

2009 BMW 128i Coupe (E82) L6-3.0L (N51)

Vehicle > Engine, Cooling and Exhaust > Engine > Engine Lubrication > Engine Oil > Service and Repair > Procedures

ENGINE OIL SERVICE

11 00 ... Service - Engine Oil (N51)

Special tools required:



WARNING:

Risk of scalding.

Carry out work on the vehicle only when wearing oil- and heat-resistant protective gloves incl. forearm protection, face guard and protective apron.



IMPORTANT:

Carry out the engine oil service only when the engine is at operating temperature.

Observe the exact engine oil filling capacity.

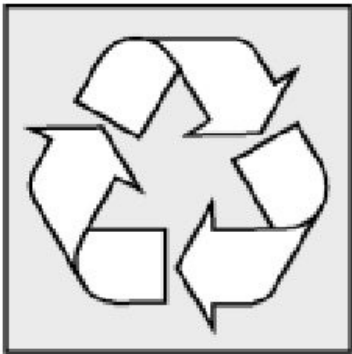
Overfilling the engine with engine oil will result in engine damage.

Checking and drip-off times (at least 10 minutes) must be observed.

Risk of damage.

Protect belt drive against dirt.

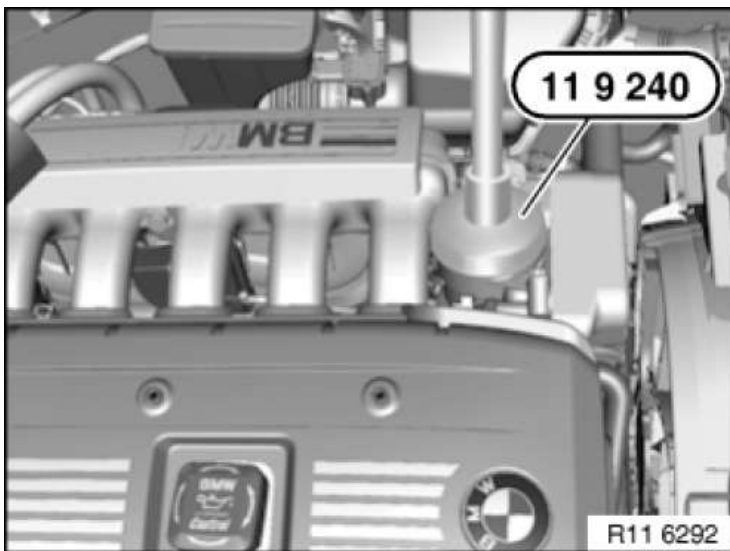
Cover with suitable materials.



Recycling:

Catch and dispose of drained engine oil in a suitable collecting vessel.

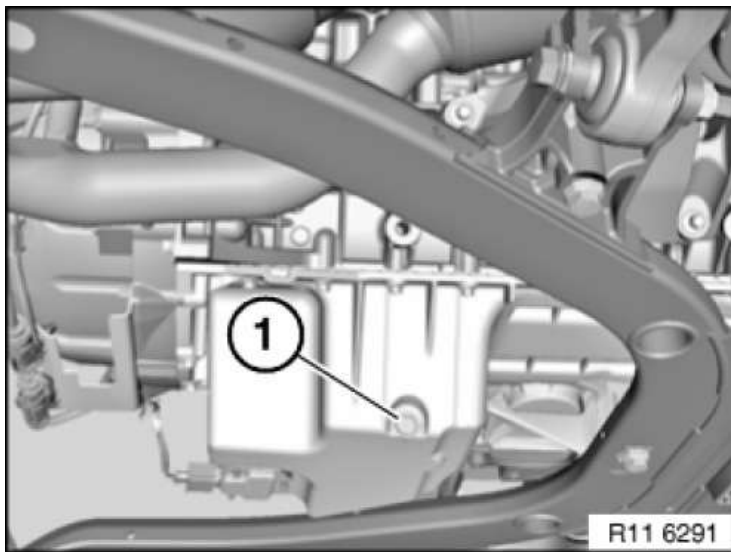
Observe country-specific waste disposal regulations.



Release oil filter cover with special tool 11 9 240.

Tightening torque 11 42 1AZ.

NOTE: Engine oil flows out of the oil filter housing and back into the oil sump.



NOTE: Presentation: without underbody protection or reinforcement plate (AWD = four-wheel drive).

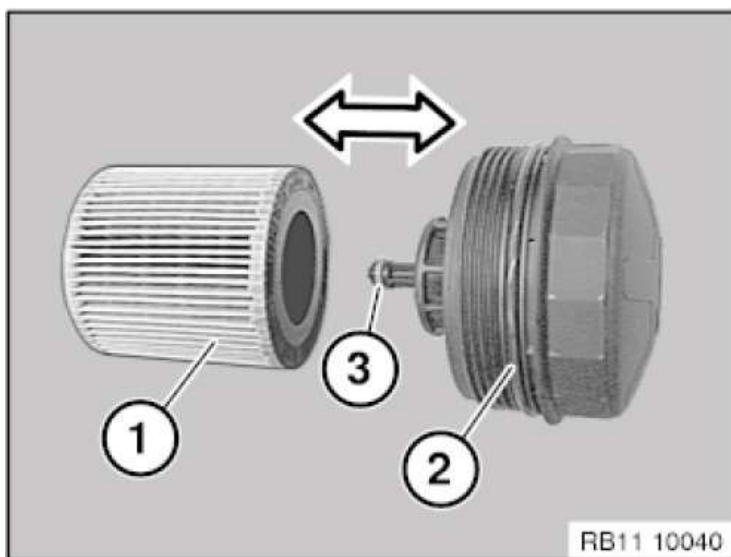
Unclip sensor opening on underbody protection or reinforcement plate.

Remove screw plug (1) from oil sump and drain engine oil.

Tightening torque 11 13 1AZ.

Installation note:

Replace sealing ring.



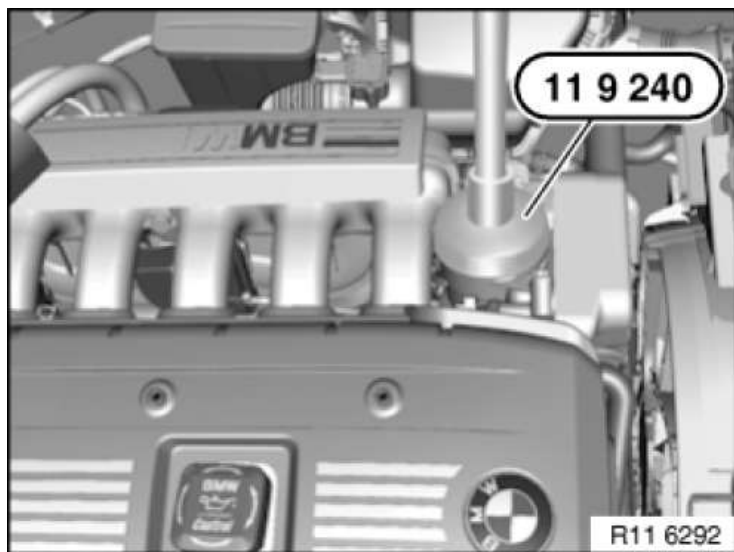
Remove and insert oil filter element (1) in direction of arrow.

Installation note:

Replace oil filter element (1) and sealing ring (2).

Replace gasket (3) and renew if necessary.

NOTE: Moisten sealing ring (2,3) with engine oil.



Secure oil filter cover with special tool 11 9 240.

Tightening torque 11 42 1AZ.

NOTE:

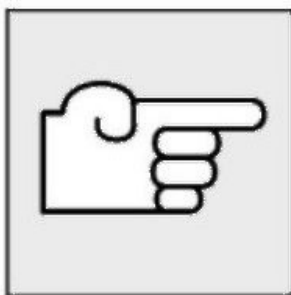
Pour in engine oil.

Start engine and run at idle until oil pressure indicator light goes out.

Switch off engine

Check oil filter cover and screw plug on oil sump for leaks.

Assemble engine.



Checking engine oil level:

- Park vehicle on a horizontal surface
- Allow engine to run at operating temperature for three minutes with increased engine speed (approx. 1100 rpm)
- Read off engine oil level in instrument panel or on Control Display
- Top up engine oil if necessary

11 13 Oil sump

	Type	Thread	Tightening specification	Measure
1AZ Oil drain plug	N51	M12 x 1.5		25 Nm
2AZ Oil sump on engine block Aluminium oil sump Aluminium screws/bolts are permitted with and without colour coding (blue).	N51	M8x26	Replace screws Thread repairs exclusively with Al Helicoil Jointing torque and angle of rotation must be observed without fail. Jointing torque Torque angle	8 Nm 60 °
3AZ Oil sump on engine block Aluminium oil sump Aluminium screws/bolts are permitted with and without colour coding (blue).	N51	M8x92 M8x112	Replace screws Thread repairs exclusively with Al Helicoil Jointing torque and angle of rotation must be observed without fail. Jointing torque Torque angle	8 Nm 180 °
5AZ Oil deflector to crankcase lower section Aluminium screws/bolts are permitted with and without colour coding (blue).	N51	M6x20	Replace screws Thread repairs exclusively with Al Helicoil Jointing torque and angle of rotation must be observed without fail. Jointing torque Torque angle	4 Nm 90 °
6AZ Oil sump on engine block Sheet metal oil sump Aluminium screws/bolts are permitted with and without colour coding (blue).	N51	M8x24	Replace screws Thread repairs exclusively with Al Helicoil Jointing torque and angle of rotation must be observed without fail. Jointing torque Torque angle	8 Nm 90 °
7AZ Oil sump on engine block Aluminium oil sump Aluminium screws/bolts are permitted with and without colour coding (blue). (AWD)	N51	M8x36 M8x44	Replace screws Thread repairs exclusively with Al Helicoil Jointing torque and angle of rotation must be observed without fail. Jointing torque Torque angle	8 Nm 90 °

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11- 42 Oil Filter and Pipes

	Type	Thread	Tightening specification	Measure
1AZ Oil filter cap to oil filter housing	N51			25 Nm
2AZ Oil filter housing to cylinder head	N51	M8x78 M8x48 M8x28		22 Nm
3AZ Oil/water heat exchanger to oil filter housing	N51	M8x20		16 Nm

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11-30 42 Oil Filter and Pipes

	Type	Thread	Tightening specification	Measure
1AZ Oil filter (one-way cartridge) (tightening torque by hand as specified on easy-change filter)				Nm
2AZ Full flow oil filter (cover)		M8		22 Nm
		M10		33 Nm
		M12		33 Nm
Screwed-on cover				25 Nm
3AZ Oil filter housing and lines on crankcase		M8		22 Nm
		M20 x 1.5		40 Nm

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