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MANDATORY SERVICE BULLETIN

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Engineering Aspects are
FAA Approved

SUBJECT: Recommendations Regarding Accidental Propeller/Rotor Strike or Loss of Propeller/Rotor Blade or Tip

MODELS AFFECTED: All Textron Lycoming aircraft engines.

TIME OF COMPLIANCE: Whenever there is propeller/rotor damage.

On numerous occasions Textron Lycoming has been consulted about recommendations on whether to continue using an aircraft engine that has been involved in the separation of the propeller/rotor blade from the hub, the loss of a propeller/rotor blade tip or sudden stoppage following accidental propeller/rotor damage (such as propeller/rotor strike).

A propeller strike is defined as follows:

A. Any incident, whether or not the engine is operating, that requires repair to the propeller other than minor dressing of the blades.

B. Any incident during engine operation in which the propeller impacts a solid object which causes a drop in RPM and also requires structural repair of the propeller (incidents requiring only paint touch up are not included). This is not restricted to propeller strikes against the ground, and although the propeller may continue to rotate, damage to the engine may result, possibly progressing to engine failure.

C. A sudden RPM drop while impacting water, tall grass, or similar non-solid medium, where propeller structural damage is not normally incurred.

The above definitions encompass any propeller strike occurring at taxi speeds, including touch-and-go operations involving propeller tip ground contact. In addition, they also include situations where an aircraft is stationary and the landing gear collapses causing one or more blades to be substantially bent, or where a hangar door (or other object) strikes the propeller blade. These cases should be handled as sudden engine stoppage because of potentially severe side loading on the crankshaft flange, front bearing and seal.

Circumstances which surround accidents are many and varied; therefore, the circumstances of the accident can not, in our opinion, be used to predict the extent of the damage to the engine or assure its future reliability.

Textron Lycoming must take the position that in the case of a sudden engine stoppage, propeller/rotor strike or loss of propeller/rotor blade or tip, the safest procedure is to remove and disassemble the engine and completely inspect the reciprocating and rotating parts including crankshaft gear and dowel parts. Any decision to operate an engine which was involved in a sudden stoppage, propeller/rotor strike or loss of propeller/rotor blade or tip without such an inspection must be the responsibility of the agency returning the aircraft to service.

NOTE: Revision "A" adds the definition for propeller strike.