

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



WPR24FA190

ON SCENE SUMMARY REPORT

June 14, 2024

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A. ACCIDENT

Location: Elk River, Idaho
Date: June 12, 2024
Time: 10:06 Pacific daylight time
Airplane: N34903, Cessna 177B

B. ON SCENE SUMMARY REPORT

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NTSB	Albert Nixon National Transportation Safety Board Federal Way, Washington
Party Coordinator	Casey Love Textron Aviation Wichita, Kansas

C. SUMMARY

Documentation of the accident site occurred on June 13, 2024. All major components of the airplane were observed at the accident site.

D. DETAILS OF THE INVESTIGATION

1.0 Accident Site

GPS Location: 46.8755° / -116.184334°
Elevation: 3,755 ft mean sea level (MSL)

Examination of the accident site revealed that the airplane impacted 45° sloping, wooded terrain about 5.2 miles north of the departure end of ID85's runway 35. The first identifiable point of contact (FIPC) was an approximately 120 ft tall tree and the debris path was oriented on a magnetic heading of about 086°. The second identifiable point of contact was a pair of approximately 100 ft tall trees, one that had been topped immediately adjacent to the other and displayed an impact scar about 8 ft long and 3 ft wide. The FIPC was about 114 ft from the main wreckage, and the second point of contact was about 80 ft from the main wreckage. The outboard 2-3 ft of the left wing and the left aileron were located about 103 ft from the main wreckage. The propeller assembly was located about 67 ft from the main wreckage. The

fuselage came to rest inverted, on an approximate heading of about 153° magnetic, at an elevation of 3,755 ft msl. An area of burnt vegetation surrounded the empennage in about a 6 ft radius. All major components of the aircraft were observed throughout the debris field. (See figure 1.)



Figure 1. Debris path.

2.0 Airframe

Make and Model: Cessna 177B

Serial Number: 1770277

Hobbs: 600.4 (as of 4/30/2024)

The airplane came to rest inverted, across a downed tree. The fuselage was thermally destroyed.

Both wings remained attached at their roots. The carry through spar was thermally damaged. The inboard sections of both wings were thermally consumed. The outboard 2-3 ft of the left wing was observed separated and located 103 ft from the main wreckage. The left aileron remained attached to the separated left wing segment. The right aileron remained attached to the right wing. The left and right wing flaps remained attached to their wings. (See figure 2.)



Figure 2. Main wreckage.

The flap actuator mechanism screw drive extension dimension indicated that the flaps were extended to approximately 30°; 18 threads were counted.

The empennage came to rest inverted and was thermally separated from the aft fuselage. The horizontal stabilator remained attached at its attachment points. The stabilator trim tab remained attached to the horizontal stabilator. The vertical stabilizer remained attached at its attachment points. The rudder remained attached to the vertical stabilizer.

Flight control continuity was established from the cockpit to their respective control surface.

The cockpit aileron control cable drums were thermally damaged. The right cockpit aileron control cable drum was observed separated into multiple segments, consistent with impact forces. The aileron control cable remained attached to the segments.

The left aileron interconnect control cable was separated near the left aileron wing bellcrank, consistent with impact forces. The left aileron bellcrank was observed fractured, consistent with overload, at the direct aileron control cable attachment. The elevator and rudder control cables were continuous and remained attached via hardware. The elevator trim chain was observed among debris in the cabin area and was attached to the trim control cable. The elevator autopilot and elevator trim bridal cables remained attached and in place on the servo capstan.

The cabin area and instrument panel were thermally destroyed. The cockpit seats were observed loose in the wreckage. The seat tracks were not observed, consistent with thermal consumption. The seat belt webbing was thermally consumed. Three seat restraint buckles were observed. One cockpit three point seat belt buckle was observed latched, with the shoulder strap portion also latched. (See figure 3.)

Instrument Panel/Cockpit Documentation: undetermined due to thermal damage
Throttle: undetermined on scene
Mixture: undetermined on scene
Propeller: undetermined on scene
Fuel Selector Valve: in BOTH detent



Figure 3. Cockpit/cabin area.

Portions of the aluminum fuel lines from the wing tanks to the fuel selector valve and fuel shutoff valve were thermally consumed. The fuel selector valve exhibited thermal damage and was observed laying on top of a fallen tree, with 2 inch segments of thermally separated fuel lines attached. (See figure 4.) The valve was in the BOTH position. The fuel shutoff valve was observed open. The fuel tanks were observed breached and thermally damaged. The header tank was not observed.



Figure 4. Fuel selector valve, as observed on fallen tree. (Courtesy of Textron)

3.0 Engine

Manufacturer: Lycoming Engines

Model: O-360A1F6D

Serial Number: L-25286-36A

Tach: 3446.2 (as of 5/27/2024)

The engine was thermally damaged and remained attached to its engine mount and the firewall. It came to rest in a nose low position, facing aft. The firewall was thermally separated from the fuselage. (See figure 5.) The engine controls were observed thermally separated from the instrument panel mount. The upper engine cowling was

separated from the engine. A portion of the lower engine cowling remained attached to the engine.



Figure 5. Engine on scene.

4.0 Propeller

The engine's propeller assembly was separated at the aft side of the crankshaft flange. (See figure 6.) The crankshaft flange and both propeller blades remained attached to the hub. Both propeller blades displayed leading edge polishing and scuffing, and both blades displayed forward bending. (See figure 7.) The spinner displayed bending, crushing, aluminum tearing, vegetation and brown colored transfer, consistent with contact with trees. (See figure 8.)



Figure 6. Propeller assembly at aft side of hub.



Figure 7. Forward bending of propeller blade.



Figure 8. Propeller spinner.

Submitted by:

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