



# The National Transportation Safety Board

Office of Aviation Safety  
Central Region  
Memorandum for the Record  
Engine and Propeller  
Examination Findings  
CEN19FA270  
New Orleans, Louisiana

The engine was a Lycoming model AEIO-540, Serial Number L-2986-48  
The propeller was a MT, model MTV-9-B-C/C203-46 wooden propeller, Serial Number 120805  
Total engine time, as of its most recent annual inspection on September 2, 2018, was 2,731 hours.  
Review of the engine and propeller logbooks did not show any outstanding or uncorrected mechanical issues.

## SUMMARY

- As found at the accident site, the engine sustained severe thermal damage from a post-crash fire. Examination of the engine and propeller did not reveal any pre-impact mechanical anomalies. The wooden propeller blades were severely fractured and splintered, consistent with powered rotation at the time of impact.



Photo 1 Engine at Accident Site



## EXAMINATION DETAILS

- The engine crankshaft was rotated by hand and drivetrain continuity was confirmed.
- Accessory gear movement was inhibited by molten material.
- Thumb compression was established except for the #5 intake valve. The valve had severe thermal damage from the post-crash fire.
- All spark plugs were removed and examined. #2, #4, and #6 had normal wear. #1, #3, and #5 were slightly dark.
- Borescope inspection of the cylinders was normal. All cylinders and pistons were removed and showed no anomalies.
- Mixture and throttle cables/arms were encased in molten material and could not be examined.
- Fuel injectors were clear of debris.
- Fuel flow divider was clear, and the diaphragm was intact.
- Propeller governor screen found clear of debris.
- The wooden propeller blades were fractured and splintered, consisted with powered rotation at the time of impact. The fragments were dispersed around the accident area and collected for the photo.



Photo 2 Wooden Propeller Blade Fragments

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Alexander Lemishko

Senior Air Safety Investigator  
NTSB Central Region Aviation