

**Reliable diagnosis.
Time-saving repairs.
Bosch Diagnostics and service parts.**

Everything from one single source

Bosch has a full range of products available to increase efficiency and quality in the workshop's everyday routine. The globally operating developer and leading manufacturer of automotive system technology provides service parts in familiar original equipment quality.

Bosch Diagnostics offers workshops perfectly matched hardware and software, technical training courses, a technical hotline and a knowledge database. All with a practical focus and covering all brands.

Expertise and quality – for the future of your workshop

Bosch Diagnostics			
ESI[tronic] Software	Test Equipment	Service Training	Technical Hotline

Engine management | Gasoline injection

2008 | 2009

Engine management Gasoline injection

2008 | 2009



BOSCH

☎ 1 987 721 090/200709

AA/MKV3 – 09.2007 – En

© 2007 Robert Bosch GmbH
Automotive Aftermarket
Postfach 41 09 60
76225 Karlsruhe

Token fee: € 10,00

www.bosch.de/aa

Editorial closing: 31. 07. 2007
Subject to change without
notice. Please direct questions
and comments to our
Authorized Representative in
your country. This edition
supersedes all previous
editions.



BOSCH



BOSCH



Just right!

Lambda sensors from Bosch

- ✕ The right sensor!
- ✕ The right cable!
- ✕ The right connector!



Convincing reasons for choosing Bosch lambda sensors

- Bosch invented the lambda sensor.
- Bosch has the most know-how in terms of development and production. Since then Bosch has made more than 400 million lambda sensors.
- Bosch lambda sensors are all available in OEM quality.
- Bosch has patented this convincing technology.
- Most automobile manufacturers around the world use Bosch lambda sensors as original equipment.
- As market leader in the OEM and aftermarket sector, Bosch has the ideal replacement sensor for more than 80% of all vehicles.
- Bosch has a comprehensive range of multipurpose lambda sensors.
- The multipurpose lambda sensors won awards at the Auto-mechanika 2004 and the “Equip Auto 03” exhibition in Paris.

All your advantages at a glance:

Bosch lambda sensors...

- ... always right**
through exact application data.
- ... save up to 15 % fuel**
- ... avoid expensive consequential damage**
as, e.g. a faulty catalytic converter.
- ... minimize emissions**
The most stringent emission levels can be complied with.
- ... optimize engine performance**
- ... are resistant**
to splash water and contamination through the use of a stainless, laser-welded steel casing.
- ... have a long service life**
through continuous innovations such as, e.g. optimized protective electrode layers and suitable protective tube devices.
- ... undergo 100% functional testing in the manufacturing plant**
- ... come with a pre-greased thread**

Explanation of symbols

	Part number		Date / Production period
	Electric fuel pump (in-line/in-tank)		O-rings - Quantity per injector
	Universal electric fuel pump		Fuel injector
	EKP non-return valve		O-ring on top
	Search number		O-ring below
	Passenger cars		Parts kit
	Original equipment number / Return number		Export market
	Passenger cars / Small vans		Special case
	Core deposit values		

Content

Technology, program

- A2** Counterfeit and imitation products
- A3** More than 100 years of Bosch ignition systems
- A4** Ignition and gasoline-injection systems from Bosch
- A6** Gasoline injection systems
- A14** Electric fuel pumps
- A20** Sensors
- A21** Gasoline injectors
- A22** Ignition coils
- A24** eXchange – Back in Box
- A26** eXchange – conditions for component return
- A30** Gasoline injection components
- A46** Central injection unit (ZEE)
- A50** Parts-assortment case
- A54** List of applications for O-rings
- A72** Low-way plug-in connections

Applications

- B1** Vehicle-specific equipment
- B2** Overview contents
- B9** Passenger cars, vans

Cross-reference

- C2** Non-Bosch → Bosch
- C92** Bosch-original parts (new) → Bosch Exchange (BX)
- C99** Bosch (OE) → Bosch Aftermarket (IAM)



Counterfeit and imitation products

Important information



Warning about Lambda sensors

Be wary of using universal sensors which do not meet the standards of vehicle manufacturers. There is a risk of premature damage and thus failure of the Lambda sensor. In the interests of your customers please therefore make exclusive use of genuine Lambda sensors or universal Lambda sensors from Bosch.

Warning about electric fuel pumps

Certain rival companies make use of inferior imitation products instead of high-performance Bosch pumps. This can lead to problems when driving and to a loss of engine power due to an inadequate fuel supply. In the interests of your customers please therefore make exclusive use of genuine fuel pumps from Bosch.

Warning about the use of non-Bosch air-mass meters

Only genuine air-mass meters from Bosch can ensure compliance with the legally prescribed emission values. The vehicle homologation will be invalidated if use is made of air-mass meters from other manufacturers. In addition, this can result in a considerable loss of engine power and thus higher fuel consumption.

Warning about ignition coils

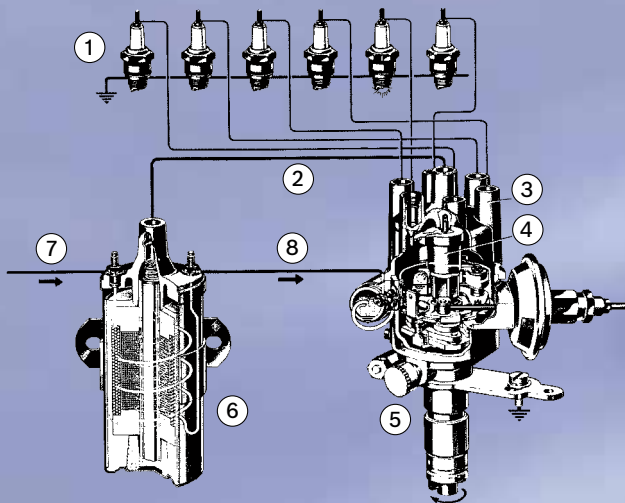
Bosch ignition coils always provide the engine with sufficient energy for the ignition spark. This prevents cold-starting difficulties and exhaust-emission test problems. The high-grade plastic or asphalt insulation materials used by Bosch ensure a high breakdown voltage and guard against the risk of fire, in contrast to the oil-based products of certain low-cost suppliers. High-precision, corrosion-proof connections form the basis for a long product service life.

Bosch products guarantee Bosch quality

This means:

- ▶ High performance, optimum operation
- ▶ Long service life
- ▶ Maximum reliability
- ▶ Compliance with all legal requirements and safety standards
- ▶ Excellent workmanship
- ▶ environmental compatibility

More than 100 years of Bosch ignition systems



Bosch started supplying high-voltage magnetos and spark plugs as far back as 1902.

After 1910 the ignition distributors were separated from the high-voltage source.

When Robert Bosch AG presented the battery-ignition system in 1925, magneto ignition was predominant in the automotive industry. This was considered to be the most reliable form of ignition system.

At the same time, vehicle manufacturers were demanding a less costly system and in the light of constant progress battery ignition quickly became established in the automobile and motorcycle industry throughout Europe.

Nowadays, more advanced versions of this type of ignition are standard equipment in virtually every gasoline-engine motor vehicle.

- ① Spark plugs
- ② H.T. cables
- ③ Distributor cap
- ④ Distributor rotor
- ⑤ Ignition distributors
- ⑥ Ignition coil
- ⑦ From battery
- ⑧ To contact breaker



In 2001, Bosch celebrated 50 years of gasoline injection.

The first experiments with injection systems for gasoline engines took place in 1921. Following extensive trials between 1923 and 1928, gasoline injection was initially restricted to aircraft engines. Whereas reliability and increased performance were the crucial aspects with regard to aircraft engines, the economy aspect was the main motivation in the development of automobile gasoline-injection systems.

The Bosch gasoline-injection system presented at the Frankfurt Motor Show in 1951 for the Gutbrod Superior two-stroke engine achieved fuel savings of around 20 percent and raised the vehicle power from 23 to 28 hp.

The power-enhancement aspect was however the major factor in the first mass-produced four-stroke vehicle with gasoline injection (Mercedes 300 SL). The advantages offered by fuel injection ousted the carburetor.

In 1967, in the light of stringent US emission legislation, VW launched the 1600 TL with Bosch-Jetronic, thus marking the introduction of electronic injection control. By 1972 the Jetronic system was the choice of 18 manufacturers and well on its way to success.

Ignition and gasoline-injection systems from Bosch

More than a century of system expertise



L-Jetronic components



KE-Jetronic components



Motronic components

Renowned vehicle manufacturers rely on Bosch as original equipment supplier and thus form the basis for a fruitful replacement parts business.

In addition to the full range of more than 10,000 items for gasoline-injection systems, Bosch also supplies the aftermarket and workshop sector with the appropriate replacement and wear parts.

1902 Delivery of the first high-voltage magneto and the first spark plug

1910 Separation of ignition distributor and high-voltage source

1925 Presentation of battery-ignition system by Robert Bosch GmbH

1951 Presentation of Bosch gasoline-injection system at the Frankfurt Motor Show

1967 First emission legislation in the USA
Introduction of the first electronic injection system:
The D-Jetronic controlled by intake-manifold pressure.

1973 Energy crisis – fuel consumption becomes the focus of development efforts
Market launch of the L-Jetronic with air-flow sensor and the K-Jetronic with mechanical-hydraulic control – this was also an air-flow sensing system.

1976 Bosch invents the Lambda sensor, thus paving the way for the closed-loop-controlled catalytic converter.

1979 Motronic market launch
The unique feature of this system was the digital processing of a wide range of engine functions. It combines the L-Jetronic principle with electronic map-controlled ignition. The first microprocessor to be fitted in a motor vehicle.

1981 LH-Jetronic market launch
Instead of a flap-type air-flow sensor, the basic L-Jetronic system was equipped with a hot-wire air-mass meter and marketed for the first time as LH-Jetronic.

1982 KE-Jetronic market launch

The K-Jetronic was extended to include an electronic control loop and the Lambda sensor and was employed for the first time in a mass-produced vehicle in the form of the KE-Jetronic.

1987 Mono-Jetronic market launch

The Mono-Jetronic is a particularly inexpensive single-point injection system, making it feasible to equip even smaller vehicles with Jetronic.

1989 Mono-Motronic market launch

The Mono-Motronic is a more advanced form of the Mono-Jetronic and has been extended to incorporate an electronic map-controlled ignition and a microprocessor.

1989 Electronic throttle control (ETC)

With ETC systems, the driver input is detected by a sensor at the accelerator pedal. The Motronic control unit evaluates the sensor signal and adjusts the electric motor-driven throttle valve, taking into account other vehicle and engine data.

1997 Increasing use of intake modules

Intake modules are pre-assembled units comprising the intake manifold with injectors, throttle-valve unit, pressure regulator etc.

2000 Market launch of Motronic gasoline direct injection

The Motronic MED 7 system with torque-based control makes it possible to combine extremely economical fuel consumption and highly dynamic performance.



Mono-Jetronic components



Intake module

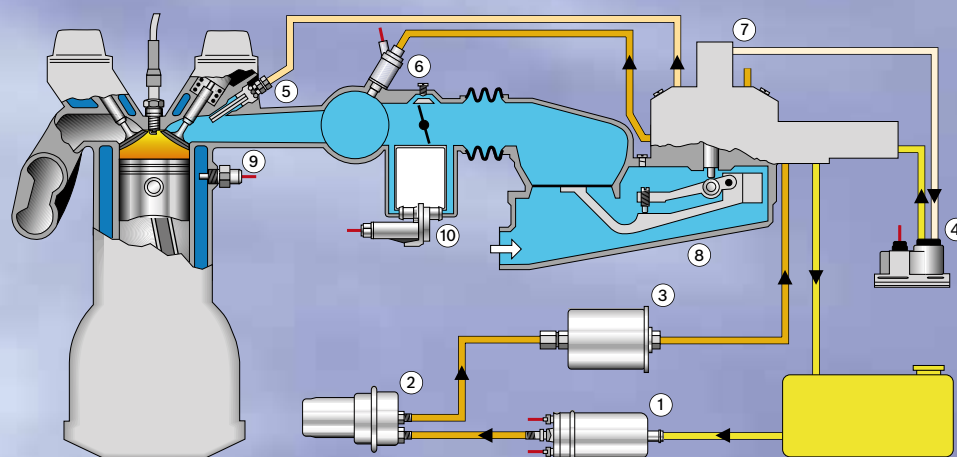


Gasoline direct injection



Gasoline injection systems

K-Jetronic

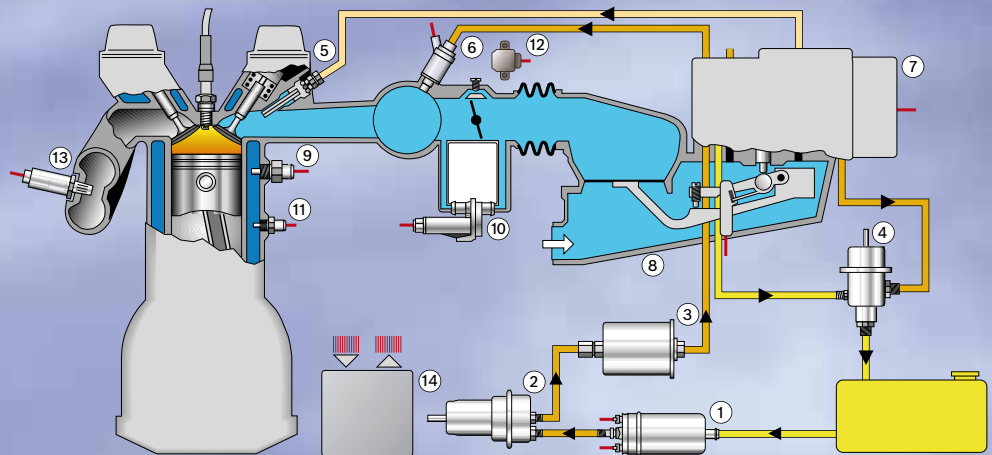


Further technical information can be found in the “K-Jetronic” booklet.
Part number **1 987 722 159**.
The booklets are available from franchised Bosch wholesalers.

The K-Jetronic is a mechanical system in which the fuel is constantly metered on the basis of the volume of air drawn in by the engine.
The K-Jetronic was used as original equipment in mass-produced vehicles between 1973 and 1995. Since then, the K-Jetronic has only been of relevance in terms of service and maintenance work.

- ① Electric fuel pump
- ② Fuel accumulator
- ③ Fuel filter
- ④ Warm-up regulator
- ⑤ Injector
- ⑥ Electric start valve
- ⑦ Fuel distributor
- ⑧ Air-flow sensor
- ⑨ Thermo-time switch
- ⑩ Auxiliary-air device

KE-Jetronic



Further technical information can be found in the “KE-Jetronic” booklet.

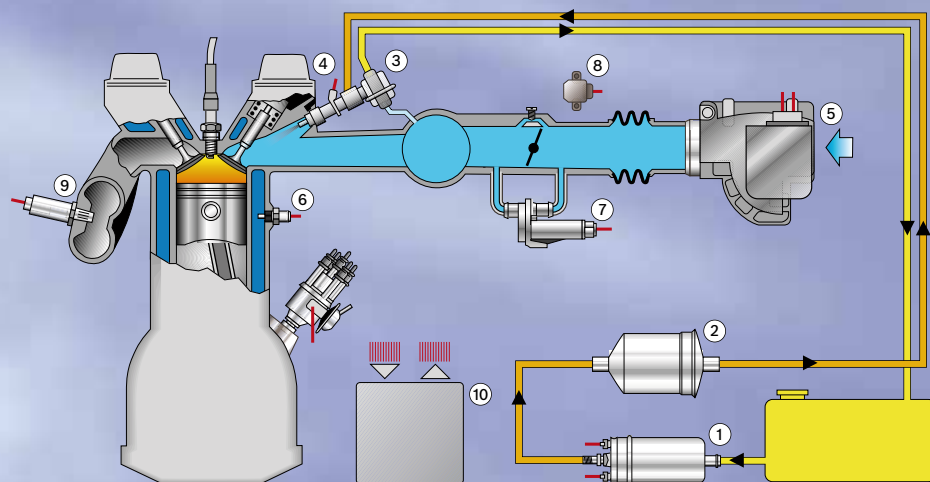
Part number **1 987 722 101**.

The booklets are available from franchised Bosch wholesalers.

The KE-Jetronic is a mechanical/electronic injection system based on the K-Jetronic. Additional electronics record a variety of measurement quantities at the engine, thus permitting optimization of fuel requirements and emission quality.

- ① Electric fuel pump
- ② Fuel accumulator
- ③ Fuel filter
- ④ Primary-pressure regulator
- ⑤ Injector
- ⑥ Cold-start valve
- ⑦ Fuel distributor
- ⑧ Air-flow sensor
- ⑨ Thermo-time switch
- ⑩ Auxiliary-air device
- ⑪ Engine-temperature sensor
- ⑫ Throttle-valve switch
- ⑬ Lambda Sensor
- ⑭ Electronic control unit

L-Jetronic

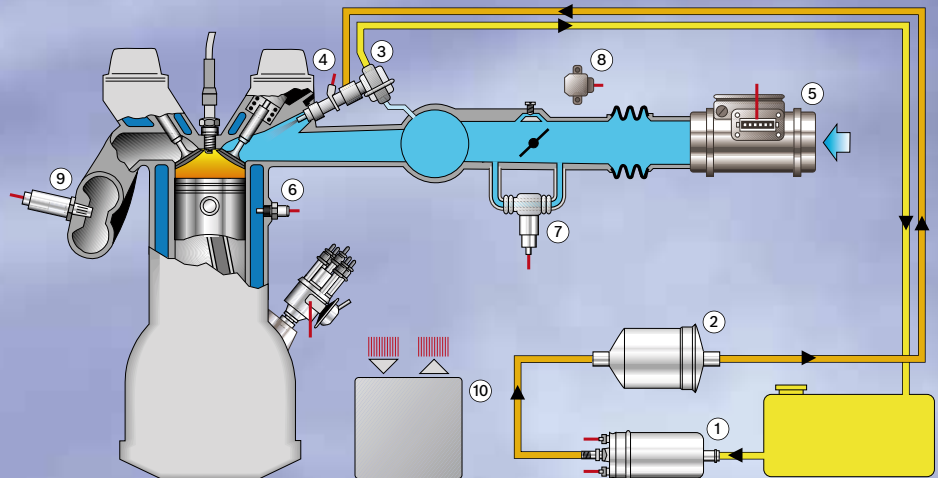
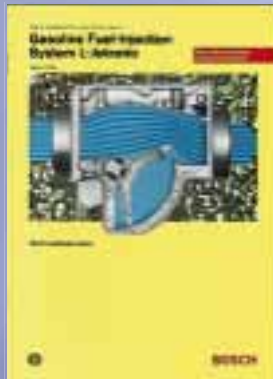


Further technical information can be found in the “L-Jetronic” booklet.
Part number **1 987 722 160**.
The booklets are available from franchised Bosch wholesalers.

The L-Jetronic is an electronically controlled injection system featuring air-flow measurement based on the sensor-plate principle and electromagnetically controlled fuel injection into the intake manifold. All engine-related changes are recorded by a variety of sensors and processed in the electronic control unit. This ensures constant good emission quality in combination with low fuel consumption.

- ① Electric fuel pump
- ② Fuel filter
- ③ Fuel-pressure regulator
- ④ Injector
- ⑤ Air-flow sensor
- ⑥ Thermo-time switch
- ⑦ Auxiliary-air device
- ⑧ Throttle-valve switch
- ⑨ Lambda Sensor
- ⑩ Electronic control unit

LH-Jetronic



Further technical information can be found in the "L-Jetronic" booklet.

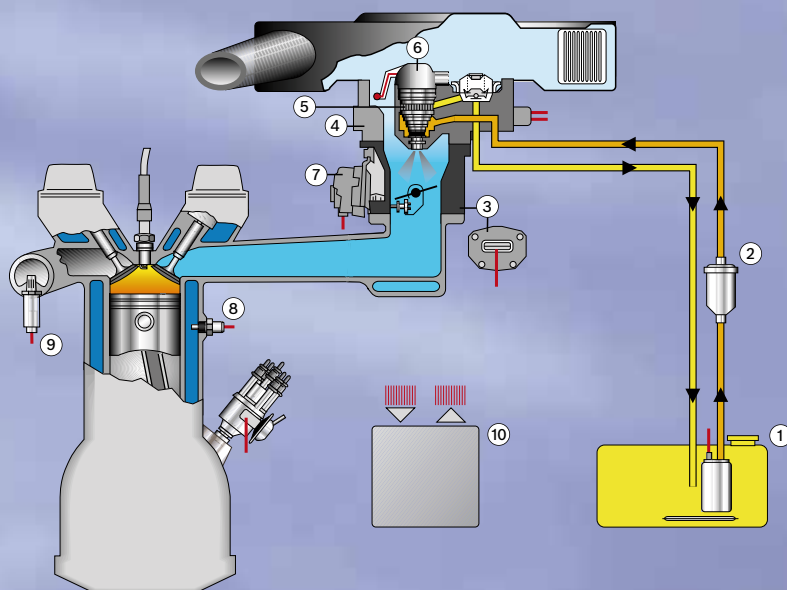
Part number **1 987 722 160**.

The booklets are available from franchised Bosch wholesalers.

The LH-Jetronic is closely related to the L-Jetronic. It differs in terms of the recording of the volume of air drawn in by the engine, which in this case is performed by a hot-wire air-mass meter. This measures the air mass drawn in by the engine. The measurement result is thus independent of temperature and pressure.

- ① Electric fuel pump
- ② Fuel filter
- ③ Fuel-pressure regulator
- ④ Injector
- ⑤ Hot-wire air-mass meter
- ⑥ Engine-temperature sensor
- ⑦ Rotary idle actuator
- ⑧ Throttle-valve switch
- ⑨ Lambda Sensor
- ⑩ Electronic control unit

Mono-Jetronic

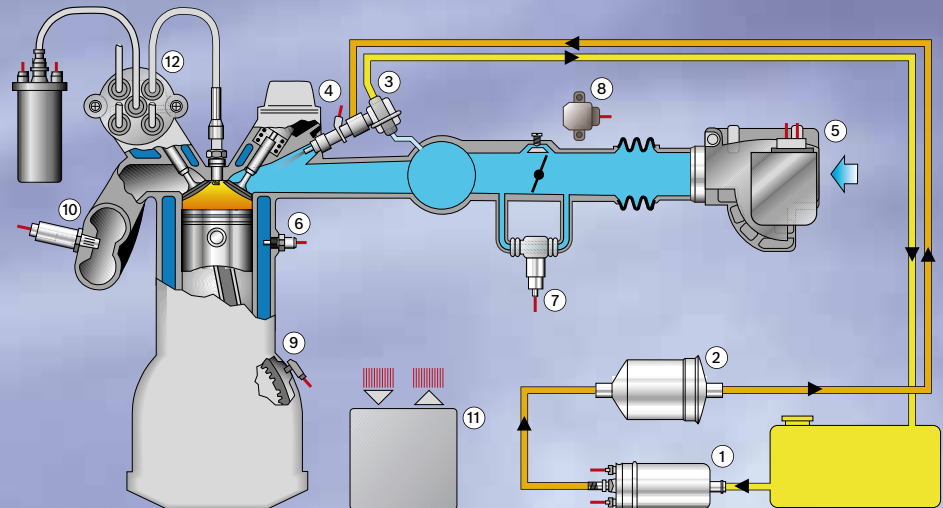


Further technical information can be found in the “Mono-Jetronic” booklet. Part number **1 987 722 105**. The booklets are available from franchised Bosch wholesalers.

The Mono-Jetronic is an electronically controlled single-point injection system in which a solenoid injector injects the fuel for all cylinders at a central location above the throttle valve. The operating data are recorded by way of sensors and converted into injection pulses in an electronic control unit.

- ① Electric fuel pump
- ② Fuel filter
- ③ Throttle-valve potentiometer
- ④ Pressure regulator
- ⑤ Injector
- ⑥ Connector with intake-air temperature sensor
- ⑦ Throttle-valve actuator
- ⑧ Engine-temperature sensor
- ⑨ Lambda Sensor
- ⑩ Electronic control unit

Motronic manifold injection



Further technical information can be found in the “Motronic” booklet.

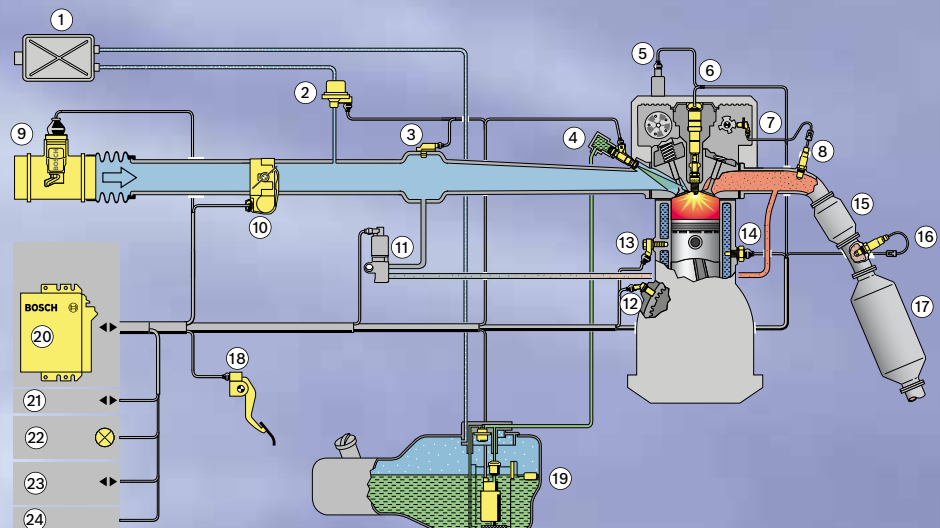
Part number **1 987 722 161**.

The booklets are available from franchised Bosch wholesalers.

The Motronic combines the injection and ignition systems to form an engine-management system. Fuel metering and ignition are optimally matched. Other electronic functions can also be incorporated. Digital data processing and the use of microprocessors make it possible to convert a wide range of operating data into map-controlled injection and ignition data.

- ① Electric fuel pump
- ② Fuel filter
- ③ Fuel-pressure regulator
- ④ Injector
- ⑤ Air-flow sensor
- ⑥ Engine-temperature sensor
- ⑦ Rotary idle actuator
- ⑧ Throttle-valve switch
- ⑨ Engine-speed/reference-mark sensor
- ⑩ Lambda Sensor
- ⑪ Electronic control unit
- ⑫ High-voltage distributor

ME-Motronic with ETC



The principal function of the engine-management system is to set the driver's torque input whilst at the same time achieving optimum fuel consumption and the lowest possible emission level. The ME-Motronic engine-management system combines all the sub-systems required for this: The electronic throttle control (EGAS) sets the amount of air needed to generate this torque. The corresponding fuel mass is controlled in the gasoline injection sub-system and the ignition sub-system sets the appropriate ignition point as well as the necessary ignition energy.

In combination with other electronic systems in the vehicle, the ME-Motronic also enhances ride comfort and user safety. If, for example, an ABS or ESP system requires a specific engine torque to provide vehicle traction, the ME-Motronic sets the necessary torque.

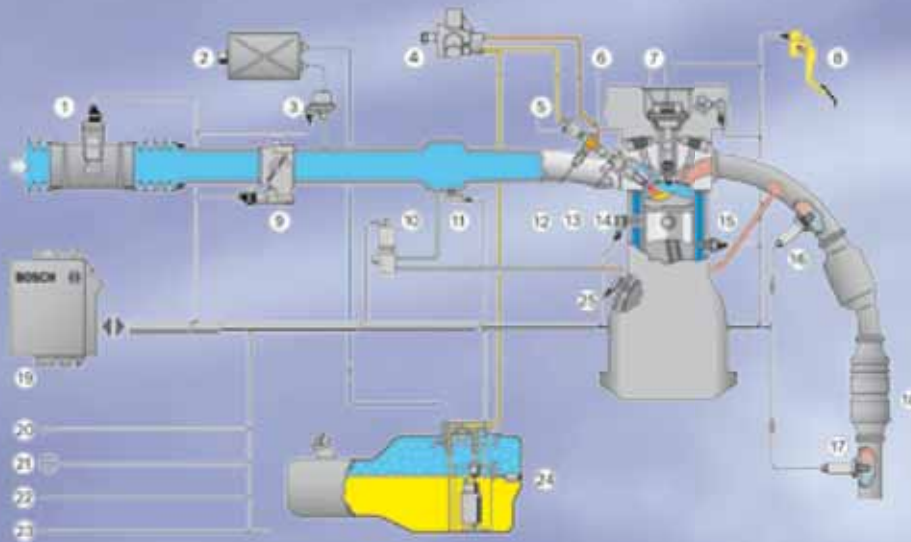
The sub-systems have become more closely integrated in order to deal with this wide range of engine-management tasks.

- ① Carbon canister
- ② Canister-purge valve
- ③ Intake-manifold pressure sensor*
- ④ Fuel rail/injector
- ⑤ Camshaft adjuster*
- ⑥ Ignition coil/spark plug
- ⑦ Phase sensor
- ⑧ Lambda Sensor
- ⑨ Air-mass meter
- ⑩ Throttle device (ETC)
- ⑪ EGR valve*
- ⑫ Speed sensor
- ⑬ Knock sensor
- ⑭ Temperature sensor
- ⑮ Primary catalytic converter
- ⑯ Lambda Sensor
- ⑰ Main catalytic converter
- ⑱ Accelerator-pedal module
- ⑲ In-tank unit
- ⑳ Electronic control unit
- ㉑ CAN
- ㉒ Diagnosis lamp
- ㉓ Diagnostics interface
- ㉔ Immobilizer

- ETC = Electronic throttle control
- EOBD = European On-Board Diagnosis System
- RLFS = Non-return fuel supply system
- Inlet and/or exhaust adjustment
- * = optional

 Bosch components

Motronic – gasoline direct injection



Engines with gasoline direct injection form the air/fuel mixture directly in the combustion chamber. Only fresh air flows through the open intake valve on the induction stroke. Special injectors inject the fuel directly into the combustion chamber at high pressure. Exact metering, conditioning and distribution of the air and fuel for each individual combustion stroke permit economical fuel consumption and a low level of emissions. With its torque-based electronic control function, the DI-Motronic from Bosch sets new standards in the field of gasoline direct injection. The intelligent system adapts all the relevant quantities to the corresponding driving situation with a high degree of accuracy. In part-load mode it generates a lean stratified air/fuel mixture and at full load a homogeneous mixture.

Operation: With gasoline direct injection, the high-pressure pump supplies the high-pressure circuit with fuel at the high pressure required for the fuel rail. The high-pressure injector attached to the fuel rail very quickly meters and atomizes the fuel at high pressure, thus ensuring the best-possible formation of the air/fuel mixture directly in the combustion chamber.

- ① Air-mass meter with temperature sensor
- ② Carbon canister
- ③ Canister-purge valve
- ④ High-pressure pump
- ⑤ Pressure-control valve
- ⑥ Fuel rail
- ⑦ Ignition coil
- ⑧ Accelerator-pedal module
- ⑨ Throttle device (ETC)
- ⑩ EGR valve
- ⑪ Intake-manifold pressure sensor
- ⑫ High-pressure sensor
- ⑬ High-pressure injector
- ⑭ Knock sensor
- ⑮ Engine-temperature sensor
- ⑯ Lambda sensor (LSU)
- ⑰ Lambda sensor (LSF)
- ⑱ NO_x Catalytic converter
- ⑲ Electronic control unit
- ⑳ Diagnosis interface
- ㉑ Diagnosis lamp
- ㉒ Immobilizer
- ㉓ CAN
- ㉔ Delivery module with presupply pump
- ㉕ Speed sensor

Electric fuel pumps

Replacement parts range and “in-tank” units



Cutting-edge technology sets new standards

The winning features of Bosch fuel pumps and delivery units:

- ▶ Maximum pulsation-free performance (pressure/delivery) for constant injection pressure
- ▶ Longer service life thanks to extensive filter area
- ▶ Improved ride comfort due to lower noise level
- ▶ Extremely compact dimensions and low weight simplify installation
- ▶ Outstanding reliability even for “in-tank” applications
- ▶ Capacitor and interference suppression cap provide excellent protection against signal interference

Comprehensive market coverage with fuel pumps and in-tank units from Bosch

- ▶ Broadest possible market coverage with series-production pumps and modules
- ▶ New “present value” repair options for fuel-supply modules for 10 million vehicles in Europe
- ▶ Top quality level – all products supplied by Bosch are of original-equipment standard
- ▶ Universal range with only 7 types for 72 original-equipment pumps
- ▶ Aftermarket range also includes fuel pumps for modern diesel-injection systems such as common rail and unit injector
- ▶ Long-term availability of all products – at competitive prices

The universal range “7 instead of 72”



One type for a variety of applications: The universal electric-fuel-pump range from Bosch

The 72 pumps used in the past can now be replaced by just 7 universal electric fuel pumps from Bosch. The key to this is a parts set. Each of the 7 electric fuel pumps is supplied with a parts set and easy-to-follow installation instructions. These pumps form the Bosch universal range.

Bosch quality

Crucial criteria for electric fuel pumps:

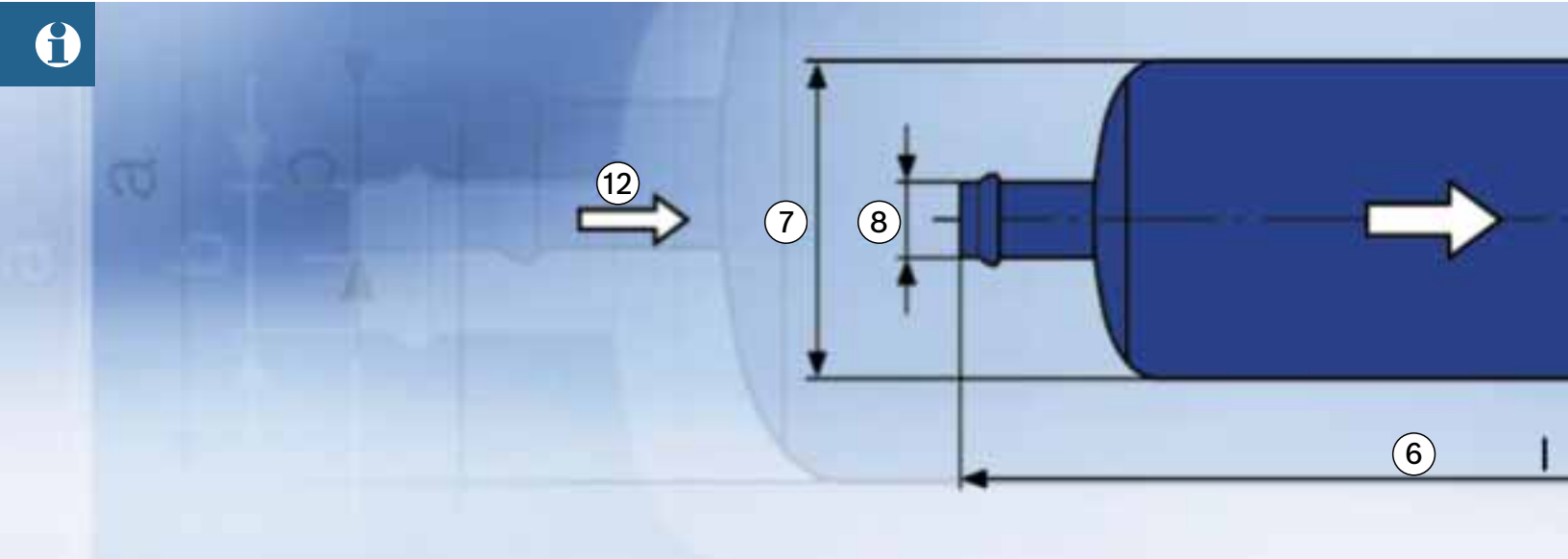
- ▶ Maximum operational reliability
- ▶ Compliance with all original-equipment demands
- ▶ Long service life
- ▶ Low noise level
- ▶ Optimum fuel delivery
- ▶ Maximum possible safety for hot-fuel delivery
- ▶ Excellent interference-suppression level


Warning about imitation pumps

Certain rival companies make use of inferior imitation products instead of high-performance Bosch pumps. This can lead to fuel-delivery problems and to a loss of engine power due to an inadequate fuel supply. In the interests of your customers please therefore make exclusive use of genuine fuel pumps from Bosch.

Electric fuel pumps

Universal range – technical data



 0580...	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
... 254 053	175...228	500	13	< 11.4	800...1450	180	60	12	M 12 x 1.5	–	–
... 254 909	148...198	500	13	< 8.7	800...1450	180	60	12	M 12 x 1.5	–	–
... 254 910	130...200	500	13	< 9.8	800...1450	203	60	15	M 12 x 1.5	–	–
... 254 911	95...135	400	12	< 5.2	650...850	199	52	15	M 12 x 1.5	–	M 10 x 1
... 464 069	98...148	400	12	< 7.0	480...850	186	52	12	M 12 x 1.5	–	M 14 x 1.5
... 464 070	130...195	300	12	< 6.5	450...800	175	52	12	–	8	–
... 464 085	95...145	250	12	< 4.5	480...850	175	52	12	–	8	–

Electrical connections:

Cable lug: M 4/M 5
Temperature range: –40 °C ... +60 °C
Fuel grade as per DIN: 51 600, 51 607

Scope of delivery:

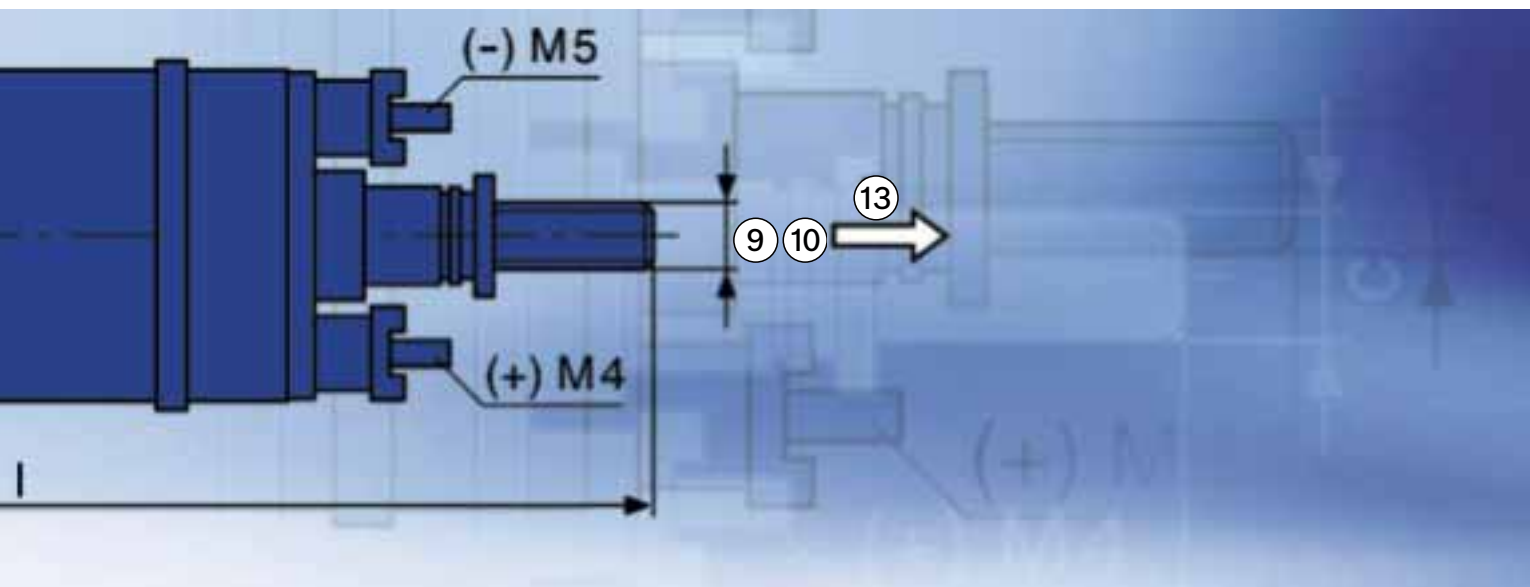
Universal electric fuel pump with parts set (1 cable lug M4/M5 each with the corresponding washers and nuts).







Note:

All universal electric fuel pumps are of the “in-line” type. They are only suitable for installation outside the fuel tank.

- ① Delivery at rated voltage l/h
- ② Primary pressure kPa
- ③ Rated voltage V
- ④ Current input A
- ⑤ Pressure limitation kPa
- ⑥ Total length mm
- ⑦ Pump dia. mm
- ⑧ Intake connection nom. dia. mm
- ⑨ Pressure-connection thread
- ⑩ Pressure-connection nom. dia. mm
- ⑪ Additional threaded socket
- ⑫ Suction end
- ⑬ Delivery end

Universal range – reference table



					
0 580 254 921	0 580 254 910	0 580 254 967	0 580 254 053	0 580 464 021	0 580 464 069
0 580 254 922	0 580 254 910	0 580 254 968	0 580 254 053	0 580 464 022	0 580 464 069
0 580 254 927	0 580 254 910	0 580 254 969	0 580 254 053	0 580 464 023	0 580 464 070
0 580 254 928	0 580 254 910	0 580 254 970	0 580 254 909	0 580 464 024	0 580 464 069
0 580 254 931	0 580 254 909	0 580 254 971	0 580 254 909	0 580 464 025	0 580 464 069
0 580 254 932	0 580 254 909	0 580 254 972	0 580 254 909	0 580 464 027	0 580 464 069
0 580 254 934	0 580 254 909	0 580 254 973	0 580 254 910	0 580 464 028	0 580 464 069
0 580 254 942	0 580 254 910	0 580 254 974	0 580 254 910	0 580 464 030	0 580 254 911
0 580 254 943	0 580 254 910	0 580 254 980	0 580 254 909	0 580 464 032	0 580 464 070
0 580 254 945	0 580 254 911	0 580 254 981	0 580 254 909	0 580 464 033	0 580 464 070
0 580 254 946	0 580 254 911	0 580 463 010	0 580 464 085	0 580 464 034	0 580 254 911
0 580 254 949	0 580 254 909	0 580 463 011	0 580 464 085	0 580 464 037	0 580 464 069
0 580 254 950	0 580 254 911	0 580 463 012	0 580 464 085	0 580 464 038	0 580 464 070
0 580 254 951	0 580 254 911	0 580 463 013	0 580 464 085	0 580 464 040	0 580 254 911
0 580 254 952	0 580 254 910	0 580 463 014	0 580 464 085	0 580 464 041	0 580 254 911
0 580 254 956	0 580 254 910	0 580 463 015	0 580 464 085	0 580 464 042	0 580 464 069
0 580 254 957	0 580 254 909	0 580 463 016	0 580 464 085	0 580 464 044	0 580 464 069
0 580 254 958	0 580 254 909	0 580 463 017	0 580 464 085	0 580 464 048	0 580 464 070
0 580 254 959	0 580 254 909	0 580 464 008	0 580 464 070	0 580 464 050	0 580 464 070
0 580 254 960	0 580 254 909	0 580 464 013	0 580 464 070	0 580 464 051	0 580 464 070
0 580 254 961	0 580 254 909	0 580 464 014	0 580 464 070	0 580 464 056	0 580 464 070
0 580 254 962	0 580 254 909	0 580 464 015	0 580 464 070	9 580 810 046	0 580 464 070
0 580 254 964	0 580 254 909	0 580 464 016	0 580 464 070		
0 580 254 965	0 580 254 909	0 580 464 019	0 580 464 070		
0 580 254 966	0 580 254 909	0 580 464 020	0 580 464 070		

Electric fuel pumps

The full range



Fuel-supply module

Pump	Included
Fuel reservoir	Optional
Fuel-level sensor	Included
Pressure regulator	Optional
Strainer	Included



Electric fuel pump

Pump	Included
Fuel reservoir	–
Fuel-level sensor	–
Pressure regulator	–
Strainer	Optional



Electric-fuel-pump parts sets and repair kits

Pump	Included
Fuel reservoir	Optional
Fuel-level sensor	Optional
Pressure regulator	–
Strainer	Optional



Intake module

Pump	–
Fuel reservoir	Optional
Fuel-level sensor	Included
Pressure regulator	–
Strainer	Optional

Non-return valves

On certain electric fuel pumps the non-return valve integrated into the threaded socket on the delivery end can be replaced. Each of the parts sets listed comprises the genuine threaded socket with non-return valve and a corresponding sealing ring.



0 580 254 001	1 587 010 533
0 580 254 002	1 587 010 533
0 580 254 003	1 587 010 531
0 580 254 005	1 587 010 531
0 580 254 010	1 587 010 536

0 580 254 011	1 587 010 532
0 580 254 012	1 587 010 532
0 580 254 013	1 587 010 536
0 580 254 018	1 587 010 532
0 580 254 019	1 587 010 531

0 580 254 020	1 587 010 531
0 580 254 021	1 587 010 532
0 580 254 023	1 587 010 531
0 580 254 033	1 587 010 532
0 580 254 035	1 587 010 531

0 580 254 039	1 587 010 531
0 580 254 040	1 587 010 531
0 580 254 044	1 587 010 532
0 580 254 049	1 587 010 536
0 580 254 050	1 587 010 536

0 580 254 052	1 587 010 532
0 580 254 914	1 587 010 004
0 580 254 916	1 587 010 004
0 580 254 918	1 587 010 533
0 580 254 919	1 587 010 536

0 580 254 920	1 587 010 536
0 580 254 921	1 587 010 532
0 580 254 922	1 587 010 532
0 580 254 927	1 587 010 532
0 580 254 928	1 587 010 532

0 580 254 929	1 587 010 532
0 580 254 930	1 587 010 532
0 580 254 933	1 587 010 535
0 580 254 934	1 587 010 532
0 580 254 935	1 587 010 534

0 580 254 936	1 587 010 533
0 580 254 937	1 587 010 537
0 580 254 938	1 587 010 533
0 580 254 941	1 587 010 532
0 580 254 942	1 587 010 532

0 580 254 943	1 587 010 532
0 580 254 945	1 587 010 538
0 580 254 947	1 587 010 532
0 580 254 948	1 587 010 534
0 580 254 949	1 587 010 532



0 580 254 950	1 587 010 536
0 580 254 951	1 587 010 538
0 580 254 952	1 587 010 532
0 580 254 953	1 587 010 535
0 580 254 956	1 587 010 532

0 580 254 957	1 587 010 532
0 580 254 958	1 587 010 532
0 580 254 959	1 587 010 532
0 580 254 967	1 587 010 532
0 580 254 968	1 587 010 532

0 580 254 975	1 587 410 901
0 580 254 979	1 587 410 901
0 580 254 982	1 587 410 901
0 580 254 984	1 587 410 901
0 580 254 992	1 587 010 001

0 580 463 998	1 587 010 540
0 580 464 017	1 587 010 532
0 580 464 021	1 587 010 536
0 580 464 022	1 587 010 539
0 580 464 024	1 587 010 536

0 580 464 025	1 587 010 539
0 580 464 027	1 587 010 536
0 580 464 028	1 587 010 536
0 580 464 029	1 587 010 539
0 580 464 031	1 587 010 534

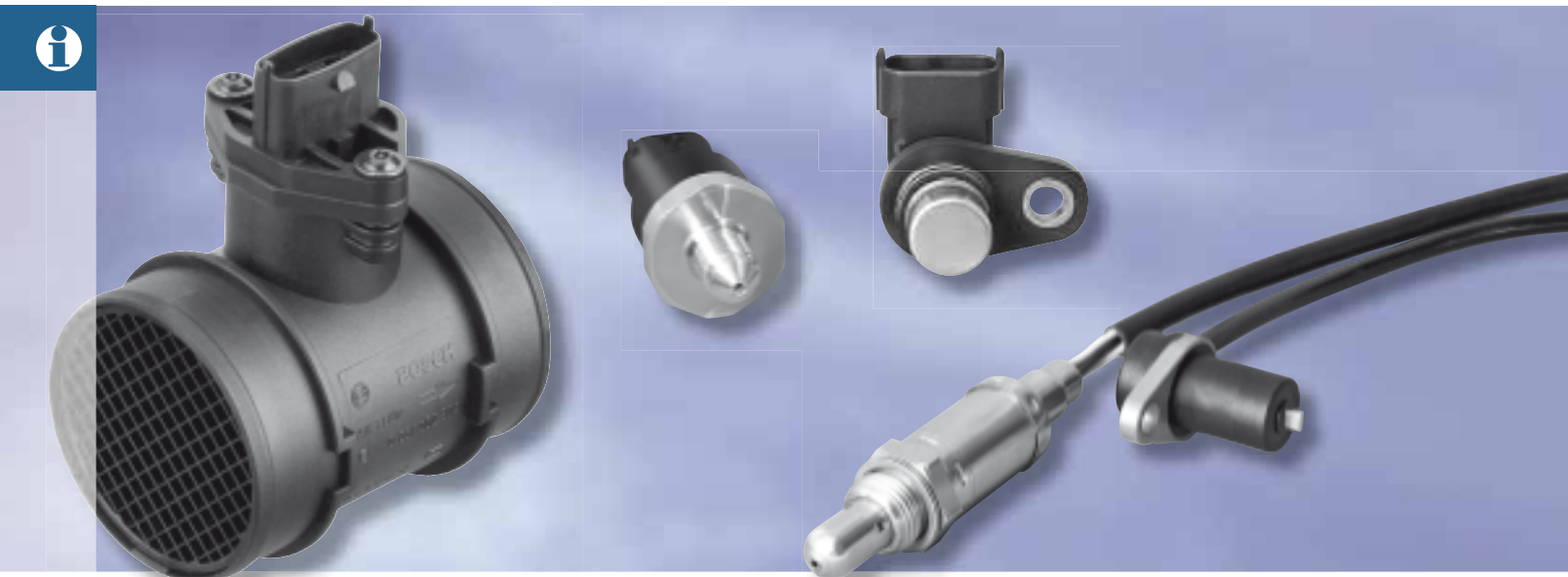
0 580 464 037	1 587 010 536
0 580 464 039	1 587 010 539
0 580 464 040	1 587 010 536
0 580 464 041	1 587 010 538
0 580 464 042	1 587 010 536

0 580 464 044	1 587 010 536
0 580 464 045	1 587 010 532
0 580 464 047	1 587 010 537
0 580 464 057	1 587 010 532
0 580 464 058	1 587 010 532

0 580 464 068	1 587 010 539
0 580 464 990	1 587 010 536
0 580 464 995	1 587 010 538
0 580 464 997	1 587 010 536

Sensors

Comprehensive range of sensors from Bosch



Increasing original-equipment figures – growing replacement demand

Even compact vehicle models are currently fitted with more than 50 individual sensors. With the exception of the Lambda sensor the majority are not subject to wear, but accidents or other influences may cause damage.

As the leading supplier of original-equipment automobile sensors, Bosch can also offer the most comprehensive aftermarket range in this sector. Suitable replacement parts can be found for nearly all repair applications. In addition, Bosch provides workshops with the essential electronic diagnosis techniques for the identification of defective sensors.

The Bosch sensor range comprises several hundred different types. The types of sensor based on ultra-modern micro electromechanical systems (MEMS) span a field of applications including pressure, acceleration and yaw-rate detection. The wide range of conventional measuring elements available extends from speed sensors and hot-film air-mass meters or Lambda sensors right through to sensors for automatic air-conditioning systems.

Gasoline injectors

Bosch is the worldwide market leader



A Bosch milestone: 40 years of manufacturing expertise

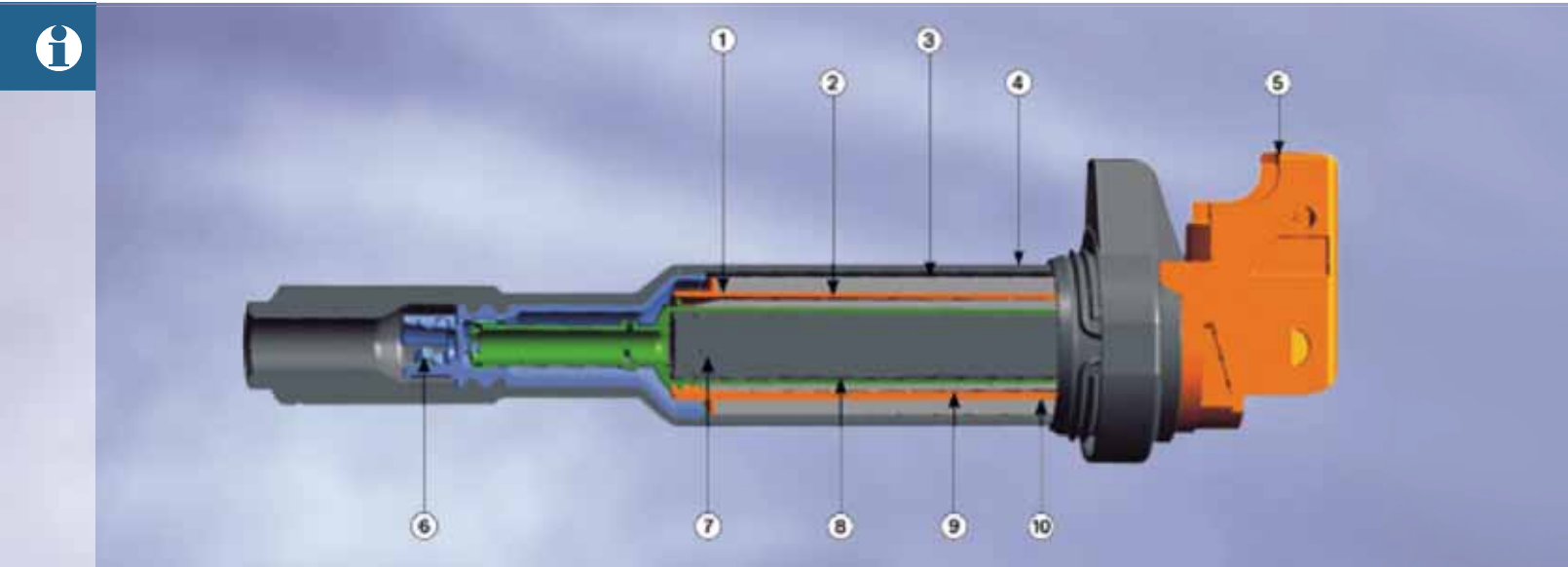
Bosch manufactures 80 million gasoline injectors every year at seven production plants distributed around the world. With particularly high market shares in Western Europe, the NAFTA area, and China, Bosch is way out in front as the world-market leader.

Bosch has the innovative answers for optimized gasoline-injection systems and natural-gas injectors:

- ▶ 2001: EV14 for manifold injection – an optimized injection orifice plate and finer atomization permit a reduction of up to 15 percent in hydrocarbon emissions.
- ▶ 2005: Injectors for environmentally compatible, inexpensive natural gas – as compared to conventional gasoline, carbon-dioxide emissions can be reduced by up to 30%.
- ▶ Refinement of the DI-Motronic gasoline direct-injection system to obtain a jet-directed combustion process: Consumption can be reduced by up to 15% in comparison with manifold injection.
- ▶ Parallel development of solenoid-controlled high-pressure injectors with multihole nozzle suitable for all gasoline direct-injection combustion processes.

Ignition coils

Innovative plastic ignition coils of original-equipment standard



Bosch ignition systems set new standards in engine management

Thanks to the expertise obtained from the development of injection systems, Bosch ignition systems are always ideally adapted to the engine concerned and ensure low fuel consumption and high power in combination with good emission values. This means that compliance with ever more stringent emission legislation can always be guaranteed.

100 years of Bosch ignition

Bosch's unrivalled wealth of experience in the field of ignition technology makes all the difference when it comes to developing original equipment. Bosch ignition systems offer the safety and reliability of established system technology whilst at the same time incorporating the latest research findings.

Market coverage and range expansion

At Bosch, technological development is a constantly ongoing process. Keeping a close eye on the market, technical innovations are incorporated into engine production in close cooperation with the automotive industry. As a result, the range and thus also market coverage are constantly being expanded.




Bosch is also a worldwide supplier of plastic ignition coils for the automotive industry

The use of Bosch plastic ignition coils guarantees all the benefits of original equipment:

- Demand-oriented ignition voltage
- Long spark duration
- Improved engine performance
- Lower fuel consumption
- Reduced pollutant emissions

- ① Primary coil body
- ② Primary winding
- ③ Yoke
- ④ Silicone casing
- ⑤ Connectors
- ⑥ Spark-plug contact
- ⑦ Core
- ⑧ Shrink-down tubing
- ⑨ Secondary coil body
- ⑩ Secondary winding

New additions to range

 N°		O.E.		
0 986 221 034	CITROËN PEUGEOT	5970 72 / 74	Berlingo, Saxo, Xsara, 106, 206, 306, Partner, Ranch	
0 986 221 035	CITROËN PEUGEOT	5970 78 / 79, 9635864980	C2, C3, Berlingo, Saxo, Xsara, 206, 306, Partner, Ranch	
0 986 221 036	RENAULT	82 00 025 256 82 00 084 401 82 00 051 128	Clio II, Kangoo, Twingo	
0 986 221 037	AUTOBIANCHI FIAT INNOCENTI LANCIA	7746151	Croma, Delta, Elba, Fiorino 88, Tempra, Tipo, Uno 75, Y10	
0 986 221 038	AUTOBIANCHI FIAT LANCIA	4439396	126, Panda	
0 221 504 470	BMW MINI	12 13 7 571 643 12 13 7 562 744 V7 571 64380 V7 562 744	335i, Cooper, One	
0 221 504 471	BMW	12 13 7 571 644	320i	

eXchange – Back in Box

Outstanding quality, comprehensive range, top-class service



1. Delivery of genuine Bosch exchange product.



2. Replace the corresponding old part with the exchange product.

Gasoline-injection engine management	
Hot-film air-mass meter	5
Hot-wire air-mass meter	20
Air-flow sensor	10
Fuel distributor	20
Electronic control units	20
Central injection unit (ZEE) - top section	10
Central injection unit (ZEE) - bottom section	10
Ignition distributors	10

Note:

Deposits can only be redeemed if the old item is returned in the packaging of the exchange product supplied.

Advantages:

- Protection of old items on return shipment
- Faster processing of old items as old part is easier to identify
- Disposal of packaging no longer necessary
- No soiling by the old item



3. Place the old part in the packaging of the exchange product.



4. Return the old part to Bosch in the sealed packaging.

The comprehensive, intelligent exchange range

- ▶ Currently a total of 21 product groups from the starter/alternator, diesel/gasoline-injection and brake-caliper sectors
- ▶ High degree of market coverage for all the major motor-vehicle manufacturers
- ▶ Constant updating of range
- ▶ Top class service in the form of product information and technical media such as ESI[tronic] from the diagnostic sector
- ▶ Quick and easy processing of old items

Outstanding quality at attractive prices

- ▶ Quality standards comparable to original equipment
- ▶ 100% replacement of all critical components
- ▶ Consistent use of genuine Bosch replacement parts
- ▶ Same warranty as for new products

eXchange – conditions for component return

Hot-film air-mass meter

Hot-wire air-mass meter



Returned item not accepted if: <ul style="list-style-type: none">▶ Not a genuine Bosch assembly▶ Severe corrosion▶ Assembly incomplete or dismantled▶ Assembly manipulated▶ Mechanical damage	Returned item not accepted if: <ul style="list-style-type: none">▶ Not a genuine Bosch assembly▶ Severe corrosion▶ Assembly incomplete or dismantled▶ Assembly manipulated▶ Mechanical damage
--	--



Damage to bolts, bolts screwed out and projecting, incorrect bolts



Damage to temperature sensor



Damage to plug-in sensor and plug connection



Damage to cylinder housing



Damage to cylinder housing or strainer element



Damage to electronics housing (no cover) or plug connection

Air-flow sensor

Control unit



Returned item not accepted if:

- ▶ Not a genuine Bosch assembly
- ▶ Severe corrosion
- ▶ Assembly incomplete or dismantled
- ▶ Assembly manipulated
- ▶ Mechanical damage

Returned item not accepted if:

- ▶ Not a genuine Bosch assembly
- ▶ Severe corrosion
- ▶ Assembly incomplete or dismantled
- ▶ Assembly manipulated
- ▶ Mechanical damage



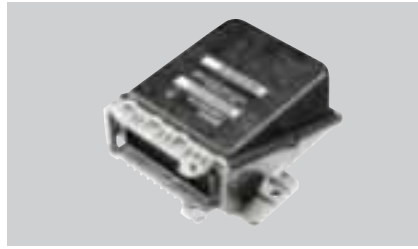
Damage to plastic housing



Damage to housing, screw connection and flange



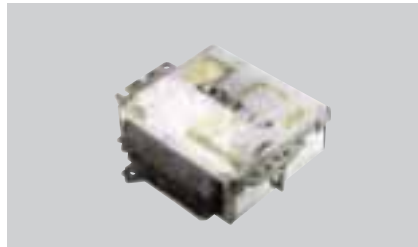
Damage to aluminum housing



Damage to connector or terminal strip



Severe corrosion



Water damage or housing opened

Ignition distributor

Central injection unit
(top/bottom section)



Returned item not accepted if:

- ▶ Not a genuine Bosch assembly
- ▶ Severe corrosion
- ▶ Assembly incomplete or dismantled
- ▶ Assembly manipulated
- ▶ Mechanical damage

Returned item not accepted if:

- ▶ Not a genuine Bosch assembly
- ▶ Severe corrosion
- ▶ Assembly incomplete or dismantled
- ▶ Assembly manipulated
- ▶ Mechanical damage

Attention: Complete ZEE cannot be returned



Damage to vacuum unit,
mounting plate



Damage to housing



Damage to ignition
module, distributor shaft
or cap



Damage to sealing
surfaces, thread,
throttle valve, control
lever



Distributor cap missing,
connector missing



Pressure regulator or
throttle-valve potentiometer
missing

Fuel distributor

**Returned item not accepted if:**

- ▶ Not a genuine Bosch assembly
- ▶ Severe corrosion
- ▶ Assembly incomplete or dismantled
- ▶ Assembly manipulated
- ▶ Mechanical damage



Severe damage to housing (e.g. deformation or cracks)

Gasoline injection components

A to Z guide



Acceleration sensor

System:

Motronic

Purpose:

Compliance with OBDII requirements (engine management on-board diagnostics) demands the detection of misfiring at individual cylinders as well as misfiring distributed randomly over all the cylinders. This is achieved by recording the fluctuations in crankshaft speed. Speed fluctuations also occur as a result of driving on particularly rough roads and frequent road surface irregularities. Such road surface irregularities additionally give rise to extreme body acceleration, which is measured by way of an acceleration sensor. This signal is used to block the misfiring detection function.

Part number:

0 273 101 02.



Air-flow sensor

Systems:

L-Jetronic, Motronic

Purpose:

The air flowing into the engine deflects a sensor plate in opposition to the restoring force of a spring. A potentiometer converts the deflection of the sensor plate into a voltage. The electronic control unit uses this signal to calculate the quantity of fuel required.

Part number:

0 280 200..., 0 280 201..., 0 280 202..., 0 280 203...,

BX: 0 986 280 0..



Air-flow sensor (mechanical)

Systems:

K, KE-Jetronic, KE-Motronic

Purpose:

The air-flow sensor and the fuel distributor together form the mixture-control unit. The two components are available separately and must be replaced separately. The air flowing through the air funnel deflects the sensor plate by a certain distance. The sensor-plate deflection is transmitted to the fuel distributor by way of a lever system.

Part number:

0 438 120..., 0 438 121..., F 026 TX2...,

BX: 0 986 439...



Air-mass meter

System:

LH-Jetronic, Motronic

Purpose:

The air-mass meter is installed between the air filter and the throttle valve and measures the intake-air mass. Use is made in practice of hot-wire and hot-film air-mass meters. Both sensors operate on the same principle: An electrically heated thin platinum wire or platinum film resistor is positioned in the intake-air flow together with a temperature sensor in the form of a temperature-sensitive resistor. The electronic control unit is supplied with a voltage signal proportional to the air mass flow and uses this signal to calculate the quantity of fuel required.

Part number:

0 280 21....,

BX: 0 986 280 1.. (HLM), 0 986 280 2.. (HFM)



Auxiliary-air device

Systems:

D, L, K-Jetronic, Motronic (some)

Purpose:

The auxiliary-air device is installed in a bypass around the throttle valve. In the warm-up phase, the engine is supplied with additional air/fuel mixture to ensure stable idling. The auxiliary-air device is electrically heated and closes the bypass with increasing engine temperature. The bypass is completely closed off when the engine reaches operating temperature.

Part number:

0 280 140 001 – 0 280 140 299



Camshaft speed sensor

Systems:

Motronic

Purpose:

The camshaft position indicates whether an engine piston moving towards top dead center is in the compression or exhaust stroke. The speed sensor at the camshaft (also referred to as phase sensor) passes this information to the electronic control unit. Such sensors are used where high accuracy is required. Further advantages include a comparatively large air-gap range and good temperature compensation.

Part number:

0 232 10....





Canister-purge valve

System:

Motronic

Purpose:

Vapors are produced in the fuel tank due to external heat radiation or surplus fuel having warmed-up in the engine compartment while flowing back from the fuel circuit. These vapors are purged by way of an activated charcoal filter. This filter retains the fuel vapor and only allows the air to escape into the open. This also ensures pressure equalization. For regular regeneration of the activated charcoal, a further pipe containing the canister-purge valve is routed from the carbon canister to the intake manifold. The canister-purge valve (regeneration valve) is actuated such that the activated carbon canister is adequately purged with minimal Lambda deviations.

Part number:

0 280 142 150 – 0 280 142 499



Central injection unit (Mono-Jetronic)

Systems:

Mono-Jetronic, Mono-Motronic

Purpose:

The main component of Mono systems is the central injection unit. This contains the injector, the pressure regulator, the throttle valve, the throttle-valve actuator and sensors for intake-air temperature and throttle-valve position. Bosch supplies the appropriate workshop parts sets for repair work. The replacement parts range can be found as of Page A46. The parts sets for the top and bottom sections of the central injection unit are also listed in the vehicle applications (B Section).

Part number:

0 438 201 ...,

BX: 0 986 438 5..., 0 986 438 6..



Cold-start valves

Systems:

D, L, LH, K, KE-Jetronic, Motronic (some)

Purpose:

The cold-start valve injects additional fuel into the intake manifold during the starting phase. In this process, the fuel is highly atomized by a swirl nozzle. The cold-start valve is attached to the intake manifold so as to provide a uniform supply for all cylinders. The injection time of the cold-start valve is limited by the thermo-time switch or the electronic control unit.

Part number:

0 280 170...



Coolant-temperature sensor

Systems:

D, L, LH-Jetronic, K-Jetronic (with Lambda sensor), KE-Jetronic, KE-Motronic, Motronic

Purpose:

The coolant-temperature sensor measures the temperature in the coolant circuit and provides the electronic control unit with an electric signal. The sensor comprises an NTC thermistor embedded in a threaded sleeve or a plastic casing. The “coolant temperature” signal is particularly important for the starting and warm-up phase.

Part number:

0 261 220 ..., 0 280 130 ...



Crankshaft speed sensor

System:

Motronic

Purpose:

A ferromagnetic gear wheel with reference mark (tooth gap) is attached to the crankshaft. The speed sensor scans the tooth sequence. The electronic control unit uses the signal to calculate the crankshaft position and speed. Some systems are fitted with two sensors. Crankshaft position and speed are then measured separately.

Part number:

0 261 210 ...



Electric fuel pumps/in-tank units

Systems:

All systems

Purpose:

The electric fuel pump (EKP) must supply the engine with sufficient fuel at the pressure required for injection under all operating conditions. The EKP is also increasingly assuming the function of a pre-supply pump for modern direct-injection systems in both gasoline and diesel engines. Principal requirements: Delivery rate between 60 and 200 l/h at rated voltage, pressure in fuel system between 300 and 450 kPa (3...4.5 bar), build-up of primary pressure as of 50 % to 60 % of rated voltage; cold-starting operation is definitive for this.

Part number:

0 580 254 ..., 0 580 303 ..., 0 580 305 ..., 0 580 309 ..., 0 580 310 ..., 0 580 313 ..., 0 580 314 ..., 0 580 453 ..., 0 580 464 ..., 0 582 980 ..., 0 587 010 ..., 0 986 580 ..., etc.



Electronic control units

Systems:

Jetronic and Motronic

Purpose:

The electronic control unit determines the quantity of fuel required in each case and regulates all the connected actuators and injectors. This is implemented on the basis of the signals from the temperature, pressure and load-detection sensors. Electronic control units for Motronic systems also control the ignition point. In modern systems, the ECU also assumes diagnosis functions. Faults occurring are stored in the fault memory and can be read out using self-diagnosis testers.

Note:

Electronic control units in vehicles with immobilizer sometimes have to be “taught”. This work can only be performed in specially equipped workshops.

Part number:

0 261 20.... (Motronic), 0 280 00.... (L/LH-Jetronic), 0 280 800... (KE-Jetronic/Motronic)



Fuel accumulator

Systems:

K, KE-Jetronic, KE-Motronic

Purpose:

The fuel accumulator keeps the fuel-supply system pressurized after shutting off the engine. This considerably enhances starting performance, particularly with a hot engine. The accumulator also has a sound-absorbing effect.

Part number:

0 438 170...



Fuel distributor

Systems:

K, KE-Jetronic, KE-Motronic

Purpose:

The fuel distributor and the air-flow sensor together form the mixture-control unit. The two components are available separately and must be replaced separately. The fuel distributor's control plunger is deflected by the air-flow sensor's lever system. The fuel distributor meters the quantity of fuel to be injected to each cylinder.

Note:

Note: The fuel distributor can only be replaced as a complete unit. It cannot be assembled using workshop equipment after removing individual components.

Part number:

0 438 100..., 0 438 101..., T 026 TX2...,
BX: 0 986 438...



Fuel rail

Systems:

L, LH-Jetronic, Motronic

Purpose:

Along with the electric fuel pump, fuel filter, injectors and pressure regulator, the fuel rail forms part of the fuel-supply system which always supplies the engine with the necessary amount of fuel under all operating conditions. The pressure generated by the fuel pump is applied to all injectors by way of the fuel rail. The unused fuel flows back to the fuel tank via a pressure regulator. In most cases, the pressure regulator (fuel rail – conventional design with pressure regulator) uses the intake-manifold pressure as a reference. The use of this typical pressure and the flow through the fuel rail (fuel cooling) prevent the formation of any unwanted vapor bubbles in the fuel.

Part number:

0 280 151 ..., 0 280 152 ...



High-pressure injector HDEV-1 + HDEV-5

Purpose:

The high-pressure injector (HDEV), one of the key components of a gasoline direct-injection system, is linked by way of hydraulic connections to the fuel rail (KVS-HD) and is actuated via a current-controlled output stage. The solenoid swirl valve injects a precisely metered quantity of fuel with a defined spray pattern directly into the combustion chamber in finely atomized form. The injected fuel quantity is determined by pressure, flow rate and the actuation time of the injector. The spray geometry is matched to the requirements of the corresponding engine and the combustion process.

Part number:

0 261 500 ...



High-pressure injector HDEV-4

System:

Motronic gasoline direct injection

Purpose:

The HDEV-4 is a high-speed piezo injector for gasoline with variable needle lift. The nozzle opens outwards and ensures outstanding spray stability whilst at the same time being extremely resistant to coking. The injector covers a wide metering range in which the quantity characteristic curve is distinguished by a high degree of linearity. The HDEV-4 can be employed for various combustion methods and injection concepts. Its rapid and accurate multiple injection action opens up new potential for configuring the injection process.

Part number:

0 261 500 ...



High-pressure pump HDP-1

Purpose:

The 3-barrel radial-piston high-pressure pump is driven by the camshaft via a coupling. It compresses the fuel provided by the electric fuel pump up to 12 MPa and delivers it to the high-pressure fuel rail (KVS-HD). The fuel cools and lubricates the high-pressure pump.

Part number:

0 261 520...



High-pressure pump HDP-2

System:

Motronic gasoline direct injection

Purpose:

In contrast to the HDP-1, the high-pressure pump HDP-2 is a unit pump. It is a demand-regulated, intermittent-delivery 1-barrel piston pump with a maximum pressure range up to 120 bar. It features an integral pressure damper and the integrated fuel-quantity control valve. The pump is of modular design for flexible adaptation to different customer requirements. The HDP-2 is driven via the bucket tappet which is actuated by the camshaft. It is attached directly to the cylinder head or to an adapter housing.

Part number:

0 261 520...



High-pressure pump HDP-5

System:

Motronic gasoline direct injection

Purpose:

The HDP-5 is a quantity-controlled single-barrel high-pressure pump for 4 to 8-cylinder engines. In new engine projects it supersedes all the previous 1st-generation Bosch high-pressure pumps (HDP-1 and HDP-2).

Part number:

0 261 520...



High-pressure sensor

Purpose:

The sensor installed in the high-pressure fuel rail is designed to detect the fuel-pressure level in the rail. The pressure measured is used as actual quantity for rail-pressure regulation.

Part number:

0 261 545...



Idle actuator

Systems:

LH, KE-Jetronic, KE-Motronic, Motronic

Purpose:

The idle actuator is installed in a bypass around the throttle valve and keeps the idling speed steady under all conditions. Electrical actuation is effected by way of the engine control unit or the idle controller on vehicles with idle-speed control. Extensive use is made of idle actuators with hose connection. Add-on idle actuators are also employed in Motronic systems.

Part number:

0 280 140 5..



Idle controller (electronic control unit)

Systems:

All systems with idle-speed control

Purpose:

The idle controller regulates the rotary idle actuator and keeps the engine idling speed absolutely steady. This avoids speed fluctuations when such loads as power steering, air conditioner or automatic-transmission gearshift are activated.

Part number:

0 280 220...



Ignition coil

Purpose:

The operating principle of an ignition coil is based on Faraday's law. Modern ignition coils consist of iron cores made up of individual laminations and a plastic casing. To provide better insulation of the windings, the casing is cast in epoxy resin or asphalt.

The pencil coil shown is one of the plastic ignition coils. It provides high spark energy (> 60 mJ) and a long spark duration (≥ 1.8 ms) and thus ensures reliable, optimum combustion of the air/fuel mixture under all engine operating conditions.

Part number:

0 221, F 000 ZS0..., 1 227 030..., 0 986 221...



Ignition distributors

Purpose:

The ignition distributor, which runs at half the engine speed, assigns the high voltage (ignition sparks) to the particular engine cylinder (firing order). A basic distinction is made between three types:

Type 1:

Contact-type ignition distributor (ZV-K). This is used with conventional coil ignition and breaker-triggered transistorized ignition (TZ-K). The ignition point is modified by way of speed-dependent centrifugal or vacuum advance.

Part number:

0 231

Type 2:

Ignition distributor with non-contacting sensor. This is used for transistorized ignition with inductive or Hall sensor. The ignition point is modified by way of speed-dependent centrifugal or vacuum advance. Also double-acting. Also with add-on trigger box.

Part number:

0 237

Type 3:

Ignition distributor for electronic ignition. The ignition distributor contains only the high-voltage section (cap, rotor).

Part number:

0 237 5....,

BX: 0 986 237 ...



Injectors (electromagnetic)

Systems:

D, L, LH-Jetronic, Motronic

Purpose:

Each cylinder is assigned an injector. This is triggered electronically and injects the fuel upstream of the engine intake valves. In this process, the nozzle needle is lifted off its seat by approx. 0.1 mm, allowing the fuel to emerge through a precision annular orifice. Even the slightest contamination of the fuel or deposits can impair operation. The injectors are installed by way of special holders in rubber mouldings. The thermal insulation thus achieved prevents the formation of vapor bubbles and thus ensures good hot starting performance. To avoid unmetered air and leakage, the O-rings are always to be replaced prior to renewed installation.

Part number:

0 280 150..., 0 280 155..., 0 280 156..., 0 280 157 ..., 0 280 158...



Injectors (mechanical)

Systems:

K, KE-Jetronic, KE-Motronic

Purpose:

K-Jetronic valves open at a precisely defined fuel pressure (usually between 3.5 and 4.1 bar). In this process the valve needle oscillates at a high frequency and the fuel is thoroughly atomized even in the case of very small injected quantities. Each cylinder is assigned an injector, which injects the fuel directly upstream of the engine intake valves. Atomization, opening pressure and freedom from leaks have a major influence on emission characteristics, fuel consumption and starting performance. To avoid unmetered air and leakage, the O-rings are always to be replaced prior to installation.

Part number:

0 437 502...



Injectors EV10 (electromagnetic)

Systems:

Mono-Jetronic, Mono-Motronic

Purpose:

The injector EV10 is installed in the top section of the central injection unit. In this case one injector supplies all the cylinders with fuel. The fuel is injected into the intake manifold upstream of the throttle valve. As each ignition pulse also triggers an injection pulse, the EV10 is designed for very short switching times. During injection, the valve needle is lifted off its seat by approx. 0.06 mm. Even the slightest fuel contamination can impair operation. Injectors to suit each central injection unit can be found in the replacement parts range as of Page A46.

Part number:

0 280 150 051 – 0 280 150 099, 0 280 150 651 – 0 280 150 699



Knock sensors

System:

Motronic

Purpose:

The knock sensor converts vibration into electric signals. This enables the electronic control unit to detect knocking combustion and to retard the ignition point to prevent engine damage. In some cases several sensors are attached to the engine block for knock-control purposes.

Part number:

0 261 231...



Lambda sensors

Systems:

All

Purpose:

With older systems, the Lambda sensor is installed upstream of the catalytic converter. The sensor measures the oxygen content of the exhaust gas and supplies the electronic control unit with a voltage of approx. 800 mV for a rich mixture (λ 1). Modern systems require two Lambda sensors – one upstream of the catalytic converter (= Lambda control sensor) and one downstream (= Lambda diagnosis sensor). Increasing use is being made of planar sensors. These attain the necessary operating temperature after just a few seconds. To permit lean operation of the engine, the sensor upstream of the catalytic converter must be capable of detecting a lean mixture composition. Use is made of the latest broadband sensors for this purpose. These play a crucial part in reducing emissions in the critical warm-up phase and thus ensure compliance with the EURO IV and ULEV (Ultra Low Emission Vehicle) emission specifications.

Note:

Recommended torque: 40 – 60 Nm

Part number:

Unheated: 0 258 001 ..., 0 258 002 ...

Heated: 0 258 003, 0 258 005 ...

Planar: 0 258 006..., 0 258 007 ..., 0 258 010... and 0 258 017 ...



Pedal-travel sensor/accelerator-pedal module

Systems:

Motronic with ETC

Purpose:

In contrast to conventional engine-management systems, with the EGAS Motronic the driver's acceleration input is no longer relayed to the throttle valve via a cable. Instead, the input is detected using a pedal-travel sensor (also referred to as "electronic throttle control") and transmitted to the electronic control unit. The accelerator-pedal module is a pre-assembled unit containing a vehicle-specific foot plate and the pedal-travel sensor. The Motronic ECU evaluates the sensor signal and adjusts the electric motor-driven throttle valve (throttle device or EMS positioner) taking into account other vehicle and engine data.

Part number:

0 205 001 ..., 0 280 752 ..., 0 280 755 ...



Pressure damper

Systems:

D, L, LH, K, KE-Jetronic, Motronic

Purpose:

The opening and closing of the injectors and the cyclic delivery action of fuel pumps cause fluctuations in fuel pressure. These may be transmitted to other components and the body and result in noise. The pressure damper smoothes the pressure peaks and is primarily designed to reduce noise.

Part number:

0 280 161 ...



Pressure regulator

Systems:

D, L, LH-Jetronic, Mono-Jetronic, Motronic, Mono-Motronic

Purpose:

The pressure regulator is designed to maintain the system-specific difference in pressure between the fuel-supply line and the intake manifold at a constant level. The regulator is located at the end of the fuel rail (in the top section of the central injection unit on Mono systems). If the set pressure is exceeded, a diaphragm-actuated valve opens up the return pipe and the depressurized surplus fuel flows back to the tank.

Note:

The pressure regulator at the central injection unit cannot be replaced separately. Bosch supplies top sections with pre-assembled pressure regulator for this purpose (as of Page A46).

Part number:

0 280 160 0..., 0 280 160 2..., 0 280 160 5..., 0 280 160 7...,
0 438 161 ... Primary-pressure regulator for KE-Jetronic/Motronic



Pressure sensors (Motronic)

System:

Motronic

Purpose:

Pressure sensors can be used for a variety of applications. Intake-manifold pressure sensors measure the absolute pressure in the intake manifold. These sensors are either integrated into the electronic control unit or fitted in the vicinity of the intake manifold in the form of externally mounted sensors. Modern systems featuring on-board diagnosis are additionally fitted with tank-pressure sensors. Modern DUO sensors combine pressure and temperature measurement.

Part number:

0 261 230...



Pressure sensors (altitude sensors)

Systems:

L, K, KE-Jetronic, Motronic

Purpose:

Pressure sensors detect the atmospheric pressure and relay this to the electronic control unit in the form of a voltage signal. This prevents the over-enrichment and increased fuel consumption normally associated with decreasing atmospheric pressure at high altitudes.

Part number:

0 280 101...



Pressure-control valve (DSV)

Purpose:

The pressure-control valve is positioned between the fuel rail (KVS-HD) and the low-pressure end of the high-pressure pump (HDP-1). The pressure in the rail is set by varying the flow cross-section. The surplus fuel conveyed is returned to the tank.

Part number: 0 261 540...



Pulse valves

System:

K-Jetronic (with Lambda control)

Purpose:

The pulse valve is installed in the connecting line between the fuel distributor's lower chambers and the fuel return. It is actuated by the Lambda controller and opened and closed in a defined cycle. This enables the pressure in the lower chambers to be varied and the air/fuel mixture regulated to $\lambda = 1$.

Part number:

0 280 150 300 – 0 280 150 349



Secondary-air pump (electrical)

System:

Motronic

Purpose:

Use is made of the electric secondary-air pump to comply with the stringent emission legislation in the post-start phase. Fresh air injected directly downstream of the combustion chamber causes afterburning of the hot exhaust gases and ensures more rapid warm-up of the catalytic converter.

Part number:

0 580 000...



Shutoff valve

System:

Motronic

Purpose:

The shutoff valve is used in turbo engines to protect the turbocharger. The turbocharger remains in operation on switching from turbo to overrun mode. Without a shutoff valve, the air would impact against the closed throttle valve and flow back into the turbocharger. This return flow of air could damage the turbocharger. To guard against this, the seat of the shutoff valve is opened by the vacuum applied in the intake manifold in overrun mode with the throttle valve closed. This enables the air conveyed by the continued operation of the turbocharger to be routed via a bypass around the turbocharger and back into the intake manifold.

Part number:

0 280 142 100 – 0 280 142 150



Thermo-time switch

Systems:

D, L, LH, K, KE-Jetronic, Motronic

Purpose:

The thermo-time switch limits the injection period of the cold-start valve as a function of time and temperature. The switch consists of an electrically heated bimetallic element, which breaks or makes a contact. Actuation is implemented by way of the ignition/starter switch.

Part number:

0 280 130 2..



Throttle-valve assembly (EMS positioner)

Systems:

Motronic with ETC

Purpose:

In engine management systems with ETC, the throttle valve is no longer adjusted directly by way of a cable. The acceleration input is detected via a pedal-travel sensor and the sensor signal is relayed to the electronic control unit. The signal received by the control unit is converted into a control signal incorporating other vehicle and engine data. This control signal opens or closes the throttle valve (driven by an electric motor) in line with the driver input and driving situation.

Part number:

0 205 003 0.., 0 280 750...



Throttle-valve potentiometer, throttle-valve sensor

Systems:

Mono-Jetronic, Motronic, Mono-Motronic

Purpose:

Throttle-valve sensors are attached to the throttle-valve assembly or the central injection unit. These sensors detect the position of the throttle valve and the angular velocity on opening and closing. The angular velocity is an important signal for the electronic control unit to provide compensation for load-change reactions and to prevent part-load bucking. Note: Throttle-valve sensors at central injection units cannot be replaced. The entire bottom section of the injection unit has to be renewed. The appropriate bottom section can be found in the replacement parts range as of Page A46.

Part number:

0 261 211 ..., 0 280 122...





Throttle-valve switch

Systems:

D, L, LH, KE-Jetronic, Motronic

Purpose:

The throttle-valve switch is attached to the throttle-valve assembly. The switch is actuated by the throttle-valve shaft. One contact is made in each case in the “idle” and “full load” positions. These signals enable the electronic control unit to activate the idle-increase function with a cold engine and enrichment at full load.

Part number:

0 280 120 000 – 0 280 120 499



Vacuum limiter

Systems:

L, LH, K, KE-Jetronic, Motronic

Purpose:

The vacuum limiter restricts the difference in pressures upstream and downstream of the throttle valve. Additional air flows into the intake manifold if the set pressure difference is exceeded.

Part number:

0 280 160 1.., 0 280 160 3..



Warm-up regulator

System:

K-Jetronic

Purpose:

Warm-up regulators comprise a spring-controlled diaphragm valve and an electrically heated bimetallic spring. As a function of engine temperature and time, the control pressure in the fuel distributor is reduced and more fuel is injected into the engine.

Part number:

0 438 140...

[illegible]

Central injection unit (ZEE)

Mono-Jetronic replacement-parts range



Top-section parts set



1

Top section with pre-assembled pressure regulator

Note:

The pressure regulator cannot be replaced separately.



Bottom-section parts set



2

Bottom section with throttle valve and throttle-valve potentiometer

Note:

The throttle-valve potentiometer cannot be replaced separately.



Injector EV10

3

Injector complete with O-ring



Throttle-valve actuator

4

Idle actuator



Seal

5








Seal between top and bottom section











Connector

6

Connector for injector with integrated intake-air temperature sensor

ZEE		 1	 2	 3	 4	 5	 6
0 438 201 024	→ FD166	3 437 020 510	3 437 020 597	0 280 150 625	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 024	FD167 →	3 437 020 531	3 437 020 597	0 280 150 684	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 028		3 437 020 531	3 437 020 409	0 280 150 684	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 029		3 437 020 509	3 437 020 548	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 038		3 437 020 592	3 437 020 521	0 280 150 669	3 437 010 524	3 431 038 502	3 437 010 533
0 438 201 039	→ FD164	3 437 020 510	3 437 020 522	0 280 150 639	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 039	FD165 →	3 437 020 531	3 437 020 522	0 280 150 663	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 041	→ FD166	3 437 020 510	3 437 020 523	0 280 150 625	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 041	FD167 →	3 437 020 531	3 437 020 597	0 280 150 684	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 052		3 437 020 592	3 437 020 416	0 280 150 660	3 437 010 524	3 431 038 502	3 437 010 533
0 438 201 053		3 437 020 509	3 437 020 549	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 061		3 437 020 531	3 437 020 532	0 280 150 663	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 062		3 437 020 509	3 437 020 533	0 280 150 664	3 437 010 524	3 431 038 502	3 437 010 560
0 438 201 063		3 437 020 509	3 437 020 552	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 065		3 437 020 509	3 437 020 546	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 067		3 437 020 509	3 437 020 547	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 073		3 437 020 509	3 437 020 547	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 075		3 437 020 509	3 437 020 540	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 077		3 437 020 509	3 437 020 541	0 280 150 673	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 079		3 437 020 509	3 437 020 542	0 280 150 673	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 081		3 437 020 509	3 437 020 555	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 085		3 437 020 531	3 437 020 543	0 280 150 663	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 087		3 437 020 592	3 437 020 521	0 280 150 669	3 437 010 524	3 431 038 502	3 437 010 533
0 438 201 088		3 437 020 509	3 437 020 550	0 280 150 670	3 437 010 524	3 431 038 502	3 437 010 560
0 438 201 089		3 437 020 509	3 437 020 551	0 280 150 667	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 091		3 437 020 531	3 437 020 406	0 280 150 672	3 437 010 524	3 431 038 502	3 437 010 533
0 438 201 092		3 437 020 509	3 437 020 546	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 094		3 437 020 509	3 437 020 547	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 096		3 437 020 509	3 437 020 548	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 098		3 437 020 509	3 437 020 561	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 100		3 437 020 531	3 437 020 532	0 280 150 663	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 103		3 437 020 509	3 437 020 553	0 280 150 676	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 105		3 437 020 509	3 437 020 554	0 280 150 676	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 109		3 437 020 509	3 437 020 556	0 280 150 680	3 437 010 524	3 431 038 502	3 437 010 560
0 438 201 115		3 437 020 509	3 437 020 559	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 125		3 437 020 509	3 437 020 546	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 127		3 437 020 509	3 437 020 559	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 129		3 437 020 509	3 437 020 561	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 131		3 437 020 509	3 437 020 594	0 280 150 670	3 437 010 524	3 431 038 502	3 437 010 560
0 438 201 132		3 437 020 509	3 437 020 595	0 280 150 664	3 437 010 524	3 431 038 502	3 437 010 560
0 438 201 135		3 437 020 509	3 437 020 547	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 137		3 437 020 509	3 437 020 596	0 280 150 685	3 437 010 524	3 431 038 502	3 437 010 560
0 438 201 138		3 437 020 509	3 437 020 565	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 142		3 437 020 509	3 437 020 593	0 280 150 680	3 437 010 524	3 431 038 502	3 437 010 560
0 438 201 143		3 437 020 509	3 437 020 568	0 280 150 685	3 437 010 524	3 431 038 502	3 437 010 560

Mono-Jetronic replacement-parts range

<div>  ZEE   1  2  3  4  5  6 </div>							
0 438 201 146		3 437 020 509	3 437 020 575	0 280 150 673	3 437 010 552	3 431 038 502	3 437 010 523
0 438 201 149		3 437 020 509	3 437 020 580	0 280 150 651	3 437 010 552	3 431 038 502	3 437 010 523
0 438 201 151		3 437 020 576	3 437 020 577	0 280 150 673	3 437 010 552	3 431 038 502	3 437 010 555
0 438 201 154		3 437 020 509	3 437 020 574	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 156		3 437 020 509	3 437 020 573	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 158		3 437 020 509	3 437 020 572	0 280 150 673	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 160		3 437 020 509	3 437 020 554	0 280 150 676	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 162		3 437 020 509	3 437 020 578	0 280 150 664	3 437 010 524	3 431 038 502	3 437 010 560
0 438 201 163		3 437 020 509	3 437 020 579	0 280 150 680	3 437 010 524	3 431 038 502	3 437 010 560
0 438 201 166		3 437 020 509	3 437 020 574	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 168		3 437 020 531	3 437 020 414	0 280 150 684	3 437 010 524	3 431 038 502	3 437 010 533
0 438 201 169		3 437 020 509	3 437 020 584	0 280 150 670	3 437 010 524	3 431 038 502	3 437 010 560
0 438 201 176		3 437 020 576	3 437 020 588	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 555
0 438 201 178		3 437 020 576	3 437 020 404	0 280 150 651	3 437 010 524	3 431 038 502	3 437 010 555
0 438 201 180		3 437 020 590	3 437 020 405	0 280 150 673	3 437 010 524	3 431 038 502	3 437 010 555
0 438 201 184		3 437 020 509	3 437 020 598	0 280 150 667	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 188		3 437 020 509	3 437 020 400	0 280 150 676	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 192		3 437 020 590	3 437 020 591	0 280 150 673	3 437 010 552	3 431 038 502	3 437 010 555
0 438 201 194		3 437 020 590	3 437 020 589	0 280 150 651	3 437 010 552	3 431 038 502	3 437 010 555
0 438 201 196		3 437 020 509	3 437 020 400	0 280 150 676	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 200		3 437 020 509	3 437 020 402	0 280 150 667	3 437 010 524	3 431 038 502	3 437 010 523
0 438 201 203	FD466 →	3 437 020 592	3 437 020 412	0 280 150 660	3 437 010 524	3 431 038 502	3 437 010 533
0 438 201 203	→ FD465	3 437 021 500	3 437 020 403	0 280 150 660	3 437 010 524	3 431 038 502	3 437 010 533
0 438 201 204		3 437 020 407	3 437 020 411	0 280 150 698	3 437 010 524	3 431 038 502	3 437 010 533
0 438 201 205		3 437 020 576	3 437 020 588	0 280 150 651	3 437 010 552	3 431 038 502	3 437 010 555
0 438 201 207		3 437 020 509	3 437 020 413	0 280 150 664	3 437 010 524	3 431 038 502	3 437 010 560
0 438 201 208		3 437 020 576	3 437 020 404	0 280 150 651	3 437 010 552	3 431 038 502	3 437 010 555
0 438 201 210		3 437 020 531	3 437 020 415	0 280 150 672	3 437 010 524	3 431 038 502	3 437 010 533
0 438 201 211		3 437 021 501	3 437 020 417	0 280 150 071	3 437 010 552	3 431 038 502	3 437 010 555
0 438 201 213		3 437 021 502	3 437 020 418	0 280 150 698	3 437 010 524	3 431 038 502	3 437 010 533
0 438 201 214		3 437 020 531	3 437 020 419	0 280 150 072	3 437 010 524	3 431 038 502	3 437 010 533
0 438 201 215		3 437 020 531	3 437 020 420	0 280 150 072	3 437 010 524	3 431 038 502	3 437 010 533
0 438 201 216		3 437 020 531	3 437 020 421	0 280 150 072	3 437 010 524	3 431 038 502	3 437 010 533
0 438 201 217		3 437 020 531	3 437 020 422	0 280 150 072	3 437 010 524	3 431 038 502	3 437 010 533
0 438 201 501		3 437 021 900	3 437 020 900	0 280 150 686	3 437 010 900	3 431 015 900	3 437 010 902
0 438 201 502		3 437 021 903	3 437 020 902	3 437 010 907	3 437 010 915	3 431 015 900	3 437 010 906
0 438 201 504		3 437 021 902	3 437 020 904	3 437 010 909	3 437 010 900	3 431 015 900	3 437 010 902
0 438 201 505		3 437 021 902	3 437 020 905	3 437 010 911	3 437 010 900	3 431 015 900	3 437 010 902
0 438 201 506		3 437 021 902	3 437 020 906	3 437 010 911	3 437 010 900	3 431 015 900	3 437 010 902
0 438 201 507		3 437 021 900	3 437 020 907	3 437 010 913	3 437 010 900	3 431 015 900	3 437 010 902
0 438 201 508		3 437 021 901	3 437 020 908	3 437 010 916	3 437 010 900	3 431 015 900	3 437 010 906
0 438 201 509		3 437 021 903	3 437 020 902	3 437 010 907	3 437 010 915	3 431 015 900	3 437 010 906
0 438 201 514		3 437 021 902	3 437 020 910	3 437 010 920	3 437 010 900	3 431 015 900	3 437 010 902
0 438 201 515		3 437 021 901	3 437 020 911	3 437 010 921	3 437 010 900	3 431 015 900	3 437 010 906
0 438 201 516		3 437 021 901	3 437 020 908	3 437 010 917	3 437 010 900	3 431 015 900	3 437 010 906

2008 | 2009 Bosch Automotive Aftermarket

Parts-assortment case

Jetronic/Motronic



For the repair of Jetronic/Motronic systems and wiring harnesses, Bosch supplies a case containing an assortment of the most important parts such as: Connector housings and couplings, plug-in contacts with tinned or gold-plated contact surface, O-rings for single and multipoint systems, non-return valves for electric fuel pumps, protective caps, plugs.




Advantages

- ▶ Less expensive than purchasing individual components
- ▶ All parts to original-equipment standard
- ▶ Expert repair of wiring harnesses and components through the use of genuine parts
- ▶ Good service availability and short repair times thanks to rapid access to replacement parts without time-consuming searching and ordering
- ▶ Clear-cut, practical arrangement of parts in a case
- ▶ Also ideal for mobile applications such as breakdown services

Part number

1 987 280 003

Contents

Compartment	Name/designation	Dimensions in mm	Application (note)			
1	Blade terminal	2.8	For wire cross-section 0.5...1.0 mm ²	20	1 234 477 014	
2	Blade receptacle	2.8	For wire cross-section 0.5...1.0 mm ²	20	1 224 477 026	
3	Blade receptacle	2.8	For wire cross-section 0.5...1.0 mm ²	20	1 987 280 103	
4	Blade receptacle	2.8	For wire cross-section 0.5...1.0 mm ²	20	1 987 280 104	
5	Blade receptacle	2.8	For wire cross-section 1.0...2.5 mm ²	20	1 284 477 028	
6	Blade receptacle	2.8	For wire cross-section 1.5...2.5 mm ²	20	1 987 280 105	
7	Blade receptacle	2.8	For wire cross-section 0.35 mm ²	20	1 987 280 102	
8	Blade receptacle	2.8	For wire cross-section 0.35 mm ²	20	1 987 280 101	
9	Blade receptacle	2.8	For wire cross-section 0.5...1.0 mm ²	20	1 284 477 121	
10	Blade-receptacle parts set	2.8	For wire cross-section 0.5...1.0 mm ²	4	3 437 010 546	
11	Cable gland		Individual wire seal for 0.35...1.0 mm ²	50	1 987 280 106	
12	Cable gland		Individual wire seal for 1.5...2.5 mm ²	20	1 987 280 107	
13	Dummy plug		For connector housing	20	1 987 280 108	
14	Sealing plug		For air-flow sensor	20	1 280 508 012	
15	O-ring	11 x 2	For terminal strip (central injection unit)	10	3 430 210 524	
16	O-ring	5.0 x 2.5	For pressure regulator DR1 and DR2	10	1 280 210 033	
17	O-ring	7.52 x 3.53	For pressure regulator DR4 and injectors	10	1 280 210 752	
18	O-ring	20 x 2.5	For pressure regulator DR1 and DR2	10	1 280 210 034	
19	Flat seal (Cu)	A 8 x 11.5	For electric fuel pump	100	2 916 710 603	
20	Flat seal (Cu)	A 10 x 13.5	For electric fuel pump	100	2 916 710 605	
21	Flat seal (Cu)	A 14 x 18	For electric fuel pump	100	2 916 710 609	
22	Flat seal (Cu)	A 12 x 17	For fuel distributor (connection fitting)	10	2 916 710 650	
23	Connection fitting with strainer		For fuel distributor	1	2 433 356 109	
24	Cap		For fuel distributor	20	3 430 522 002	
25	O-ring	25.5 x 2	For fuel distributor K/KE-Jetronic	10	2 430 210 036	
26	O-ring	36.3 x 1.78	For fuel distributor K/KE-Jetronic	10	2 430 210 032	
27	O-ring	29.5 x 1.5	For fuel distributor K/KE-Jetronic	10	2 430 210 013	
28	Sealing ring	6.2 x 8.2 x 2.5	For fuel distributor KE-Jetronic	10	2 430 206 009	
29	Sealing ring	9.2 x 11.2 x 2.5	For fuel distributor KE-Jetronic	10	2 430 206 011	
30	Sealing plug		Anti-tamper device for K/KE-Jetronic	20	2 437 001 009	
31	Sealing plug		Anti-tamper device for K/KE-Jetronic (Mercedes-Benz)	50	1 987 280 109	
32	O-ring	6.0 x 5.2	For injectors K/KE-Jetronic (top)	10	3 430 210 606	
33	O-ring	7.6 x 2.1	For injectors	5	1 280 210 784	
34	O-ring	3.6 x 7.8	For injectors	10	1 280 210 711	
35	O-ring	7.8 x 4.6	For injectors	5	1 280 210 765	
36	O-ring	9.8 x 1.4	For injectors K/KE-Jetronic (bottom)	10	3 430 210 603	
37	O-ring	13.0 x 2.5	For injectors	5	1 280 210 777	
38	O-ring	18.55 x 3.5	For injectors	5	1 280 210 761	
39	Rubber ring	7.8 x 13.8 x 4.5	For injectors	10	1 280 206 703	
41	Coupler plug (2-PIN)		With individual wire seal	3	1 928 402 448	
42	Connector housing (2-PIN)		With individual wire seal (attached to body)	3	1 928 402 404	
43	Connector housing (2-PIN)		With individual wire seal	3	1 928 402 571	
44	Protective cap (2-PIN)	Short	For connector housing and coupler plug	3	1 280 703 021	









Contents

[illegible]

[illegible]

List of applications for O-rings









For injectors / manifold-injection systems

									
0 280 150 051	1 280 210 770	1 280 210 769	2		0 280 150 225	1 280 210 748	1 280 210 748	2	
0 280 150 052	1 280 210 770	1 280 210 769	2		0 280 150 226	1 280 210 752	1 280 210 752	2	
0 280 150 053	1 280 210 770	1 280 210 768	2		0 280 150 227	1 280 210 752	1 280 210 752	2	
0 280 150 054	1 280 210 770	1 280 210 768	2		0 280 150 229	1 280 210 748	1 280 210 748	2	
0 280 150 055	1 280 210 770	1 280 210 768	2		0 280 150 231	1 280 210 752	1 280 210 752	2	
0 280 150 056	1 280 210 770	1 280 210 768	2		0 280 150 232	1 280 210 752	1 280 210 752	2	
0 280 150 057	1 280 210 770	1 280 210 768	2		0 280 150 233	1 280 210 752	1 280 210 752	2	
0 280 150 058	1 280 210 770	1 280 210 768	2		0 280 150 234	1 280 210 752	1 280 210 752	2	
0 280 150 059	1 280 210 746	1 280 210 769	2		0 280 150 235	1 280 210 752	1 280 210 752	2	
0 280 150 060	1 280 210 770	1 280 210 769	2		0 280 150 237	1 280 210 752	1 280 210 752	2	
0 280 150 063	1 280 210 770	1 280 210 768	2		0 280 150 238	1 280 210 752	1 280 210 752	2	
0 280 150 064	1 280 210 770	1 280 210 768	2		0 280 150 239	1 280 210 752	1 280 210 752	2	
0 280 150 065	1 280 210 770	1 280 210 768	2		0 280 150 255	1 280 210 752	1 280 210 752	2	
0 280 150 067	1 280 210 770	1 280 210 768	2		0 280 150 351	1 280 210 752	–	1	
0 280 150 068	1 280 210 770	1 280 210 768	2		0 280 150 352	1 280 210 752	1 280 210 752	2	
0 280 150 069	1 280 210 770	1 280 210 768	2		0 280 150 353	1 280 210 748	1 280 210 748	2	
0 280 150 070	1 280 210 770	1 280 210 769	2		0 280 150 354	1 280 210 748	1 280 210 752	2	
0 280 150 071	1 280 210 770	1 280 210 769	2		0 280 150 355	1 280 210 752	1 280 210 752	2	
0 280 150 072	1 280 210 770	1 280 210 769	2		0 280 150 357	1 280 210 752	1 280 210 752	2	
0 280 150 126	1 280 210 752	1 280 210 752	2		0 280 150 360	1 280 210 752	1 280 210 752	2	
0 280 150 129	1 280 210 752	1 280 210 752	2		0 280 150 361	1 280 210 752	1 280 210 752	2	
0 280 150 130	1 280 210 752	1 280 210 752	2		0 280 150 362	1 280 210 752	1 280 210 752	2	
0 280 150 133	1 280 210 752	1 280 210 752	2		0 280 150 363	1 280 210 752	–	1	
0 280 150 136	1 280 210 752	1 280 210 752	2		0 280 150 364	1 280 210 752	1 280 210 752	2	
0 280 150 157	1 280 210 752	1 280 210 752	2		0 280 150 365	1 280 210 752	1 280 210 752	2	
0 280 150 158	1 280 210 752	1 280 210 752	2		0 280 150 403	–	–	0	
0 280 150 159	1 280 210 748	1 280 210 748	2		0 280 150 413	1 280 210 752	1 280 210 752	2	
0 280 150 160	1 280 210 748	1 280 210 748	2		0 280 150 414	1 280 210 752	1 280 210 752	2	
0 280 150 165	1 280 210 752	1 280 210 752	2		0 280 150 415	1 280 210 752	1 280 210 752	2	
0 280 150 200	1 280 210 752	1 280 210 752	2		0 280 150 416	1 280 210 752	1 280 210 752	2	
0 280 150 201	1 280 210 752	1 280 210 752	2		0 280 150 417	1 280 210 752	1 280 210 752	2	
0 280 150 203	1 280 210 752	1 280 210 752	2		0 280 150 418	1 280 210 752	1 280 210 752	2	
0 280 150 208	1 280 210 752	1 280 210 752	2		0 280 150 419	1 280 210 752	1 280 210 752	2	
0 280 150 209	1 280 210 752	1 280 210 752	2		0 280 150 420	1 280 210 752	1 280 210 752	2	
0 280 150 210	1 280 210 752	1 280 210 752	2		0 280 150 421	1 280 210 752	1 280 210 752	2	
0 280 150 211	1 280 210 752	1 280 210 752	2		0 280 150 422	1 280 210 752	1 280 210 752	2	
0 280 150 213	1 280 210 748	1 280 210 748	2		0 280 150 423	1 280 210 752	1 280 210 752	2	
0 280 150 215	1 280 210 752	1 280 210 752	2		0 280 150 424	1 280 210 752	1 280 210 752	2	
0 280 150 217	1 280 210 752	1 280 210 752	2		0 280 150 425	1 280 210 752	1 280 210 752	2	
0 280 150 218	1 280 210 752	1 280 210 752	2		0 280 150 427	1 280 210 752	1 280 210 752	2	
0 280 150 219	1 280 210 748	1 280 210 748	2		0 280 150 428	1 280 210 752	1 280 210 752	2	
0 280 150 220	1 280 210 752	1 280 210 752	2		0 280 150 429	1 280 210 752	1 280 210 752	2	
0 280 150 221	1 280 210 752	1 280 210 752	2		0 280 150 431	1 280 210 752	1 280 210 752	2	
0 280 150 222	1 280 210 752	1 280 210 752	2		0 280 150 432	1 280 210 752	1 280 210 752	2	
0 280 150 223	1 280 210 752	1 280 210 752	2		0 280 150 433	1 280 210 784	–	1	



0 280 150 555	1 280 210 752	1 280 210 752	2
0 280 150 556	1 280 210 815	1 280 210 796	2
0 280 150 557	1 280 210 815	1 280 210 752	2
0 280 150 558	1 280 210 815	1 280 210 796	2
0 280 150 559	1 280 210 815	1 280 210 796	2
0 280 150 560	1 280 210 752	1 280 210 752	2
0 280 150 561	1 280 210 815	1 280 210 796	2
0 280 150 562	1 280 210 815	1 280 210 796	2
0 280 150 565	1 280 210 796	1 280 210 796	2
0 280 150 566	1 280 210 796	1 280 210 796	2
0 280 150 567	1 280 210 796	1 280 210 796	2
0 280 150 568	1 280 210 796	1 280 210 796	2
0 280 150 569	1 280 210 815	1 280 210 796	2
0 280 150 570	1 280 210 815	1 280 210 796	2
0 280 150 584	1 280 210 752	1 280 210 752	2
0 280 150 651	1 280 210 752	1 280 210 752	2
0 280 150 652	1 280 210 752	1 280 210 752	2
0 280 150 653	1 280 210 770	1 280 210 768	2
0 280 150 654	1 280 210 770	1 280 210 768	2
0 280 150 655	1 280 210 770	1 280 210 769	2
0 280 150 656	1 280 210 770	1 280 210 769	2
0 280 150 657	1 280 210 746	1 280 210 769	2
0 280 150 660	1 280 210 770	1 280 210 769	2
0 280 150 661	1 280 210 770	1 280 210 769	2
0 280 150 662	1 280 210 770	1 280 210 769	2
0 280 150 663	1 280 210 770	1 280 210 769	2
0 280 150 664	1 280 210 770	1 280 210 769	2
0 280 150 665	1 280 210 770	1 280 210 769	2
0 280 150 666	1 280 210 770	1 280 210 769	2
0 280 150 667	1 280 210 770	1 280 210 769	2
0 280 150 669	1 280 210 770	1 280 210 769	2
0 280 150 670	1 280 210 770	1 280 210 769	2
0 280 150 671	1 280 210 770	1 280 210 769	2
0 280 150 672	1 280 210 770	1 280 210 769	2
0 280 150 673	1 280 210 770	1 280 210 769	2
0 280 150 674	1 280 210 770	1 280 210 768	2
0 280 150 675	1 280 210 770	1 280 210 768	2
0 280 150 676	1 280 210 770	1 280 210 769	2
0 280 150 677	1 280 210 770	1 280 210 769	2
0 280 150 678	1 280 210 770	1 280 210 769	2
0 280 150 679	1 280 210 770	1 280 210 769	2
0 280 150 680	1 280 210 770	1 280 210 769	2
0 280 150 682	1 280 210 746	1 280 210 769	2
0 280 150 683	1 280 210 746	1 280 210 769	2
0 280 150 684	1 280 210 770	1 280 210 769	2
0 280 150 685	1 280 210 770	1 280 210 769	2









For injectors / manifold-injection systems

									
0 280 150 686	1 280 210 770	1 280 210 769	2		0 280 150 746	1 280 210 760	–		1
0 280 150 687	1 280 210 770	1 280 210 769	2		0 280 150 747	1 280 210 752	1 280 210 752		2
0 280 150 688	1 280 210 770	1 280 210 769	2		0 280 150 748	1 280 210 752	1 280 210 752		2
0 280 150 690	1 280 210 770	1 280 210 769	2		0 280 150 749	1 280 210 752	1 280 210 752		2
0 280 150 691	1 280 210 770	1 280 210 769	2		0 280 150 750	1 280 210 748	1 280 210 752		2
0 280 150 692	1 280 210 770	1 280 210 769	2		0 280 150 754	1 280 210 760	–		1
0 280 150 693	1 280 210 770	1 280 210 769	2		0 280 150 756	1 280 210 748	1 280 210 752		2
0 280 150 695	1 280 210 770	1 280 210 769	2		0 280 150 757	1 280 210 752	1 280 210 752		2
0 280 150 697	1 280 210 770	1 280 210 769	2		0 280 150 758	1 280 210 752	1 280 210 752		2
0 280 150 698	1 280 210 770	1 280 210 769	2		0 280 150 759	1 280 210 748	1 280 210 752		2
0 280 150 699	1 280 210 770	1 280 210 769	2		0 280 150 760	1 280 210 752	1 280 210 752		2
0 280 150 701	1 280 210 752	1 280 210 752	2		0 280 150 761	1 280 210 752	1 280 210 752		2
0 280 150 702	1 280 210 752	1 280 210 752	2		0 280 150 762	1 280 210 752	1 280 210 752		2
0 280 150 703	1 280 210 752	1 280 210 752	2		0 280 150 763	1 280 210 784	–		1
0 280 150 704	1 280 210 752	1 280 210 752	2		0 280 150 766	1 280 210 748	1 280 210 752		2
0 280 150 705	1 280 210 752	1 280 210 752	2		0 280 150 767	1 280 210 748	1 280 210 752		2
0 280 150 706	1 280 210 752	1 280 210 752	2		0 280 150 769	1 280 210 752	1 280 210 752		2
0 280 150 710	1 280 210 748	1 280 210 752	2		0 280 150 770	1 280 210 748	1 280 210 752		2
0 280 150 711	1 280 210 752	1 280 210 752	2		0 280 150 771	1 280 210 752	1 280 210 752		2
0 280 150 712	1 280 210 752	1 280 210 752	2		0 280 150 773	1 280 210 752	1 280 210 752		2
0 280 150 714	1 280 210 752	1 280 210 752	2		0 280 150 774	1 280 210 752	1 280 210 752		2
0 280 150 715	1 280 210 752	1 280 210 752	2		0 280 150 775	1 280 210 752	1 280 210 752		2
0 280 150 716	1 280 210 752	1 280 210 752	2		0 280 150 776	1 280 210 752	1 280 210 752		2
0 280 150 718	1 280 210 748	1 280 210 752	2		0 280 150 777	1 280 210 752	1 280 210 752		2
0 280 150 719	1 280 210 752	1 280 210 752	2		0 280 150 778	1 280 210 752	1 280 210 752		2
0 280 150 720	1 280 210 752	1 280 210 752	2		0 280 150 779	1 280 210 752	1 280 210 752		2
0 280 150 721	1 280 210 752	1 280 210 752	2		0 280 150 783	1 280 210 784	–		1
0 280 150 722	1 280 210 752	1 280 210 752	2		0 280 150 784	1 280 210 752	1 280 206 705		3
0 280 150 725	1 280 210 752	1 280 210 752	2		0 280 150 785	1 280 210 752	1 280 210 752		2
0 280 150 726	1 280 210 748	1 280 210 748	2		0 280 150 786	1 280 210 752	1 280 210 752		2
0 280 150 727	1 280 210 748	1 280 210 752	2		0 280 150 788	1 280 210 784	–		1
0 280 150 728	1 280 210 748	1 280 210 752	2		0 280 150 789	1 280 210 752	1 280 210 752		2
0 280 150 729	–	–	0		0 280 150 790	1 280 210 748	1 280 210 752		2
0 280 150 730	1 280 210 752	1 280 210 765	2		0 280 150 791	1 280 210 752	1 280 210 752		2
0 280 150 731	1 280 210 752	1 280 210 752	2		0 280 150 792	1 280 210 752	1 280 210 752		2
0 280 150 734	1 280 210 752	1 280 210 752	2		0 280 150 793	1 280 210 752	1 280 210 752		2
0 280 150 736	1 280 210 748	1 280 210 748	2		0 280 150 802	1 280 210 752	1 280 210 752		2
0 280 150 737	1 280 210 711	1 280 210 711	2		0 280 150 803	1 280 210 752	1 280 210 752		2
0 280 150 738	1 280 210 711	1 280 210 711	2		0 280 150 804	1 280 210 752	1 280 210 752		2
0 280 150 740	1 280 210 752	1 280 210 752	2		0 280 150 806	1 280 210 752	1 280 210 752		2
0 280 150 741	1 280 210 752	1 280 210 752	2		0 280 150 807	1 280 210 752	1 280 210 752		2
0 280 150 742	1 280 210 760	–	1		0 280 150 808	1 280 210 752	1 280 210 752		2
0 280 150 743	1 280 210 748	1 280 210 752	2		0 280 150 809	1 280 210 752	1 280 210 752		2
0 280 150 744	1 280 210 752	1 280 210 752	2		0 280 150 810	1 280 210 752	1 280 210 752		2
0 280 150 745	1 280 210 760	–	1		0 280 150 811	1 280 210 752	1 280 210 752		2



0 280 150 931	1 280 210 748	1 280 210 748	2
0 280 150 932	1 280 210 711	1 280 210 711	2
0 280 150 933	1 280 210 711	1 280 210 711	2
0 280 150 934	1 280 210 748	1 280 210 752	2
0 280 150 935	1 280 210 752	1 280 210 752	2
0 280 150 936	1 280 210 752	1 280 210 752	2
0 280 150 937	1 280 210 748	1 280 210 748	2
0 280 150 938	1 280 210 748	1 280 210 748	2
0 280 150 939	1 280 210 748	1 280 210 748	2
0 280 150 940	1 280 210 748	1 280 210 748	2
0 280 150 941	1 280 210 748	1 280 210 748	2
0 280 150 942	1 280 210 748	1 280 210 748	2
0 280 150 943	1 280 210 748	1 280 210 748	2
0 280 150 944	1 280 210 748	1 280 210 748	2
0 280 150 945	1 280 210 748	1 280 210 748	2
0 280 150 946	1 280 210 748	1 280 210 748	2
0 280 150 947	1 280 210 748	1 280 210 748	2
0 280 150 948	1 280 210 748	1 280 210 748	2
0 280 150 951	1 280 210 711	1 280 210 711	2
0 280 150 952	1 280 210 711	1 280 210 711	2
0 280 150 953	1 280 210 752	1 280 210 752	2
0 280 150 954	1 280 210 752	1 280 210 752	2
0 280 150 955	1 280 210 752	1 280 210 752	2
0 280 150 956	1 280 210 752	1 280 210 752	2
0 280 150 957	1 280 210 752	1 280 210 752	2
0 280 150 958	1 280 210 752	1 280 210 752	2
0 280 150 960	1 280 210 748	1 280 210 752	2
0 280 150 962	1 280 210 752	1 280 210 752	2
0 280 150 965	1 280 210 752	1 280 210 752	2
0 280 150 966	1 280 210 752	1 280 210 752	2
0 280 150 967	1 280 210 748	1 280 210 748	2
0 280 150 968	1 280 210 748	1 280 210 748	2
0 280 150 969	1 280 210 752	1 280 210 752	2
0 280 150 971	1 280 210 784	–	1
0 280 150 972	1 280 210 748	1 280 210 752	2
0 280 150 973	1 280 210 748	1 280 210 752	2
0 280 150 974	1 280 210 752	1 280 210 752	2
0 280 150 975	1 280 210 752	1 280 210 752	2
0 280 150 976	1 280 210 752	1 280 210 752	2
0 280 150 977	1 280 210 752	1 280 210 752	2
0 280 150 978	1 280 210 752	1 280 210 752	2
0 280 150 979	1 280 210 752	1 280 210 752	2
0 280 150 980	1 280 210 752	1 280 210 752	2
0 280 150 981	1 280 210 752	1 280 210 752	2
0 280 150 982	1 280 210 752	1 280 210 752	2

For injectors / manifold-injection systems

									
0 280 150 983		1 280 210 752	1 280 210 752	2		0 280 155 605	1 280 210 761	1 280 210 752	2
0 280 150 984		1 280 210 752	1 280 210 752	2		0 280 155 606	1 280 210 752	1 280 210 723	2
0 280 150 985		1 280 210 752	1 280 210 752	2		0 280 155 612	1 280 210 745	1 280 210 744	2
0 280 150 987		1 280 210 752	1 280 210 752	2		0 280 155 613	1 280 210 761	1 280 210 752	2
0 280 150 988		1 280 210 752	1 280 210 752	2		0 280 155 700	1 280 210 796	1 280 210 796	2
0 280 150 989		1 280 210 752	1 280 210 752	2		0 280 155 701	1 280 210 796	1 280 210 796	2
0 280 150 990		1 280 210 752	1 280 210 752	2		0 280 155 702	1 280 210 796	1 280 210 796	2
0 280 150 991		1 280 210 748	1 280 210 748	2		0 280 155 703	1 280 210 796	1 280 210 796	2
0 280 150 992		1 280 210 748	1 280 210 748	2		0 280 155 704	1 280 210 796	1 280 210 796	2
0 280 150 993		1 280 210 748	1 280 210 752	2		0 280 155 705	1 280 210 796	1 280 210 796	2
0 280 150 995		1 280 210 752	1 280 210 752	2		0 280 155 706	1 280 210 796	1 280 210 796	2
0 280 150 996		1 280 210 752	1 280 210 752	2		0 280 155 709	1 280 210 796	1 280 210 796	2
0 280 150 997		1 280 210 752	1 280 210 752	2		0 280 155 710	1 280 210 815	1 280 210 815	2
0 280 150 998		1 280 210 752	1 280 210 759	2		0 280 155 711	1 280 210 815	1 280 210 815	2
0 280 150 999		1 280 210 752	1 280 210 759	2		0 280 155 712	1 280 210 796	1 280 210 796	2
0 280 155 002		1 280 210 752	1 280 210 752	2		0 280 155 715	1 280 210 815	1 280 210 815	2
0 280 155 003		1 280 210 752	1 280 210 752	2		0 280 155 716	1 280 210 815	1 280 210 815	2
0 280 155 007		1 280 210 752	1 280 210 752	2		0 280 155 717	1 280 210 784	–	1
0 280 155 008		1 280 210 752	1 280 210 752	2		0 280 155 720	1 280 210 784	–	1
0 280 155 009		1 280 210 752	1 280 210 752	2		0 280 155 721	1 280 210 796	1 280 210 796	2
0 280 155 010		1 280 210 752	1 280 210 752	2		0 280 155 722	1 280 210 796	1 280 210 796	2
0 280 155 012		1 280 210 752	1 280 210 752	2		0 280 155 723	1 280 210 784	–	1
0 280 155 013		1 280 210 752	1 280 210 752	2		0 280 155 724	1 280 210 796	1 280 210 796	2
0 280 155 100		1 280 210 752	1 280 210 752	2		0 280 155 725	1 280 210 796	1 280 210 796	2
0 280 155 101		1 280 210 752	1 280 210 752	2		0 280 155 726	1 280 210 796	1 280 210 796	2
0 280 155 102		1 280 210 752	1 280 210 752	2		0 280 155 731	1 280 210 796	1 280 210 796	2
0 280 155 104		1 280 210 752	1 280 210 752	2		0 280 155 732	1 280 210 796	1 280 210 796	2
0 280 155 201		1 280 210 752	1 280 210 752	2		0 280 155 733	1 280 210 796	1 280 210 796	2
0 280 155 202		1 280 210 752	1 280 210 752	2		0 280 155 734	1 280 210 796	1 280 210 796	2
0 280 155 203		1 280 210 752	1 280 210 752	2		0 280 155 735	1 280 210 796	1 280 210 796	2
0 280 155 204		1 280 210 752	1 280 210 752	2		0 280 155 736	1 280 210 784	–	1
0 280 155 205		1 280 210 752	1 280 210 752	2		0 280 155 737	1 280 210 796	1 280 210 796	2
0 280 155 206		1 280 210 752	1 280 210 752	2		0 280 155 739	1 280 210 784	–	1
0 280 155 209		1 280 210 752	1 280 210 752	2		0 280 155 740	1 280 210 796	1 280 210 796	2
0 280 155 210		1 280 210 752	1 280 210 752	2		0 280 155 741	1 280 210 796	1 280 210 796	2
0 280 155 213		1 280 210 752	1 280 210 752	2		0 280 155 742	1 280 210 796	1 280 210 796	2
0 280 155 216		1 280 210 752	1 280 210 752	2		0 280 155 743	1 280 210 796	1 280 210 796	2
0 280 155 217		1 280 210 752	1 280 210 752	2		0 280 155 744	1 280 210 796	1 280 210 796	2
0 280 155 218		1 280 210 752	1 280 210 752	2		0 280 155 745	1 280 210 796	1 280 210 796	2
0 280 155 219		1 280 210 752	1 280 210 752	2		0 280 155 746	1 280 210 796	1 280 210 796	2
0 280 155 220		1 280 210 752	1 280 210 752	2		0 280 155 749	1 280 210 796	1 280 210 810	3
0 280 155 503		1 280 210 761	1 280 210 752	2		0 280 155 750	1 280 210 796	1 280 210 810	3
0 280 155 504		1 280 210 761	1 280 210 752	2		0 280 155 752	1 280 210 796	1 280 210 796	2
0 280 155 505		1 280 210 761	1 280 210 752	2		0 280 155 753	1 280 210 796	1 280 210 796	2
0 280 155 604		1 280 210 761	1 280 210 752	2		0 280 155 754	1 280 210 796	1 280 210 796	2



0 280 155 862	1 280 210 815	1 280 210 796	2
0 280 155 863	1 280 210 815	1 280 210 796	2
0 280 155 864	1 280 210 815	1 280 210 796	2
0 280 155 865	1 280 210 815	1 280 210 796	2
0 280 155 866	1 280 210 815	1 280 210 796	2

For injectors / manifold-injection systems



0 280 155 868	1 280 210 796	1 280 210 796	2
0 280 155 869	1 280 210 796	1 280 210 796	2
0 280 155 870	1 280 210 796	1 280 210 796	2
0 280 155 871	1 280 210 796	1 280 210 796	2
0 280 155 872	1 280 210 796	1 280 210 796	2

0 280 155 873	1 280 210 796	1 280 210 796	2
0 280 155 874	1 280 210 796	1 280 210 796	2
0 280 155 875	1 280 210 796	1 280 210 796	2
0 280 155 876	1 280 210 796	1 280 210 796	2
0 280 155 877	1 280 210 815	1 280 210 796	2

0 280 155 878	1 280 210 815	1 280 210 796	2
0 280 155 880	1 280 210 796	1 280 210 796	2
0 280 155 882	1 280 210 796	1 280 210 796	2
0 280 155 883	1 280 210 796	1 280 210 796	2
0 280 155 884	1 280 210 796	1 280 210 796	2

0 280 155 885	1 280 210 796	1 280 210 796	2
0 280 155 887	1 280 210 815	1 280 210 796	2
0 280 155 888	1 280 210 796	1 280 210 796	2
0 280 155 889	1 280 210 796	1 280 210 796	2
0 280 155 890	1 280 210 796	1 280 210 796	2

0 280 155 891	1 280 210 796	1 280 210 796	2
0 280 155 892	1 280 210 796	1 280 210 813	2
0 280 155 893	1 280 210 796	1 280 210 813	2
0 280 155 894	1 280 210 796	1 280 210 813	2
0 280 155 895	1 280 210 796	1 280 210 813	2

0 280 155 896	1 280 210 796	1 280 210 813	2
0 280 155 897	1 280 210 796	1 280 210 813	2
0 280 155 898	1 280 210 796	1 280 210 813	2
0 280 155 899	1 280 210 796	1 280 210 813	2
0 280 155 900	1 280 210 815	1 280 210 796	2

0 280 155 901	1 280 210 815	1 280 210 796	2
0 280 155 902	1 280 210 815	1 280 210 796	2
0 280 155 903	1 280 210 815	1 280 210 796	2
0 280 155 904	1 280 210 815	1 280 210 796	2
0 280 155 905	1 280 210 796	1 280 210 796	2

0 280 155 906	1 280 210 796	1 280 210 796	2
0 280 155 909	1 280 210 815	1 280 210 796	2
0 280 155 910	1 280 210 815	1 280 210 796	2
0 280 155 911	1 280 210 815	1 280 210 796	2
0 280 155 912	1 280 210 815	1 280 210 796	2

0 280 155 913	1 280 210 815	1 280 210 796	2
0 280 155 914	1 280 210 815	1 280 210 796	2
0 280 155 915	1 280 210 815	1 280 210 796	2
0 280 155 916	1 280 210 815	1 280 210 796	2
0 280 155 917	1 280 210 815	1 280 210 796	2



0 280 155 918	1 280 210 815	1 280 210 796	2
0 280 155 919	1 280 210 796	1 280 210 796	2
0 280 155 920	1 280 210 796	1 280 210 796	2
0 280 155 921	1 280 210 796	1 280 210 796	2
0 280 155 922	1 280 210 796	1 280 210 796	2

0 280 155 923	1 280 210 815	1 280 210 796	2
0 280 155 924	1 280 210 815	1 280 210 796	2
0 280 155 925	1 280 210 796	1 280 210 796	2
0 280 155 926	1 280 210 796	1 280 210 796	2
0 280 155 927	1 280 210 796	1 280 210 813	2

0 280 155 928	1 280 210 796	1 280 210 813	2
0 280 155 929	1 280 210 796	1 280 210 796	2
0 280 155 930	1 280 210 796	1 280 210 796	2
0 280 155 931	1 280 210 796	1 280 210 796	2
0 280 155 932	1 280 210 796	1 280 210 796	2

0 280 155 933	1 280 210 796	1 280 210 796	2
0 280 155 934	1 280 210 796	1 280 210 796	2
0 280 155 935	1 280 210 796	1 280 210 796	2
0 280 155 936	1 280 210 829	–	1
0 280 155 937	1 280 210 815	1 280 210 796	2

0 280 155 940	1 280 210 796	1 280 210 796	2
0 280 155 941	1 280 210 796	1 280 210 796	2
0 280 155 942	1 280 210 796	1 280 210 796	2
0 280 155 943	1 280 210 796	1 280 210 796	2
0 280 155 957	1 280 210 815	1 280 210 796	2

0 280 155 958	1 280 210 796	1 280 210 796	2
0 280 155 959	1 280 210 796	1 280 210 796	2
0 280 155 960	1 280 210 815	1 280 210 796	2
0 280 155 961	1 280 210 815	1 280 210 796	2
0 280 155 962	1 280 210 815	1 280 210 796	2

0 280 155 963	1 280 210 796	1 280 210 796	2
0 280 155 964	1 280 210 796	1 280 210 796	2
0 280 155 965	1 280 210 796	1 280 210 796	2
0 280 155 966	1 280 210 796	1 280 210 796	2
0 280 155 967	1 280 210 796	1 280 210 796	2

0 280 155 968	1 280 210 796	1 280 210 796	2
0 280 155 969	1 280 210 815	1 280 210 796	2
0 280 155 970	1 280 210 816	1 280 210 816	2
0 280 155 971	1 280 210 796	1 280 210 796	2
0 280 155 972	1 280 210 796	1 280 210 796	2

0 280 155 973	1 280 210 796	1 280 210 796	2
0 280 155 974	1 280 210 815	1 280 210 796	2
0 280 155 975	1 280 210 815	1 280 210 796	2
0 280 155 976	1 280 210 815	1 280 210 796	2
0 280 155 977	1 280 210 815	1 280 210 796	2



0 280 156 030	1 280 210 815	1 280 210 796	2
0 280 156 031	1 280 210 815	1 280 210 796	2
0 280 156 034	1 280 210 796	1 280 210 796	2
0 280 156 036	1 280 210 815	1 280 210 796	2
0 280 156 037	1 280 210 815	1 280 210 796	2
0 280 156 038	1 280 210 796	1 280 210 796	2
0 280 156 039	1 280 210 796	1 280 210 796	2
0 280 156 040	1 280 210 796	1 280 210 796	2
0 280 156 041	1 280 210 815	1 280 210 796	2
0 280 156 042	1 280 210 815	1 280 210 796	2
0 280 156 043	1 280 210 815	1 280 210 796	2
0 280 156 044	1 280 210 815	1 280 210 796	2
0 280 156 045	1 280 210 796	1 280 210 796	2
0 280 156 046	1 280 210 815	1 280 210 796	2
0 280 156 047	1 280 210 815	1 280 210 796	2
0 280 156 048	1 280 210 815	1 280 210 796	2
0 280 156 049	1 280 210 815	1 280 210 796	2
0 280 156 050	1 280 210 796	1 280 210 796	2
0 280 156 051	1 280 210 796	1 280 210 796	2
0 280 156 052	1 280 210 816	1 280 210 813	2
0 280 156 053	1 280 210 796	1 280 210 796	2
0 280 156 054	1 280 210 796	1 280 210 796	2
0 280 156 055	1 280 210 796	1 280 210 796	2
0 280 156 056	1 280 210 796	1 280 210 796	2
0 280 156 057	1 280 210 796	1 280 210 796	2
0 280 156 058	1 280 210 796	1 280 210 796	2
0 280 156 059	1 280 210 896	1 280 210 828	3
0 280 156 060	1 280 210 896	1 280 210 828	3
0 280 156 061	1 280 210 796	1 280 210 796	2
0 280 156 062	1 280 210 796	1 280 210 796	2
0 280 156 063	1 280 210 796	1 280 210 796	2
0 280 156 064	1 280 210 796	1 280 210 796	2
0 280 156 065	1 280 210 796	1 280 210 796	2
0 280 156 066	1 280 210 796	1 280 210 796	2
0 280 156 067	1 280 210 832	–	1
0 280 156 069	1 280 210 815	1 280 210 796	2
0 280 156 070	1 280 210 796	1 280 210 796	2
0 280 156 071	1 280 210 796	1 280 210 796	2
0 280 156 072	1 280 210 796	1 280 210 796	2
0 280 156 073	1 280 210 796	1 280 210 796	2
0 280 156 074	1 280 210 796	1 280 210 796	2
0 280 156 075	1 280 210 796	1 280 210 796	2
0 280 156 076	1 280 210 796	1 280 210 796	2
0 280 156 077	1 280 210 796	1 280 210 796	2
0 280 156 078	1 280 210 796	1 280 210 796	2

For injectors / manifold-injection systems



0 280 156 079	1 280 210 796	1 280 210 796	2
0 280 156 080	1 280 210 796	1 280 210 796	2
0 280 156 081	1 280 210 815	1 280 210 796	2
0 280 156 082	1 280 210 815	1 280 210 796	2
0 280 156 083	1 280 210 796	1 280 210 796	2

0 280 156 084	1 280 210 796	1 280 210 796	2
0 280 156 085	1 280 210 796	1 280 210 796	2
0 280 156 086	1 280 210 796	1 280 210 796	2
0 280 156 090	1 280 210 796	1 280 210 796	2
0 280 156 091	1 280 210 796	1 280 210 796	2

0 280 156 093	1 280 210 815	1 280 210 796	2
0 280 156 094	1 280 210 796	1 280 210 796	2
0 280 156 095	1 280 210 815	1 280 210 796	2
0 280 156 096	1 280 210 796	1 280 210 796	2
0 280 156 097	1 280 210 796	1 280 210 796	2

0 280 156 098	1 280 210 815	1 280 210 796	2
0 280 156 101	1 280 210 796	1 280 210 796	2
0 280 156 102	1 280 210 796	1 280 210 796	2
0 280 156 103	1 280 210 796	1 280 210 796	2
0 280 156 104	1 280 210 796	1 280 210 796	2

0 280 156 105	1 280 210 796	1 280 210 796	2
0 280 156 106	1 280 210 796	1 280 210 796	2
0 280 156 107	1 280 210 815	1 280 210 796	2
0 280 156 108	1 280 210 815	1 280 210 796	2
0 280 156 109	1 280 210 796	1 280 210 796	2

0 280 156 110	1 280 210 796	1 280 210 796	2
0 280 156 123	1 280 210 796	1 280 210 796	2
0 280 156 124	1 280 210 796	1 280 210 796	2
0 280 156 127	1 280 210 815	1 280 210 796	2
0 280 156 128	1 280 210 815	1 280 210 796	2

0 280 156 129	1 280 210 815	1 280 210 796	2
0 280 156 130	1 280 210 815	1 280 210 796	2
0 280 156 131	1 280 210 815	1 280 210 796	2
0 280 156 132	1 280 210 815	1 280 210 796	2
0 280 156 133	1 280 210 815	1 280 210 796	2

0 280 156 134	1 280 210 815	1 280 210 796	2
0 280 156 135	1 280 210 815	1 280 210 796	2
0 280 156 136	1 280 210 815	1 280 210 796	2
0 280 156 138	1 280 210 796	1 280 210 796	2
0 280 156 139	1 280 210 796	1 280 210 796	2

0 280 156 140	1 280 210 815	1 280 210 816	2
0 280 156 141	1 280 210 815	1 280 210 816	2
0 280 156 142	1 280 210 796	1 280 210 796	2
0 280 156 143	1 280 210 796	1 280 210 796	2
0 280 156 144	1 280 210 796	1 280 210 796	2



0 280 156 145	1 280 210 796	1 280 210 796	2
0 280 156 146	1 280 210 796	1 280 210 796	2
0 280 156 147	1 280 210 796	1 280 210 796	2
0 280 156 148	1 280 210 796	1 280 210 796	2
0 280 156 149	1 280 210 796	1 280 210 796	2

0 280 156 150	1 280 210 796	1 280 210 796	2
0 280 156 151	1 280 210 796	1 280 210 796	2
0 280 156 152	1 280 210 796	1 280 210 796	2
0 280 156 153	1 280 210 796	1 280 210 833	2
0 280 156 154	1 280 210 815	1 280 210 796	2

0 280 156 155	1 280 210 815	1 280 210 796	2
0 280 156 156	1 280 210 815	1 280 210 796	2
0 280 156 157	1 280 210 796	1 280 210 796	2
0 280 156 158	1 280 210 796	1 280 210 796	2
0 280 156 159	1 280 210 815	1 280 210 796	2

0 280 156 160	1 280 210 815	1 280 210 796	2
0 280 156 161	1 280 210 815	1 280 210 796	2
0 280 156 162	1 280 210 815	1 280 210 796	2
0 280 156 163	1 280 210 815	1 280 210 796	2
0 280 156 164	1 280 210 815	1 280 210 796	2

0 280 156 165	1 280 210 796	1 280 210 796	2
0 280 156 166	1 280 210 796	1 280 210 796	2
0 280 156 167	1 280 210 796	1 280 210 796	2
0 280 156 168	1 280 210 796	1 280 210 796	2
0 280 156 169	1 280 210 829	–	1

0 280 156 170	1 280 210 796	1 280 210 796	2
0 280 156 171	1 280 210 796	1 280 210 796	2
0 280 156 172	1 280 210 796	1 280 210 796	2
0 280 156 173	1 280 210 796	1 280 210 796	2
0 280 156 174	1 280 210 796	1 280 210 796	2

0 280 156 177	1 280 210 796	1 280 210 796	2
0 280 156 178	1 280 210 796	1 280 210 796	2
0 280 156 179	1 280 210 796	1 280 210 796	2
0 280 156 180	1 280 210 796	1 280 210 796	2
0 280 156 181	1 280 210 796	1 280 210 796	2










0 280 156 182	1 280 210 815	1 280 210 796	2
0 280 156 183	1 280 210 796	1 280 210 796	2
0 280 156 184	1 280 210 815	1 280 210 796	2
0 280 156 185	1 280 210 815	1 280 210 796	2
0 280 156 186	1 280 210 796	1 280 210 796	2

0 280 156 187	1 280 210 796	1 280 210 796	2
0 280 156 188	1 280 210 815	1 280 210 796	2
0 280 156 189	1 280 210 796	1 280 210 796	2
0 280 156 190	1 280 210 796	1 280 210 796	2
0 280 156 193	1 280 210 815	1 280 210 796	2



0 280 156 242	1 280 210 829	–	1
0 280 156 243	1 280 210 829	–	1
0 280 156 244	1 280 210 796	1 280 210 796	2
0 280 156 245	1 280 210 815	1 280 210 796	2
0 280 156 246	1 280 210 815	1 280 210 796	2
0 280 156 247	1 280 210 815	1 280 210 796	2
0 280 156 248	1 280 210 815	1 280 210 796	2
0 280 156 249	1 280 210 815	1 280 210 796	2
0 280 156 252	1 280 210 796	1 280 210 796	2
0 280 156 253	1 280 210 796	1 280 210 796	2
0 280 156 254	1 280 210 796	1 280 210 796	2
0 280 156 255	1 280 210 796	1 280 210 796	2
0 280 156 256	1 280 210 796	1 280 210 796	2
0 280 156 257	1 280 210 796	1 280 210 796	2
0 280 156 258	1 280 210 796	1 280 210 796	2
0 280 156 259	1 280 210 796	1 280 210 796	2
0 280 156 260	1 280 210 796	1 280 210 796	2
0 280 156 261	1 280 210 796	1 280 210 796	2
0 280 156 262	1 280 210 796	1 280 210 796	2
0 280 156 263	1 280 210 796	1 280 210 796	2
0 280 156 264	1 280 210 796	1 280 210 796	2
0 280 156 266	1 280 210 829	–	1
0 280 156 267	1 280 210 829	–	1
0 280 156 268	1 280 210 796	1 280 210 796	2
0 280 156 269	1 280 210 796	1 280 210 796	2
0 280 156 270	1 280 210 796	1 280 210 796	2
0 280 156 271	1 280 210 796	1 280 210 796	2
0 280 156 272	1 280 210 796	1 280 210 796	2
0 280 156 273	1 280 210 796	1 280 210 796	2
0 280 156 274	1 280 210 796	1 280 210 796	2
0 280 156 275	1 280 210 796	1 280 210 796	2
0 280 156 276	1 280 210 796	1 280 210 796	2
0 280 156 277	1 280 210 796	1 280 210 796	2
0 280 156 278	1 280 210 796	1 280 210 796	2
0 280 156 279	1 280 210 796	1 280 210 796	2
0 280 156 280	1 280 210 796	1 280 210 796	2
0 280 156 281	1 280 210 796	1 280 210 796	2
0 280 156 282	1 280 210 796	1 280 210 796	2
0 280 156 283	1 280 210 796	1 280 210 796	2
0 280 156 284	1 280 210 796	1 280 210 796	2
0 280 156 285	1 280 210 796	1 280 210 796	2
0 280 156 286	1 280 210 796	1 280 210 796	2
0 280 156 287	1 280 210 815	1 280 210 796	2
0 280 156 288	1 280 210 815	1 280 210 796	2
0 280 156 289	1 280 210 815	1 280 210 796	2

For injectors / manifold-injection systems

								
0 280 156 290	1 280 210 815	1 280 210 796	2	0 280 156 390	1 280 210 796	1 280 210 796	2	
0 280 156 291	1 280 210 796	1 280 210 796	2	0 280 156 407	1 280 210 796	1 280 210 796	2	
0 280 156 292	1 280 210 796	1 280 210 796	2	0 280 157 000	1 280 210 796	1 280 210 813	2	
0 280 156 294	1 280 210 796	1 280 210 796	2	0 280 157 001	1 280 210 796	1 280 210 813	2	
0 280 156 295	1 280 210 796	1 280 210 796	2	0 280 157 002	1 280 210 796	1 280 210 813	2	
0 280 156 296	1 280 210 796	1 280 210 796	2	0 280 157 003	1 280 210 796	1 280 210 813	2	
0 280 156 297	1 280 210 796	1 280 210 796	2	0 280 157 004	1 280 210 796	1 280 210 813	2	
0 280 156 298	1 280 210 796	1 280 210 796	2	0 280 157 005	1 280 210 816	1 280 210 813	2	
0 280 156 299	1 280 210 815	1 280 210 796	2	0 280 157 006	1 280 210 796	1 280 210 813	2	
0 280 156 300	1 280 210 815	1 280 210 796	2	0 280 157 007	1 280 210 796	1 280 210 813	2	
0 280 156 301	1 280 210 815	1 280 210 796	2	0 280 157 008	1 280 210 796	1 280 210 813	2	
0 280 156 302	1 280 210 796	1 280 210 796	2	0 280 157 009	1 280 210 796	1 280 210 813	2	
0 280 156 303	1 280 210 796	1 280 210 796	2	0 280 157 012	1 280 210 796	1 280 210 813	2	
0 280 156 304	1 280 210 796	1 280 210 796	2	0 280 157 013	1 280 210 796	1 280 210 813	2	
0 280 156 305	1 280 210 796	1 280 210 796	2	0 280 157 014	1 280 210 796	1 280 210 813	2	
0 280 156 306	1 280 210 796	1 280 210 796	2	0 280 157 015	1 280 210 796	1 280 210 813	2	
0 280 156 307	1 280 210 796	1 280 210 796	2	0 280 157 016	1 280 210 796	1 280 210 813	2	
0 280 156 308	1 280 210 796	1 280 210 796	2	0 280 157 017	1 280 210 796	1 280 210 813	2	
0 280 156 315	1 280 210 796	1 280 210 796	2	0 280 157 100	1 280 210 796	1 280 210 796	2	
0 280 156 318	1 280 210 796	1 280 210 796	2	0 280 158 001	1 280 210 815	6 002 ER1 002	2	
0 280 156 319	1 280 210 796	1 280 210 796	2	0 280 158 004	1 280 210 815	6 002 ER1 002	2	
0 280 156 320	1 280 210 796	1 280 210 796	2	0 280 158 006	1 280 210 815	6 002 ER1 003	2	
0 280 156 321	1 280 210 796	1 280 210 796	2	0 280 158 007	1 280 210 815	6 002 ER1 003	2	
0 280 156 322	1 280 210 796	1 280 210 796	2	0 280 158 008	1 280 210 815	6 002 ER1 003	2	
0 280 156 323	1 280 210 796	1 280 210 796	2	0 280 158 010	1 280 210 815	6 002 ER1 002	2	
0 280 156 324	1 280 210 796	1 280 210 796	2	0 280 158 012	1 280 210 815	6 002 ER1 003	2	
0 280 156 325	1 280 210 796	1 280 210 796	2	0 280 158 013	1 280 210 796	6 002 ER1 003	2	
0 280 156 326	1 280 210 796	1 280 210 796	2	0 280 158 014	1 280 210 796	6 002 ER1 003	2	
0 280 156 327	1 280 210 796	1 280 210 796	2	0 280 158 016	1 280 210 815	6 002 ER1 002	2	
0 280 156 328	1 280 210 796	1 280 210 847	2	0 280 158 017	1 280 210 796	6 002 ER1 003	2	
0 280 156 329	1 280 210 796	1 280 210 847	2	0 280 158 019	1 280 210 815	6 002 ER1 002	2	
0 280 156 331	1 280 210 796	1 280 210 796	2	0 280 158 021	1 280 210 815	6 002 ER1 003	2	
0 280 156 336	1 280 210 796	1 280 210 796	2	0 280 158 022	1 280 210 796	6 002 ER1 003	2	
0 280 156 341	1 280 210 796	1 280 210 796	2	0 280 158 024	1 280 210 815	6 002 ER1 002	2	
0 280 156 342	1 280 210 796	1 280 210 796	2	0 280 158 025	1 280 210 796	F 00V E24 002	2	
0 280 156 355	1 280 210 796	1 280 210 796	2	0 280 158 026	1 280 210 796	6 002 ER1 003	2	
0 280 156 356	1 280 210 796	1 280 210 796	2	0 280 158 027	1 280 210 796	6 002 ER1 003	2	
0 280 156 357	1 280 210 796	1 280 210 847	2	0 280 158 028	1 280 210 815	6 002 ER1 002	2	
0 280 156 368	1 280 210 796	1 280 210 796	2	0 280 158 029	1 280 210 815	6 002 ER1 002	2	
0 280 156 383	1 280 210 796	1 280 210 796	2	0 280 158 030	1 280 210 815	6 002 ER1 002	2	
0 280 156 384	1 280 210 796	1 280 210 796	2	0 280 158 031	1 280 210 815	6 002 ER1 002	2	
0 280 156 385	1 280 210 796	1 280 210 796	2	0 280 158 034	1 280 210 815	6 002 ER1 003	2	
0 280 156 386	1 280 210 796	1 280 210 796	2	0 280 158 035	1 280 210 815	6 002 ER1 003	2	
0 280 156 387	1 280 210 796	1 280 210 796	2	0 280 158 036	1 280 210 796	6 002 ER1 003	2	
0 280 156 389	1 280 210 796	1 280 210 796	2	0 280 158 037	1 280 210 796	6 002 ER1 003	2	



0 280 158 091	1 280 210 815	6 002 ER1 004	2
0 280 158 092	1 280 210 815	6 002 ER1 004	2
0 280 158 093	1 280 210 796	6 002 ER1 003	2
0 280 158 094	1 280 210 796	6 002 ER1 003	2
0 280 158 095	1 280 210 796	6 002 ER1 003	2
0 280 158 096	1 280 210 796	6 002 ER1 003	2
0 280 158 097	1 280 210 796	6 002 ER1 003	2
0 280 158 098	1 280 210 796	6 002 ER1 003	2
0 280 158 099	1 280 210 796	6 002 ER1 003	2
0 280 158 100	1 280 210 796	6 002 ER1 003	2
0 280 158 101	1 280 210 796	6 002 ER1 004	2
0 280 158 102	1 280 210 796	6 002 ER1 004	2
0 280 158 103	1 280 210 844	6 002 ER1 003	2
0 280 158 104	1 280 210 844	6 002 ER1 003	2
0 280 158 107	1 280 210 796	6 002 ER1 003	2
0 280 158 108	1 280 210 796	6 002 ER1 003	2
0 280 158 109	F 00V E24 005	6 002 ER1 003	2
0 280 158 110	1 280 210 796	6 002 ER1 003	2
0 280 158 112	1 280 210 796	6 002 ER1 003	2
0 280 158 113	1 280 210 796	6 002 ER1 003	2
0 280 158 114	1 280 210 796	6 002 ER1 003	2
0 280 158 115	1 280 210 796	6 002 ER1 003	2
0 280 158 116	1 280 210 796	6 002 ER1 003	2
0 280 158 121	1 280 210 796	6 002 ER1 003	2
0 280 158 122	1 280 210 796	6 002 ER1 003	2
0 280 158 123	1 280 210 796	1 280 210 796	2
0 280 158 124	1 280 210 796	6 002 ER1 003	2
0 280 158 125	F 00V E24 007	F 00V E24 008	2
0 280 158 128	1 280 210 796	6 002 ER1 003	2
0 280 158 130	F 00V E24 005	6 002 ER1 003	2
0 280 158 131	F 00V E24 005	6 002 ER1 003	2
0 280 158 142	1 280 210 796	6 002 ER1 003	2
0 280 158 143	1 280 210 796	6 002 ER1 003	2
0 280 158 146	1 280 210 796	6 002 ER1 003	2
0 280 158 147	1 280 210 796	6 002 ER1 003	2
0 280 158 150	1 280 210 796	6 002 ER1 003	2
0 280 158 151	1 280 210 796	6 002 ER1 003	2
0 280 158 153	F 00V E24 011	F 00V E24 010	2
0 280 158 158	1 280 210 796	6 002 ER1 003	2
0 280 158 159	1 280 210 796	6 002 ER1 003	2
0 280 158 164	1 280 210 816	6 002 ER1 003	2
0 280 158 167	1 280 210 796	6 002 ER1 003	2
0 280 158 172	1 280 210 796	6 002 ER1 003	2
0 280 158 181	1 280 210 815	6 002 ER1 003	2
0 280 158 182	1 280 210 796	6 002 ER1 003	2





For injectors / manifold-injection systems








0 280 158 183	1 280 210 796	6 002 ER1 003	2
0 280 158 184	1 280 210 796	6 002 ER1 003	2
0 280 158 185	1 280 210 796	6 002 ER1 003	2
0 280 158 195	1 280 210 796	6 002 ER1 003	2
0 280 158 196	1 280 210 796	6 002 ER1 003	2
0 280 158 199	1 280 210 796	6 002 ER1 003	2
0 280 158 201	1 280 210 796	6 002 ER1 003	2
0 280 158 202	1 280 210 796	6 002 ER1 003	2
0 280 158 206	1 280 210 796	6 002 ER1 003	2
0 280 158 207	1 280 210 796	6 002 ER1 003	2
0 280 158 208	1 280 210 796	6 002 ER1 003	2
0 280 158 209	1 280 210 796	6 002 ER1 003	2
0 280 158 210	1 280 210 796	6 002 ER1 003	2
0 280 158 501	1 280 210 796	6 002 ER1 003	2
0 280 158 502	1 280 210 796	6 002 ER1 003	2
0 280 158 700	1 280 210 796	6 002 ER1 003	2
0 280 158 801	1 280 210 823	6 002 ER1 003	2
0 280 158 802	1 280 210 823	6 002 ER1 003	2
0 280 158 803	1 280 210 823	6 002 ER1 003	2
0 280 158 807	1 280 210 823	6 002 ER1 003	2

[illegible]








For injectors / central injection units (Mono-Jetronic)

	ZEE			ZEE	
0 280 150 052	0 438 201 524	3 437 010 904	0 280 150 651	0 438 201 177	3 437 010 559
0 280 150 052	0 438 201 525	3 437 010 904	0 280 150 651	0 438 201 178	3 437 010 559
0 280 150 069	0 438 201 016	3 437 010 558	0 280 150 651	0 438 201 179	3 437 010 559
0 280 150 069	0 438 201 018	3 437 010 558	0 280 150 651	0 438 201 194	3 437 010 559
0 280 150 069	0 438 201 020	3 437 010 558	0 280 150 651	0 438 201 195	3 437 010 559
0 280 150 069	0 438 201 031	3 437 010 558	0 280 150 651	0 438 201 205	3 437 010 559
0 280 150 069	0 438 201 036	3 437 010 558	0 280 150 651	0 438 201 206	3 437 010 559
0 280 150 069	0 438 201 047	3 437 010 558	0 280 150 651	0 438 201 208	3 437 010 559
0 280 150 071	0 438 201 211	3 437 010 559	0 280 150 651	0 438 201 209	3 437 010 559
0 280 150 071	0 438 201 212	3 437 010 559	0 280 150 657	0 438 201 051	3 437 010 559
0 280 150 072	0 438 201 214	3 437 010 559	0 280 150 660	0 438 201 052	3 437 010 559
0 280 150 072	0 438 201 215	3 437 010 559	0 280 150 660	0 438 201 203	3 437 010 559
0 280 150 072	0 438 201 216	3 437 010 559	0 280 150 663	0 438 201 039	3 437 010 558
0 280 150 500	0 438 201 085	3 437 010 558	0 280 150 663	0 438 201 039	3 437 010 559
0 280 150 532	0 438 201 038	3 437 010 558	0 280 150 663	0 438 201 061	3 437 010 559
0 280 150 623	0 438 201 017	3 437 010 558	0 280 150 663	0 438 201 100	3 437 010 559
0 280 150 651	0 438 201 029	3 437 010 559	0 280 150 664	0 438 201 062	3 437 010 559
0 280 150 651	0 438 201 053	3 437 010 559	0 280 150 664	0 438 201 132	3 437 010 559
0 280 150 651	0 438 201 063	3 437 010 559	0 280 150 664	0 438 201 162	3 437 010 559
0 280 150 651	0 438 201 065	3 437 010 559	0 280 150 664	0 438 201 207	3 437 010 559
0 280 150 651	0 438 201 067	3 437 010 559	0 280 150 667	0 438 201 089	3 437 010 559
0 280 150 651	0 438 201 071	3 437 010 559	0 280 150 667	0 438 201 184	3 437 010 559
0 280 150 651	0 438 201 073	3 437 010 559	0 280 150 667	0 438 201 185	3 437 010 559
0 280 150 651	0 438 201 075	3 437 010 559	0 280 150 667	0 438 201 190	3 437 010 559
0 280 150 651	0 438 201 081	3 437 010 559	0 280 150 667	0 438 201 191	3 437 010 559
0 280 150 651	0 438 201 083	3 437 010 559	0 280 150 667	0 438 201 200	3 437 010 559
0 280 150 651	0 438 201 092	3 437 010 559	0 280 150 667	0 438 201 201	3 437 010 559
0 280 150 651	0 438 201 094	3 437 010 559	0 280 150 669	0 438 201 087	3 437 010 559
0 280 150 651	0 438 201 096	3 437 010 559	0 280 150 670	0 438 201 088	3 437 010 559
0 280 150 651	0 438 201 098	3 437 010 559	0 280 150 670	0 438 201 131	3 437 010 559
0 280 150 651	0 438 201 101	3 437 010 559	0 280 150 670	0 438 201 169	3 437 010 559
0 280 150 651	0 438 201 107	3 437 010 559	0 280 150 672	0 438 201 091	3 437 010 559
0 280 150 651	0 438 201 115	3 437 010 559	0 280 150 672	0 438 201 210	3 437 010 559
0 280 150 651	0 438 201 125	3 437 010 559	0 280 150 673	0 438 201 077	3 437 010 559
0 280 150 651	0 438 201 127	3 437 010 559	0 280 150 673	0 438 201 079	3 437 010 559
0 280 150 651	0 438 201 129	3 437 010 559	0 280 150 673	0 438 201 146	3 437 010 559
0 280 150 651	0 438 201 135	3 437 010 559	0 280 150 673	0 438 201 151	3 437 010 559
0 280 150 651	0 438 201 138	3 437 010 559	0 280 150 673	0 438 201 158	3 437 010 559
0 280 150 651	0 438 201 139	3 437 010 559	0 280 150 673	0 438 201 164	3 437 010 559
0 280 150 651	0 438 201 144	3 437 010 559	0 280 150 673	0 438 201 180	3 437 010 559
0 280 150 651	0 438 201 149	3 437 010 559	0 280 150 673	0 438 201 181	3 437 010 559
0 280 150 651	0 438 201 154	3 437 010 559	0 280 150 673	0 438 201 192	3 437 010 559
0 280 150 651	0 438 201 156	3 437 010 559	0 280 150 673	0 438 201 193	3 437 010 559
0 280 150 651	0 438 201 166	3 437 010 559	0 280 150 676	0 438 201 103	3 437 010 559
0 280 150 651	0 438 201 176	3 437 010 559	0 280 150 676	0 438 201 105	3 437 010 559








For injectors / central injection units (Mono-Jetronic)








		ZEE			ZEE	
0 280 150 676	0 438 201 160	3 437 010 559		0 280 150 699	0 438 201 533	3 437 010 904
0 280 150 676	0 438 201 186	3 437 010 559				
0 280 150 676	0 438 201 187	3 437 010 559				
0 280 150 676	0 438 201 188	3 437 010 559				
0 280 150 676	0 438 201 189	3 437 010 559				
0 280 150 676	0 438 201 196	3 437 010 559				
0 280 150 676	0 438 201 197	3 437 010 559				
0 280 150 677	0 438 201 504	3 437 010 904				
0 280 150 680	0 438 201 109	3 437 010 559				
0 280 150 680	0 438 201 142	3 437 010 559				
0 280 150 680	0 438 201 148	3 437 010 559				
0 280 150 680	0 438 201 163	3 437 010 559				
0 280 150 682	0 438 201 123	3 437 010 559				
0 280 150 683	0 438 201 124	3 437 010 559				
0 280 150 684	0 438 201 024	3 437 010 559				
0 280 150 684	0 438 201 028	3 437 010 559				
0 280 150 684	0 438 201 041	3 437 010 559				
0 280 150 684	0 438 201 168	3 437 010 559				
0 280 150 685	0 438 201 137	3 437 010 559				
0 280 150 685	0 438 201 143	3 437 010 559				
0 280 150 686	0 438 201 501	3 437 010 904				
0 280 150 687	0 438 201 505	3 437 010 904				
0 280 150 687	0 438 201 506	3 437 010 904				
0 280 150 687	0 438 201 528	3 437 010 904				
0 280 150 687	0 438 201 529	3 437 010 904				
0 280 150 688	0 438 201 514	3 437 010 904				
0 280 150 689	0 438 201 513	3 437 010 904				
0 280 150 690	0 438 201 502	3 437 010 904				
0 280 150 690	0 438 201 503	3 437 010 904				
0 280 150 690	0 438 201 509	3 437 010 904				
0 280 150 690	0 438 201 510	3 437 010 904				
0 280 150 690	0 438 201 517	3 437 010 904				
0 280 150 690	0 438 201 518	3 437 010 904				
0 280 150 690	0 438 201 519	3 437 010 904				
0 280 150 690	0 438 201 520	3 437 010 904				
0 280 150 691	0 438 201 521	3 437 010 904				
0 280 150 691	0 438 201 522	3 437 010 904				
0 280 150 692	0 438 201 507	3 437 010 904				
0 280 150 693	0 438 201 508	3 437 010 904				
0 280 150 695	0 438 201 516	3 437 010 904				
0 280 150 695	0 438 201 527	3 437 010 904				
0 280 150 697	0 438 201 515	3 437 010 904				
0 280 150 698	0 438 201 204	3 437 010 559				
0 280 150 698	0 438 201 213	3 437 010 559				
0 280 150 699	0 438 201 523	3 437 010 904				

For fuel distributors

						
0 438 100 005	–	2 430 210 036	0 438 100 088	–	2 430 210 032	
0 438 100 006	–	2 430 210 013	0 438 100 090	–	2 430 210 032	
0 438 100 007	–	2 430 210 036	0 438 100 092	–	2 430 210 013	
0 438 100 010	–	2 430 210 013	0 438 100 096	–	2 430 210 036	
0 438 100 016	–	2 430 210 032	0 438 100 097	–	2 430 210 013	
0 438 100 018	–	2 430 210 036	0 438 100 098	–	2 430 210 013	
0 438 100 023	–	2 430 210 036	0 438 100 099	–	2 430 210 013	
0 438 100 026	–	2 430 210 013	0 438 100 100	–	2 430 210 036	
0 438 100 027	–	2 430 210 032	0 438 100 101	–	2 430 210 036	
0 438 100 028	–	2 430 210 013	0 438 100 102	–	2 430 210 036	
0 438 100 031	–	2 430 210 013	0 438 100 103	–	2 430 210 036	
0 438 100 032	–	2 430 210 036	0 438 100 104	–	2 430 210 013	
0 438 100 033	–	2 430 210 013	0 438 100 105	–	2 430 210 013	
0 438 100 034	–	2 430 210 032	0 438 100 107	–	2 430 210 036	
0 438 100 035	–	2 430 210 013	0 438 100 108	–	2 430 210 013	
0 438 100 037	–	2 430 210 032	0 438 100 109	–	2 430 210 013	
0 438 100 039	–	2 430 210 036	0 438 100 111	–	2 430 210 032	
0 438 100 041	–	2 430 210 032	0 438 100 113	–	2 430 210 036	
0 438 100 047	–	2 430 210 036	0 438 100 114	–	2 430 210 013	
0 438 100 048	–	2 430 210 036	0 438 100 115	–	2 430 210 013	
0 438 100 053	–	2 430 210 036	0 438 100 116	–	2 430 210 036	
0 438 100 055	–	2 430 210 013	0 438 100 120	–	2 430 210 013	
0 438 100 057	–	2 430 210 013	0 438 100 121	–	2 430 210 036	
0 438 100 058	–	2 430 210 036	0 438 100 122	–	2 430 210 013	
0 438 100 060	–	2 430 210 013	0 438 100 123	–	2 430 210 013	
0 438 100 062	–	2 430 210 013	0 438 100 124	–	2 430 210 013	
0 438 100 063	–	2 430 210 013	0 438 100 125	–	2 430 210 013	
0 438 100 064	–	2 430 210 036	0 438 100 126	–	2 430 210 013	
0 438 100 065	–	2 430 210 036	0 438 100 127	–	2 430 210 013	
0 438 100 066	–	2 430 210 013	0 438 100 133	–	2 430 210 036	
0 438 100 067	–	2 430 210 013	0 438 100 134	–	2 430 210 013	
0 438 100 068	–	2 430 210 032	0 438 100 135	–	2 430 210 013	
0 438 100 069	–	2 430 210 013	0 438 100 136	–	2 430 210 013	
0 438 100 071	–	2 430 210 036	0 438 100 137	–	2 430 210 013	
0 438 100 073	–	2 430 210 036	0 438 100 138	–	2 430 210 036	
0 438 100 074	–	2 430 210 036	0 438 100 139	–	2 430 210 032	
0 438 100 075	–	2 430 210 036	0 438 100 140	–	2 430 210 036	
0 438 100 076	–	2 430 210 013	0 438 100 144	–	2 430 210 036	
0 438 100 077	–	2 430 210 013	0 438 100 145	–	2 430 210 032	
0 438 100 078	–	2 430 210 036	0 438 100 146	–	2 430 210 013	
0 438 100 079	–	2 430 210 036	0 438 100 147	–	2 430 210 013	
0 438 100 080	–	2 430 210 013	0 438 100 148	–	2 430 210 013	
0 438 100 081	–	2 430 210 013	0 438 100 149	–	2 430 210 013	
0 438 100 083	–	2 430 210 036	0 438 100 150	–	2 430 210 036	
0 438 100 084	–	2 430 210 013	0 438 100 151	–	2 430 210 013	

For fuel distributors

						
0 438 100 152	–		2 430 210 013	0 986 438 035	–	2 430 210 013
0 438 100 153	–		2 430 210 013	0 986 438 037	–	2 430 210 032
0 438 100 155	–		2 430 210 032	0 986 438 039	–	2 430 210 036
0 438 100 160	–		2 430 210 036	0 986 438 041	–	2 430 210 032
0 438 100 161	–		2 430 210 013	0 986 438 047	–	2 430 210 036
0 438 101 002	–		2 430 210 036	0 986 438 048	–	2 430 210 036
0 438 101 004	–		2 430 210 036	0 986 438 053	–	2 430 210 036
0 438 101 005	–		2 430 210 036	0 986 438 055	–	2 430 210 013
0 438 101 006	–		2 430 210 013	0 986 438 057	–	2 430 210 013
0 438 101 010	–		2 430 210 036	0 986 438 058	–	2 430 210 036
0 438 101 012	–		2 430 210 013	0 986 438 062	–	2 430 210 013
0 438 101 015	–		2 430 210 032	0 986 438 063	–	2 430 210 013
0 438 101 016	–		2 430 210 032	0 986 438 064	–	2 430 210 036
0 438 101 017	–		2 430 210 032	0 986 438 065	–	2 430 210 036
0 438 101 018	–		2 430 210 032	0 986 438 066	–	2 430 210 013
0 438 101 023	–		2 430 210 036	0 986 438 067	–	2 430 210 013
0 438 101 024	–		2 430 210 013	0 986 438 068	–	2 430 210 032
0 438 101 026	–		2 430 210 036	0 986 438 069	–	2 430 210 013
0 438 101 028	–		2 430 210 036	0 986 438 069	–	2 430 210 013
0 438 101 029	–		2 430 210 013	0 986 438 071	–	2 430 210 036
0 438 101 030	–		2 430 210 036	0 986 438 073	–	2 430 210 036
0 438 101 031	–		2 430 210 036	0 986 438 074	–	2 430 210 036
0 438 101 032	–		2 430 210 032	0 986 438 075	–	2 430 210 036
0 438 101 033	–		2 430 210 032	0 986 438 076	–	2 430 210 013
0 438 101 035	–		2 430 210 036	0 986 438 077	–	2 430 210 013
0 438 101 037	–		2 430 210 036	0 986 438 078	–	2 430 210 036
0 438 101 038	–		2 430 210 013	0 986 438 079	–	2 430 210 036
0 438 101 039	–		2 430 210 036	0 986 438 080	–	2 430 210 013
0 438 101 040	–		2 430 210 032	0 986 438 081	–	2 430 210 013
0 438 101 044	–		2 430 210 013	0 986 438 083	–	2 430 210 036
0 438 101 046	–		2 430 210 036	0 986 438 084	–	2 430 210 013
0 986 438 005	–		2 430 210 036	0 986 438 088	–	2 430 210 032
0 986 438 006	–		2 430 210 013	0 986 438 090	–	2 430 210 032
0 986 438 007	–		2 430 210 036	0 986 438 092	–	2 430 210 013
0 986 438 010	–		2 430 210 013	0 986 438 096	–	2 430 210 036
0 986 438 016	–		2 430 210 032	0 986 438 097	–	2 430 210 013
0 986 438 018	–		2 430 210 036	0 986 438 098	–	2 430 210 013
0 986 438 023	–		2 430 210 036	0 986 438 099	–	2 430 210 013
0 986 438 026	–		2 430 210 013	0 986 438 100	–	2 430 210 036
0 986 438 027	–		2 430 210 032	0 986 438 101	–	2 430 210 036
0 986 438 028	–		2 430 210 013	0 986 438 102	–	2 430 210 036
0 986 438 031	–		2 430 210 013	0 986 438 103	–	2 430 210 036
0 986 438 032	–		2 430 210 036	0 986 438 104	–	2 430 210 013
0 986 438 033	–		2 430 210 013	0 986 438 105	–	2 430 210 013
0 986 438 034	–		2 430 210 032	0 986 438 107	–	2 430 210 036

						
0 986 438 108	–	2 430 210 013	0 986 438 224	–	2 430 210 013	
0 986 438 109	–	2 430 210 013	0 986 438 226	–	2 430 210 036	
0 986 438 111	–	2 430 210 032	0 986 438 228	–	2 430 210 036	
0 986 438 113	–	2 430 210 036	0 986 438 229	–	2 430 210 013	
0 986 438 114	–	2 430 210 013	0 986 438 230	–	2 430 210 036	
0 986 438 115	–	2 430 210 013	0 986 438 231	–	2 430 210 036	
0 986 438 116	–	2 430 210 036	0 986 438 232	–	2 430 210 032	
0 986 438 120	–	2 430 210 013	0 986 438 233	–	2 430 210 032	
0 986 438 121	–	2 430 210 036	0 986 438 235	–	2 430 210 036	
0 986 438 122	–	2 430 210 013	0 986 438 237	–	2 430 210 036	
0 986 438 123	–	2 430 210 013	0 986 438 238	–	2 430 210 013	
0 986 438 124	–	2 430 210 013	0 986 438 239	–	2 430 210 036	
0 986 438 125	–	2 430 210 013	0 986 438 240	–	2 430 210 032	
0 986 438 126	–	2 430 210 013	0 986 438 244	–	2 430 210 013	
0 986 438 127	–	2 430 210 013	0 986 438 246	–	2 430 210 036	
0 986 438 133	–	2 430 210 036	F 026 TX2 000	–	2 430 210 013	
0 986 438 134	–	2 430 210 013	F 026 TX2 001	–	2 430 210 032	
0 986 438 135	–	2 430 210 013	F 026 TX2 002	–	2 430 210 013	
0 986 438 136	–	2 430 210 013	F 026 TX2 003	–	2 430 210 032	
0 986 438 137	–	2 430 210 013	F 026 TX2 004	–	2 430 210 013	
0 986 438 138	–	2 430 210 036	F 026 TX2 005	–	2 430 210 036	
0 986 438 139	–	2 430 210 032	F 026 TX2 006	–	2 430 210 013	
0 986 438 140	–	2 430 210 036	F 026 TX2 007	–	2 430 210 013	
0 986 438 144	–	2 430 210 036	F 026 TX2 008	–	2 430 210 036	
0 986 438 145	–	2 430 210 032	F 026 TX2 009	–	2 430 210 013	
0 986 438 146	–	2 430 210 013	F 026 TX2 010	–	2 430 210 013	
0 986 438 147	–	2 430 210 013	F 026 TX2 011	–	2 430 210 036	
0 986 438 148	–	2 430 210 013	F 026 TX2 012	–	2 430 210 013	
0 986 438 149	–	2 430 210 013	F 026 TX2 013	–	2 430 210 036	
0 986 438 150	–	2 430 210 036	F 026 TX2 014	–	2 430 210 032	
0 986 438 151	–	2 430 210 013	F 026 TX2 015	–	2 430 210 013	
0 986 438 152	–	2 430 210 013	F 026 TX2 016	–	2 430 210 013	
0 986 438 153	–	2 430 210 013	F 026 TX2 017	–	2 430 210 013	
0 986 438 155	–	2 430 210 032	F 026 TX2 018	–	2 430 210 036	
0 986 438 160	–	2 430 210 036				
0 986 438 161	–	2 430 210 013				
0 986 438 202	–	2 430 210 036				
0 986 438 204	–	2 430 210 036				
0 986 438 205	–	2 430 210 036				
0 986 438 206	–	2 430 210 013				
0 986 438 210	–	2 430 210 036				
0 986 438 212	–	2 430 210 013				
0 986 438 216	–	2 430 210 032				
0 986 438 218	–	2 430 210 032				
0 986 438 223	–	2 430 210 036				

Low-way plug-in connections

Wiring-harness section, protective caps and plug-in contacts



Bosch supplies a full range of connections for automotive electronic systems.

Special features of Bosch plug-in connections:

- ▶ Long service life
- ▶ All parts to original-equipment standard
- ▶ Extremely resistant to water, moisture and salt spray
- ▶ Temperature-resistant
- ▶ Vibration-proof
- ▶ Easily connected and assembled

The full range can be found in the catalog **1 987 721 029**
or in internet under:

www.bosch-connectors.com

This image shows a full page of blank white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page, providing a guide for handwriting or typing. There are no margins, text, or other markings on the page.