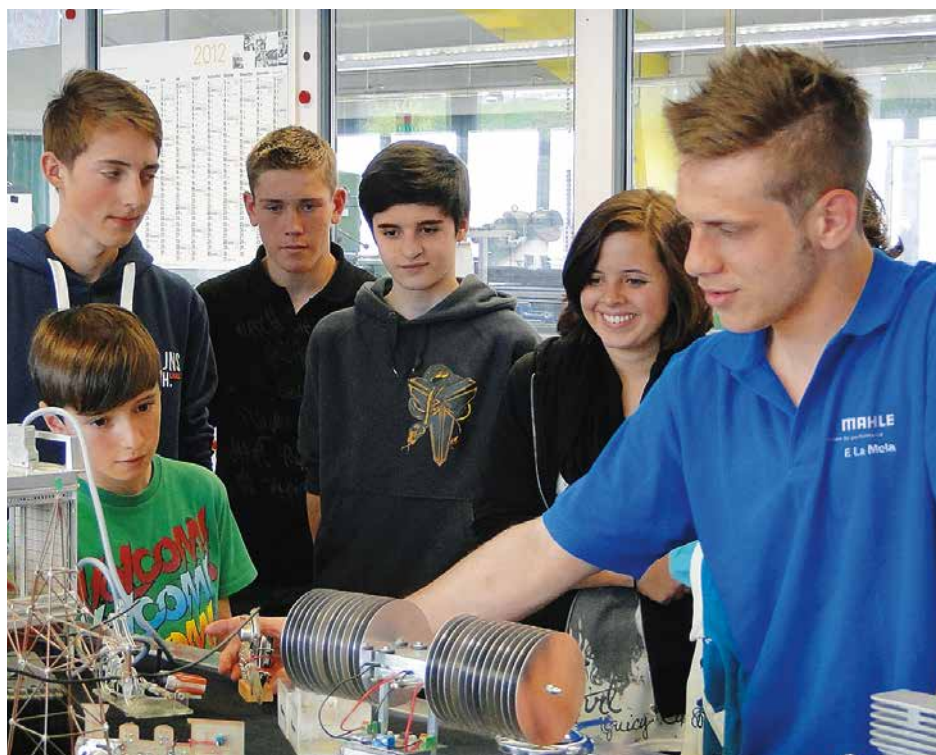
Good health is priceless

At MAHLE, the health of individual employees is of great importance. In order to promote and maintain good health, the Group organizes and coordinates health days, nutritional advice, specialist presentations, company sports activities, flu shots, eyesight tests, antismoking courses, and back training programs, as well as social counseling. In Poland, MAHLE even offers employees medical screenings.

An in-house day-care center with 40 places for employees' children has been set up in Stuttgart/Germany to improve the work-life balance. Furthermore, MAHLE organizes holiday programs and sports camps held during the summer and spring breaks in Germany, Poland, Brazil, and Mexico, during which employees' children are supervised throughout the day.

Many thanks!

The Management Board would like to thank all employees for their high level of motivation and commitment. MAHLE owes its success to their ideas and dedication. At the same time, the Management Board would also like to express its thanks to the employee representatives for their outstanding openness to dialog and for the forward-thinking cooperation characterized by mutual respect.



MAHLE apprentice Fernando La Mela explains the functionality of mechatronic systems to a MINT working group.

QUALITY //

// Quality is what makes an innovative product. In order to prevent or detect defects at an early stage, quality management is integrated into every business process at MAHLE.

Quality is a decisive competitive factor, because customers are not prepared to compromise when it comes to quality. For this reason, MAHLE has set itself the clear goal to continuously improve its products and set a global benchmark. For MAHLE customers, quality means failure-free assembly, satisfied end customers, and no product recalls—and thus a reliable and strong brand.

Qualified employees and smooth processes at the highest technological level are the prerequisite for the quality of MAHLE products—because the zero-defect principle does not tolerate any failings. As a result, product development relies on failure prevention methods, and the production process draws on quality assurance strategies. Thanks to continuous improvement of quality standards, any occurring defects can be rectified immediately with the latest problem-solving procedures.

Quality planning in product development

In order to ensure unproblematic series production, quality planning during product development and series launch must be highly effective. Once again, MAHLE has subjected its quality planning processes to internal scrutiny this year. Based on the results of this audit, a more effective standard was defined in October 2012 for the following business year.

Monitoring production processes

Customers across the globe rely on premium-quality MAHLE products. The yardstick for their quality is the number of customer complaints and the quantity of defective parts shipped. As in previous years, both defect criteria were further reduced in 2012. In the coming business year, a more systematic monitoring of production processes will be devised. In future, this should contribute to the further improvement in product quality, while enabling as short and effective production control loops as possible. Furthermore, the flow of data information is being optimized and accelerated.

Global problem-solving process

In the event of a defect, a speedy solution to the problem is the key to success. The prevention of repeated defects is indicative of the quality of the problem-solving process at MAHLE. Customer feedback from all four corners of the globe flows into a Group-wide standardized process. Lessons learned from all of our production locations are used to continuously improve processes. An electronic workflow aids this process. Next year, MAHLE will be implementing this SAP-based software solution in Asia and thus complete the global rollout. The premise for problem resolution is the identification of the correct cause of defect. The further optimization of analysis will thus continue to remain the focus for improvement actions.

Strategic planning for the improvement of quality

The improvement of quality at MAHLE is an integral component of the annual business plan. Improvement targets are specified “top-down” and then consolidated “bottom-up.” In recent years, MAHLE has been developing its “Master Plan”—the Group’s own standard for planning and controlling the corresponding actions. The global rollout was driven forward in 2012.

Group-wide quality management

Quality management is fully integrated into all business processes. A business process owner is responsible for the performance of each process. Using a balanced scorecard, the owner formulates the targets for his part and plans the necessary improvement actions for the following business year.

Awards as motivation

Once again, MAHLE received numerous awards in 2012. The list is long and includes “Best Supplier” and “Best Quality Award,” awards for the entire Group and for individual production locations in Asia, America, or Europe—and MAHLE welcomes every prize. Information about these can be found in the Highlights of this Annual Report. Such awards spur MAHLE on to achieve even better performance in the coming year, and for individual production locations to reach out for internal top ranking as well.



Quality assurance at MAHLE: a coordinate measuring machine ensures the production of consistently high-quality large-bore pistons.

PRISMO navigator

ENVIRONMENT //

// Environmental protection is just as essential to MAHLE as safety at work and health care. Already during the planning phase for installations and processes, the Company focuses on limiting the environmental impact and guaranteeing safety at work and health care by means of risk analyses.

This process involves continuously focusing on methods to avoid and recycle waste materials, and the reduced use or substitution of chemicals. In addition, the guidelines for safety at work and health care are integral components of this process. Annual safety audits confirm the efficacy of this approach, which has reflected in low accident figures for several years.

Material compliance tests automated

International companies with production plants at the most diverse locations worldwide are required to comply with a number of various laws, regulations, and customer standards. MAHLE must be able to guarantee to its customers that its products do not contain any unauthorized substances. This applies to the complete process chain: from research & development to purchased parts all the way to packaging. Such regulations include REACH, which regulates the handling of chemical substances across the EU, and the specifications from automobile manufacturers. Added to this comes the fact that these lists of prohibited substances are regularly updated. The MAHLE Group is obliged to notify its customers in the event of any of its products containing a substance found on the REACH candidate list, for example. For new developments and series products alike, checks must be performed to ensure that all products comply with the latest specifications.

Consequently, MAHLE has opted for a software tool, which can perform material compliance tests reliably and quickly. The tool includes a constantly updated database with the relevant statutory requirements and customer specifications currently applicable across the world. This software was rolled out in Europe and the regions of North and South America in 2012; implementation in Asia is scheduled for 2013. The application is used for the automotive activities; commercial vehicle and industrial applications are to follow.

Transparency thanks to new environmental indicator system

During the 2012 business year, MAHLE restructured its instrument for safety and environmental controlling. Figures are polled on a monthly basis across the Group, such as energy and water consumption, production waste quantities, and the number of occupational accidents. Data is compiled so as to compare installations, operating sections, locations, and business units. Benchmarks can thus be set for the individual production locations. This is an important feedback tool for the locations, which promotes the learning and continuous improvement processes. In order to increase the sustainability of all activities in terms of safety at work, health care, and environmental protection, location-specific environmental objectives are defined annu-

ally. In future, the level of implementation can be assessed using the new indicator system; it will then become an integral component of the Group environmental management review.

South America: commitment to environmental protection pays off

With over 300 measures relating to waste management, MAHLE has succeeded to save a significant sum of money at the South American locations. To this end, all processes generating waste were initially analyzed and suggestions for improvement compiled, which were progressively implemented. Optimizing the production process, separating the waste, and thus increasing the recycling rate, has reduced disposal costs while increasing revenue from the sale of reusable raw materials. The foundation for this success has been the willingness of employees to embrace the subject and be committed to protect the environment. Involving service companies and suppliers was a key contributory factor to the project's success. After the result achieved in 2012, this process will be continuously pursued.

The objective is to implement this topic at all locations as best practice through regular meetings of the Group's regional environmental officers.

Energy savings potential at the MAHLE headquarters in Stuttgart/Germany

Up until now, the focus of energy savings had been predominantly placed on the production locations. However, MAHLE has set its sights on the Group headquarters in 2012, quite simply because administrative buildings housing approximately 2,000 employees can also generate considerable energy costs. The main energy consumers here are the heating and air conditioning systems, as well as the lighting. Within two years, MAHLE has reduced energy costs by ten percent by increasing the efficiency and utilization rate of the installations and fitting improved thermostatic control systems, as well as by using energy-efficient lighting technology to reduce the energy used. In the coming years, the ventilation and warm-water treatment systems will be assessed for savings potential and appropriate measures will be undertaken.

Health care is an element of corporate culture

Good personal health is not only priceless; it is also the fundamental prerequisite to be able to work—and thus a necessity to ensure the long-term success of a company. Therefore, MAHLE has integrated health care as a core component of corporate culture at a very early stage. The goal has been to promote sustainable prevention and to raise employees' awareness of how they can look after their own health. To this end, MAHLE pursues new holistic approaches in order to plan and implement health-related measures. At the same time, the requirements of the working environment and the varying sociopolitical constraints in the individual countries are given due consideration, and campaigns are adapted to our locations across the world accordingly.



Energy consumption, particularly for heating and air conditioning systems, offers considerable savings potential.



"Health days" are held regularly including at our locations in Mexico; the health of our employees is one of our main priorities.

RESEARCH & DEVELOPMENT //

// Major investments in the future—as in previous years, MAHLE developed numerous new products and technologies in 2012.



The research and development center in Shanghai/China has more than doubled in size.



One of the new buildings in Shanghai houses the engine test benches, offices for development engineers, and the new canteen.



The expansion of our research and development center in Farmington Hills/USA yields several benefits including the amalgamation of various development divisions.

RESEARCH AND DEVELOPMENT CENTERS IN CHINA AND THE USA EXPANDED

MAHLE develops new products and technologies at seven major research and development centers across the globe in close proximity to its customers. Solutions specifically tailored to the requirements of the respective markets are created. Fundamental research projects at the various locations help to gain new and partly market-specific knowledge. As a result, MAHLE products are perfectly adapted to suit the specific conditions for each region. In order to secure these goals and despite a partially difficult business environment, the MAHLE Group has once again increased its research and development expenses by a comparable level in the 2012 business year.

Just five years after starting up operations, the research and development center in Shanghai/China needed to be more than doubled in size, as did the number of employees, due to the strong growth of MAHLE's activities in China. Moreover, additional engine test benches were installed to work on the large number of customer projects.

MAHLE's North American research and development center situated in Farmington Hills, Detroit/USA, is currently undergoing considerable expansion work. On completion, vehicle and engine development as well as electrics/electronics development for Engineering Services will be integrated with product development for the MAHLE business units.

The management team and sales activities for the Aftermarket business unit are also relocated from Ann Arbor to Farmington Hills and will operate from the joint MAHLE campus in future.

As part of the general consolidation of locations in Greater Detroit, the North American management and development teams for the Filtration and Engine Peripherals business unit were relocated to the Behr development unit at Troy/USA. MAHLE anticipates this amalgamation to generate significant synergy effects in future development activities carried out by the Thermal Management as well as Filtration and Engine Peripherals business units.

The remaining major MAHLE research and development centers in Stuttgart/Germany, Northampton/Great Britain, Jundiaí (São Paulo)/Brazil, Kawagoe and Okegawa (both situated close to Tokyo/Japan) were also steadily expanded during the 2012 business year.

DEVELOPMENTS FOR ENGINE COMPONENTS AND SYSTEMS

Combustion processes

To comply with future global emissions targets, it is necessary to further reduce fuel consumption in the short to medium term. Spark-ignition, gasoline-driven powertrains are one of the areas of particular focus. Downsizing technology, i.e., increasing the specific engine output while reducing displacement, is the preferred method in such instances. Other technological approaches, such as variable valve trains and stratified, lean combustion, supplement downsizing. The Turbulent Jet Ignition System, MAHLE's own development, achieves extremely lean

combustion thanks to highly energetic, turbulent pilot injection. This innovative spark-ignition combustion process provides for a stable partial-load operation even at a lambda value of two. The system enables reduced consumption, high thermal efficiency, and low NO_x emissions; it can easily be implemented in existing, naturally aspirated engines and even in turbocharged engines.

Pistons

Steel pistons have been successfully used in commercial vehicles for many years. Since the various levels of emissions legislation must be observed while power densities are increasing, pistons are sometimes subjected to peak firing pressures in excess of 220 bar. This calls for the use of high-strength ferrous alloys. This application is becoming increasingly viable for passenger car diesel engines. Steel pistons can enable fuel savings of approximately three to four percent in passenger car engines, if all optimized design and process parameters are applied. MAHLE is therefore expecting considerable growth from these applications for the coming years.

Until now, production technology constraints prevented the production of an optimally cooled, compact steel piston. MAHLE has developed a new manufacturing method for commercial vehicle steel pistons using a beam-based welding method that is now ready as a mature process. In the future, optimum cooling can thus be combined with the lowest possible piston weight.

Bearings

The use of stop-start or hybrid systems increases the mechanical and tribological loads on engine bearings due to the high number of interruptions to operation. Con-



The design of a more compact piston was previously limited primarily by production requirements. MAHLE has developed a new manufacturing method for commercial vehicle steel pistons that allows the necessary design flexibility.

sequently, MAHLE has developed a new bearing technology for gasoline and diesel engines. During engine operation, an oil film forms between the bearing and the rotating shaft. The forces increase and the oil film thickness reduces with higher specific engine outputs and increasing peak cylinder pressures. During the starting process, the bearing is exposed to the most wear-intensive phase of mixed lubrication. Therefore, vehicles equipped with a stop-start system represent a major challenge in terms of wear resistance. To this end, MAHLE has developed a lead-free bronze bearing with a new polymer coating incorporating a solid lubricant and aluminum flakes.

Valve trains

Valve train components in combustion engines are continuously subjected to high mechanical loads. In order to not only maintain the service life with increasing load conditions in the engine, but also to reduce their frictional loss and weight, MAHLE is continuously optimizing new materials, production processes, and coating technologies.

This was also the rationale behind the development of the assembled camshaft for commercial vehicles. For many years, MAHLE has successfully been fitting weight-optimized, assembled camshafts in passenger car engines. Generally, cast camshafts are used for engines in light commercial vehicles. Forged steel camshafts are predominantly deployed in engines for mid-sized and heavy-duty commercial vehicles due to the severe loads. Such camshafts are demanding both in terms of production costs and actual weight. The assembled camshaft concept is not only more flexible and more cost effective than its forged steel counterpart; it is considerably lighter too. Depending on requirements, various materials can be used for the shaft, cam lobes, as well as drive and output elements. This creates additional savings potential.

In 2012, MAHLE started the first series launch of assembled camshafts for commercial vehicles. Compared with the previous standard solution, an estimated weight saving of 30 percent has been achieved. Combining the assembled camshaft with roller bearings, which reduce frictional loss and optimize the oil balance, further reduce CO₂ emissions and fuel consumption.

DEVELOPMENTS IN FILTRATION AND ENGINE PERIPHERALS

Air filter modules

Two core objectives define the development of air filter modules: on the one hand, the specific filtration performance must be increased in the reduced package; on the other hand, a precise and stable signal from the air mass sensor must be ensured for the entire service life. The latter is a key requirement to meet stringent exhaust gas limits. MAHLE has achieved these development goals ideally by developing new filter media and deploying innovative filter element concepts together with special measures for flow optimization.

In this context, MAHLE has developed a wholly new concept for commercial vehicle applications. Thanks to a particularly flat de-

sign, the air filter module can be located behind the driver's cab. Other features of the MAHLE concept include plasticized filter elements and high-separation filter media containing nanofiber layers with diameters of 90 to 110 nanometers. The extremely fine fabric of the nanofibers filters with very high efficiency, storing the dust in a dust cake outside of the filter medium on the intake side without causing a major increase in pressure as it used to be the case.

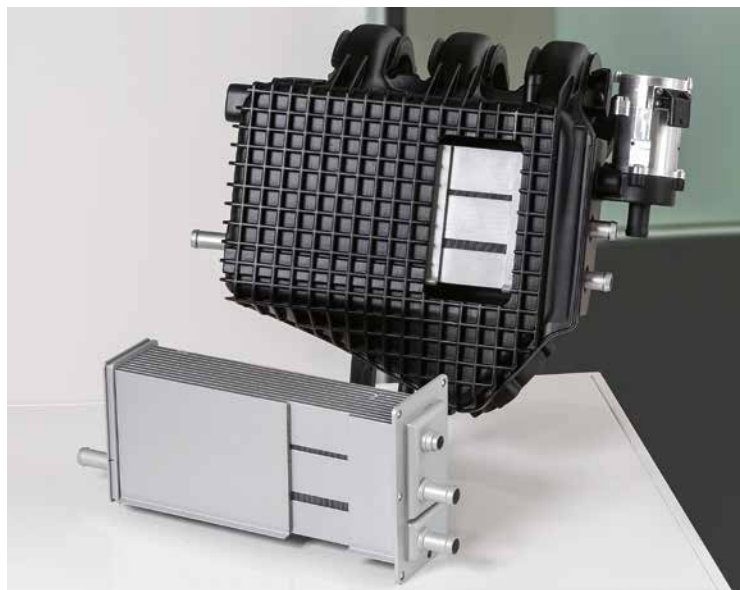
MAHLE primarily uses grooved cellulose filter media for the new air filter modules designed for passenger car applications. These enable a very high packing density in the filter element, and thus high specific filtration performance. Flow guides, either in the air filter or the filter element itself, homogenize the velocity distribution for varying mass flows. This is how these ensure the air mass flow meter's constantly high signal quality during its service life. Special injection molding processes based on MuCell® technology enable the production of guide vanes with extremely thin walls. This allows the flow to occur with virtually no pressure loss.

Air intake modules

The main goal for the ongoing development of the combustion engine is to further reduce fuel consumption and exhaust gas emissions while maintaining driving dynamics and comfort. One way of meeting these requirements is to raise the specific output of engines with a reduced displacement. A key factor in this process is turbocharging. But the associated rising charge air temperatures pose a challenge. These lead to disadvantages, such as retarded ignition and enrichment. The installation of air intake modules with integrated indirect charge air coolers can remedy this. However, it does mean that the physical limits of standard charge air cooling are reached sooner when the engine's absolute output is increased. Design changes to conventional charge air coolers do not compensate this effect. There is generally no additional space available in the vehicle's front end to enlarge the low-temperature coolant cooler for an increase of the cooling capacity.



The assembled camshaft for commercial vehicles from MAHLE achieves a weight advantage of around 30 percent in its first series application.



Left: high filter performance and low package requirements characterize the new air filter module from MAHLE. New plasticized filter elements limit installation depth to less than 15 cm.

Right: the cascaded charge air cooling system integrated in the air intake module allows for significantly lowered inlet temperatures into the combustion chamber. Advantages can be seen in the engine's fuel consumption, torque, and driving dynamics.

The newly developed cascaded charge air cooling system can solve this problem as it can also be integrated into the plenum of the air intake module. This development paves the way for new downsizing solutions and enhanced turbocharging concepts, and thus for further reduced fuel consumption. A second cooling circuit is installed upstream of the existing charge air cooling system to lower the inlet temperature. This is achieved by transferring about 40 percent of the compressed charge air's thermal energy to the engine's high-temperature cooling circuit. As a result, the inlet temperature level of the low-temperature cooler is reduced. Improved fuel consumption, torque, and dynamics are achieved thanks to the considerably reduced charge air temperature.

Cylinder head covers with oil mist separators

MAHLE developed the second generation of the patented oil mist separator with impactor design to satisfy the highest demands for separation efficiency. A separation system combines the benefits of a filter with the service life requirements of current passive oil mist separators. First, the finest oil drops are agglomerated by their flow through a nonwoven material and then separated. With the new Euro 6 engines, the process ensures that the turbocharger is protected against wear, and the exhaust gas aftertreatment system can function optimally during the entire service life. In downsizing engines, the improved oil mist separation helps to ensure the durability of engines despite significantly rising combustion pressures. MAHLE is currently working on numerous projects for both passenger cars and commercial vehicles, where the cylinder head covers with second generation impactors are going into series production.

Fuel filter modules

MAHLE has developed fuel filter modules for Euro VI heavy-duty applications that meet the highest requirements for particle and water separation, while maximizing service life. In modern diesel fuel systems, water can lead to wear in the form of corrosion, cavitation, reduced lubricity, and microbial growth, all the way to failures of the injection system. The diesel fuel filters are therefore equipped with high-efficiency water separation systems. MAHLE has developed the BlueDrain® automatic water disposal system for diesel fuel with a high water content. In future, it will be available as both a stand-alone system and an integrated system unit in MAHLE fuel filter modules.



The new oil filter module for commercial vehicles from MAHLE achieves significant advantages in weight and package with a high level of integration and increased use of high-performance plastics.

Oil filter modules

In the new MAHLE heavy-duty oil filter module, the coolant pump, coolant thermostat, and sensors for temperature control are all integrated. A valve provides the venting of the cooling circuit. The high quality of the filter media allows the reduction of the filter surface. As a result, the element can be built more compact and the module's total pressure loss improves by ten percent at low temperatures.

In view of the increased power densities in engines and the related demands on engine oil, MAHLE has developed a new filter medium for passenger cars with an improved separation level. The medium is being installed in a new oil filter module for the first time in 2013. Despite only having two housing options, the module covers a complete engine platform with variants for three- and four-cylinder engines, longitudinal and transversal installation, as well as diesel and gasoline engines. During development, particular attention was paid to the seal concept for the plastic housing, increased hydrolysis resistance, and higher coolant temperatures occurring in the gasoline application. Additional model variants with multistage thermostat regulation are currently under development.

Controlled pendulum-slider oil pump combined with vacuum pump

In the pendulum-slider oil pump patented by MAHLE, pressure and volume flow are solely generated according to demand, which reduces the required power input to a minimum. Depending on the control strategy and driving cycle, its use reduces the CO₂ emissions of a vehicle by up to four percent. Furthermore, interesting combinations are possible thanks to the high flexibility of the pendulum-slider oil pump. One example of such a combination is the innovative MAHLE tandem pump created by coupling the pendulum-slider oil pump and a vacuum pump. MAHLE will start series production with this new concept in 2014 for the first time and will supply several new engine platforms in the following years.

DEVELOPMENTS FOR ALTERNATIVE POWERTRAIN CONFIGURATIONS

Energy-efficient actuation of engine accessories

The electric actuation of engine accessories for demand-based operation and for reducing frictional losses offers considerable fuel savings potential. During the purely electric operation phases, the auxiliary functions normally provided by the combustion engine

remain available for engine accessories in hybrid powertrains. Hence, MAHLE is developing possible solutions providing full functionality for powertrain configurations of the future. The function of the auxiliaries can thus be maintained, and the vehicle can also be heated and cooled in all operating modes.

Range extender

Using a special combustion engine as a range extender, cruising ranges can be achieved in passenger cars with a battery-powered powertrain that are comparable to conventional powertrains. This is the reason why MAHLE is investigating this special drive technology with its compact-class demonstrator vehicle—developed and constructed in-house. The 0.9-liter, inline, two-cylinder gasoline engine with integrated generator—specifically developed by MAHLE—requires considerably less space than the original combustion engine for the basic vehicle. All electrical drive components, including inverters and control units, can thus be integrated together with the range extender in the vehicle's front end. The 14 kWh high-voltage battery is the only item installed in the spare wheel recess. It does not reduce the loading space or passenger compartment.

The electric powertrain was designed such that the vehicle can accelerate similarly to the basic vehicle or even outperform it. In order to maximize the pure electric cruising range, the consumption-optimized operating strategy only starts the range extender when the battery has reached a low charge status. In standard operating mode, it adapts its output in proportion to the speed of the vehicle. The purely electric cruising range is 70 kilometers. The new operating strategy also enables the demonstrator vehicle to travel more than 400 kilometers with CO₂ emissions below 45 g/km with a fuel tank of half the standard size. This amounts to a CO₂ reduction of around two thirds compared with the low initial figure of the basic vehicle. The MAHLE powertrain reaches a very high efficiency of up to 31 percent. This is an impressive value, when considering the disadvantages of the phys-

ical efficiency of series-production hybrid drive concepts with additional dual energy conversion. Both the engine and the vehicle were presented to the technical journalists in 2012.

Vehicles with range extender drive are particularly attractive for applications that should enable short-distance, zero-emissions driving, such as in urban areas, while achieving cruising ranges comparable to conventional drives.

DEVELOPMENTS FOR INDUSTRIAL APPLICATIONS

MAHLE ultrafiltration

MAHLE has started to develop ultrafiltration filter elements as well as modules for water treatment and for the purification of liquids. These innovative filter elements can be used for industrial water treatment with a filter surface covering up to 30 square meters. Filter elements and modules for general liquid clarification and stabilization, as well as ultrafiltration solutions for building services applications have filter surfaces of 0.5 to

10 square meters. Products tailored for the most diverse markets and areas of application are currently under development.

Indirect charge air cooling for large engines

The new counterflow staggered blade charge air cooler for indirect charge air cooling in large engines is characterized by its low weight and package while having an exceptionally high cooling capacity. Compared with current state-of-the-art technology, the savings in weight and package amount to approximately 50 percent and thus contribute toward a more favorable vibration behavior of the engine and to a more compact design. Thanks to the selected internal port geometry, the wall temperature of the charge air cooler does not exceed the coolant temperature, and extensive insulation is not required. The counterflow charge air cooler is available in stainless steel or aluminum. Both options have identical engine interfaces allowing engine manufacturers to select the variant best suited to their area of application and coolant quality without having to undertake any design modifications to the engine.



Top: the MAHLE range extender drive achieves efficiency of up to 31 percent.

Bottom: packaging in the front end—all relevant drive components are housed here with the exception of the battery.

GROUP ORGANIZATION //

// The MAHLE Group is organized into four business units and five profit centers. Automotive industry customers are primarily supported by both Engine Systems and Components as well as Filtration and Engine Peripherals business units. The Aftermarket business unit supplies the independent spare parts market with products in original equipment quality. The industrial activities in the Industry business unit are combined in the Filtration, Engine Components, and Thermal Management divisions.

BUSINESS UNITS

Sales and Application Engineering

Advanced Engineering

Engine Systems and Components

Aluminum pistons for gasoline and diesel engines, articulated and steel pistons for commercial vehicle engines, piston assemblies, and complete power cell units.

Piston rings, piston pins, connecting rods, cylinder liners, bearings, and bushings for combustion engines and other automotive applications, piston inserts.

Complete valve train systems and their components, camshafts, valves, and valve actuating components.

Filtration and Engine Peripherals

Filter modules for fuel, oil, and air filtration as well as cabin air filters.

Air intake modules for gasoline and diesel engines, cylinder head covers with integrated oil mist separation, controlled oil pump systems, oil coolers for engine and transmission applications, and activated carbon canister modules for tank ventilation.

Aftermarket

Products for vehicle maintenance and engine repair for passenger cars, motorcycles, transporters, commercial vehicles, stationary engines, as well as agricultural and construction machinery: engine components, filters, engine gaskets, exhaust gas turbochargers, air compressors, thermostats, and charge air coolers. Workshop equipment for air conditioning, oil, and cooling circuit maintenance. Supplementary ranges.

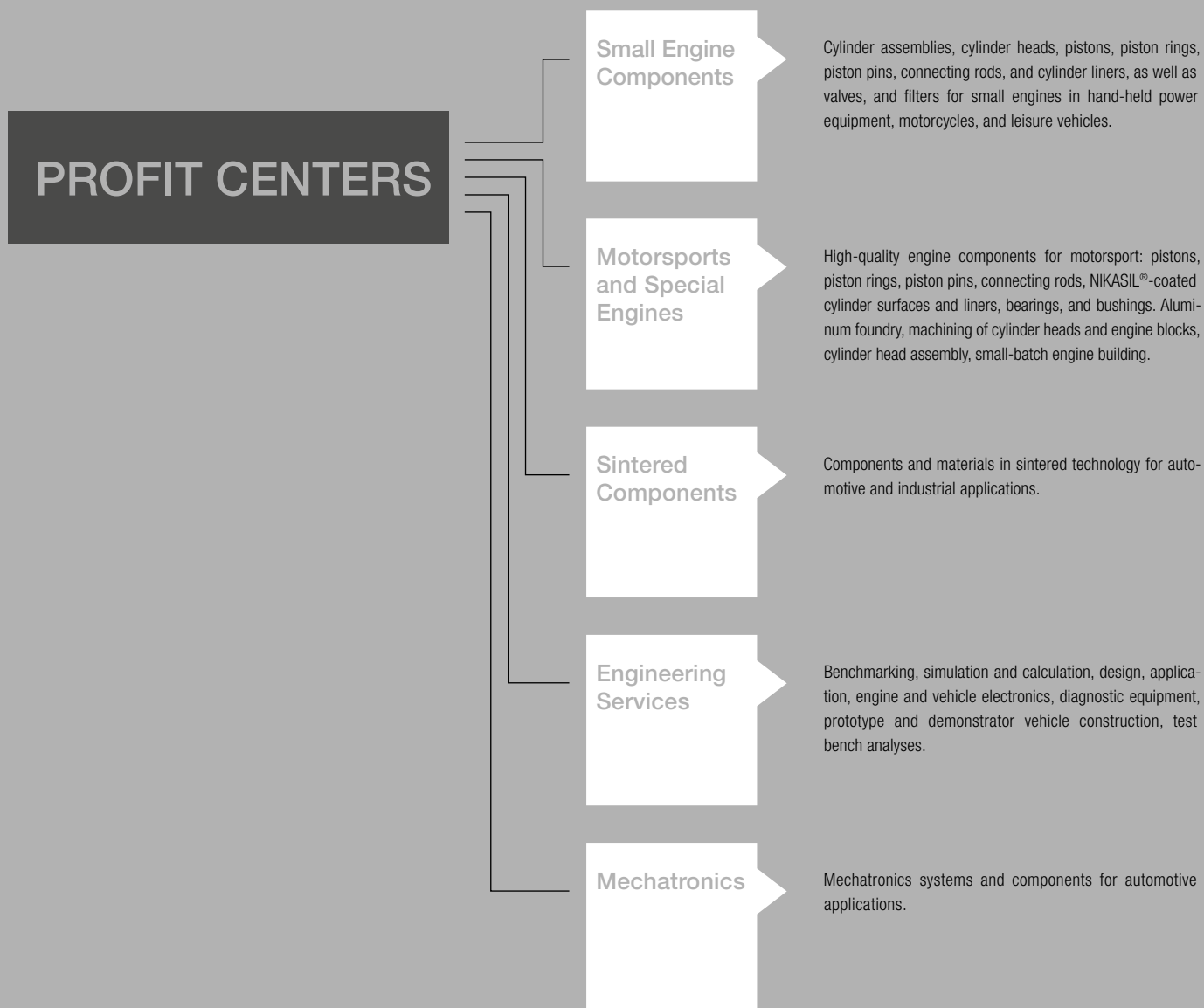
Industry

Filters and filtration systems, fluid separation, and dedusting for a variety of industrial applications. Membrane technology for water treatment.

Pistons, piston pins and rings, cylinder liners, valve train components, camshafts, and bearings for large engines.

Cooling systems and applications for an array of vehicles, gensets, as well as wind and solar installations. Air conditioners and complete air conditioning systems for special vehicles.

The profit centers are each geared toward specific customer segments. In 2012, the Small Engine Components, Sintered Components, and Engineering Services profit centers were complemented by the addition of Mechatronics. The Motorsports profit center was extended to include the MAHLE Powertrain production division in England and renamed “Motorsports and Special Engines.”



ENGINE SYSTEMS AND COMPONENTS BUSINESS UNIT //

The Engine Systems and Components business unit supplies the global automotive industry with piston and valve systems as well as cylinder components. Comprehensive systems competence, extensive production experience, and continuous development activities form the basis for integrated systems solutions and components for all types and sizes of combustion engines. The products are developed and manufactured at 51 production locations and five research and development centers across the globe. The number of employees was 29,888 as at the end of the year.

Regional variations in business development

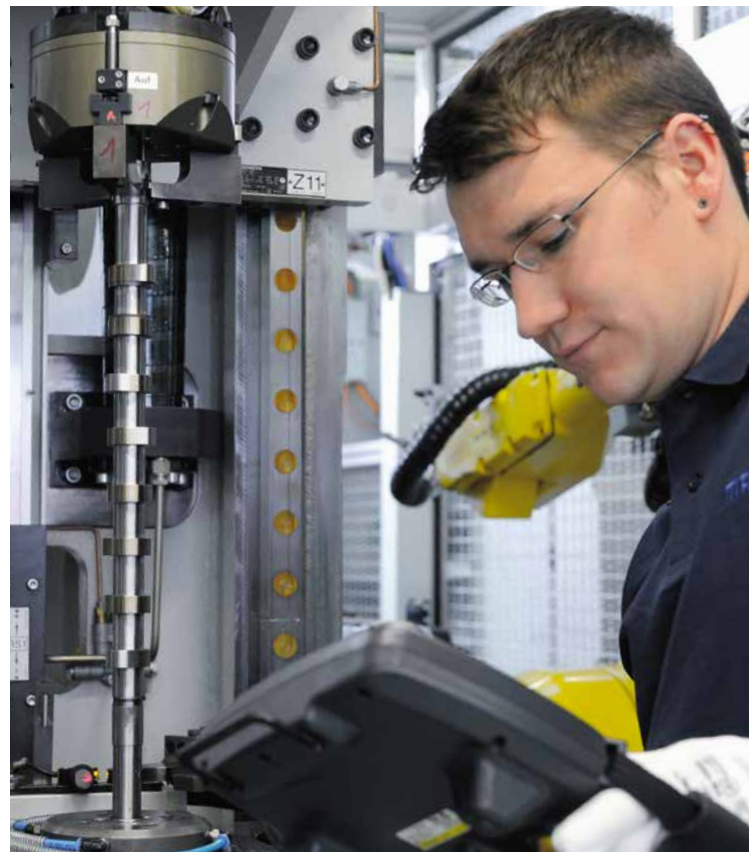
Sales for the business unit in the year under report did not match the previous year's positive business development. However, considerable regional variations became apparent. Sales in Europe reached the previous year's level only during the first quarter. The figures then proceeded to reflect the weakening economic situation in the automotive industry for the remainder of the year. Primarily affected by this trend were products for the European commercial vehicle industry and for passenger car manufactur-

ers offering vehicles in the lower and medium price range. The downturn impacted a large number of product groups. However, passenger car cylinder liners, valves, and piston pins were able to buck this trend and generate sales growth owing to market share gains.

The development of sales in North America was encouragingly positive compared with Europe. Here, the business unit benefited from the recovery of North American automobile production. All major product groups made a contribution toward this increase.

For even better quality and shorter delivery times: MONOTHERM® pistons are manufactured on the most state-of-the-art manufacturing line for steel pistons in the world in line with the one-piece flow system.

Maximum precision is required for assembled camshafts. The exact setup of the piston joining machine plays a key role for ensuring quality.



Sales in South America didn't achieve the previous year's level. The main reasons were the considerable drop in commercial vehicle production and the slight reduction in the manufacture of passenger cars. Declines in volumes were recorded in almost all product groups; however, pistons for commercial vehicle applications were most heavily affected. The previous year's sales were outstripped in the region Asia/Pacific. Sales increases were achieved particularly in China and Thailand. One of the contributing factors in China was the encouraging business development with valves for Chinese passenger car manufacturers.

Overall, staffing levels reflected the regions' business development. The number of employees was reduced in Europe and South America; particularly in Europe, accumulated hours in time accounts were reduced and short-time work was introduced at various plants in order to adjust personnel costs. In contrast, the headcount increased in North America and Asia/Pacific.

Growth region Asia/Pacific as focal point for investment

Investments focused on new customer projects, for which specific production facilities and tools were required. As in the past, a significant proportion of investments was used for the rationalization of production processes and the introduction of new production technologies in all regions. A large share of investments flowed into the growth region Asia/Pacific. In order to continue to participate in economic growth and rising vehicle production in this region, the business unit further expanded its activities during 2012. Once the plant in Yingkou/China had been awarded an order for assembled camshafts, the appropriate production facilities were installed. Likewise, the capacities for valve production in China were further extended. In

Thailand, the Bangkok production location was expanded in view of the anticipated growth of the local automotive market and the increased relocation of Japanese automobile production to Thailand.

Continuous development work as the foundation for success

Development activities focused on reducing fuel consumption and the corresponding emissions. The key development areas for 2012 were the ongoing development of steel pistons for passenger cars and commercial vehicles, the improved durability of aluminum pistons for diesel applications, and the weight reduction of pistons for gasoline engines. Development also focused on enhancing the design of piston rings in order to reduce oil consumption, on coating technologies, polymer-coated bearing shells, as well as the use of CamInCam® camshafts in diesel engines.

In the 2012 business year, the business unit was awarded numerous major new customer orders. Subsequently, the newly developed steel pistons for passenger cars—the result of systematic development over recent years—will shortly go into series production for European customers. Passenger car aluminum pistons garnered high-volume orders from key accounts too. In future, MAHLE will also be supplying assembled passenger car camshafts to globally operating manufacturers with production locations in North America and China. In addition, MAHLE received a first order for an assembled commercial vehicle camshaft, whose production started successfully during the second half of the year.

DEVELOPMENT OF ENGINE SYSTEMS AND COMPONENTS BUSINESS UNIT //

Business year	2012	2011
Consolidated sales*		
Business unit	2,887	2,987
Share of Group sales	2,623	2,699
Capital expenditure on tangible fixed assets*	144	159
Production locations	51	52
Headcount (as at Dec. 31)	29,888	31,119

* million EUR

FILTRATION AND ENGINE PERIPHERALS BUSINESS UNIT //

The Filtration and Engine Peripherals business unit develops and produces components and systems for automotive air and liquid management at five research and development centers and 30 production locations in Europe, Asia/Pacific as well as in North and South America. MAHLE is one of the leading automotive suppliers in this sector.

Innovative air and liquid management

In the field of air management, MAHLE is a competent development partner and systems supplier with a high degree of process know-how for the entire air section: from the unfiltered air intake through the filtration to the air injection into the combustion chambers and the processing of the combustion air. By focusing on the potential to reduce CO₂ emissions, MAHLE products, such as

air intake systems, air filters, and air guidance systems, make a major contribution toward compliance with emissions and consumption regulations. In addition, increasing performance and acoustic requirements are taken into account. The air management division's core competence not only includes products for direct engine air supply but also cylinder head covers, crankcase ventilation systems, and cabin air filters.

Liquid management's focus is on the processing of lubricating oils and fuels. For automobile and engine manufacturers, MAHLE operates as a globally active development partner with extensive systems and process expertise. Thus, for example, highly integrated, multifunction treatment systems can assume key tasks for controlling the oil circuit and for the thermal management of oil and

fuels, alongside the actual filtration. Overall, efficiency and service life requirements for modern engines—particularly against the backdrop of downsizing—as well as requirements for alternative fuels are thus taken into account.

Diverse business developments across the regions

In the year-on-year comparison, the Filtration and Engine Peripherals business unit recorded a significant double-digit increase in sales in 2012—in part due to positive exchange rate effects. Nevertheless, the individual regions developed unevenly.

Despite the weakening economy in the automotive industry, Europe was able to generate sales on a par with the previous year's figures. However, considerable efforts to optimize processes were yet unable to substantially improve unsatisfactory profit margins in Europe.

Employee manufacturing Audi V8 air intake modules with integrated charge air cooler from Behr.



One of the highlights of the past business year was the business development achieved in North America. MAHLE participated in the region's economic recovery along with significant productivity improvements. Overall, the business unit was able to record a clear turnaround compared with the problematic performance of the previous year.

In South America, new production ramp-ups for air intake systems and air filter elements led to sales clearly surpassing the previous year's figures, which in turn, translated into corresponding result improvements.



With the controlled pendulum-slider oil pump, MAHLE has developed a highly efficient, patented technology.

Once more, Asia/Pacific was able to achieve significant sales increases. However, the growth rates could no longer match the dynamism of earlier years. In addition, the conflict between China and Japan about a group of islands in the East China Sea had a noticeable negative impact on the demand for Japanese vehicles in China during the last quarter of the business year.

The varied regional business development is also largely reflected in staffing levels, whereas the number of employees was affected far less markedly than sales growth.

Investments in growth markets

Capital expenditure on tangible fixed assets in the past business year was above depreciation. Apart from investments in customer projects, there was a major investment focus on the region Asia/Pacific. In order to expand capacities in this region, a plant was opened on the island of Kyushu in the south of Japan, and the existing plant in Thailand was extended. In Europe, MAHLE invested in the Auengrund location in Thuringia/Germany, where the local competence center for pump technology underwent expansion. Simultaneously, the production plant in Wustermark/Germany received investments for the start-up of large-scale production of controlled oil pumps.

Innovative solutions based on development activities

Research and development work is carried out in all of the business unit's regions. Not least due to these intensive research and development activities and the resulting technological edge, a very encouraging development was observed during the 2012 business year in terms of winning numerous new customer projects. For the following years, we can thus assume sales for the business unit will develop considerably above general market growth.

DEVELOPMENT OF FILTRATION AND ENGINE PERIPHERALS BUSINESS UNIT //

Business year	2012	2011
Consolidated sales*		
Business unit	2,113	1,873
Share of Group sales	1,926	1,700
Capital expenditure on tangible fixed assets*	99	104
Production locations	30	30
Headcount (as at Dec. 31)	9,292	9,130

* million EUR

THERMAL MANAGEMENT //



*Behr products play a key role in ensuring safe, comfortable, and ecological mobility.
Illustration: cooling module assembly.*

Behr: thermal management in transition

Behr GmbH & Co. KG is a systems partner for the international automotive industry. The specialist for vehicle air conditioning and engine cooling is one of the leading suppliers for passenger cars and commercial vehicles worldwide. A team of 16,928 employees with a network of 38 production locations and regional research and development centers form the foundation for the close cooperation with automobile manufacturers. The MAHLE Group has a minority holding of 36.85 percent in the Behr Group. The following information on Thermal Management business activities is based on HGB figures of the internal reporting.

Throughout the world, Behr products play a key role in ensuring safe, comfortable, and ecological mobility. In the last years, engine cooling has been further developed to become a dynamic thermal management system, which regulates the heat flows within the vehicle as required. This contributes toward compliance with stringent emissions and consumption legislations. The same applies to air conditioning, which is now indispensable in today's vehicles. In conjunction with its customers, Behr develops components, modules, and complete systems for various applications both for passenger cars and large commercial vehicles. Behr is developing new areas of ac-

tivity in the context of the electrification of the powertrain, e.g., for the cooling of sensitive lithium-ion batteries.

2012 sales adjusted for exchange rate effects below previous year's figure

In 2012, sales for the Behr Group's Thermal Management division remained at the previous year's level. However, when adjusted for currency conversion effects, sales were 1.5 percent below the previous year's value. After developing positively during the first half-year, sales shrank during the second half in the year-on-year comparison due to unfavorable market conditions. The economic decline predominantly affected Europe—and the passenger car manufacturers based in southern Europe in particular. Reduced sales were also recorded for the commercial vehicle sector in Europe, South America, and Asia/Pacific.

Capital expenditure on tangible fixed assets remained at the same level as the previous year; however, there were regional variations. While western European locations considerably reduced their investments, locations in eastern Europe, Asia/Pacific, and South America increased their investments.

The headcount also remained at the previous year's level. Europe recorded a downward trend whereas the number of Behr employees rose in the regions of North America and Asia/Pacific.

Growth in Asia, efficiency enhancement in the other regions

In global terms, the greatest growth potential for Behr can be found in the Asia/Pacific region, where Behr is currently setting up a strong regional organization and continuing to increase its production footprint with new plants in China and Korea.

An additional core task involved improving efficiency and competitiveness at the Behr plants in Europe as well as North and South America. For this reason, a number of projects and measures were launched in Europe during the second half-year in order to adjust cost structures and sustainably improve productivity.

Behr has also systematically further developed its product portfolio. Air conditioning innovations include the HIPEX high-performance radiator, the high-voltage PTC booster heater with integrated power electronics, as well as innovative material concepts, in order to improve corrosion resistance, for example. For passenger car engine cooling, the charge air coolers integrated in the intake modules were successfully launched on the market in close cooperation with MAHLE. In commercial vehicles, the dominant topics were the thermal management solutions for Euro VI, as well as cooling modules and the Visco® water pump.

Continuously improved: numerous projects and measures to increase efficiency have considerably sharpened the competitive edge of Behr's European locations in 2012.



DEVELOPMENT OF THERMAL MANAGEMENT //

Business year*	2012	2011
Consolidated sales**	3,630	3,632
Capital expenditure on tangible fixed assets**	106	107
Production locations***	38	36
Headcount (as at Dec. 31)	16,928	16,985

* HGB figures of the internal reporting

** million EUR

*** Incl. locations of joint ventures

AFTERMARKET BUSINESS UNIT //

Worldwide network for vehicle maintenance and engine repair

The Aftermarket business unit distributes MAHLE Group products for vehicle maintenance and engine repair to the independent vehicle spare parts sector and engine repair workshops. This includes a growing supplementary segment in the engine area. With a total of 17 locations and 1,500 employees, MAHLE offers its global trade customers a wide-scale network with comprehensive sales and maintenance functions.

In 2012, sales from the independent aftermarket slightly exceeded the previous year's figure. The individual regions developed unevenly. While sales in eastern Europe as well as the Near and Middle East were clearly above the previous year's figures, southern Europe recorded slightly decreasing sales due to the weak economic development. Sales in North America outperformed the previous year's level. This primarily involved additions to the product range, as well as product groups such as pistons and bearing

shells; foreign currency exchange rate effects also made a significant contribution to growth. In South America, sales for filter products and exhaust gas turbochargers continued to progress positively. Sales of the remainder of the product range fell short of the previous year's figure, also due to negative foreign currency exchange rate effects. The Asia/Pacific region recorded considerable growth. This was essentially influenced by encouraging business development in China and the commissioning of the logistics location in Singapore last year.

Investments in growth markets of Russia and South America

The 2012 business year involved crucial preparations to broaden the product range. This included, for example, assuming the responsibility for the distribution of thermostats from Behr Thermot-tronik, integrating air compressors for commercial vehicles into the product range, expanding the portfolio to include exhaust gas turbochargers, and supplementing the business segment

with the corresponding charge air coolers. By acquiring the U.S. provider for air conditioning service units RTI, based in York, Pennsylvania/USA, MAHLE underpinned the significance of workshop business as well as a comprehensive service offering for its customers. Furthermore, a number of key investment projects were started: a new logistics location is being constructed in Obninsk/Russia. The current location in Limeira/Brazil is moving to a considerably larger site in close proximity. Both locations will start operations by 2014. The number of vehicles in Russia and Belarus along with the demand for top-quality spare parts from brand manufacturers continues to grow. Owing to its proximity to the region and shorter paths to customers, MAHLE anticipates growing market shares due to the new location. Booming business in South America and the expansion of the product range require an optimized flow of goods. The future orientation of the new Brazilian location gives these aspects due consideration.

*In the Aftermarket central warehouse, piston ring packs are packaged manually.
 Illustration: Fitting of the piston rings in the magazines.*

DEVELOPMENT OF AFTERMARKET BUSINESS UNIT //

Business year	2012	2011
Consolidated sales*		
Business unit	797	775
Share of Group sales	787	767
Capital expenditure on tangible fixed assets*	7	6
Locations	17	16
Headcount (as at Dec. 31)	1,500	1,536

* million EUR



INDUSTRY BUSINESS UNIT //

Successful sales activities

All of MAHLE's nonautomotive business activities are combined in the Industry business unit. These encompass products from the application areas of filtration, thermal management, and large engines for industrial purposes. These three segments are structured as divisions. Synergies are primarily tapped in terms of market cultivation. Overall, the business unit employs more than 2,200 people and has a network comprising 23 production locations around the globe.

The business unit's sales were approximately at the previous year's level. However, the divisions recorded different development patterns. In regional terms, the falling figures for Europe were offset by the expansion of activities in North and South America as well as in Asia.

In the Filtration division, negative market influences were successfully counteracted by the launch of new products and gains in the

oil & gas as well as wind power applications. First high-volume orders for the newly launched systems for marine ballast water treatment contributed positively toward growth. The filter element business also developed positively owing to the increasing globalization. In contrast, market-related decreases in the Thermal Management division led to shrinking sales in the year-on-year comparison, with demand for cooling systems for electric railroad vehicles in particular falling short of the previous year's level. Market launches delayed by customers also had a negative impact on business development. Despite these challenging market conditions, new projects were secured. In the agricultural machine segment, the new modular cooler platform has been very well received. The field of wind power also experienced a successful market entry with newly developed, customer-specific applications. For the Engine Components division, sales were virtually unchanged from the previous year. One contributing factor was the successful acquisition of a

new customer in Asia/Pacific, which offset weakened demand in Europe and North America. Major inroads were made with activities to standardize and integrate business processes, and to restructure the Filtration division. Investments focused on the expansion and modernization of production locations. The headcount remained almost constant.

Water treatment enhances product portfolio

Worthy of special mention is the acquisition and integration of InnoWa GmbH. Takeover of the specialist in the development and production of hollow fiber membranes took place at the beginning of 2012. Currently, business activities focus on point-of-use filtration applications as well as applications for industrial water treatment.

Employee at the turning-milling center manufacturing a large-bore piston.



DEVELOPMENT OF INDUSTRY BUSINESS UNIT //

Business year	2012	2011
Consolidated sales*		
Business unit	474	471
Share of Group sales	465	463
Capital expenditure on tangible fixed assets*	16	14
Production locations	23	22
Headcount (as at Dec. 31)	2,275	2,356

* million EUR

SMALL ENGINE COMPONENTS PROFIT CENTER //

Since the market for recreational vehicles continued to develop positively in the year under report, the location in Rankweil/Austria was able to generate a slight sales increase as it primarily serves this market. In contrast, the German location of Markgröningen recorded a drop in sales due to a declining market for hand-held power equipment. As

a whole, total sales for the Small Engine Components profit center did not fully match the previous year's level.

In 2012, investments increased in the year-on-year comparison. A large proportion consisted in expenditure on replacement equipment for piston manufacturing and rational-

ization projects for cylinder manufacturing at the Rankweil/Austria location. The profit center's 2012 headcount fell as a result of the closure of the Trumbull/USA location at the end of 2011.

MOTORSPORTS AND SPECIAL ENGINES PROFIT CENTER //

Once again, MAHLE Motorsports can look back on a very successful motorsport season. In 2012, as in previous years, victories were achieved in most major national and international motorsport series and racing events with engine components from MAHLE Motorsports.

An organizational change in 2012 will have a major impact on the profit center's structure and results, starting with the 2013 business year. On September 1, 2012, the MAHLE

Powertrain Ltd. production division started to report to the profit center's management, and the profit center was renamed Motorsports and Special Engines. As of 2013, the results of the MAHLE Powertrain Ltd. production division will be shown in the Motorsports and Special Engines profit center.

In 2012, sales for the profit center rose slightly in the year-on-year comparison. The good sales figures from the previous year could not be matched in the business

segment for high-performance road vehicles. Increased sales in the Formula 1 and motorsport segments compensated for this development. A contributory factor was the start of motorsport conrod production at the plant in Fellbach/Germany. Investments in 2012 focused on the expansion of the motorsport conrod output capacities.

SINTERED COMPONENTS PROFIT CENTER //

Sales from the Sintered Components profit center exceeded the previous year's figure slightly. The individual locations developed unevenly. While the location in Grenchen/Switzerland was able to generate significant sales growth owing to increased volumes for new applications in the controlled oil

pump segment, the location in Indaiatuba/Brazil recorded a slight drop in sales due to the weakened local automotive market.

Investments in 2012 were lower than the previous year's value. At both locations, MAHLE invested predominantly in new cus-

tomers projects and in measures to improve productivity. The successful restructuring measures as well as productivity increases at both locations lead to a reduction of headcount in Brazil and Switzerland.

ENGINEERING SERVICES PROFIT CENTER //

Once again, in the 2012 business year, sales and result for Engineering and Test Systems outstripped the budget figures. This was primarily achieved through investments and measures toward continuous efficiency enhancement, as well as tapping new markets and customers.

Since 2005, MAHLE Powertrain as part of the MAHLE Group has assisted vehicle and engine manufacturers, the aftermarket, and Tier 1 customers with comprehensive engineering services and test systems for powertrains and vehicles. Across the world, employees from the MAHLE research and de-

velopment centers in Great Britain, the USA, Germany, Brazil, China, and Japan are working directly at the customer site. With intensive research and development, MAHLE provides active support in numerous projects for the optimization and ongoing development of existing and future engines, powertrains, and industrial applications.

Services provided encompass the concept phase, design, construction, FE calculations, numerical simulations, development of engine mechanics and thermodynamics, all the way to vehicle application and life cycle testing.

Development focuses on new concepts and technologies to reduce CO₂ emissions and ensure compliance with international requirements for exhaust gas emissions. This includes, among other things: downsizing with different turbocharging concepts and direct injection, range extender engines for battery-powered electric vehicles, minimization of frictional loss using demand-controlled auxiliaries, alternative fuels to reduce CO₂ and particulate emissions, integrated thermal management (powertrain/vehicle), and alternative lean combustion processes (MAHLE Turbulent Jet Ignition).

MECHATRONICS PROFIT CENTER //

In the 2011 business year, MAHLE spun off the Mechatronics profit center from the Filtration and Engine Peripherals business unit, thereby acknowledging the increasing significance of the mechatronics and actuator engineering segment in vehicle production. At present, the profit center primarily develops and produces electrical actuators for intake modules and turbochargers, controlled exhaust gas recirculation valves as well as electric heaters.

In the year-on-year comparison, sales showed a continuous increase in 2012. Major contributors to this growth were electric wastegate actuators for exhaust gas turbochargers, fuel heaters, and electric intake

pipe actuators. However, the development of sales did not result in a positive profit level yet. The high development expenses led to a negative result for the profit center.

The profit center's main investments were made at the location in Austria. They were used for machines for ongoing production and imminent production ramp-ups, as well as tools related to specific orders.

The number of employees was approximately on a par with the previous year. At the end of the year, MAHLE employed 122 people in this profit center, who are predominantly involved in product and fundamental development.

Profit Centers:

Small Engine Components

Motorsports and Special Engines

Sintered Components

Engineering Services and Others

Mechatronics

DEVELOPMENT OF ALL PROFIT CENTERS AND SERVICES //

Business year	2012	2011
Consolidated sales*		
Profit Centers	639	620
Share of Group sales	359	372
Capital expenditure on tangible fixed assets*	57	37
Production locations	12	14
Headcount (as at Dec. 31)	4,707	4,677

* million EUR

MAHLE IN ASIA //

Over 30 locations and almost 10,000 employees generating sales of approximately EUR 1.3 billion—that is an estimated 21 percent of total sales: MAHLE is well-positioned in Asia. Our philosophy: you will find us wherever there are automobile manufacturers—provided that the local market is large enough to justify our involvement. Our global presence has enabled us to counteract economic fluctuations in individual countries and regions. In particular, we have been benefiting from the world’s key growth market Asia—40 million passenger cars and light commercial vehicles were produced here in 2012; that corresponds to half of global production. In order to participate in this development, we have expanded our research and development center in China, constructed a new plant on the island of Kyushu/Japan as well as moved into new headquarter in Tokyo, extended two plants in Thailand, and plowed ahead with the planning for new locations in China and Southeast Asia, all in this year.

Brief chronicle of a success story

The MAHLE history in Asia is still relatively young; it built its current dynamics in the late nineties. But initial contacts were established back in 1968, when MAHLE concluded a license agreement with the then Izumi Corporation in Japan for the manufacture and distribution of cast light-alloy pistons. Then from the nineties until 2003, MAHLE gradually acquired all shares in Izumi. Today, the company trading under the name of MAHLE Engine Components Japan Corporation is the largest Asian manufacturer of commercial vehicle diesel pistons with

its four production locations in Japan as well as the management of the MAHLE piston plants in China and Thailand, and it is also continuously increasing its market shares in the passenger car sector.

However, the oldest MAHLE location in Asia is not in Japan, but in India: Pithampur. The plant joined MAHLE as part of a joint venture in 1996 and is now also a wholly owned subsidiary of the MAHLE Group. This was followed in 1997 by the first Asian location—also





in India—for the Filtration division, the Kirloskar Knecht Filters joint venture, which is now trading as MAHLE Filter Systems (India) Limited. A second filter location in the Far East was established via a majority joint venture with the company Donghyun two years later in South Korea.

In the same year—1999—two piston plants were commissioned in Nanjing and Yingkou to mark the entry into the promising Chinese market. The next major step in expanding the Company's presence in Asia followed in 2001 with the acquisition of the Tennex Group, which as part of the Nissan Group offered the complete product range of the MAHLE Filtration and Engine Peripherals business unit and brought production locations in Japan, the USA, Great Britain, and the Philippines into the MAHLE Group. MAHLE thereby became the world's largest provider of air, oil, and fuel filter systems for the automotive industry. In 2005, the Group was fully acquired and now trades as MAHLE Filter Systems Japan Corporation.

These milestones were supplemented not only by additional acquisitions but by the Group establishing its own companies too. Examples of this strategy are MAHLE Trading (Shanghai) and MAHLE Trading Japan, which

were launched in 2006 to boost aftermarket activities in Asia. In the meantime, MAHLE has been present with its own production locations in the Far East for over 15 years. Drawing up an interim assessment, the following could be concluded: MAHLE in Asia is a success story. The development was rapid and exceptionally positive. Today, MAHLE is a key player in all of Asia's major automotive and industrial countries. However, we cannot just sit back on our laurels: since Asia is the dominant growth region for our industries, we must keep up our pace of growth.

In recent years, a disproportionate share of our investments has flowed to Asia, and this will continue to be the case in coming years. It still remains our objective to become established in countries in which we are not yet represented. Moreover, our existing production network still needs to be expanded. And: if we keep focused on supplementing our product portfolio, then Asia is possibly the crucial provider of ideas.

One of the main reasons for our previous success was most certainly the fact that we succeeded in transferring our corporate values to Asia. The loyalty of our Asian managerial staff and employees is exceptionally high. And that stands for our success!

Asia: one market? Many markets!

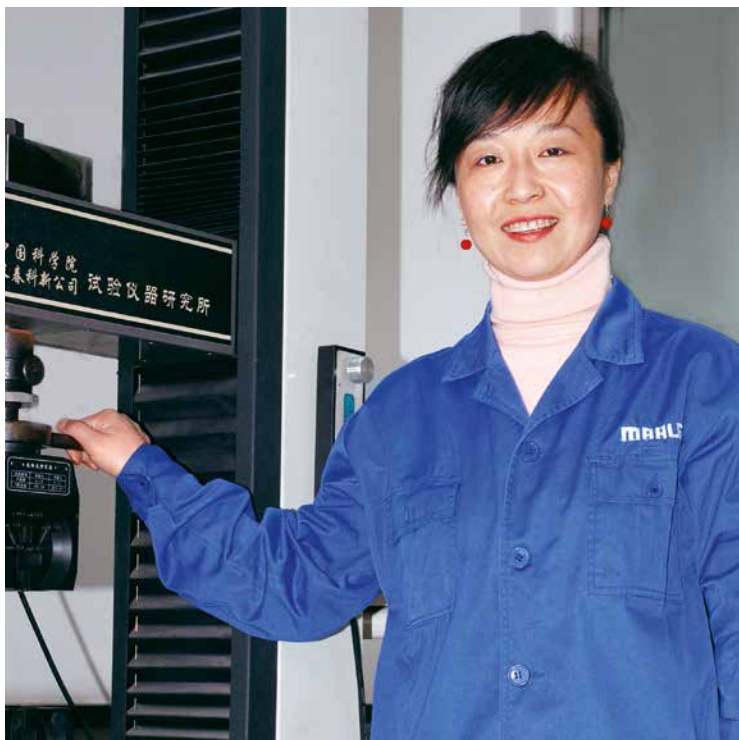
We all like to speak about the “Asian market”—while not being aware of what dimensions it really has. Besides being the largest, Asia is also the most populous continent in the world. It encompasses developing countries, rich oil-producing states, and large industrial nations. After the United States, Japan and China are the world’s largest economies, with India and Southeast Asia recording very high economic growth.

As a result, it is not possible to lump the Asian countries together—and the same is true for their automotive markets. Japan is being confronted with domestic stagnation, and OEMs are expanding their capacities in Thailand, Indonesia, and India as well as in the USA, Mexico, and Brazil. In China, domestic growth was considerably lower than in previous years, but imports rose rapidly. The luxury segment for passenger cars is booming; however, Chinese manufacturers are unable to supply that demand. Therein lies a major opportunity for international groups. It is assumed that passenger car demand will continue to rise significantly until 2017. The commercial vehicle market also offers great potential—trucks from western manufacturers are currently considerably more expensive than those from local manufacturers; but the latter do not meet emis-

sion levels that will be introduced in the foreseeable future. Thus, the market is very heterogeneous. Furthermore, MAHLE is facing stiff competition from western and domestic suppliers alike.

And, what’s more, local cultures are as varied as the markets of each respective country. It is now possible to communicate quite well in English within the companies, but this does not mean by a long shot that it is clear what the person you are talking to actually wants to convey. Let us take the subject of quality. China does not supply the requested quality, say the Indians. India does not supply the requested quality, say the Chinese. In both instances, the focus in these countries is more on price than on perfection. It is a completely different story with Japan: here, the expression “nobody’s perfect” means nothing. While Europeans are happy with a low defect rate, the Japanese are very apologetic. The goal is to record zero defects—not achieving it means failure.

And it’s not just this you need to know if you wish to be successful locally. You must be able to comprehend and understand your business partners’ reactions, and this demands sensitivity and intercultural competence.





Spare parts business: China is emerging as the world's largest market

Every fourth vehicle is registered in Asia—in a few years, it will increase to almost every third. Accordingly, there is substantial demand for spare parts. MAHLE Aftermarket is present locally in Japan, China, and India. Furthermore, we opened a regional warehouse in Singapore in 2011. Our regional headquarters are located in Shanghai.

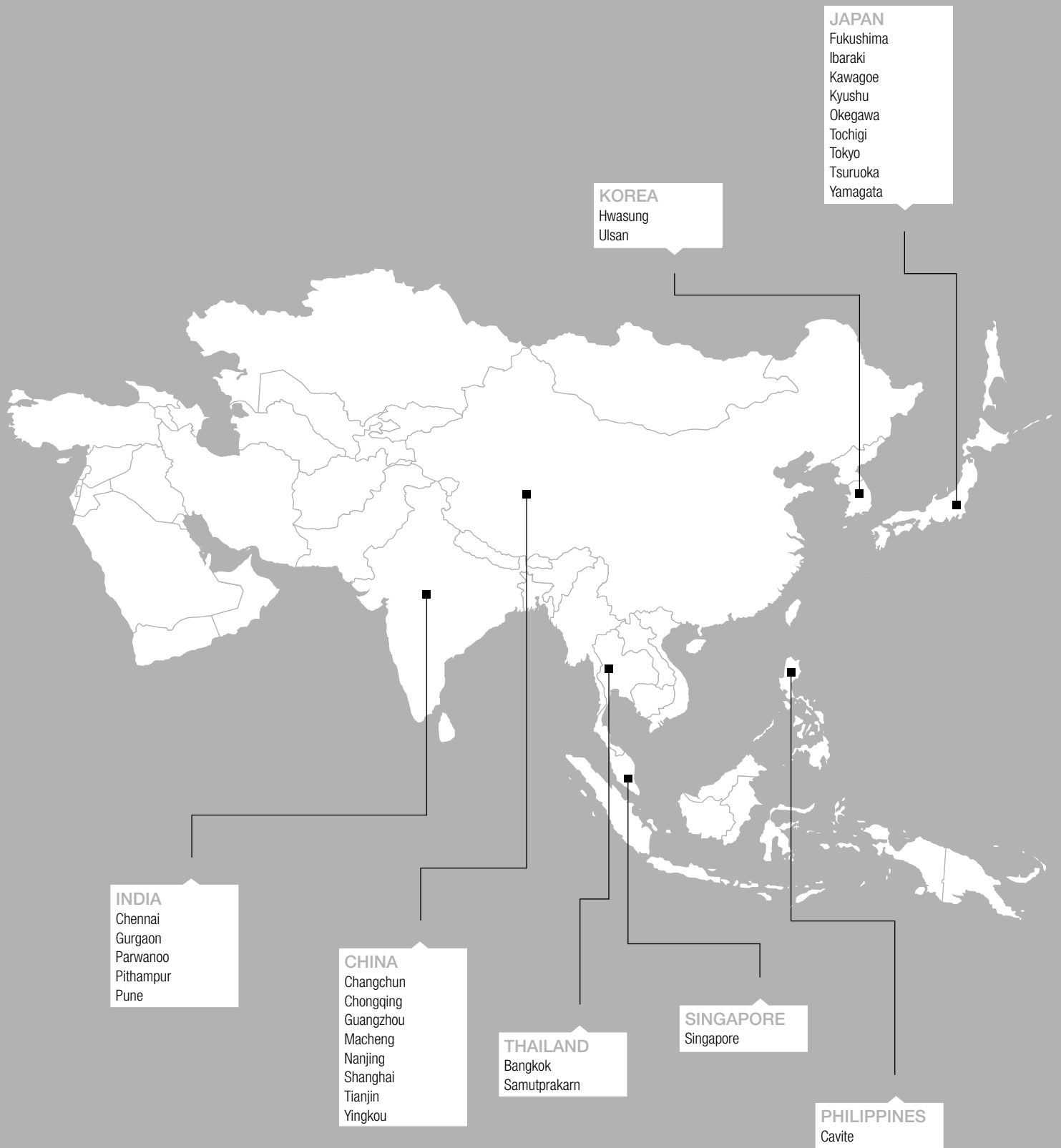
After merging our Asian aftermarket activities into one organization in 2006, the next step was to tap the synergy potential between the markets. Currently, we are working on further expanding our market position in India. Since China has become the world's largest aftermarket, we are concentrating our activities particularly on this strategically important market. Many manufacturers of varying quality levels, little brand awareness, workshops with low-skilled staff, and complex distribution structures: these are the keywords that depict the situation in China. It is our goal to turn our brand into a synonym for OEM quality and to offer a full range for all vehicle applications in this country. In addition, we will expand our range of services, qualify our customers by means of technical training, and provide repair and maintenance information about the powertrain.

Nonautomotive: Asia offers great development potential

MAHLE is pursuing the strategy of expanding its Industry business unit to create a second mainstay. Asia presents great potential, but coupled with major challenges. This is particularly due to the very mixed situations the industry sector faces in individual countries. Furthermore, our portfolio includes products for numerous and very varied industries—from wind power to agricultural and construction machinery, railroad vehicles, and shipbuilding all the way to factory equipment for filtration and separation. Power generation, water treatment, and road construction are particularly fiercely competitive growth markets, on which we compete directly with local manufacturers.

MAHLE presents itself less as a supplier of components but rather as a solutions provider—our European customers who are present in Asia in their role as global players count on our expertise and the reliable quality of our products. In addition, we are benefiting from the resources and many years of experience gained by the MAHLE automotive business units. Initially, we will be focusing on the needs analysis of the market and identifying niches of interest to us. Depending on market trends, we will then become active in selected individual segments—both in terms of sales and production. Our goal is to generate one third of sales in Asia in five years' time.

MAHLE LOCATIONS IN ASIA //



Well-positioned in the automotive sector

Japan

Nine locations, nearly 2,000 employees, and sales totaling almost EUR 600 million currently make Japan the top country in Asia in terms of sales.

The Engine Systems and Components business unit is represented with three plants in Yamagata, Tsuruoka, and Fukushima, as well as a research and development center in Okegawa in Greater Tokyo; pistons and cylinder liners for diesel engines are the main products manufactured here. Apart from a research and development center in Kawagoe by Tokyo, the Filtration and Engine Peripherals business unit has three plants in Kawagoe, Tochigi, and Kyushu, in which heat exchangers, valve cover modules, air intake and tank ventilation modules as well as air and fuel filters are produced.

In 2012, we moved to new headquarters in North Tokyo. Five floors and an area of 2,300 square meters house

140 members of staff for sales, finance, controlling, and IT. By mid-2012, all locations were situated on the island of Honshu—the country's largest island. The earthquake and tsunami in March 2011 highlighted the necessity to minimize risk by not concentrating all of our sites on one single island. Since major Japanese passenger car customers relocated parts of their vehicle production to the island of Kyushu, and customers such as Nissan, Toyota, and Mitsubishi already manufacture there, we decided to establish a production plant for air intake and filtration systems close to the city of Fukuoka. The plant was opened in September and started production toward the end of the year. One additional advantage of the location in Kyushu is its access to seaports, which are important for exports and imports with east Asian markets. Proximity to Korea is also significant, because we import many supplier parts from there.

*New headquarter of MAHLE Japan Ltd.
in Tokyo/Japan*

*The research and development center
in Okegawa/Japan*



China

In eight plants and an administrative and technology center, nearly 4,500 employees generate sales of approximately EUR 400 million. This makes China the Asian country with the greatest number of MAHLE employees—and following Japan the country with the second highest sales.

The MAHLE administration and technology center in Shanghai is home to the central functions such as sales, purchasing, human resources, IT, and finance, but especially research and development for all product lines. The research and development center was extended by three new buildings in 2012, which were officially opened in November. Nearly 9,000 square meters of development activity and office space were added to the existing 7,000 square meters.

The Engine Systems and Components business unit works from four locations. In Chongqing, pistons for motorcycles and the aftermarket are the main components being manufactured. At our oldest Chinese plant in Nanjing, MAHLE produces predominantly diesel pistons for commercial vehicles. We are present with several activities at our Yingkou location—in particular the manufacture of pistons and piston rings, camshafts, bearings, and conrods. Macheng rounds off the product range with valves.

The Filtration and Engine Peripherals business unit has four locations in China. Intake manifolds, cylinder head covers, and air filters are manufactured in Tianjin and Changchun to the north and in Guangzhou to the south of the country. In Shanghai, one production location for liquid filtration is located in a new industrial estate in direct proximity to our research and development center.

Thailand

An increasing number of Japanese vehicle manufacturers are producing in Thailand—not only for the Thai market, but also for exporting to the ASEAN countries. Reasons for this strategy include the considerably lower costs, which result in a high export ratio, and the fact that domestic vehicle demand will rise considerably in the coming years. In order to defend and increase our market shares with Japanese manufacturers, we decided to follow the trend and extend our two existing plants in Thailand.

MAHLE Engine Components (Thailand) predominantly manufactures diesel engine pistons in its plant in Bangkok. Construction work of the new large building was completed in September. It provides space to expand the current production capacities considerably.

MAHLE Siam Filter Systems has also significantly extended its production and logistics complex in Greater Bangkok, in order to be equipped for the forecasted quantity increases and expansion of the product portfolio.

South Korea

We serve our Korean customers from two locations. All products from our Filtration and Engine Peripherals business unit are manufactured in Hwasung and Ulsan. Both plants generated sales totaling nearly EUR 130 million.

India

Six plants and a headquarter in Delhi—this is how MAHLE is represented in India. Since 1996, we have been manufacturing camshafts at Pithampur for domestic automobile manufacturers. The remaining activities of the Engine Systems and Components as well as the Filtration and Engine Peripherals business units are integrated in majority joint ventures with various Indian partners. These locations are situated in Chennai, Pune, Parwanoo, and Gurgaon.

The plant of MAHLE Engine Components (Yingkou)/China



Plant expansion of MAHLE Siam Filter Systems in Samutprakarn/Thailand



The plant of MAHLE Donghyun Filter Systems in Ulsan/Korea





02 //

MANAGEMENT REPORT

// IN THE 2012 BUSINESS YEAR, MAHLE GENERATED SALES OF NEARLY EUR 6.2 BILLION. A GLANCE AT THE DETAILS REVEALS THAT THE GLOBALIZATION STRATEGY THAT WE HAVE BEEN SYSTEMATICALLY PURSUING IN RECENT YEARS IS BEARING FRUIT IN VIEW OF THE CHALLENGING EUROPEAN MARKET SITUATION. THE ASIAN AND NORTH AMERICAN MARKETS IN PARTICULAR HAVE SUPPORTED BUSINESS DEVELOPMENT IN 2012. IRRESPECTIVE OF THIS, THE GROUP'S GLOBAL POSITIONING PROVIDES US EMPLOYEES WITH A MULTITUDE OF DEVELOPMENT AND CAREER OPPORTUNITIES IN AN INTERNATIONAL ENVIRONMENT.

*Andreas Steiner, Director of Corporate Controlling, and Jolanthe Haag, Head of Group Reporting
in Group headquarters at the Stuttgart location in Germany*

GLOBAL ECONOMY LOSING MOMENTUM //

// Sluggish growth and increasing risks were the main characteristics of the global economy in 2012. The automotive markets developed unevenly.

General economic development

In general, the advanced economies experienced restrained economic growth. Although the growth rates for the majority of emerging markets remained at a comparatively high level, these were still lower than in 2011.

Despite implemented policies, the European debt crisis intensified during the first half of 2012. Additional interventions were necessary to prevent a rapid deterioration of the financial situation in the European peripheral countries. Recession persisted in most of these countries as a result of this crisis, and its impact on economic activities across the entire region amplified. Even the initially very resistant German economy increasingly felt the ramifications of the debt crisis and weak global economy during the course of the year.

In the United States, the economy grew by 2.3 percent during the period under report. While the real estate market stabilized, the labor market remained subdued. In order to revive the economy, the U.S. Federal Reserve continued to pursue an expansive monetary policy. However, the political dispute surrounding the fiscal cliff led to uncertainty on the markets toward the end of the year. In South America, economic growth slowed down considerably in both Brazil and Argentina. In addition to a continuing expansive monetary policy, the Brazilian government responded with economic stimulus packages to fuel investment and the domestic economy.

The Japanese economy continued with its recovery bolstered by the reconstruction measures following the earthquake. However, the economic dynamics lost significant momentum in the second half of the year. Both a strong yen and the dispute with China about a group of islands in the East China Sea dragged down exports. Growth cooled off in China, a heavyweight in the region Asia/Pacific. In order to counteract the weakened global economy and dampened domestic economy, the tight monetary and lending policy pursued in previous years was relaxed once again. Furthermore, the government sanctioned an economic stimulus package. India was another country where growth also slowed.

Market development for passenger cars and light commercial vehicles

The global market for passenger cars and light commercial vehicles developed unevenly during the 2012 business year. Strong growth in North America and Asia/Pacific contrasted the declining production figures from Europe and South America. Compared with 2011, the worldwide production of passenger cars and light commercial vehicles increased by 6.1 percent to a total of 81.5 million units.

Due to the ongoing national debt crisis and weak economic growth, the market for passenger cars and light commercial vehicles recorded a marked downward trend in Europe. After two years of growth, production in western Europe dropped significantly

to 12.6 million units (–7.8 percent) in 2012, mainly due to the drop in demand in France, Italy, and Spain. As a result, production was approximately 21 percent lower than the precrisis figure from 2007. The German production of passenger cars and light commercial vehicles—heavily dependent on exports—was no longer able to escape this negative trend during the course of the year. In central and eastern Europe, production increased by 2.9 percent to 6.7 million vehicles in the year-on-year comparison.

The North American market was a major growth driver for global production in the 2012 business year. With growth of 17.6 percent to 15.4 million units, the North American production of passenger cars and light commercial vehicles continued the recovery process started at the end of 2009. For the first time, production outperformed the precrisis level recorded in 2007 again. The South American production of passenger cars and light commercial vehicles was just below the previous year's level. In Brazil, production was hampered by the economic slowdown and tighter restrictions from banks for granting credit. Only after sales stimulus programs had been launched at the end of the second quarter was it possible to achieve positive growth rates. The Argentinian market was unable to match the previous year's production level.

With an increase of 10.3 percent at 40.8 million units, the Asia/Pacific region achieved a major expansion in the production of pas-

senger cars and light commercial vehicles. Japan was able to record an above-average increase in production with 19.7 percent. The two substantial contributing factors to this high growth were the previous year's low figure resulting from the tsunami and national purchase incentive programs. The incentive program ended in September. A major contribution to the region's production growth was made by the Chinese market, which achieved solid growth with a production increase of almost one million units (+5.4 percent). In the past ten years, China has expanded production by more than 14 million units. In India, production grew by approximately five percent.

Development of the markets for medium-sized and heavy-duty commercial vehicles

The global production of medium-sized and heavy-duty commercial vehicles fell far short of expert forecasts during the 2012 business year. In the year-on-year comparison, commercial vehicle production developed

negatively as a whole, and fell to 3.3 million units.

In Europe, the weak economic conditions caused production to fall below the previous year's level. This drop can be predominantly attributed to the development in western Europe. Conversely, production increased in central and eastern Europe in comparison with the previous year.

The North American market continued its impressive recovery during the first half-year with double-digit growth rates; however, production recorded a decline for the second half in the year-on-year comparison. In South America, the previous year's production figures could not be matched. The introduction of the Euro V standard, which had led to anticipatory effects in the 2011 business year, coupled with a noticeable economic slowdown impacted the production of commercial vehicles in Brazil. Consequently, the production volume dropped by 33.8 percent.

Production in the Asia/Pacific region also failed to match the previous year's value. The significant increase in Japanese vehicle production was only able to partially offset the drop in Chinese production. In China, weakened growth in exports and investments impaired vehicle production. With a decline of approximately 19 percent, commercial vehicle production fell markedly for the second year in a row. In India, the number of manufactured commercial vehicles remained lower than the previous year's value.

WORLDWIDE AUTOMOBILE PRODUCTION //

Number in 1,000s

Business year	2012	2012	2011	2011
	Passenger cars & light comm. vehicles	Commercial vehicles (incl. buses)	Passenger cars & light comm. vehicles	Commercial vehicles (incl. buses)
America	19,723	694	17,439	735
North America	15,434	497	13,127	451
South America	4,289	197	4,312	284
Asia/Pacific	40,788	1,977	36,974	2,142
Japan	9,436	365	7,886	305
China	18,566	1,042	17,611	1,289
Europe	19,282	619	20,159	649
Germany	5,550	145	5,763	156
Other countries	1,727	3	2,266	3
Total	81,520	3,293	76,838	3,529

Source: IHS Automotive, figures for passenger cars and light commercial vehicles (last updated: March 2013); figures for commercial vehicles (last updated: February 2013)

BUSINESS DEVELOPMENT OVERVIEW //

// Notwithstanding the challenging markets in Europe and South America, MAHLE generated sales totaling EUR 6,159.5 million in the 2012 business year.

With sales of EUR 6,159.5 million, the MAHLE Group achieved an increase of 2.6 percent in the 2012 business year, compared with the previous year's figure of EUR 6,002.2 million. These sales figures include positive foreign currency exchange rate effects totaling EUR 175.2 million, such that real sales remained at about the same level as the previous year.

Business units and profit centers

Business units experienced uneven sales developments. The Engine Systems and Components business unit did not reach the previous year's level, predominantly due to the challenging market conditions in Europe and South America and significant sales shares in the globally shrinking commercial vehicle market. Sales increases in various product segments including power cell cylinder modules, light vehicles gasoline pistons, and valves were unable to fully offset declines in other product segments. Overall, the business unit recorded sales of EUR 2,623 million (previous year: EUR 2,699.3 million) and once again contributed the highest share to Group sales with a figure of 42.6 percent (previous year: 45 percent). The Filtration and Engine Peripherals business unit turned out to be the MAHLE Group's key growth driver in the 2012 business year. Despite the economic downturn in several regions, the business unit increased sales to EUR 1,925.5 million (+13.2 percent) and boosted its share of Group sales to 31.3 percent. All major product segments contributed toward the sales increase, with the air intake modules and

components segment as well as air filter modules and components reporting substantially increased sales. Bolstered by MAHLE's strong technological expertise, the business unit thereby benefited from the increasing complexity of engine peripherals in downsizing engines.

The Aftermarket business unit recorded sales totaling EUR 787.3 million in the year under report, and outperformed the previous year's value slightly (+2.6 percent). The Industry business unit generated sales of EUR 464.8 million and, as a result, was able to match the previous year's level. Together, both business units jointly contributed about 20 percent to Group sales during the 2012 business year. The profit centers achieved sales of EUR 358.8 million (previous year: EUR 371.7 million).

The diagram on page 57 illustrates the development of sales for the business units and profit centers.

Development across the regions

The MAHLE Group has a very strong market presence owing to over 100 production locations in 25 countries, local research and development centers in the four core regions, and an international supplier network. This has led to a very balanced customer portfolio across the globe, whereby all key customers can be supported locally. Furthermore, consistently strengthening activities in non-European markets has allowed the Group to benefit from the impetus in

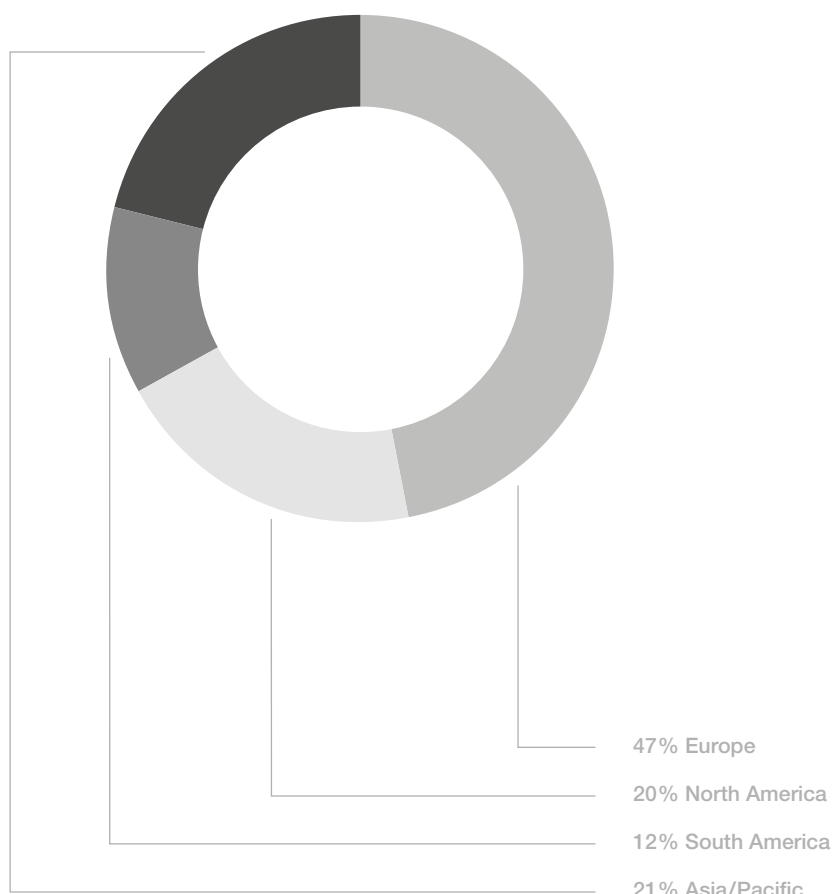
these markets. In the 2012 business year, the companies in North America recorded the highest sales increases, followed by the companies in Asia/Pacific. By contrast, the previous year's sales could not be achieved in Europe and South America due to the prevalent economic conditions. The breakdown of sales by region is shown in the figure on page 55.

Europe

In Europe, the MAHLE Group recorded sales totaling EUR 2,867.2 million (-3.8 percent) during the period under report. The share of Group sales fell from 49.7 to 46.5 percent. This can be attributed to the persisting financial and sovereign debt crisis combined with the deteriorating economic situation in the automotive industry, which impacted business development.

The decline in European passenger car and commercial vehicle production was most clearly felt by the Engine Systems and Components business unit, which provided a major contribution to European Group sales at 42.2 percent (previous year: 44.2 percent). In line with the prevailing economic conditions, sales decreased markedly for both passenger car and commercial vehicle components, whereas with regard to the production of passenger car components, products for vehicles in the lower and medium price range were particularly affected. Overall, sales for the business unit fell by 8.1 percent to EUR 1,209.9 million in the 2012 business year. The Filtration and Engine Pe-

SALES BY REGIONS //



riperals business unit contributed EUR 630.8 million toward European Group sales and was thus approximately in line with the previous year's value. Sales were buoyed by oil filter modules as well as air cleaner and air intake modules, even though the figures for the latter were lower in the year-on-year comparison. The newly established pump systems product segment developed very well. This segment is primarily involved in the development and production of demand-controlled oil pumps, which can contribute toward significant fuel consumption savings.

The Aftermarket business unit recorded sales of EUR 345.6 million in the 2012 business year, thereby exceeding the previous year's value by 2.4 percent. Major inroads were made in eastern Europe and—partly

—with exports in the Near and Middle East. However, business development in southern Europe was more cautious due to the weak economic conditions. Sales for the Industry business unit fell slightly to EUR 392.8 million. Significant growth impetus originated from the Industrial Filtration division. In contrast, the Industrial Thermal Management as well as Industrial Engine Components divisions reported market-related sales declines. With EUR 288 million, sales for the profit centers remained almost at the previous year's level.

North America

In the previous business year, the North America region represented a key growth driver for the MAHLE Group. With EUR 1,258.9 million, sales exceeded the previous year's value by approximately 20 percent in 2012. However, part of this growth in sales reported in euros is attributable to positive exchange rate effects. When adjusted for these effects, Group sales in North America improved by a good eleven percent. Overall, the North American units accounted for 20.4 percent (previous year: 17.4 percent) of total Group sales.

The Engine Systems and Components business unit achieved sales of EUR 599.4 million in the North America region, and thus outperformed last year's sales by 16.2 percent. This positive development was primarily due to increased demand for passenger car parts from U.S. automobile manufacturers. Sales in the commercial vehicle sector also recorded a positive trend. However, this development tailed off by the end of the year. At EUR 482.7 million, sales from the Filtration and Engine Peripherals business were also substantially higher than the previous year's value of EUR 351.3 million (+37.4 percent). The business unit's growth exceeded that of the passenger car and light commercial vehicle production in North America as well as the growth of commercial vehicle production. All product groups were able to record higher sales in the year-on-year comparison. To a greater extent, this development can be accredited to increased sales with U.S. manufacturers; however, sales to Japanese customers based in the region intensified considerably too. In the previous year, production losses following the natural disasters in Asia partially affected business with the latter. Overall, the Engine Systems and Components and the Filtration and Engine Peripherals business units accounted for 86 percent of Group sales in the North America region.

The Aftermarket business unit increased its sales by 6.7 percent to EUR 119.8 million. Notably, additions to the product range, such as exhaust gas turbochargers, developed very positively. By comparison, transactions relating to the existing product range remained approximately at the previous year's level when adjusted for positive foreign currency exchange rate effects. With sales growing by 18.3 percent to EUR 40.9 million, the Industry business unit benefited from the expansion of its international business activities. As a result of the closure of the Trumbull/USA location, the profit centers were unable to achieve the previous year's sales in the North America region.

South America

In South America, sales remained 9.4 percent below the previous year's value at EUR 730.6 million. The region's share in total sales fell to just under twelve percent.

With EUR 374.9 million, the Engine Systems and Components business unit generated considerably less sales in the region. This development had two causes: Firstly, Brazilian commercial vehicle production dropped considerably, as the introduction of new emissions regulations in 2012 led to anticipatory effects in the 2011 business year, and manufacturers initially reduced their inventories in 2012. Secondly, the Brazilian market for passenger cars and light commercial vehicles faltered. Consequently, sales fell for nearly every product group. In contrast, adjusted for negative exchange rate effects the Aftermarket business unit was able to improve its sales marginally despite weak business development. Thereby, improvements were recorded for the Argentinian market. Furthermore, the continued expansion of the product range to include filter products and exhaust gas turbochargers had a positive impact on sales. With a total of EUR 250.5 million, the Aftermarket business unit contributed 34.3 percent (previous year: 31.4 percent) to total Group sales in the South America region.

The Filtration and Engine Peripherals business unit achieved sales of EUR 52.1 million, thus exceeding the previous year's value by 27.7 percent. This is primarily due to the increased sales in the air filter module and air intake module product segments. The profit centers recorded a decline in sales to EUR 49.5 million (-4.3 percent) in the period under report. In South America, the Industry business unit achieved again a strong sales growth rate in the 2012 business year—albeit from a low starting level.

Asia/Pacific

The MAHLE Group achieved considerable sales growth in the Asia/Pacific region in 2012. Including positive foreign currency exchange rate effects, Group sales in Asia/Pacific rose by EUR 133 million to EUR 1,302.8 million.

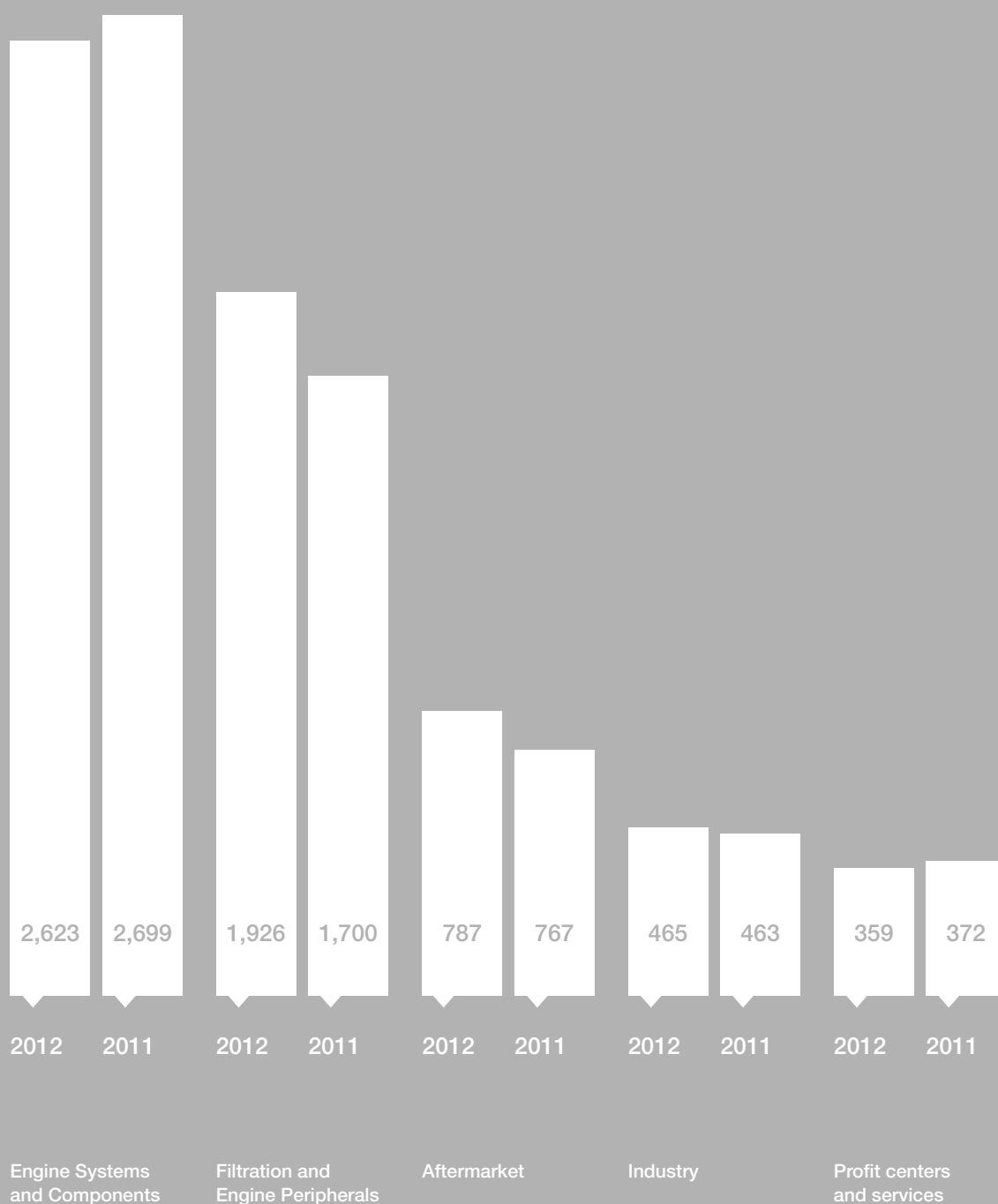
The Engine Systems and Components business unit achieved solid growth owing to increasing sales by 7.4 percent to EUR 438.8 million. However, increases in euro sales resulting from exchange rate effects—arising primarily from the revaluation of the Chinese, Thai, and Japanese currencies—contributed significantly to the sales growth. With regard to product segments, the sales increase is attributable in particular to light vehicle gasoline pistons, light vehicle diesel pistons, and valves. This development was significantly assisted by growth on the Chinese and Thai markets for passenger cars and light commercial vehicles. Apart from the recovery following the 2011 flood disaster, the increasing relocation of production undertaken by Japanese manufacturers also contributed to the dynamic development of the Thai vehicle production. The Filtration and Engine Peripherals business unit recorded double-digit growth and outperformed production growth for the Asian vehicle market. At EUR 759.9 million, the 2012 sales exceeded the previous year's figure by EUR 90.6 million. Overall, the business unit achieved just under 40 percent of its worldwide sales in the Asia/Pacific region. All ma-

ior product segments contributed toward the increase in sales. Firstly, the business unit benefited from the economic recovery of the Japanese and Thai markets following the previous year's natural disasters, as well as from notably increased sales on the Chinese and South Korean markets. Secondly, foreign currency exchange rate effects had a positive impact on sales. During the last quarter, however, the conflict between China and Japan about a group of islands in the East China Sea led to a slowdown in sales growth.

The Aftermarket and Industry business units both recorded double-digit growth rates as well. In the Aftermarket business unit, this development of sales resulted from the fact that China reports continuous growth and exports from the logistics location established in Singapore in 2011 are increasing significantly. Exports from Japan remained at the previous year's level despite a stronger Japanese yen. In the Industry business unit, the successful acquisition of a new customer in China was one of the contributing factors leading to sales increases in the fluid technology product segment.

DEVELOPMENT OF THE BUSINESS UNITS AS WELL AS PROFIT CENTERS AND SERVICES //

Consolidated sales in million EUR



TECHNOLOGICAL LEADERSHIP AS A GUARANTEE FOR GROWTH //

// MAHLE is bolstering its research and development facilities in Asia/Pacific. At a global level, the key development focus remains reducing CO₂ emissions.

The MAHLE Group maintains a local presence in the core regions of the automotive industry with a total of seven major research and development centers. By expanding the centers in Detroit/USA and Shanghai/China, MAHLE is strengthening its local innovative strength and responding to more development contracts from the Asia/Pacific region. In 2012, MAHLE employed approximately 2,400 people across the world in research and development and spent EUR 289.4 million on research and development activities. Activities focus on efficiency technologies to further optimize the combustion engine, which will remain the dominant powertrain technology for mobile applications in the coming decades. In this context, MAHLE is pursuing three goals: smaller engines, reduced friction losses, and lower emissions. Numerous innovations can be presented as the result of research and development activities. The following are just a few examples.

In MAHLE's patented pendulum-slider oil pump, pressure and volume flow can be generated on a demand-controlled basis. Depending on the control strategy and driving cycle, it reduces CO₂ emissions by up to four percent. The innovative MAHLE tandem pump comprises a combination of pendulum-slider oil pump and vacuum pump to generate the vacuum required to boost pneumatic brake performance.

In order to further reduce fuel consumption and CO₂ emissions, the powertrain must be regarded as a system and optimized accordingly. Here, the demand-controlled electric actuation of engine accessories offers considerable savings potential for reducing friction losses. MAHLE is developing new solutions for future powertrains to ensure a vehicle's full functionality in all operating modes, as well as to heat and cool the vehicle.

The goals of reducing pollutant emissions while increasing efficiency make the ongoing development of engines a major challenge. The Bosch Mahle Turbo Systems (BMTS) joint venture is developing new turbocharging technologies for passenger car engines that will result in considerably improved low-end torque and transient response in driving operation.

For years, MAHLE steel pistons have been successfully fitted in commercial vehicle engines. The focus is on developing this technology for series production in passenger car diesel engines. Friction losses can be minimized by reducing compression height in conjunction with a longer connecting rod. By optimizing combustion, increasing cylinder pressures, and reducing friction, MAHLE expects fuel consumption to fall by approximately three percent and the oscillating masses to be reduced by up to 30 percent.

Bearings are exposed to greater loads due to the implementation of new technologies, such as downsizing as well as stop-start or hybrid systems. MAHLE developed an innovative polymer coating for lead-free engine bearings, which contains a solid lubricant and aluminum flakes. This new bearing is characterized by extremely low wear, high strength as well as good thermal and chemical resistance.

The second generation of the patented oil mist separator with impactor design is going into series production. The oil mist separator is integrated into the cylinder head cover and removes the finest oil drops from gas being recirculated from the crankcase via a precleaner.

Innovative filter elements allow air filters in commercial vehicles to be fitted in tight package constraints. The use of new nanofiber filter media with exceptionally high retention efficiency provides the air filter with greater freedom of design. The filter media reliably protect the air mass sensors against excessive loads in passenger cars too. MAHLE minimizes the number of interfaces and sealing points by integrating the coolant pump, a coolant thermostat, and sensors for temperature control in oil cleaner modules for commercial vehicles.

PROCUREMENT MARKET CHARACTERIZED BY STABLE COST LEVEL //

// Following the cost increases in the previous year, there were signs of limited easing in 2012.

During the 2012 business year, there was a limited easing of material costs in the year-on-year comparison. This had a particularly positive impact on the major product materials used by the MAHLE Group's Engine Systems and Components business unit. In contrast, the costs for energy and crude oil—one of the associated main material groups for the Filtration and Engine Peripherals business unit—rose.

As demand declined and supplier capacities remained unchanged, raw material costs fell. This also affected the cost of associated components, such as alloys, sintered powder, and metal components. In addition, the lead time for replacing aluminum, copper, nickel, and steel shortened. Part of the cost reductions was shared with customers as a result of contractual agreements. Raw material suppliers adjusted their offer in line with reduced demand. Conversely, there was a shortage of rare earth elements in the procurement market. However, stringent bottleneck management along the entire supply chain prevented any delivery disruptions for the MAHLE Group.

The global demand for valve steel, which has been rising in recent years, also led to supply bottlenecks at the start of 2012. MAHLE developed alternative supply sources, improved the bottleneck management, and

created a global supplier network. By doing so, disruptions in deliveries to customers were avoided. MAHLE expects additional major raw materials suppliers to merge; furthermore, trade barriers arising from state intervention, such as export duties, will influence the raw materials market. The Group is responding by developing a transregional supplier network and with the extended approval of alternative procurement sources.

The crude oil price persisted in the first quarter with its steep increase from the previous year, and stabilized at a high level toward the middle of the year. The costs for crude oil derivatives also continued to rise. This was reflected in the associated product groups, such as resins, elastomers, and plastic components. Supplier quota changes as well as the approval of alternative suppliers and materials enabled the MAHLE Group to counteract cost increases and stabilize the cost level. The remaining cost increases could only be partially compensated by customer price increases.

The cost of heating oil and natural gas continued to rise across the world in 2012. The German plants were also confronted with an increase of up to thirteen percent in grid usage charge for the power supply. In the coming year, the MAHLE Group is striving to keep the cost burden arising from the

increase in electricity costs, the anticipated rise in the EEG reallocation charge (levy for renewable energies), and the fees for power grid usage as low as possible through continuous optimization steps and the avoidance of peak loads at high-tariff periods. In order to reduce energy costs, projects involving the use of energy efficient systems, optimized processes, and energy recovery are being implemented, partly with external support.

The continued weak economic situation across the European automotive industry may result in capacity adjustments for the entire industry. This will also increase the risk of insolvencies for individual companies, which in turn may have a direct impact on supply bottlenecks. To counteract these scenarios, MAHLE operates a risk management system to detect supply risks at an early stage and to introduce appropriate countermeasures.

PRODUCTION AND HUMAN RESOURCES //

// Innovative and reliable products secure the MAHLE Group's long-term success. Qualified and committed employees are a key factor in maintaining the Group's high standards and technological strength.

Production

The MAHLE Group operates more than 100 production locations in 25 countries. The Group paid particular attention to strengthening its production capacities in the Asia/Pacific region during the 2012 business year. In Kyushu/Japan, MAHLE constructed a new production plant for air intake and filtration systems in close proximity to major Japanese customers. Production started at the end of the year. In Thailand, both plants located in Greater Bangkok were extended. By expanding these plants, the Group responded to the rising trend of Japanese automobile manufacturers relocating production to Thailand and to growing local vehicle production. Overall, in the business year 2012, the Group spent EUR 95.4 million for investments in tangible fixed assets in the region Asia/Pacific.

In addition to technological strength, the high standard of quality is crucial in securing the MAHLE Group's long-term commercial success. Hence, quality management is fully integrated into all business processes. As part of the global problem-solving process, best practices from all MAHLE production locations are used to continuously improve product quality. The already small number of customer complaints in the previous year was again significantly reduced in the period under report. During the 2012 business year, it was also possible to further lower the number of faulty deliveries, which was already very low in the previous years.

As a result, MAHLE received quality awards from numerous customers in the course of this year.

A comprehensive program of safety at work, environmental protection, and health care is essential for safe and environmentally friendly production. To ensure this, the MAHLE Group has defined and continuously further developed processes applicable to all locations. Using an environmental indicator system revised and expanded in the 2011 business year, it is possible to evaluate the sustainability and effectiveness of all activities relating to safety at work, health care, and environmental protection, and to compile appropriate improvement actions.

Human resources

As at the 2012 balance sheet date, the MAHLE Group employed 47,662 employees, compared with 48,818 in the previous year. Reflecting the development of sales, headcount in Europe and South America was reduced, while the number of employees increased in North America and Asia/Pacific. Several European plants had to resort to short-time work owing to the challenging market conditions. The number of employees working outside of Europe remained almost constant at 57.9 percent.

The worldwide headcount can be split into 52.7 percent of direct and 45.1 percent of indirect employees as well as 2.2 percent of apprentices as at the end of the period un-

der report. With 29,888 employees as at the end of the period under report, the Engine Systems and Components business unit accounted for 62.7 percent of the Group's headcount. The number of employees thus fell by approximately four percent. The Filtration and Engine Peripherals business unit marginally increased its headcount to 9,292 employees. 17.8 percent of employees worked in the Aftermarket and Industry business units as well as in the profit centers and services (previous year: 17.6 percent).

The MAHLE Group's companies operate in competitive markets characterized by highly dynamic and technological complexity. Employees play a major role in the Group's long-term success owing to their knowledge, commitment, and creativity. Through intensive training and further education measures as well as targeted national and international development programs, MAHLE supports the personal and professional development of specialists and managers. MAHLE's expenses for ongoing qualification activities totaled EUR 6.9 million in the year under report. As part of the accreditation of HR activities, working conditions, and development opportunities for employees in Germany, MAHLE received the award as top automotive employer in 2012/2013 from the CRF Institute.

IMPROVED BALANCE SHEET STRUCTURE DESPITE CHALLENGING MARKET CONDITIONS //

// In 2012, the Group was able to increase equity ratio to almost 42 percent. The markets in North America and Asia/Pacific proved to be crucial stabilizing factors for business development.

Results of operations

MAHLE Group sales totaled EUR 6,159.5 million (previous year: EUR 6,002.2 million) for the 2012 business year. Adjusted for positive foreign currency effects, sales remained at around the previous year's level. In general, a slowdown was observed during the course of the year: while sales in the first half-year achieved a year-on-year increase of just under eight percent, business development was considerably more restrained in the second half. In view of the challenging market conditions seen particularly in Europe, the Group benefited during

2012 from the reinforcement of its non-European business, which has been systematically pursued in recent years and proved to be a key stabilizing factor. The share of sales recorded outside of Europe rose to 53.5 percent (previous year: 50.3 percent).

In comparison with the previous year, cost of sales increased proportionally to growing sales, which was reflected in a relatively unchanged gross margin. Expenditure on prototypes has been included in costs of sales for the first time. In previous years, this was incorporated in research and development

expenses. The administrative and selling expenses accounted for 10.4 percent of Group sales—a figure on a par with the previous year. Research and development expenses totaled EUR 289.4 million (previous year: EUR 322.8 million). The reduction in the year-on-year comparison essentially results from the change in reporting of the expenditure on prototypes. Net other operating expenses and income amounted to EUR 25.9 million compared with EUR 83.3 million in the 2011 business year. The substantially higher income from the previous year was heavily influenced by the special effects arising

INCOME STATEMENT OF THE MAHLE GROUP //

Figures in million EUR

Business year	2012		2011	
Sales	6,159.5	100.0%	6,002.2	100.0%
Cost of sales	-4,849.6	-78.7%	-4,714.0	-78.5%
Gross profit on sales	1,309.9	21.3%	1,288.2	21.5%
Selling expenses and general administrative expenses	-642.5	-10.4%	-623.9	-10.4%
Research and development expenses	-289.4	-4.7%	-322.8	-5.4%
Other operating income and expenses	25.9	0.4%	83.3	1.4%
Financial result	-136.8	-2.3%	-73.3	-1.2%
Result from ordinary business activities	267.1	4.3%	351.5	5.9%
Taxes	-118.5	-1.9%	-120.4	-2.0%
Net income	148.6	2.4%	231.1	3.9%

ing from the sale of shares in MAHLE Metal Leve on the São Paulo stock exchange. The financial result has deteriorated by EUR 63.5 million to EUR –136.8 million. This drop is predominantly due to a significantly lower result from associated enterprises, which reflects strains arising from special effects for the Behr Group as well as expenses from startup losses for Bosch Mahle Turbo Systems, which had increased once again.

Overall, the Group generated a result from ordinary business activities totaling EUR 267.1 million compared with EUR 351.5 million in the previous year. Adjusted for special effects, the result is clearly better than the previous year's value despite partly challenging market conditions. Therefore, business development in 2012 was overall satisfactory.

Taking into account the Group's tax expenditure, the net income for the year amounted to EUR 148.6 million (previous year: EUR 231.1 million).

Net assets position

In the 2012 business year, the MAHLE Group reduced the balance sheet total by EUR 375 million to EUR 4,248.4 million and improved once again key balance sheet ratios such as equity ratio and net financial liabilities. This reduction was caused by the planned cut-back on cash items as well as the restrained course of business and substantial foreign currency exchange rate effects. The development of the balance sheet structure can be derived from the adjacent graph.

Fixed assets fell by EUR 51.8 million to EUR 1,920.7 million. This decline is primarily attributable to intangible assets, which also include goodwill. These contracted to EUR 126.6 million (previous year: EUR 177.6 million), particularly due to amortizations in accordance with HGB. In contrast, tangible fixed and financial assets remained on a par with the previous year's value. Investments

in tangible fixed assets considerably higher than depreciation were offset by negative foreign currency exchange rate effects.

For current assets, not only was there a decrease in inventories (EUR –47 million) and a decline in trade receivables (EUR –82.7 million); there was also a significantly lower cash position (EUR –172.1 million). The development of inventories is representative of further optimized inventory management, while the reduction in receivables is a reflection of the subdued business development observed in the fourth quarter. The decrease in cash to EUR 335.9 million (previous year: EUR 508 million) resulted from the repayment of liabilities to banks. It was part of the Group's strategy to secure liquidity by means of a medium-term, large-volume syndicated loan, which enabled a reduction in the cash reserve related to the repayment of liabilities to banks. Overall, liabilities to banks fell by EUR 363.5 million to EUR 702.6 million. As a result, the share of liabilities to banks fell to 16.5 percent of the balance sheet total (previous year: 23.1 percent).

The liabilities side of the balance sheet was characterized by an increase in equity to EUR 1,775.2 million (previous year: EUR 1,695.7 million). This led to the equity ratio increasing from 36.7 percent to 41.8 percent. In particular, the development of the Group's result had a positive effect, while negative foreign currency exchange rate effects of EUR 44.5 million had a negative impact. Accruals were reduced by EUR 57.8 million in comparison with the previous year. Apart from foreign currency exchange rate effects, the decline was predominantly attributable to lower accruals for potential losses. Trade payables fell by EUR 44.7 million to 482.4 million, while other payables rose to EUR 215.9 million (previous year: EUR 204.4 million). This change mainly resulted from payables to associated enterprises.

Financial position

The cash flow from operating activities in 2012 totaled EUR 580.8 million (previous year: EUR 342.3 million). Apart from the Group result, in particular the reduction in inventories and trade receivables had a positive impact.

Investment activities led to a cash outflow amounting to EUR 364.9 million (previous year: EUR 348.8 million) chiefly owing to capital expenditure on tangible fixed assets. At EUR 323.8 million, this exceeded both the previous year's investments and depreciation. In the year under report, 62 percent of investments were made in non-European markets. Investment activities were primarily focused on the growth region Asia/Pacific. The Group was thereby in a position to fully finance cash requirements for capital expenditure from the cash flow from operating activities. Furthermore, additional cash was generated.

A cash outflow from the cash flow from financing activities occurred in the period under report totaling EUR 371.5 million compared with an cash inflow totaling EUR 174.9 million in the previous year. The cash outflow was primarily related to the repayment of financial loans. In 2012, MAHLE concluded a medium-term syndicated loan agreement for EUR 750 million to serve as a cash reserve, which had not been drawn on as at December 31, 2012. This enabled a reduction in the actual cash reserves. The cash that became available was used to repay loans. In the event of a full integration of the Behr Group during the contractual period, there is an option to raise the syndicated credit line to one billion euros.

BALANCE SHEET STRUCTURE OF THE MAHLE GROUP //



OPPORTUNITY AND RISK REPORT //

// As a globally operating company, the MAHLE Group is exposed to a variety of opportunities and risks. Across the Group, the established opportunity and risk management system takes into account current operational, customer, and legal requirements in order to minimize risk and exploit opportunities.

The opportunity and risk management system is designed to identify, assess, and control business and financial opportunities and risks associated with business operations. A significant portion of the rules of the German Corporate Governance Code have been applied voluntarily although not legally binding for the MAHLE Group as a privately held foundation-owned company.

On the basis of inspection plans that change every year, the viability of the opportunity and risk management system is checked regularly by means of a global internal audit. Internal and external experts are integrated in the processes from an early stage. This approach minimizes risks arising from fiscal, occupational, competition, patent, antitrust, and environmental regulations and legislations. The implementation of directives alongside organizational and work instructions ensures that statutory requirements are observed. Seminars, interactive e-learning courses, and memos regarding specific regulations and changes provide MAHLE employees with regular information about new developments across all relevant areas of responsibility.

The MAHLE Group's opportunity and risk management system is characterized by the following main aspects:

Market and technological trends

The identification of opportunities and risks at an early stage is ensured by systematic monitoring of market and technological trends. Information from these analyses is used in decision making on future business segments and new production processes. The measures taken are described in the strategic or yearly corporate planning and their implementation is monitored in the monthly management reporting. The MAHLE Group addresses opportunities and risks arising from the increasing environmental awareness of the markets and new statutory requirements toward reducing emissions by incorporating relevant topics into international research and development activities at an early stage. Efficiency technologies, downsizing, the MAHLE range extender, and turbocharging enable the Group to market competitive and innovative products. Moreover, the nonautomotive range offers the possibility to further expand business activities. Consequently, an important focus for Group strategy is the continued strengthening and strategic orientation of the Industry business unit, which combines the Group's industrial activities such as industrial filtration, industrial engine components, industrial thermal management, and water technologies.

Notwithstanding systematic globalization and diversification of the customer and product portfolio, it is not possible to eliminate economic and political risks affecting the MAHLE Group's sales and profit. Most notably, a slowing of the global economy or changes to the political framework in individual countries can have a significant impact on the Group's business development within the various regions.

In light of prevailing uncertainties, the MAHLE Group's global orientation represents a major stabilizing factor. With continuous strengthening of the international orientation and a heavily diversified customer and product portfolio, the MAHLE Group is aiming to achieve optimum dispersion of regional market and customer risks. Potential declines in demand in individual markets or from individual customers may be absorbed at least partially by counteracting market cycles in other regions and by exploiting regional growth potential. Additional growth potential is arising in the medium term, particularly due to strengthened activities in Asia/Pacific as well as central and eastern Europe, and the growth market of South America.

Procurement and production

Minimizing risks arising from the procurement markets represents another main focus of risk management. Risks in the form of unexpected supply bottlenecks and/or price increases in purchasing are counteracted by means of regular supplier evaluations, use of alternative raw material sources and materials, and preservation of supplier independence. Furthermore, procurement risks are reduced by appropriate stock buffers and hedging transactions.

The MAHLE Group operates production locations in every major region. This enables MAHLE to regularly exchange best practices and various production philosophies to continuously optimize production processes. Unforeseeable circumstances, unexpected technical faults, accidents, and human error can impair production operations at the locations. Potential operative risks are counteracted by means of safety standards, optimized production processes, and high quality standards. The MAHLE Group is audited and certified in accordance with all major external standards and specifications, and is thus subjected to substantial external checks that limit risks. Possible damages and resulting disruptions of operations, as well as other damage events and liability risks, are covered to an economically prudent degree by means of insurance policies.

Finance management

A systematic and Group-wide finance management system ensures the best possible use of financing opportunities from the banking and capital market. The liquidity risk is covered by a combination of diversified financing facilities considerably exceeding the Group's foreseeable financial requirements. A syndicated loan from ten core banks acts as the Group's cash reserve. Bonded loans currently secure the Group's long-term financing. Short-term financing is complemented by means of factoring included in an asset-backed security program (ABS pro-

gram). The South American Group member MAHLE Metal Leve S.A. is listed on the Prime Standard Novo Mercado at the BM&F BOVESPA stock exchange in São Paulo. This listing provides the Group with access to the equity market.

Currency risks are identified using a Group-wide planning and reporting system. The risks are counteracted by means of non-predictive hedging activities over a time frame of twelve months in accordance with uniform Group principles. From 2013, the hedging time frame will be extended to 24 months. The use of derivative financial instruments is necessarily linked to the existence of an operational underlying transaction, whereby expected and not yet invoiced currency risks are provided with diminishing hedging grades in the future. According to value-at-risk analyses, the interest rate risk is low. Counterparty risks with financial institutions arise from hedging activities and other financial transactions. These are identified and evaluated in a Group-wide uniform reporting system.

Human resources, IT, and accounting

The recruitment of top quality employees, their continued promotion and qualification alongside their long-term retention in the Group represent a major factor for the Group's sustainable success. A comprehensive personnel marketing concept affords crucial opportunities for recruiting highly qualified employees by means of early and direct contact with potential applicants. At the same time, this reduces the risk of delaying or not finding suitable staff for vacant positions. In order to guarantee the Group's long-term success and exploit chances arising from market and technological changes, personnel requirement planning is linked with developments in the relevant markets and with strategically relevant technologies and business segments. The risk of losing employees in strategically important corporate positions is counteracted by means of

performance-related remuneration systems, an employee- and goal-oriented leadership style, modern pension schemes, and numerous advanced training activities. Creating a positive and open working atmosphere and allowing a wide scope for individual creativity strengthens the employees' loyalty to the company.

In the area of information technology, security technologies protect against unauthorized access to data or misuse of data by internal and external parties. Server and storage systems allow data to be recovered at short notice in emergency and crisis situations. The defined security standards are geared toward not only the technical specifications of the hardware and software but also functional security structures and organizational provisions. In addition to detailed backup and recovery procedures, the risk of severe disruptions is reduced by securing access procedures as well as mirroring and archiving data on a daily basis.

With regard to the accounting process, the internal controlling and risk management system is geared toward ensuring compliance and effectiveness of accounting and financial reporting. Besides guidelines and principles, the system also includes measures to prevent and uncover reporting errors. For the 2012 business year, the auditors have analyzed the internal accounting control system as part of the audit of the consolidated financial statements and have raised no objections.

OUTLOOK //

// In view of the sustained European debt crisis and the high level of national debt in the USA and Japan, the global economy remains vulnerable in 2013.

General economic development

Global economic development continues to be tinged with great uncertainty at the start of the 2013 business year. The International Monetary Fund (IMF) forecast global growth of 3.5 percent for 2013—under the premise that European governments can ease the debt crisis and the USA resolve the dispute about public deficit.

In view of the ongoing sovereign debt crisis, it is anticipated that Europe will only achieve weak economic performance. For the 2013 business year, the recessionary trend is forecast to continue in many of the peripheral countries primarily affected by the debt crisis. The U.S. economy is expected to record solid growth. Favorable financial market conditions and the reversal in trend on the U.S. housing market should aid consumer spending in the process. However, should the parties be unable to reach a solution in the ongoing fiscal dispute, it is assumed that the U.S. economy will weaken due to automatic, extensive budget cuts. An improvement of the Brazilian economic output by 3.5 percent in 2013 seems possible, following the implementation of monetary incentive programs and economic stimulus packages. The Japanese economy may have slowed considerably during 2012, nonetheless analysts expect the ratified economic stimulus package to generate growth impetus for 2013. Stabilizing economic growth is forecast for the Asian emerging markets. Economic growth is projected to be more dynamic than in the previ-

ous business year in both China and India. Overall, the Asian emerging markets are predicted to achieve growth of 7.1 percent in 2013. This figure would be notably higher than the growth forecast of 1.4 percent for the advanced economies.

Development of the vehicle markets

The vehicle markets for passenger cars and light commercial vehicles will most probably experience subdued growth in 2013. Analysts estimate that the number of passenger cars and light commercial vehicles produced will rise to a total of 82.7 million (+1.5 percent). Based on the present situation, it must be assumed that European production will fall once again. Central and eastern Europe are expected to achieve production volumes on a par with the previous year, and production in western Europe is most likely to decline again in 2013. In contrast, analysts anticipate growing production volumes for the North America region in 2013, albeit at a considerably lower rate than in the previous business year. In the South American markets for passenger cars and light commercial vehicles demand is expected to stabilize and production to increase accordingly. By contrast, production is expected to dwindle in Japan as a result of the post-tsunami recovery effect seemingly coming to an end and the expiry of purchase incentive programs. Chinese production of passenger cars and light commercial vehicles is forecast to rise by 8.9 percent to over 20 million units in 2013; it would thereby exceed both European and

North American production. For production in India, an increase of 7.8 percent to 4.1 million vehicles is expected.

The forecasting institute IHS Automotive predicts a growing global vehicle production for medium-sized and heavy-duty commercial vehicles in 2013. In light of the current prevailing risks and the high level of market volatility, this forecast is however shrouded in considerable uncertainty. MAHLE is expecting a challenging commercial vehicle market for the 2013 business year, particularly in Europe and North America.

For 2014, analysts anticipate both the global passenger car and commercial vehicle production to regain momentum in comparison with the previous year.

Development of the MAHLE Group

Given the conservative growth forecast for global automobile production, the MAHLE Group is only projecting a moderate increase of sales and a corresponding increase of income for the 2013 business year. For the German locations, a works agreement was concluded that enables a fast and effective response to fluctuations in capacity and intends to safeguard employment until July 2015. Locations with special restructuring provisions are exempt from this agreement. Subject to the general development of the global vehicle markets, MAHLE is cautiously optimistic in its forecast for the development of sales and income in 2014. Overall, MAHLE expects a slight increase in Group sales in

2014. The development of the vehicle markets particularly in Asia/Pacific and the Group's technological strength hold the prospect of growth for every business unit, which will lead to a further slight improvement of result.

The Management Board has been strengthening the Company's equity base and securing its long-term liquidity by continuously diversifying financing sources and instruments. In view of the prevailing uncertainties, these efforts represent major steps toward sustaining MAHLE's business success. Moreover, the Group's globalization strategy consistently pursued in the past few years represents a major competitive advantage. It is expected that strains arising from the challenging European market environment will be offset at least partly by the Group's good market position in other regions. In 2013 and 2014, the production footprint will be further expanded in particular for the automotive business in Asia/Pacific. Specifically,

expansion-related investments are planned in China and Indonesia. In line with its long-term Group development, MAHLE is striving to further diversify the product portfolio, strengthen the aftermarket business, and extend its nonautomotive activities in 2013. In addition to sustained high investments in research and development, MAHLE is using strategic acquisitions to continuously expand the Company's product portfolio. For instance, the acquisition of RTI Technologies, Inc. paves the way for increased activities on the North American aftermarket for workshop equipment. A major expansion of the product portfolio is also expected following strategic investments in the Japanese specialists for mechatronic products Kokusan Denki Co., Ltd. and in the Behr Group. In January 2011, MAHLE already increased its share in the Behr Group to 36.85 percent. The aim of acquiring the majority holding in the Behr Group and of integrating it fully into the MAHLE Group may have been delayed due to the ongoing investigation proceed-

ings conducted by European and U.S. anti-trust authorities against manufacturers of thermal systems for automobiles, but it is still being pursued.

No events occurred after the conclusion of the 2012 business year that would impact the Group's annual financial statements.

This report contains forward-looking statements that rely on current estimates of future developments. Such statements are subject to risks and uncertainties that are beyond MAHLE's control or which cannot be precisely estimated by MAHLE, and which may cause the actual facts and figures to deviate from these statements.

WORLDWIDE AUTOMOBILE PRODUCTION //

Number in 1,000s

Business year	2013	2013	2012	2012
	Passenger cars & light comm. vehicles	Commercial vehicles (incl. buses)	Passenger cars & light comm. vehicles	Commercial vehicles (incl. buses)
America	20,360	762	19,723	694
North America	15,889	521	15,434	497
South America	4,471	241	4,289	197
Asia/Pacific	41,858	2,128	40,788	1,977
Japan	8,272	386	9,436	365
China	20,211	1,144	18,566	1,042
Europe	18,653	633	19,282	619
Germany	5,322	134	5,550	145
Other countries	1,843	3	1,727	3
Total	82,714	3,526	81,520	3,293

Source: IHS Automotive, figures for passenger cars and light commercial vehicles (last updated: March 2013); figures for commercial vehicles (last updated: February 2013)

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MANAGEMENT COMMITTEE
MAHLE WORLDWIDE
REFERENCES
CORPORATE CITIZENSHIP
HUMAN RESOURCES
QUALITY

ENVIRONMENT
RESEARCH & DEVELOPMENT
GROUP ORGANIZATION
BUSINESS UNITS INCLUDING
THERMAL MANAGEMENT
PROFIT CENTERS
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02 // MANAGEMENT REPORT
GLOBAL ECONOMY
BUSINESS DEVELOPMENT
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PRODUCTION AND HUMAN RESOURCES
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OUTLOOK



03 //

CONSOLIDATED FINANCIAL STATEMENTS

// DESPITE THE ECONOMIC CRISIS, WE HAVE NEARLY DOUBLED OUR SALES IN THE LAST TEN YEARS AND INCREASED OUR HEADCOUNT BY APPROXIMATELY 17,000. IT IS FASCINATING TO EXPERIENCE HOW THE GROUP IS BECOMING INCREASINGLY INTERNATIONALIZED AND DIVERSIFIED. ONE OF THE CURRENT KEY MILESTONES IS THE STRATEGIC INVESTMENT INTO THE BEHR GROUP, WHICH IS PROVIDING VITAL STIMULI FOR THE GROUP'S LONG-TERM DEVELOPMENT. INTERCULTURAL TEAMS AID THE COMMUNICATION FOR GLOBAL PROJECTS. WORKING IN SUCH A TEAM ALSO OFFERS A FASCINATING EXPERIENCE AND NEW INSIGHTS.

Elke Hohner, Head of Group Accounting, and Naoki Ohashi, Group Accounting Analyst for the region of Asia/Pacific in Group headquarters at the Stuttgart location in Germany

BALANCE SHEET OF THE MAHLE GROUP //

as at December 31, 2012

Assets

in EUR '000

			Dec. 31, 2012	Dec. 31, 2011
Fixed assets				
Intangible assets				
Purchased industrial property and similar rights	20,110			23,845
Goodwill	106,506			153,597
Advance payments	29			156
		126,645		177,598
Property, plant, and equipment				
Land, leasehold rights, and buildings including buildings on third-party land	524,662			529,022
Technical equipment and machinery	807,804			828,665
Other equipment, fixtures, and furniture	68,530			66,381
Advance payments and assets under construction	159,593			137,517
		1,560,589		1,561,585
Financial assets				
Shares in affiliated enterprises	18,111			1,760
Shares in associated enterprises	187,906			218,190
Other equity investments	5,831			1,632
Marketable securities	16,794			6,634
Other loans	4,858			5,051
		233,500		233,267
			1,920,734	1,972,450
Current assets				
Inventories				
Raw materials and supplies	216,992			229,516
Work in process	173,175			184,014
Finished goods and merchandise	339,487			362,474
Advance payments	8,760			9,350
		738,414		785,354
Accounts receivable and other assets				
Trade receivables	881,767			964,419
Receivables from affiliated enterprises	10,959			4,433
Receivables from enterprises in which investments are held	8,404			5,154
Other assets	163,405			178,153
		1,064,535		1,152,159
Marketable securities		110		3,101
Cash on hand and at banks		335,791		504,927
			2,138,850	2,445,541
Prepaid expenses			14,457	12,268
Deferred tax assets			174,309	193,139
			4,248,350	4,623,398

Equity and liabilities

in EUR '000	Dec. 31, 2012	Dec. 31, 2011
Equity		
Subscribed capital	150,000	150,000
Capital reserves	166,430	166,430
Revenue reserves	1,343,341	1,231,436
Equity impact from currency translation	-47,675	-12,486
Unappropriated retained earnings	5,095	7,051
Minority interests	158,036	153,229
	1,775,227	1,695,660
Accruals		
Accruals for pensions and similar obligations	397,438	411,903
Accruals for income taxes	36,910	40,103
Other accruals	637,932	678,111
	1,072,280	1,130,117
Liabilities		
Liabilities to banks	702,585	1,066,082
Advance payments received on account of orders	33,204	36,301
Trade payables	482,393	527,109
Liabilities on bills accepted and drawn	2,525	272
Payables to affiliated enterprises	5,324	1,147
Payables to enterprises in which investments are held	19,724	10,050
Other liabilities	152,811	154,872
thereof from taxes:	48,972 (prev. yr. 42,431)	
thereof relating to social security and similar obligations:	21,777 (prev. yr. 24,982)	
	1,398,566	1,795,833
Deferred income	2,277	1,788
	4,248,350	4,623,398

INCOME STATEMENT OF THE MAHLE GROUP //

from January 1 to December 31, 2012

in EUR '000	2012	2011
Sales	6,159,464	6,002,207
Cost of sales	-4,849,599	-4,714,033
Gross profit on sales	1,309,865	1,288,174
Selling expenses	-367,498	-362,443
General administrative expenses	-274,892	-261,473
Research and development expenses	-289,427	-322,813
Other operating income	199,928	287,179
thereof income from currency translation:	74,453 (prev. yr. 79,805)	
Other operating expenses	-174,004	-203,873
thereof expenses from currency translation:	-70,332 (prev. yr. -75,672)	
	-905,893	-863,423
Investment income	57	0
Income from other marketable securities and long-term loans	1,232	575
Result from associated enterprises	-71,934	-12,382
Other interest and similar income	23,496	37,744
thereof from affiliated enterprises:	269 (prev. yr. 180)	
thereof income from discounting:	665 (prev. yr. 13)	
Amortization of financial assets and of marketable securities	-3,004	-200
thereof from affiliated enterprises:	0 (prev. yr. -90)	
Expenses from the transfer of losses	-4,224	0
Interest and similar expenses	-82,466	-99,023
thereof to affiliated enterprises:	0 (prev. yr. -9)	
thereof expenses from discounting:	-25,036 (prev. yr. -25,347)	
Income from ordinary business activities	267,129	351,465
Taxes on income	-98,978	-103,213
thereof expenses from deferred income taxes:	-5,659 (prev. yr. -20,398)	
Other taxes	-19,597	-17,108
Net income	148,554	231,144
thereof profit applicable to minority shareholders:	40,947 (prev. yr. 40,158)	
thereof loss applicable to minority shareholders:	-9,372 (prev. yr. -4,840)	

CASH FLOW STATEMENT OF THE MAHLE GROUP //

from January 1 to December 31, 2012

in EUR '000	2012	2011
Cash funds at the beginning of the period	504,927	354,670
Cash flow from operating activities	580,834	342,302
Net result (including minority share of result)	148,554	231,144
Write-downs/write-ups on noncurrent assets	323,207	331,866
Increase/decrease in accruals	-24,962	-33,266
Other noncash income and expenses	77,799	17,635
Profit/loss on disposals of property, plant, and equipment and from the sale of shares in Group member companies	-18,905	-69,203
Increase/decrease of inventories, trade receivables, and other assets not related to investing or financing activities	93,505	-198,872
Increase/decrease of trade payables, and other liabilities not related to investing or financing activities	-18,364	62,998
Cash flow from investing activities	-364,904	-348,753
Proceeds from disposals of property, plant, and equipment	17,830	9,640
Purchase of property, plant, and equipment	-323,786	-318,929
Proceeds from disposals of intangible assets	643	43
Purchase of intangible assets	-5,603	-5,896
Proceeds on disposals of noncurrent financial assets	8,087	945
Acquisition of noncurrent financial assets	-85,279	-139,263
Receipts from disposal of shares in subsidiaries and business units	23,235	119,832
Acquisition of shares in subsidiaries and business units (less acquired cash funds)	-22	-15,107
Payments/receipts in connection with the short-term financial management of cash investments	-9	-18
Cash flow from financing activities	-371,482	174,912
Cash receipts from issue of capital	1,070	1,737
Cash payment to owners and minority shareholders (dividends, equity repayments)	-33,518	-34,660
Cash proceeds from issuing bonds/loans and short- or long-term borrowings	259,691	571,786
Cash repayments of bonds/loans or short- or long-term borrowings	-598,725	-363,951
Total cash flow	-155,552	168,461
Change in cash funds from exchange rate movements, changes in the consolidation group, and valuation procedures	-13,584	-18,204
Cash funds at the end of the period	335,791	504,927

ANNOTATIONS TO THE BALANCE SHEET OF THE MAHLE GROUP //

The Behr Group was included using the equity method for the first time on January 1, 2011. Offsetting the proportionate equity against the carrying amount of the holding resulted in a difference of EUR 119,454k, which includes goodwill of EUR 14,415k. As at December 31, 2012, there was an adjusted difference of EUR 76,632k, including goodwill of EUR 11,464k.

in EUR '000	Carrying value Dec. 31, 2012	Thereof with a remaining period of more than 1 year
Accounts receivable		
Trade receivables	881,767	159
Receivables from affiliated enterprises	10,959	–
Receivables from enterprises in which investments are held	8,404	–
Other assets	163,405	17,020
Total	1,064,535	17,179

In the previous year, trade receivables (EUR 392k), as well as other assets (EUR 17,638k), had a remaining term of more than one year.

Other assets include receivables from shareholders amounting to EUR 0k (previous year: EUR 30k).

Prepaid expenses include the differences between net loan proceeds and the amount repayable to banks (debt discounts) amounting to EUR 0k (previous year EUR 7k).

The **unappropriated retained earnings** equal that of the parent company and contain the amount carried forward from the previous year of EUR 52k.

in EUR '000	Carrying value Dec. 31, 2012	Thereof with a remaining period of up to 1 year	Thereof with a remaining period of more than 5 years
Liabilities to banks	702,585	191,345	37,860
Advance payments received on account of orders	33,204	32,654	–
Trade payables	482,393	481,802	192
Liabilities on bills accepted and drawn	2,525	2,525	–
Payables			
to affiliated enterprises	5,324	5,324	–
to enterprises in which investments are held	19,724	19,724	–
Other liabilities	152,811	121,341	543
Total	1,398,566	854,715	38,595

In the previous year, liabilities to banks (EUR 490,000k), advance payments received on account of orders (EUR 35,758k), trade payables (EUR 526,486k), liabilities on bills accepted and drawn (EUR 272k), payables to affiliated enterprises (EUR 1,147k), payables to enterprises in which investments are held (EUR 10,050k), and other liabilities (EUR 120,116k) had a remaining term of less than one year.

Other liabilities include payables to shareholders amounting to EUR 42k (previous year: EUR 0k). Payables to shareholders have a remaining term of less than one year.

Of the liabilities to banks, EUR 10,256k are secured by property liens and EUR 3,923k by similar rights.

in EUR '000	
Contingents from notes	20,437
Bonds and guarantees	170
Warranties	411

To our knowledge, the underlying obligations can be fulfilled in all cases by the companies concerned. We do not expect the liabilities to be called in.

in EUR '000	
Purchase commitments	78,572
Financial obligations resulting from rent and lease agreements	31,982
Others	23,425

ANNOTATIONS TO THE INCOME STATEMENT OF THE MAHLE GROUP //

The income statement of the MAHLE Group is grouped in accordance with the cost of sales method. The sales are set against the expenditure incurred in their realization, which is allocated in principle to the functional divisions production, sales, general administration, and research and development.

The cost of sales includes the material and production costs incurred in the realization of the sales and the landed costs of the trade business. The costs of the allocation to accruals for warranties are also included in this item.

The marketing costs include, in particular, personnel and equipment costs, depreciation allocated to the sales division, logistics, market research, sales promotion, shipping and handling, and advertising costs.

The general administration costs include personnel and equipment costs as well as depreciation allocated to the administration division.

The personnel and equipment costs and depreciation allocated to the research and development division are of considerable importance to the MAHLE Group. In order to present the economic status of the Company more clearly, they have been included as separate items in the breakdown.

The reduced research and development expenses in the year-on-year comparison essentially result from a change in the reporting of the expenditure on prototypes being included as cost of sales. Consequently, this improves the insight into the Group's results of operations.

in EUR '000	
Business unit Engine Systems and Components	2,622,965
Business unit Filtration and Engine Peripherals	1,925,524
Business unit Aftermarket	787,297
Business unit Industry	464,831
Profit centers and others	358,847
Total	6,159,464
in EUR '000	
Europe	2,867,205
America	1,989,490
Asia, Africa, Australia	1,302,769
Total	6,159,464
in EUR '000	
Europe	2,590,708
America	2,070,004
Asia, Africa, Australia	1,498,752
Total	6,159,464
in EUR '000	
Total	1,706,610
in EUR '000	
Total	324,429
thereof extraordinary	7,932
in EUR '000	
Proportionate net income/loss for the year	-70,500
Effects from the adjustment of the difference between proportionate equity and carrying amount	-1,434
Result from associated enterprises	-71,934

OTHER ANNOTATIONS //

Direct employees	25,793
Indirect employees	21,360
Total	47,153

Derivatives not yet settled at the balance sheet date in accordance with Secs. 285, 314 of the German Commercial Code (HGB) can be broken down as follows:

in EUR '000	Nominal amounts	Fair value*
Transactions relating to interest	175,317	-2,173
Transactions relating to currency	706,904	-24,483
Transactions relating to currency and interest	16,680	-181
Transactions relating to commodity	22,583	-478

* The fair value of the currency- and goods-related transactions corresponds to the market value of the derivatives at the balance sheet date which is identified in accordance with the Net Present Value method. All interest-related transactions as well as transactions relating to currency and interest are based on recognized financial/mathematical models.

The derivative contracts as at December 31, 2012 are placed exclusively with banks. For all hedges having effective relations with the underlying transaction, valuation units have been established.

in EUR '000	
Supervisory Board	232
Management Board	5,708

The total remuneration paid to the Management Board comprises fixed and variable components. The fixed portions for 2012 came to EUR 1,577k, and the variable compensation for 2012 to EUR 3,944k. The remuneration shown also includes an adjustment for the previous year. The fixed portions include benefits in kind, which consist primarily of the noncash benefits of having company cars.

Remunerations paid to former executive directors and their descendants amounted to a total of EUR 1,279k.

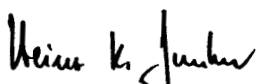
An amount of EUR 15,309k is set aside for this group of persons in the pension accruals as at December 31, 2012.

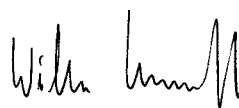
The fee for Ernst & Young GmbH, the Group auditor, calculated in accordance with Sec. 314 para. 1 no. 9 of the German Commercial Code (HGB), consists of the following:

in EUR '000	
Audit of financial statements	736
Other assurance services	1
Tax advisory services	153
Other services	183
Total	1,073

Stuttgart/Germany, March 13, 2013

The Executive Directors of MAHLE GmbH


 Heinz K. Junker


 Wilhelm Emperhoff


 Arnd Franz


 Michael Glowatzki


 Rudolf Paulik


 Bernhard Volkmann

AUDIT OPINION //

The auditors have issued the following opinion on the complete consolidated financial statements and the Group management report:

We have audited the consolidated financial statements prepared by MAHLE GmbH, Stuttgart, comprising the balance sheet, the income statement, the notes to the consolidated financial statements, cash flow statement, and statement of changes in equity, together with the Group management report for the fiscal year from January 1 to December 31, 2012. The preparation of the consolidated financial statements and the Group management report in accordance with German commercial law is the responsibility of the Company's management. Our responsibility is to express an opinion on the consolidated financial statements and on the Group management report based on our audit.

We conducted our audit of the consolidated financial statements in accordance with Sec. 317 HGB ("Handelsgesetzbuch:" German Commercial Code) and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany: IDW). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position, and results of operations in the consolidated financial statements in accordance with German principles of proper accounting and in the Group management report are detected with reasonable assurance. Knowledge of the business activities, the economic and legal environment of the Group, and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the consolidated financial statements and the Group management report are examined primarily on a test basis within the framework of the audit. The audit includes assessing the annual financial statements of the entities to be included in consolidation, the determination of the entities to be included in consolidation, the accounting and consolidation principles used, and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements and the Group management report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion, based on the findings of our audit, the consolidated financial statements comply with the legal requirements and give a true and fair view of the net assets, financial position, and results of operations of the Group in accordance with German principles of proper accounting. The Group management report is consistent with the consolidated financial statements and as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

Stuttgart/Germany, March 15, 2013

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Marbler
German Public Auditor

Hähler
German Public Auditor

MEMBERS OF THE SUPERVISORY BOARD //

Dr. rer. pol. Dr. rer. pol. h.c. Klaus P. Bleyer
Chairman
Former Chairman of the Management Board of
ZF Friedrichshafen AG, Friedrichshafen/Germany

Bernd Hofmaier-Schäfer
Deputy Chairman
Chairman of the Central Works Council of
MAHLE Group Germany and
Deputy Chairman of the European Works Council

Rolf Allmendinger
Former Chairman of the Supervisory Board of
WMF Aktiengesellschaft, Geislingen/Germany

Kai Steffen Bliesener
Press Relations Officer of Industriegewerkschaft
Metall Baden-Württemberg,
District Administrative Office, Stuttgart/Germany

Herbert Bossert
until April 18, 2013
Chief Operation Officer of the European Works Council

Martin Bücher
Deputy Chairman and Executive Secretary of
the Central Works Council of MAHLE Group Germany

Prof. Dr. jur. Wolfgang Fritzemeyer
LL.M., Attorney-at-Law
Baker & McKenzie, Munich/Germany

Josef Häring
effective April 18, 2013
Chairman of the Works Council of Rottweil plant

Dr. rer. pol. Rolf A. Hanssen
until April 18, 2013
Former Chairman of the Management Board of
MTU Friedrichshafen GmbH, Friedrichshafen/Germany

Hans D. Jehle
until April 18, 2013
Former President of MAHLE, Inc., Morristown/USA

Jürgen Kalmbach
effective April 18, 2013
Chairman of the Works Council of Stuttgart plant

Thomas R. Letsch
Former Vice President Sales and Application Engineering
Commercial Vehicles of MAHLE International GmbH,
Stuttgart/Germany

Uwe Meinhardt
effective April 18, 2013
First Authorized Representative of
Industriegewerkschaft Metall
District Administrative Office, Stuttgart/Germany

Dr. Uwe Mohr
effective April 18, 2013
Vice President Corporate Research and
Advanced Engineering of MAHLE International GmbH,
Stuttgart/Germany

Dr. Franz-Josef Paefgen
effective April 18, 2013
Former CEO of Bentley Motors Ltd. and President of
Bugatti International S.A.

Gerhard Pietsch
Former Managing Director of the MABEG e.V.
Association to promote and advise the MAHLE Group,
Stuttgart/Germany

Prof. Dr.-Ing. Stefan Pischinger
Director and Professor, Institute of
Combustion Engines, RWTH Aachen/Germany

Willi Ritter
until April 18, 2013
Chairman of the Works Council of Stuttgart plant

Hansjörg Schmierer
until April 18, 2013
Managing Director of Industriegewerkschaft Metall
Local Administrative Office, Stuttgart/Germany

Prof. Dr.-Ing. Dr.-Ing. e.h. Hans-Joachim Schöpf
Former Executive Vice President R&D at
Mercedes Car Group of Daimler AG

Manfred Steidle
Chairman of the European Works Council and
Deputy Chairman of the Central Works Council of
MAHLE Group Germany

REPORT OF THE SUPERVISORY BOARD //

In March 2013, the members of the Supervisory Board were re-elected in accordance with the regulations of the 1976 Codetermination Act; the constituent meeting of the new Supervisory Board took place on April 18, 2013. The Supervisory Board would like to express its gratitude to former members Herbert Bossert, Dr. Rolf A. Hanssen, Hans D. Jehle, Willi Ritter, and Hansjörg Schmierer for their many years of constructive cooperation.

It is due to the MAHLE Group's excellent global positioning that both the planned figures and those of the previous year were exceeded for the year 2012 despite the considerable decline in demand from many customers in the third and particularly the fourth quarter of the business year. Increased demand in North America and Asia was able to offset our customers' lower sales and production in Europe. The Management Board promptly implemented cost adjustment measures in Europe and South America, which will be maintained in 2013 predominantly in Europe due to the continued weak course of business.

Therefore, the Supervisory Board devoted itself intensively to the budget for the 2013 business year presented by the Management Board and considered with it various scenarios against the backdrop of an economic development considered being problematic. The Management Board announced the future, prompt handling of business plans with the relevant road map.

During the year under report, the Supervisory Board was informed regularly, promptly, and comprehensively through oral and written reports from the Management Board and during meetings on the status and development of the market and the business of the Company and the MAHLE Group, as well as its business units. The Supervisory Board held three ordinary meetings and adopted one resolution by written consent.

Willhelm Emperhoff assumed his role as member of the Management Board on Oc-

tober 1, 2012, following his appointment back in December of the previous year. He was appointed Corporate Executive Vice President and General Manager of both the Filtration and Engine Peripherals business unit and the Mechatronics profit center. Prof. Dr. Heinz K. Junker has earned the thanks of the Supervisory Board for successfully managing the business unit until Mr. Emperhoff joined the Company.

Arnd Franz was appointed member of the Management Board with effect from February 1, 2013. Apart from his duties for the Aftermarket business unit—the responsibility he already held—Mr. Franz was also appointed Corporate Executive Vice President of Automotive Sales and Application Engineering. The previous incumbent was Dr. Jörg Stratmann who was named member of the Management Board of the Behr Group by its Supervisory Board. The Supervisory Board would like to thank Dr. Stratmann for his many years of successful service to the Group.

The Supervisory Board was continuously informed about the business situation of the minority holding in Behr. The Supervisory Board supported the Management Board in its intention to acquire additional shares in the Behr Group as soon as the status of the antitrust proceedings permits this.

The report of the Management Board regarding the better-than-expected development of the Bosch Mahle Turbo Systems joint venture, and thus justifiable substantial investments in the new product of exhaust gas turbochargers, was acknowledged by the Supervisory Board with satisfaction.

In addition, the Supervisory Board received reports about the Company's strategic approach toward mechatronics and electrics as well as about the compliance structure at MAHLE. Subsequently, the Company's current global compliance situation has not given cause for concern.

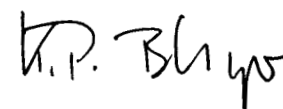
Ernst & Young Wirtschaftsprüfungsgesellschaft, Stuttgart/Germany, audited the Annual Financial Statements and Management Reports of the MAHLE Group and of MAHLE GmbH for the 2012 business year, rendering an unqualified audit opinion. The Supervisory Board agrees with the results of the audit following in-depth analysis of the audit reports and the report from the auditors to the Supervisory Board meeting.

The Supervisory Board approves the Annual Financial Statements and the Management Reports of the MAHLE Group and of MAHLE GmbH, and does not raise any objections to the appropriation of income as proposed by the Management Board.

The Supervisory Board would like to thank the members of the Management Board as well as all employees across the globe for their outstanding commitment and excellent performance during the 2012 business year, which have enabled the Company to grow despite the challenging market conditions.

Stuttgart/Germany, April 19, 2013

For the Supervisory Board



Dr. Klaus P. Bleyer
Chairman



MANAGEMENT BOARD //

Prof. Dr.-Ing. Heinz K. Junker

Chairman and CEO

Business Unit Industry,
Profit Centers Engineering Services, as well as
Motorsports and Special Engines;
Research and Advanced Engineering,
Corporate Planning, Corporate Communications

Wilhelm Emperhoff

effective October 1, 2012

Corporate Executive Vice President and General Manager
Business Unit Filtration and Engine Peripherals,
Profit Center Mechatronics

Arnd Franz

Automotive Sales and Application Engineering (effective February 1, 2013)
Business Unit Aftermarket

Michael Glowatzki

Corporate Executive Vice President
Human Resources, Legal

Dr. Rudolf Paulik

Corporate Executive Vice President and General Manager
Business Unit Engine Systems and Components,
Profit Centers Small Engine Components, and
Sintered Components;
Corporate Quality Management

Dr. rer. pol. Bernhard Volkmann

Corporate Executive Vice President and Chief Financial Officer
IT Services, Insurances, Internal Audit





FINANCIAL CALENDAR 2013 //

April 19, 2013
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September 2, 2013
Half-year Press Conference

IMPRINT //

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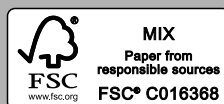
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