

Service Bulletin

TO: Aircraft manufacturers, distributors, dealers, engine overhaul facilities, owners and operators of Slick magnetos.

SUBJECT: Mandatory replacement of magnetos on certain 6-cylinder Teledyne Continental Motors engines, including like versions built under license by Rolls-Royce.

BACKGROUND INFORMATION:

There has been an incident in which the impulse coupling stop pin migrated out of the magneto frame of a Slick 6314 magneto. The stop pin entered the gear train of the engine, resulting in damage to the gear train and engine accessories.

Although an investigation is underway to determine the reason for the loose stop pin, data indicates that the condition is limited to a specific range of magneto model and serial numbers produced during November and December 1999.

This bulletin has been updated to replace all references to Unison Industries with Champion Aerospace.

COMPLIANCE: Effective immediately, and prior to further flight, operators of Teledyne Continental Motors C-125, C-145, O-300, IO-360, TSIO-360, and LTSIO-520-AE engines, and like versions built under license by Rolls-Royce, are required to determine if their engines are equipped with Slick 6314, 6324, or 6364 magnetos from the affected serial number range.

If it is determined that the engine is equipped with magnetos from the affected serial number range, then the aircraft is prohibited from further flight until the magnetos have been replaced with units that have serial numbers outside of the affected range.

PROOF OF COMPLIANCE: Appropriate logbook entries.

PARTS REQUIRED PER BULLETIN: Replace magnetos as required.

TOOLS REQUIRED PER BULLETIN: Standard shop tools.
Slick Master Service Manual F-1100.

WEIGHT CHANGE: None.

MAGNETO MODELS AFFECTED: Model 6314, 6324, and 6364 magnetos manufactured during November and December 1999 within the following serial number range: 99110001 thru 99129999

ENGINE MODELS AFFECTED: Teledyne Continental Motors, including like versions built under license by Rolls-Royce:
C-125 - All Models
C-145 - All Models
O-300 - All Models
IO-360 - All Models
TSIO-360 - All Models
LTSIO-520-AE - All Models

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DETAILED INSTRUCTIONS:

- A. Locate magneto serial number on magneto dataplate. If magneto serial number is determined to be within the range specified in this bulletin, remove the magneto from engine in accordance with the latest revision of the engine manufacturer's manuals.
- B. Inspect the magneto to confirm that the stop pin is present in the magneto frame. View the drive end of the magneto where the impulse coupling is attached and position the magneto as detailed in Figure 1. The magneto stop pin should be located at approximately the 8 o'clock position. Only one stop pin is installed in the magneto and the hole in the magneto frame located at the 4 o'clock position should be open.

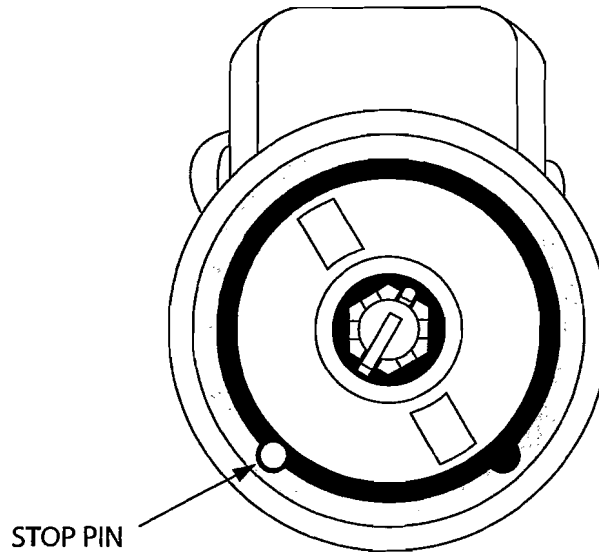


FIGURE 1

- C. If the stop pin is present in the magneto frame, replace the magneto with a new or serviceable unit. If the magneto stop pin is not present in the magneto frame, proceed as detailed in step D or E.
- D. C-125, C-145, O-300, IO-360, and TSIO-360 engines:

NOTE: Conduct the following inspection in accordance with the latest revision of the engine manufacturer's overhaul manuals and inspection procedures.

1. Remove both magnetos, alternator or generator and starter adapter from the accessory case.
2. Visually inspect the entire engine gear train for damaged or broken gears and gear teeth.
3. Inspect the visible portions of the engine crankcase and accessory case for damage due to the stop pin becoming lodged between the gear train, crankcase or accessory case.

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4. Inspect oil pump drive gear teeth and inner cam gear teeth for damage.
5. Recover the stop pin from the engine
6. Replace any engine drive train component that has incurred damage. If a gear is found to be damaged and replaced, the mating gears must be removed and magnafluxed in accordance with the applicable engine overhaul manual.
7. If the accessory case is damaged, repair or replace the accessory case. If the engine crankcase is damaged a complete engine disassembly will be required to repair or replace the crankcase.

E. LTSIO-520-AE engines:

NOTE: Conduct the following inspection in accordance with the latest revision of the engine manufacturer's overhaul manuals and inspection procedures.

1. Remove both magnetos, starter adapter, fuel pump, vacuum pumps and accessory drive pads.
2. Visually inspect the entire engine gear train for damaged or broken gears and gear teeth.
3. Inspect the visible portions of the engine crankcase and accessory case for damage due to the stop pin becoming lodged between the gear train, crankcase or accessory case.
4. Inspect oil pump drive gear teeth and inner cam gear teeth for damage.
5. Recover the stop pin from the engine
6. Replace any engine drive train component that has incurred damage. If a gear is found to be damaged and replaced, the mating gears must be removed and magnafluxed in accordance with the applicable engine overhaul manual.
7. If the accessory case is damaged, repair or replace the accessory case. If the engine crankcase is damaged a complete engine disassembly will be required to repair or replace the crankcase.

WARRANTY INFORMATION:

A. Magneto replacement only:

1. For new or overhauled TCM engine within warranty, submit a warranty claim with a TCM distributor.
2. For magnetos purchased through aftermarket distribution sources or supplied on field overhauled engines, submit a warranty claim through an authorized Champion distributor of Slick magnetos.

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B. Engine inspection and repair only:

1. For new or factory overhauled TCM engines within warranty, submit a warranty claim with a TCM distributor.
2. For TCM engines that are out of warranty or have been field overhauled, contact the Champion Aerospace Customer Service Department at 904-772-1909 prior to submitting a warranty claim.

LABOR ALLOWANCE:

- A. For new or overhauled TCM factory engines within warranty, standard warranty labor rates will be honored. Warranty claims for labor must be filed with a TCM distributor.
- B. For magnetos purchased through aftermarket distribution sources or supplied on non-factory overhauled engines, Champion will allow for the following:
 1. Removal/replacement of each magneto on a non-turbocharged engine- 1.5 hours posted shop rate.
 2. Removal/replacement of each magneto on a turbocharged engine- 2 hours posted shop rate.
 3. Warranty claims for labor must be filed with a Champion distributor of Slick magnetos. None

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