

**to fit:**

BMW - 1 series - E81, E82, E87, E88. 3 series – E90, E91, E92, E93. 5 series – E60, E61

Engine: N40 – B16A, N42 – B18A, B20A, N43 – B16A, B16AA, B20A, N45 – B16A, B16AC, B20A, N46 – B18A.



EN

## Oil Filter with seal rings

**Problem**

The engine is very noisy and ‘rattling’ on start-up, with the oil pressure warning light and engine warning lamp illuminated. The engine is in reduced power (“limp home”) mode.

Possible fault code stored in the engine control unit: 30C1 static engine oil pressure control.

**Cause**

The oil filter may have become twisted or broken-up inside the oil filter housing; restricting oil flow.

**Solution**

Firstly, check if the engine oil is at the correct level and adjust if necessary. Subject to the oil level being correct, carry out a diagnostic test (using a suitable diagnostic tool) to check for fault codes and the pressure of the engine oil. The oil pressure can also be checked at the oil filter housing – using a suitable, external oil pressure gauge. The minimum oil pressure at idle is 1.5 bar (22 PSi) at normal operating temperature.

If the oil pressure is found to be below 1.5 bar (22 PSi), drain the engine oil and remove the oil filter. Inspect the oil filter element to check if it is twisted and broken-up inside the oil filter housing. If it is, you will need to replace the engine oil and filter, and re-test.

If the oil filter element is complete, replace with a new oil filter – refilling it with the correct grade and quantity of engine oil. Clear the fault codes and re-test. If the problem is still apparent, further investigation of the oil pressure control valve, oil pump and timing chain tensioner and guides will be required.

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