



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

October 02, 2019

AIRFRAME AND ENGINE EXAMINATION

WPR19LA100

A. ACCIDENT

Location: Watsonville, CA
Date: February 9, 2019
Aircraft: Bellanca 7GCAA Registration Number: N11666,
NTSB IIC: Albert Nixon

B. EXAMINATION PARTICIPANTS:

Albert Nixon
Senior Aviation Accident Investigator
National Transportation Safety Board
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Michael Schaadt
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San Jose, CA

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Federal Aviation Administration
San Jose, CA

C. SUMMARY

Examination of the airplane's airframe and engine was conducted on October 02, 2019, at a private hanger at the Watsonville Municipal Airport, Watsonville, California. No anomalies or evidence of preimpact mechanical failure or malfunction were noted during the examination of the recovered airframe and engine.

D. DETAILS OF THE INVESTIGATION

1.0 Airframe Examination

Examination of the airplane revealed that the wings, elevators, and rudder, were removed for recovery. The engine was attached.

Flight control continuity was established from the ailerons to the wing root. In addition, aileron continuity was established from the cabin to the cockpit controls. Rudder and elevator continuity were established to the flight controls.



Figure 1: The airplane wreckage in hanger before examination.

The front and rear seat's lap belt buckle and shoulder harness were cut by rescue personnel.

The front seat yoke and rear seat yoke remained in place in the cockpit.

The throttle was full forward, and the mixture was full in, however, the throttle was difficult to move from impact damage. The carburetor heat was selected to the cold position.

The altimeter indicated about 170 ft with 30.02 set. The airspeed indicator indicated 0. The vertical speed indicator indicated about 0.

2.0 Engine Examination

Examination of the Lycoming O-320-A2B engine, serial number L12089-27A, revealed that the engine sustained impact damage on the exhaust system and the carburetor heat box. No engine mounts were observed fractured. The crankcase was intact. The propeller and spinner had separated from the crankshaft. All rocker covers were removed, and examination revealed that all intake and exhaust rocker arms, shafts, and valve springs, were intact with no anomalies observed. The crankshaft was able to be rotated by hand and rotational continuity was established throughout the engine and valve train in all cylinders. All cylinders displayed appropriate compression and suction in the proper firing order. The left magneto was secured in its mount and when crankshaft was rotated, spark was observed at all ignition leads. The right magneto was removed and during manual rotation, spark was observed on all the ignition leads.

The top spark plugs were removed, and the spark plugs electrodes exhibited “normal wear” signatures when compared to the Champion Check-A-Plug comparison chart.

A borescope inspection of the cylinders revealed evidence of normal operational conditions.

The engine accessories mounted to the rear of the engine were intact.

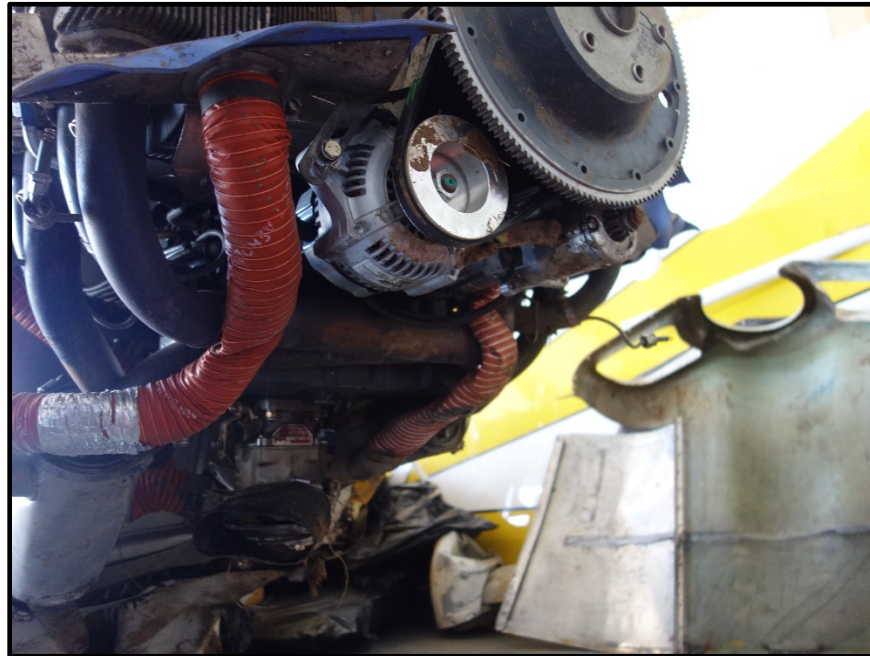


Figure 2: Engine as viewed from the right bottom side.

All the fuel lines from the gascolator to the engine were intact. The carburetor was securely attached. The carburetor was disassembled, and no anomalies were noted. The floats and bowl were unremarkable, and no corrosion was noted.

The engine exhaust system remained attached but was bent upward and aft. The exhaust system mufflers were removed, and internal examination revealed no anomalies were noted.

The two-bladed propeller was examined. One blade exhibited a twist about mid-span and was bent aft. The other blade was relatively intact.

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

Submitted by: Albert Nixon