

**SERVICE BULLETIN**

**SB653**

**Compliance Will Enhance Safety**

**FAA APPROVED**

**SUBJECT:** HOT MAGNETO TEST

**PURPOSE:** To provide test procedure to ensure the integrity of the magneto grounding circuit.

**EQUIPMENT**

**AFFECTED:** All ignition systems utilizing TCM or Bendix magnetos and/or ignition switches on all aircraft types.

**GENERAL INFORMATION:**

Magneto ignition systems must be tested in the following manner to ensure magnetos are grounded after engine shutdown in order to avoid engine ignition from movement of the propeller.

**DETAILED INSTRUCTIONS:**

1. Prior to engine shut-down, and prior to performing any maintenance on the engine, perform the Magneto RPM drop-off Test as detailed in the Pilot's Operating Handbook (Normally found under Preflight Engine Run-Up Procedures).
2. If no RPM drop is noted when a magneto is individually selected, either the magneto selected is timed far in advance of the magneto, or a discontinuity exists between the other magneto primary circuit and airframe ground. Either condition must be remedied before further flight and before moving the propeller by hand.
3. Stop the engine using normal procedures as detailed in the Pilot's Operating Handbook.

**WARNING**

**THE ENGINE MAY INADVERTENTLY EXPERIENCE IGNITION OR START-UP ANY TIME THE PROPELLER IS MOVED. INJURY, DEATH OR DAMAGE TO PROPERTY MAY RESULT.**

4. If there is evidence of discontinuity in the magneto grounding circuit, inspect circuit connections for cleanliness and tightness, inspect wire and fed-through capacitors (whether mounted inside or outside the magneto) for continuity, and inspect switch (es) for correct electrical operation. Repair or replace malfunctioning parts as necessary as specified in the appropriate service manual.

**NOTE . . .** Do not use an ohmmeter or continuity tester to troubleshoot the magneto grounding circuit with the magneto connected, as false continuity to ground will be read through the points or coil primary windings. Instead, position the magneto shaft so that the points are open, and use a magneto timing light to troubleshoot the magneto grounding circuit with the magneto connected.

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