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OAS-WPR

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Subject: WPR24FA010

Contact: Director of Material Laboratory, Lycoming Engines

The following is a synopsis of the communication as relayed to the NTSB Investigator-in-charge, by Lycoming Engines Director of Materials Laboratory, following the postaccident metallurgy examination of the experimental amateur-built airplane (N75RT) propeller governor mounting flange affixed to the IO-360-A1A accident engine.

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Postaccident examination of the propeller governor mounting flange using Keyence digital microscope and Scanning Electron Microscope analysis, revealed that all fracture surfaces from the mounting flange region at the base of the "tower" feature, including those involving the oil channel, and all fracture surfaces display clear evidence of sudden overload. No evidence of fatigue cracking was found on any of the cracks. The straight nozzle oil fitting port hole crack was not opened for examination, because that crack was fully consistent with bending-induced hoop stress, caused by the fitting being bent into the port hole wall.

NOTHING FOLLOWS