

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN24FA089

WRECKAGE EXAM

January 16, 2024

A. ACCIDENT

Location: Poolville, Texas
Date: January 14, 2024
Time: 1215 CST
1815 Zulu
Airplane: Cessna 310R

B. WRECKAGE EXAM

IIC	Laura A. Abraham NTSB Aurora, Colorado
Party Member	Ryan W. Roth Textron Wichita, Kansas
FAA	Dan Montie and Elvin Osorio North Texas FSDO Irving, Texas

C. SUMMARY

The airplane impacted a wooded area about 13 miles southwest of XBP. Multiple propeller strikes were found in a field ½ mile south of the beginning of the debris field. Only one set of propeller strikes was found. At the time this summary was written, the strikes appear to be from the right propeller. Each strike was about 2 to 2.5 ft apart. Additionally, scar marks from the fuselage were found parallel to the scarring from the propeller. Part of the right propeller separated from the flange and was found in a bush ¼ mile south of the beginning of the debris field. At the beginning of the debris field, several large tree trunks about 30 ft above the ground were cut at 45°. The remainder of the airplane, spread over about 370 ft, was fragmented, and was scattered throughout the wooded area in a relatively straight path on a heading of about 360°. Both wings, the complete empennage, fuselage, left and right fuel nacelles, and right engine were found in the debris field. The left propeller, still attached at the flange, and the left engine were found in a pond about 30 ft north of the debris field. Portions of all flight controls were identified. Lengths of several flight control cables were noted but could not be positively attributed to a flight control system. All breaks in cables showed signs consistent with tensile overload. The empennage, wings, fuel nacelles, and part of the fuselage were burned.

D. ITEMS EXAMINED

1.1 Fuselage

The fuselage was heavily fragmented and partially burned. All seats except for the 5th back row seat were separated from the fuselage and found in the debris field. The throttle quadrant was bent and twisted. The copilot yoke was found in the debris field, and the pilot yoke was still attached to the instrument panel. The combustion heater was found in the debris field and did not show signs of thermal damage.

1.2 Empennage

The empennage was intact but heavily burned and separated from the fuselage. It contained the horizontal stabilizer, and part of the vertical stabilizer, elevator, and part of the rudder. Lengths of several flight control cables were noted but could not be positively attributed to the rudder or elevator. The cables showed signs of tensile overload. The rudder trim actuator measured 1.1" which equates to approximately 13°-tab right; however, the pushrod was bent, and measurements may not be accurate. The elevator trim actuator measured 1.8" which equates to 5 to 10° tab up. There were no signs of horizontal stabilizer anti-icing systems observed. Aircraft delivery documents indicate the aircraft was delivered with wing and horizontal stabilizer pneumatic de-icing boots and propeller electric de-icing boots.

1.3 Wings

Portions of the left and right wings were found. Both were heavily fragmented, burned, and separated from the fuselage. Portions of the flaps and ailerons were found, but flight control cables could not be positively attributed to the ailerons. Cables showed signs of tensile overload. Flap position could not be determined due to the actuator being found loose in the wreckage without its control cable chain. There were no signs of wing anti-icing systems observed on the wings. Aircraft delivery documents indicate the aircraft was delivered with wing and horizontal stabilizer pneumatic de-icing boots and propeller electric de-icing boots.

1.4 Landing Gear

All parts of the landing gear were found. The right-hand main landing gear wheel and nose landing gear assembly separated from the wing and fuselage and they were found in the debris path. The left-hand main landing gear was still attached and inside the wheel well. Landing gear position could not be confirmed due to heavy fragmentation.

1.5 Cockpit

The cockpit and instrument panel were crushed and fragmented. Switch and instrument conditions could not be determined; however, an altimeter was found with 30.40 set in the Kollsman Window. Several Garmin branded displays were found amongst the wreckage. A GTN 750 was retained and sent to the lab for examination. The throttle quadrant containing throttle, propeller, and mixture controls was found. Both throttle levers were found in the fully closed position. The propeller and mixture controls were bent, and position could not be determined.

1.6 Survivability

All three occupants were ejected from their seats. It is assumed the pilot was occupying the seat 1 position (the pilot seat); however, it was unable to be determined what seats the passengers were occupying.

1.7 Fuel/Fuel System

The left and right fuel nacelles were found in the debris path. Both were fragmented, split, and burned. The auxiliary tanks were burned and succumbed to thermal damage. Both fuel caps for the auxiliary tanks were observed and one of the fuel caps for one of the nacelles was found. The left and right fuel selectors were found in the debris; however, the housing was bent, and the fuel switch position could not be positively determined.

2.0 Engine Examination

The right engine was found in the debris path not connected to the mount. The data plate was missing; however, through maintenance log examination, it was determined to be the right engine - SN 560337. The right propeller was separated at the flange and not on the right engine.

The left engine separated from the mount and was found in a pond about 30 ft north of the debris field with the propeller still attached. The left engine serial number is 235580-R.

Both the left and right engine cases were intact, and no holes were noted. A witness who saw the airplane shortly before it impacted the ground said that both propellers were spinning.

3.0 Propeller Examination

The right propeller separated from the flange and was found in a bush about ¼ mile south of the main wreckage. The serial number on the right propeller was 754646.

The left propeller was found still attached at the flange to the left engine. The left propeller and engine were in a pond about 30 ft north of the debris field. The serial number on the left propeller was 970174.

Both the left and right three-bladed variable pitch propellers showed signs of tip curling and polishing.

There was a trail of blade strikes on the ground prior to the debris field. There was only one set though, and at the time this wreckage summary was written the strikes appeared to be from the right propeller.

4.0 Pilot Information

The pilot was a 40-year-old male. He had a current 3rd class medical with no restrictions or limitations. The date of his medical was August 1, 2019. The pilot's logbook was reviewed and there is no evidence of a current biennial flight review or instrument currency.

5.0 Aircraft Information

The aircraft was a 1975 Cessna 310. It was purchased by the current owner in November 2019.

6.0 Meteorological Information

AIRMETs for moderate ice were forecast in the area at the time the pilot filed his IFR flight plan. PIREPs from multiple pilots were issued for light rime ice between 4,000 ft and 6,000 ft in the vicinity of the Dallas/Fort Worth area at the time of the accident. The pilot was descending from 7,000 ft to 3,000 ft in IMC conditions when the accident occurred.

Submitted by:

Laura Abraham
Air Safety Investigator