AIRWORTHINESS DIRECTIVE

On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/ELECT/75 and issues the following AD under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Electrical Equipment

AD/ELECT/75 TCM Magneto Impulse Coupling 9/2005 Amdt 1

Applicability: Teledyne Continental Motors (TCM) (formerly Bendix) magnetos that have a magneto part number (P/N) listed in Table 1, installed on Lycoming AEIO-540, HIO-540, IO-540, O-540 and TIO-540 series engines:

Table 1

P/N	Model	P/N	Model
10-51365-32	S6LN-21	10-79020-18	S6LN-25
10-51365-34	S6RN-21	10-79020-19	S6RN-25
10-51365-35	S6RN-21	10-79020-118	S6LN-25P
10-51365-39	S6LN-21	10-79020-119	S6RN-25P
10-51365-40	S6LN-21	10-500556-101	S6RSC-25P
10-51365-43	S6LN-21	10-500556-901	S6RSC-25P
10-51365-47	S6RN-21	10-349350-4	S6RN-1225
10-51365-48	S6RN-21	10-349350-5	S6RN-1225
10-51365-54	S6LN-21	10-349350-6	S6LN-1225
10-51365-57	S6LN-21	10-349350-7	S6LN-1225
10-52350-19	S6RN-23	10-349370-4	S6LN-1227
10-52350-20	S6LN-23	10-382560-11	D6LN-2031
10-79020-6	S6LN-25	10-382560-13	D6LN-2031
10-79020-10	S6RN-25	10-682560-11	D6LN-3000
10-79020-11	S6LN-25	10-682560-13	D6LN-3000
10-79020-16	S6LN-25	10-682560-131	D6LN-3000
10-79020-17	S6LN-25		

Note 1: Table 1 is a partial reproduction of Table 1 from TCM Mandatory Service Bulletin (MSB) MSB645, dated 4 April 1994.

Note 2: Lycoming AEIO- 540, HIO-540, IO-540, 0-540 and TIO-540 series engines are known to be installed on, but not limited to, aircraft manufactured by the Cessna Aircraft Company, Maule Aerospace Technology Corporation, Mooney Aircraft Corporation, The New Piper Aircraft Inc. and Raytheon Aircraft Company (Formerly Beech Aircraft Company).

Requirement:

1. Inspect the impulse coupling assembly for wear using paragraphs 1.2 through 1.4.5 of the Detailed Instructions of TCM MSB645.

Electrical Equipment

AD/ELECT/75 Amdt 1 (continued)

Installing a "Shower-of-Sparks" ignition system in place of a magneto system that has a riveted-impulse coupling assembly or a snap-ring impulse coupling assembly is optional terminating action for the repetitive inspection requirements. More information on installing a "Shower-of-Sparks" ignition system may be found in TCM Service Information Letter SIL648, dated 18 October 1994.

2. Replace any impulse coupling assembly that fails the inspection with a serviceable riveted or snap-ring impulse coupling assembly. Paragraphs 2 through 2.6 of the Detailed Instructions of TCM MSB645 and TCM Service Bulletin 639 dated March 1993 contain information on replacing the impulse coupling assembly.

3. If a snap-ring impulse coupling assembly is replaced with a riveted impulse coupling assembly, strike out the "A" on the magneto data plate.

Note 3: FAA AD 2005-12-06 Amdt 39-14122 refers.

Compliance: For Requirement 1 -

a. **Magnetos that have not previously been inspected -** Initially as specified in Table 2 and thereafter as specified in Table 3.

Table 2

Type of Impulse Coupling Assembly	Impulse Coupling Time in Service (TIS) as of the Effective Date of this Directive	Inspect
Riveted	100 or more hours time since new or overhaul (TSN) or TSN is unknown. Fewer than 100 hours TSN.	Within 10 hours TIS after the effective date of the original issue of this Directive. Before accumulating 100 hours TSN.
Snap-ring	450 or more hours TSN. Fewer than 450 hours TSN.	Within 50 hours TIS after the effective date of the original issue of this Directive. Before accumulating 500 hours TSN.

Note 4: Previous inspections may have been accomplished in accordance with AD/ELECT/68 (FAA AD 96-12-07).

b. **Magnetos that have previously been inspected -** Repeat the inspections as specified in Table 3.

Electrical Equipment

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Table 3

Type of Impulse Coupling Assembly	Inspect
Riveted	Within 100 hours time since the last inspection.
Snap-ring	Within 500 hours time since the last inspection.

For Requirement 2 - Before further flight after the Requirement 1 inspection.

For Requirement 3 - Before further flight after the snap-ring impulse coupling assembly is replaced.

This Amendment becomes effective on 1 September 2005.

Background: This Directive supersedes AD/ELECT/68 which will be cancelled. AD/ELECT/68 required repetitive inspections of riveted and snap-ring impulse coupling assemblies and, if necessary, their replacement when they were worn beyond limits.

This Directive requires a reduced inspection interval for magnetos with riveted impulse coupling assemblies installed on certain Lycoming engine models. The Directive does not lower the inspection interval for magnetos with snap-ring impulse coupling assemblies. The Directive also limits the applicability to certain Lycoming engine models. These actions result from data provided by the manufacturer to the United States Federal Aviation Administration that showed a need to reduce the inspection intervals for riveted-impulse coupling assemblies used on certain Lycoming engine models.

Note 5: Teledyne Continental Ignitions Systems Service Bulletin SB643B dated 6 April 2005 provides the manufacturer recommended periods for inspection/overhaul for TCM magnetos installed on engine types that are not specifically referenced in this Amendment. Inspection periods specified in this Amendment supersede those in SB643B.

The original issue of this Directive was issued to aid in the prevention of failure of the magneto impulse coupling assembly and possible engine failure.

This Amendment continues the requirements of the original issue but corrects Table 1 by limiting the listing to magnetos installed on the specified Lycoming engines and adds a note in the background indicating where the manufacturer's recommended maintenance intervals may be found.

Electrical Equipment

AD/ELECT/75 Amdt 1 (continued)

The original issue of this Directive became effective on 19 July 2005.

David Villiers
Delegate of the Civil Aviation Safety Authority

22 July 2005