



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

February 13, 2019

AIRFRAME AND ENGINE EXAMINATION

WPR19FA083

A. ACCIDENT

Location: Walnut Creek, CA
Date: February 8, 2019
Aircraft: N3270F
NTSB IIC: Albert Nixon

B. EXAMINATION PARTICIPANTS:

Albert Nixon
Senior Aviation Accident Investigator
National Transportation Safety Board
Federal Way, WA

Michael Hicks
Aviation Accident Investigator
National Transportation Safety Board
Los Angeles, CA

Dave Vickers
Aviation Safety Inspector
Federal Aviation Administration
Oakland, CA

C. SUMMARY

Examination of the airframe and engine was conducted on February 13, 2019, at the facilities of Plain Parts in Pleasant Grove, California. No evidence of preimpact mechanical failure or malfunction was noted during the examination of the airframe and engine.

D. DETAILS OF THE INVESTIGATION

1.0 Airframe Examination

Examination of the airframe revealed that the cabin, instrument panel, and fuselage was consumed by thermal damage. Both wings and the empennage were separated for recovery.

Both wings had their aileron and flap attached. Numerous impacts were observed on the leading edge of the wings.

The flaps were observed retracted. Additionally, the landing gear was retracted.

The empennage was relatively intact. The rudder and elevators were attached.

Flight control continuity was established.



Figure 1: Airplane tail section viewed from the left side during examination.

2.0 Engine Examination

Examination of the Lycoming IO-360A1A engine, revealed that all engine components and accessories were present. The engine remained attached to the airframe at all the respective engine mounts. All rocker covers were removed, and the cylinder overhead areas were lubricated and unremarkable. The crankshaft was rotated by hand, utilizing a tool attached to the rear gear section and rotational continuity was established throughout the engine, accessory section, and valve train. During crankshaft rotation, thumb compression and suction were attained on all cylinders. A borescope inspection of the cylinders revealed evidence of normal operational conditions.

The two-bladed propeller separated from the crankshaft propeller flange with the blades attached and the separation surfaces were consistent with overload. Both blades exhibited leading edge gouging and chordwise scratches. One blade was twisted 180° in its hub. The spinner was attached and crushed aft.

The top sparkplugs were removed, and all the spark plug electrodes were normal in color and exhibited normal to worn out wear signatures when compared to the Champion Check-A-Plug comparison chart. The left and right magneto were removed and when rotated by hand, spark was

observed on all the respective ignition leads.

The vacuum pump was intact and removed for examination. The drive shaft was intact and could be rotated by hand with no anomalies were noted.

The examination of the airplane engine on-site revealed no evidence of pre-impact mechanical malfunctions or failures that would have precluded normal operation.

Submitted by: Albert Nixon