AVIATION TECHNICAL BULLETIN

Champion Spark Plug Company

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ROUTE TO	
SERVICE MANAGER	
SALES MANAGER	
BULLETIN BOARD	

THE PILOT AND PLUG FOULING

If engine operating conditions allow the plugs to become coated with fouling deposits there will be electrical leakage through these deposits. This decreases the voltage available to spark the gap, causing misfiring, power loss and excessive fuel consumption.

Combustion chamber fouling deposits are kept to a minimum even with highly leaded 100 octane areas by pilots who practice the following good engine operating procedures.

1. Keep engine temperatures warm enough to insure fuel vaporization and good fuel distribution. Don't be satisfied with any temperature within the green operating range. CHT of 370-380°F and oil temperatures of 175-180°F are recommended.

2. Part throttle operation is far more critical than full throttle operation. When selecting power setting alternatives, using a higher RPM is recommended for a given power setting.

3. Combustion chamber cleanliness is almost directly proportionate to the fuel air ratio at idle, take-off, climb, cruising and descent. The correct fuel air ratio with proper vaporization produces complete combustion and in turn leaves little if any residues in the combustion chamber. The fixed carburetion at idle and take-off must be correct and more importantly the variable mixture strength must be adjusted by the pilot for clean combustion at climb, cruising and descent.

4. Premature plug fouling means dirty combustion resulting from highly leaded fuels, low engine temperature, extended low engine power operation, and/or moderately low RPM usage and richer mixtures than recommended for the most efficient and cleanest combustion.

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