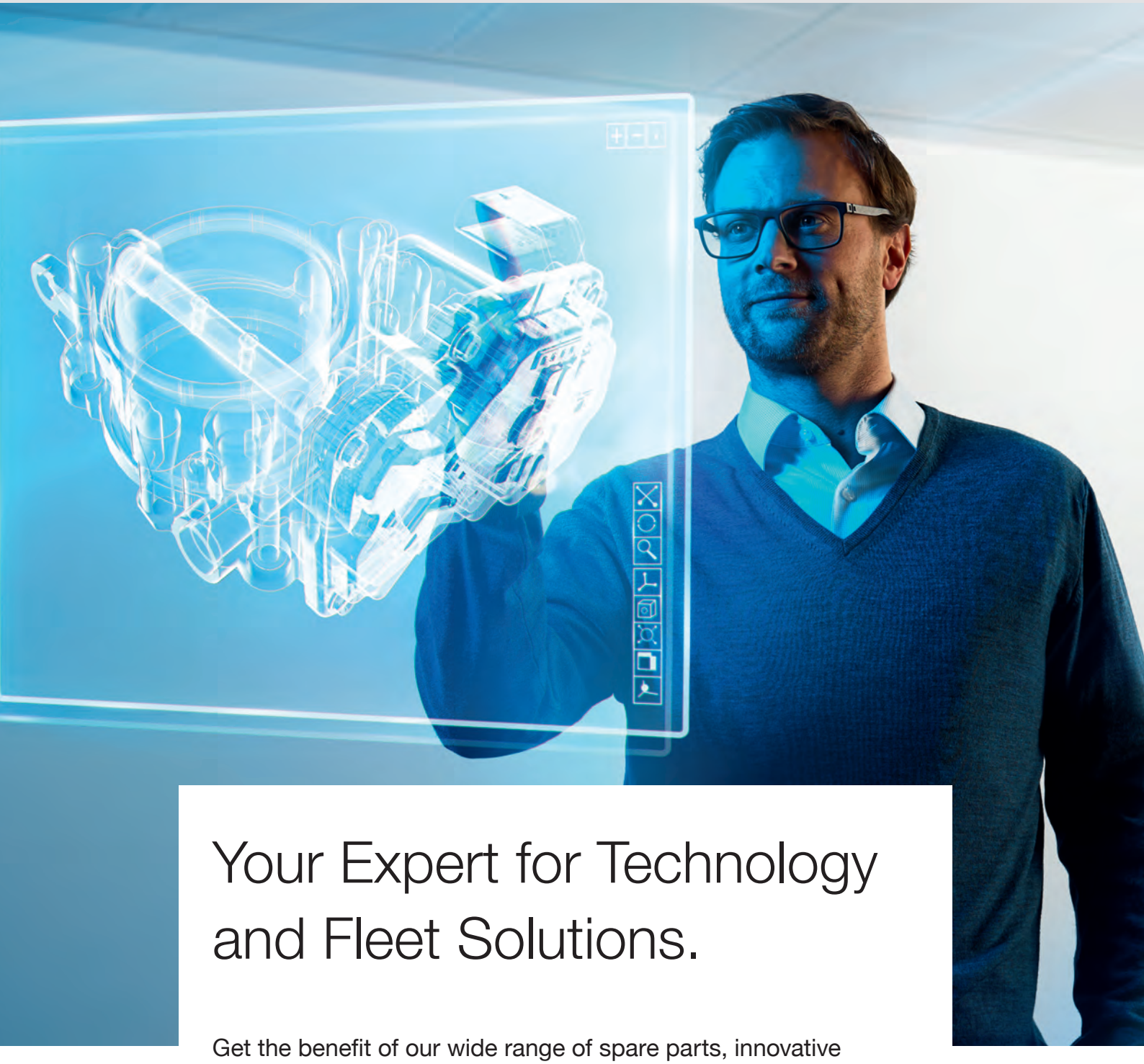
www.vdo.com/replacementparts

Perfectly Fitting Solutions in Top Quality.

VDO original spare parts – electronics and mechatronics.

VDO



Your Expert for Technology and Fleet Solutions.

Get the benefit of our wide range of spare parts, innovative solutions and a strong partnership to build a successful business.

VDO has been a reliable source of advanced solutions for cars and commercial vehicles for more than 90 years. We are a pioneer in automotive engineering. Today, as part of the Continental Group, we offer original spare parts at the cutting edge of technology. Whether it's vehicle diagnostics, fuel systems, engine actuators, sensors or tire pressure monitoring systems – we supply innovative solutions that are backed by many years of experience as an original equipment manufacturer. You can always count on a precise fit, easy installation and original quality. Our fleet management solutions enable you to meet legal requirements, optimize your work processes and minimize your costs.

Put your trust in us as a reliable partner. You and your customers can look forward to unique advantages: a wide selection of high-quality spare parts and services tailored to the needs of independent workshops.

Contents

Original spare parts from the OEM.

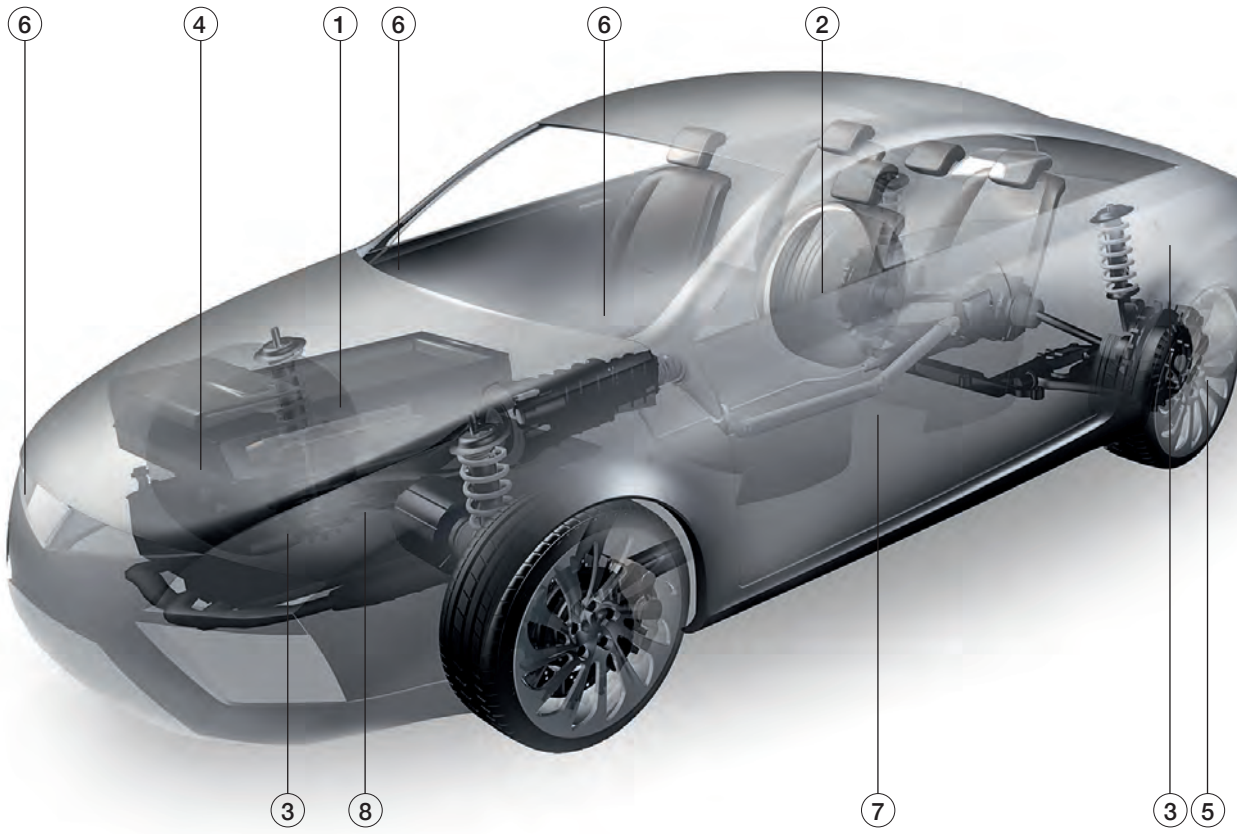
In addition to our special and versatile solutions for automobile manufacturers, we also offer a wide range of solutions for the trade and the service market.

This includes in particular VDO original spare parts, which we offer you backed by the knowledge and many years of competence of an original equipment manufacturer.

Our comprehensive, fast-delivery range of high-quality spare parts stands for fitting precision and simple installation. VDO original spare parts therefore offer the same powerful benefits to wholesalers, workshops and customers alike.

Our solutions:

1 Engine actuators
2 Fuel systems
3 Sensors for engine management
4 Sensors for instrumentation
5 Sensors for tire pressure monitoring systems (TPMS)
6 Windshield and headlight washer systems
7 Actuators for central locking
8 Common rail diesel



Catalogs

Detailed and up-to-date information on the available spare parts can be found in our clearly structured catalogs. Or visit us at www.vdo.com/replacementparts

Guaranteed genuine: unforgeable identity marks from VDO.

We put a lot of passion and experience into the development of our products, so we don't take kindly to inferior quality being sold with our name on the package. Our security label on the package gives you proof that you've bought an original VDO product.

1 Tesa PrioSpot®
The tesa PrioSpot® is the first stage of the safety label. This anti-counterfeiting technology with various testing and security features offers maximum protection and allows the unambiguous identification of imitations. Every PrioSpot® has a unique code that contains the last four digits of the MAPP code (Manufacturers Against Product Piracy) and shines with iridescent rainbow colors under illumination.

2 Checking MAPP codes with TecIdentify
We achieve maximum security by adding an additional code called a MAPP code, which is shown as a scannable data matrix code and in clear text.

The MAPP code can be checked by scanning it or entering it manually (i. e. in clear text) in the query field of TecIdentify. If you enter the code manually, please note that the parentheses must also be entered and that the code is case-sensitive. In this way you immediately know if what you are checking is an original VDO part.

Always on the safe side.

For further information on counterfeit parts, inferior imitations and labeling, talk to your VDO contact person or go to www.vdo.com/passenger-cars/replacement-parts/brand-protection

Engine actuators to meet the highest standards.

The current range of engine actuators by VDO make full use of all the possibilities offered by modern engine management. The fuel is optimally mixed with air for combustion. The fuel-air mixture is then ignited with a precisely timed spark. The exhaust gases are recirculated through special filters in order to minimize the emissions.

Throttle valves.

Throttle valves control the mixture ratio of air and fuel. The mixture changes according to the degree of opening of the throttle valve.

Exhaust gas recirculation valves.

Compared to traditional valves, electrically actuated valves enable an even more precise control of exhaust gas recirculation rates in diesel engines and direct injection gasoline engines, making an important contribution to the fulfillment of exhaust emission standards.

Air flap actuators.

The electric actuator with integrated position sensor enables the continuous adjustment of components such as intake manifold flaps or turbocharger guide vanes – and thanks to its more precise control, it replaces conventional pneumatic drives.

Idle-speed controllers.

Our digital linear and idling speed controls regulate the intake air in the throttle valve bypass – and consequently the engine speed. In this way, engine rpm deviations are quickly corrected in conjunction with the corresponding sensors.

Air control valves.

Air control valves are used to throttle the intake air in the intake tract of diesel engines. The valves use an electric motor to achieve a precisely controlled level of exhaust gas recirculation that meets exhaust gas standards. In addition, they eliminate shudder when a diesel engine shuts down.

Motors variable valve train.

Within the valvetronic system the airflow is controlled by the motor of the variable valve train and replaces the throttle valve. Nevertheless, a throttle valve is still mounted and responsible for other functionalities like emergency operation.

Electric water pumps.

Our electric water pumps with integrated control unit ensure reliable, precise and demand-controlled engine cooling.

Actuators for central locking systems.

Lock and unlock doors, windows and tank flaps – conveniently, at the touch of a button. Our actuators enable comfortable opening and closing operations on numerous vehicle models.

These actuators are controlled by the central locking system and/or remote control. Each actuator's motor operates a lifter that activates and deactivates the lock. Additionally, the lifter may be retained by a latch mechanism and used specifically for anti-theft protection.

The product range includes actuators for:
- Doors
- Rear doors, rear windows and tailgates
- Fuel tank flaps

Efficient fuel systems.

One prerequisite for the functioning of a vehicle is fuel in the tank.
In addition, there must be a reliable fuel supply from the tank to the engine.
Our systems ensure a high-quality supply for a wide range of vehicle brands and models.

Fuel supply units.

The fuel supply unit consists of the fuel pump (sometimes with a swirl pot), a filter and the flange with its corresponding connections.
The supply unit may also be equipped with a lever sensor or can be operated in combination with an immersion tube sensor.

Fuel pumps.

The fuel pump is a component of the fuel supply unit. It operates in the tank.

Fuel injection valves.

The exact amount of fuel is determined for each operating condition of the engine. The injection valve injects the calculated quantity in front of the inlet valve of the cylinder, ensuring clean and efficient use of the fuel.

Fuel pressure regulators.

Fuel pressure regulators maintain the fuel pressure at a constant value. When the preset pressure is exceeded, a spring-loaded diaphragm opens the return flow channel, enabling excess fuel to flow back into the fuel tank.

Lever-type and tubular-type senders.

For measuring the fuel level in conjunction with an electrical display device. The ground wire is attached to the housing of some sensors. Other sensors are ungrounded, i. e. the ground wire is connected separately.

Advanced windshield and headlight washer systems.

Clear vision is essential in road traffic. Our windshield and headlight washer systems always provide the best – and widest – possible view. Our systems make a significant contribution to improved driving safety, by day and especially at night.

Screen washer pumps – mono pumps.

Mono pumps have a delivery outlet and supply water to the front or rear windows.

Screen washer pumps – dual pumps.

Dual pumps have two delivery directions. Depending on the direction of rotation of the pump motor, only one pump is used to pump washer water to the front or rear window.

Headlight washer pumps – mono pumps.

Headlight washer pumps are used to clean the light-diffusing headlamp lenses. They supply the diffusing lenses' washer nozzles with the necessary amount of water and ensure the required water pressure.

Washer nozzles.

Washer nozzles are used to apply washer water to front and rear windows and the headlights.

Telescoping nozzles.

Hydraulic headlight washer nozzles are extended via a pump and operate according to the piston principle. Thanks to their innovative valve function, the systems are highly effective.

Accessories

The accessories complete our product range for windshield and headlight washer systems:

- Level switches
- Connectors
- Valves
- Filters
- Nozzle jet needles
- Washer fluid containers

Accurate and reliable: cutting-edge sensor technology.

VDO sensors help to reduce fuel consumption and pollutant emissions. They also help to increase engine efficiency and driving safety. Our sensors are particularly durable, and they can record and transmit data without interference from external influences like humidity, pollution, electromagnetic fields or emissions from other sensors.

Exhaust temperature sensors.

Environmental protection, exhaust gas purification and fuel consumption are important topics nowadays. Exhaust temperature sensors are an ideal addition to our product range. They monitor the temperature of various media in exhaust after-treatment systems. In addition, they help to reduce fuel consumption and pollutant emissions.

Characteristics of an exhaust temperature sensor:

- Checking of efficiency and protection for components
- Temperature monitoring of turbochargers, catalytic converters, diesel particle filters and nitrogen oxide reduction systems
- Monitoring of optimum operating point
- Protection from temperature overload
- Reduction of pollutant emissions and fuel consumption

Camshaft sensors.

The camshaft sensor is located in the cylinder head and scans the camshaft sprocket to determine its position.

This information is needed, for example, for the start of injection in sequential injection, for the control signal of the solenoid valve in the pump nozzle injection system and for cylinder-selective knock control.

Mass airflow sensors.

Mass airflow sensors are located directly behind the air filter in the intake manifold. They provide information on temperature, humidity and the amount of air drawn in. Despite their very compact design, they are equipped with high-precision technology that can be used to acquire valuable information and link it with additional engine data for perfect engine management.

Crankshaft sensors.

This sensor supplies information about the current crankshaft position, which the engine management system uses to calculate the rpm. The most economical injection and ignition timing of the vehicle can be calculated using these values.

Pressure sensors.

Pressure sensors measure the air pressure in the intake manifold behind the throttle valve to determine the air mass intake. This information is particularly important for calculating the amount of fuel to be injected in order to obtain the correct fuel-air mixture.

The dynamic measuring capability of these engine management components has a decisive influence on the reduction of vehicle emissions.

Lambda sensors.

The measurement results of the lambda sensor enable the catalytic converter to convert almost all of the harmful exhaust gases produced during fuel combustion. The sensor determines the residual oxygen content in the exhaust gas and transmits this value to the engine control system, which then precisely adjusts the mixture composition. This achieves the best possible engine performance with minimum fuel consumption.

Our lambda sensors guarantee optimum engine performance in countless vehicle models – and they also comply with prescribed emission values.

Knock sensors.

Modern engines that enable a high compression ratio have a decisive disadvantage: Their design leads to increased knocking, which can damage the engine.

Knock sensors reliably measure the engine block vibrations characteristic of engine knock. This allows the ignition angle and other operating parameters to be optimally set, enabling the combustion engine to operate close to the knock limit, not only protecting the engine, but also reducing fuel consumption.

Always reliable:
accurate sensors for instrumentation.

Our instrumentation sensors are highly accurate. They monitor important data like pressure, temperature, rpm, speed and fuel level, ensuring the continuous and reliable operation of the vehicle.

Temperature switches.

These monitor the temperature of various media by means of contact when a preset limit value is exceeded or not reached. The ground wire is attached to the housing of some switches. Other switches are ungrounded, i. e. the ground wire is connected separately.

Temperature sensors.

For measuring various media in conjunction with an electrical display device.*

Pressure sensors.

These measure gas or liquid pressure in conjunction with an electrical display device.*

Pressure switches.

These monitor the pressure of gases and liquids by making contact when a preset limit value is exceeded or not reached.*

RPM and speed sensors.

For measurement and display of engine and transmission rpm or vehicle speed, used in conjunction with an electrical display device.*

Lever and immersion tube sensors.

For measuring the fuel level in conjunction with an electrical display device.*

*Some sensors & switches have the ground wire attached to the housing. Other sensors & switches are ungrounded, i. e. the ground wire is connected separately. The products listed here are designed for use in grounded vehicles, engines and systems.

For greater safety and efficiency: Sensors for tire pressure monitoring systems.

Tire pressure monitoring systems (TPMS) are highly effective safety systems. They minimize the risks of a tire defect, contribute to fuel savings and help maximize the life of tires.

Correct tire pressure is a vital factor in maintaining the road safety and operational reliability of a vehicle. Insufficient tire pressure leads to extended braking distances and impairs the control of the vehicle, in particular when cornering. Sensors mounted in the wheel measure the tire pressure and tire temperature and send the measured results to a control unit. Either an optical or an acoustic signal alerts the driver.

Legislation

As of November 1, 2014, all newly registered M1 category vehicles in the European Economic Area must be fitted with a tire pressure monitoring system.

Clear-cut rules

EU regulation ECE 661/2009 specifies clearly what safety information the system must display:

- It must report a sudden loss of pressure of more than 20 % within a period of ten minutes.
- It must warn the driver within 60 minutes if there is a gradual loss of pressure.
- It must function reliably at speeds of 40 km/h and more, up to the top design speed of the vehicle.

Tire pressure sensors.

The tire pressure sensor measures the tire pressure and temperature directly at the valve and sends the data to the control unit as a wireless signal.

Service kits.

The service kit contains all the sensor components required for tire service. Each kit includes a valve core, mounting nut, seal, sealing washer and valve cap.

Sensor valve stems.

Our spare parts range for tire servicing also includes valve stems for sensor generation 1C and 1D.

Assembly tools.

With our tools, we guarantee the optimal assembly and disassembly of valve-based TPMS sensors. Manufacturer-specific torques can be easily complied with and prevent the overtightening of the union nut and valve insert.

VDO TPMS service units

The VDO service units for tire pressure monitoring systems (TPMS) are compact, universal testing and programming devices for TPMS sensors covering a large number of vehicle manufacturers.

You can find more information on VDO TPMS service units at www.vdo.com/tpms-service-devices

TPMS Pro: Optimally adapted to user needs. Thanks to the comprehensive OBDII relearning procedures in TPMS Pro, newly programmed TPMS sensors can be loaded right into the ECU ready for relearning.

TPMS Go: Cost-effective and easy to use. Equipped with the latest scan technology, TPMS sensors are quickly read out, checked and programmed with the VDO TPMS Go.

Impressive performance: the VDO common rail diesel system.

The first high-pressure diesel injection system with VDO piezo injectors was the predecessor of all common rail diesel systems in the world.

VDO common rail diesel injection systems consist of the following main components: a high-pressure pump, piezo injectors, rail, lines and engine control unit. The high-pressure pump delivers fuel into the rail, which serves as a high-pressure reservoir.

The fuel is injected into the combustion chamber by piezo injectors that are controlled by the engine control unit. This technology ensures that exactly the right amount of fuel is injected.

Advantages of the VDO common rail diesel system:

- Most high-pressure pumps are equipped with an internal presupply pump that reduces the demands on the fuel pump in the tank.
- Injection pressures of up to 2,500 bar ensure maximum combustion efficiency and lower fuel consumption.
- The cycle times of the piezo injectors are extremely short, allowing several injections per combustion event for quieter operation and lower engine emissions.

Diesel common rail pumps (DCP).

While conventional direct injection diesel engines regenerate fuel pressure for each injection process, in the common rail system it is built up independently of the injection sequence, remaining permanently available in the fuel line.

Piezo-controlled injectors.

The injectors are electrically controlled by the engine control unit so that they inject exactly the right amount of diesel fuel into the cylinders at exactly the right time. Instead of an electromagnet, a piezo element is used for valve actuation and this offers significant advantages, since the piezo response time is three times faster. This makes fuel injection even more precise and the diesel engine even more economical.

System-based repair: Diesel Repair Service partners.

You can benefit from our many years of experience repairing complex high-pressure pumps and injectors. The worldwide DRS partner network makes it possible for you to offer repairs that take the vehicle's current value into account.

Our DRS partners are highly skilled experts. They attend regular training courses to broaden their knowledge and become familiar with Continental systems. To be successful partners, they must use appropriate test equipment and tools.
Only in this way can DRS partners get exclusive access to original spare parts and the information that goes with them. This ensures that repairs are performed in keeping with our strict standards. You and your customers benefit, and so does the environment –because we make no compromises when it comes to performance and emissions.

For more information visit www.vdo.com/replacementparts

Advantages of the Diesel Repair Service:

- VDO original spare parts
- Repairs of high-pressure pumps and injectors by trained specialists
- Certified inspection processes for a high level of quality assurance

Overview of our spare parts range.

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