

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



ERA24LA341

ENGINE EXAMINATION

September 18, 2024

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A. ACCIDENT

Location: Jacksonville, FL
Date: August 7, 2024
Time: 1544 EDT
1944 UTC
Airplane: N2376L; Beech 23

B. ENGINE EXAMINATION

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C. SUMMARY

On August 7, 2024, about 1544 eastern daylight time, a Beech 23, N2376L, was substantially damaged when it was involved in an accident near Jacksonville, Florida. The pilot and pilot-rated passenger were not injured. The airplane was operated as a Title 14 Code of Federal Regulations Part 91 personal flight.

D. DETAILS OF THE EXAMINATION

1.0 Engine Examination

The engine remained attached to the airframe through the undamaged tubular mount. The engine was operationally checked and operated normally, see Test Run section of this report. After the engine run the engine was partially disassembled to facilitate the examination.

1.1 Induction and Exhaust System

The induction air hoses, exhaust tubing and exhaust muffler were unobstructed.

1.2 Magnetos

Both magnetos were secure in the engine accessory case. The magnetos were operationally checked during the engine run and operated normally.

1.3 Ignition System

The ignition harness was undamaged. All sparkplugs were secure in their respective cylinders. The ignition system was operationally checked during the engine run and operated normally. The top and bottom spark plugs were removed and were dark grey in color and exhibited normal wear. The No. 2 bottom spark plug exhibited oil on the electrodes.



Photo 1: View of the sparkplugs removed from the engine.

1.4 Fuel System

The carburetor remained attached to the engine and no damage was noted. The throttle, mixture and carburetor heat cabled remained attached to their respective control arms on the carburetor and induction air box. The engine was started and run at various power settings up to full throttle. After the engine run the carburetor fuel inlet screen was removed and a small amount of dark granular material observed in the screen. The engine driven fuel pump remained attached to the engine and no damage was noted. The engine started and ran normally. The pump was not removed.



Photo 2: View of the carburetor fuel inlet screen.



Photo 3: View of the carburetor fuel inlet screen with debris from in the screen.

1.5 Lubrication System

The dipstick indicated about 7 quarts of oil. The oil suction screen was removed and examined, it exhibited minimal amounts of debris consistent with sealant material. The oil filter was dated 8/1/23 and was removed and cut open for examination. The filter media contained a small amount of metallic debris consistent with a recent engine field overhaul.



Photo 4: View of the oil suction screen.



Photo 5: View of the oil filter cut open for examination.

1.6 Vacuum Pump/System

The vacuum system was operationally checked during the engine run and operated normally.

2.0 Propeller Examination

The propeller was undamaged and remained secure to the engine crankshaft flange.



Photo 6: View of the undamaged propeller.



Photo 7: View of the undamaged propeller.

3.0 Test Run

A fuel tank was plumbed into the right wing root and the engine was started with the fuel selector on the right. The engine started and ran smoothly at an idle speed of about 700 RPM. The RPM was increased to 1800, and the magnetos were checked. Both magnetos dropped about 150 RPM and the engine ran smooth on each magneto. The engine was then run at full power and achieved 2450 static RPM. No anomalies were noted with the engine that would have precluded normal operation.

Submitted by:

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