

Truck World

A Bosch Automotive Aftermarket magazine | Edition 27 | March 2020

In the comfort zone!

The new Bosch TA AGM battery reliably supplies modern CVs that have high energy requirements – even in stationary operation



Dream jobs

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EDITORIAL

POWER SUPPLY AND MANDATORY BREAKS



The new TA AGM battery supplies consumers in trucks

Dear truck fans,

Every trucker needs to unload their vehicle promptly. Time frames at loading ramps are often short, and stress levels are high. Legally regulated rest periods are therefore effective at breaking up journeys and avoiding the danger of fatigue at the wheel. Modern commercial vehicles are well-equipped for breaks. Yet hotel and comfort functions require a lot of power. With this in mind, Bosch has added the new TA AGM battery to its portfolio – for comfortable breaks and reliable starts.

On behalf of the Commercial Vehicle team, I hope you enjoy reading this issue and wish you safe travels into an interconnected workshop future!

Tobias Weiss

The 2020 FIA European Truck Racing Championship begins
April 25–26, Hungaroring

NEW BOSCH TWIN FOR IAM

Since late 2019, Bosch has been offering workshops Twin wiper blades under order number **3 397 015 453 FUP** for the new MP5 variants of the Mercedes-Benz Actros, Antos, and Arocs (SOP 9/2019).



All-round supplier

High-performance CV battery TA AGM

Professional truckers need to keep moving – usually for extended periods. Their commercial vehicles become like a second home over days, weeks, or even months. Equipment based on power-hungry electrical technology turns modern commercial vehicles into a mobile rest area for long-haul drivers. The numerous hotel and comfort functions, such as auxiliary air conditioning and heating, a refrigerator, microwave, or television improve working conditions for truckers, yet they place a heavy burden on the batteries – even in stationary operation. Numerous breakdown statistics – in which depleted and aged batteries top the list of causes – prove that such increased requirements can only be satisfied with a high-performance battery.

NEW TA AGM SUPPLIES COMFORT AND HOTEL FUNCTIONS

Bosch has now added an extremely capable battery for commercial vehicles to its range in the shape of the new 12-volt TA AGM starter battery. Bosch's high-performance, vibration-resistant, and maintenance-free commercial-vehicle batteries are specifically designed for supplying a multitude of consumers – and for reliable starts. The Bosch TA AGM supplies consumers in commercial vehicles reliably over long periods – even in stationary operation. In doing so, the risk of failures and unnecessary downtimes is reduced.

LEAK-PROOF AND MAINTENANCE-FREE

The new TA AGM truck battery with AGM (absorbent glass mat) technology was developed entirely for the specific demands of long-haul



Bosch TA battery (12V, 210Ah, 1,200A) with AGM technology for commercial vehicles

operations. With this battery type, the electrolyte is held entirely within a fiberglass mat. This makes it absolutely leak-proof and maintenance-free.

EXCEPTIONAL CYCLE RESISTANCE

The TA AGM also demonstrates its superiority in terms of cycle resistance, which is up to six times higher than that of conventional lead-acid batteries at a discharge depth of up to 80 percent. The risk of potential failures caused by cyclical loads is reduced; the constant output in slow-moving traffic and stationary operation is assured, as are reliable starts.

HIGH VIBRATION RESISTANCE

Over time, the space allocated to components in the engine compartments of modern commercial vehicles has changed. AdBlue technology and SCR catalysts need space close to the engine. For this reason, it is ever more common for the battery to be installed near the rear axle, where intense vibration prevails. Like the TE EFB battery, the TA AGM is ideal for this application thanks to its high vibration resistance as per DIN EN

50342-1. Among other things, this standard defines the highest vibration resistance tested during stress and vibration tests in laboratories – on a horizontal, vertical, and diagonal level.

STRONG IN COLD STARTS AND START/STOP SYSTEMS

The TA AGM boasts high cold-starting performance. With a rating of 1,200 A (CCA) and a capacity of 210 Ah, it is a reliable energy supplier for assured cold starts, in addition to all comfort and hotel functions. Due to the micro-cycle resistance associated with the AGM technology, it is also suitable for functions like start/stop systems and sailing/coasting without assistance from the engine.

As the most high-performance battery, the TA AGM complements the existing Bosch range of EFB batteries and conventional lead-acid batteries for commercial vehicles by adding a new, reliable premium product in OEM quality.

THE RANGE OF BATTERIES FOR CVs

BOSCH'S POWERFUL STAR PRODUCTS COVER A WIDE RANGE



BOSCH TA AGM BATTERY

The most powerful battery for commercial vehicles in Bosch's product range with AGM technology and patented PowerFrame® – it supports start/stop systems and was specifically designed for advanced comfort and hotel functions with auxiliary air conditioning/heating. This enables a reliable supply of energy to satisfy the high requirements of long-haul commercial vehicles, even when these are on the road for multiple days – or with a low state of charge.

BOSCH TE EFB BATTERY

Extremely powerful, vibration-resistant

CV battery with EFB technology and patented PowerFrame® (grid) for an optimized current flow and less corrosion – ideal for the enormous amount of energy required for numerous hotel functions, on long-haul routes, or for off-highway/heavy-duty operations.

BOSCH LEAD-ACID BATTERIES

Very high-performance, cycle-resistant **T5 SLI** CV starter battery with patented PowerFrame® for optimized current flow and reduced corrosion – for the high electricity requirements of the long haul. The range of lead-acid batteries is complemented by the **T4 SLI** for moderate energy requirements and the **T3 SLI** for vehicles requiring less energy.

Alltrucks Jobmarket, the recruitment portal for CV experts



have been able to use the Alltrucks Jobmarket to post their own job adverts on established regional and national recruitment portals (Step-Stone, Monster, etc.) at discounted rates. Alltrucks also supervises and consults with partners to boost their professional image. In addition, centralized print, online, and social-media advertising campaigns are conducted to appeal to applicants directly.

www.alltrucks-jobmarket.com

Workshop specialists are in high demand. Alltrucks has more than 700 partners: In order to help them reach out to qualified employees, Alltrucks has expanded its online presence to include a recruitment market for all kinds of commercial-vehicle specialists. Alltrucks Jobmarket – as the pan-

European platform is called – shows an up-to-the-minute overview of all vacant jobs within the network.

QUICK AND EASY – PARTNERS REACT POSITIVELY

The feedback from Alltrucks' network has been positive: The e-recruitment market is quick and easy to use. More than 130 Alltrucks partners have registered a company profile since its launch. Today, applicants can choose from over 100 advertised vacancies to find the right role in their preferred region. They can communicate easily and directly in their own language and also access information about the workshop placing the advertisement. Alltrucks partners can get in contact via the website.

ONLINE RECRUITMENT PORTALS AND EXTERNAL ADVERTISING

However, the Alltrucks Jobmarket is going one step further. Since September 2019, Alltrucks partners

SPECIALISTS WANTED!

Qualität ist Mehrwert (“quality is added value”) – an initiative started by Germany's leading parts manufacturers – surveyed 306 employees of commercial-vehicle workshops on the sector's current challenges between July and August 2019.

62% named **a shortage of specialist staff** as one of the major challenges of the next five years.

Almost 80% of outlets attempt to attract specialists by guaranteeing greater **individual freedom and flexibility**.

The most frequently implemented means (62%) of addressing this shortage within the company is providing employees with **further training**.

58% opt for traditional **job advertisements**.

Nonetheless, around 14% are more proactive still when hunting for qualified staff and are already looking to **other European countries**.

qualitaet-ist-mehrwert.de



USING THE JOBMARKET IN FIVE SIMPLE STEPS

1. Create a company profile
- ▼
2. Enter a point of contact
- ▼
3. Configure job advertisements
- ▼
4. Manage applications
- ▼
5. Sound out the recruitment market

Bosch Denoxtronic filters: clean AdBlue for optimum dosing



Bosch Denoxtronic filters (from left to right): 6HD, 6.5, 2.2, 2.1, 1

The Bosch Denoxtronic system is an important element of exhaust-gas treatment systems in commercial and off-highway vehicles. With assistance from the pump and dosing module, it controls the injection of AdBlue into the flow of exhaust gas. The appropriate quantity of AdBlue is injected based on the engine's operating state and exhaust values. A chemical reaction in the SCR (selective catalytic reduction) catalyst reduces pollutant emissions in the exhaust gas. In the course of this reaction, nitrogen

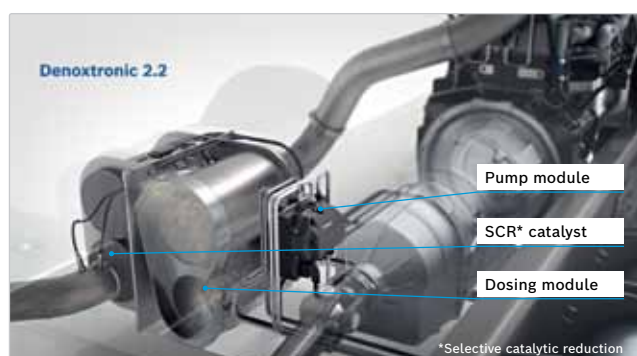
oxides and ammonia are converted into water and nitrogen. AdBlue is a solution comprising 32.5% urea and 67.5% demineralized water. Bosch Denoxtronic filters reliably cleanse the AdBlue of dirt particles, assist with optimum dosing, and protect the Denoxtronic system at the same time. The Denoxtronic filter must be changed at regular intervals as per the manufacturer's specifications. There is now a video tutorial that describes how to change the filter.

www.youtube.com/watch?v=w-BNDcBn178

Denoxtronic service kits for CVs

Model/kit	SNR	Vehicles
Denoxtronic 1 service kit	1 457 436 042	DAF, MAN, IVECO, Scania, Volvo
Denoxtronic 1 repair kit	F 00B H40 025	DAF, MAN, IVECO, Scania, Volvo
Denoxtronic 2.1 service kit	1 457 436 006	Case, IVECO, KHD, Renault, Volvo
Denoxtronic 2.1 repair kit	1 457 030 020	Case, IVECO, KHD, Renault, Volvo
Denoxtronic 2.2 service kit	1 457 436 088	Cummins, IVECO, Mack, Nissan, Renault, Volvo
Denoxtronic 6.5 service kit	1 457 436 039	Perkins, IVECO, CNH, JCB, Daimler India, CAMC (China)
Denoxtronic 6HD service kit	1 457 436 057	MAN, John Deere, IVECO, CNH

Video: a fly-through of the exhaust-gas treatment system, Denoxtronic generations, and filter replacement



Overview of the Denoxtronic 2.2 system in the vehicle: When the engine is running, the flow of exhaust gas and AdBlue becomes visible, and the system's components are highlighted and labeled.

Denoxtronic filters from Bosch Well-equipped for demanding tasks:

Frost resistance due to compressible compensating element with sealing function

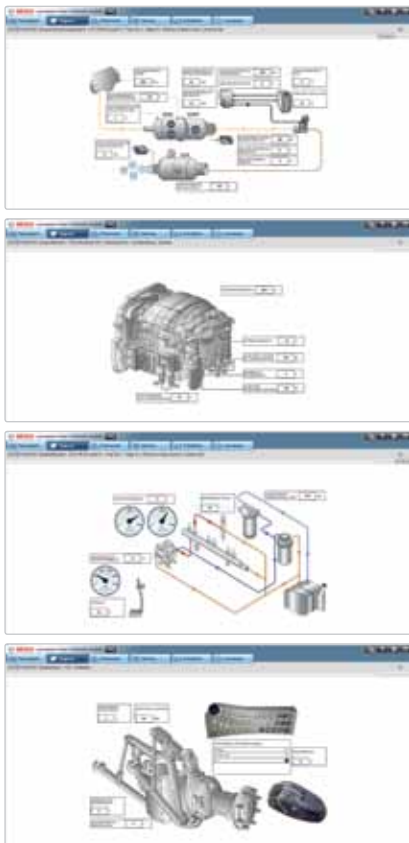
High particle-separation rate

Chemical resistance to AdBlue

High dirt-absorption capacity

Cut-away view of the filter in the Denoxtronic 2.2 with compensating element: The function and benefits of the components are described.

Off-highway training courses: Expertise helps workshops prosper



Training courses on OHW vehicles: diesel injection technology, exhaust-gas treatment, and hydraulics

Commercial vehicles used in off-highway (OHW) applications – whether agricultural/construction vehicles, forklift trucks, municipal and forestry vehicles, or vehicles/units driven by industrial engines – are becoming ever more complex. For workshops dealing with commercial vehicles, new technologies represent both a challenge and an opportunity. Only with the requisite specialist knowledge can diagnostics, maintenance, and repairs on current vehicle models be conducted effectively and economically. Trained employees are obviously a clear advantage for workshops.

This is why Bosch has developed a series of special training courses for them.

USING KTS TRUCK AND TRUCK ESI[TRONIC] 2.0 EFFICIENTLY

This course focuses on efficient use of KTS Truck and Truck ESI[tronic] 2.0 (information types OHW1/OHW2). To this end, the installation and commissioning of software and hardware are practiced, while the application options and structure of Truck ESI[tronic] 2.0 are explained. In the practical section, component inspections are conducted using wiring diagrams and maintenance schedules, and vehicle connection variants are explained. Participants also familiarize themselves with the possibilities of control-unit diagnostics and extended tester functions (e.g., injector replacement).

DIESEL INJECTION TECHNOLOGY

This course concerns the safe handling of electronic diesel systems (e.g., common rail, UI, UP). The function and structure of high-pressure pumps, injectors, sensors, and actuators are explained in this context. Using Truck ESI[tronic] 2.0 and KTS Truck, participants conduct tests on the low- and high-pressure sides of the fuel system.

EXHAUST-GAS TREATMENT

Knowledge of the assemblies, structure, and the function of components underly the safe handling of modern exhaust-gas treatment systems. This

course explains the interplay between the particle filter and exhaust-gas recirculation and the EDC, and also outlines the structure and function of SCR systems. SCR systems are tested using Truck ESI[tronic] 2.0, KTS Truck, and hydraulic measurement equipment.

OFF-HIGHWAY SYSTEMS SPECIALIST COURSE (MOBILE HYDRAULICS)

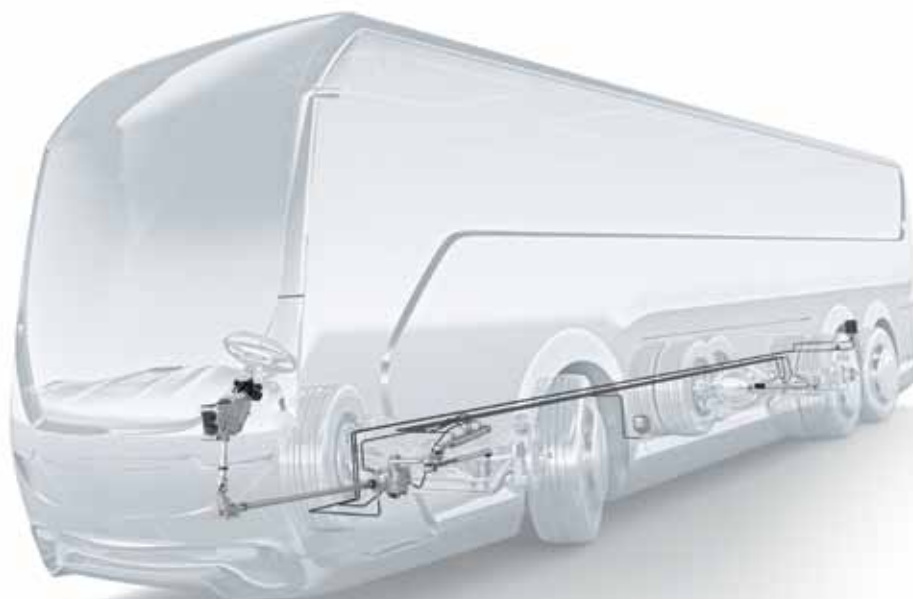
Service technicians and operators of electronically actuated hydraulic equipment need to understand the fundamentals of mobile hydraulics and mobile electronics. Participants in the course run by Bosch Rexroth in Elchingen learn how to assess the condition of an electronically actuated hydraulic system using mobile work machinery. The course includes practical work on the wheel loader in addition to troubleshooting on current mobile-hydraulic systems and use of KTS Truck for diagnostics on vehicle components.

BOSCH SERVICE TRAINING COURSES

Technicians can register easily through the Bosch Automotive Campus. The maximum number of participants is limited to twelve to ensure better learning outcomes. Two agricultural vehicles and two construction vehicles with current injection-technology systems (common rail) and exhaust-gas technology (SCR and AdBlue) will be available. Participants will work on each vehicle in teams. The course has equal proportions of theory and practice.

Further information and registration: www.automotive-campus.com

An expanded range of parts for rear-axle steering systems



Schematic diagram of a rear-axle steering system for coaches

Rear-axle steering systems are subjected to extremely high levels of stress. This is especially true in the case of special vehicles with multiple axles and heavy bodies or vehicles with very heavy loads, such as oil tankers, dump trucks, or garbage trucks. Due to the elevated risk of damage, their components must be regularly inspected in commercial-vehicle

CAUSES OF STEERING IMPAIRMENT

- ▶ External mechanical damage
- ▶ Leaking hydraulic fluid and water ingress due to damaged bellows on the working cylinders or on the sealing rings
- ▶ Leakage due to contamination in the system
- ▶ Use of fluid with incorrect specifications
- ▶ Thermal overload

workshops and replaced if necessary. Bosch has now added 144 new part numbers to its range of spare parts for rear-axle steering systems and add-on parts for commercial vehicles. The expanded portfolio includes working cylinders, ball joints, fluid reservoirs, hydraulic accumulators, flow-limiting valves, pitman arms, valves, and flow indicators. Spare parts can be supplied quickly thanks to “make-to-stock” production and availability in over 80 countries. Combined with the quick, easy replacement, this helps to minimize the very costly downtimes that special vehicles spend in the workshop.

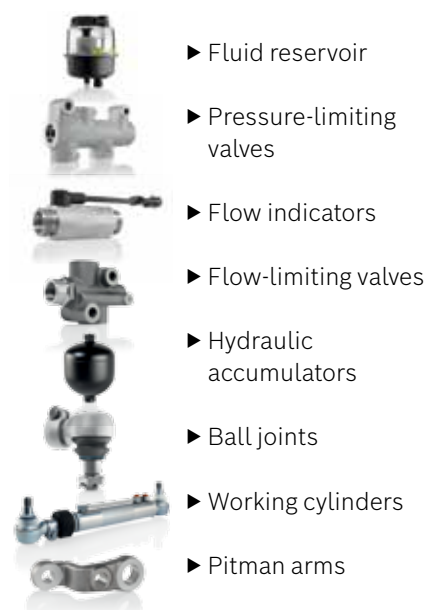
HIGH QUALITY STANDARDS FOR REAR-AXLE STEERING SYSTEMS

In hydraulic rear-axle steering (RAS) systems, the steering movements of the front axle are hydrostatically trans-

mitted to the rear axle. This movement is transmitted by a master cylinder on the front axle via hydraulic hoses to the centering cylinder mounted on the rear axle. In the case of electronically controlled rear-axle steering systems (RAS-EC), a hydraulic control valve controlled by the electronic control unit governs the rear axle’s motion by means of a centering cylinder.

Rear-axle steering systems improve driving dynamics, minimize the turning circle, and reduce tire wear. As safety-critical vehicle components, steering systems are subject to stringent quality requirements. That is why Bosch also manufactures spare parts and add-on parts for workshops’ requirements to the same quality standards as original equipment.

INCLUDED IN THE RANGE OF SPARE PARTS



- ▶ Fluid reservoir
- ▶ Pressure-limiting valves
- ▶ Flow indicators
- ▶ Flow-limiting valves
- ▶ Hydraulic accumulators
- ▶ Ball joints
- ▶ Working cylinders
- ▶ Pitman arms



Photograph: IVECO

Let the desert shake: 2020 Dakar Rally in Saudi Arabia

BOSCH TECHNOLOGY IN IVECO POWERSTAR/TRAKKER*

Camshaft sensor • ribbed V-belt • crankshaft sensor • intake-manifold pressure sensor • EDC 7 diesel injection control unit • injectors • high-pressure diesel injection pump • air-filter insert • fuel-filter replacement box • oil filter • Denoxtronic pump module • Denoxtronic dosing module • wiper blades • cabin filter • air-drier cartridge

* Technical equipment may differ in certain countries.

More than 800 horsepower: the PETRONAS De Rooy IVECO team's IVECO Powerstar at the debut of the Dakar Rally in the Middle East

All PETRONAS De Rooy IVECO trucks cross the finish line

Twelve days of competition, five thousand timed kilometers, and more than fifty hours' full throttle for the racing trucks. This is how the 2020 Dakar Rally in Saudi Arabia shaped up over two weeks for the PETRONAS De Rooy IVECO team.



Photograph: IVECO

Janus van Kasteren in his IVECO Powerstar

After more than 7,800 kilometers, all four IVECO trucks crossed the finish line, with an overall sixth-place ranking for Janus van Kasteren. The race was fiercely contested, with the trucks and equipment alike subjected to

extreme loads. Team Leader Gerard de Rooy, who was not fielded as an active driver this year due to a back injury, was clearly satisfied with the performances. The two-time winner of the Dakar Rally highlighted the outstanding re-

sult by his fellow Dutchman, Janus van Kasteren, whose sixth-place finish was the best ranking of anyone in the team. Albert Llovera (15th place) and Michiel Bex (16th place) were new to the team. Attention will now turn to the 2021 race, which will once again take place in the Middle East. After in-depth analysis and evaluation of this year's performances, the PETRONAS De Rooy IVECO team will start preparing for the races in the year to come.

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