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~ 0900 EDT

Beech C-23, N6009U

WRECKAGE EXAMINATION

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On April 28, 2021, about 0900 eastern daylight time, a Beech C-23, N6009U, was destroyed when it was involved in an accident near Middleburg, Florida. Two pilots and one passenger were fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

Examination of N6009U was completed on April 29, 2021 at the site of the accident in Middleburg FL and at Florida Air Recovery in Jacksonville, FL. The airplane was located in the woods about 800 ft off the end of runway 27 at Spencer's Airpark (FL13), Middleburg, FL. The Airpark is a private airstrip at an elevation of 150'. Runway 09/27 is constructed of turf and is 2,800' x 75'. Runway 27 is downhill with an elevation change of about 40'.

The main wreckage came to rest on a heading of 180°. A post-accident fire ensued and consumed most of the airplane. Multiple (propeller) cut tree branches were noticed along the flight path leading to the accident site.

Engine Exam:

As first viewed, the engine remained attached to the aircraft firewall through the tubular engine mount and was heavily fire damaged. The propeller remained attached to the engine crankshaft flange and the spinner and one propeller blade were embedded in the soft earth. The engine oil sump, carburetor and the lower portion of the accessory case were consumed in the post-impact fire. The engine driven fuel pump, the vacuum pump and both magnetos were fire destroyed.

The aircraft wreckage was recovered by personnel from Florida Air Recovery and transported to

their facilities in Jacksonville, FL. Investigators from the NTSB, Textron Aviation and Lycoming Engines gathered at Florida Air Recovery on 04/29/2021 to examine the wreckage.

The engine was suspended from a lift and partially disassembled to facilitate the examination. The engine was heavily fire damaged and could not be initially rotated by turning the propeller. The remaining rear mounted accessories and the accessory case were removed and the engine rotated by turning the propeller. Continuity of the crankshaft to the rear gears and to the valve train were confirmed. Compression and suction were observed on cylinders #1, #2 and #4. The interiors of the cylinders were observed with a lighted borescope. No anomalies were noted, except that the #3 cylinder exhaust valve did not close fully. The #3 cylinder exhaust valve springs were observed discolored consistent with exposure to heat from the fire and could be depressed with finger pressure.

According to a family member of the aircraft owner, he kept the aircraft maintenance logbooks in the aircraft. No logbooks were observed in the wreckage and are assumed to have been destroyed in the fire.

The carburetor and engine driven fuel pump were destroyed in the post-impact fire.

Both magnetos remained attached to the engine and both were fire destroyed.

The spark plug electrodes exhibited gray coloration and worn normal condition. The #1 top, #1 bottom and #3 bottom spark plug electrodes were oil soaked.

The ignition harness was fire destroyed.

The starter remained attached to the engine and was fire damaged. No other damage was noted and it was not removed.

The alternator remained attached to the engine and was fire damaged. No other damage was noted and it was not removed. The alternator belt was present and partially burned.

The vacuum pump remained attached to the engine and was fire and impact damaged. The rear cover plate was removed and the carbon rotor and carbon vanes observed intact.

The oil suction screen and the remote mounted oil filter were not observed and assumed destroyed in the fire.

Airframe Exam:

The aircraft struck trees at about 70' AGL on a heading of 270° and created an approximately 300' long wreckage path in the woods. The cabin and instrument panel were destroyed by the post-impact fire. The wings sustained tree impact damage and appeared to be partially separated from the fuselage. Both wings came to rest in front of the engine and sustained significant post-impact fire damage. The right flap was separated from the wing and remained in one piece. A small fragment of the left flap was found forward of the engine. The tail sustained minimal impact damage; thermal damage and soot were observed.



Flight control cable continuity was established for all tail control surfaces. Aileron and flap continuity were partially established due to multiple impact related overload separations and post-impact fire damage. The manual flap handle ratchet plate was loose; position could not be determined. Stabilator trim was approximately 8° tab down.

The fuel strainer assembly was crushed and contaminated with debris. The top of the fuel selector valve and a portion of the melted handle was located; position could not be determined.

The ELT was melted by the fire.

The seats and seat belt webbing were destroyed by the post-impact fire. Two fire-damaged seat belt buckles were found fastened in the front seat area.



The instrument panel was destroyed by the post-impact fire.

The Sensenich propeller was removed from the engine. Both blades were twisted with S-bending and both tips were separated. Multiple tree limbs were found with propeller cuts.





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