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Automechanika 2016

Bosch expands its portfolio with connected solutions for wholesalers and workshops

More efficient maintenance and higher quality standards

September 13, 2016

PI 9386 AA Dr

- ▶ Position in aftermarket strengthened
- ▶ Steering systems have expanded the product range
- ▶ Connectivity is bringing forth new business models
- ▶ New services thanks to telematics solutions

Frankfurt/Stuttgart – At the Automechanika in Frankfurt (September 13 to 17, Hall 9), Bosch is presenting a broad range of components, systems, and services. The company is also unveiling solutions that wholesalers and workshops can use to make their processes even more efficient and expand their service offers. “When it comes to connectivity, we have expanded our offer across the board: from the vehicle and workshops to wholesalers. We strongly believe that connectivity will be the biggest topic at this year’s Automechanika,” said Uwe Thomas, the president of the Bosch Automotive Aftermarket division, at the press conference in Frankfurt. With the help of augmented reality, the necessary steps of a repair can be identified in a targeted manner. With new telematics solutions, Bosch supports efficient fleet operations and makes it possible for insurance companies to come up with new offers.

In 2015, Bosch Automotive Aftermarket grew by about eight percent, keeping pace with overall market growth. Part of this development was the result of currency effects. “Last year, we were able to further strengthen our position. For 2016, we plan to grow at about the same pace as the market, about three or four percent,” said Thomas. In Europe, its core market, Automotive Aftermarket achieved about five percent growth. “This year, we expect competition to intensify, as the European market is likely to see moderate growth,” Thomas said.

Strong development in India

In contrast, there was almost no change in the North American market. In 2016, Bosch Automotive Aftermarket expects to see stable development in its second largest sales region. However, the situation remains difficult in Latin America, where automotive markets have collapsed. Despite this development, in 2015 Automotive Aftermarket performed well in the region. The Asian markets continue to develop well. “In India, we were able to grow seven percent last year. This performance was even better than in China. And this was no exception. We expect the trend to continue in 2016,” Thomas said. However, China continues to be an important market, with significant growth expected in the years to come.

Bosch replacement parts program offers full steering systems

Bosch Automotive Aftermarket has also expanded its product portfolio, mainly as a result of the integration of ZF Lenksysteme GmbH. While the former joint venture’s original equipment business has become the Bosch Automotive Steering division, the Bosch Aftermarket segment has taken over sales. “Moreover, our division now also handles the remanufacturing of steering systems,” Thomas said. By consistently replacing wear parts, and with comprehensive quality controls and functional assessments in remanufacturing, Bosch ensures high product quality. “The workshop and its customers can thus rest assured that components and steering systems are just as safe and functional as the original equipment,” Thomas said.

Connectivity is changing the sector

The growing digitization and connectivity of vehicles and their surroundings are also leading to fundamental changes in workshops and parts wholesale. “Service, high levels of transparency, attractive services, and individual customer support are becoming increasingly important also in workshops and parts wholesale. In fact, they are becoming essential. Let me go one step further: service and even closer contact to end customers are decisive success factors for the future success of our business,” Thomas said.

This new reality is based on the growing connectivity of the vehicle and its surroundings. Today, telematics data can be easily accessed, and workshops can use them to determine the current vehicle status and prepare for required repair or maintenance work accordingly – long before the vehicle rolls in to the workshop. This is beneficial for all parties involved, and enables effective planning: fleet operators can plan appointments, workshops can plan their work schedules, and parts wholesalers can ensure smooth logistics.

New business models via the Bosch IoT platform

Connected vehicles make it possible to combine different services. This will call for high-performance online platforms that will connect existing business models with new ones. Bosch already offers such a platform with the Bosch IoT Cloud, which was designed specifically with the needs of workshops and wholesalers in mind. “We know these requirements very well because we are active in the business ourselves and are familiar with the entire value chain. This is why we can offer customized solutions that were developed specifically for this field of business and were not simply adapted from other solutions,” said Hans-Peter Meyen, the executive vice president of the Bosch Automotive Aftermarket product area diagnostics and engineering segment. The new Connected Repair software is one example. It connects all systems within the workshop. “This makes it easier to plan visits to the workshop and improve both work processes and services. When the customer arrives at the workshop, their vehicle’s data and repair history are already available. The data are automatically transmitted between service devices and saved,” Meyen said.

New telematics solutions

Vehicle telematics data are opening the door to new services that expand the traditional product business. For instance, they give workshops the possibility of cooperating closely with fleet operators. Both parties benefit from the Bosch solution. Fleet operators can gain a quick overview of vehicle status, driving behaviors, and upcoming repairs. Smaller fleet operators, such as delivery services or service providers in the trades, can easily hand over technical fleet management to workshops. Workshops can thus coordinate maintenance work at an early stage and reduce vehicle down time. This is the basis of close cooperation between fleet operators and workshops.

A major German insurance company will soon also be using the telematics solution with the aim of offering younger drivers more affordable insurance policies. In exchange for lower prices, young drivers will make their data available to show that they practice defensive driving. The Bosch telematics solution thus promotes an economical and safe driving style.

Savings lives with augmented reality

Augmented reality connects the physical and virtual worlds with one another, and this makes it possible to create brand new work methods for the modern workshop. When employees point a smartphone or tablet camera at a vehicle, important additional information appears on a real image of the vehicle. This can include explanations such as operating instructions, circuit boards, three-

dimensional objects, photographs, or videos. Such information makes it easier to detect malfunctions and work more efficiently.

Augmented Reality can also save lives. In cooperation with Daimler AG, Bosch has developed an app that helps fire fighters cut vehicles open. It is based on the Bosch Common Augmented Reality Platform (CAP), which can be used to create applications for a broad range of vehicle models. CAP thus enables the use of augmented reality on an industrial scale.

Press photo: #453715, #453742, #453736, #454368, #454369, #454370

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The Automotive Aftermarket division (AA) provides the aftermarket and repair shops worldwide with a complete range of diagnostic and repair shop equipment and a wide range of spare parts – from new and exchange parts to repair solutions – for passenger cars and commercial vehicles. Its product portfolio includes products made as Bosch original equipment, as well as aftermarket products and services developed and manufactured in-house. More than 18,000 associates in 150 countries, as well as a global logistics network, ensure that some 650,000 different spare parts reach customers quickly and on time. In its “Automotive Service Solutions” operations, AA supplies testing and repair-shop technology, diagnostic software, service training, and information services. In addition, the division is responsible for the “Bosch Service” repair-shop franchise, one of the world’s largest independent chains of repair-shops, with some 17,000 workshops. In addition, AA is responsible for more than 1,000 “AutoCrew” partners.

Additional information can be accessed at www.bosch-automotive.com.

The Bosch Group is a leading global supplier of technology and services. It employs roughly 375,000 associates worldwide (as of December 31, 2015). The company generated sales of 70.6 billion euros in 2015. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiaries and regional companies in some 60 countries. Including sales and service partners, Bosch’s global manufacturing and sales network covers some 150 countries. The basis for the company’s future growth is its innovative strength. Bosch employs 55,800 associates in research and development at roughly 118 locations across the globe. The Bosch Group’s strategic objective is to deliver innovations for a connected life. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is “Invented for life.”

Additional information is available online at www.bosch.com, www.bosch-press.com, <http://twitter.com/BoschPresse>



BOSCH

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Aftermarket and workshops: on the cusp of a new era
Connectivity will define the workshop of the future

Dr. Uwe Thomas, President of Bosch Automotive Aftermarket
and

Dr. Hans-Peter Meyen, Executive Vice President Product Area
Diagnostics and Engineering, Bosch Automotive Aftermarket

at the press conference, September 13, 2016

Check against delivery.

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AA's development

Ladies and gentlemen,

Welcome to our booth at this year's Automechanika. Together with my colleague Hans-Peter Meyen, I would first like to give you an overview of the developments at Bosch Automotive Aftermarket.

Allow me to start with a few details about our business development and provide you with some figures. Bosch Automotive Aftermarket has grown at around the same pace as the market, with about eight percent growth last year. Among other things, currency effects drove growth in the market and at Bosch. As a result, we were able to further strengthen our market leadership. For the current year, we plan to grow about three to four percent, which will be comparable to market growth.

Bosch Automotive Aftermarket also expanded its product portfolio. Without doubt, the biggest development was the complete integration of ZF Lenksysteme into our company. While the former joint venture's original equipment business has become Bosch Automotive Steering, we now also supply parts retailers. Moreover, our division is also responsible for the remanufacturing of old steering systems. By consistently changing wear parts, and by carrying out comprehensive quality controls and functional tests in reconditioning processes, we ensure the high quality of our products. The workshop and its customers can rest assured that the components and steering systems are just as safe and functional as the original equipment.

This not only applies to Bosch steering systems; it will soon also be true for those of other manufacturers. We are thus contributing to making road traffic safer: thanks to our remanufacturing products, older vehicles can also be equipped with an affordable, high-quality reconditioned steering system.

Let's now have a look at how business developed in Europe, our core market, last year. In 2015, we achieved sales growth of around five percent in Europe. Moving forward, we expect competition to intensify, as growth in the European market is likely to be moderate this year.

Latin America continues to be the automotive industry's biggest problem child. Following the drop in raw material prices, major markets such as Brazil collapsed. In spite of this development, Automotive Aftermarket performed well. In the North American market, we have not recorded any major changes. Here, our development remains stable, and North America is still our second biggest region in terms of sales.

The Asian markets have continued to show a positive development. Especially in India, we grew seven percent last year. In fact, our growth there was even greater than in China. And this was not an exception. We expect the trend to continue in 2016. Overall, we are also satisfied with our development in China. While the pace slowed somewhat in 2015, China remains a very important market for us. In the coming years, we expect to see significant growth in the country.

Developments in the African market were a positive surprise. We were able to grow our business by 11 percent in the region, and we see good growth potential for the years to come.

Especially in the emerging countries, we want to step up our Bosch Car Service operations. To this end, we have already begun to develop our own flagship workshops. In China, three such workshops are already in operation, and the first is set to open in India in October. Moreover, we are currently examining other markets. These workshops offer us an opportunity to gain our own experience at selected locations. In turn, this allows us to develop even more attractive country-specific services, which we can then offer to our partners. Today, the network that was founded in 1921 counts more than

17,000 service operations. This makes it one of the the biggest chain of independent workshops worldwide.

Developments in the industry

Ladies and gentlemen,

As you can see, Bosch Automotive Aftermarket has a strong set-up. But this isn't a reason to rest on our laurels, quite the contrary:

In our view, our entire industry is facing bigger challenges than it has in a long time. On the one hand, market developments in some regions – like Europe, as I have already mentioned – mean that competition has intensified. However, increasing digitization and connectivity will shape the biggest change for all market players in the aftermarket segment. While this trend will bring forth major opportunities, it also represents change so significant that it could pose an existential threat for some actors in the market.

We have seen such developments in other industries before. Service, high levels of transparency, attractive services, and customized customer support are also becoming increasingly important for workshops and in parts distribution. In fact, they are becoming essential. Allow me to take the argument one step further: service and even closer contact to end customers are crucial for the future success of our business.

This new reality is based on the growing connectivity of the vehicle and its surroundings. Today, telematics data can be accessed very easily. The workshop can then use these data to assess the vehicle's status and prepare the work required, long before the car rolls into the workshop. This benefits everyone involved, and helps make planning reliable. Fleet operators can plan appointments effectively, workshop employees can be scheduled accordingly, and efficient logistics for parts wholesalers can be ensured.

Two years ago, we predicted the growing significance of digitization for both vehicle and workshops, and we presented our initial approaches to paving the way for it. At the time, we were pioneers in the field and our ideas were met with astonishment. But we kept to our plan and our retail and workshop partners also recognized the importance of the topic. At Bosch Automotive Aftermarket, the connected workshop is now our central focus. In our view, the high number of connected services and augmented reality applications has made the connected vehicle one of the central topics of Automechanika 2016. Here at the Bosch booth, we are presenting a broad range of related products and services.

Connected vehicles make it possible to combine different services with one another. So why not think one step further? For instance, why not combine maintenance work while a car is parked in a parking garage? Doing so will require high-performance online platforms that will make it possible to link existing and new business models to one another. Bosch offers workshops such a platform with the Bosch IoT cloud, which is designed to take the needs of workshops and wholesalers into account. We know these requirements very well because we are active in this field of business ourselves, and we have deep knowledge of the entire value-added chain. This is why we can offer customized solutions that we have developed specifically for this sector rather than merely adapting other technologies.

As these examples show, the entire market is in a state of upheaval. At the same time, it is a highly appealing market that is attracting many new players. This means that we must prepare for new competitors. Just as has happened in other markets, players from different fields of business, such as IT companies, have recognized that the combination of software and services is paving the way toward new business models. And they are acting fast. There is thus a pressing need to respond to new conditions. Those who fail to do so risk falling behind very quickly.

At Bosch, we are well prepared. We are holding the key that opens the door to new business models. One example of this is the new Connected Repair software, which connects all systems within a workshop. In just a few seconds, all of a vehicle's data and its entire history can be called up. This not only simplifies processes, it also makes them more efficient and saves our customers' time and money.

Competition in the parts business continues to increase, and will grow ever more intense as a result of innovations and new technologies. However, the competition should be fair. This means, for instance, that all market participants must have access to vehicle data. Vehicle owners must be able to decide what happens with their data and who is permitted to use it. This is why we ask customers what we can and should do for them with their data before we access it.

With increasing connectivity, data protection is also gaining significance. Thanks to our encryption technologies and high industry standards, we can ensure that our customers' data are safe from hacker attacks and data theft.

Digitization is also changing everyday life in many fields of business. When we talked about augmented reality two years ago, it still seemed like a distant dream to many. But have you noticed how many people are now chasing Pokémons? For young people, augmented reality is already an established part of the everyday life. To them, the real and virtual worlds are naturally connected to one another. And it is this very connection that opens the door to new work methods for a modern workshop.

Augmented Reality can also save lives. In cooperation with Daimler AG, we have developed an app that helps fire fighters cut open vehicles. It is based on our Common Augmented Reality Platform, CAP for short, which can be used to generate applications for different vehicle models. CAP has thus made it possible to use augmented reality on an industrial scale for the first time ever.

As you can see, connectivity and digitization are gaining significance in our field of business. This is why we are offering an ever-greater range of services and developing beneficial new offers that serve our customers' interest. This will allow us to secure the future success of our business.

I would now like to hand over to Hans-Peter Meyen, who will provide you more detailed information about our new products.

Ladies and gentlemen,

I would also like to welcome you to our booth.

As Mr. Thomas already mentioned, connectivity is having a growing impact on our business. At Bosch, we have contributed our expertise from other divisions and used it to come up with customized solutions for the aftermarket and workshops. Our aim is to optimize the work processes of workshops. What's more, we want to improve the flow of IT-related data at workshops. In short: we aim to achieve more efficiency and greater transparency for workshops and their operators.

Let me give you a few examples to illustrate what I am talking about. Drawing on our experience as a cloud provider, we were able to develop the new "SWEETWORXX" platform, which is currently being piloted in California. It makes it possible for drivers to connect to the workshop quickly. Via this app, users can book a variety of services. Service is the key word here, for instance in the form of a pick-up and delivery service. Customers go to work in the morning and park their vehicles there. By the time their working day is over, their car is in the same place, but has already been at the workshop. Without doubt, such a service leads to greater customer satisfaction and loyalty.

With "Drivelog Connect", we offer additional services via the smartphone. This app gives drivers real-time information about the vehicle's status. To this

end, the Drivelog Connector is connected to the diagnostics interface, which transmits important data to the smart phone via a Bluetooth connection. The Drivelog then analyses error codes, routes travelled, or driving style, for instance. In particular, the analysis of driving style provides valuable information. It allows drivers to find out how much fuel their vehicles consume and thus helps them save money. In the event of a breakdown, the vehicle's position can be determined and transmitted to the roadside assistance service, along with the error code. As a result, drivers can receive targeted assistance more quickly.

Mr. Thomas has already mentioned our Connected Repair workshop software. Connected Repair connects all Bosch diagnostics systems in the workshop. This means that all computers have immediate access to all vehicle data. Registering the vehicle in the database is all that is required. Once this has been done, workshop employees only need to enter the license plate or vehicle identification number to access a vehicle's entire history. They can do this from any workstation, and important data are immediately available across the workshop. With this technology, we have simplified the planning process for visits to the workshop. At the same time, we have contributed to making work processes faster and more efficient.

As already mentioned, telematics data from vehicles offer workshops the possibility to cooperate closely with fleet operators.

Both parties benefit from the Bosch solution. Via our IT infrastructure, fleet operators receive a good overview of a vehicle's status, driving style, and necessary repairs.

Smaller fleet operators, such as delivery services or service providers in the trades, can easily hand over fleet management to workshops. In so doing, workshops can coordinate required maintenance work at an early stage and thus reduce a vehicle's down time. This is the basis of close cooperation between fleet operators and workshops.

For secure data transmission, we are currently expanding our offer by applying state of the art encryption technologies that were specially developed by ESCRYPT, a Bosch subsidiary.

The insurance industry has also expressed interest in our telematics solution, which can be used in any vehicle. In fact, a major German insurance company is set to start using our telematics offer in the very near future. The aim is to offer younger drivers more affordable insurance policies in exchange for access to their telematics data. By making these data available, young drivers can prove that they have adopted a defensive driving style. This shows that our telematics solution also promotes an economical and safe driving style.

As you know, vehicle technology is increasingly complex. This is also reflected in the workshop. We have responded to this technical challenge with augmented reality. The employee points a smartphone camera or tablet at the vehicle. Instead of seeing a Pokémon appear on the screen, they see important additional information on a real image of the car. This can include explanations such as operating instructions or circuit diagrams, three-dimensional objects, pictures, or videos. This information helps provide a deeper understanding of the product in question and makes it easier to detect malfunctions.

We also continue to develop our traditional workshop services. With Esitronic Web, we have developed an online diagnostics portal that complements our Esitronic 2.0 workshop software. This software now delivers repair and maintenance-related information even faster. Since Esitronic Web does not need to be installed on any specific device, all workshops can use it. All that is needed to retrieve the desired information is an internet connection and a browser. Here, too, workshops save time and money.

With its broad range of products, Bosch has always stood for innovation and quality. The M Li-ion, our new high-performance battery for two wheelers, is the most recent example. Thanks to lithium-ion technology, its cycle stability

is significantly improved. At the same time, it is more dynamic and lightweight than traditional lead-acid batteries. Here at Automechanika, the battery has just received the Innovation Award for innovative and trailblazing products.

Ladies and gentlemen,

As you can see, we not only offer our customers prize-winning innovative replacement parts, but also a broad range of connected services. These include Drivelog Connect, Connected Repair, Augmented Reality applications, telematics services, and Esitronic Web. These services are our answer to the changes in our field of business. As Mr. Thomas already said: we will continue decisively on this path. In so doing, we will keep offering our customers the newest and best solutions, and this will allow them to master the challenges ahead.

Thank you for your attention.

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New Bosch “Connected Repair” software for connected repair tasks improves workflows High efficiency, utilization and repair quality

September, 2016

PI 9372 AA Dr

- ▶ Connected Repair: Effective working thanks to systematically connected Bosch workshop equipment
- ▶ Entrance Check: Increased transparency at the vehicle reception
- ▶ Quick Check: Helps performing routine service tasks up to 60 percent faster
- ▶ ToolNet: More efficient working thanks to smart and connected tool management

The “Internet of things”, the smart processing of large data volumes and the increasing connection between products and their environment bear huge potentials for automotive workshops. They can ease scheduling and planning of workshop appointments and improve the individual working steps in servicing. Vehicle data and repair history are already available as the customer hands over the vehicle, the data is automatically transferred between the service devices and stored by them.

Bosch Connected Repair: connected workshop is becoming reality

At the Automechanika 2016, Bosch presents its new Connected Repair software solution connecting all Bosch service equipment at a workshop with each other. In case of an already identified vehicle, the user just has to enter the respective vehicle’s license plate or the vehicle identification number (VIN) at the individual work station. Afterwards, job tasks can be created and sent to the connected products for the processing. In this manner, the tasks are available within just seconds. For subsequent workshop appointments, no additional identification is required. By means of the license plate or VIN, the complete vehicle history including all test results can be accessed at any work station and at any time. Former tasks often contain links to potential sources of turnovers ready to be used by the workshop. In addition, the software uses an innovative vehicle identification allowing the individual test devices to complement specific parameters. At a future appointment, these identification parameters are then

used again. This saves set-up times at the individual work stations, eases the processes and prevents unnecessary duplication of work.

Connected Repair uses a central database. All members of staff with access to the system can thus have a quick and easy view at the current state of repair. In this manner, the customers can be informed at any time and whenever they ask for feedback. This fact contributes to increased customer satisfaction.

By means of an activation code, the software can be used on any one of the workshop's computers. For optimum performance, Bosch recommends to set up a separate server unit. Information on the vehicle's life cycle can then be saved centrally and accessed at each individual work station if required. Using a standard interface, even the connection with most of the dealer-management systems is possible too.

Bosch Entrance Check: quick revision at the service reception

It is at the service reception where the customer decides about how satisfied he is with his workshop. And again a connected workshop provides a lot of advantages. Thanks to the Bosch Entrance Check, customers can be informed about the current condition of their vehicle within just a few minutes. With the aid of modern Bosch diagnostic equipment, different tests are performed. These include, for instance, reading out error codes, checking tire pressure, tread depth and battery condition, performing a wheel alignment as part of the visual inspection of the vehicle. The results can immediately be seen on all workshop systems and can directly be discussed with the customer or sent to his smartphone. This high degree of transparency increases the customer loyalty and thus also the turnovers by additional repair jobs agreed on together.

Quick Service: helps performing routine service tasks up to 60 percent faster

In case of scheduled routine service tasks such as oil or tire change, Bosch supports automotive workshops by means of the newly developed Quick Service system. This combination of mobile toolboxes, specifically designed for the respective routine tasks, standardized tools and staff trainings, significantly increase the efficiency at such routine tasks. If applied systematically, the Quick Service system reduces the time required for routine service tasks by up to 60 percent.

ToolNet: process optimization and increase in efficiency by means of the digital inventory

The smart inventory and tool management ensures and optimizes the workshop's service readiness. ToolNet increases the efficiency of businesses by functions

regarding the use, maintenance, rental and tracking of tools managed by the cloud. Using different tracking technologies such as RFID, ToolNet extends the Internet of things to all tools and equipment used in workshops. The main objective of this interconnection is a digital image and the optimization of workshop and repair processes.

Press photo: #453715

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Achieving better work results more quickly using 3D technology

For the first time, Bosch uses Augmented Reality for the product explanation at its BEA 750 emission tester

September, 2016

PI 9373 AA Dr

- ▶ Product brochure of the new BEA 750 tester contains Augmented Reality information
- ▶ Quick and easy first start-up and operation thanks to multimedia explanations
- ▶ Users become aware of the possibilities of Augmented Reality

The future belongs to Augmented Reality (AR), the technology complementing real images by useful additional information which can easily be accessed at your fingertips. Using the example of the BEA 750 emission tester, at Automechanika, Bosch shows how to enrich the documentation of a workshop tester by multimedia contents with the aid of Augmented Reality. Bosch thus makes the innovative information system come alive and facilitates its direct use in everyday workshop life. In order to access multimedia product information, for instance, the user just has to point his tablet camera onto the cover of the product brochure. The cover is linked to a 3D model of the emission tester which can then be displayed on the tablet computer using Augmented Reality technology. So-called points of interest regarding BEA 750 are displayed at the three-dimensional representation of the emission tester. By simply tapping them, additional information can be accessed. In addition, the user can even watch a product video as well. The multimedia product description eases the operation of the device for mechatronics and allows them to understand the different working steps much faster as well. At the same time, they familiarize themselves with the possibilities provided by the use of Augmented Reality.

First start-up and operation explained step by step by Augmented Reality animations

Among other things, Augmented Reality is also very useful for the first start-up as part of the operating instructions of the BEA 750 emission tester. As soon as the

user points the camera of his tablet computer onto the actual tester, all required tasks for the first start-up are projected onto the depiction of the device – step by step and using an AR animation. Hoses and cables, for instance, are shown with different colors thus easing the identification of the correct hose for the respective connector. Furthermore, optionally available accessories can also be displayed in connection with BEA 750 and via Augmented Reality. An information box contains the respective additional information concerning the accessories.

Augmented Reality supports mechatronics in everyday workshop life

Bosch uses Augmented Reality to provide additional information including texts, pictures or videos for service or repair tasks at automotive workshops. On the screen of a tablet computer, mechatronics can see the location of usually hidden components, for instance, or even the cable harness behind the dashboard. In addition, required special tools and information concerning the next working steps are displayed as well. This speeds up the working process increasing the service and repair quality at the same time.

Development platform eases the creation of AR applications

In order to integrate the large diversity of versions and products in modern automotive technology into AR application at low costs, Bosch developed the Common Augmented Reality Platform (CAP). It accesses the existing database and collects the matching data for the intended Augmented Reality application. Besides information and explanations as texts, videos, pictures, safety notes with audio content, 3D data, circuit diagrams, technical drawings and markers can be integrated as well. The system works in a cross-platform manner and independently from certain tracking or rendering techniques. It can thus be used for all business areas.

Press photo: #453716, #453717

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Future-proof with new Ethernet diagnostic interface **Bosch presents new KTS generation with innovative and even more powerful diagnostic solutions** Expanded and optimized Esitronic workshop software

September, 2016

PI 9374 AA Dr

- ▶ With PassThru Interface; thus perfectly suitable for the use of the vehicle manufacturers' portals for ECU programming
- ▶ New Bosch KTS ECU-diagnosis modules save both time and money
- ▶ Bosch Esitronic Web: Proven Bosch workshop software is now also available online

Bosch is one of the first suppliers of testers coming with the new, Ethernet-based diagnostic interface. Besides all common interfaces used so far, the new generation of the Bosch KTS-line diagnostic testers – such as the KTS 560 and KTS 590 modules or the compact KTS 350 workshop tester – also support future, Ethernet-based vehicle interfaces.

Most European vehicle manufacturers already equip their current vehicle models with such new, Ethernet-based diagnostic interfaces. Volvo XC90 is the first vehicle on the market allowing a complete diagnosis only by means of the Ethernet interface. The software automatically detects when to activate the Ethernet interface.

In addition, the new KTS generation is equipped with the improved “PassThru Interface” allowing to use the vehicle manufacturers' web portals as usual when programming control units in accordance with Euro 5/6. Moreover, the computer performance of the KTS testers is improved considerably, the memory size is increased significantly and the parallel operation of several vehicle interfaces is facilitated. Systematical backward compatibility ensures the new tester generation to cooperate with all available and future Bosch devices at a workshop. In this manner, the new KTS diagnostic testers are future-proof equipped and ready for future technical developments.

New KTS 560 and KTS 590 ECU-diagnosis modules

Using the new KTS 560 and KTS 590 diagnostic modules, up to three CAN interfaces and up to three K-line interfaces can be used simultaneously for the diagnosis. Special requirements of the manufacturer portals are thus perfectly supported. Using the KTS modules, diagnoses can either be performed using the Bosch Esitronic 2.0 workshop software or by means of the manufacturer portals. No additional hardware is required. KTS 560 and KTS 590 feature a powerful computer platform with one gigabyte of RAM and 512 megabytes of program memory – which can be extended without restrictions. A long-range radio connection for the connection with the workshop computer allows their mobile use all over the workshop. All-in-all, diagnoses will be faster and more economical using the new KTS modules 560 and 590.

KTS 350 mobile diagnostic tester with more power for fast working

The handy KTS 350 tester with its 10-inch touch screen also provides each and any one of the possibilities of the new KTS generation. In addition, it supports all common and current vehicle interfaces – even the new ones based on Ethernet. It is also equipped with the optimized “PassThru Interface” for diagnosis and programming of control units by means of the portals of the vehicle manufacturers. The device comes with the workshop software Esitronic 2.0 already preinstalled. A significantly more powerful processor than the predecessor’s one, four gigabytes of RAM and a quick 256-gigabytes SSD program memory combined with the current Windows 10 operating system ensure quick program starts and fast working. With its complete equipment, the compact KTS 350 tester provides anything required to perform ECU diagnoses, troubleshooting, service and repair tasks.

DCU 100 Diagnostic Control Unit with significant performance upgrade

The robust DCU 100, the 10-inch tablet computer for mobile workshop applications, has also been equipped with a more powerful processor. Instead of a conventional hard disk, it now also features a 256-gigabytes SSD memory and four gigabytes of random access memory, Windows 10 operating system and fast USB 3.0 interfaces. DCU 100 also comes with Esitronic 2.0 workshop software already preinstalled. The connection to KTS diagnostic testers is established by means of a smart high-performance Bluetooth module. In combination with the KTS 560 module, Bosch also supplies DCU 100 as a complete package solution called KTS 460.

Esitronic 2.0 workshop software and Esitronic Web expanded and optimized

Esitronic 2.0 already supports the Bosch workshop-connection concept known as Connected Workshop. Thanks to regular updates, automotive workshops can be sure always to have latest data of all common types of vehicles at their disposal. In case a Bosch diagnostic device is connected to the Internet, all updates will be downloaded in the background – that is, while the device is in use – from the first quarter 2017 onwards. Another novelty to Esitronic is the “EBR – Experience-based Repair” program. It includes specific errors repeatedly occurring on certain vehicle models. In case a known error is detected during the diagnosis, Esitronic recommends the mechatronic a repair solution which has already proven to be a good remedy.

Esitronic Web is an online diagnostic portal for repair and maintenance information which can be accessed by any workshop without having to install the software on one of its workshop computers. In this manner, missing repair information, for example, can be accessed quickly. A search function helps finding the desired information quickly. Esitronic Web works on all workshop systems including tablet computers, as long as they are connected to the Internet and have a browser installed. Access is possible within minutes, the payment for the information retrieval is made via credit card.

Press photo: #453720, #453718, #453719

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Automatic measurement of the tire tread depth at workshop checks **Detecting run-down tires while driving by with the aid of Bosch**

September, 2016

PI 9375 AA Dr

- ▶ Less errors in measurement thanks to high-resolution cameras and color-coded light
- ▶ Measurement system automatically starts when driving onto the measurement system
- ▶ Versions requiring low installation space and suitable for sport suspension systems

Detecting run-down tires when driving by – the new Bosch systems for tire tread measurement determine the tire tread depth within seconds. Once a car drives across the two measurement modules at maximum 8 km/h, they are started automatically and instantly show the results of all four wheels. The system even detects unevenly worn tires – an indication for incorrect wheel alignment or a damaged chassis. In this manner, workshop professionals can perform vehicle tests even easier and quicker. In order to display the measured values, there are three different options. The measured values can be displayed on both a workshop computer and a tablet. Using a standard, web-enabled TV screen next to the test station, even the customer can see the measured values.

Highly resilient to dust, humidity and varying temperatures

Bosch tire tread depth measurement uses high-resolution cameras and color-coded light. Thanks to the light, even the deepest tread area is illuminated thus preventing common measurement errors which could occur when measuring with a mechanical gage. As usual with laser systems, the measurement method does not require any moving parts. This makes it highly resilient to dust, vibrations, humidity and changing temperatures. The measurement is neither influenced by dirt or leaves nor by marks on the tires or by workshop lighting. In addition, the measurement line can be cleaned using water. Cleaning with compressed air is not required thus saving both time and money.

Two types of tire tread detection are available: The TTM (Tire Tread Measurement) 2104 measurement system is the floor-mounted version. With a height of 80 mm it is even suitable for cars with sport suspension. TTM 2104 can easily be mounted onto the workshop floor by means of bolts and screws. As an alternative, the Bosch range also includes the underfloor solution TTM 2204. Using this system workshops can save mounting space. Both systems use the same measurement modules featuring a length of 50 cm. In addition, the scope of delivery of TTM 2104 also includes two 50 cm drive-on ramps.

Less measurement errors in tire replacement business

For workshops, the Bosch tire tread measurement systems provide several advantages. Automatic measurement reduces measurement errors and accelerates the vehicle reception in servicing. Digital measurement results can easily be stored and documented thus complementing the vehicle's life-cycle records. And by means of quick and trouble-free measurement providing objective measured values, the customers can clearly appreciate the workshops' technical competence.

Press photo: #453721

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Intelligent fleet management **Bosch connects vehicle fleets and workshops** Custom-made telematic solutions

September, 2016

PI 9377 AA Dr

- ▶ Service opens new areas of business for workshops
- ▶ Quick response and care prevents expensive downtimes for fleet operators
- ▶ Data processing with Bosch encryption

At the Automechanika fair, Bosch presents a new telematic solution connecting fleet operators and workshops. Using this Bosch solution, fleet operators can reduce their vehicle's downtimes and workshops win an important customer segment thanks to the additional service offer. This is possible thanks to a communication unit installed at the vehicle. In an encrypted manner, it sends current operating data and information on the vehicle condition to the Bosch IT infrastructure for the analysis of the data. That's also, where fleet operators and participating workshops can access the edited information. For the data transfer itself, Bosch uses latest encryption techniques developed by the Bosch subsidiary ESCRYPT for this specific application. Bosch will put this new solution into operation towards the end of 2016 and thus expand its range of telematics even further. The www.boschconnectedvehicle.com website provides an overview of all Bosch possibilities and services for a connected fleet management.

Low costs, predictable repairs

By means of this new service, workshops are able to provide their customers with an individual and custom-made offer. This can reach from the installation of the controller through to the complete online support for the vehicle. Minor fleet operators such as delivery services or craftsmen service providers can easily source out the complete technical fleet management to the workshop. The latter one recognizes early if a service appointment is required or if significant technical changes have been performed. In this manner, the respective vehicle is ordered to the workshop in due time. The fleet operator can then schedule the downtime and arrange a replacement car if required. Using the new service provided by Bosch, the repair shops can approach companies with several vehicles in a

target-oriented manner thus winning new customers – and opening an additional business field.

Comprehensive solutions for fleet operators

In addition, Bosch collects a large variety of additional information for the fleet operators reaching far beyond the condition of the vehicle. Among others, information on location, fuel consumption, mileage of the vehicle or even driving style can be analyzed. In this manner, the fleet managers also have a useful tool at their disposal allowing them to raise their drivers' awareness for safe and economical driving. Based on the data collected, incentives can be created, for instance to reduce fuel costs, wear or even both. In addition, the localization via GPS allows optimum fleet management. In cases of last-minute assignments or emergencies, for instance, the vehicle being the closest to the customer can be used. Thanks to the data provided by the Bosch cloud, the fleet manager also detects imbalanced use of leased vehicles. He can then change two vehicles with strongly differing amount of use thus preventing possible supplementary payments as the contract expires. The electronic driver's logbook replaces the manual one and the efforts required for the documentation. This saves both time and money.

Press photo: #453736, #453737, #453738, #453739

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Winner of the Automechanika Innovation Award **M Li-ion: New powerful Bosch two-wheeler battery with lithium-ion technology**

September, 2016

PI 9350 AA Dr

- ▶ New powerful lithium-ion two-wheeler battery for increased dynamics, fun to drive and safety
- ▶ Also suitable for extreme conditions in sports or racing motorcycles
- ▶ Bosch Esitronic Bike workshop software specifically for two-wheeler workshops

Frankfurt/Karlsruhe – The Bosch lithium-ion-two-wheeler battery M Li-ion won the Innovation Award of Automechanika 2016 in the category parts and components. With this award, innovative and aspirational products will be rewarded.

Thanks to its innovative lithium-ion technology, the new M Li-ion battery features a significantly higher deep-cycle resistance than conventional lead-acid batteries. And it weighs about a third less, too. As two-wheeler batteries are usually installed at a pretty high location, the low weight of the M Li-ion battery has a positive influence on the bikes' center of gravity as well. A battery management system, the so-called balancers, ensure a balanced charging and discharging of all battery cells. The low self-discharge rate of the M Li-ion battery is yet another one of its advantages. It holds its charge up to four times longer than comparable lead-acid batteries and thus survives the winter break unharmed. Thanks to its high performance and its quick and reliable starting behavior, the M Li-ion battery is particularly suitable for two-wheelers with high energy demands such as motorcycles equipped with ABS and MSC (Motorcycle Stability Control) or electronic gasoline injection systems. By means of the new M Li-ion motorcycle battery, workshops and retailers can offer their customers a powerful two-wheeler battery for increased dynamics and more fun to drive.

Lithium-ion technology: powerful and flexible

The Bosch M Li-ion battery is available for all common motorized two-wheelers, quads and jetboats on the market. As the new battery does not contain any acid, it can be installed in any position and used even for the extreme conditions acting in sports and racing motorcycles, on long journeys or in demanding terrain. Bosch will continue to broaden its range of starter batteries for passenger cars using the lithium-ion technology as a basis. This makes Bosch a pioneer on the battery market as well. By now, Bosch is already the worldwide leading supplier of motorcycle safety technology.

Broad Bosch range specifically for two-wheelers

Besides OE parts, Bosch also supplies a wide range of parts and products specifically for two-wheeler workshops and motorcycle riders. The high-quality spare parts, the state-of-the-art workshop equipment for diagnoses, service and repair as well as the specific trainings are perfectly aligned with to the specific requirements of two-wheelers. In addition, Bosch developed Esitronic Bike specifically for two-wheeler workshops and based on the proven Esitronic 2.0 workshop software package. This software covers all common European and Asian motorcycle brands and works on Bosch KTS-line diagnostic testers. Several vehicle manufacturers rely on Bosch with regard to the original equipment of their new models – and so do workshops and riders of two-wheelers if they need any spare parts.

Press photo: #452297, #452298

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Fully automatic charging, back-up and buffer operations **New Bosch BAT 645 and BAT 690 battery chargers for all types of car and commercial vehicle batteries**

September, 2016

PI 9379 AA Dr

- ▶ With a current of 45 or 90 ampere, suitable for both 12-volt and 24-volt on-board power supply
- ▶ Special charge characteristic for all current types of batteries
- ▶ Buffer operation supports on-board power supply in case of control unit updates

By means of the new BAT 645 and 690 battery chargers, Bosch offers automotive workshops two universally applicable professional devices featuring 45 or 90 ampere of continuous current output. Automatically detecting the required nominal voltage, both chargers can be used for 12-volt car batteries and 24-volt commercial vehicle batteries alike. Besides conventional lead-acid and gel batteries, they are also suitable for batteries featuring modern AGM (Absorbent Glass Mat) and EFB (Enhanced Flooded Battery) technologies as well as for up-to-date lithium-ion (LiFEPP04, in short: LFP) batteries. Due to a universal characteristic, all types of batteries are charged fully automatically. Moreover, a special charge characteristic can be selected for each type of battery thus considering the specific peculiarities of different battery technologies at the charging process. In case an exhausted battery is identified, the battery chargers start their task using a gentle charge characteristic.

As additional modes of operations, BAT 645 and BAT 690 feature both a back-up and a buffer mode. At the back-up mode, the device ensures the vehicle's power supply in case the starter battery has been removed. The buffer mode, on the other hand, is of increasing importance in everyday workshop life. In this case, the battery charger supports the on-board power supply, for instance, in case of control unit updates.

Future-proof thanks to USB port and software updates

Both of the new BAT 645 and BAT 690 battery chargers are protected by a robust metal housing. Thanks to their low weight and their compact size of 120 millimeters in height and 230 millimeters in width, they can be applied in a highly mobile manner. They can, for example, even be placed below the vehicle. In this way, they do not disturb anyone while in operation. Another advantage is the option to easily replace the charge or electric cables – no matter whether in case of damage or if the standard cables are simply not long enough. The charge cables are available in lengths of three and five meters. The new battery chargers are equipped with a USB port easing software updates. This allows, for instance, uploading characteristics for innovative types of batteries – thus keeping the devices up to date at any time. In addition, a WiFi connection is planned for BAT 690 in order to enable its future integration into workshop networks.

Press photo: #453740

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September, 2016

PI 9380 AA Dr

Complete range of latest steering systems **New to the Bosch spare parts range: Steering systems and components for cars, trucks and buses**

- ▶ Steering systems perfectly complement the Bosch product range
- ▶ Steering components as replacement parts within the Bosch eXchange range
- ▶ Bosch diagnostic equipment for repairs on modern electric power steering systems

Steering systems in modern cars, trucks and buses are very robust and designed to withstand the vehicle's complete service life. In case parts of the steering system are worn or damaged by an accident, they are to be replaced by systems and spare parts featuring equally high quality. Since Bosch took over 100 percent of ZF Lenksysteme GmbH, the Bosch spare-parts range now also includes complete OE-quality steering systems and components for all types of vehicles – reaching from compact cars to long-distance trucks. Besides mechanical and hydraulic steering systems, the Bosch range also includes electric power steering systems – a prerequisite for a whole series of modern assistance systems and for autonomous driving used more and more often by car and commercial-vehicle manufacturers.

Steering systems are specifically designed for each type of vehicle. In case of replacement, workshops thus have to install identical systems again. On the one hand, of course, these can be new systems straight from the factory. On the other hand, however, for economical repairs based on the vehicle's current value, remanufactured systems are a worthy alternative. The Bosch eXchange range thus includes a large number of remanufactured steering systems and components. The systematic replacement of wearing parts, comprehensive quality checks and functional tests throughout the remanufacturing process always ensures high quality of eXchange products. Both, the workshops and their customers can be sure the components and steering systems are as safe and functional as genuine new parts.

New opportunities for workshops to generate turnovers servicing steering systems

In addition, Bosch supports workshops in troubleshooting and replacement of steering systems and components by means of test equipment and know-how. Considering the growing number of electric power steering systems, the use of state-of-the-art diagnostic equipment becomes ever more important. By means of wheel-alignment systems, diagnostic testers and the Esitronic software package, the Bosch workshop range provides anything workshops need for professional diagnoses on all types of steering systems. Special trainings at the Bosch training centers and the technical hotline condition workshops to perform tasks on automotive steering systems. The comprehensive Bosch range consisting of parts, bytes and services allows workshops to access the profitable steering-system market.

Press photo: #453741, #453742

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Car diagnosis, breakdown assistance and tips on fuel saving

September, 2016

PI 9383 AA Dr

New: Drivelog Connect displays car-related information on the smartphone

- ▶ Error codes are read out and explained in a comprehensible manner
- ▶ Analysis of the driving behavior helps saving fuel
- ▶ Car finder shows the shortest way to the car

Berlin – Drivelog, the online car manager of the Bosch subsidiary Mobility Media GmbH expands its range of services by “Drivelog Connect”. This new service informs car drivers about the condition of their vehicle – at any time. For this purpose, a special connector, the so-called Drivelog Connector is plugged into the vehicle’s OBD2 diagnostic interface. Via Bluetooth, this connector can then transmit any important information regarding the vehicle condition to the free-of-charge Drivelog Connect app installed on the user’s smartphone. By means of this app, incomprehensible error codes and the causes of warning lamps lit up on the dashboard are read out and explained in a comprehensible manner. If the user wishes so, he can even book a workshop appointment directly through the app. In addition, the system reminds the users of upcoming service deadlines. In case of breakdown, quick assistance is provided, too. If the driver wishes so, the breakdown assistance of the Drivelog Connect app can even submit the current vehicle location to the breakdown service. For a quick diagnosis, the error codes are also transmitted at the same time.

But there is even more to Drivelog Connect. The system traces all driven routes thus allowing both fuel consumption and driving behavior to be analyzed. Drivelog Connect can thus be used as a digital driver’s logbook – for instance, to differentiate between private and professional trips in case of company cars. On the other hand, the analysis of the driving behavior shows saving potentials on a live screen. Over the course of a year, a lot of fuel and money can thus be saved by slightly changing the driving behavior. Another very practical feature of the Drivelog Connect app is its car finder. It reliably shows the location of a parked

car providing the user with information on how to approach it using the shortest way.

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In order to use Drivelog Connect, the special Drivelog Connector is required. In comparison with other so-called dongles, it is particularly small and can thus be plugged into the OBD2 interface in a very space-saving manner. Furthermore, the Drivelog Connector allows reading out manufacturer-specific data such as service intervals and oil or fuel levels which cannot be analyzed by conventional OBD2 dongles. As of now, car drivers can order the Drivelog Connector for EUR 69.90 directly from Bosch via Drivelog shop: <https://shop.drivelog.de>. The Drivelog Connect app itself is available free-of-charge at the PlayStore for Android devices and at the Apple Store for iPhones. Once the app is installed and the connector plugged in, the user just has to connect both of them via Bluetooth.

Press photo: #453685, #453684

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Novelties in Bosch's classic division **Bosch Automotive Tradition provides more than 60 000 products for classic and vintage vehicles**

September, 2016

PI 9381 AA Dr

- ▶ BMW M1 starter reissued in the event of the 100th anniversary of BMW
- ▶ Black battery resembling its historic predecessor is available again
- ▶ New book title at the Bosch knowledge line

Starters for the legendary BMW M1 have been reissued

On the occasion of the 100th anniversary of the BMW brand, Automotive Tradition, the Bosch classic division, relaunched the BMW M1 starter. The complete so-called reverse-engineering project – from the idea to the final product – was realized together with BMW Classic and within just four months. Both, drive bearing and starter pinion have been redesigned. Furthermore, additional parts from current series production for BMW have also been adopted. In this manner, required spare parts will be available in future as well. The BMW M1 starter meets all OEM standards. When BMW M1 was first launched onto the market in 1978, it reached a top speed of 260 km/h and was thus the fastest series-production passenger car built in Germany. Until 1981, 450 units of this mid-engine sports car were built; most of them as street-use version. Nowadays, this iconic car in the area of classic and vintage cars fascinates fans around the world.

Besides the reissued M1 starter, Automotive Tradition also supplies additional BMW M-series products. The M1 alternator, for instance, is still part of the Bosch exchange-parts range “Exchange”. The alternator for M3 (E30) cars was reissued as exchange product specifically for BMW Classic – and so was the M5 (E34) starter. Both, the M3 starter and the M5 alternator are also available as exchange parts included at the Bosch Exchange range. Bosch Automotive Tradition thus contributes to keeping the legendary BMW M-series cars on the roads.

By now, the classic division of the Automotive Aftermarket business division provides fans of classic and vintage cars with a range of more than 60 000 different products. “We take our historic responsibility resulting from more than 130 years of our company’s history seriously and do anything we can to support

owners of classic and vintage cars in maintaining their beloved cars,” Fritz Cirener, head of Automotive Tradition, said. The classic division does not only help getting the right Bosch spare parts, it also coordinates the reproduction of several parts. As is the case with the “black battery”, many of these reproductions are actually based on redevelopments. All of this is complemented by remanufacturing of genuine spare parts.

Starter batteries following their historic examples

In 2016, Bosch Automotive Tradition presents four 12-volt versions of the historic black battery thus complementing its range of historic batteries. So far, this range already included the 6-volt versions relaunched in 2014. Whereas the battery exterior with its black body resembles the historic predecessor, Bosch relies on latest technology and quality standards for the battery interior. As a consequence, the batteries feature low degassing values and a high starting power – moreover they can be recycled almost completely. The range also includes the CC, C1, C3 and C7 battery chargers allowing the user to recharge discharged 6-volt, 12-volt and 24-volt batteries without any problems. Thanks to their so-called trickle charging function, classic and vintage vehicles remain ready to start – even after extended periods without driving them.

New book title at the Bosch knowledge line

The editorial team of the Bosch Automotive Handbook, first published in 1932 and currently available on the market in its 28th edition, also forms part of Bosch Automotive Tradition. In 2016, a new book titled “Ottomotorsteuerung für Young- und Oldtimer” was published. In part it is based on the former Bosch “yellow line”, although significantly reworked and complemented. It explains the basics concerning both fuel mixture and ignition. Besides classic carburetors and ignition systems, all Jetronic systems are shown and explained as well. In this manner, the book is a worthy knowledge base for owners of modern-era classic and classic cars with an affinity for technology.

Technical training and comprehensive online knowledge database

Whoever wants to broaden his knowledge can sign up for special trainings about older Bosch systems. Besides the Jetronic systems, the topics of starters and alternators as well as mechanical Bosch gasoline injection are available as well. At these trainings, the participants learn technical knowledge right from the manufacturer Bosch and in a practice-oriented manner. Furthermore, fans of classic and vintage cars can also find free-of-charge answers to technical details at the Bosch Automotive Tradition knowledge database comprising more than 60,000 historic documents. Additional information can be accessed at www.automotive-tradition.com.

Press photo: #453743, #453745, #453744

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Presse Release

September, 2016

PI 9382 AA Dr

Beissbarth at Automechanika 2016 **New combined workshop test bay for wheel alignment, headlight testing and DAS adjustment**

- LTB 300: for different test tasks at the workshop
- Headlight adjustment in line with the general inspection test guideline
- MLD 110 headlight tester homologated for Mercedes-Benz workshops
- Adjustment of driver assistance systems
- MS 670 tire changer with Ergo Control

At Automechanika 2016, Beissbarth presents a combined solution for different test tasks at automotive workshops, the new universal **LTB 300 workshop bay**. Concerning the workshop floor, the Beissbarth LTB 300 leveled vehicle test bay allows equalizing unevenness and differences in height of up to 40 mm across its full length of up to six meters. In combination with the MLD 815 digital headlight tester, it allows workshops to perform precise headlight tests in line with the current general inspection test guideline.

Furthermore, LTB 300 vehicle test bay is equipped with turntables and slide plates for wheel alignment. Combined with the Touchless wheel alignment system or the new Easy 3D+ system with new software and graphic user interface, reception measurements can be performed every minute. Wheel camber, individual and total toe as well as the geometric driving axle can be determined simultaneously. In this manner, yet another prerequisite for the adjustment of driver assistance systems (DAS) by means of special adjustment tools – such as radar reflection mirrors or camera calibration targets – is met. As a result and thanks to LTB 300 and different check and test systems, chassis, headlight and DAS adjustment tasks can be performed at a single combined workshop bay.

Moreover, Beissbarth will also present the new **MLD 110 headlight testing system for Mercedes-Benz workshops** at the same fair. It comes equipped with seven-meter roll-on

marks, rails and a special LED color filter. The system homologated for Mercedes-Benz and labeled with a TÜV seal is ready to be delivered as of now.

For applications at the vehicle reception, Beissbarth presents the new **EasyTread system** for the measurement of the tire tread depth. EasyTread is started as soon as a vehicle rolls over it at a maximum speed of 8 km/h. Within seconds, the system displays the precise depth of the treads of all four tires. The color-coded measurement procedure with HD cameras does not use any moving parts. This makes it highly resilient to external influences such as dust, vibrations, humidity and changing temperatures.

New devices for professional tire service

For tire services, Beissbarth presents the new and particularly robust and sturdy **MS 670 tire changer** at the Automechanika fair. The device is equipped with the ErgoControl bead breaker, a side-mounted wheel lift of the latest generation and a central clamping system. In addition, MS 670 features a lever-free mounting head and an assistance post with two separately operated assistance arms. This allows safe and quick fitting of even run-flat tires (RFT) and ultra-high-performance (UHP) tires.

As yet another highlight, Beissbarth presents the new automatic 30-inch **tire changer MS 900** with central clamping. Both bead breaker disks as well as the tools with lever-free mounting head protect both the rim and the TPMS. They are controlled easily and intuitively by the control panel. Two laser pointers ease the entry of the rim size. On top of this, Beissbarth also presents the new **MT 849 AD wheel balancer** equipped with a function for contact-free measurement of the wheel width – among other features. Thanks to the measurement routine lasting just six seconds, the quick locking and the direct selection of the most important balancing routines, this wheel balancer is a perfect solution for tire specialists.

Press photos: #453746, #453747, #453748, #453749, #453750, #453751,
#453752, #453753

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Beissbarth GmbH, founded in Munich (Bavaria, Germany) in 1899, has since been a manufacturer of high-precision measurement devices for car manufacturers and repair garages worldwide. Besides its core business fields of wheel alignment and brake testers/test lanes Beissbarth also offers tire changers, wheel balancers and ac service units. In April 2007 Beissbarth became a Bosch Group Company and was integrated into the Diagnostics Business Unit of the Automotive Aftermarket Business Division.

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Car diagnosis, breakdown assistance and tips on fuel saving

September, 2016

PI 9383 AA Dr

New: Drivelog Connect displays car-related information on the smartphone

- ▶ Error codes are read out and explained in a comprehensible manner
- ▶ Analysis of the driving behavior helps saving fuel
- ▶ Car finder shows the shortest way to the car

Berlin – Drivelog, the online car manager of the Bosch subsidiary Mobility Media GmbH expands its range of services by “Drivelog Connect”. This new service informs car drivers about the condition of their vehicle – at any time. For this purpose, a special connector, the so-called Drivelog Connector is plugged into the vehicle’s OBD2 diagnostic interface. Via Bluetooth, this connector can then transmit any important information regarding the vehicle condition to the free-of-charge Drivelog Connect app installed on the user’s smartphone. By means of this app, incomprehensible error codes and the causes of warning lamps lit up on the dashboard are read out and explained in a comprehensible manner. If the user wishes so, he can even book a workshop appointment directly through the app. In addition, the system reminds the users of upcoming service deadlines. In case of breakdown, quick assistance is provided, too. If the driver wishes so, the breakdown assistance of the Drivelog Connect app can even submit the current vehicle location to the breakdown service. For a quick diagnosis, the error codes are also transmitted at the same time.

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Press photo: #453685, #453684

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Robinair celebrates its 60th anniversary The success story of the air conditioning specialist began in 1956

September 2016

PI 9385 AA Dr

- ▶ Robinair is inventor of automotive air conditioning service units
- ▶ Global market leader for A/C service equipment
- ▶ More than 1,000,000 manufactured air conditioning service units

Robinair was found in Warren (Michigan, USA) in 1956. Its initial task was to develop tools for the repair of vehicle air conditioning systems.

The company name Robinair originated from the names of the pioneers, Robinette and Adair. With the growing popularity of air conditioning systems in cars and commercial vehicles, the company quite early focused on the development of air conditioning service equipment and offered a comprehensive product portfolio already in 1960. Robinair became known as inventor of A/C service units for automotive workshops. The first device combining recovery, recycling and filling of refrigerant hit the market in the 1970s. Today, for the 60th anniversary, Robinair is the global market leader for A/C service equipment on the worldwide automotive workshop market – with sales and service locations all over the world. Since December 2012, Robinair is a Bosch brand integrated into the Automotive Service Solutions business unit of the Bosch Automotive Aftermarket business division.

Robinair set standards in A/C servicing

Throughout the 60 years of the company's history, Robinair has always been a pioneer introducing technical milestones. With a multitude of new developments and innovative patents, the Robinair technicians succeeded in increasing the efficiency, simplicity and environmental friendliness of air conditioning servicing in workshops. In 1979, the company patented the first refrigerant recovery and refilling station. The first device for the complete A/C service on vehicles with R134a refrigerant was introduced in 1992. In 2006, Robinair developed the first device meeting the SAE J2788 industrial standard. With the production of the 250,000th A/C service unit, the company reached yet another milestone in 2008. In 2010, Robinair introduced the first unit for the A/C service on vehicles

equipped with the new refrigerant R-1234yf. Robinair set a new benchmark with its air conditioning service units, recovering 99 percent of the refrigerant. The comprehensive product range includes fully automatic air conditioning service units suitable for any workshop requirements. In addition, the Robinair product portfolio includes diagnostic systems, electronic and UV leak detection as well as flushing systems.

Close cooperation with automobile manufacturers

Throughout the years to come, Robinair intends to expand its market leadership in the area of A/C service equipment for the refrigerants R134a, R1234yf and CO₂ even further. A close cooperation with the vehicle manufactures has a huge impact on developing new devices. In future, Robinair does thus not only ensure professional and efficient, but also reliable and environmentally friendly maintenance of vehicle air conditioning systems.

Press photo: #453758

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As of December 2012, Robinair became a Bosch brand and was integrated into the Automotive Service Solutions Business Unit of the Bosch Automotive Aftermarket Business Division. Bosch Automotive Service Solutions is a major manufacturer and supplier of professional vehicle electronic diagnostic equipment and offers a wide range of servicing tools and equipment with various manufacturing facilities. Robinair is the leading high quality brand in automotive AC equipment and tools.

For more information on Robinair, visit www.robinair.com.

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