AGCO POWER

Workshop Service Manual

5th Generation AWF Engines

8370 79873



AGCO POWER

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3.11.10 Oil sump capacity

Number of cylinders	Oil sump partnumber	Minimum oil capacity	Maximum oil capacity
4 cylinders	8361 20641	9,5	11,5
	8361 28794	8,0	10,0
	8370 84513	13	17
	8361 29147	8,0	10,0
6 cylinders	8363 47308	20,0	25,5
	8363 36229	21,5	25,5
	8370 74007	17	22
	8370 84152	19	24
	8370 84394	16	19
	8368 73817	16	19
	8368 74808	17	20
	8368 84674	17	20
	8368 84621	16,8	19,5
	8368 73994	21	25
	8368 74002	20	24
	8368 73779	16,5	21,5
7 cylinders	8368 73028	27	33
	8368 74866	29,5	35,5

3.11.11 Closed crankcase ventilation

All 5th Generation engines have closed crankcase ventilation (CCV) with filtering of ventilation gases. This is to prevent oil and soot getting into engine air intake with ventilation gases. CCV system is maintenance-free. There are two different types of CCV system. There is a centrifugal-type filtering in the 84 and 98 engines, which is driven by engine oil pressure. There is a filter that uses a small part of boost pressure for filtration boosting in the 33, 44, 49, 66 and 74 engines.

Installing the closed crankcase ventilation system components

33 - 74 engines

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3.13.3 Removing actuator of the high pressure turbocharger

Procedure

1. Remove cooling pipe and cooling pipe support of the actuator.
2. Remove the actuator from the turbocharger without removing the mounting bracket of the actuator from the turbocharger.

   NOTE: *Do not remove the link rod of the actuator.*

3.13.4 Fitting actuator of the high pressure turbocharger

Procedure

1. Fit the actuator to the turbocharger.
2. Fit the cooling pipe and the cooling pipe support.
3. Finally, remove the air from the cooling system by using the highest bleeding plug of the engine.

3.13.5 Removing the high pressure turbocharger

Procedure

1. Remove the inlet and exhaust pipes and pressure and return oil pipes from the turbocharger.
2. Untighten the clamp between the HP turbocharger and the intermediate piece of the turbochargers.
3. Remove the cooling pipes of the actuator and the actuator wire.
4. Remove the fixing nuts and remove the turbocharger.

3.13.6 Checking the turbocharger

If a fault is suspected in the turbocharger, it can be located in the following way:

Procedure

1. Visually inspect the turbine and compressor wheels. The vanes must not show any signs of damage, deformation or wear caused by foreign objects.
2. Investigate any oil leaks through the sealing rings on the shaft in the turbine and compressor housing.

   NOTE: *At low idling speed there is always a certain amount of oil leakage on the compressor side. However, this should not cause too much concern unless the oil consumption is too great.*

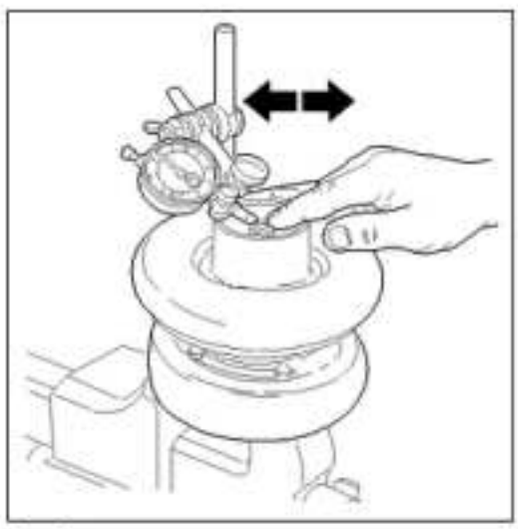


Fig. 99

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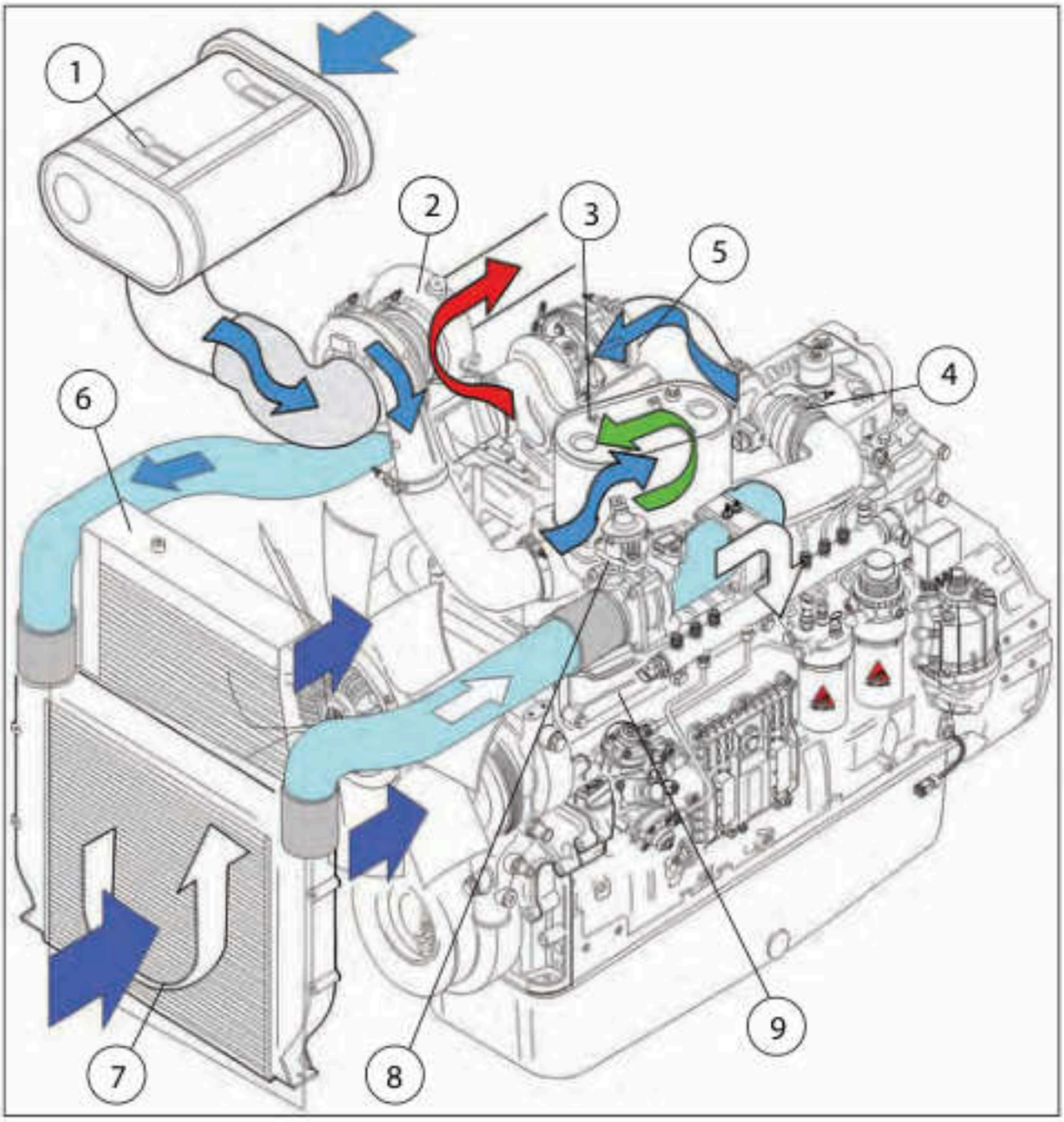


Fig. 11

(1) Air filter
(2) Low pressure turbocharger
(3) Interstage charge air cooler (ICAC)
(4) Mass air flow (MAF) sensor
(5) High pressure turbocharger
(6) Engine radiator
(7) Air to air intercooler
(8) Air intake throttle
(9) Intake manifold

The air control system includes pre-filter (or cyclone, if installed), air filter, turbocharger(s), intercooler(s), air mass flow meter, throttle valve, intake manifold, exhaust manifold, EGR valve, EGR cooler and air pipes. A mechanical or electric sensor can be fitted to indicate the service point of the air filter. If the engine is operating in very dusty conditions (for example spreading lime) it must be equipped with a special pre-filter and oil bath air filter.

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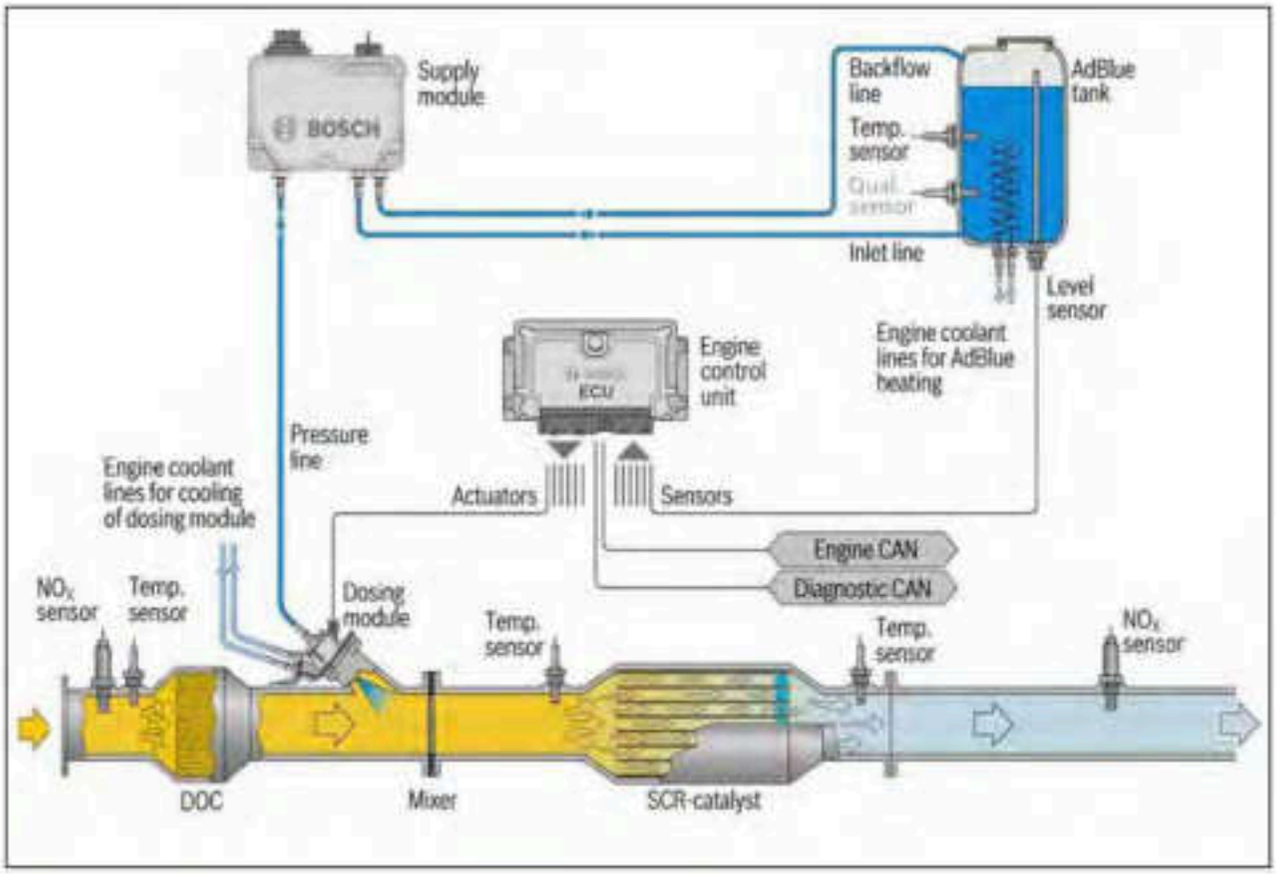


Fig. 115

The exhaust gas aftertreatment system used is Bosch DENOXTRONIC2.2 (DNOX2.2). DNOX2.2 uses SCR (Selective catalyst reduction) technology in order to reduce the exhaust emissions from the engine.

AGCO POWER SCR system consists of engine control system and DNOX2.2 SCR system. These two systems are connected together via CAN bus.

See instructions of the appliance for location and instructions for removing and installing the SCR system components.

Supply module

Supply Module (SM) transfers NOx reductant (DEF) from tank and pressurizes it. It contains also filters for reductant (prefilter and mainfilter).

Dosing module

Dosing module (DM) is installed in the exhaust pipe between turbocharger and SCR catalyst. DM contains an electrically operated, ECU controlled solenoid valve, which will inject the required amount of DEF through the DM nozzle. DEF amount is calculated by EEM4 for optimal reduction of NOx.

Sensors

DNOX2.2 system includes several sensors:

- NOx sensors
- Exhaust temperature sensors
- DEF tank level sensor
- Temperature sensors: DEF tank, Supply Module internal

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