

# Truck World

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## Innovations at the IAA 2022

At the IAA Transportation in Hanover, Bosch showed many technical innovations for more efficient and sustainable logistics.



### Individual check

Testing single CR injectors on DCI 200

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### DCU 120

Diagnoses with the professional tablet

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### Winter check

using Bosch service parts

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## EDITORIAL

### BOSCH'S GOAL: SUSTAINABILITY TO THE LAST MILE



#### Dear truck fans,

At IAA Transportation, the leading international trade fair for commercial vehicles, Bosch presented many new developments for the logistics market. The engineers work with full concentration on sustainable solutions without preferring a specific drive concept. By means of the DCI200 and the DCU 120, Bosch also presented two devices at the Automechanika in Frankfurt that make workshop processes easier and faster (from page 4).

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

#### Your commercial-vehicle team

#### Hahn is vice champion



Jochen Hahn once again becomes FIA European Truck Racing Vice Champion



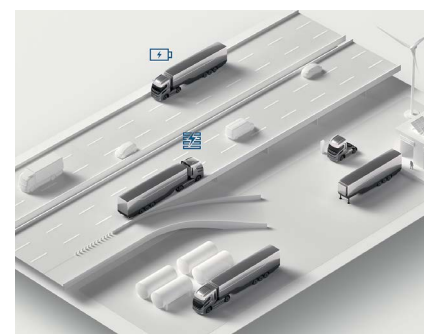
# Bosch innovations

## Sustainable logistics solutions

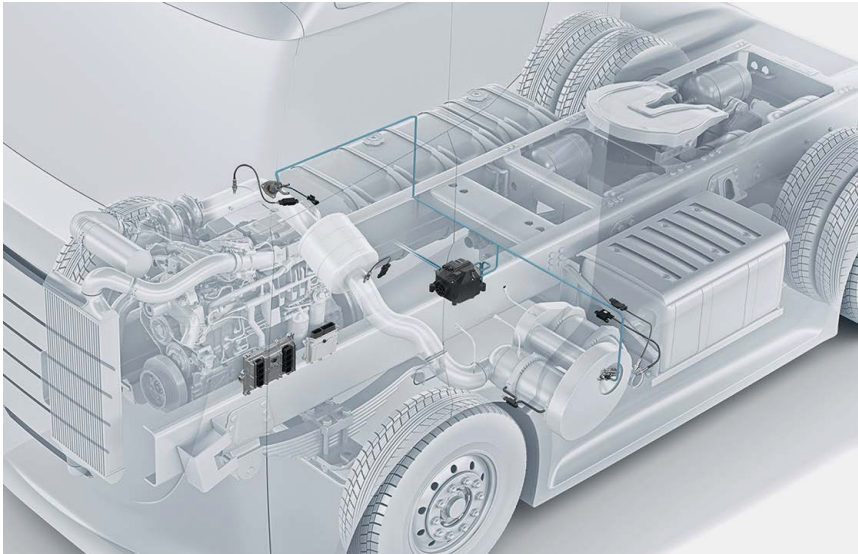
Commercial vehicles keep the economy running. However, an increasing shortage of drivers, a lack of safety in the transport of goods, and more climate action are challenging the industry. Bosch technology for the electrification, automation, and connectivity of commercial vehicles increases efficiency, safety, and reliability in logistics. At IAA Transportation 2022 in Hanover, the supplier of technology and services presented its innovations for the freight traffic of tomorrow – from the first mile to the last. Climate action for freight transport calls for a broad technology offensive. Bosch hopes to play a role in realizing climate-neutral transportation for all vehicle classes. To this end, the company is developing a range of efficient powertrains – from combustion engines to battery-electric and fuel-cell powertrains Bosch makes heavy-duty freight more sustainable.

#### FUEL-CELL POWERTRAIN

Bosch's eDistanceTruck powertrain solutions are designed for heavy-duty long-haul transport. The heavier the freight and the longer the route, the more attractive a fuel-cell powertrain's short refueling times and long range become. If the hydrogen used comes from renewable sources, then the fuel cell's operation is climate neutral, too. Bosch offers not only individual system components, but also



eDistanceTruck powertrain solutions



Helps to further reduce the fuel consumption and emissions – modern diesel engine technology

complete fuel-cell powertrain systems and solutions for H<sub>2</sub> storage systems.

**EFFICIENT DIESEL ENGINE**

Modular common-rail injection systems, effective temperature management, and exhaust-gas treatment with double injection – Bosch diesel technology for commercial vehicles helps truck manufacturers to further reduce the fuel consumption and emissions of their vehicles and meet future emissions requirements.

**FULLY ELECTRIC POWER STEERING**

ServoE augments Bosch’s product portfolio to include a fully electric



Fully electric power steering ServoE

steering system for heavy trucks. Because the steering system operates exclusively with electric servomotors, it does not require hydraulic oil or additional pumps. The system’s redundant design supports assistance functions up to and including automated driving. Its function and steering feel can be adapted to customer-specific requirements.

**SERVOTWIN**

The next generation of the Servotwin electrohydraulic steering system for heavy commercial vehicles combines a hydraulic Servocom steering system with two control units. This means it meets the requirements of automated driving up to and including SAE Level 4.

**REAR-AXLE STEERING SYSTEM**

The next generation of the electrohydraulic steering system for rear axles is a stand-alone power-on-demand system. It enables the steering of three or more leading or trailing heavy-truck axles. Steering the additional axles, if required, reduces the turning radius and tire

wear. Thanks to its compact design, Bosch technology can be adapted to all types of powertrains.



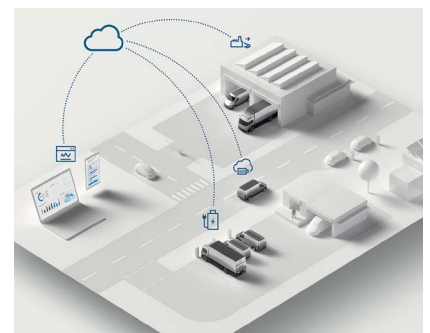
Next generation rear-axle steering system

**HYDROGEN ENGINE**

Bosch is currently examining the marketability of this technology. The basic structure of the fuel, air, and exhaust system, along with numerous system components, can be adopted from existing powertrain solutions. That means, there is a great deal of synergy between the hydrogen engine and familiar diesel and natural-gas engines.

**ELECTRIC RECHARGING**

A Bosch cloud-based software solution seamlessly integrates electric recharging into logistics planning and service operations for electric-vehicle fleets.



Cloud-based electric delivery traffic:

**More information about Bosch at the IAA Transportation**



# DCI 200: New Bosch single common-rail injector test bench



Bosch DCI 200: Single-injector test bench expands the potentials of any workshop

Current emission standards and future regulations increase the importance of testing common-rail injectors of modern diesel engines. Instead of outsourcing these tasks to authorized workshops, independent workshops can now make use of this market potentials using the new DCI 200 injector test bench. **Solely the 1,979 Bosch CRI and CRIN part numbers (as of May 2022) represent almost 830 million common-rail injectors out on the roads worldwide.**



Accessory kits for commercial-vehicle and off-highway common-rail injectors optionally complement the scope of delivery (ill. CRIN 4.2 accessory kit)

## DCI 200: QUICK AND PRECISE INJECTOR TESTING

Due to short set ups and test times of 15 minutes in average as well as the user-friendly and ergonomic design the common-rail injectors are tested efficiently. Using the single-injector test bench, workshops benefit from short setup and testing times as well as from easy operation.

DCI 200 stands out for its top quality, reliability and transparency concerning Bosch injectors thanks to quick and precise measurement routines – including IMA/IQA coding. Sensitive high-pressure hoses have become obsolete thanks to the patented rotating rail. This allows for low maintenance costs and eases the operation. DCI 200 can be used to test latest technologies such as VCC (Valve Closing Control) and NCC (Needle Closing Control) – technologies often used in LCV engines – as well as EURO-5 or EURO-6 injectors.

## SOFTWARE SUBSCRIPTION: STAY UPDATED

A software subscription is a prerequisite for the operation of DCI 200. It allows both activation and flawless operation with regular online updates. Software does not only provide current data, it also ensures straightforward operation and pays off quickly – testing only eight injectors, at least.



Learn more about the DCI 200 at the product video



## DCI 700 INJECTOR TEST BENCH



Bosch DCI 700 is designed for workshops with rather high test volumes. The test bench allows testing CRIN4.2 and CRIN common-rail injectors concomitantly.

# Mobility facilitators: new DCU 120 at CV workshops



DCU 120

Mobile devices ease and speed up processes at commercial-vehicle workshops. Considering the sheer size of buses and trucks, mechanics performing repair and maintenance tasks at commercial-vehicle workshops have to cover larger distances than their colleagues working at passenger-car workshops, for instance. Devices such as the DCU 120 using wireless LAN or Bluetooth connections automatically save several meters of cables a mechanic would have to watch out for while working. Otherwise, they could easily cause tripping hazard.

## SYSTEMATICALLY MOBILE

The flexible DCU 120 diagnostic control unit combined with a KTS Truck communication module is a well-matched system. The intelligent Bosch ESI[tronic] 2.0 Truck diagnostic software supports workshops at diagnosis, maintenance and repair on light commercial vehicles, trucks, trailers and buses. Besides ECU diagnosis, the workshop software also includes technical information such as circuit diagrams, service and repair instructions as well as the

system information of common commercial-vehicle manufacturers. ESI[tronic] 2.0 Truck can optionally be complemented by two off-highway packages. They prepare commercial-vehicle workshops for effective diagnostics on agricultural and construction machinery as well as on engines.

## PRACTICAL AND FAST

The DCU 120 is a practical, lightweight tablet – equipped with a foldable bracket on the back allowing to position it at the right angle or to hook it in to carry it around the workshop. The resilient all-round rubber housing protects the 11.6” touch screen as well as the front and rear cameras. A lithium polymer battery allows for up to eight hours of mobile operation. Via Bosch Connected Repair, this diagnostic solution can be connected to other test devices at the workshop as to speed up the processes. In order to discuss the diagnostic results, the tablet can be handed over to another technician or can even be connected to an external monitor.

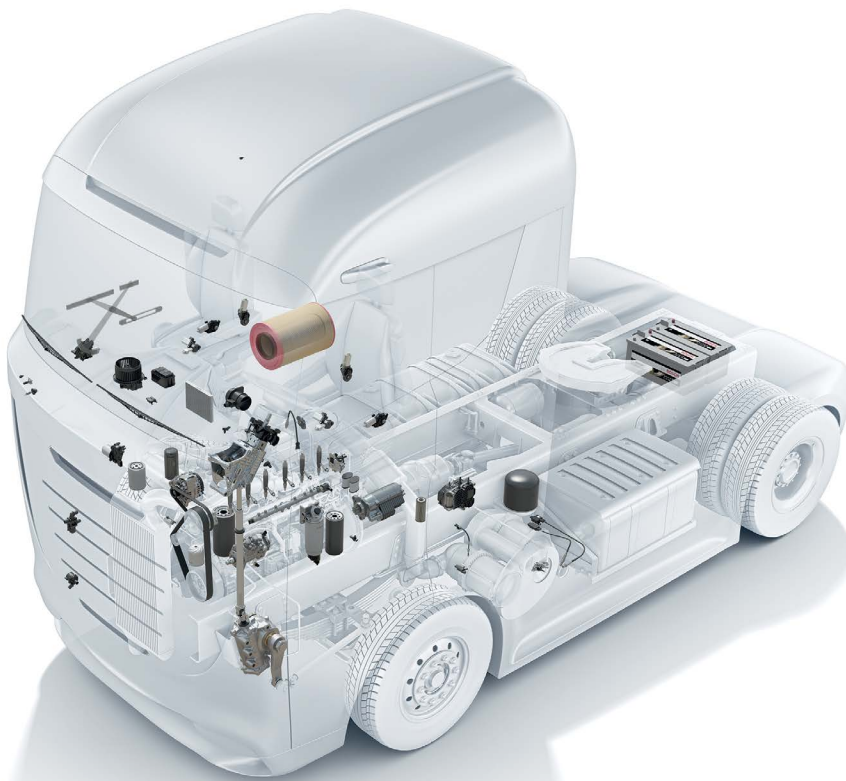


KTS Truck communication module

## Technical data: Bosch DCU 120 diagnostic tablet

Performance characteristics	DCU 120
<b>Diagnostic software</b>	ESI[tronic] 2.0 Truck/agricultural machinery/construction machinery and engines
<b>Online updates</b>	•
<b>ESI[tronic] 2.0 preinstalled</b>	•
<b>Screen size</b>	11.6" Full-HD touch screen (1,920 x 1,080)
<b>Battery</b>	Lithium polymer battery 7.7 V / 5900 mAh / 8h
<b>Operating system</b>	Windows 10 IoT
<b>Memory</b>	8 GB RAM
<b>Storage</b>	256/512 GB SSD
<b>Interfaces</b>	WLAN 802.11a/b/g/n/ac, 2 x USB 3.0, LAN 10/100/1,000 Mbit, micro HDMI, Audio, Bluetooth 5.0
<b>Camera</b>	Front/rear

# Bosch spare parts for commercial-vehicle electrical systems



Bosch spare parts for commercial vehicles

Engine cooling, safety and comfort functions of modern commercial vehicles are powered electrically. This allows the driver to fully focus on the surrounding traffic. For professionals operating commercial vehicles around the clock, electrical equipment is of major importance for safety and comfort.



## WINDOW LIFTERS

Window lifters of commercial vehicles are controlled by compact gear motors. The well-proven Bosch drives are designed for a variety of applications and

produced to comply with high quality standards.



## FAN MOTORS

Robust and powerful gearless DC motors – equipped with a fan module – are used for heating and cooling systems of commercial vehicles. These products are designed for long service lives.



## ELECTRIC COOLANT PUMPS

Bosch electric coolant pumps ensure ad-

equated coolant flow rates. The Bosch range comprises electric coolant pumps for a variety of commercial vehicles.



## SOLENOID VALVES

Bosch solenoid valves reliably control the coolant flow rates in secondary powertrain coolant circuits as well as in cabin heating circuits.



## RELAYS

The Bosch range of relays comprises different types reaching from compact micro and mini relays to power relays. Switching nominal currents of up to 350 A, they control motors, starters and large consumers among others.



## SEAT ACTUATORS

Bosch actuators with a modular design are used for different electrical seat adjustment purposes at commercial vehicles.



## WIPER MOTORS

Robust, powerful and reliable performance: Bosch wiper motors with gear stand out for their long service life.

# Winter check with Bosch service parts



Bosch wiper blades, batteries, automotive bulbs, air-drier cartridges and cabin filters

Every trucker and fleet operator knows: Winter can be tough – for drivers, vehicles and dispatchers. That's why vehicles should be checked thoroughly and on time before the cold season sets in. Wearing parts posing any risks of failure should be replaced – if required, in advance. Doing so, relying on high quality will pay off in the medium run. Risking breakdowns or even safety are neither an option nor an alternative.

## BOSCH TRUCK SPARE PARTS

Under sub-zero temperatures, wiper blades are subject to extreme strains. Whenever having to replace them, Bosch recommends durable and quiet Aerotwin flat wiper blades – available in lengths between 500 and 750 mm – featuring an aerodynamic profile and innovative Power Protection Plus wiper-rubber technology. Particularly resilient **Twin** wiper blades (400–1,000 mm) feature a metal bracket system and triple

corrosion protection. In terms of batteries, deep discharge is a common cause of failure. Powerful and durable Bosch TA, TE, T5, T4 and T3 truck batteries are reliable Bosch power suppliers.

In autumn, defective truck lighting is a common hazard on the roads. By means of its product lines Trucklight, Trucklight Maxlife, Xenon HID, Xenon Gigalight HID and Xenon White HID, Bosch offers durable and robust 24-volt bulbs for commercial vehicles.

At the same time, autumn is also the best time for the annual replacement of air-drier cartridges. Prepared in this manner, no frozen water can affect the air-pressure or hydraulic functions.

Cabin filters prevent windshields from fogging up and protect the A/C system against deposits. Recommended replacement: after 120,000 km at latest or annually. In addition, the vehicle manufacturer's specifications must be observed.

## ETM READERS' POLL

### FOUR ETM BEST BRAND AWARDS FOR BOSCH PRODUCTS



Andreas Wegner (center), Channel Manager Truck at Robert Bosch GmbH, received the awards at the international ADAC Truck Grand Prix on Nürburgring.



### BOSCH HONORED IN FOUR CATEGORIES

For the ninth time, WERKSTATT aktuell asked for the expertise of workshop and service experts at its readers' poll. Concerning commercial-vehicle servicing, 98 brands competed against each other in 16 categories at the "Best Brands 2022" poll. More than 700 workshop experts took part. They voted and **Bosch products achieved the first rank in the categories** starter batteries for 24-volt systems, battery chargers, cross-brand OBD diagnostics and A/C servicing. Bosch sincerely thanks the readers of WERKSTATT aktuell for their highly qualified compliment.



\*Detailed results of the readers' poll at [www.eurotransport.de](http://www.eurotransport.de) (German only)

# Jochen Hahn becomes ETRC vice champion



## BOSCH INSIDE 2022 HAHN TRUCK

- ▶ Batteries
- ▶ Crankshaft sensor
- ▶ Camshaft sensor
- ▶ Diesel injection system with EDC7U control unit and unit injectors
- ▶ 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

Jochen Hahn and the enthusiastic fans in Jarama at the FIA European Truck Racing Championship

## In 2022, Hahn earned another title at the FIA ETRC

Under beautiful weather conditions and in front of crowded stands, Jochen Hahn – the pilot from Altensteig – once again finished second at the 2022 FIA European Truck Racing Championship. The final round of the season on Circuito del Jarama in Spain couldn't have been any more thrilling. As a result of an accident at the penultimate race, Hahn's advantage over his competitor Sascha Lenz on the scores dropped to 4 points. It took his team two hours to bring the Iveco S-Way back into racing con-



Photo: Bartscher/Team Hahn Racing

Race 3 left a lot of work for the technicians

ditions before he started the final race from the last position. Lap by lap, Hahn ranked up one position after another. About half way through the race, he was back on track for becoming vice champion.

“The final laps of the season were excitement as pure as it gets.” Jochen Hahn was overwhelmed with joy as he summarized the last round on Sunday evening. “The last day of racing action couldn't have been any more dramatic. I'm particularly proud about our team who managed to get the truck back on track in absolutely no time at all. And, of course, we also want to thank all of our partners and sponsors – none of this would have been possible without your support!”  
[www.team-hahn-racing.de](http://www.team-hahn-racing.de)

## IMPRINT

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