

Service Bulletin

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BMW Motorcycles

Subject: Checking engine oil level - All 4V opposed twin models.

Operating Manager
Sales Department
Accessory Department
Parts Department
Service Department

Details: Engines of the 4V opposed-twin models are often overfilled with oil due to an incorrect reading of the oil level.

If the oil level is above the permitted maximum there is an increased escape of engine oil through the crankcase breather to the intake silencer. Under these circumstances, a customer might complain about "oil consumption" and/or "blue smoke in the exhaust."

Service Measures: Check the engine oil level as described in the current rider's manuals and as detailed below:

1) Check the oil level **only with the engine at its normal operating temperature.** Normal operating temperature means **a minimum oil temperature of 95°C (203° F)** or, in the case of motorcycles manufactured as of December 1997, the temperature at which the oil thermostat starts to open, as indicated by heat build up in the oil cooler.

2) After switching off the engine, wait at least 5 minutes before checking the engine oil level. Less than 5 minutes and the oil will not have adequate time to fully drain into the sump.

3) The motorcycle must be **upright** and standing on a **level**, firm **surface**.

Details: Factors that frequently make the oil level appear too low:

1) Checking the engine oil level with the engine cold and when the ambient temperature is low.

At an ambient temperature/engine temperature of minus 10°C (14°F), the oil level is about 10 mm lower than at operating temperature. This is due to the different coefficients of thermal expansion of engine oil and materials of the engine as well as the gas solubility of oil, which in turn is influenced by other factors.

Important Note: The red ring of the oil sight glass has a diameter of 25 mm and this corresponds to a difference of approximately 0.5 litre in the quantity of oil in the engine. An oil level found to be midway up the sight glass when the oil is checked at operating temperature can drop to "minimum" when the oil is checked again at a very low temperature.



Details: 2) Checking the oil level after the engine has run for no more than a short time. This includes, for example, riding the motorcycle out of the garage and onto the driveway.

The cold, viscous engine oil is distributed through the engine and in some instances can take several hours to drain back into the sump.

Important Note: Each retailer is requested, from both the new motorcycle sales floor and the workshop, to explain this procedure and contributing factors, to each customer.



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