

Service-Information Motorcycle



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Service Department

Group: 11

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(2416)

For USA Only

Engine

Oil Consumption

Basis: The following conditions should be closely adhered to in order to determine if oil consumption exists:

1. The engine must not be leaking.
2. Check the oil level every second time the motorcycle is refueled (after approx. 300 miles).
3. Do not add oil until the minimum mark on the dipstick on flat-twin models or at the bottom of the circle on K models is reached.

Do not screw in the oil dipstick when measuring.

4. Position the motorcycle upright.
5. After switching off the engine, wait for approx. 5 minutes until the oil in the engine has returned to the sump.
6. Add no more than 1 pint. Too much oil results in higher oil consumption at high engine speeds via the crankcase breather, and on flat-twin models power is also lost as a result of the crankshaft churning in oil.

Important: The piston rings in the cylinder bores are only broken in and an optimum sealing effect achieved after a minimum of 5,000 miles.

Only when this stage is reached is it usually advisable to measure the oil consumption.

Calculation of Oil Consumption: Oil consumption can only be estimated roughly with the oil dipstick or at the window. The only precise method is proper measuring or weighing of the initial and residual oil content (see Attachment #1 for procedure).

Causes of High Oil Consumption:

1. Flat-Twin Engine

If the piston rings and crankcase breather are in order, worn valve guides can be the source of the fault.

Please initial and route to the following before filing				
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The degree of wear can be calculated by measuring lateral valve play. The measuring method is described exactly in Attachment #2. If play exceeds 0.7 mm, new valve guides should be fitted.

We will supply information on reaming out and using oversize valves as soon as the appropriate valves and tools are available.

2. **K Engines:**

- Piston rings with a defective surface may have been fitted to a limited number of motorcycles. If so, oil consumption may be excessively high.
- Another explanation can be a defect in the coating of the cylinder bore. When the engine has operated for approx. 6,500 miles, traces of honing are no longer visible on the cylinder coating (in defective cylinders) at the piston top and bottom dead centers. The coating has been rubbed shiny at these points. In cases of doubt, obtain the advice of your Technical Services Manager. This possible defect has since been rectified in the production process.

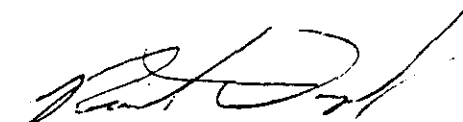
A three-figure number is stamped on the front right-hand mounting eye of the engine block. Only engine casings bearing numbers below 593 may be affected by the defect.

Very truly yours,

BMW of North America, Inc.



Frank Stevens
National Service Manager
Motorcycle Group



Richard Dampf
National Technical Manager

FS:jel/334.18

Attachment #1

Measuring Procedure for Calculation of Oil Consumption:

- Drain off engine oil while the engine is warm.
- Allow 10 minutes for complete drainage.
- Add the specified amount of the correct SAE oil grade (without filter).
- Use the motorcycle for 600 miles.
- Drain off engine oil while the engine is warm.
- Allow 10 minutes for complete drainage.
- Measure the amount of oil drained off in a suitable measuring container.

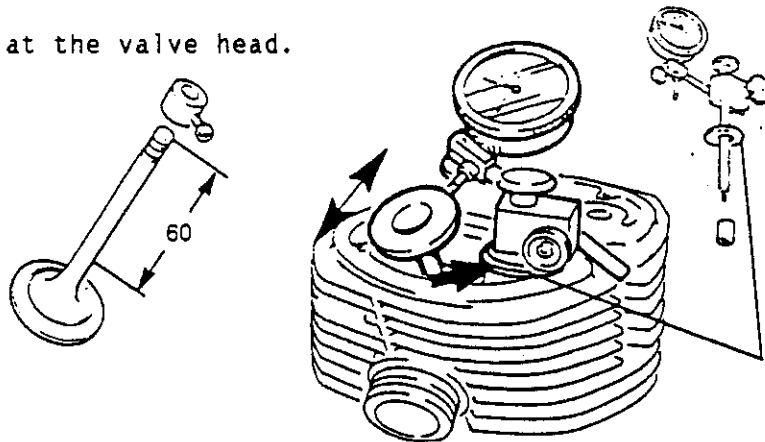
Calculation of Oil Consumption:

Amount of oil added minus amount of oil drained off = oil consumption

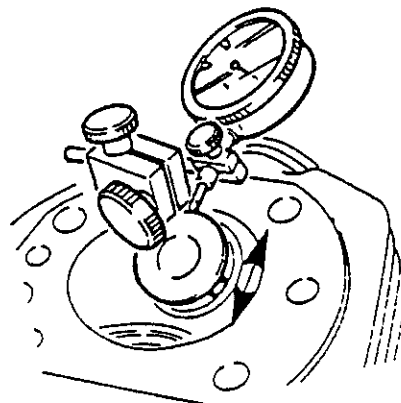
Attachment #2

Measuring Process for Lateral Valve Play:

- Remove cylinder head and strip down.
- Fit an adjustable ring (pictured) to the valve shaft 60 mm from the end. A small O-ring can also be used, or if unavailable simply mark with a felt pen.
- Fit the measuring gauge stand together with a shim of at least 4 mm.
- Insert the valve in the guide and place the measuring gauge tip on the valve head.
- Measure lateral play at the valve head.



- Reverse the cylinder head and carry out the same measurement for the combustion chamber end.



- Take the measurement at right angles to the rocker arm shafts, as the most wear is incurred in this direction.

Assessment:

If lateral play of more than 0.7 mm is recorded at any one measuring point, a new valve guide should be fitted or the guide must be reamed out to fit an oversize valve stem.