

Engine Description

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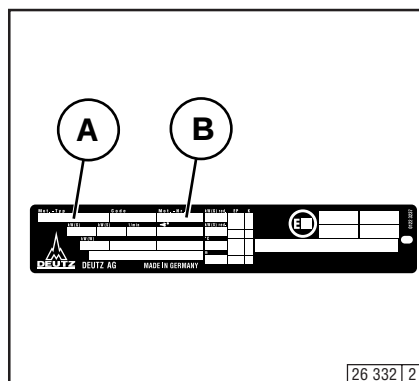
- 2.1 Model**
- 2.2 Engine Illustration**
- 2.3 Lube Oil Circuit Schematic**
- 2.4 Fuel System Schematic**

Engine Description

2.1 Model

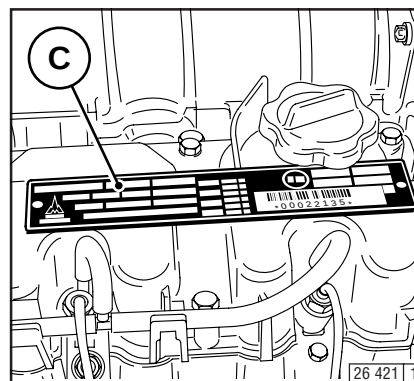
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2.1.1 Rating Plate



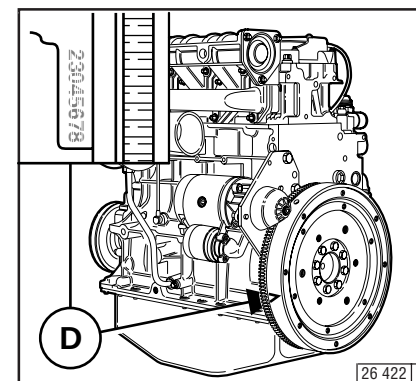
The model **A**, the engine serial number **B** and the performance data are stamped on the rating plate. The model and engine serial number must be given when ordering parts.

2.1.2 Rating Plate Location



The rating plate **C** is attached to the valve cover.

2.1.3 Engine Serial Number



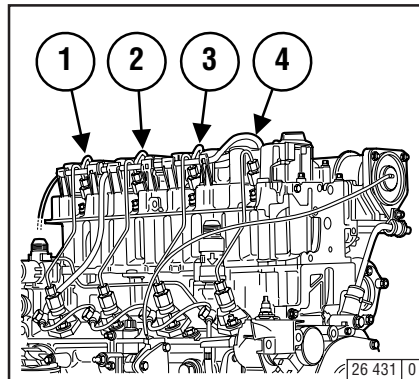
The engine serial number **B** is stamped on the crankcase **D** as well as the rating plate.

2.1 Model

Engine Description

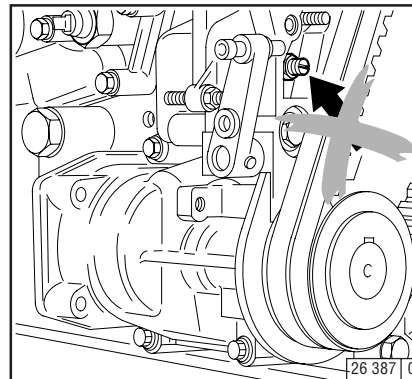
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2.1.4 Cylinder Numbering



Cylinders are numbered consecutively, beginning at the flywheel end.

2.1.5 Fuel Delivery Lock



The manufacturer shall not be held liable for damages resulting from adjustments made to the regulator by the operator.
The lock screws are protected in order to prevent this:

1. with locking paint on model:
torque balancer
2. with plastic protective cap on model:
without torque balancer.

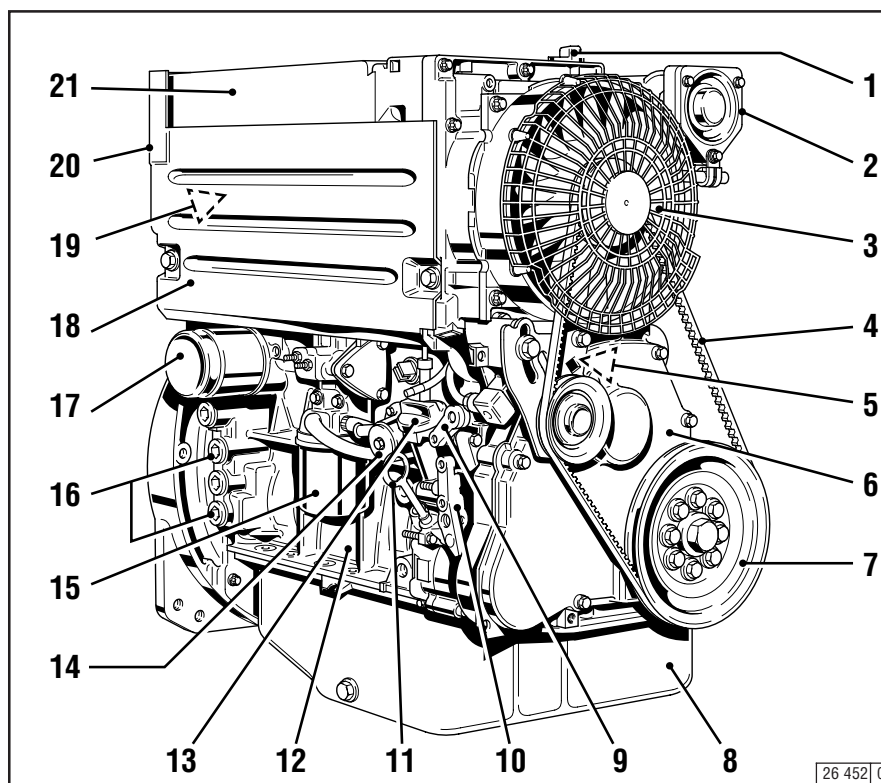


Adjustments to the regulator are to be carried out only by authorized DEUTZ SERVICE - specialists.

Engine Description

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2.2.1 Service Side FL 1011F



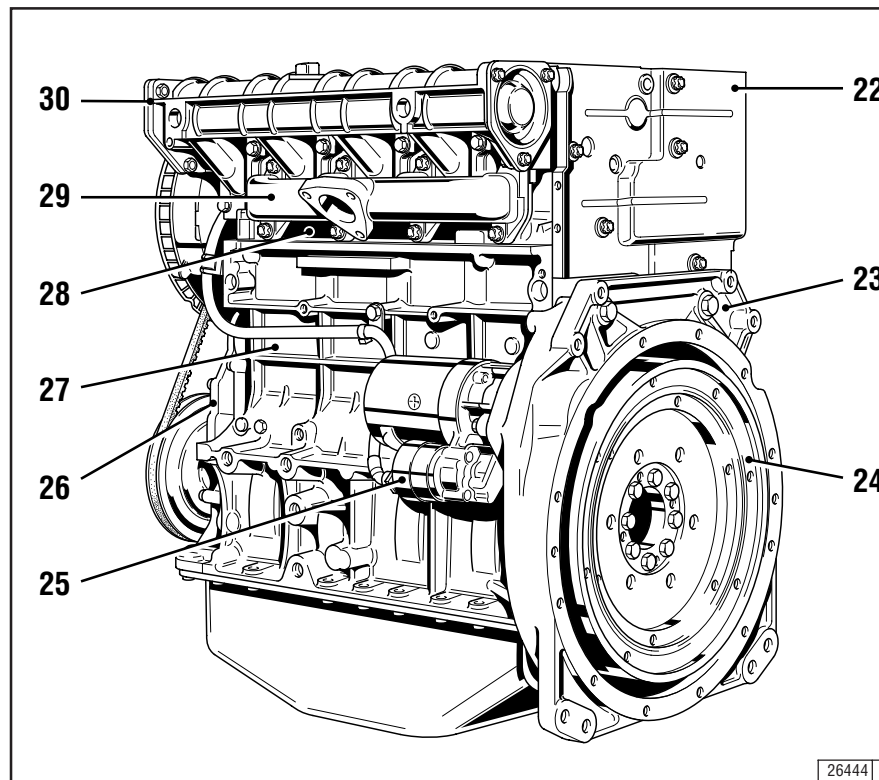
- 1 Oil filler neck (valve-gear cover)
- 2 Charge-air line / air-intake line
- 3 Fan with integrated generator
- 4 Narrow V-belt
- 5 Solenoid
- 6 Toothed belt cover
- 7 V-belt pulley on crankshaft
- 8 Oil sump
- 9 Cut-out handle
- 10 Speed control lever
- 11 Oil dipstick
- 12 Crankshaft housing
- 13 Oil fill point (on side of crankcase)
- 14 Fuel pump
- 15 Easy-change fuel filter
- 16 Connecting facility for oil heater
- 17 Lube oil easy-change filter
- 18 Removable coolant intake hood
- 19 Injection pumps
- 20 Date plate
- 21 Oil cooler

2.2 Engine Illustrations

Engine Description

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2.2.2 Exhaust side FL 1011F



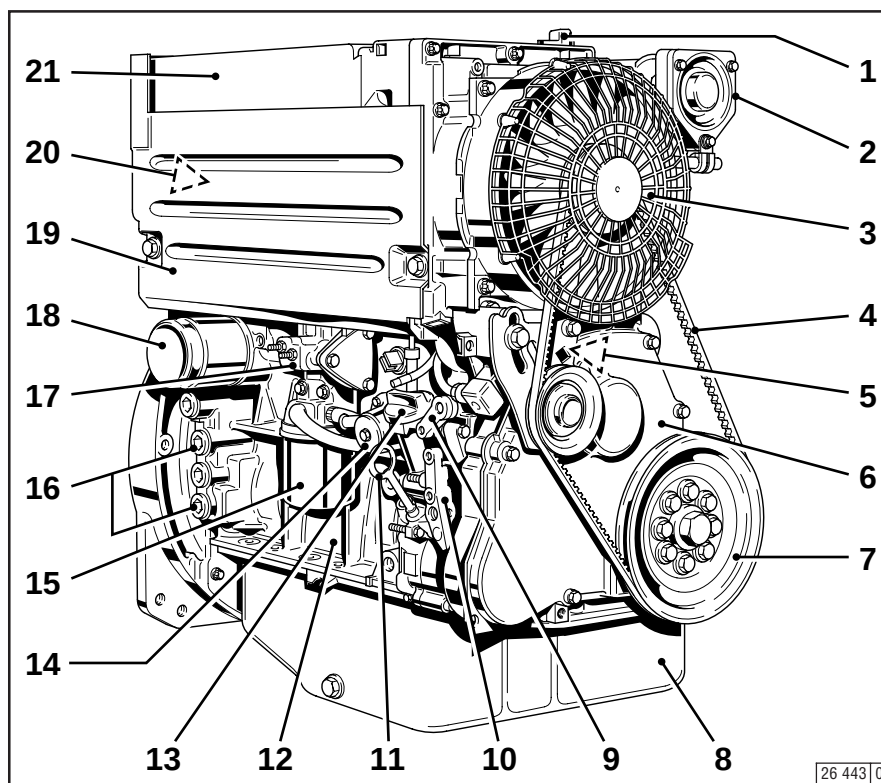
- 22 Date plate
- 23 Connection housing (SAE)
- 24 Flywheel with ring gear
- 25 Starter
- 26 Front cover
- 27 Crankcase
- 28 Cylinder head
- 29 Exhaust manifold pipe
- 30 Air-intake pipe

Engine Description

2.2 Engine Illustrations

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2.2.3 Service Side BFL 1011F



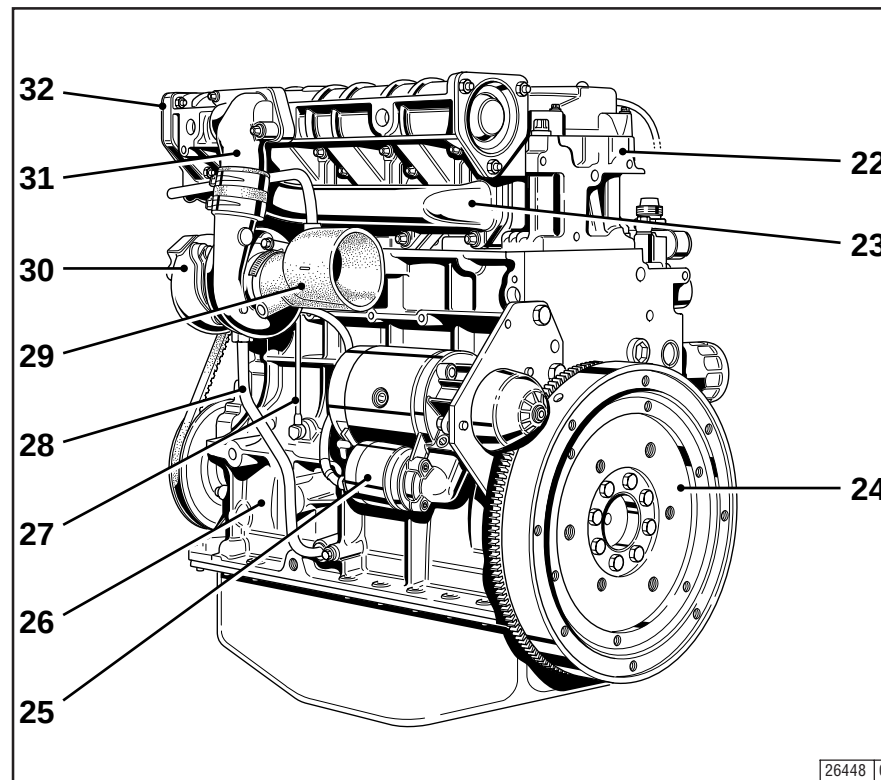
- 1 Oil filler neck (valve-gear housing cover)
- 2 Charge-air line / air-intake line
- 3 Fan with integrated generator
- 4 Narrow V-belt
- 5 Solenoid
- 6 Wheel-house cover
- 7 V-belt pulley on crankshaft
- 8 Oil sump
- 9 Cut-out handle
- 10 Speed control lever
- 11 Oil dipstick
- 12 Crankshaft housing
- 13 Oil fill point (on side of crankcase)
- 14 Fuel pump
- 15 Easy-change fuel filter
- 16 Connection facility for oil heater
- 17 Charge-air pressure full-load stop (LDA)
- 18 Lube oil easy-change filter
- 19 Removable coolant intake hood
- 20 Injection pumps
- 21 Oil cooler

2.2 Engine Illustrations

Engine Description

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2.2.4 Exhaust side BFL 1011F

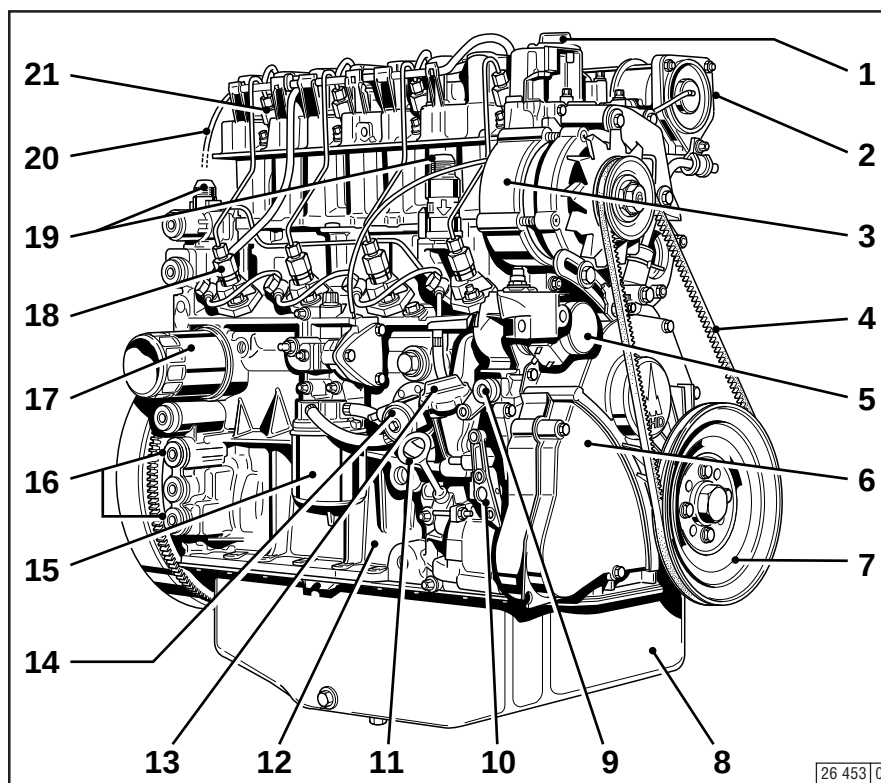


- 22 Cylinder head
- 23 Exhaust manifold pipe
- 24 Flywheel with ring gear
- 25 Starter
- 26 Crankshaft housing
- 27 Inlet line to TC (Lube oil)
- 28 Return line from TC (Lube oil)
- 29 Induction pipe
- 30 Turbocharger (TC)
- 31 Intake manifold
- 32 Air-intake line

Engine Description

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2.2.5 Service Side FM 1011F



- 1 Oil filler neck (valve-gear housing)
- 2 Charge-air line / air-intake line
- 3 Generator
- 4 Narrow V-belt
- 5 Solenoid
- 6 Wheel-house cover
- 7 V-belt pulley on crankshaft
- 8 Oil sump
- 9 Cut-out handle
- 10 Speed control lever
- 11 Oil dipstick
- 12 Crankshaft housing
- 13 Oil fill point (on side of crankcase)
- 14 Fuel pump
- 15 Easy-change fuel filter
- 16 Connecting facility for oil heater
- 17 Lube oil easy-change filter
- 18 Injection pumps
- 19 Connection for oil cooler
- 20 Leakage-fuel line
- 21 Injection valves

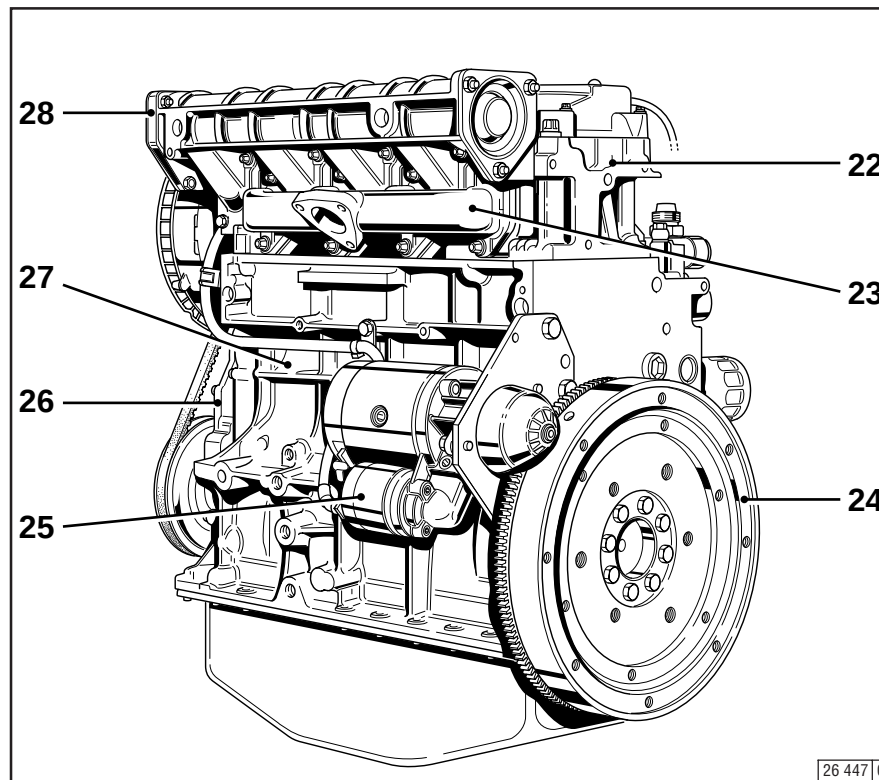
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2.2 Engine Illustrations

Engine Description

2.2.6 Exhaust side FM 1011F

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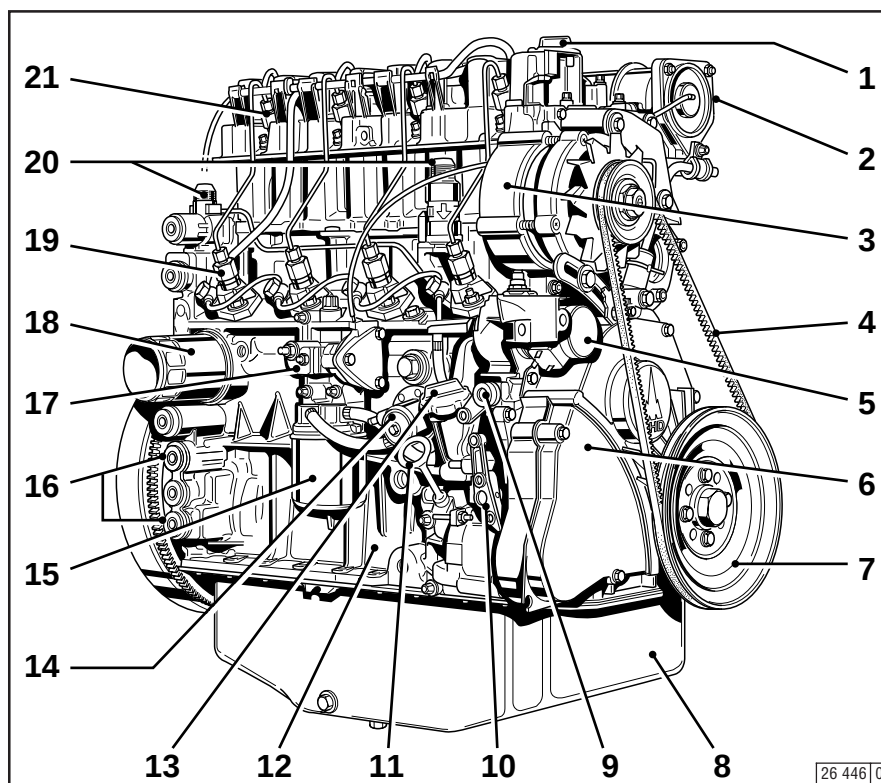


- 22 Cylinder head
- 23 Exhaust manifold line
- 24 Flywheel with ring gear
- 25 Starter
- 26 Front cover
- 27 Crankcase
- 28 Intake pipe

Engine Description

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2.2.7 Service Side BFM 1011F



- 1 Oil filler neck (valve-gear housing cover)
- 2 Charge-air line / air-intake line
- 3 Generator
- 4 Narrow V-belt
- 5 Solenoid
- 6 Wheel-house cover
- 7 V-belt on crankshaft
- 8 Oil sump
- 9 Cut-out handle
- 10 Speed control lever
- 11 Oil dipstick
- 12 Crankshaft housing
- 13 Oil fill point (on side of crankcase)
- 14 Fuel pump
- 15 Easy-change fuel filter
- 16 Connecting facility for oil heater
- 17 Charge-air pressure full-load stop (TC)
- 18 Lube oil easy-change
- 19 Injection pumps
- 20 Oil cooler connection
- 21 Injection valves

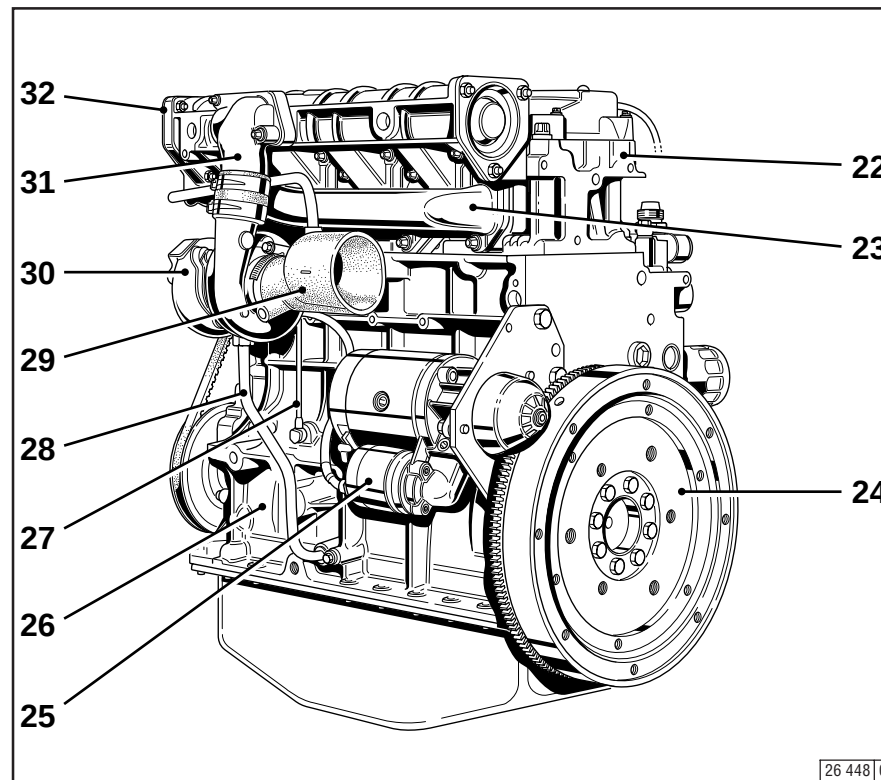
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2.2 Engine Illustrations

Engine Description

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2.2.8 Exhaust side BFM 1011F



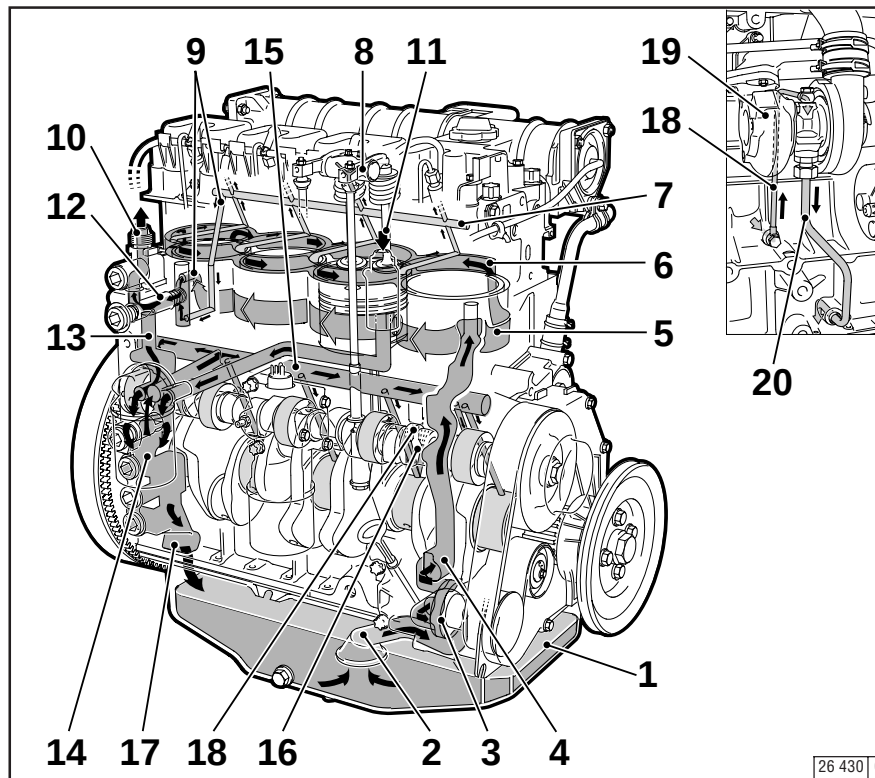
- 22 Cylinder head
- 23 Exhaust manifold pipe
- 24 Flywheel with ring gear
- 25 Starter
- 26 Crankshaft housing
- 27 Inlet line to TC (Lube oil)
- 28 Return line from TC (Lube oil)
- 29 Induction pipe
- 30 Turbocharger (TC)
- 31 Intake manifold
- 32 Air-intake line

Engine Description

2.3 Oil Circuit

2

2.3.1 Lube Oil Circuit Schematic



- 1 Oil sump
- 2 Intake manifold
- 3 Oil pump
- 4 Main oil duct
- 5 Oil-cooled cylinder
- 6 Cylinder head cooling neck
- 7 Oil duct for rocker arm lubrication
- 8 Rocker arm
- 9 Oil manifold for the thermostat
- 10 Intake to external engine oil cooler
- 11 Return from external engine oil cooler
- 12 Thermostat housing with slide thermostat
- 13 Oil duct to oil filter
- 14 Oil filter
- 15 Oil duct to the cam, con-rod and crankshaft bearing
- 16 Injection jet for cooling the pistons
- 17 Oil return via crankcase to the oil sump
- 18 Lube oil intake to turbocharger
- 19 Turbocharger
- 20 Return from turbocharger to oil sump

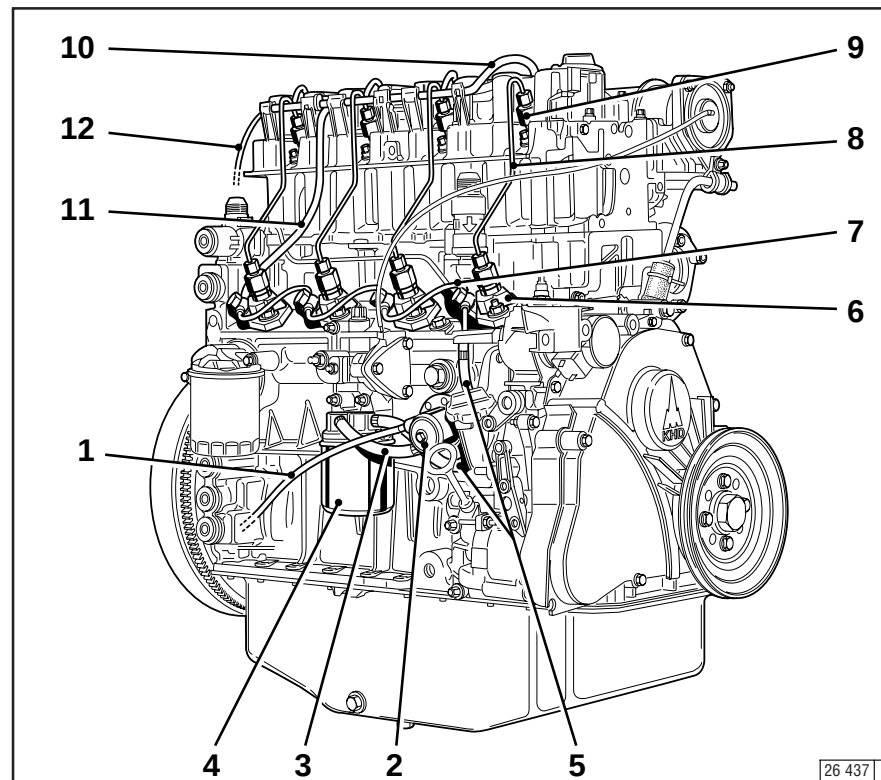
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2.4 Fuel System

Engine Description

2.4.1 Fuel system schematic

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- 1 Fuel line from tank to fuel pump
- 2 Fuel pump
- 3 Fuel line from fuel pump to easy-change fuel filter
- 4 Easy-change fuel filter
- 5 Fuel line from filter to injection pump
- 6 Injection pumps
- 7 Fuel distributor line
- 8 Injection lines
- 9 Injection valves
- 10 Fuel leakage line
- 11 Fuel overflow pipe
- 12 Fuel return line to tank