



BOSCH

Invented for life

Diesel spare parts

from Bosch for the reliable repair of modern
as well as conventional diesel systems



Top quality from Bosch

Outstanding in diesel injection systems

As a developer and manufacturer of diesel injection systems, Bosch has given the motoring world many important innovations. The know-how and high quality standard expected from Bosch as an OE supplier are also incorporated into the spare parts it manufactures. As a result, workshops always receive top-quality spare parts and system components.



Common-rail system or unit injector system, inline pump or distributor injection pump – whatever the technology used, Bosch innovations ensure powerful performance characteristics and efficient fuel combustion in millions of diesel engines.

Bosch – diesel competence based on OE experience

Also workshops benefit from Bosch know-how and its experience as an OE supplier.

Bosch – partner to workshops

Bosch offers workshops a comprehensive portfolio for diesel injection systems:

- ▶ original spare parts and spare parts of matching quality
- ▶ for almost every vehicle – even for older cars
- ▶ innovative workshop equipment and software
- ▶ practice-oriented service training
- ▶ technical hotline



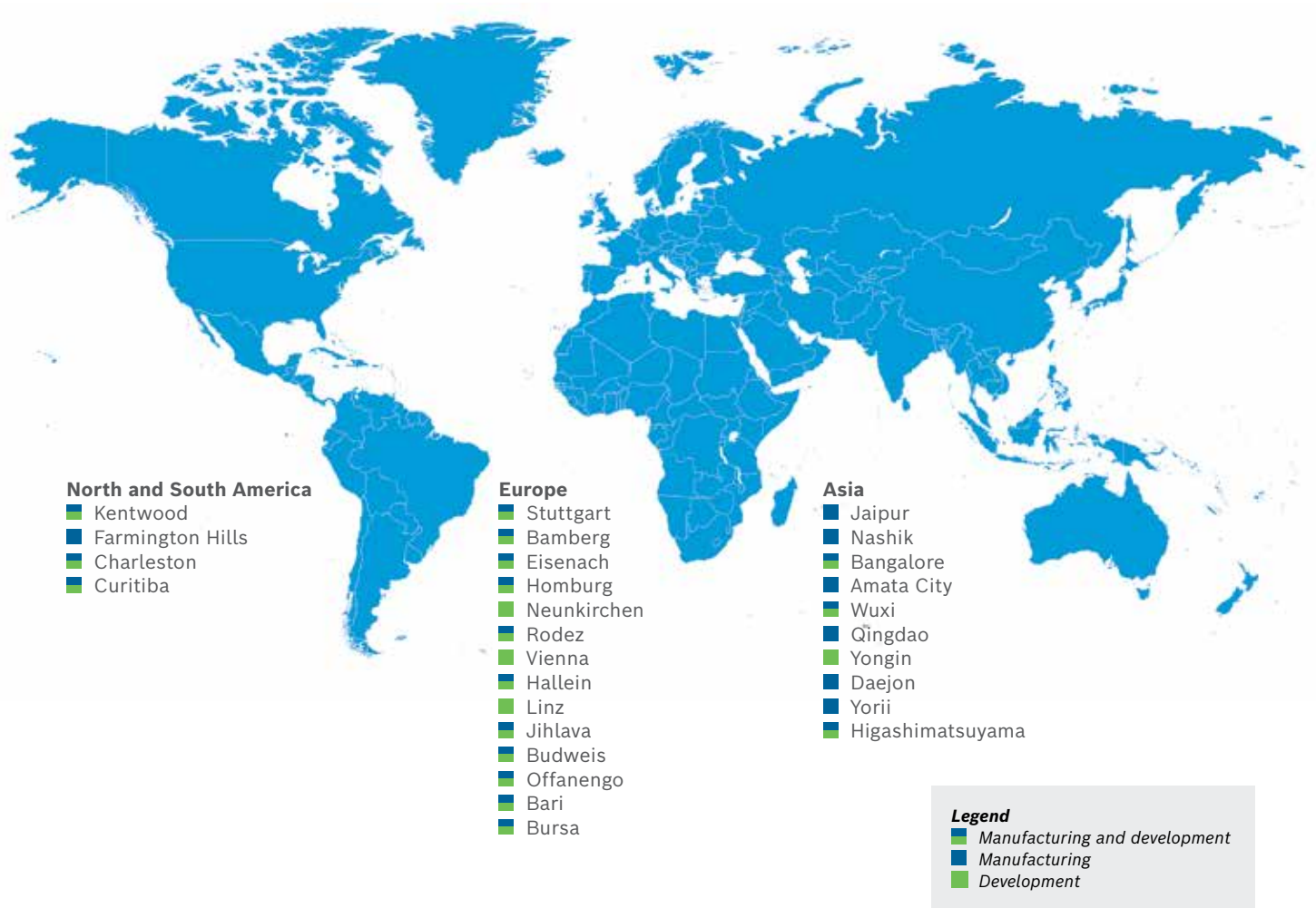
Bosch – pioneer and diesel system developer

Bosch recognized the favorable consumption characteristics of diesel technology as early as 1922 when it began development of diesel fuel injection pumps. By 1927, the sophisticated technology for trucks was ready for series

production. In 1936, Bosch brought the first diesel fuel injection pump for passenger cars onto the market – which was also the world-premiere for the diesel engine as a series product in a passenger car.

Spare parts in Bosch quality

Reliable repairs



Worldwide manufacturing: reliable Bosch spare parts

Today, Bosch diesel systems and a comprehensive assortment of spare parts for carrying out associated repairs are produced worldwide at 28 locations in four continents. After all, the prerequisite for

ensuring that the systems work properly is that high-quality spare parts are used. Bosch spare parts ensure high quality and reliability.



Pump elements



Nozzles



Delivery valves



Gasket kits

Bosch pump elements

Reliable repair of injection pumps



Safe, efficient, consistent performance: Bosch pump elements

Perform reliable repairs with Bosch pump elements

Inline injection pumps are lubricated via the engine's oil circuit. These robust pumps also accept inferior fuel qualities. To ensure reliable operation, however, regular maintenance is essential.

Fuel is supplied to each cylinder of this pump type by a separate pump element via a pressure valve and high-pressure line. The engine drives the camshaft of the pump via gear wheels or a chain. Pump operation is synchronized with the piston movements – and accordingly runs at half the speed of the engine. To ensure this remains the case for hundreds of thousands of miles, spare parts of the high quality must be used whenever repairs are necessary. We recommend using pump elements from Bosch.

Pump elements are wear parts and must therefore be regularly checked in the event of the following

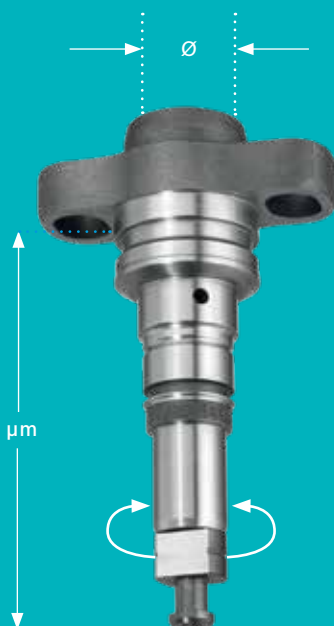
- ▶ starting problems, especially during cold starts
- ▶ loud combustion noise when the engine is cold
- ▶ engine does not run smoothly although it is at operating temperature
- ▶ loss of power or higher consumption

When replacing the pump elements it pays to consider Bosch quality

Visually the fine details of manufacturing pump elements are barely noticeable. For the engine, however, the quality difference can be critical. Pump elements from Bosch are manufactured with high precision and help prevent adverse consequences, e.g.:

- ▶ higher fuel consumption
- ▶ loss of power
- ▶ shorter service life of pump and engine
- ▶ breakdowns and engine damage

Precision and tight tolerances



Bosch pump elements are manufactured to a high degree of precision and in compliance with very tight tolerances.

One example: The fuel inlet opening is set so precisely that adjustment problems are eliminated.

Bosch pump elements

Quality in every detail

Whether contact surfaces, holes or threads – if pump elements are not manufactured with the utmost precision and attention to mechanical detail, pumps can be damaged and compromise engine operation. The details to which Bosch devotes attention when manufacturing pump elements and the consequences of deviating from the quality standard are described in the following.



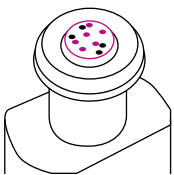
Contact surface of Bosch pump pistons

The convex contact surface of the piston has no unevenness.

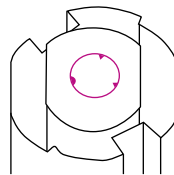


Centering hole of the Bosch piston

No metal burrs or chips in the centering hole of the piston.



If the contact surface is **uneven** or it **deviates** from the specified shape, there is the risk that the piston will move only in response to greater application of force or the engine will run roughly when the load changes.

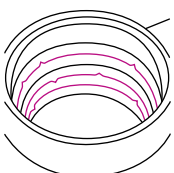


If the centering hole of the pump piston has **metal burrs** or **chips**, there is the risk that pump elements may be blocked.



Quality of the thread on Bosch pump elements

The threaded section is manufactured with high surface quality.

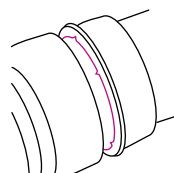


If threaded sections are **uneven** or are **manufactured poorly**, there is the risk that metal parts will loosen during assembly and drop into the pressure chamber, which can block the element or damage the nozzle.



O-ring and mounting groove on pump elements from Bosch

Edges and the mounting groove are flat and the O-ring is intact.



If the edge is **damaged** or the mounting groove is **uneven**, there is the risk that the O-ring will be damaged during assembly, resulting in leaks.

Bosch injection nozzles

Precision as the common denominator



From vehicle to ship engines – Bosch injection nozzles vary in size, but their quality always remains the same.

Increasing pressure requires higher quality

Diesel systems are expected to become more and more efficient and powerful. This can be achieved with higher system pressures. 2,700 bar is the new “sound barrier”. This means that it is necessary to adapt manufacturing methods, apply tighter tolerances and use quality materials for all components, including injection nozzles. A carbon coating also ensures a longer service life of the Bosch nozzle needles.

Injection nozzles are wear parts and must therefore be checked regularly in the event of the following

- ▶ more smoke, especially after a cold start
- ▶ loud combustion noise when the engine is cold

- ▶ engine does not run smoothly although it is at operating temperature
- ▶ loss of power or higher consumption

Reliable repairs with Bosch injection nozzles

It is important for the engine that high-quality injection nozzles be used for repairs. Bosch injection nozzles help prevent adverse consequences, e.g.

- ▶ higher fuel consumption
- ▶ loss of power
- ▶ reduced service life
- ▶ breakdowns and engine damage



Safety

Safety features of Bosch fuel injection nozzles:

- ▶ sealing ring technology
- ▶ inscription as proof of originality
- ▶ Bosch Secure Code Label with 18-digit code and hologram on the packaging



Longer service life

Nozzle needles with carbon coating: System pressures of up to 2,700 bar require the use of high-strength steels in nozzle and injector construction. To further extend their service life, Bosch also coats the nozzle needles with carbon if necessary.

Bosch injection nozzles

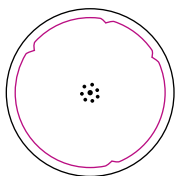
Manufactured to meet demanding requirements



Nozzle seat

The surface of the nozzle seat is carefully smoothed on injection nozzles from Bosch.

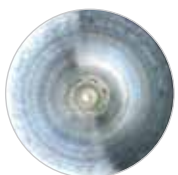
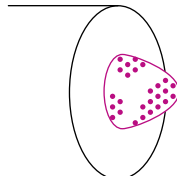
If the surface of the nozzle seat is **not smooth**, there is the risk of loud noises after the engine has been operating for an extended period of time or the engine will tend to shake.



Nozzle tips

The surface of nozzle tips on injection nozzles from Bosch are free of corrosion.

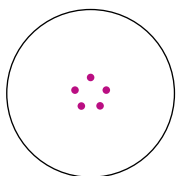
If the surface of the nozzle tip is **corroded**, there is the risk of the nozzle fracturing under high engine load, with subsequent engine damage.



Spray holes

Spray holes on Bosch fuel injection nozzles are provided in the number and arrangement required technically.

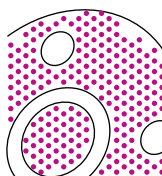
If the injection nozzle has **too few** spray holes or they are **positioned incorrectly**, fuel consumption may be higher and more smoke may be generated – with the risk of power loss or thermal overloads.



Nozzle sealing surface

The nozzle sealing surface of Bosch injection nozzles is flat.

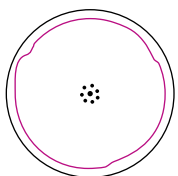
If the nozzle sealing surface is **uneven**, there is the risk of leaks with subsequent dilution of the lubricating oil and the danger of engine damage.



Inside surface

The inside surface of Bosch injection nozzles are machined very precisely.

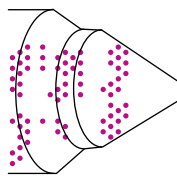
If the surfaces of the injection nozzle are **not rounded smoothly inside**, there is the risk of the nozzle fracturing under high engine load, with sub-sequence engine damage.



Coating

On coated Bosch nozzles, the surface coating of the nozzle needle is uniformly smooth.

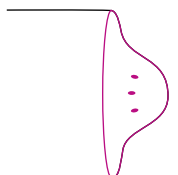
Risk: If the nozzle needle of the injection nozzle is **not coated uniformly**, it can leak and cause blue smoke, and also generate noise.



Round end/spray hole length

The round end and spray hole length on Bosch injection nozzles are designed specifically for the particular application.

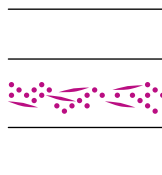
If the **shape** and **length** of the round end and spray hole are **not properly designed**, there is the risk of blue smoke being generated, accompanied by a rough engine or engine clattering.



Guide

The guide on a Bosch injection nozzle is free of damage and scratches.

If the guide has **scratches** or other **damage**, increased wear may result – with the risk of the engine stopping and the vehicle unable to drive any further.



Bosch valve sets

Precision at extremely high loads



Valve sets

Bosch valves: excellent quality for original equipment and workshops

Opening – closing. Opening – closing. Many millions of times. The valves are among the components of the fuel injection system upon which the greatest demands are placed. It is therefore important to install products of very high quality when carrying out a repair at the workshop. As one of the largest original equipment suppliers and diesel system developers in the world, Bosch offers high-quality products – in the form of original equipment and also for the aftermarket.

Precision operation throughout their lifetime: hard-chrome-plated valve sets from Bosch

Precision counts. The more precisely the valve piston and valve component fit together, the less the friction loss will be. Precise machining reduces the surface roughness of the valve sets. When combined with geometrical precision, this achieves a precise pairing of both parts. Bosch valve sets are also made of high-strength materials some of which are additionally hardened or hard-chrome-plated. This extends the service life and provides potential advantages in terms of consumption of as much as several percent.

Stringent checks and continuous monitoring of dimensional accuracy during the manufacturing process ensure the high-quality of Bosch valve sets.

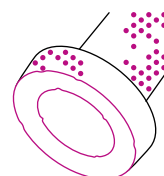


High-strength materials extend the service life



Material quality

Bosch valves are manufactured using high-quality materials and special alloys for all components.



In this way, the risk of worn valve seats and material chipping is minimized.

Bosch rail and pump components

Precise pressure detection and control

Precise pressure detection: rail-pressure sensors

Bosch rail-pressure sensors are specially designed and manufactured for use on the rail. They are notable for their precise characteristic curve and long service life. This small unit is a particularly good team player in terms of achieving interaction with the electronic periphery.



Rail-pressure sensor

Precise pressure control: pressure control valves

Bosch pressure control valves are designed and manufactured to strict tolerances for the specific application. Their electrical winding is precisely matched with the valve seat. This allows the rail pressure to be precisely controlled. As a consequence, the right amount of power is available as and when it is needed. This also improves the exhaust gas characteristics and fuel consumption of the engine. Bosch pressure control valves also have a long service life, as they are constructed from high-quality stable materials.



Pressure control valve

No overpressure: pressure limiting valves

Bosch pressure limiting valves are specially matched to the corresponding rail and facilitate proper function of the fuel injection system. They have been specially designed so that a limp home function is activated if a fault develops so the vehicle can still be driven to a garage or safely parked.



Pressure limiting valve

Exact amount: metering units

Bosch metering units are matched to the high-pressure pumps. They allow an exact dosage of the required amount of fuel. The power consumption is minimized while at the same time the fuel consumption and the vehicle's emissions are reduced.



Metering unit

Bosch seals and gasket kits

High quality for common-rail pumps



Complete gasket kit for the Bosch CP4 common-rail high-pressure pump



CP4 common-rail high-pressure pump

Simply unpack and install top quality

Time is often wasted on trivial matters when carrying out repairs. Bosch gasket kits therefore contain all the necessary parts. This makes the work at the workshop quick and avoids complications. It therefore makes sense to use the right seals. Malfunctions are also often caused by using the incorrect gasket kit or by premature wear. Workshops can rely on the high-quality materials of Bosch seal kits.



High-pressure sealing ring for common-rail injectors



Complete gasket kit for the CP3 common-rail high-pressure pump

Bosch seals and gasket kits

Fast installation in distributor injection pumps



Gasket kit for distributor fuel injection pumps

Seals and gasket kits

Bosch seals are designed and manufactured for their special applications. They retain their sealing characteristics over a very high temperature range. Due to their composition, most of the seals are also suitable for operation with alternative fuels. But that's not all, they also protect and safeguard the mechanical components of the engine. The wear of Bosch shaft sealing rings for example is so low that it has a positive effect on the longevity of the drive shafts.

The composition of the gasket kits is also adapted to the various repair scenarios. The sets are complete, which allows the mechanic to carry out professional repairs. This keeps the expenditure involved in placing the order and storage as minimal as possible.



VP44 distributor injection pump



The benefits of Bosch gasket kits

- ▶ complete and reflect the state-of-the-art
- ▶ include the full scope of all necessary parts
- ▶ made of high quality materials, such as Viton, which is resistant to biodiesel
- ▶ high strength – which prevents leaks
- ▶ resistant to high and low temperatures

Bosch eXchange

Exchange program for diesel spare parts



Bosch eXchange cylinder heads for the repair of common-rail high-pressure pumps (fig.: cylinder heads for CP4)

Bosch eXchange: economical and ecological

To certain extent, the range of the Bosch eXchange program comprises series-remanufactured products in an outstanding quality. To provide a high market coverage and delivery capability, it is complemented by new parts.

The Bosch eXchange products help the workshop to calculate economically and to keep costs low. The delivered ready-to-install products reduce the workload and the downtime of customer vehicles. They also offer a clear price advantage compared

to the new product range, save resources and thus protect the environment.

The Bosch eXchange program for diesel components is a high-quality solution for value-based vehicle repairs in Bosch quality. The program includes offers for most vehicles equipped with Bosch common-rail technology.



Bosch eXchange: CP4 common-rail high-pressure pump and injectors



Benefits for workshops with Bosch eXchange products and spare parts kits

- ▶ series-remanufacturing in certified factories
- ▶ technological advances on original parts are included in the series production
- ▶ strict functional and quality tests based on OE standards
- ▶ up to 30% price advantage to comparable products in the new parts program with the same warranty
- ▶ high operational reliability and long service life
- ▶ the reuse of old parts saves resources and thus protects the environment

Bosch eXchange

Value-based repairs



Range of spare parts from Bosch eXchange for repair of VP30 and VP44 distributor fuel injection pumps (fig. pump control unit parts kit PSG 5)

New product Parts kit PSG 5	Bosch eXchange Parts kit PSG
F 00N 300 380	0 986 444 958
F 00N 300 379	0 986 444 959
F 00N 300 378	0 986 444 960
F 00N 300 377	0 986 444 961
F 00N 300 376	0 986 444 962
F 00N 300 375	0 986 444 963
F 00N 300 374	0 986 444 964
F 00N 300 373	0 986 444 965
F 00N 300 372	0 986 444 966
F 00N 300 371	0 986 444 967
F 00N 300 370	0 986 444 968
F 00N 300 369	0 986 444 969
F 00N 300 368	0 986 444 970
F 00N 300 367	0 986 444 971
F 00N 300 366	0 986 444 972



Bosch eXchange: pressure-actuated solenoid valve parts kit (DMV 10)

New product Parts kit DMV 10	Bosch eXchange Parts kit DMV 10
1 467 045 055	0 986 444 946
1 467 045 056	0 986 444 947
1 467 045 058	0 986 444 948
1 467 045 059	0 986 444 949
1 467 045 060	0 986 444 950
1 467 045 061	0 986 444 951
1 467 045 066	0 986 444 952
2 467 010 017	0 986 444 953
2 467 010 018	0 986 444 954
2 467 010 019	0 986 444 955
2 467 010 020	0 986 444 956
2 467 010 027	0 986 444 957

Range of spare parts from Bosch eXchange for VP30 and VP44 distributor fuel injection pumps

Due to their production over many decades in quantities reaching into the millions, many distributor fuel injection pumps of type VP30 and VP44 are the work horses of numerous vehicles with high mileages. Bosch offers the following for value-based vehicle repairs:

- parts kits for pump control unit (PSG 5)
- parts kits for pressure-actuated solenoid valves (DMV 10, DMV 11)

New product Parts kit DMV 11	Bosch eXchange Parts kit DMV 11
2 467 010 028	0 986 444 973



Bosch distributor fuel injection pump

Bosch diesel-component tests

Precisely testing injectors



DCI 700: test bench for common-rail injectors

Precision and speed that excite

Current emission standards as well as future guidelines make the precise examination of common-rail injectors increasingly important. Thanks to the high-speed precision of the new DCI 700 measuring system, workshops can secure a competitive advantage and benefit from short assembly and testing times and user-friendly operation.

- ▶ time savings and high throughput thanks to the clamping and unclamping of 4 standard injectors in just 5 minutes and an average test time of 15 minutes

- ▶ future-proof thanks to the ability of testing all diesel injectors for cars and commercial vehicles from Bosch and third-party manufacturers
- ▶ VCC and NCC technologies according to manufacturer specifications can be tested
- ▶ higher quality, reliability and transparency thanks to fast and precise testing including IMA/NIMA coding
- ▶ maximum effectiveness through ergonomic workflows and an intuitive operating concept
- ▶ software updates and test plans can be downloaded online quickly and easily
- ▶ lower maintenance costs as there is no longer any need for vulnerable high-pressure hoses



EPS 205 – Automatic nozzle and injector testing

The compact unit tests nozzles, conventional injectors and common-rail injectors by means of an automatic testing procedure supported by straightforward menu guidance with the measurement results displayed both graphically and numerically. Includes database for test values and customer data.



EPS 118 – Automatic injector testing

This unit economically tests a wide range of common-rail injectors. The testing procedure is automatic and the measurement results are displayed both graphically and numerically. Includes database for test values and customer data.

Diesel pumps and -injectors

High-pressure testing



EPS 708

Specialized common-rail test bench – EPS 708

The diesel test bench EPS 708 is specially designed for common-rail injection pumps and injectors:

- ▶ electronic quantity measurement for economic testing of common-rail components
- ▶ electronic inlet pressure control for pump and lubricating oil supply
- ▶ easy pump assembly without coupling cover
- ▶ self-diagnosis system for test oil and filter changes



EPS 625 – Entry-level diesel test equipment

The EPS 625 conventional component test bench can be used to test conventional inline and distributor fuel injection pumps from Bosch and other manufacturers.

Testing program: universal or special

DCI 700 – specialized common-rail injector test bench for testing of:

- ▶ Bosch CRI: CRI 1-13, CRI 1-16, CRI 1-18, CRI 2.0, CRI 2.1, CRI 2.2, CRI 2-16, CRI 2-18, CRI 2-20, CRI 2-22, CRI 2-25, CRI 3.0, CRI 3.1, CRI 3.2, CRI 3-16, CRI 3-18, CRI 3-20, CRI 3-22, CRI 3-25
- ▶ Bosch CRIN: CRIN 1, CRIN 1-14, CRIN 2-16, CRIN 3-18, CRIN 3-20, CRIN 3-22, CRIN 3-25, CRIN 4.2, CRIN 4-21, CRIN 4-25, CRIN 4-27
- ▶ CRI foreign: Delphi, Denso, Siemens
- ▶ testable up to 2,700 bar

EPS 708 – specialized common-rail test bench for testing of:

- ▶ common-rail systems: CP1, CP3, CP4, CB18, CP Delphi/Denso/Siemens,
- ▶ solenoid valve CRI by Bosch/Delphi/Denso
- ▶ solenoid valve CRIN by Bosch
- ▶ piezo CRI by Bosch/Siemens/Denso

EPS 625 – conventional diesel component test bench for testing of:

- ▶ inline fuel injection pumps and controllers of the following sizes: PE(S) x A, PE(S) x M, PE(S) x MW, PE(S) x P, PE(S) x H and PE(S) x R
- ▶ distributor fuel injection pumps of the following sizes: VA.A, VA.B, VA.C, VE.F, VE. with mechanical and electronic controllers

EPS 205 – automatic nozzle and injector tester for testing of:

- ▶ UI nozzle via holding adapter (Unit Injector)
- ▶ 1-spring / 2-spring nozzle holder (NHA)
- ▶ NHA with needle motion sensor (NBF)
- ▶ NHA of brands by other manufacturers
- ▶ step holder
- ▶ solenoid valve CRI by Bosch/Delphi/Denso
- ▶ solenoid valve CRIN by Bosch
- ▶ piezo CRI by Bosch/Siemens/Denso

EPS 118 – Automatic injector tester for testing of:

- ▶ solenoid valve CRI by Bosch/Delphi/Denso
- ▶ piezo CRI by Bosch/Siemens/Denso
- ▶ solenoid valve CRIN by Bosch

ESI[tronic] 2.0 Online

Workshop software

The various types of the ESI[tronic] 2.0 software for workshops systematically support diagnosis and repairs to diesel-powered passenger cars and commercial vehicles. The information stored for virtually every vehicle simplifies the processes considerably. The integrated troubleshooting with user guidance also saves valuable labor time.



**ESI[tronic] 2.0
Online**



A Applications and functions, including automobile equipment

- ▶ Quickly finding the right Bosch spare parts: detailed overview of all Bosch automotive equipment
- ▶ Clear identification of Bosch spare part numbers: comparison of the order numbers from the vehicle manufacturer and Bosch for direct and efficient ordering
- ▶ Adapted to different needs: structure according to individual assemblies or overall display
- ▶ Cross-vehicle overview: information on other vehicles in which the product is used

D Diesel spare parts

- ▶ Efficient finding of Bosch spare part numbers: detailed representation of the diesel engines and exploded drawings
- ▶ Detailed and precise work: display of the complete diesel engine from the assemblies to the smallest individual part
- ▶ Clear representation of the required spare parts: special functions, e.g. automatically displayed detailed information, multi-level, variable parts list display, zoom function
- ▶ Simplification of ordering and referencing: information on the other units in which the spare part is also used

K Component repair instructions

- ▶ Instructions for repair or maintenance and diesel-component diagnoses on the test bench
- ▶ Different activation variants: K1 Diesel, K2 starters/alternators, K3 Diesel and starters/alternators
- ▶ Step-by-step instructions: simple and clear approach to professional and safe component repair
- ▶ Various search options: to simplify the work in the workshop
- ▶ Visualization through illustrations/pictures

W Fuel injection pump test values

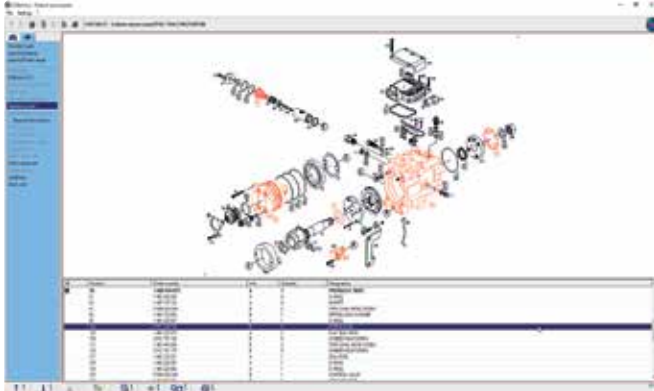
- ▶ Complete test process: from the measured value determination up to the log printout
- ▶ Display of the test steps in the optimal sequence

Info types of ESI[tronic] 2.0 Online for Diesel-component testing and repair:

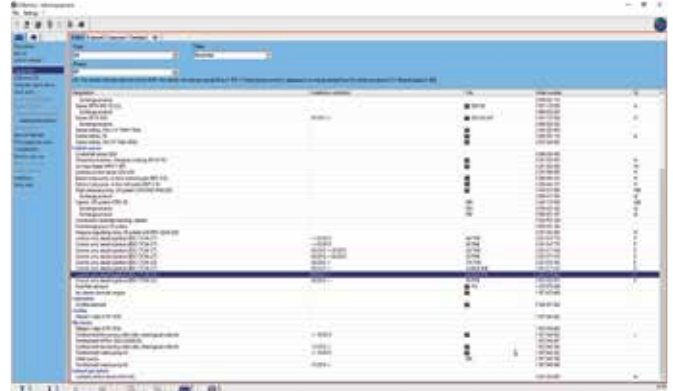
ESI[tronic] A	Automobile equipment
ESI[tronic] D	Diesel spare parts
ESI[tronic] K	Component repair instructions
ESI[tronic] W	Fuel injection pump test values
ESI[tronic] SD	Vehicle diagnosis (control unit diagnosis)
ESI[tronic] SIS	Troubleshooting instructions (Service Information System)
ESI[tronic] Truck	Truck

ESI[tronic] 2.0 Online

Workshop software



Exploded drawings: quickly find the right spare part



Spare parts catalog: ordering made easy with spare part number

SD Vehicle diagnosis (control unit diagnosis)

- ▶ Electronic issues at a glance: quick and clear system overview of all installed control units, including an overview of the error memory
- ▶ Transparency and documentation of the vehicle status: mileage overview across all control units
- ▶ Time-saving access to service activities: smart shortcuts for easy execution of maintenance-relevant test steps
- ▶ Efficient and fast work: direct connections of specific error codes and live parameters to troubleshooting instructions
- ▶ Large range of functions: identification of the control unit, reading/deleting the error memory, measurement and analysis of current values, control of various components, function tests, setting options and special functions
- ▶ Integrated recording function: recording of parameters for the analysis of, i.e. temporarily interrupted values in the event of malfunctions
- ▶ Extended range of functions: diverse coding and setting options

SIS Troubleshooting instructions (Service Information System)

- ▶ Reliable diagnosis result: structured and logical procedure thanks to step-by-step instructions including test procedures and target values for diagnosis
- ▶ Quick finding of components: information on the position, removal and installation of vehicle components
- ▶ Structured and efficient work: overview of all lines installed in the vehicle
- ▶ Finding defective components in a targeted manner: system tests for almost every vehicle component
- ▶ Extensive coverage of circuit diagrams including the connection assignment of the control unit: simple, fast and reliable measurement of the required values including information on the setpoint
- ▶ Fast reading of values: diagnosis combined with real-time measurements from the multi-meter within the troubleshooting instructions

Truck

- ▶ Diagnosis, maintenance schedules and information for trucks, trailers, buses and vans
- ▶ All important data is available for servicing and repairs

Diesel spare parts in Bosch quality

Product overview



Pump elements



Nozzles



Valve sets



Rail pressure sensors



Gasket kits

Bosch diesel systems

Bosch is one of the world's leading manufacturer of diesel injection systems. Bosch products and spare parts carry the system knowledge acquired over decades and must satisfy high quality expectations at all times. This gives the workshop the certainty that it is always installing state-of-the-art tough spare parts in proven Bosch quality.

Bosch pump elements

- ▶ for reliable pump repair
- ▶ made to a very high degree of precision in compliance with the strictest tolerances

Bosch injection nozzles

- ▶ for system pressures up to 2,700 bar
- ▶ made in compliance with strict tolerances
- ▶ state-of-the-art manufacturing methods using high-strength steels
- ▶ carbon-coated nozzle needles

Bosch valve sets

- ▶ made from high-quality material with special alloys
- ▶ hard chrome-plated
- ▶ valve piston and valve component precisely paired

Bosch rail pressure sensors

- ▶ specially harmonized with the corresponding rail
- ▶ for proper function of the injection system
- ▶ precise characteristic curve and long service life

Bosch gasket kits

- ▶ complete with all necessary parts
- ▶ use of high-quality materials
- ▶ high-pressure resistance, prevents leaks
- ▶ resistant to high and low temperatures

Service solutions in Bosch quality

Certainly a good choice



Common-rail
high-pressure pump CP4

Bosch eXchange: the safety package for the workshop

When using an exchange product, Bosch eXchange products are highly recommendable. This minimizes risks for the vehicles of the workshop customers.

Because when it comes to series-remanufacturing, Bosch not only replaces the defective components, but also all components that are relevant for a long service life and functional reliability.

Secure Code Label

Certified quality with Bosch Secure Code Label

Bosch has increased the level of protection against counterfeit products even further. The packages for nozzles, pump elements and valve sets thus now carry the new Bosch Secure Code Label which contains a unique security code.

Security features

- ▶ Hologram extremely difficult to copy
- ▶ Unique for every product: 18-digit Bosch Secure Code, the last 6 characters of which are repeated individually in the hologram
- ▶ To check, simply visit www.protect.bosch.com and enter the Bosch Secure Code – the entry must be in uppercase letters without spaces
- ▶ The check can also be performed using a smartphone: the 2D Datamatrix code can be found on the right of the label at www.tecidentify.com – to do so, the free app can be downloaded from www.get.neoreader.com to the smartphone – following installation, open the app and simply point the mobile phone camera at the 2D Datamatrix code – the response comes in a matter of seconds



Cross checking – Bosch Secure Code Label



When exposed to direct light, the secure code and logo on the Bosch Secure Code Label shimmer in rainbow colors.



In indirect light, only silvery and black structures can be seen.

What drives you, drives us

Bosch technologies are used in most vehicles worldwide.
People, and assuring their mobility, is what we are focused on.

Therefore, we have dedicated over 130 years of pioneering spirit
and expertise in research and manufacturing to achieving this.

We provide the aftermarket and workshops worldwide with modern
diagnostic and workshop equipment and a wide range of spare parts
for passenger cars and commercial vehicles:

- ▶ Solutions for efficient and effective vehicle repairs
- ▶ Innovative workshop equipment and software
- ▶ One of the world's most comprehensive ranges
of new and exchange parts
- ▶ Large network of wholesale customers,
for quick and reliable parts supply
- ▶ Competent technical support
- ▶ Comprehensive educational and training offers
- ▶ Targeted sales and marketing support

Find out more at:
boschaftermarket.com

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