Spark Plug Information

Service Bulletin Number: SB-005

**Subject:** Cautions against excessive use of thread lubricant.

**Background:** If anti-seize material gets onto the electrodes of the spark plug it can cause misfiring. Some anti-seize compounds contain metals suspended in grease or oil. If introduced into the combustion chamber the carrier material burns away or, alternatively, is deposited on the firing end of the spark plug along with metallic particles. The metallic particles provide a path to ground for the spark. Metallic particles in the gap area effectively reduce the gap. Although the plug may fire, the spark may not be powerful enough to ignite the fuel.

**Corrective Action:** Graphite based thread lubricant/anti-seize is preferred. Regardless of what type anti-seize is used, Do Not apply it to the first thread on the spark plug. Apply the anti-seize sparingly, starting at the second thread and thence towards the spark plug gasket surface (see Figure 1). Make sure no anti-seize is on the firing end of the spark plug and that no anti-seize enters the cylinder. The photos (Figures 2 thru 4) attached show the residue from a copper containing anti-seize material. It contaminated the spark plugs and caused them to misfire. After cleaning, the plugs performed normally.

Run the piston to the top of its stroke in each cylinder. With both spark plugs removed from the cylinder, use shop air to alternately blow through the top and bottom plug holes to clear away carbon particles broken free when the spark plugs were removed. Proceed with spark plug installation in accordance with spark plug and aircraft/engine instructions manual.
DO NOT APPLY ANTI-SEIZE TO THE FIRST THREAD ON THE SPARK PLUG

APPLY ANTI-SEIZE STARTING AT THE SECOND THREAD TOWARDS THE SPARK PLUG GASKET SURFACE

FIGURE 1
ANTI-SEIZE APPLICATION

FIGURE 2
COPPER DEPOSITS ON ELECTRODES

FIGURE 3
COPPER PARTICLES IN GAP

FIGURE 4
COPPER DEPOSITS ON ELECTRODES

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