

**SERVICE BULLETIN NO.639**

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<b>SUBJECT:</b>	Proper installation of impulse couplings
<b>REASON FOR BULLETIN:</b>	To modify, confirm and stress the importance of proper installation procedures of impulse coupling assemblies
<b>EQUIPMENT AFFECTED:</b>	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.
<b>COMPLIANCE:</b>	<b>MANDATORY AT TIME OF INSTALLATION OF ANY BENDIX/TCM IMPULSE COUPLING ASSEMBLY</b>

**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 and secure new cotter 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)

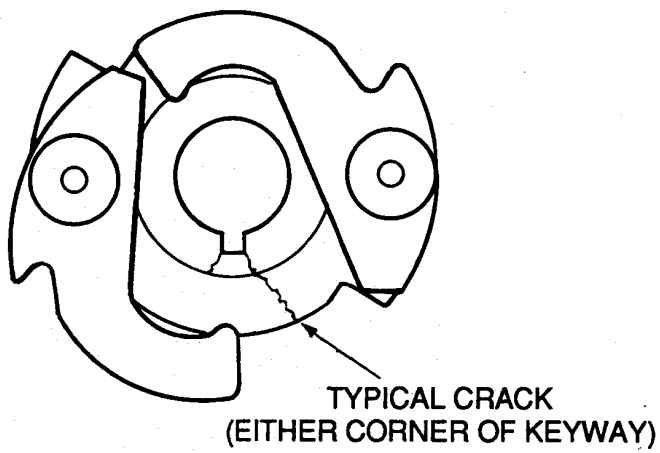
# TCM IGNITION SYSTEMS

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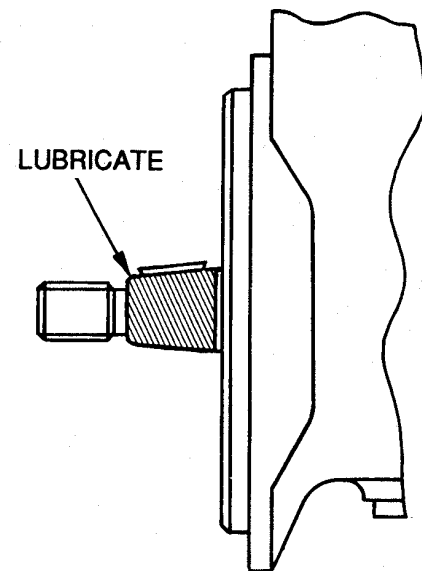
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**FIGURE 1**



**FIGURE 2**

**Apply P/N 646943 Anti Seize  
Lubricant to Magneto Shaft**