Truck World

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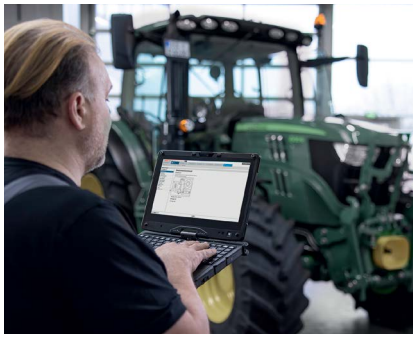
Update for OHW diagnostics

New KTS Truck and expansion of ESI[tronic] Evolution diagnostic software for off-highway vehicles

EDITORIAL

DIGITAL BOSCH SOLUTIONS SUPPORT WORKSHOPS



Dear truck fans,

whether it's the information overload, broad competency requirements or new drive technologies, workshops face various challenges every day. Bosch offers digital solutions to make everyday work easier and more efficient. This includes ESI[tronic] Evolution diagnostic software. With its new software package, it now covers off-highway vehicles more comprehensively. Services such as the digital evaluation of used trucks are easily accessible for workshops on the Bosch logistics platform L.OS. However, changing market conditions do not always affect the workshop business right away: Many diesel spare parts can also be used for modern hydrogen engines.

Enjoy reading and have a great journey into a connected workshop future!

Your commercial-vehicle team

Dates: 2024 FIA ETRC		
Zolder	June 22 –	June 23
Nürburgring	July 13 –	July 14
Most	Aug. 31 –	Sept. 1
Le Mans	Sept. 28 –	Sept. 29
Jarama	Oct. 5 –	Oct. 6

The OHW evolution

Off-highway vehicle diagnostics

Commercial vehicles, agricultural and construction machinery or material-handling trucks operated off paved roads – known as off-highway (OHW) vehicles – face extreme strains and wear in daily use. High robustness of installed systems and reliable high-quality solutions for maintenance and repair are thus required. Modern generations of OHW vehicles, machinery and engines available on the market are equipped with common-rail systems or even electrically driven. They are controlled electronically and as with modern vehicles, the level of technical equipment and performance can be assessed by the number of installed control units. Diagnostic and troubleshooting requirements for CV workshops are thus comparable to those for passenger cars. The wide range of applications and specializations of OHW vehicles call for comprehensive diagnostic software. Bosch now upgraded the ESI[tronic] Evolution in accordance with these diverse requirements.

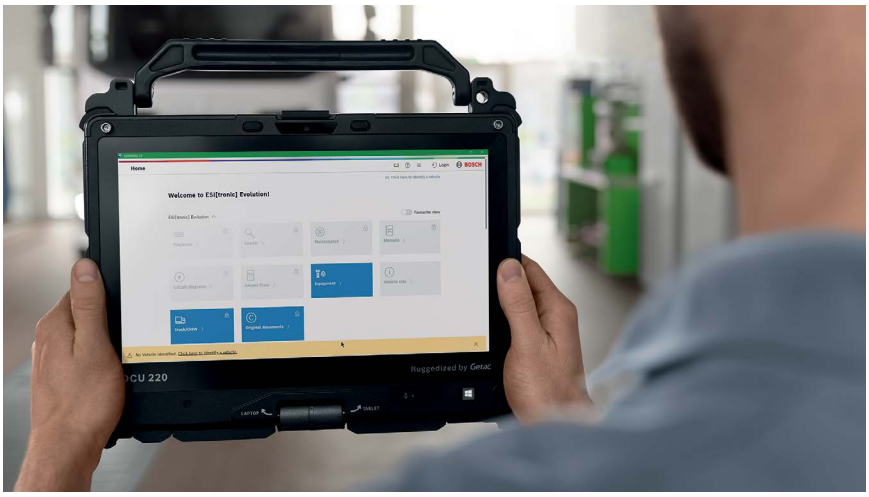
ESI[TRONIC] EVOLUTION

The comprehensive and reliable ESI[tronic] Evolution diagnostic software is designed for all types of commercial and off-highway vehicles. Truck workshops can choose and combine four licensable software packages: the **truck package** for light and heavy commercial vehicles, trailers, vans, and buses; the **package for agricultural vehicles** (OHW 1); the **package for construction vehicles and engines** (OHW 2); and the newly introduced **package for material-handling** (OHW 3). The modular structure of ESI[tronic] Evolution allows workshops to quickly progress through diagnoses and to find

the proper repair solution for their daily operations.

ESI[TRONIC] EVOLUTION FOR TRUCKS, VANS, TRAILERS AND BUSES

Vehicle information for commercial vehicles – such as model series, performance, engine identification, and axle configuration – forms the basis for well-founded diagnoses at the workshop. ESI[tronic] Evolution software reads and clears fault codes, selects actual values, activates actuators, resets service intervals, and calibrates components according to the circuit diagram. Its intuitive user interface with dynamic component descriptions allows quick and easy usage. Inspections are accessible at any time. Component information with target values, output voltage, and characteristic curves support the troubleshooting process. Furthermore, there is access to the complete Bosch spare parts catalog.



ESI[TRONIC] EVOLUTION FOR OFF-HIGHWAY VEHICLES

The packages OHW 1, OHW 2, and OHW 3 complement the ESI[tronic] Evolution with information on agricultural vehicles, construction vehicles and engines as well as material handling. This includes setting and parameterization functions, and the diagnosis of hydraulic systems. Technical information on component removal and installation is also included. All off-highway vehicle packages work with KTS Truck modules. They can be used with Bosch DCU 120, DCU 220 and common laptops or PCs.

EFFICIENT DIAGNOSES

The intuitive use of ESI[tronic] Evolution diagnostic software allows particularly fast and target-oriented work on the vehicle. Regular automatic software updates keep workshops up to date for professional service, maintenance and repair of commercial and off-highway vehicles.

NEW KTS TRUCK

MODULAR AND MOBILE: CV DIAGNOSTIC SOLUTIONS

The mobile comprehensive solution Bosch KTS 900 Truck consists of the KTS Truck module and the DCU 220. The ESI[tronic] Evolution diagnostic software has to be licensed separately for operation.

Fast and precise diagnoses at commercial vehicle workshops
With the modular control unit diagnosis from Bosch for commercial and off-highway vehicles, workshops can quickly get their customers back on the road. The upgradable entry-level version KTS Truck or the future-proof KTS 900 Truck all-in-one solution diagnose and maintain all common electronic systems. The ESI[tronic] Evolution software with the packages Truck, OHW 1, OHW 2 and OHW 3 provides all necessary functions and information.

Easy Connect: the adapter kit with a selection of suitable connection plugs for commercial vehicles

Logistics platform L.OS: global, digital, practical

Cloud-based logistics platform L.OS intelligently connects separated solutions

Minimizing operating costs, acquiring drivers and new talents, and reducing CO_2 emissions are just a few of the challenges that companies in the transportation and logistics sector face. Therefore, numerous digital services available on the market provide support in this regard. However, the offering is so huge and confusing that many decision makers in logistics companies are struggeling with information overload. For this, there is a lack of solutions, which can be implemented and used in an easy way. With the logistics platform L.OS, Bosch offers an efficient and reliable option.

L.OS BUNDLES DIGITAL SERVICES

Considering that there are more than 200 telematics providers alone, it is high time for consolidated access to services and data. This is what Bosch L.OS provides. The result is a kind of one-stop shop simplifying the logistics process for drivers, dispatchers, and management by integrating various services. Dispatchers, for instance, can already book a truck parking space during transportation and route planning without having to open separate systems and entering data manually again. The intelligent integration of data across system boundaries makes the use of different solutions much more efficient.

SIMPLE CONNECTIVITY FOR ALL

Bosch L.OS connects digital services provided by Bosch and partner companies integrating them on one single platform. Different aspects of the supply chain can be tracked and monitored centrally. The use of real-time data helps operating the fleet efficiently. Optimizing routes and planning parking spaces makes transportation safer and more punctual. In this way, L.OS improves the transportation process. Invoicing and payments are digitized. Even drivers can be found, trained, and efficiently managed via this system.

MANY COMPANIES ARE ALREADY ON BOSCH L.OS

The L.OS portfolio already includes a range of offerings such as telematics solutions by Geotab or Webfleet, the Bosch Secure Truck Parking platform, digital message-based communication between drivers and dispatchers via ZeKju, the training management system Spedifort, JITpay as a partner for financial services and billing, as well as Tiramizoo to organize last-mile logistics – to name just some examples. In this manner, the smooth and easy user experience of L.OS is constantly being improved.

MAKE WORKSHOP OPERATIONS MORE EFFICIENT WITH L.OS

- Get used commercial vehicles evaluated digitally
- Fill vacancies with skilled personnel

Discover more digital services

Or simply get in touch with hello.l-os@bosch.com

Bosch Aerotwin wiper blades now with plastic-free packaging

The Bosch Aerotwin packaging with cardboard rail made from molded wood fibers is fully recyclable.

BOSCH AEROTWIN WIPER BLADES WITH PLASTIC-FREE PACKAGING

As part of its global sustainability strategy, Bosch now replaced the plastic components of the Aerotwin wiper blade packaging by a material based on wood fibers. These molded fibers now replace the PET plastic previously used.

SOPHISTICATED PACKAGING

Bosch places high demands on its product packaging. Bosch Aerotwin flat wiper blades feature a wiper lip ensuring highly effective windshield cleaning – even under extreme weather conditions. The delicate cutting edge of the wiper lip must be carefully protected during transport. Therefore, the two-part packaging consists of an outer cardboard box and a cardboard tray holding the wiper blades in position and protecting the wiper rubber lip from damage. So far, a PET plastic blister was used for this purpose. Now, molded fibers provide the necessary protection and make sure that the entire packaging can now be recycled as waste paper. Furthermore, it should resemble the shape of the former plastic blister in the best possible manner in order to avoid extensive modifications to automated Bosch packaging lines. The new custom-made packaging insert meets all of these requirements. It is 100% plastic-free and is used for both Bosch Aerotwin sets and single wipers.

AEROTWIN WIPERS AROUND THE WORLD FEATURE THE NEW PACKAGING

The new packaging concept is applied at Bosch's European production sites, where almost the entire volume for the European market is produced. The packed Aerotwin wipers for passenger cars, commercial vehicles and buses are available worldwide. This new concept saves more than 350 tons of plastic waste annually.*

*Bosch research for 2023

PERFORMANCE IN HEAT AND COLD – BOSCH AEROTWIN

The requirement profile placed on wipers for professional use is a complex one: High wiping performance under all weather conditions, longer service life and quiet operation are demanded. Throughout the year, commercial vehicle wipers are subjected to high strains.

For their replacement, Bosch recommends Aerotwin flat wiper blades (lengths: 450–800 mm). Besides their aerodynamic profile, they also feature the innovative Power Protection Plus wiper-rubber technology for long-lasting wiping performance and particularly quiet operation.

Hydrogen engine for CVs

A promising alternative to diesel drives

Thanks to the introduction of hydrogen engines, the vision of climate-neutral CV traffic is now more realistic than ever before. Vehicle platforms, production lines, and components show many technical similarities with the robust and powerful diesel drive technology, but without CO_2 emissions while driving. Bosch is also pushing this development. This year, a hydrogen engine with a Bosch port-fuel injection system will be launched on the roads in India. Further series orders by renowned truck manufacturers in North America, Europe, and East Asia are in progress.

FUTURE RANGE OF POWERTRAINS

In addition to fuel cell applications and battery-electric drives, hydrogen engines represent another option for future powertrain solutions. They stand out for their high robustness – especially under demanding conditions. The basic structure of the fuel, air and exhaust gas systems share numerous established components with existing powertrain solutions. This allows hydrogen engines to leverage synergies with existing diesel and gasoline engines. Besides fuel injection, Bosch as system provider also offers products for engine control, hydrogen storage systems and other powertrain components as part of its original-equipment program.

The hydrogen port-fuel injector ensures precise gas supply to each cylinder of the hydrogen engine.

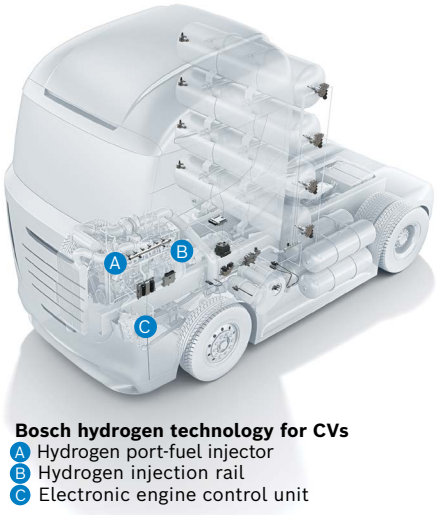
The hydrogen injection rail, equipped with pressure and temperature sensors, evenly directs gas to the injectors.

Bosch‘s new injector for direct hydrogen injection works without additional lubrication.

Tests with the new injector for direct hydrogen injection, first presented by Bosch at Agritechnica 2023 in Hanover, Germany.

SOLUTION FOR LONG-DISTANCE TRAFFIC, CONSTRUCTION AND AGRICULTURAL MACHINERY

Although the tasks of agricultural machinery vary a lot, they all have the diesel engine in common. The operation of agricultural and forestry machinery causes an annual consumption of around two billion liters of diesel in Germany alone.* Therefore, agricultural machinery needs to become more climate-friendly. By means of hydrogen engine solutions, Bosch aims to contribute to the development of an H_2 economy. At the Agritechnica 2023 trade fair, Bosch introduced an injector for direct hydrogen injection operated without any additional lubrication. For this reason, the injector has a sophisticated internal design with media separation and various coatings.



Bosch hydrogen technology for CVs
A Hydrogen port-fuel injector
B Hydrogen injection rail
C Electronic engine control unit

LITTLE NEED FOR CHANGE IN WORKSHOPS

Bosch's hydrogen port-fuel injection allows for a quick market introduction of hydrogen engines and enables retrofitting to existing fleets. Ninety percent of the established development and manufacturing techniques can be used – this also applies to the aftermarket. For workshops, this means they can continue to rely on familiar and reliable Bosch aftermarket solutions, despite the spreading of hydrogen engines.

*information.medien.agrar e.V. (published in Dec. 2023) www.ima-agrar.de

H_2 ECONOMY

CLIMATE PROTECTION CALLS FOR ONGOING INVESTMENTS

Dr. Stefan Hartung, Chairman of the Management Board of the Robert Bosch GmbH

CO_2-efficient technologies are under budget pressure

"[...] We're seeing that climate action is no longer the only issue at the top of the political agenda – especially in the light of complex geopolitics and increasing social tensions in our society. Nonetheless, Bosch is investing heavily in the development of technologies for a carbon-neutral future. This is necessary so that we can be at the forefront of the transformation. We continue to see great opportunities for growth, but some markets are developing too slowly – that's the case for electromobility, and it's no different for hydrogen and heat pumps. Subsidies for CO_2-efficient technologies are under pressure, specifically economic pressure. Climate action requires sustained investment from government, from companies, and from each individual – it is expensive. [...]"

Dr. Hartung at the Bosch annual press conference on April 18, 2024

2024 ETRC: a perfect season opener

BOSCH INSIDE 2024 HAHN TRUCK

- batteries
- crankshaft sensor
- camshaft sensor
- common-rail system
- fuel-filter replacement box
- fuses
- heavy-duty alternator
- intake-manifold pressure sensor
- oil filter
- relays
- ribbed V-belts
- wiper blades

Photo: Bartscher/Team Hahn Racing

Improved safety and sustainability according to Goodyear: the new standard tires provide higher grip, last longer, and reduce tire wear.

Misano: three podium finishes for Hahn at the first round

At the season opener of the 2024 European Truck Racing Championship on Misano World Circuit at the Italian Adriatic coast, Jochen Hahn, the Iveco pilot from Altensteig, had an outstanding racing weekend – achieving three second-place finishes.

NEW REGULATIONS

This year, the first race of the season brought several changes for the teams. A new generation of standard racing tires was introduced and the qualifying sessions were split into three rounds.

Similar to Formula 1, the fastest trucks enter the next round. Hahn seemed totally unimpressed by these changes. Right at the first qualifying session on Saturday, he secured the second place on the grid – right behind the reigning European champion. „We couldn't wait for the season to start and are thrilled that it's finally getting underway," Hahn said cheerfully on Sunday evening. "With all the changes, it was hard to know where we stood, but with three podium finishes and four additional ones at the team rating, it was a fantastic start into the season."

Photo: Bartscher/Team Hahn Racing

Jochen Hahn at the 2024 FIA Motorsport Games

Competing at the Truck Racing Cup on Circuit Ricardo Tormo in Valencia, Spain, from October 23 to 27, this year, ETRC teams will participate at the FIA Motorsport Games for the very first time.

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