



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

September 19, 2017

AIRFRAME AND ENGINE EXAMINATION

WPR17FA125

This document contains 06 embedded photos.

A. ACCIDENT

Location: Mountain Ranch, California
Date: June 9, 2017
Aircraft: Airplane Beech 95-C55, Registration Number: N3717Q, Serial #: TE-298
NTSB IIC: WPR17FA125

B. EXAMINATION PARTICIPANTS:

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C. SUMMARY

Examination of the recovered airframe and engine was conducted on September 19, 2017, at the facilities of Plain Parts, Pleasant Grove, California. No evidence of preimpact mechanical malfunction was noted during the examination of the recovered airframe and engine.

D. DETAILS OF THE INVESTIGATION

1.0 Airframe Examination

As a result of impact forces, flight control continuity could not be established. However, flight control cables and associated hardware were accounted for.



Photo 01 – Wreckage Layout (NTSB)



Photo 02 – Wreckage Layout (NTSB)

2.0 Engine Examination

Left Engine

A visual examination of the left engine revealed no obvious holes in the case. Both magnetos separated from the engine. The right magneto was in pieces. The left magneto remained intact. The ignition harness sustained damage at the P-leads. The Spark plugs were removed with normal operating signatures observed. The pistons were borescoped; no stuck intake/exhaust valves were observed, and operating signatures appeared normal. The vacuum pump vanes were intact and coated with residual oil. The drive coupling had separated; however, it was reinserted, manually manipulated and rotated without binding.



Photo 03 – View of Left Engine (NTSB)

Right Engine

A visual examination of the left engine revealed no obvious holes in the case. Both magnetos separated from the engine. The right magneto sustained impact damage and a functional check was not possible; the magneto was disassembled with no anomalies identified with the internal components. The left magneto remained intact sparked at all leads when manually rotated.

The ignition harness sustained damage at the P-leads. Spark plugs sustained impact damage and the bottom spark plugs were removed. The numbers 4 and 6 top sparkplugs' center electrodes were missing. According to the champion check-a-plug chart AV-27, the spark plugs exhibited normal wear pattern. There were no signs of lead or carbon fouling of the electrodes.

The pistons were borescoped; no stuck intake/exhaust valves were observed, and operating signatures appeared normal. There was organic matter (dirt, tree, rocks) in the cylinders. The vacuum pump vanes remained intact and coated with residual oil. The drive shaft was manually manipulated and rotated without binding.



Photo 04 – View of Right Engine (CMI)

3.0 Propeller

Left

The propeller hub assembly including the propeller blades separated from the engine. The propeller blades exhibited torsional twisting along leading and trailing edge nicks and gouges.



Photo 05 – View of Left Propeller Assembly (NTSB)

Right

The propeller hub assembly separated from the right engine with all three propeller blades remaining attached at the hub. All three propeller blades exhibited torsional twisting with leading and trailing edge nicks and gouges.



Photo 06 – View of Right Propeller Assembly (NTSB)

Submitted by: Investigator T. Cornejo