



## MEMORANDUM FOR RECORD

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**Date:** 09/29/2021  
**Subject:** WPR21LA357

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The engine was examined at the facilities of Air Transport, Phoenix, Arizona, on September 29, 2021. The following is a summary of the findings of the engine examination.

- The two bladed constant speed propeller remained attached at the crankshaft flange. The spinner was attached
- to the propeller. The propeller blades remained attached to the propeller hub. There was no conclusive evidence observed on the propeller blades consistent with the absorption of rotational energy sustained at the time of impact.
- The propeller governor was securely attached at the mounting pad with the pitch control rod securely attached at the control wheel. The governor was not removed for examination.
- Postaccident examination of the engine revealed no evidence of catastrophic failure.
- The right magneto was securely attached at its mounting flange. The magneto was removed and produced spark at all terminal leads.
- The left magneto was found loose on its mounting flange; however, the flange was detached from the magneto. The left magneto was removed and the three cap attachment screws were missing. The screw holes exhibited severe elongation and deformation, consistent with a loss of torque over an extended time, as also evidenced by fretting and wear of the magneto housing components.
- The oil filter element contained a large amount of non-ferrous metal contamination; however, the source of the contamination was not determined, as the engine was not examined further.
- The spark plugs were secure at each position with their respective spark plug lead attached. The top spark plugs were removed, examined and photographed. The spark plug electrodes (fine-wire) remained mechanically undamaged, and according to the Champion Spark Plugs Check-A-Plug chart AV-27, the spark plug electrodes displayed coloration consistent with normal operation.

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