Single Engine

Service Bulletin

June 25, 1993

TITLE
MAGNETO IMPULSE COUPLING INSTALLATION PROCEDURES

EFFECTIVITY

The following Cessna and Reims Aviation airplanes equipped with Teledyne Continental Motors/Bendix S-20, S-1200, D-2000, or D-3000 series magnetos and affected by Teledyne Continental Motors (TCM) Service Bulletin M93-10 and/or TCM Ignition Systems Service Bulletin No. 639 (or later revisions).

<table>
<thead>
<tr>
<th>Models</th>
<th>Year</th>
<th>Serial Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>All 100 Series</td>
<td>1946 thru 1986</td>
<td>All Serial Numbers</td>
</tr>
<tr>
<td>All 200 Series</td>
<td>1960 thru 1986</td>
<td>All Serial Numbers</td>
</tr>
</tbody>
</table>

NOTE: All airplanes were not equipped from the factory with TCM/Bendix magnetos. More than 70,000 airplanes were delivered with Slick magnetos. However, these airplanes may have subsequently been retrofitted with TCM/Bendix magnetos (reference Cessna Single Engine Service Bulletin SEB90-4, TCM Engine Ignition System Installation, which identifies airplanes originally equipped with Slick magnetos).

PURPOSE

To transmit TCM Service Bulletin M93-10 and TCM Ignition Systems Service Bulletin No. 639, Proper Installation Of Impulse Couplings. TCM Service Bulletin M93-10 and TCM Ignition Systems Service Bulletin No. 639 provide the proper magneto impulse coupling installation procedures. According to TCM; “Field reports indicate there have been instances in which the impulse coupling cam assemblies have cracked upon installation” and “cracking can be caused by improper installation procedures which may result in coupling assembly damage or potential engine failure”.

COMPLIANCE

Mandatory, as specified in TCM Service Bulletin M93-10 (or later revision) and/or TCM Ignition Systems Service Bulletin No. 639 (or later revision).

APPROVAL

Refer to TCM Service Bulletin M93-10 (or later revision) and/or TCM Ignition Systems Service Bulletin No. 639 (or later revision).

To obtain satisfactory results, procedures specified in this publication must be accomplished in accordance with accepted methods and prevailing government regulations. The Cessna Aircraft Company cannot be responsible for the quality of work performed in accomplishing the requirements of this publication.

The Cessna Aircraft Company, Product Support, P.O. Box 7706, Wichita, Kansas 67277, U.S.A. (316) 941-7550, Facsimile (316) 942-9006

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MAN-HOURS
Not determined.

MATERIAL

The following parts are available from Cessna Parts Distribution thru an appropriate Cessna Service Station for the suggested list price shown.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Qty./Airplane</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>646943</td>
<td>Antiseize</td>
<td>As Required</td>
<td>$ 8.53 (TI) ea.</td>
</tr>
</tbody>
</table>

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

ACCOMPLISHMENT INSTRUCTIONS

Refer to the attached TCM Service Bulletin M93-10 (or later revision) and TCM Ignition Systems Service Bulletin No. 639 (or later revision) for magneto impulse coupling installation procedures.

CREDIT

Not applicable.

OWNER NOTIFICATION

On June 25, 1993 the following Owner Advisory message will be sent to applicable owners of record in SEB93-6A.

Dear Cessna Owner,

The following applies to your airplane if it is equipped with a Teledyne Continental Motors/Bendix S-20, S-1200, D-2000, or D-3000 series magnetos. TCM Service Bulletin M93-10 transmits TCM Ignition Systems Service Bulletin No. 639, Proper Installation Of Impulse Couplings. According to TCM; “Field reports indicate there have been instances in which the impulse coupling cam assemblies have cracked upon installation” and “cracking can be caused by improper installation procedures which may result in coupling assembly damage or potential engine failure”.

Compliance is mandatory; shall be accomplished at time of installation of any Bendix/TCM impulse coupling assembly per TCM Service Bulletins M93-10 and/or TCM Ignition Systems Service Bulletin No. 639 (or later revisions).

Please contact a Cessna Single Engine Service Station for detailed information.

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TELEDYNE CONTINENTAL® AIRCRAFT ENGINE

service bulletin

1 March 1993

SUBJECT: TCM IGNITION SYSTEMS SERVICE BULLETIN NO. 639

MODELS

AFFECTED: All models that utilize TCM/Bendix magnetos with impulse couplings.

COMPLIANCE: See TCM Ignition Systems Service Bulletin No. 639

Teledyne Continental Motors requires that the attached TCM Ignition Systems Service Bulletin No. 639 be complied with as indicated.
SUBJECT: Proper installation of impulse couplings.

REASON FOR BULLETIN: To modify, confirm and stress the importance of proper installation procedures of impulse coupling assemblies.

EQUIPMENT AFFECTED: All TCM & Bendix S-20, S-1200, D-2000 and D-3000 series magnetos with impulse couplings as installed on TCM, Lycoming, Franklin and other manufacturer's engines.

COMPLIANCE: MANDATORY AT TIME OF INSTALLATION OF ANY BENDIX/TCM IMPULSE COUPLING ASSEMBLY.

General Information:

Field reports indicate that there have been instances in which the impulse coupling cam assemblies have cracked upon installation. See Figure 1. Cracking can be caused by improper installation procedures which may result in coupling assembly damage or potential engine failure.

Detailed Instructions:

The following instructions pertain to installation of new impulse coupling assemblies as well as those that are being reinstalled after scheduled magneto maintenance.

1. Clean impulse coupling assembly and magneto drive shaft using standard cleaning solvent.

2. Apply a light coating of TCM P/N 646943 anti-seize lubricant to the tapered section of the magneto drive shaft. This prevents seizure of the cam assembly to the shaft and avoids damage during disassembly. Do not apply lubricant to shaft or nut threads. See Figure 2.

3. Install woodruff key in tapered portion of the shaft. Install coupling assembly, washer(s) and thread nut onto shaft. Use approved hardware specified in the appropriate TCM Ignition Systems parts manual.

WARNING... Use of unapproved hardware and/or lubrication of threads will produce inaccurate torque values and increased stress on the impulse coupling during assembly.

4. Using a calibrated torque wrench, tighten nut to 180 in-lbs. Install and secure new cotter pin. If unable to install pin, increase torque gradually to align the first available slot in the castellated nut.

WARNING... Under no circumstances should you exceed 300 in-lbs. torque. Any impulse coupling that is damaged in any way during installation must be replaced.

The preceding information will be incorporated into the next revision of the TCM Master Service Manual form No. X40000.

(continued)
TCM IGNITION SYSTEMS

SERVICE BULLETIN NO. 639

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Engineering Portions are FAA Approved

FIGURE 1

TYPICAL CRACK
(EITHER CORNER OF KEYWAY)

FIGURE 2
Apply P/N 646943 Anti Seize Lubricant to Magneto Shaft