

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN23FA220-N977RV

WRECKAGE SUMMARY

June 5, 2023

ACCIDENT

Location: Gibbon, Nebraska
Date: June 2, 2023
Time: 0907 CDT
1407 Zulu
Airplane: Vans RV-7

IIC Laura Abraham
NTSB
Aurora, CO

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FAA
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SUMMARY

The airplane impacted an open grassy area surrounded by trees about 260 feet south of Interstate 80 near Gibbon, Nebraska at an elevation of 2,070 feet mean sea level. The airplane traveled about 100 feet from the impact site to the main wreckage. A piece of the bottom rudder fairing was found about 130 feet prior to the impact site. A piece of the rudder was found about 120 feet prior to the impact site and a second piece of the rudder was found about 25 feet prior to the impact site. A piece of the rudder was in a tree about 30 feet north of the impact site. The vertical stabilizer was on the ground about 55 feet northeast of the initial impact site. Impact ground scaring showed nose, wing, and main landing gear impact. The propeller was embedded in the ground at the impact site. The engine separated and was found about 40 feet after the impact site. The magnetos and carburetor were separated and found adjacent to the engine. The main landing gear assembly was also found near the engine. The debris field contained fragmented engine components, instrument

panel, windshield, and multiple pieces of fiberglass skin. The main wreckage came to rest upright on a 266° heading, and consisted of the fuselage, wings, and horizontal stabilizer. The debris field was generally aligned on a 257° heading.

Fuselage

The fuselage was destroyed. Both forward and aft fuselage were twisted and crushed. The cowlings and main cabin were impact separated and scattered along the debris field.

Empennage

The horizontal stabilizer remained attached to the fuselage; however, both sides were bent on the outboard sides. The elevator push tube was present and attached to the elevator, but due to impact damage, the elevator was unable to move. The vertical stabilizer and rudder were separated from the rest of the empennage. Control cable continuity from the cabin to the rudder and elevator could not be determined due to impact damage.

Wings

Both wings remained attached to the fuselage and were crushed along the leading edge. The aileron and flap on the right wing were attached and although the push rods were broken, we were able to trace them back to the control stick. The flap on the left wing was attached; however, the aileron was impact separated and found about 15 feet south of the main wreckage. Control continuity to the flap was unable to be determined due to impact damage.

Landing Gear

The main landing gear assembly was impact separated and located in the debris field. The tail wheel remained attached to the lower empennage. One tire was found about 75 feet west of the main wreckage. Another tire was found about 110 feet west of the main wreckage.

Cockpit

The cockpit was impact damaged and remnants were found along the debris field. The altimeter was found along the debris field with a 30.00 pressure setting in the Kollsman window. The mixture and throttle controls were found along the debris field and were found in the full rich and high rpm setting, respectively.

Fuel/Fuel System

The fuel system was crushed, fragmented, and destroyed; it could not be functionally tested.

Engine Examination

The engine separated from the airplane and was found about 40 feet after the impact site. The engine was unable to be functionally tested due to impact damage. The case was cracked. Fragments of the oil pan were found scattered along the debris field along with the magnetos and carburetor.

Propeller Examination

The propeller was found inside a crater, about two feet deep, at the initial impact site. It was separated at the flange. The propeller was twisted. Both blades remained attached at the hub and exhibited chordwise scratching and bending along the blade length.

Pilot Information

The pilot's personal effects were found among the wreckage, which included a private pilot certificate with instrument rating and a current 3rd class medical.

Submitted by:

Laura Abraham
Air Safety Investigator