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TECHNICAL REPORT

Oil pan gasket 14089800 fitting
for BMW engine 204D4 (M47N)



PURPOSE

Instructions for proper **disassembly and assembly of the oil pan gasket** for BMW with engine type 204D4 (M47N). Special features and torques.

DISASSEMBLING

1 Remove the oil pan cover and metal splash shield.

2 Drain engine oil.

3 Disconnect oil level sensor.

4 **Remove oil dipstick guide tube** through the upper bolt and pulling away the guide tube from oil pan.

- The guide tube is sealed in the pan with an O-ring. Replace the O-ring while installing the tube.

5 Install **engine lifting equipment** at front engine lifting point and rise engine approximately 5 mm until engine weight is supported.

6 **Separate steering column** shaft from steering rack.

- Point wheels straight ahead before disconnecting shaft from rack. Mark steering column shaft joint to steering rack spindle.
- In order to avoid the need for front-end realignment, do not unbolt power steering rack from suspension crossmember.

7 **Remove bolts** from left and right sides of suspension crossmember and **remove nuts** from bottom of left and right engine mounts. Lower crossmember as far as possible.

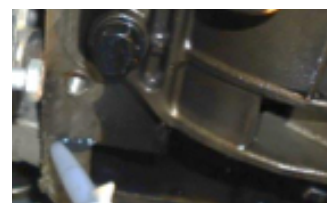
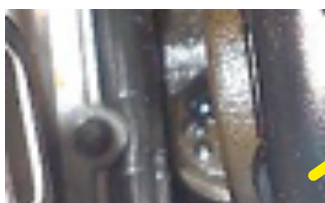
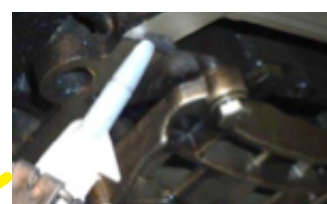
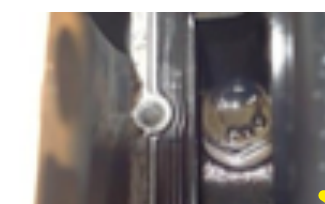
8 Unbolt oil pan screws; remove oil pan and old gasket (replace).

ASSEMBLING

- 1 Clean surfaces before installing the new gasket. Install new gasket.



- 2 Apply sealant (Ajusil) only in the transition zones of the block.



After applying the sealant (Ajusil), match the oil pan to the block before the sealant starts hardening (about 10 min).

- 3** Tighten oil pan bolts following always the torque specifications.



There are three bolts types that require different torques depending on their metric and hardness.

- M6 (8.8) > 1 kpm
- M6 (10.9) > 1.2 kpm
- M8 > 2.2 kpm

- 4** Replace the copper washer of oil drain bolt.



In the oil pan of this engine, we can find various types of drain bolts that require a specific torque according to the metric:

- M12 > 2.5 kpm
- M18 > 3 kpm
- M22 > 6 kpm

- 5 Follow the removal steps in reverse to complete the repair.

COMMENTARY

- The **rubber-metal** gaskets are gaskets with a metal core, well coated with elastomeric or with this material attached to the metal part, in the area to be sealed. In this particular case the **gasket is composed of aluminum with polyacrylic material** in the internal side for the oil pan sealing.

In case of **non-following the specified tightening** torques, we run the risk of applying excessive or insufficient tightening, causing **losses** in case of looseness or **serious damage** to the oil pan or the threads of the block when excessive torque is applied



*Example of **over-tightening** the oil drain bolt causing the crack of the oil pan because it is made in aluminum and leaving it totally unusable.*