



# PRODUCTCOMPETENCE

BF SPARE PARTS  
OIL PUMPS AND WATER PUMPS  
FOR SCANIA AND VOLVO TRUCKS

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NOTRE **CŒUR** BAT POUR VOTRE MOTEUR.



**MOTORSERVICE**  
RHEINMETALL AUTOMOTIVE

# EXPERTISE IN WATER PUMPS

## WATER PUMPS – COOLING FOR A LONG ENGINE LIFE

The water pump is the central component in the coolant circuit. It conveys the cooling liquid in the sealed engine cooling system. Variable coolant pumps provide demand-based engine cooling, reduce power requirements and cut frictional losses, fuel consumption and pollutant emissions. The Rheinmetall Automotive production sites produce more than ten million mechanical and electrical water pumps for motor vehicles and utility vehicles every year.



### **MECHANICAL WATER PUMPS**

The cooling liquid in the water pump absorbs the heat from the engine block and cylinder head and releases it into the ambient air through the cooler.

Depending on their design, mechanical water pumps are located either externally on the engine in their own pump housing or are flanged directly on the crankcase and are driven by a V-belt, a toothed belt or directly by the engine.



### **VARIABLE WATER PUMPS**

On a variable water pump with electromagnetic clutch, the impeller of the pump turns significantly slower than the drive when the clutch is not supplied with power. The full delivery rate is only achieved when the clutch is supplied with power.

# MOTORSERVICE WATER PUMPS

Manufacturer	BF no.	Ref. no.*	Engine
Volvo <sup>1</sup>	20 1604 07000	21417491	D7/TAD7
	20 1604 11000	21974080	D11 EU5/6
	20 1604 11001	22423448	D11 EU5/6
	20 1604 11002	22244090	D11 EU5/6
	20 1604 12001	220 1067	D12 EU3
	20 1604 12002	20734268	D12 EU3
	20 1604 12003	8149882	D12 EU2
	20 1604 12100	20431484	D12/TAD123
	20 1604 12200	1675945	D12/TAD122
	20 1604 13000	22195450	D11/13/16 EU3
	20 1604 13001	21960481	D13 EU5/6
	20 1604 13002	21960479	D13 EU5/6
	20 1604 13003	22183231	D13 EU5/6
	20 1604 70010	1699784	TD60/70
	20 1604 73000	20575653	D7/TD61/63
	20 1622 62465	50 10 438 102	MIDR EU2
Scania <sup>2</sup>	20 1607 09000	1540490	D9
	20 1607 09001	2224112	DC9/13 EU5
	20 1607 11000	1672680	DS11
	20 1607 11004	1508533	DSC12 EU2
	20 1607 12000	1787120	DC12 EU5
	20 1607 13000	1778923	DC13 EU5
	20 1607 13001	2224045	DC13 EU6
	20 1607 14004	1508534	DSC14 EU2
	20 1607 16000	1793989	DS16 EU4/5

<sup>1</sup> The Volvo Group includes vehicles from:  
Volvo Trucks and Buses, Renault Trucks/RVI, MACK,  
UD Trucks, Volvo White, Volvo BM

(construction machines), Volvo Penta  
<sup>2</sup> The Traton Group includes vehicles from:  
Scania Trucks and Buses, MAN Trucks and Buses,  
Neoplan, Navistar, Volkswagen Caminhões e Ônibus

## QUALITY FEATURES OF OUR WATER PUMPS

- High-quality sliding ring sealing cartridge
- Maintenance-free, long-life rolling bearings
- Flow-optimised impellers made from plastic, steel, aluminium or brass
- Gaskets and O-rings are included in the scope of supply
- OE expertise from a technology leader

# EXPERTISE IN OIL PUMPS

## OIL PUMPS – LUBRICATION FOR A LONG ENGINE LIFE

Oil pumps deliver oil from the oil pan through the oil filter and oil cooler to the lubricating points of the engine. This ensures that engine parts are supplied with a sufficient quantity of lubricating oil.

For effectively functioning cooling and lubrication, the total oil volume must be pumped through the engine four to six times per minute.

Moreover, the oil pump design must ensure that the lubricating points are supplied with fresh oil as fast as possible after cold starting, and the flow rate is always adequate even at low engine speeds.

The quality of an oil pump in terms of design and workmanship contributes significantly to a long and efficient engine life.

Don't take any chances and choose one of the renowned pumps from the BF brand.

Rheinmetall Automotive is the OE supplier for all reputable engine manufacturers in the automotive and light utility vehicle industry, with numerous patents for oil pumps and producing tens of millions of oil pumps worldwide each year.

Based on this know-how, Motorservice offers a broad product range for over 3,000 engine applications from the renowned, Pierburg and BF brands.



Volvo "I-Shift" transmission oil pump





## OIL PUMPS FROM MOTORSERVICE

Manufacturer	BF no.	Ref. no.*	Engine
Volvo <sup>1</sup>	20 1404 04000	3583623	TD60
	20 1404 06000	466387	TD60
	20 1404 06100	471570	TD61
	20 1404 07000	466530	TD70
	20 1404 07100	477547	TD71
	20 1404 09000	20758237	D9
	20 1404 10000	467517	TD100
	20 1404 10100	479319	TD101
	20 1404 10200	479317	TD102/103
	20 1404 11000	22196494	I-Shift
	20 1404 11001	21736639	D9/D11
	20 1404 12000	468351	TD120
	20 1404 12002	22396953	D12
	20 1404 12200	4786497	TD122/123
	20 1404 13001	20824908	D13/TAD13
	20 1404 16000	22411770	D16/TAD16
	20 1404 FH120	21261593	D12 EU2
	20 1422 11000	5010477184	DCI11
Scania <sup>2</sup>	20 1407 09000	2209508	DC9 EU5
	20 1407 09003	1402401	DC9 EU3
	20 1407 09004	2055915	DC9 EU6
	20 1407 11000	3014735	DS11
	20 1407 12000	1448659	DC12 EU4
	20 1407 12001	2028987	DC12 EU5
	20 1407 13000	2105497	DC13 EU5
	20 1407 16000	1888026	DC16 EU5
	20 1407 16001	2092332	DC16 EU6

<sup>1</sup> The Volvo Group includes vehicles from: Volvo Trucks and Buses, Renault Trucks/RVI, MACK, UD Trucks, Volvo White, Volvo BM

(construction machines), Volvo Penta  
<sup>2</sup> The Traton Group includes vehicles from: Scania Trucks and Buses, MAN Trucks and Buses, Neoplan, Navistar, Volkswagen Caminhões e Ônibus

### OIL PUMP FOR SCANIA – COMPARED TO A COMPETITOR

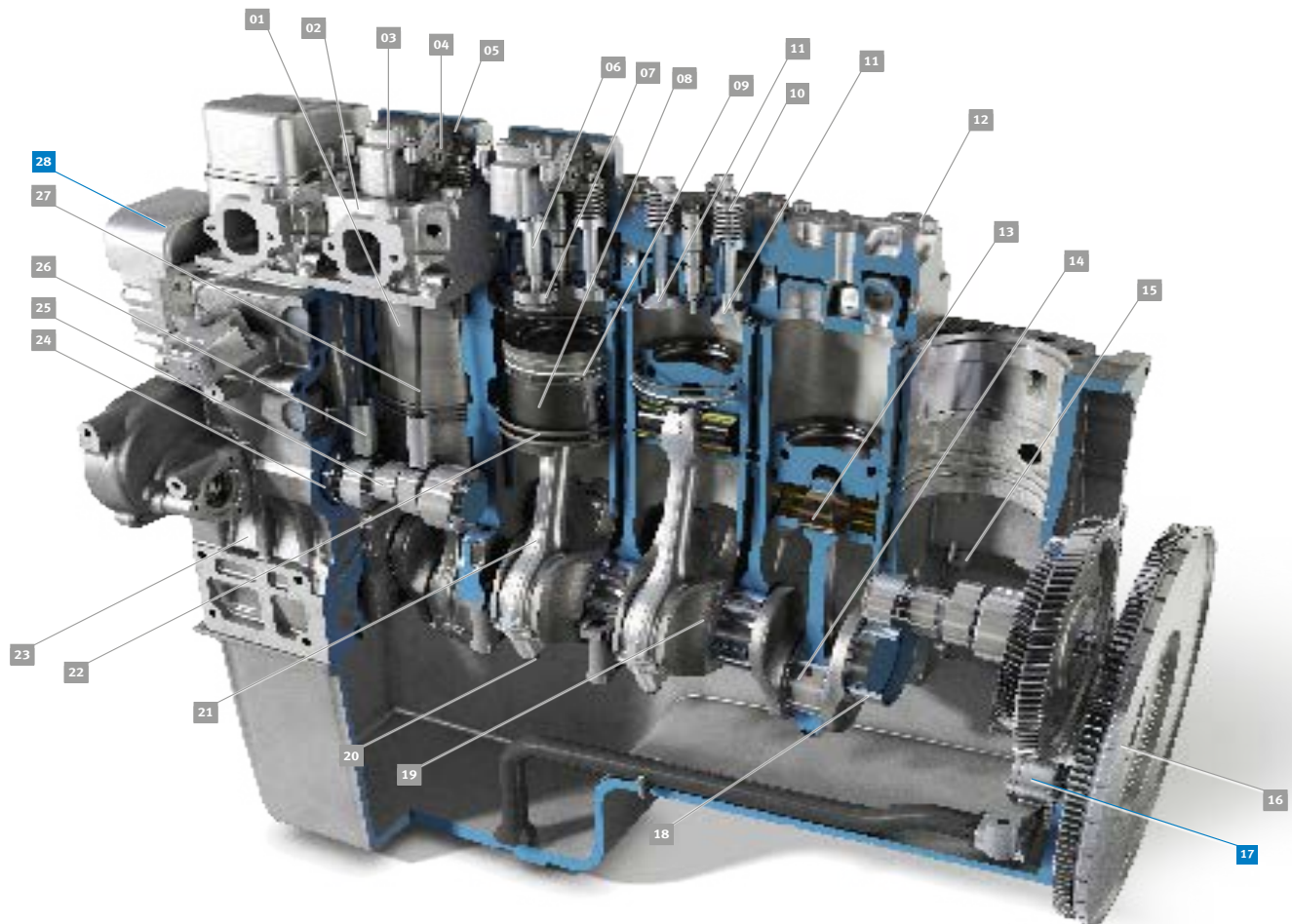


Minimum tooth flank clearance thanks to optimum production quality in mechanical machining – a guarantee of even running, low noise generation and durability.



Competitor comparison

# PRODUCT RANGE



- |                               |                        |
|-------------------------------|------------------------|
| 01 Cylinder liner             | 15 Oil injection jet   |
| 02 Cylinder head              | 16 Fly wheel           |
| 03 Rocker arm bearing block   | 17 Oil pump            |
| 04 Rocker arm bush            | 18 Main bearing        |
| 05 Rocker arm                 | 19 Crankshaft          |
| 06 Valve guide                | 20 Connecting rod bolt |
| 07 Valve seat insert          | 21 Connecting rod      |
| 08 Pistons                    | 22 Sealing rings       |
| 09 Piston rings               | 23 Crankcase           |
| 10 Valve spring + accessories | 24 Camshaft bearing    |
| 11 Intake/exhaust valves      | 25 Camshaft            |
| 12 Cylinder head bolt         | 26 Tappet              |
| 13 Conrod bush                | 27 Valve push rod      |
| 14 Connecting rod bearing     | 28 Water pump          |



# KNOW-HOW TRANSFER

## PROFESSIONAL KNOWLEDGE FROM THE EXPERTS

### WORLDWIDE TRAINING

Each year, around 4,500 mechanics and engineers benefit from our training courses and seminars, which we hold on-site in locations across the world or in our training centres in Neuenstadt, Dormagen and Tamm (Germany).

### TECHNICAL INFORMATION

Our Product Information and Service Information publications, technical brochures and posters keep you at the forefront of the latest technological developments.

### TECHNICAL VIDEOS

Our videos provide you with useful information on our products, such as hands-on fitting instructions and system descriptions.



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Interactive elements, animations and video clips provide interesting information about our products in and around the engine.

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Order at any time. Quick availability check. Extensive product search by engine, vehicle, dimensions etc.

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