

SERVICE BULLETIN 215C

August 1, 2000

TO: FAA-Approved Propeller Repair Stations

SUBJECT: Governors Exposed to Propeller Blade Strike, Propeller/Engine Lightning Strike, Engine Detonation, Oil Contamination, or Sudden Engine Stoppage

MODEL AFFECTED: All McCauley Governors

SERVICE MANUAL AFFECTED: 780401

This service information is to be added to the appropriate McCauley Service Manual until the next manual revision is issued.

Service Bulletin 215C replaces Service Bulletin 215B dated April 22, 1997. Revisions include new definitions for blade strike and engine stoppage. Lines in the margins indicate changes.

In response to inquiries from the field, McCauley has now established inspection criteria for governors following any one of the occurrences listed below.

Section 1 - Definitions

COMPLIANCE: Any governor exposed to propeller blade strike, propeller and/or engine lightning strike, engine detonation, oil contamination or sudden engine stoppage must not be returned to service as is. It must be repaired/overhauled as defined in Section 2.

Propeller Blade Strike: Blade strike, sometimes referred to as "ground strike," is defined as any impact or suspected impact of the rotating propeller upon such items as, but not limited to, the ground, tow bars, landing lights, carts, snow banks, hedges, etc. Please note the above definition is intended for use as example only. Determination as to whether or not a blade strike actually occurred is ultimately the responsibility of the aircraft operator.

CAUTION: Internal damage can occur without evidence of gross external damage.

Any governor mounted on an aircraft involved in a blade strike must comply with Section 2.

Propeller/Engine Lightning Strike:

Determination of Lightning Strike: If doubt exists as to the occurrence of a lightning strike, the following criteria can be used to verify any suspicion:

- 1) Check for burns or signs of arcing on blades and hub.
- 2) Using a magnetism detector, check all exposed steel areas of propeller for magnetism.
- 3) Look for any signs of localized melting or metal flow, particularly on blades.

(Please note that the above definition is intended for use as example only. Determination as to whether or not a "lightning strike" actually occurred is ultimately the responsibility of the operator.) Refer to engine manufacturers' service information for definition of engine lightning strike. Any governor showing signs of arcing or pitting due to electrical discharge, mounted on an aircraft exposed to engine or propeller lightning strike as defined in these documents must comply with Section 2.

Engine Detonation:

Refer to engine manufacturers' service information for determination of engine detonation. (*Note: Special attention should be paid to engines exposed to fuel contamination which may have changed fuel octane levels.*) Exposure to detonation may impart severe stresses to the governor's rotating parts. Any governor operated under the above conditions must comply with Section 2.

Engine Oil Contamination:

Refer to engine manufacturers' service information for determination of oil contamination. Any governor mounted to an engine which required servicing to remove oil contamination must comply with Section 2.

Sudden Engine Stoppage:

Sudden engine stoppage is defined as any propeller experiencing a sudden decrease in RPM. This is commonly due to engine failure or seizure. Please note, determination as to whether or not sudden engine stoppage has occurred is ultimately the responsibility of the aircraft operator. McCauley recommends consulting engine manufacturer's data to determine criteria for sudden engine stoppage. Any governor mounted on an aircraft which has experienced a sudden engine stoppage must comply with Section 2.

Section 2 - Inspection Criteria

The following steps must be performed on any governor affected by Section 1:

1. The governor must be tagged that it was involved in such an incident for the information of the overhauling agency.
2. The governor must be overhauled per McCauley Service Manual 780401.
3. During overhaul, pay particular attention to the following procedures: Perform magnetic particle inspection on flyweight assembly components, idler gear, and drive gear according to instructions in manual. Carefully examine all rotating parts for signs of cracks or other damage. Pay special attention to governor parts involved in a lightening strike; look closely for signs of burning or metal flow. Any parts showing burns or metal flow must be scrapped and replaced.
4. If parts pass inspection and are found to be acceptable, governor may be reassembled, tested, and returned to service.
5. If parts do not pass inspection, replace defective parts before governor is reassembled, tested, and returned to service.
6. Record a clear entry in the appropriate airframe and/or engine logbook indicating inspection/repair of the governor per this service bulletin.