



From a single source:  
**Diagnostics, parts** and  
**services** for vans and trucks



**BOSCH**

Invented for life

# For professionals on the road: Diagnostics, spare parts and accessories from a single source

Drivers of 40-ton trucks and LCV (light commercial vehicle) all know how important commercial vehicle quality is to their day-to-day business. And Bosch can be relied upon to provide you with the replacement parts, testing systems and service needed by the workshop of the future.



## **Diesel systems** P. 4–6

- ▶ Genuine original equipment components
- ▶ Modular design for ease of servicing
- ▶ Bosch is a service provider for: Cummins, Deutz, Iveco, MAN, Mercedes-Benz, Renault, Volvo
- ▶ Also available as part of the eXchange range

## **Bosch Diesel Center and Bosch Diesel Service** P. 7–8

- ▶ Expertise and service from the diesel specialists
- ▶ Quick, top quality repair work
- ▶ Professional remanufacturing for high reliability

## **Bosch eXchange** P. 9–11

- ▶ Up to 30 % cheaper than new parts
- ▶ Extensive range from a single source
- ▶ Professional remanufacturing for high reliability

## **Starters and alternators** P. 10

- ▶ Hardwearing and a long service life

- ▶ Constantly monitored top quality
- ▶ Universal range for all standard vehicles
- ▶ Optimum power-to-weight ratio in combination with extremely compact design

## **Batteries** P. 12–13

- ▶ Top performance to satisfy all requirements
- ▶ Reliable power supply
- ▶ Sealed and 100% leak-proof
- ▶ Highly vibration-resistant

## **Bosch Aerotwin and Bosch Twin** P. 14

- ▶ Excellent wiping performance and perfect cleaning
- ▶ Quiet wiping
- ▶ Long service life thanks to wear-resistant wiper blade edge

## **Filters** P. 15

- ▶ For all standard types of commercial vehicle and engines
- ▶ Long service life and top filtering performance



Common Rail Systeme



Bosch Diesel Center  
Bosch Diesel Service



Starters and alternators



Batteries



Bosch Aerotwin / Bosch Twin



**Vehicle electronics** P. 16

- ▶ Comprehensive range
- ▶ Original-equipment quality

**Auxiliary lamps** P. 17

- ▶ Comprehensive range to suit all requirements
- ▶ Lamps in a modern design, high-quality workmanship and flexible installation solution
- ▶ Heavy-duty quality for all commercial vehicles: Rugged, long service life and high light output
- ▶ **New!** Trucklight Maxlife 24-V bulbs – long-lasting and robust for off-road and the highway

**Compressed-air fanfares and supertone horns** P. 17

- ▶ Long service life and sturdy, chromium-plated design
- ▶ Voltage: 12 V and 24 V
- ▶ Comprehensive range

**Drive belts** P. 20

- ▶ For all common commercial vehicles, vans and LCVs
- ▶ **New!** Ribbed V-belts for commercial vehicles

**Testing systems** P. 21–23

- ▶ Diesel system testing EPS
- ▶ **New!** ECU diagnosis KTS
- ▶ Vehicle system analysis FSA
- ▶ Wheel alignment FWA
- ▶ Air conditioning service ACS

**Bosch range for LCVs**



**Brake systems and replacement parts** P. 18–19

- ▶ One of the world's leading manufacturers of brake systems
- ▶ Outstanding quality
- ▶ Perfectly matched components

- ▶ Tire change equipment TCE
- ▶ Wheel balancing machines WBE
- ▶ Emission analysis BEA
- ▶ Battery service BAT
- ▶ Vehicle lift equipment VLE
- ▶ Brake system analysis BSA



Filters



Vehicle electronics



Auxiliary lamps



Air horns



Drive belts



Diagnostic systems

# The future of diesel

You can rely on the premier supplier



For both innovative diesel injection systems and conventional diesel components – Bosch can provide specialist assistance for rapid, expert and economical servicing and repair of diesel vehicles.

## **Tailor-made system expertise**

Bosch develop diesel components specifically for integration into a particular system and tailor-made to suit each series and vehicle model. Customers benefit from the broad-based expertise of a single supplier of engine, air and emissions management concepts. The perfect interaction of starting systems, pumps, control systems, injectors, nozzles, sensors and filters ensures top performance combined with the lowest possible consumption and emission values.

# New diesel systems

## High pressure for optimum results

Common rail systems have long since become state-of-the-art in modern commercial vehicles. This offers vast potential for every workshop, as diesel engine components are also subject to wear. Bosch can supply component packages for the common rail systems of almost all vehicle manufacturers.

### Denoxtronic®

- ▶ Up to 85 % reduction in NO<sub>x</sub> emissions in combination with SCR catalytic converters
- ▶ Together with the SCR system, the Euro 4 and Euro 5 particle limit values can be obtained without the need for a particulate filter.

### Common rail high-pressure pumps

- ▶ Broad range for every generation of common rail system
- ▶ Repair work can be performed at a Diesel Center
- ▶ Exchange range

### Common rail injectors

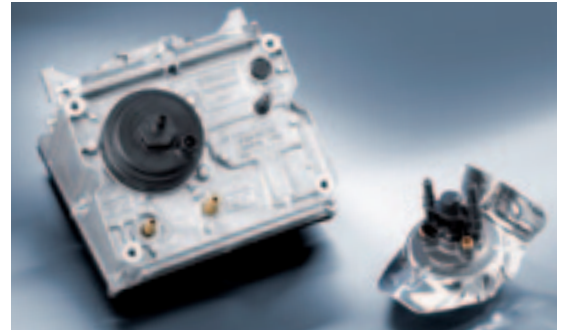
- ▶ Solenoid-controlled injectors
- ▶ Piezo injectors for the third common rail system generation
- ▶ Repair work can be performed at a Diesel Center
- ▶ Exchange range

### Unit injectors

- ▶ A unit consisting of pump and injector
- ▶ Exchange range, repairs

### Sensors

- ▶ Absolute pressure sensor
- ▶ Rail pressure sensor
- ▶ Differential pressure sensor
- ▶ Accelerator pedal sensor
- ▶ Temperature sensor
- ▶ Camshaft / crankshaft speed sensor
- ▶ Hot-film air mass meter
- ▶ Knock sensor



DENOX 2 supply and dosing module



Common rail high-pressure pump



Common rail injector



Unit injector



Knock sensor

# Conventional diesel drive systems

## Successful technology from a reliable supplier



The winning characteristics of commercial vehicles with diesel engines are their high mileage capability coupled with a long engine service life. You can impress customers by offering competent service and low-cost maintenance with the support of a supplier you can rely on: Bosch. No other name is so closely associated with the development and high performance of diesel systems.

### **In-line and distributor injection pumps**

- ▶ Full range of in-line and distributor injection pumps
- ▶ Comprehensive eXchange range for the distributor injection pumps of the major vehicle manufacturers

### **Plunger-and-barrel assemblies and delivery valves**

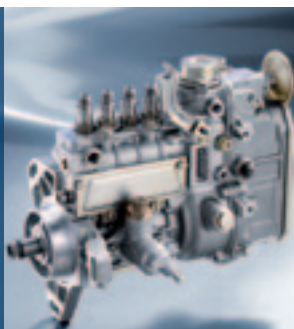
- ▶ More than 90% global market coverage
- ▶ Bosch is Europe's sole supplier of original equipment in-line pumps and thus also of plunger-and-barrel assemblies and delivery valves

### **Nozzle-and-holder assemblies**

- ▶ Broad market coverage for commercial vehicles
- ▶ Original equipment quality
- ▶ Full repair range

### **Nozzles**

- ▶ Broad market coverage
- ▶ Range incorporates nozzles for non-Bosch systems
- ▶ Original equipment quality
- ▶ Forgery-proof packaging



Inline pump



Nozzle-and-holder assemblies



Nozzles



Plunger-and-barrel assemblies and delivery valves

# Bosch Diesel Center and Bosch Diesel Service

## The diesel repair specialists

High-quality test equipment, high precision, special tools and the expertise of diesel specialists are all essential for repairing modern diesel systems.

### Professional diagnosis and repair

The Bosch Diesel Center and Bosch Diesel Service experts can be relied upon to find the right answer to all diesel technology problems of your vehicle. Highly qualified technicians carry out diagnosis and repairs on Bosch diesel injection pumps using state-of-the-art Bosch test equipment.

### What your Bosch Diesel workshop has to offer:

- ▶ Market leadership in the fields of diesel system testing and component repair
- ▶ Expert servicing and repair of all diesel systems
- ▶ Repair concepts for workshops, corporate customers and fleet operators
- ▶ All work performed by experienced, highly qualified diesel specialists
- ▶ Bosch spare parts in original equipment quality
- ▶ Diagnosis and system testing with state-of-the-art Bosch test equipment
- ▶ Warranty on parts and labour
- ▶ Minimized repair times for vehicles in non-stop operation



**Bosch Diesel Center**  
Your specialist for all diesel-powered vehicles

# Benefit from our expertise and System Know-how from Bosch



Commercially used vehicles have to earn their keep. That applies equally to commercial vehicles with a 40-ton gross weight and to taxis and smaller delivery vans. "Repair solutions in line with the age of the vehicle" is the key factor: Repairing defective diesel engine assemblies or components is one of the main strengths of Bosch Diesel Center and Bosch Diesel Service garages.

## **Bosch Diesel Service: Professional component repair for all mechanical diesel systems**

- ▶ Diagnosis and system testing
- ▶ Professional component repair
- ▶ Servicing and repair of the mechanical diesel systems in your vehicle

## **Bosch Diesel Center:**

### **Your diesel specialist for all diesel systems**

- ▶ Diagnosis and repair for diesel vehicles
- ▶ Checking, adjustment and repair of all Bosch in-line and distributor injection pumps
- ▶ Diagnosis and repair for all Bosch high-pressure diesel injection systems
- ▶ Checking and optimization of performance and consumption
- ▶ Exhaust emission testing as required by law

## **Our diesel specialists provide component repair**

### **e.g. for the following systems:**

- ▶ Commercial vehicle common rail high-pressure pump (CP2)
- ▶ 2nd generation common rail high-pressure pump (CP3)
- ▶ Common rail injectors (CRI/CRIN)
- ▶ Nozzle-and-holder assembly (DHK)
- ▶ Commercial vehicle unit injector (UIN)
- ▶ Unit pump (UP)
- ▶ In-line injection pump (RP)



Common rail injector



Hot-film air-mass meter



Common rail high-pressure pump



# Always a good substitute: Bosch eXchange

## Top quality at a reasonable price

Bosch eXchange. The comprehensive, intelligent eXchange range is the ideal all-round concept for “present value” repairs.

### Cost/benefit – a convincing argument for professional vehicle operators

Bosch eXchange offers replacements for the full range of the most important original equipment components for repairs in keeping with the value of the vehicle. Plus full warranty coverage. The quick and easy procedure is just right for workshops.

### Workshops are guaranteed to benefit from Bosch eXchange components

- ▶ Full range for diesel injection systems: More than 800 item numbers
- ▶ For a wide range of vehicles – also including modern high-pressure injection systems
- ▶ Return in original packaging (back in box)
- ▶ Direct deposit value reimbursement
- ▶ Standard return criteria
- ▶ Full replacement of all wearing parts

### Bosch eXchange. The strong points

- ▶ Greater customer satisfaction thanks to “present value” repair, a more efficient procedure and reasonable prices
- ▶ Quality standards and functional tests comparable to new original equipment components
- ▶ Same warranty for Bosch eXchange products as for new parts.
- ▶ Helps to preserve both resources and the environment: By repairing old parts instead of producing new ones, savings of up to 90% are possible in terms of raw materials in addition to cutting down on energy consumption.



**Value-retaining repairs: Bosch eXchange saves time and money as well as helping to conserve the environment and raw materials.**



Nozzle-and-holder assembly



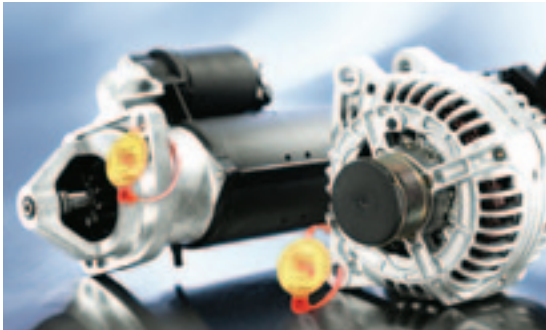
Unit injector



Distributor injection pumps



# Uncompromising quality: Starters and alternators from Bosch eXchange



Bosch eXchange

## **Bosch remanufacturing program guarantees top quality:**

- ▶ The same quality standards as for original equipment
- ▶ 100% replacement of all critical components
- ▶ Exclusive use of Bosch quality spare parts
- ▶ Improvements to original equipment are directly incorporated into the repair process



## **Tested quality – genuine Bosch eXchange seal**

The Bosch eXchange quality seal is your guarantee for tested products from the Bosch's genuine factory reconditioned range. Every Bosch eXchange product has undergone a long, intensive testing process.

The high original equipment market share is evidence of the trust placed in Bosch quality by vehicle manufacturers. Aftermarket and workshops can rely on the “present value” products from Bosch eXchange as these are subject to the same quality standards as the original equipment.

## **At a glance: All the benefits for workshops and aftermarket**

- ▶ High level of demand thanks to use in most commercial vehicles in Europe
- ▶ High degree of awareness and acceptance of the Bosch brand
- ▶ Top quality and attractive prices
- ▶ Constant updating of the range for numerous vehicle models
- ▶ 12 regional acceptance points in Europe for rapid handling of old parts
- ▶ ESI[tronic] software provides in-depth technical information on diagnosis, installation and repair
- ▶ Bosch quality seal and KeySecure label for identification of assemblies repaired by Bosch
- ▶ Parts supplied ready for installation to ensure quick and easy vehicle repair work
- ▶ Thanks to replacement rather than workshop assembly repair, vehicles are released back onto the road much sooner.
- ▶ Guaranteed customer satisfaction thanks to the long service life and reliability of Bosch quality assemblies

**Bosch can supply an extensive range of some 350 different types of starters and alternators for commercial vehicles as well as agricultural and special machinery.**



**KeySecure label** on the packaging. This means you can be 100% sure that the contents of the pack really are from Bosch and are not counterfeit.



**Bosch eXchange looks after the environment:** Annual savings of 25,000 t of CO<sub>2</sub> in comparison to the production of new parts. This is equivalent to the CO<sub>2</sub> binding capacity of 1,923 hectares of forest.

# Bosch eXchange: The comprehensive exchange program from a single source



## State of the art

All our experience and improvements resulting from original equipment manufacturing are immediately put to use in our remanufacturing. This way you always get state-of-the-art parts from Bosch.

## The Bosch eXchange range at a glance

- ▶ Starters and alternators
- ▶ Gasoline injection systems
- ▶ Brake calipers
- ▶ Diesel injection systems
- ▶ Electronics

The Bosch eXchange product range is continually being updated and expanded.

# Bosch T-series batteries for commercial vehicles: Always a reliable source of power



Commercial vehicles need a great deal from their energy supply: Long downtimes and a large number of electrical consumers can drain a battery completely. The T3, T4 and T5 from Bosch are specifically designed to deal with this.

### T3: Starting power with no compromises

Benefits of the basic type include:

- ▶ Reliable starting power
- ▶ Long service life

### T4: More power right from the start

Designed for continuous applications with the engine switched off

- ▶ Copes with frequent charging and discharging
- ▶ Reliable power supply for all energy consumers

### T5: Maximum power and cycle resistance

For extremely high power requirements and frequent discharges

- ▶ Ideal for vehicles with a sleeper cab
- ▶ Ideal for trucks with a lifting platform and coaches



T3, T4, T5: Commercial vehicle batteries from Bosch: More power, reliability and convenience in everyday use.

**\*\* Reduce your fleet operating costs with absolutely maintenance-free batteries from Bosch.**

Features	T3	T4	T5
<b>Absolutely maintenance free</b>	Maintenance-free, topping-up with water possible	✓**	✓**
<b>Installation in the cab</b>	Not possible	✓	✓
<b>Deep cycle resistance</b>	Surpasses EN Standard	Up to 300%	Up to 400%
<b>Service life</b>	100%	120%, thanks to silver technology	130% due to silver-technology and glass mat High vibration resistance
<b>Vibration resistance*</b>	Highly vibration-resistant	10x vibration-resistant	10x vibration-resistant
<b>Starting power</b>	100%	120%	130%
<b>Shelf life</b>	Up to 12 months	15 months	18 months

\* compared to conventional starter batteries

# Bosch S-series batteries for LCVs

## Top performance for all applications

Starting and stopping, loading and unloading, long and short journeys - all of that demands a lot of the battery. The Bosch S5 and S6 can be relied upon to cope with extreme and fluctuating power requirements.

### Bosch battery S5: A sustained source of power for LCV

**PowerFrame technology:** Designed to satisfy even the greatest cold starting and capacity demands

- ▶ Up to 30% extra service life and cold starting power
- ▶ 100% maintenance-free, ready for installation and start
- ▶ Carrying handles: easy transportation and installation
- ▶ Minimal self-discharge
- ▶ Short distance tolerance thanks to high current input
- ▶ Leak-proof labyrinth-type cover with fine mesh flame trap
- ▶ Also suitable for installation in cab

### Bosch S6 battery incorporating AGM technology

More and more equipment for greater convenience, safety and efficiency demands top starting and power supply performance. The PowerFrame and AGM technology (absorbent glass mat) excel under even the toughest conditions:

- ▶ Great deep cycle resistance
- ▶ High vibration resistance
- ▶ Twice the service life
- ▶ 100% maintenance-free
- ▶ Sealed and 100% leak-proof
- ▶ Suitable for installation in any position
- ▶ Triple energy density

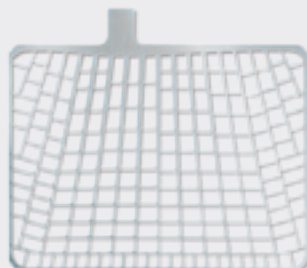


**Bosch S5 and S6 batteries for vans**  
Guaranteed powerful starting and energy supply

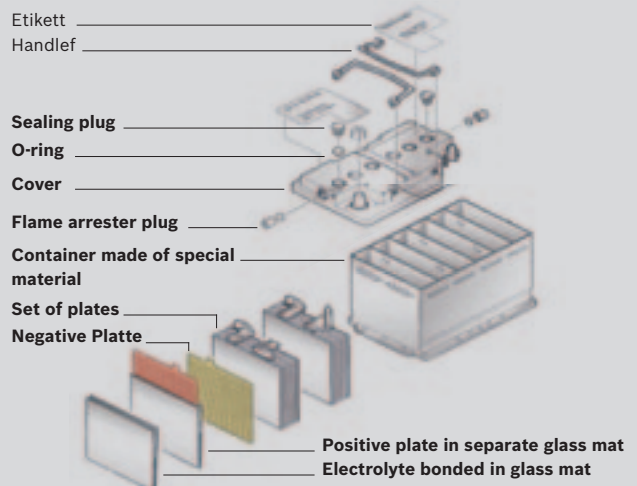
### PowerFrame technology for S5 and S6 batteries

#### PowerFrame technology:

- ▶ The special grid optimizes the flow of electricity and improves internal resistance, enabling high current output and input
- ▶ Sturdy frame prevents corrosion, grid growth and premature battery failure
- ▶ Optimized material properties minimize corrosion and ensure a longer life.



### AGM technology for S6 battery (sectional view)



# Bosch wipers

For clear vision on all roads



It is important for commercial vehicle drivers to have a clear view in every situation. Fortunately they can always rely on Bosch wipers with their proven track record of more safety and convenience even under the most adverse conditions.

## **Twin – Maximum performance standard wiper blade for commercial vehicles: Lengths from 400 to 1,000 mm (as of 2013)**

- ▶ Top quality
- ▶ Original wiper-blade element from Bosch
- ▶ Reliable cleaning without smearing
- ▶ Quiet, smooth wiping
- ▶ Wear-resistant wiping edge
- ▶ Robust and with a long service life
- ▶ Rests on the glass in a secure and firm manner

## **A unique development: Bosch Aerotwin for commercial vehicles**

Bosch are the first company in the world to be able to offer innovative Aerotwin technology for retrofitting on commercial vehicles. Comprehensive practical tests prior to the market launch have fully confirmed the added benefits of the Aerotwin wiper:

- ▶ Up to 30% longer service life
- ▶ Optimum wiping results over the full blade length
- ▶ Perfect cleaning with no smearing

- ▶ Extremely quiet operation
- ▶ Simple to replace with the pre-assembled universal adapter from Bosch

## **Innovative details**

- 1 Integrated spray jet** across many sizes of wiper blades
- 2 Combi interface** for the three most common hook sizes – 9 x 3, 9 x 4 and 12 x 4
- 3 Hasp-type fastening** for 800 mm wiper blade  
New feature of Aerotwin flat wiper blades:  
The “screw-type” interface for hasp fastening



Integrated spray jet and combi interface

Hasp-type fastening

# Bosch filters for commercial vehicles

## The full range from a single supplier

There is no room for compromise with commercial vehicles. That is why Bosch supply a full range of filters for all standard commercial vehicles and engine types. For a perfect fit in every system.

### Fuel filters

- ▶ Engine protection thanks to high-grade filter material with maximum absorption capacity for dirt particles
- ▶ Highly resistant to temperature fluctuations, corrosive fuels and pressure
- ▶ Outstanding filtration performance for severely contaminated fuels and fuels with a high water content

### Oil filters, hydraulic fluid filters, oil separator filters

- ▶ Specially impregnated, tear-proof filter material and sturdy housing for a long service life
- ▶ Ecologically sound disposal of non-metallic filter elements

### Air filters

- ▶ Highly accurate fit keeps leakage to a minimum
- ▶ High-grade microfiber paper: Ideal air permeability and dirt retention ensure maximum engine performance

### Cabin filters

For a healthy working atmosphere – reliable filtering of pollen, dirt particles and pollutants.

**DENOX filter – the genuine article** (refer to Page 5 for system description).

Ideally matched to the Denoxtronic® system.

### Special filters

- ▶ Coolant filter – optimum cooling system protection
- ▶ Desiccant box – full braking force thanks to reliable bleeding and dehumidification of the brake system
- ▶ Crankcase oil separator – optimized filtration and trapping of aerosols for effective engine protection



### Denoxtronic® and special filters



DENOX filter



Spezialfilter



Cabin filters



Air filters



Fuel filters



Oil filters

# Vehicle electronics from Bosch:

## Safety and driving comfort at your command!

As a leading innovator in the field of vehicle electrical and electronic systems, Bosch offers a broad product range covering everything from motors to switches and relays. Everything for the workshop and the after-market from a single source – in Bosch OE quality, of course.



### **Build-in switches: Maximum reliability**

Build-in switches from Bosch have proven their worth a million times over in commercial vehicles of all kinds. Thanks to the availability guarantee, you can even provide your customers with the installation of switches for older vehicles. New to the range: Build-in switch with exchangeable function symbol.

### **Battery switch: For maximum safety**

For immediate disconnection of one or more batteries from the connected vehicle electrical system: Bosch battery switches are available in numerous versions and degrees of protection, for practically all commercial vehicles.

### **Relays: Indispensable even for high-tech**

Wherever circuits are closed or opened in vehicles, the specially designed relays from Bosch should be your first choice. Our comprehensive range extends from micro relays to power relays.

### **Fans / 24-V motors: Infinitely adjustable**

High cooling output at low speed: For this, the radiator needs additional ventilation. Bosch offers engine cooling fans for every performance range. From individual components to the complete module, always in original-equipment quality.



Build-in switches



Battery switches



Relays



Engine cooling fans and electric motors



# More light for extra safety

## The ideal lighting and signalling system

By supplying extra light, Bosch universal lamps ensure greater safety and convenience. With reliable technology and their robust as well as attractive design, they cannot fail to impress. Bosch compressed-air fanfares and supertone horns provide an unmistakable warning. Sturdy design, reliable technology and an attractive appearance.

### Bosch auxiliary lamps

For more safety in the dark as well as in snow, fog and rain. Auxiliary lamps from Bosch are guaranteed to provide reliable operation and more safety combined with attractive styling and individual flair.

### Bosch flood lamps and spot lamps

With their broad and homogeneous light pattern, Bosch flood lamps are ideal for illuminating stationary and mobile working areas particularly at close range. Bosch spot lamps offer a concentrated beam of light over longer distances – with energy efficiency and a long service life.

### Bosch rotating beacons

Bosch rotating beacons make sure neither vehicles nor stationary and mobile equipment can be overlooked – different available versions suit every application. They have an optimum warning effect and are clearly visible without any radio or car phone interference. The non-wearing design ensures durable and reliable operation.

### 24-V bulbs – Trucklight and Trucklight Maxlife

Trucklight: Maximum quality and reliability

Trucklight Maxlife: Greater resistance to shock and vibration, longer service life, for off-road and the highway.

### Compressed-air fanfares and supertone horns

Bosch compressed-air fanfares and supertone horns generate a penetrating dual-tone signal to be heard at great distances for reliable warning in critical situations.



### Compressed-air fanfares and supertone horn



Compressed-air fanfare



Supertone horn



Auxiliary lamp



Flood and spot lamps



Rotating beacon



Bulbs 24 V

# Brake components and parts from Bosch

For all types of LCV



**From 100 to 0 in a matter of seconds.**

There is no substitute for safety and quality. Bosch brake systems satisfy the highest standards without cutting any corners.



Brake pads and linings



Drum brake shoes



Brake disk



Brake caliper

# Because braking is a serious business – replacement and wearing parts from Bosch

## Always the top choice for brake systems

Bosch continue to set new technological and comfort standards – and not just in terms of original equipment. Our replacement and wearing parts for brake systems also far surpass the legally required test criteria.

### Brake discs

- ▶ Mechanical and thermal stability ensure top quality and a long service life
- ▶ High Carbon brake discs for enhanced performance
- ▶ The set of bolts provided with many discs guarantees excellent repair results
- ▶ Coated discs guard against corrosion
- ▶ Discs with integrated bearing and ABS sensor ring save time and produce perfect results
- ▶ Production at the Buderus factory ensures top quality

### Brake pads and linings

- ▶ Short running-in time, highly stable coefficient of friction
- ▶ High shear strength, minimal compressibility
- ▶ Smooth pedal feel, very little vibration
- ▶ Good response
- ▶ Noise and vibration-free braking

### EXchange brake calipers

- ▶ Warranty and performance as for new parts
- ▶ 100% replacement of all wearing and sealing components
- ▶ High degree of coverage for the European vehicle fleet (more than 90%)

### Drum brake kits

- ▶ All parts comply with the toughest international quality standards for the motor vehicle aftermarket
- ▶ Perfectly matched components
- ▶ No risk of incorrect fitting
- ▶ Time-saving ordering and installation procedures

### Brake fluid

- ▶ Bosch brake fluids both satisfy and surpass



international safety standards

- ▶ DOT 4 HP: Low-viscosity brake fluid highly suited to electronic brake systems such as ABS and ESP®. The extremely short ESP® reaction time thus achieved enhances road safety
- ▶ Maximum storage time of at least 5 years guaranteed by the use of high-grade metal cans

### Electronic brake control systems

- ▶ In-company research and development
- ▶ Close contact with vehicle manufacturers
- ▶ Global leadership thanks to innovations
- ▶ Growth sector for workshops on account of increasing original equipment volume

### Wheel speed sensors

- ▶ Optimum resistance to external magnetic influences
- ▶ Speed detection close to 0 km/h
- ▶ Recognition of direction of rotation and stoppage with active sensors
- ▶ Top quality for a long service life



Brake cleaner

Brake fluid

# Bosch drive belts: for trucks, vans and LCVs



Drive belts are wearing parts and are subject to considerable stress within a vehicle. Tensioning elements and deflection and guide pulleys are also exposed to considerable strain. For this reason, these components should also be replaced when changing timing belts.

Drive belts and all tensioning elements from Bosch always match the well-known high and reliable original-equipment quality. Our new ribbed V-belts for commercial vehicles, for example, boast an especially sturdy design and outstanding resilience. Increase your competitiveness with powerful drive belts from Bosch.

## Timing belts

- ▶ Good operating safety throughout the whole service life
- ▶ Quiet operation

## Drive belt kits

- ▶ All parts included under a single part number and package – optimizing storage and simplifying the order process
- ▶ Timing belt/tensioner pulley kit
- ▶ Timing belt/tensioning element kit
- ▶ Timing belt/water pump kit

## V-belts and ribbed V-belts

- ▶ For optimum power transfer
- ▶ Minimal slip
- ▶ Resistant to oil, UV light and high temperatures

## New! Ribbed V-belts for commercial vehicles

- ▶ Ultra-modern rubber and extremely hardwearing high-tech cords guarantee a long service life
- ▶ Minimum vibration, resistant to impacts and pulsating operation
- ▶ Upgrade version with aramid cord for drive systems subject to particularly heavy loads.



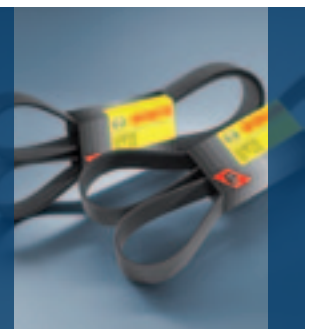
Timing belts



Kit: timing belt and tensioner pulley



V-belts and ribbed V-belts



**New!** Ribbed V-belts for commercial vehicles

# Bosch diagnostics: Test equipment and system expertise for trucks and LCVs

The professional repair of diesel components makes economic sense for both truck operators and workshops. The perfect back-up is provided by: Comprehensive Bosch expertise, available for systematic call-up in the ESI[tronic] software.

## Diesel system testing EPS

To keep pace with the rapid progress in truck diesel engine technology, Bosch develops innovative testers for the precise diagnosis of diesel components.

- ▶ The EPS 200 workbench unit is the key to getting started in the diesel business even for smaller workshops, as it allows for the reliable testing of injectors amongst other functions
- ▶ The new diesel test bench EPS 708 from specially for common rail injection pumps and injector therefore permits testing with up to 2,200 bar. Its newly developed rail is designed for pressures up to 2,500 bar, which means that the test bench is prepared for future developments in diesel technology.
- ▶ The EPS 815 component test bench can be extended with supplementary equipment sets to deal with any task. Even the latest diesel engines and components can be repaired
- ▶ Already 60 million Piezo-controlled common-rail injectors in use. The new common-rail injector test kit is designed for efficient and highly accurate testing of Bosch systems and systems from other manufacturers. Testing of competitors' components is still in preparation. This test kit extends the functions of EPS 708 as well as EPS 815.



## Multiple clamping for CRI and CRIN



Retrofit kit for EPS 708 and EPS 815



EPS 200



EPS 708



EPS 815

# Bosch diagnostics:

## The full testing system spectrum



Vehicle system analysis FSA

The increasing degree of complexity in commercial vehicle systems demands a high diagnostic standard for professional repair and maintenance work. Bosch Diagnostics can supply the full package.

### Engine system analysis FSA

Engine system analysis is employed for the systematic testing, checking and measurement of components, systems and elements.

### Wheel alignment FWA

Precise measurement, short set-up times and simple operation make the Bosch wheel alignment system indispensable.

### Emission analysis BEA

Outstanding measurement accuracy guarantees precise, high-speed emissions analysis conforming to the latest standards.

### Battery service BAT

Reliable, professional testing, charging and starting with battery service units from Bosch.

### Air conditioning service ACS

These days air conditioners are a standard feature of commercial vehicles. A/C service units from Bosch are fully automatic and make service a profitable business.

### Vehicle lift equipment VLE/VLH

Professional servicing for commercial vehicles with a weight of up to 4,000 kg. Ideal for reception areas, repair shops and wheel alignment.

**High-speed trouble-shooting, qualified repair and considerable time savings for economical commercial vehicle servicing.**

### Bosch testers

Professional equipment ensures safe and profitable work at the workshop.



KTS 800: DCU 130 with KTS truck module



Wheel alignment FWA



Air conditioning service ACS

# Bosch-Diagnostics: ESI[tronic] workshop software, hotline and training

Technical systems in commercial vehicles are becoming ever more diverse and complex. Customers are more demanding and want an answer to their problems as quickly as possible.

## ESI[tronic] with truck information: Software for professionals on the road

Service relevant diagnosis and information for trucks, LCV, busses and trailers. The workshop software ESI[tronic] 2.0 with truck info delivers top-coverage in width and depths and is continuously updated. All important data for service and repair is available to the workshop.

- ▶ Coverage of all European truck brands
- ▶ Best in Diagnostics, trouble-shooting, maintenance and service
- ▶ Best applicability by new user interface
- ▶ Perfect connection of diagnosis and replacement parts
- ▶ Best service offers with training and hotline

## Technical Hotline: To save time and money

The Bosch Technical Hotline is designed to provide specific assistance and practical support for routine work and to help deal with any problems arising in the course of Service and repair of cars and commercial vehicles. Benefit from all the qualified knowledge of the Bosch experts for your success.

## Service Training – knowledge as the key to success

Technical progress represents a constant challenge to workshops. In future, workshop activities will concentrate more on the diagnosis of interlinked systems and the specific replacement of high-grade components rather than just the traditional replacement parts business. The professional Service Training courses offered by Bosch provide the ideal basis for workshops to meet this challenge.



Specialist support for your workshop business: Test equipment, software, training and hotline all from the same source.

**Our knowledge – your success: Bosch provides workshops with system knowledge, technical information, testers, technical advice and replacement parts to original equipment standard.**



Emissions analysis BEA



Battery service BAT



Vehicle lifts VLE/VLH

# KTS 800 Truck: The professional solution for commercial vehicles



Complete system for commercial vehicles

With the KTS 800 Truck and the software package ESI[tronic] for trucks, the commercial vehicle workshop gets the complete solution for the diagnosis of trucks, light utility vans, buses, and trailers.

## Mobile complete system

- ▶ New! KTS 800 Truck: Diagnostics for immediate use Control Unit (DCU 130) and mobile KTS Truck module
- ▶ Two lithium-ion batteries enable mobile deployment of the DCU 130 everywhere in the workshop or even during a test drive.

## Mobile work over long periods

- ▶ Inclusion of two identical lithium-ion batteries
- ▶ One battery is sufficient to continue operation in the workshop
- ▶ If required, the batteries can be replaced without interruption during regular operation (hot swap function).

## Testers in line with workshop needs

- ▶ Easy handling of the DCU 130 with integrated handle on the back of the device
- ▶ Sturdy housing with 13.3" touchscreen monitor
- ▶ Recessed USB connection to enable protected connection of a dongle
- ▶ Conspicuous features of the vehicle can be documented with the integrated camera and the required spare parts can be photographed.

## Modular concept with the Diagnostic Control Unit

- ▶ Especially for deployment in the workshop, the sturdy DCU 130 controls all testing and diagnostics systems from Bosch, for example the new FSA 500 for vehicle system analysis.

## KTS 800 Truck



Tablet PC with touchscreen and KTS Truck Module  
Part number 0 684 400 800



Integrated handle



Recessed USB connection



Hot swap function



# KTS Truck: The modular solution for commercial vehicles

KTS Truck is the ideal entry-level solution for commercial vehicle workshops that already have a PC.

## Optimized and mobile diagnostics solution

- ▶ KTS Truck module for trucks, light utility vans, trailers, and buses
- ▶ Can be connected to DCU 130, PC or laptop
- ▶ Integrated Bluetooth connection with large range, up to 100 m
- ▶ Bluetooth USB adapter included in equipment supply
- ▶ The USB interface means KTS Truck can be connected to all common PCs or laptops
- ▶ Sturdy housing

Technical data	DCU 130
PC board	Intel Merom 1.06 GHz DualCore processor, Operating system Windows 7, 2 GB main memory, 250 GB hard disk capacity
Display	13.3" WXGA color display with resistive 5-wire touchscreen, resolution 1280 x 800 dpi
Equipment	Multimedia, integrated camera min. 2 megapixels, Bluetooth class 1 and 2, WLAN 802.11 a/b/g/n. Ethernet 10/100 Mbit
Status indicator	Via 4 LEDs: On/Off, hard-drive access, WLAN, Bluetooth
Interfaces	2 USB 2.0 1 USB 2.0 integrated as recessed 1 RJ45 10/100 Mbit 1 MIC IN 1 connection for headset
Lithium-ion battery	2 lithium-ion batteries 14.4 V, 32 Wh. Batteries with charge status indicator
Housing	Sturdy housing, IP 54 (IP 65 at front)
Operating temperature	0 to 40 °C
Dimensions	355 x 262 x 42 mm (W x H x D without handle)



Modular concept with Bluetooth connection

## KTS Truck



Modular solution  
Part number 0 684 400 512



Integrated digital camera

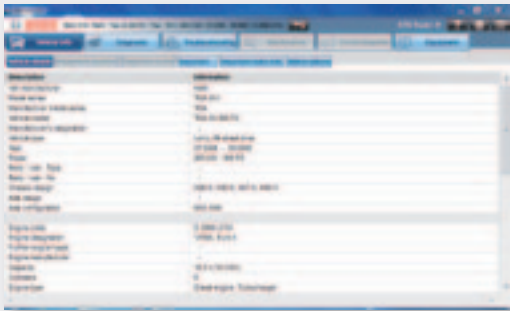


Status LED display

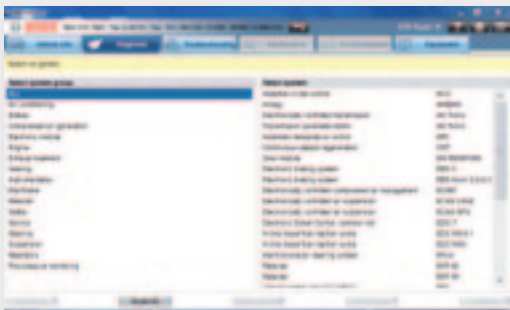


USB Bluetooth

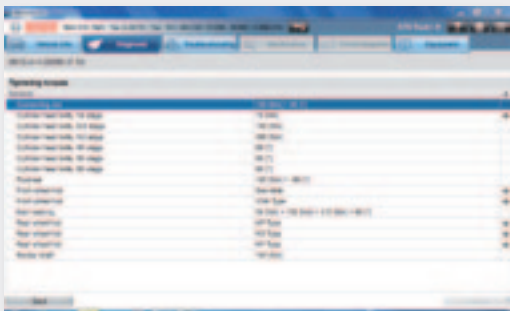
# ESI[tronic] for Truck: All information and functions for commercial vehicles



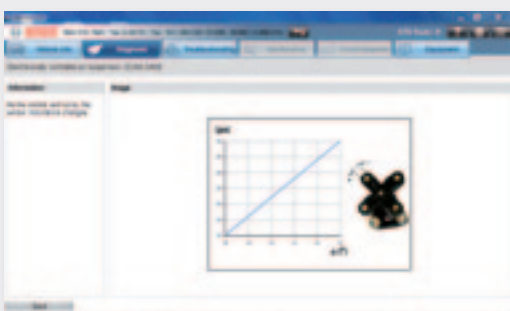
Vehicle information



ECU diagnosis



Technical data



Component information



## Everything at one stop

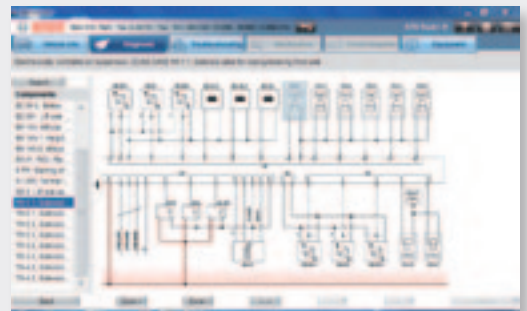
Alongside control unit diagnostics, the ESI[tronic] for Truck software also contains technical information such as circuit diagrams, service and repair instructions as well as system information. Also available are Bosch spare parts catalogs, including the catalog data of the Bosch cooperation partner ZF Services, also with service information and installation instructions for products of the Sachs, Lemförder, Boge, and ZF Parts brands.

ESI[tronic] for Truck provides all the necessary information for the execution of reliable diagnostics, complete maintenance, and efficient repair.

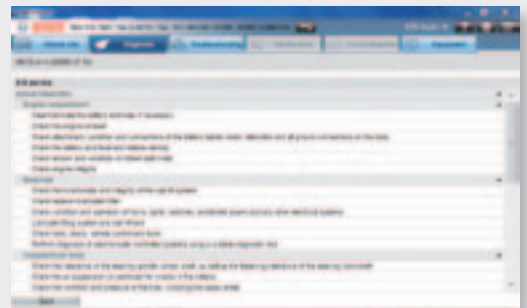
The software package features high market coverage for light utility vans, trucks, trailers, and buses common on the European market.

## Vehicle information

Alongside control unit diagnostics, the ESI[tronic] for Truck software also contains technical information such as circuit diagrams, service and repair instructions. Basic information regarding commercial vehicles that is also included in the software such as model series, power output, engine designation as well as axle configuration forms the basis for a sound diagnostics in the commercial vehicle workshop.



Circuit diagrams



Maintenance



Spare parts catalog



Installation instructions

### Diagnostics

Important functions for the commercial vehicle workshop are included: Reading / deleting error codes, selecting actual values, activating actuators, resetting service intervals, and teaching components.

### Technical data

Support for troubleshooting: component information with setpoint values, output voltage, characteristic curves, etc.

### Circuit diagrams

Fast and simple use because of intuitive operation with dynamic component description.

### Maintenance

Half-yearly and yearly inspections with additional check items can be called up at any time.

### Spare parts catalog

Always accessible: the complete spare parts catalog from Bosch and ZF Services

- ▶ Manual and automatic transmissions
- ▶ Suspension
- ▶ Steering
- ▶ Clutch

# Even giant wheels are an easy job:

## Tire service for commercial vehicles and buses



Tire service for commercial vehicles can be tricky: With wheel sizes up to 2.3 meters and a weight of up to 1.4 tons, the requirements for materials, lifting and centering forces are extreme. The wide range of tire service devices from Bosch provides a suitable solution even for the most demanding requirements.

### TCE 5330/5335: Jumbo-sized tire changes

For businesses that get to grips with big sizes: Where tire service for heavy trucks, buses and, in particular, construction and agricultural vehicles is concerned, the TCE 5330 and 5335 move even the biggest "whoppers" effortlessly. These top professional tire changers from Bosch ensure efficient working for maximum economy, combined with optimum comfort and safety.

### Operation: Extremely simple and safe

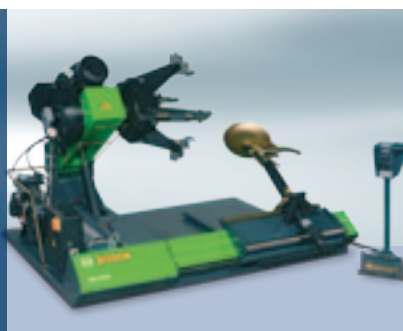
The pneumatic universal fitting arm is lifted and rotated fully automatically from the control panel. The powerful clamping arms can be moved in both directions at two speeds. The universal fitting arm is locked by a safety coupling. The TCE 5335 also comes with a radio remote control.

Technical data	TCE 5335 / 5330	TCE 5320	TCE 5310	TCE 5210	WBE 5220	WBE 5210
Rim diameter	14" – 42" <sup>1</sup>	14" – 42" <sup>1</sup>	14" – 42" <sup>1</sup>	14" – 26"	10" – 30"	10" – 26,5"
Maximum wheel diameter	2300 mm	2300 mm	2300 mm	1640 mm	1200 mm	1200 mm
Maximum wheel width	1300 mm	1300 mm	910 mm	800 mm	–	–
Maximum rim width	–	–	–	–	20"	20"
Maximum wheel weight	1400 kg	1400 kg	1200 kg	1200 kg	160 kg	200 kg
Tire pressure connection	8 – 12 bar	–	–	–	8 – 12 bar	8 – 12 bar
Balancing speed Comm.veh	–	–	–	–	< 100 rmp	< 100 rmp
Car	–	–	–	–	218 (50 Hz) rmp – 262 (60 Hz) rmp	190 (50 Hz) rmp – 228 (60 Hz) rmp

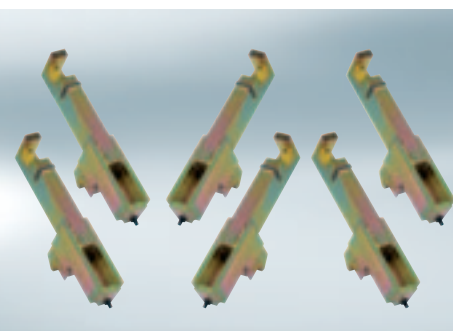
<sup>1</sup>Optionally available up to 56"



TCE 5210



TCE 5320



For TCE 533x: Adapter set for caterpillar

# TCE 5335 / 5330 / 5320 / 5310:

## Top tire service for outsize tires

### TCE 5310 / 5320: For more than man-sized tires

For tire service on commercial vehicles, buses and construction and agricultural vehicles, TCE 5210, TCE 5310 and 5320 tire changers count with the necessary solid construction and range of equipment.

### Strength and safety

The powerful clamping arms can be moved in both directions at two speeds. The universal fitting arm is locked to the fitting carriage by a safety coupling.

### TCE 5210: Ideal for commercial vehicles and buses

For fast, simple tire service on commercial vehicles and buses. Hydraulic lifting arm, fitting carriage and clamping device ensure comfortable working.

### Efficient and safe

- ▶ Clamping arms with infinitely adjustable clamping force
- ▶ Electrically powered anti-clockwise and clockwise rotation, at one rotational speed
- ▶ Fitting arm can be locked in various positions for especially efficient working

### TCE highlights:

- ▶ Large clamping range of 14" to 42" (can be extended to 56" with a special accessory)
- ▶ 4-way clamping device
- ▶ TCE 5320 fitting arm is driven separately for a shorter changeover between sides

### Universal balancing machines – WBE 5210

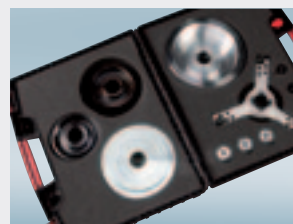
Thanks to the integrated pneumatic lift, a fitter can hoist heavy wheels without strain.

### Wheel balancing was never this easy

- ▶ Automatic measuring process
- ▶ Static and dynamic balancing
- ▶ Two programs for commercial vehicle tires and five alloy programs for car tires.



### Special accessories for wheel balancing machines



Flange case for commercial vehicles



Three-arm flange for light commercial vehicles



WBE 5210



Fixierplatte



Variable quick plates – (4-hole rims)

# Brake dynamometers for commercial vehicles: Superior technology from Bosch



## Braking system analysis for commercial vehicles

Bosch brake dynamometers for commercial vehicles combine robust, durable base components with state-of-the-art PC technology.

## Economical brake testing

The fast recording of all measured data with a display on the analog scale (or on the monitor), and the option of step-by-step test line expansion ensures excellent cost efficiency for workshops. You can choose between a 13 t and 16 t test load, plus numerous options for expedient “one-man operation”.

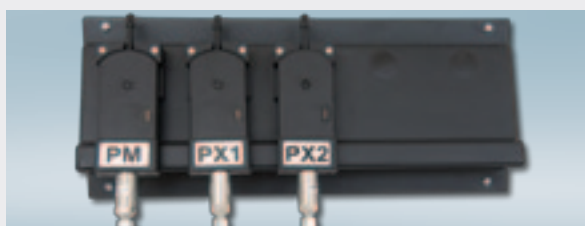
## Brake diagnosis from the driver's seat

With just a few buttons on the remote control, the test routine, commercial vehicle brake diagnosis and tractor/trailer synchronization are performed efficiently and in comfort from the driver's seat. Symbol keys are used for checking and data storage.

## Air-pressure sensor set

With this radio remote-controlled air-pressure sensor set, you can record the control pressure PM and axle braking pressure PX of an axle during a brake test. The sensor housing is watertight and impact-proof for lasting quality and reliability. Rechargeable batteries and a charging station for each sensor guarantee efficient operation.

## Special accessories for brake systems



Air-pressure sensor set

### All information on the monitor

- ▶ Comprehensive data base for customer vehicles and test results
- ▶ Fast comparison test with option of previous test results
- ▶ Additional measured value displays to complement the entire test sequence
- ▶ Purely static monitoring and setting of ALB function in front of the test rig (air-pressure program)
- ▶ Retrieval of all stored measured values



# Fully automated und expandable: Brake test for heavyweights

## Best equipped for every situation:

### BSA 5717 for 16 t test load

The brake dynamometer with maximum equipment for the most diverse operating conditions:

- ▶ Combined roller set with under-floor motors, designed for a test load of 16 t, with integrated hydraulic lifting device for simulating weights up to 10 t.
- ▶ Analog display with 2 scales for braking forces, braking factor in % and tracking  $\pm 12$  mm/m
- ▶ Facility for 4-character LCD for displaying pressure, differences, axle weight and gross vehicle weight
- ▶ Infrared remote control enables controlling of the brake dynamometer from the driver's seat
- ▶ PC display on 19" monitor available as an upgrade option
- ▶ Hydraulic lifting device with adjustable lifting height of 0 – 250 mm
- ▶ A complete unit with installation frame
- ▶ External operator unit (Up/Down buttons), operation possible via radio remote control

### 8-point axle load weighing equipment

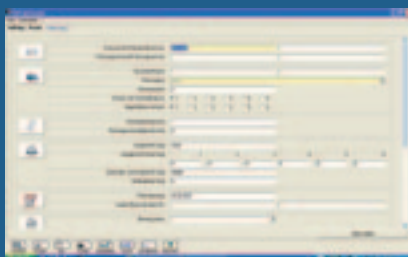
In the BSA 5717, the roller set already features an 8-point weighing device in the lifting mechanism. This is crucial for axle braking, dynamic weight measurement and tractor/trailer synchronization.



### Special accessories for brake systems



8-point axle weighing equipment



# Bosch: Bringing you the workshop of the future

For over 125 years, Bosch innovations have been keeping vehicles on the road and getting people to and from their destinations while improving safety and peace of mind along the way.

Bosch Automotive Aftermarket offers workshops and retailers a comprehensive portfolio of products that is unmatched worldwide:

- ▶ Efficient diagnostics
- ▶ Innovative workshop equipment
- ▶ Quick, reliable delivery
- ▶ The world's most comprehensive range of spare parts – including both new and remanufactured
- ▶ Workshop concepts to meet every requirement
- ▶ Comprehensive training
- ▶ Targeted sales and marketing support
- ▶ A competent service hotline
- ▶ 24-hour online workshop services
- ▶ Affordable leasing services for workshop equipment and software

From parts to scheduling, organization and results, our solutions are combined with additional services to ensure your needs will be perfectly met, helping you to maximize your potential.

## Robert Bosch GmbH

Automotive Aftermarket  
Business Unit Diagnostics

73201 Plochingen  
Germany

[www.bosch-diagnostics.com](http://www.bosch-diagnostics.com)



### The world of Bosch:

- ▶ Diagnostics
- ▶ Diesel systems
- ▶ Gasoline systems
- ▶ Braking systems
- ▶ Spark plugs
- ▶ Energy systems
- ▶ Batteries
- ▶ Filters
- ▶ Wiper systems
- ▶ Lighting technology
- ▶ Comfort electronics
- ▶ Technical hotline
- ▶ Knowledge database
- ▶ Service training
- ▶ Workshop concepts

Technical changes and program modifications are reserved

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