Driven by originals

Bosch Classic

Quality spare parts by Bosch for classic cars
Part of your life. Part of you.
Bosch Classic
The history of automobile passion

Tradition and passion for everything to do with automobiles are the basis for Bosch Classic:
As the forerunner for motor vehicle technology and worldwide leading automobile supplier, Bosch makes it possible to maintain classic cars by providing technical support.

Forerunner in the rising age of automobiles

In 1886, Robert Bosch opened a „Workshop for Precision Mechanics and Electrotechnology“ in Stuttgart. The rapid development of the automobile and the international success story of Bosch began with the development of the first magneto ignition for motor vehicles in 1897.

Bosch expands and soon supplies products to everywhere in the world. In 1905, the first production facility outside of Germany was opened in Paris, followed by the USA in 1912.

Many of the technologies used as a matter of course today would not be possible without Bosch inventions. That applies above all to the spark plug, which is to this day inseparably linked to Bosch.

Automobile Tradition and Emotion

These traditional values and the passion for everything to do with automobiles connected to it form the basis for Bosch Classic. As a forerunner of motor vehicle technology and global leading automotive supplier, classic cars are especially close to our hearts. Also in the future, we would like to see these vehicles that tell tales from bygone times on the road.
"Our products have always been our best advertisement."
Robert Bosch’s statement shows his high demand on product quality and his strong customer-orientation. A promise, Bosch still lives up to today.
Bosch Classic
No future without the past

Many paths lead to the product – spare parts supply at Bosch Classic: It doesn’t matter whether a spare part is still produced or not – Bosch Classic has a number of ways ensuring the supply for modern classic and vintage cars.

Case I: The spare part is still being produced

In this case, Bosch Classic can supply spare-parts from the active Bosch range.

If it is foreseeable that the production of a product will be ceased, we will check whether it is possible to keep producing it in small batches. The decision thereupon depends on the technical feasibility, the market demand and the quantity needed.

Case II: The spare part is no longer produced

Expertise and experience on product development, application, manufacture and quality control are needed in this case. Bosch Classic has two possibilities of re-introducing a product to the market:

Faithful reproduction

The old technology and the design are maintained in their original form, whereas at the same time, while aiming at increasing performance. Reparability and spare parts supply for the service is guaranteed. Development, testing, release process and production are performed acc. to the original equipment standards.

Finding alternative product solutions

Bosch Classic tries to keep the product’s original look whereas modern technology might be used at the same time. This comes with a lot of advantages. Due to environmental laws, some materials must not be used any longer. Solutions that are prone to mechanical errors are replaced by electronic solutions based on today’s technical know-how. This also improves the product’s reliability. Reparability and spare parts supply for the service is guaranteed. Development, testing, release process and production are performed acc. to the original equipment standards.
Case III: No production of the spare part possible

Bosch Classic will check if re-manufacturing can technically take place and the spare part can be included in the Bosch eXchange replacement program.

At the Bosch re-manufacturing plants original tools and test equipment are used to ensure quality and safety. In the case that not enough defective parts are available to re-manufacture and cover the demand, Bosch Classic offers the 1:1 REMAN service. For this, the original defective product will be sent by the workshop to Bosch Classic and will be returned re-manufactured. In doing so it will also maintain the originality of the classic vehicle.

The 1:1 REMAN service is offered only to workshops. As a private buyer please contact your local Bosch Service.

Find out more on Bosch eXchange and 1:1 REMAN on page 36
Technical archive
Fast information research and more

Bosch Classic facilitates the research work: it is possible at any time to search the technical archive on the Bosch Classic website for historic customer service documents. These date back to the very beginnings of Robert Bosch GmbH.

www.bosch-classic.com
Calling up the technical archive here, directly guides you to Bosch’s list of technical products.

The vehicle search gives access to all vehicle-related documents:
- Equipment lists
- Vehicle information
- Training on automotive engineering
- Special literature on automotive engineering

The product search gives access to product-related documents:
- Technical data
- Product pictures
- Replacement parts lists
- Where-used lists

Special stage at the Bosch Boxberg Klassik: Alfa Romeo Giulia Super 1300, year of manufacture: 1973
Keep classics mobile and original
Find suitable spare parts online

The vehicle search
In the vehicle search, the vehicle is selected by type, brand and model.

The equipment list
The equipment list includes the products with part numbers, information regarding installation restrictions and links to further information.

The product search
The product search includes technical information, where-used lists, documentation and instructions as well as product alternatives.

Did you find the spare part? This is how to correctly place an order!

Private buyers place their orders with their local Bosch Car Service. Upon request, the workshop will install the spare part.

Workshops place their orders with their wholesaler or online at HC Cargo, 1:1 REMAN upon request at Bosch Classic.

Wholesaler order also Classic products directly from Bosch Automotive Aftermarket.
**Ignition systems:** From the magneto ignition to battery ignition systems

** Tradition of progress:** the ignition posed one of the biggest technical problems in the early days of automotive engineering. Robert Bosch had the solution at hand in 1897 – he managed to adapt a magneto ignition to a vehicle engine. Ever since, Bosch stand for progressive ideas and exemplary technology, especially in the area of ignition systems for Otto engines.

**High voltage and spark plug**

In 1902, Bosch filed a patent for the high voltage magneto ignition including the spark plug. The voltage was conducted to the spark plug via cable connections. The spark plug itself was actually nothing more than an auxiliary product, which Bosch had to produce in order to offer a complete system. However, it became one of the largest successes in Bosch’s product range.

**Cheaper with battery ignition**

In 1930, a magneto ignition for a medium-sized vehicle cost about 200 Reichsmark, which then used to be twice a Bosch worker’s monthly wage and one tenth of a small-sized vehicle. Therefore, Bosch decided as of 1920 to further develop the battery ignition. For starters, mainly battery ignition systems for small- and medium-sized vehicles were supplied, consisting of ignition coil, ignition distributor and spark plugs with cables.

**Ignition coils, ignition modules, ignition lines and spark plugs – the complete ignition system provided by Bosch**

Today, Bosch offers its partners worldwide a complete program of all ignition components – also for classic cars.

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At the Prince Henry Tour 1908, Bosch was represented with a refreshment station. Robert Bosch himself welcomed the arriving drivers. And whoever had a Bosch magneto ignition, was given a refreshment.
Ignition coils
Transformer stations for ignition systems

Bosch’s product range includes different types of ignition coils for different applications. They operate with or without initial voltage boost in contact-controlled and contactless ignition systems.

Asphalt ignition coils
As fit as ever: the asphalt ignition coil has been produced in Bosch quality for several decades. This type of ignition coil is installed in many classic vehicles and owes its name to the fact that isolation and mechanical fixing of the inside windings are realized by means of asphalt.

- Thanks to their large power reserves, asphalt ignition coils guarantee a high running performance and a great starting behavior.
- Even in case of extreme cold starts, asphalt ignition coils are ignition-proof.
- The replacement of asphalt ignition coils is very easy.

Multiple spark and compact ignition coils – future young classics
Many young classics are equipped with modern follow-up generations like multiple spark or compact ignition coils. They complete the Bosch Classic product range for future classics.
Ignition distributors
It’s the small things that make a difference

Often it's the small spare parts that are hard to come by. Bosch offers a complete program for ignition components. It includes wear parts like ignition distributor caps, rotors, contacts, capacitors, some of them as reproductions.

**Ignition distribution cap**
There is high voltage under the ignition distribution cap. Up to 30 000 volt is applied to the parts under voltage. The distributor rotor located under the cap, the ignition energy of the coil is transferred to the spark plug via the ignition cables.

**Ignition distributor rotator**
Like the distributor caps, also distributor rotors must be immune to creepage currents. They are therefore made of the same material. Distributor rotors are used with or without limitation to the engine speed.

**Ignition contact set**
Ignition contacts – also called breaker contact – are subject to extraordinarily high stress. They have often gone through more than 100 million cycles of operation before being replaced.

**Impulse generator**
The contact-less impulse generators replace the mechanical ignition contacts in the distributor. An external switch boards picks up the signal by the impulse generator and activates the ignition coil.

**Ignition capacitors**
Ignition capacitors prevent the ignition contacts to burn prematurely by averting an undesired electric arc on the ignition contact.

**Repair kit impulse generator D-Jetronic**
The impulse generator is installed in the distributor and measures the engine speed. In conjunction with the values of other sensors, the control unit calculates the time and quantity of injection of the D-Jetronic. Repair kit is manufactured and checked using original equipment.
Ignition cable sets and spark plugs
The perfect selection for a perfect ignition

**Bosch quality fits:** the broad range of ignition cables and spark plugs by Bosch are attuned to the different vehicles.

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**Ignition cable set**

Bosch ignition cables are very robust and resistant against heat, cold and liquids. The connecting plugs are corrosion-resistant and thus offer reliable electrical contact.

Silicone is used for the outside insulation. This contributes to excellent radio interference suppression and a long service life.

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**Spark plugs**

Bosch spark plugs impress with their extremely high quality, reliability and performance.

Bosch Super 4 spark plugs are an alternative recommendation for older passenger vehicle models. Their air/surface-gap spark technology make them especially resistant against sooting.

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**Spark plug connector**

**Ignition coil connector**

**Ignition distributor connector**

Bosch offers spark plug connectors in different offsets and wrench sizes for young classics and vintage cars. Also ignition coil connectors and ignition distributor connectors are part of the program.

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**Find alternative solutions for historical spark plugs by way of type designation**

The type designation for spark plugs was facilitated at the end of the 1970s. A comparison between the old and the current type designations can be found under:

www.bosch-classic.com
Glow plug systems

New classics and vintage cars with diesel engines

Bosch is today’s worldwide production leader of glow plugs and glow plug system technology. Bosch offers glow plugs for almost all classical passenger cars, trucks and agricultural vehicles with diesel engines.

Glow plugs by Bosch

Glow plugs guarantee comfortable starts, a stable cold run and thus lower emissions. They should be checked for functionality by an expert on a regular basis as they are wear parts. If the glow plug has to be replaced, Bosch offers the right solution for each vehicle type – depending on the system, made of metal or ceramics and with the appropriate heating element diameter.

Bosch glow plugs have replaced the historic coil glow plug almost altogether. They combine operating voltage, maximum glow temperature and duration of afterglow. Their resistance against chemical, mechanical and thermal stress is high, just like their service life.

Historical drawing of a spark coil plug (originally: „Glühwickel“)

Shortening the pre-heating time

In 1932, production of the first 2-pole glow-wire plug by Bosch was started. Its normal pre-heating time was up to 180 seconds. The first generation of single-coil glow plugs with a pin replacing the wire – from 1958 – reduced the pre-heating time to 45 seconds.
Glow plug systems
New classics and vintage cars with diesel engines

Glow plug starter switch
Bosch supplies different types of glow plug starter switches for diesel vehicles. They are equipped with a safety lock and installed so that do not twist.

Glow time control device
Glow systems in young classics are usually equipped with glow time control devices. Their functionalities go beyond the mere starting process and affect the vehicle's consumption and emissions by way of active electronic control.

Glow plug resistor
Glow plug resistors are required to avoid excess voltage in the glow system.

Heater plug control
Heater plug controls are connected to the glow plug circuit and show by lighting up the glow coil that the system operates smoothly.

Bosch supplies different types of glow plug starter switches for diesel vehicles. They are equipped with a safety lock and installed so that do not twist.
Batteries
Charge, install, start.

Vehicle batteries store electricity and discharge it when needed. While driving, the battery is charged by the generator; at a stop, the battery supplies electrical consumers such as the starter and radio with energy.

Starter battery, classic

Whereas batteries in the 1950s used to be made primarily of hard rubber, plastic (PS) is used today. Batteries with plastic casings minimize gas penetration and prevent the formation of corrosion on poles and bridges. They are subject to a lower risk of breakage and have a longer service life. They can be recycled almost entirely. Classic batteries are delivered in dry and precharged condition. After charging the battery with battery acid, which has to be ordered separately, it can be used shortly. Due to the original design, Bosch batteries for classic vehicles are optical highlights, however, they also offer a longer service life and a higher starting performance by way of the state-of-the-art technology inside the battery casing.

Battery charger

Maintenance of the battery charge is extremely important for vehicles that are only driven seasonally. Bosch battery chargers are easy to handle and maintain the batteries’ starting performance and service life.
Starters and alternators
A strong start and reliable supply

Bosch has over 100 years of experience in the development and manufacture of starters and alternators. Know-how that pays off – for vehicle owners and workshops.

Starters
Bosch starters stand for strong performance, a long service life, first-class quality, and reliability. The product portfolio includes a broad range of innovative starters – robust and sophisticated solutions for gasoline and diesel engines that practically fulfill the requirements of all classical vehicles and that offer the highest starting reliability, even under extreme conditions.

Alternators
The higher the efficiency factor, the more effective the alternator and the lower the fuel requirement to produce the electrical energy. Furthermore, Bosch alternators are extremely reliable and have a long service life. They provide high performance and are produced and tested under the same conditions as original parts.

DC generator governor
The generator governor is responsible for voltage control and current limiting to protect the alternator.

Starters and alternators
Bosch eXchange classics
When remanufacturing starters and alternators, state-of-the-art production technology is used to replace all wear parts and critical components. The high quality standards and functional tests in certified plants guarantee the high quality. Therefore, Bosch awards the same warranty as for new products.
Filters
The world of filtration for classics

Bodyguard for the engine: Filters have an important protective function for both gasoline and diesel injection systems. The Bosch filters produced with high technical effort reliably protect engine components against dirt particles and abrasion.

Fuel filter
Smallest particles on the injection system may lead to wear and early failure. Bosch fuel filters filter impurities, thus guaranteeing optimal functionality and a long service life.

Air filter
Bosch air filter reliably clean the suction air from particles. This protects the engine components from early wear and support an optimal engine power.

Oil filters
Bosch oil filters keep soot and metal abrasion on the inside, thus preventing them from circulating in the engine’s oil cycle – for maximum service life.

Cabin filters
Bosch cabin filters clean the air from pollen, fine dust and hazardous, malodourous gases and guarantee an easygoing driving experience in every season.
Convincing quality and reliability: pump modules as complete solution or fuel pumps – Bosch systems for the fuel supply of classic vehicles offer performance and safety on the level of new vehicles.

**Fuel supply**
Everything runs smoothly with Bosch

**Side channel pump**
Gasoline injection systems by Bosch were already used in 1954 in the legendary Mercedes Benz 300 SL. The used side channel pump is the first fuel pump made by Bosch. It conveys the fuel to the in-line fuel injection pump.

The production of the side-channel pump has remained the same since it was first introduced.

**Electric fuel pumps**
In 1966, Bosch developed the first electric fuel pump from a roller pump for fuel oil burners, which is used to this day in historic injection fuel systems.

Another milestone was the introduction of the peripheral pump (flow pump) in 1985, which gradually replaced the roller cell pump.

**Fuel tank and safe pressure regulator**
After the engine has been switched off, the fuel tank maintains the pressure in the fuel system for some time to facilitate the re-start of the engine that is still warm. The electro-hydraulic safe pressure regulator of KE-Jetronic allows the implementation of warm-up control, overrun fuel cut-off and speed limit.
Mixture adjustment
More air – whenever it is needed

Reliable start-up and smooth idling – those are the requirements for an engine, irrespective of its operating temperature.

Auxiliary air slider
During the startup phase, auxiliary air sliders provide additional air so that, together with the additionally supplied fuel, the engine speed is increased.

Depending on the version, the control is exercised via the temperature of the cooling water or an electric heating element.

Idle actuator
When the engine is cold, the idle actuator operates just like the auxiliary air slider, while at a warm engine, it stabilizes the idle run by adding or removing auxiliary air.

The optimal idle speed is determined here by means of control unit sensors.

History of the Jetronic
The launch of the electronically controlled Jetronic took place first in the USA, where new exhaust gas standards became a requirement of the important Californian market. In general, however, there was still plenty of doubt regarding the system’s sustainability. In order to be able to also supply mechanically controlled injection systems, Bosch developed the mechanical equivalent K-Jetronic parallel to the electronic successor L-Jetronic. Both were introduced to the market in 1973.

Tighter emission laws worldwide ensured that the electronic fuel injection finally prevailed. The Jetronic thus provided impetus to the success of electronic systems and attached great importance to electronics in today’s cars.

The Citroën DS – pronounced in French as "Déesse" (Goddess) – is one of the best known vehicles that was equipped with the electronically controlled Jetronic by Bosch.

Photo: Citroën Communication/Jean-Brice Lemal
**Fuel metering**

**Fuel – precisely distributed**

Classic vehicles will take you on a journey through the history of fuel injection: as a forerunner for gasoline systems, Bosch is the only one to offer a complete product range from individual components to complete injection systems.

**Mechanical fuel injection**

Already in the 1950s, the mechanical fuel injection, compared with Otto engines, increased performance and reduced fuel consumption. Until today, the individual components are repaired by Bosch.

**Fuel distributors**

The fuel distributor is the central element of the K- and KE-Jetronic by Bosch. It is mainly controlled by the airflow meter and responsible for the fuel metering of the individual fuel injectors. The core of the injection system is repaired in specialized Bosch workshops.

**Mechanical and electric fuel injectors**

Fuel injectors are essential components for injecting gasoline. They are responsible for dosed injection, fuel distribution, forming the injection process and sealing against the combustion chamber.

**Warm-up compensators**

The Bosch K-Jetronic warm-up compensator ensures a good cold start behavior and takes on additional functions such as the enhancement of acceleration and full throttle, depending on the version. Warmup compensators are repaired within the framework of 1:1 REMAN.
Bosch and the diesel engine
Start of the diesel pump development

1922 marked the official beginning of the development of the diesel injection equipment. Bosch also benefitted from its experiences with lubrication pumps, which were being used for engine lubrication in vehicles and stationary engines.

From in-line fuel injection pumps to distributor fuel injection pumps

By 1950, Bosch had produced one million in-line fuel injection pumps and the success continued. However, the large in-line fuel injection pumps were hardly suitable for small engines in low-priced small-sized vehicles. Therefore, Bosch switched to distributor fuel injection pumps in 1962.

With the development of the Golf Diesel, Volkswagen geared to small, efficient diesel vehicles, bringing size and low price of distributor fuel injection pumps into play again. The launch of the Golf Diesel in 1976 downright triggered a sales boom for diesel models in the compact class.
Diesel injection Everything for the compression-ignition engine

No other name is more closely connected with the development and capacity of diesel systems than Bosch. Each individual component contains Bosch’s entire diesel know-how.

Diesel in-line fuel injection pumps and regulators

Because the in-line fuel injection pump is lubricated via the engine oil circuit, it can also manage fuel of lower quality. Long-term reliability and a long service life are guaranteed if the vehicle is serviced regularly and Bosch spare parts are installed correctly. Pumps and regulators were constantly improved. Important milestones for today’s pumps were the Electronic Diesel Control (1987) and the control-sleeve in-line fuel injection pump (1993).

Distributor fuel injection pump

Small, fast-running diesel engines in classic cars require an injection fuel system with high efficiency, fast injection sequences, low weight and a small mounting volume. The distributor fuel injection pumps fulfill this requirement.

Since 1962, Bosch has produced more than 45 million distributor fuel injection pumps. Their types and the structure of the entire system are correspondingly diverse.

Nozzle holder assembly and diesel fuel injection nozzle

Fuel injection nozzles are used to precisely nebulize the fuel and to distribute in such way that the combustion procedure runs perfectly. The nozzle holder serves to affix the injection nozzle in the cylinder and connect with the fuel line.

The Bosch Diesel Center und Bosch Diesel Service have an excellent reputation as competence centers for all aspects regarding repair and maintenance of diesel fuel injection systems. They are the contact for authorized workshops, fleet operators, business customers and private vehicle owners.
**Electronic Control Units**

*Computer for gasoline and diesel engines*

**Electronic engine controls** enable precise central management of all functions relevant for engine operation regarding constant driving characteristics and emission values throughout the entire service life.

While driving, the control unit permanently monitors and diagnoses all components that affect the safety of the system and the emission behavior. Thus, the engine control in the fuel and diesel system is the core of the linked individual components that attunes them and makes for optimal drivability.

**Overview of systems**

- D-Jetronic
- K-Jetronic with lambda control
- KE-Jetronic
- L-Jetronic
- Motronic

**Transmission control unit**

The reliable shifting of automatic transmissions is done by means of a transmission control system.

**Ignition distributor**

The pictured control unit for the high-voltage capacitor ignition (HKZ) was developed for high-revving and powerful reciprocating and rotary piston engines. It stands out due to its virtual insensitivity against electrical shunts like dirty spark plugs.

**Control unit repair with all-round service**

Find out more on page 37
**Sensors**

A vehicles’ sense organs

**Sensors measure, feel, smell and count.** Sensor signals are essential for many measurement and control functions as well as for safety and comfort reasons.

**Pressure sensor**

The pressure in the intake manifold of the engine fluctuates is measured by the intake manifold pressure sensor (pressure sensor). Using this information along with signals from other sensors, the control unit of the D-Jetronic calculates the optimum amount of fuel for each load and supplies this fuel to the fuel injectors.

**Temperature sensor**

Temperature sensors measure and record the engine’s temperature. These signals control safety and comfort functions in the vehicle.

**Flow Meter**

Air and fuel must be added to the engine in a precisely defined ratio. To do so, air flow meters measure the actual air flow and forward the measured values to the engine’s measurement and control technology.

**Lambda sensor/gas sensor**

The oxygen sensor has helped reducing motor vehicle emissions since 1976.

**Important sensor types**

Bosch produces all important sensors for classic vehicles that ensure safe and comfortable driving.

- Acceleration and vibration sensor
- Position and angle sensor
- rpm-sensor
Wipers and cleaning systems
For a better view

A better view in the long term – with windshield wipers by Bosch. They can be installed quickly and guarantee less wind and wiping noises, making them the perfect fit for every weather – and thanks to the broad product range, also for almost every vehicle.

Window cleaning

Bosch windshield wipers are being put to use wherever special resistance against climatic conditions is required. Robust metal holder system and multiple corrosion protection make them very tough and durable.

Thanks to their intelligent adapter system, Bosch windshield wipers are installed easily and quickly on classic cars.

Window cleaning products

- Wiper arm
- Wiper blade and blade rubber
- Wiper motor
- Electrical water pump
- Wiper interval switch
- Relay for wiper motors and wiper interval functionalities

Wiper motor

Perfectly adapted to the wiper system for efficient, reliable window cleaning.

Wiper interval switch

Retrofitting comfort: Switch with adjustable wipe interval in 6, 12 and 24 Volts.
Supertone horns and lighting
Pioneer for safety equipment

Light, sight and the possibility to make yourself seen are prerequisites for safe and relaxed driving – also in classic cars. Bosch offers a wide variety of vehicle lamps for different requirements and acoustic alarm for almost every vehicle.

Supertone horns

Horns make it possible for the driver to warn other drivers, particularly in hazardous situations. Bosch horns are manufactured using a historical design which includes slotted screws and a chrome-plated cover, i.e. the visuals hardly differ from the original horns from the 1950s and 60s.

Bulbs for classic cars

In both, modern and vintage cars – Bosch vehicle lamps are of high quality and are awarded top ratings by drivers on a regular basis. Depending on the vehicle’s age, either double filament or halogen lamps can be used for the head lamps.
Switches
User-friendly operation in classic cars

**Bosch switches offer exemplary quality and a long service life.** A host of designs are available for a wide range of purposes: From pressure switches for reliable starting to retrofittable wiper interval switches to improve vision while driving in the rain.

Switches enable easy and comfortable operation of technical systems in classic cars. Ignition, driving light or blinker – there is a matching switch for every function. As the leading company in the area of vehicle electrics and electronics, Bosch offers a wide variety of vehicle switches for modern classic and vintage cars.

Switches for classic vehicles

- Blinker switch
- Brake light switch
- Push switch
- Glow plug starter switch
- Light switch
- Oil pressure switch
- Warning switch
- Wiper interval switch
- Ignition starter switch

**Warning light unit**

For the retro-fitting of a flash warning function in classic cars – available for on-board systems of 6, 12 and 24 Volt.
Blinker unit and relay
The right interval, correctly connected

Blinker unit
Blinker units come in different shapes and switches, however, they all serve one purpose: to indicate the driving direction by means of bulbs inside the blinker units. The functional control is performed with optical and acoustic feedback. Blinker units by Bosch have been designed to still function reliably after many cycles of operation.

Relays
Relays for classic cars are being out to use for the most different purposes, e.g. to switch between high beam and low beam lights. Bosch relays do not need a lot of space and have a high switching capacity. They are very reliable and have to be replaced no earlier than after about 250,000 cycles.
**Engines**

**Vehicle safety made by comfort**

**Sunroof, seat adjuster or window lifter** – Bosch offers the perfect solution for diverse requirements and for almost all vehicle types. Therefore, Bosch supplies electric engines for many classic cars.

**Glass rinse motors**

Together with the wiper blades, glass rinse engines provide for a clear view in all weathers. The small water pressure pumps convey the wiper fluid from the respective container via the nozzles onto the windshield.

**Sliding sunroof motors**

Bosch sliding sunroof drives and intelligent operating concepts enhance comfort and allow the driver to concentrate fully on traffic conditions.

**Window lifter motors**

Window lifters increase comfort and safety for the driver. Bosch drives are equipped with selflocking gears, which avoids forceful opening of the glass.

**Rocker switch**

Historically suitable for cars by BMW – the rocker switch that controls the individual window lifter motors.
Engine fan
With a good feeling and concentration on tour

Maximum concentration and a quick reaction are only possible if the driver feels comfortable in his car. This is why electric AC and heating systems make for the desired comfort.

Engine fan for cooling
Together with the electric water pump, the engine fan, which is controlled via a thermal switch, protects the engine from overheating, also in stationary position.

Engine fan for heating
Bosch supplies the central element for vehicle heating: the fan. Fan wheels, casings and fan controls can be perfectly combined in the vehicles, thanks to their modular structure.

Electric water pumps
Electric water pumps circulate the water in the cooling circuit and, together with the cooling fan, protect the engine from locally overheating.
Brake actuation
Come to a stop safely

Small effort – large effect: Bosch actuating devices guarantee a reliable braking force transmission due to the use of high-quality materials. They are subject to strict quality controls and form a coordinated system for all actuating components.

Brake master cylinder
Brake master cylinders must be and stay tight. Bosch brake master cylinders impress with their high quality and long service life. They are made of cast iron or aluminum. The high quality standard is ensured by strict controls and complex production processes. Optimized cylinder surfaces minimize abrasion of the pressure collars and help Bosch brake master cylinders to work reliably for a long time.

Wheel brake cylinder
Wheel brake cylinders by Bosch are made of cast iron or aluminum. These high-quality materials, together with narrow tolerances ensure a long service life and optimal functionality and tightness.

Brake system products
- Brake master cylinder
- Wheel brake cylinder
- Brake booster
- Repair kit
- Brake light switch

Brake cable and brake hose
Bosch transmission parts, such as brake cables and hoses fulfill all applicable standards and guarantee safety by means of a consistent transmission behavior.

Brake fluid ENV4
Compared with conventional DOT standards, ENV4 has a significantly lower viscosity and a higher wet boiling point. Like this, the brake system is able to operate at full capacity.
Vehicle safety systems
Master critical driving maneuvers

Electronic vehicle safety systems intervene to avoid accidents or minimize damage. With ABS, ASR and ESP®, Bosch is one of the forerunners regarding active driving safety. Originally conceived to be special equipment for luxury class cars, electronic driving safety systems are nowadays used in many modern classic cars.

Hydraulic modulator with ABS/ASR control unit

The antilock braking systems ABS detects that one or more wheels tend to lock and reduces the braking pressure. This enables the driver to avoid an obstacle and brake safely and quickly or bring the vehicle to a stop, even in case of a full braking. The traction control system TCS detects spinning wheels, reduces the engine power as a result and brakes individual wheels, if necessary.

Products for vehicle safety systems

- Hydraulic modulator, ABS/ASR
- Acceleration sensor, ABS
- Control unit, ABS/ASR
- Double piston accumulator ASR
- Wheel speed sensor
- Electronic engine control unit (EMS)
- Sensor for accelerator pedal position

ABS/ASR test drives by Bosch in 1992
Brake discs and pads
Braking without compromise

Thanks to high-quality materials, Bosch disc brakes are also reliable when it comes to extreme stress. Thus when fully braking, the brake power corresponds to a multiple of the engine power. Only high quality can endure these thermal and mechanical stresses.

Brake discs
As a premium manufacturer, Bosch has its own research, development and production facilities. Brake discs with a high temperature conductivity, fitting accuracy, and mechanical and thermal stability are produced there while adhering to extremely strict quality requirements.

Brake pads
Bosch develops individual brake pads, depending on the vehicle model, and always selects the pad mixture that ultimately results in a brake pad with perfect characteristics.

Brake calipers
Brake calipers by Bosch convert the hydraulic pressure, reliably dose the contact force and thus provide an optimal brake action. They are available for many classic cars.

Products for disk brake systems
- Repair kit brake caliper
- Warning contact lining wear
- Parts kit
- Accessory kit
- Sensor for accelerator pedal position

Brake light switch
Pneumatic, hydraulic or operated with oil pressure – Bosch supplies suitable brake light switches for classics.

Repair kits for brake calipers
Perfectly attuned repair kits for brake calipers guarantee safe functioning of the brakes following repair or service.
Drum brakes
Brake action for high demands

Bosch drum brakes are classics – especially for smaller-sized passenger vehicles – brake components are perfectly attuned – for high abrasion resistance, fitting accuracy, a long service life and maximum reliability.

Brake drums
Brake drums must be replaced when the thickness has dropped below the minimum value or cracks appear. Bosch has the perfect spare parts for the respective vehicle type. The materials are high-quality and all components have been attuned perfectly – for a long service life and high fitting accuracy.

Drum brake shoes and kits
Tested safety: drum brake shoes by Bosch are also reliable under extreme conditions. This is of special importance as drum brake shoes belong to those parts of a brake system that are exposed to the most stress. Abrasion, high temperature fluctuations and natural aging process constantly wear on the drum brake shoes. This is Bosch also offers drum brake kits for classic cars.

Wheel speed sensor
Passive, inductive sensor (inductive sensor) or active sensor with own electronic evaluation unit controls the antilock braking system.

1927: The Bosch Dewandre power brake for trucks is launched – one year later also for passenger vehicles. Safe braking is now easier.
Especially in classic cars, electric connections are subject to high wear over time. Bosch offers an extensive accessory program which is entirely state-of-the-art regarding functionality and safety.

**Wiring harness and service parts**

**Little helpers, big “rescuers”**

Secure connections and specified insulations on the electrical system of classic cars is an absolute necessity as this not only supports the driving safety but also maintains the value of the car. Therefore, Bosch has compiled a broad range of universally usable high-performance cable connectors, shrinking hose kits and vehicle cables.

**Fuses and fuse boxes**

Standard automotive fuses are the circuit protection standard for domestic and foreign passenger vehicles and trucks. They are easy to identify and to replace and can be specified for numerous applications in the low-voltage area.

**Cable connectors, shrinking hose kits and vehicle cables**

Bosch offers a broad range of plugs and sockets for the electric connection of drawing vehicle and trailer. Among other things, required disabling contacts for the rear fog lamps of drawing vehicles and installation equipment are included.

**Plugs and sockets**
V-belts and V-rib belts
Steady power transmitters

Drive belts are wear parts and are exposed to high loads also in the classic vehicle. But also tensioning elements, idler and guide pulleys are subject to extreme stress. Drive belts and all tensioning elements are offered by Bosch in high quality.

More than 1 000 drive belts for passenger vehicles

- V-belts: Precisely ground, identical V-belts for drives with multiple grooves and for the universal application in compact drive constructions.
- V-rib belts and double V-ribbed belts for the power transmission at high belt speeds.
- Toothed V-belts for a synchronous transmission, low-noise and fail-safe throughout the entire service life.
- Drive belt kits in different combinations: toothed V-belt tension pulley kit and toothed V-belt water pump kit.

Bosch diagnostics
Test equipment and ESI[tronic] software

The team for modern and classic vehicles when it comes to the safe diagnosis of malfunctions. Test equipment and ESI[tronic] software help to find errors and repair components.

Measurement technology for professional system analysis and fault diagnosis

On many modern classics, the vehicle system analysis can be performed with FSA test devices by Bosch. The FSA 760 model is equipped with an electronic measurement module incl. oscilloscope, extensive sensor equipment and a built-in signal generator.
It features a concise and clearly arranged menu structure with test steps and connection guides. More than 50 preset component tests and vehicle-specific data are already integrated.
Bosch eXchange stands for 100% quality at a low price. The extensive and intelligent replacement program is the all-round solution for a timely and efficient repair of your vehicle – also for classic cars.

Cost and benefit – a strong argument for every vehicle owner

Although for most owners of modern classic or vintage cars, the “sentimental value of their car” is worth more than the economic value – everyone has to keep an eye on their financials. Bosch eXchange is the extensive replacement program for vehicle components. This allows for a timely and efficient repair also of classic vehicles, including the same guarantee as for new parts. Bosch applies the same high quality standards to remanufactured parts as it does to newly manufactured products. The dedicated and experienced engineering team constantly focuses on fulfilling the strictest standards. After disassembly, the components are cleaned in line with environmental legislation. Every component and part then passes an intensive testing process. They undergo a visual, dimensional and electrical test. A 2-year guarantee is given to remanufactured parts the same as for new parts.

1:1 REMAN
Individual restoration service

With 1:1 REMAN service, Bosch Classic restores selected products. The difference to Bosch eXchange is that the product delivered by the customer is restored and send back to the customer.

Special expertise for the value-preserving restoration of classic car parts

Testing and restoring is performed using original tools and testing techniques in Bosch plants. In the process, all wear parts are replaced. The product is tested and adjusted acc. to Bosch plant regulations. By restoring the product you sent, the originality of the vehicle is maintained. The restored part is subject to the same guarantee as a new part.

To be processed only via www.bosch-classic.com
**Bosch Electronic Service**
Reconditioning of electronic components

Bosch also offers automobile workshops an exchange and repair service for electronic vehicle components. Specialists who have collected their know-how by repairing thousands of electronic vehicle components, will carry out the repair.

**Repair of faulty electronic components**

Following a comprehensive diagnosis and determination of the respective defect, the workshop uses the service portal to identify the component by way of the Bosch number or device number. After the repair order has been placed, the defective part will be picked up from the workshop.

After the component has been delivered, our Bosch Electronic Service professionals carry out the repair. Usually, the repaired electronic component is on the way back to the workshop within 48 hours.

**Bosch Classic Service**
New glamour for your classic

Bosch Classic Car Services offers services tailored to classics and supplements the product line of Bosch Classics. Every company in our network is qualified to offer customized service and repair for modern classics and vintage cars.

**Brings classics back into shape**

Bosch Classic Services is qualified to offer customized service and repair, and is consistent with the special requirements for equipment and expertise. Bosch Classic Services offers a variety of services in the areas of automotive electrics, engine management, injection, brakes, magneto ignition, carburetor repair and vehicle restoration.
Technical training
You live and learn

To keep practical knowledge alive in relation to the maintenance and repairing of modern classic and vintage cars, Bosch Classic has created a range of technical training courses.

Theory and practice

Technology enthusiasts who own modern classic and vintage cars can attend technical training courses on classic Bosch systems. In addition to the intensive theoretical background, technical knowledge is communicated with hands-on examples on the vehicle.

Bosch technical literature
Technology, clearly explained

Then as now, Bosch conveys first-hand special knowledge. Information by Bosch on vehicle technology are available as book series Bosch Fachinformation Automobil, as reference work Kraftfahrtechnisches Taschenbuch and as wall charts (in German).

Knowledge pool for professionals and fans

Background knowledge should be practically applicable. Therefore, Bosch specialist books offer first-hand expertise and are ideal for self-study or for reference work in the workshop. Completely tailored to the need for practical background knowledge, the car specialist finds detailed information, which help understanding historical and modern vehicles. At the same time, the information is structured in such way that readers who are new to the topic will also become familiar.
Do you have questions?
Bosch Classic will take care of that

Please complete the fields below with the desired information regarding yourself and your modern classic or vintage car. There is also space for questions or suggestions. As a matter of course we will treat your data confidentially. Please fax the filled-out page to +49 711 811 507 1660 or send an e-mail to classic@bosch.com

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By sensing this form, you explicitly agree to the following data protection notice: You voluntarily provide your personal information. It is only needed to process your request as quickly as possible. Your information is stored only temporarily until your request has been finalized, and is then deleted or destroyed acc. to statutory provisions. It will not be used for advertisement or marketing purposes. Upon request, we will gladly inform you about what kind of information is stored. Please send your request via e-mail to classic@bosch.com, or via mail to Robert Bosch GmbH, AA-TR/ATR, Auf der Breit 4, D-76227 Karlsruhe

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**How to order the selected spare part**

- **Private buyers place their orders with their local Bosch Service center.** You may also have a Bosch Classic Service center install the part in your vehicle, if you do not want to do so yourself.
- **Workshops place their orders with their wholesaler or online at HC Cargo.** Directly contact Bosch Classic only regarding special processes like the restoration service 1:1 REMAN.
- **Wholesalers order products directly from Bosch Automotive Aftermarket.** There is no special sales channel for classic products.
No future without the past

Our vision guides us. It tells us what motivates us and where we want to go.

The guiding principle **No future without the past** cites and connects technological innovation, social competence and the tradition of the Bosch brand. We live our corporate values of responsibility, sustainability and reliability and fill them with fascinating content.

We are a passionate and agile team that develops outstanding products and services for today’s and tomorrow’s drivers of modern classic and vintage cars. We connect and accompany our customers and everyone who shares our passion for classic vehicles into the future.

We bring fascination and the creative inventive talent by Bosch to life – a fact that is conveyed perfectly by the guiding principle of Bosch Classic.

**Part of your life. Part of you.**