

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN24FA326

EXAMINATION SUMMARY

August 27, 2024

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A. ACCIDENT

Location: Crofton, Nebraska
Date: August 26, 2026
Time: 0841 CDT
1341 UTC
Airplane: Rans S19 – N519JR, S/N 090800032

B. EXAMINATION SUMMARY

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C. SUMMARY

On-site examination of a Rans S19 airplane. Accident site showed the airplane impacting terrain in a left wing low vertical descent in an agricultural field. Federal Aviation Administration (FAA) inspector was present to participate and assist. The examination revealed no pre-accident mechanical anomalies or failures that would have precluded normal operation of the airplane.

D. DETAILS OF THE EXAMINATION

1.0 Accident Site

The airplane impacted terrain (Lat/Long: +42° 41'47.05" / -097° 33'03.61") in a mature soybean field. The airplane came to rest in a vertical profile about 023° and 85 ft past the initial impact site. The entire airplane was located at the accident site with no post-crash fire. The debris field included the main impact point out to radius of about 200 ft with further debris out to 500 ft. A ground scar imprint of both wing leading edges was present in the terrain. Location of the leading-edge impression is consistent with the airplane in a nose down left wing low near vertical-to-vertical orientation at impact. The initial impact point consisted of a shallow circular ground impression surrounded by left wing tip fragments. (See Figure 1).



Figure 1. Left Wing Initial Impact

2.0 Airframe Examination

2.1 Fuselage

The fuselage came to rest upright in a nose down position with crush damage and separation of the forward fuselage at the cockpit area. The forward fuselage was heavily fragmented and longitudinally crushed consistent with a high energy near vertical impact. Various debris from the forward fuselage were found in the surrounding field. The rest of the fuselage was separated and about 85 ft from the forward section. This section was also crushed longitudinally to the empennage. (See Figure 2)



Figure 2. Forward Fuselage and Cockpit

2.2 Empennage

The empennage came to rest still attached to the fuselage with crush damage to the vertical stabilizer. The horizontal and vertical stabilizer had bending of the structure with various areas of crush damage. Flight control continuity was established from the elevator and rudder to the fuselage separation. Continuity from the cable separations to the control stick and rudder pedals could not be determined due to crush damage and fragmentation of the forward fuselage. (See Figure 3)



Figure 3. Empennage

2.3 Wings

Both wings were found still attached to the fuselage with major sections separated. The left wing was crushed in the longitudinal direction with separation of the wing skins at the initial impact point. The attached section of the right wing only consisted of the spar structure. The rest of the wing was fragmented and found among the debris field. Flight control continuity could not be established between the flight control surfaces, and the control stick due to impact fragmentation of the wings. The flight control cables were found separated in the debris field. Both wing fuel tanks were located in the field and were observed to be breached with hydraulic deformation of the tank walls.

2.4 Landing Gear

The landing gear were found among the debris field.

2.5 Cockpit

The cockpit was fragmented and crushed along with the forward fuselage from impact related damage. None of the flight instruments could be located due to the extensive fragmentation of the cockpit and the instruments being dispersed in the mature soybean field. Several faceplates of various

engine instruments were found within 500 ft. Both sets of rudder pedals were found separated in and around the forward fuselage. The control stick could not be located in the forward fuselage. A Garmin GPSMAP 396 was found about 500 ft from the cockpit and recovered for data download.

3.0 Engine Examination

The engine could not be examined due to impact fragmentation and crush damage. The engine was found still attached to the firewall with all major components located. Oil residue was observed on the ground around the engine and fuel blighting was observed on nearby vegetation.

4.0 Propeller Examination

The propeller was found fragmented and scattered in the debris field. All blade sections recovered had impact and rotational damage. (See Figure 5)



Figure 5. Propeller

5.0 Pilot Information

The Pilot held a Private Pilot Airplane Single Engine Land Certificate without an Instrument Rating. He had a recent Flight Review within the year according to family members.

6.0 Aircraft Information

The airplane was an amateur built Rans S19, N519JR, S/N 090800032. The airplane was equipped for Day & Night VFR Flight Only. Additionally, the pilot was the builder of the airplane and held a Repairman certificate.

7.0 Meteorological Information

The area was reported to have heavy fog and mist around the accident time. Responding law enforcement observed fog and low ceiling at about the 260 ft height of the nearby wind turbine. Observed weather in Yankton, South Dakota, about 14 miles to the north, showed ceilings of 200 ft and visibility of .25 statute miles about 15 minutes before the accident time.

Submitted by:

Andrew Finne
Air Safety Investigator