



# AVIATION TECHNICAL BULLETIN

Champion Spark Plug Company

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## HOW'S YOUR OIL CONSUMPTION?

How many times have you seen the lowly spark plug blamed for causing a rough engine because it became oil fouled? *Actually, a spark plug of proper heat range that fouls with oil is a valuable clue to impending trouble within the engine.* An oil fouled spark plug is generally the result of a problem and not the cause.

When a spark plug persistently oil fouls, a check of engine condition is in order. First, we must determine which cylinder or cylinders are giving trouble. The spark plugs can be the easiest and quickest means of identification. Black, shiny wet deposits on the firing end are a sure clue to excess oil present in that cylinder. Installing a "Hotter" spark plug may correct the engine misfiring but will not correct the oil consumption and could mask trouble that might end in cylinder or engine failure. Any abnormal rise in oil consumption is also a warning that requires investigation.

A gradual increase in oil consumption may occur as engine time accumulates and there is normal wear of the piston rings, valve guides, and valve stems. Equal but lower than normal compression in the cylinders may be noted. Depending on the engine time, a "Top" or a "Major" may be required to restore full power to the engine.

A rapid increase in oil consumption may be the result of broken piston rings, a scored or scuffed cylinder or piston or valve stem/valve guide wear condition. A compression check of the cylinders will usually show low compression if the trouble is in the piston, rings or cylinder wall, but will not always show a defective valve stem or guide.

Excess oil out the breather pipe is also another indication of piston, rings, or cylinder wall problems while a wet exhaust pipe could mean valve guide or stem problems as well.

In supercharged or turbocharged engines, another source of oil consumption is the supercharger impeller shaft seals or turbocharger turbine/impeller shaft seals.

REGARD AN OIL FOULED SPARK PLUG AS A WARNING OF POSSIBLE TROUBLE - FIND THE CAUSE AND APPLY CORRECTIONS.

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*first choice for dependable engine performance*