



**NATIONAL TRANSPORTATION SAFETY BOARD
Western Pacific Regional Office
Federal Way, Washington**

**Airframe and Engine Report
April 9-10, 2019
Phoenix, Arizona**

Accident

NTSB Accident Number: **WPR19FA096**
IIC: **T. Cornejo**
Aircraft: **N800DC - Beech BE-50**

Examination Participants:

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Summary

On March 16, 2019, about 1149 Pacific daylight time, A Beech BE-50 airplane, N800DC, was substantially damaged when it was involved in an accident near Riverside, California. The pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.



Photo 01 - Wreckage Layout (NTSB)



Photo 02 - Wreckage Layout (NTSB)

AIRPLANE INFORMATION

The accident airplane, Beech BE-50 airplane (serial number DH-120) was manufactured in 1956 and was powered by two Lycoming GO-480-G2D6.

A review of the maintenance records for the airplane revealed that the last annual inspection was performed on December 12, 2018. The Hobbs time was recorded as 763.2. The airplane total time at the last annual inspection was 10,881.0 hours. the total airplane time at the time of the accident was 10,881.2 hours.

The instrument panel was destroyed due to impact forces. In the cockpit, both the left and right engine control positions were throttle and propeller: mid-range, and mixture rich.

The seat belt restraints were a 2-point restraint system.

ENGINES

Both engines are geared propeller reduction, six-cylinder, air cooled, direct drive, horizontally opposed, normally aspirated, internal combustion engines. There was no pre impact mechanical malfunctions or anomalies that would have precluded normal operation. Both engines were partially separated from their respective wings.

Left Engine

A Lycoming GO-480-G2D6, serial number L-1589-34 with a Hartzell HC-A3VF-2A, hub serial number AT 104 were installed on the airplane. The left engine had a recorded time since overhaul of 877.0 hours. The Hobbs flight hour meter indicated 0763.4 at the time of the accident and at the last annual was recorded as 0763.2.

The left engine was partially separated from the airframe and the left propeller was partially separated from the engine.

To rotate the crankshaft, the propeller reduction gearbox along with the propeller hub were removed. The crankshaft was rotated by hand via a drive tool from the accessory gear drive pad.

Manual rotation of the crankshaft was done through the accessory drive pad utilizing a drive tool. The crankshaft rotated in both directions without binding. Thumb compression was obtained in all cylinders in proper firing order. Valve train and mechanical continuity was established. The top spark plugs were removed, and the combustion chambers of each cylinder were examined with a lighted borescope. There was no damage to the combustion chambers, or evidence of foreign object ingestion, or detonation.

The left and right magnetos were displaced from their respective mounting pads and had sustained impact damage. Magneto-to-engine timing was not determined. When manually rotated, spark was produced at all leads.

The exhaust system was free of obstruction and no oil was present in the exhaust system gas path.

There was no evidence of pre-impact mechanical malfunctions observed during the engine examination.



Photo 03 - Left Engine Propeller Blades (Photo Courtesy of Lycoming)



Photo 04 - Left engine Propeller Blades (Photo Courtesy of Lycoming)

Right Engine

A Lycoming GO-480-G2D6, serial number RL-247-34 with a Hartzell HC-A3VF-2A, hub serial number AT 64 were installed on the airplane. The right engine had a recorded time since overhaul of 763.4 hours. The Hobbs flight hour meter indicated 0763.4 at the time of the accident and at the last annual was recorded as 0763.2.

The right engine was partially separated from the airframe. The propeller assembly remained attached to the engine.

Manual rotation of the crankshaft was done through the accessory drive pad utilizing a drive tool. The crankshaft rotated in both directions without binding. Thumb compression was obtained in all cylinders in proper firing order. Valve train and mechanical continuity was established. The top spark plugs were removed, and the combustion chambers of each cylinder were examined with a lighted borescope. There was no damage to the combustion chambers, or evidence of foreign object ingestion, or detonation.

Magneto-to-engine timing could not be determined. The right magneto separated from its mounting pad and had sustained damage because of impact forces. The magneto was hand rotated and produced spark at all four leads. The left magneto remained secure at its mounting pad; it was removed and when rotated by hand produced spark at all four leads.

The exhaust system was free of obstructions.



Photo 05 - Right Engine Propeller Blades (NTSB)