



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Central Region

February 1, 2022

ON SCENE OBSERVATIONS

CEN22FA111

This document contains 19 embedded photos.

A. ACCIDENT

Location: Hutchinson, MN
Date: January 31, 2022
Aircraft: Cirrus SR22, Registration N227BD, Serial #3134
NTSB IIC: Samantha Link

B. EXAMINATION PARTICIPANTS:

Samantha Link
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C. SUMMARY

An on scene examination of the airframe and engine was conducted on February 1, 2022.

D. DETAILS OF THE INVESTIGATION

1.0 Accident Site Overview

The airplane touched down in an open snowy field about 2 miles southeast of the Hutchinson Municipal Airport – Butler Field (HCD), Hutchinson, Minnesota. The airplane came to rest mostly whole, and the debris field was contained to the immediate area. The first identified point of impact was located about 10 feet southeast of the main wreckage. It consisted of a rock, the nose gear tire, and one propeller blade. A narrow line of oil extended about 5 feet towards the main wreckage. Another propeller blade was about 20 feet east of the main wreckage, and the final propeller blade was located about 400 feet southwest of the main wreckage.

The main wreckage came to rest upright, with the nose of the airplane facing toward the east. The lower portion of the forward fuselage and lower engine compartment were crushed upward. The sides of the fuselage were cracked in between the instrument panel and the front seats, the forward fuselage and engine area came to rest slightly nose down and toward the left. The left wing remained attached to the fuselage, and the aft fuselage remained intact. The vertical stabilizer, horizontal stabilizer, and elevators remained attached and exhibited some damage. The rudder was fracture separated at all but its lowest attachment point.

1.1 Accident Site Photos



Figure 1: First Identified Point of Impact

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Figure 2: Accident Site Overview

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Figure 3: Aft looking Forward



Figure 4: Left Side of Airplane



Figure 5: Right side of Airplane



Figure 6: Forward Right side of Airplane

2.0 Airframe Examination

- The airplane came to rest on its belly, the lower forward fuselage was flattened. The forward cabin area was compressed with the engine compartment.
- The nose landing gear strut was bent toward the right and came to rest against the lower engine cowling.
 - The nose gear wheel and its fractured wheel pant came to rest near the first identified point of impact.
- The roof was found cut off to facilitate first responders.
- Control Continuity was mostly established throughout. The cabin control stick/pedals were inaccessible due to forward cabin crushing. However, control continuity was established from the wing roots to the ailerons, and the aft seats to the rudder and elevators.
 - The control columns remained secured in place.
 - The elevator moved when the control cables were manipulated underneath the aft seats.
 - The rudder cables remained attached underneath the aft seat, however, the rudder was fractured at all but its lowest attachment point.
 - The left-wing aileron moved when the cable was manipulated at the left-wing root.
 - The right-wing aileron cable was fractured underneath the cabin floor, and near the wing root.
 - All fracture signatures were consistent with overload.
- The cabin area:
 - The primary flight display and multifunctional display (MFD) remained intact, and a memory card was found within the MFD.
 - The card was removed for data download.
 - The ignition switch and fuel selector were found in the off position.
 - First responders noted that they turned both of these items off.
 - The fuel selector was on the right-wing fuel tank before they turned it to the off position.
 - The flap control was found in the “up” position.
 - The throttle control was found mostly forward, and the mixture control was found mostly aft.
 - The Hobbs meter read: 1015.7
 - The flight meter was: 775.2
 - The front two seats remained intact. The leading edge of each seat came to rest touching the instrument panel.
 - The four-point harnesses for both forward seats remained secured to their attachment points and both airbags were deployed.
 - The aft seats remained in place.
 - They were removed to expose the flap actuator and flight control cables.
- The flap actuator screw was observed in the fully extended position, which is consistent with the flaps in the up position.
- The parachute straps were cut by first responders,

- The parachute was later secured by first responders. It was unable to be examined during the on-scene examination due to gusty wind conditions.
 - The parachute compartment was open.
 - The rocket and parachute bag were not present.
 - The parachute retention strap remained secured and was unremarkable.
- The right wing remained mostly whole, but was fracture separated at the trailing edge. The wing was overall bent forward.
 - The aileron remained attached at its attachment points and manipulated freely by hand.
 - The right-wing flap remained secured at its wing attachment points, however, it was hanging loose upside down.
 - The flap torque tube was observed fracture separated.
 - The fuel tank cap remained secured in place
 - The cap was removed, and no fuel was noted in the wing tank.
 - Cuts were made in the top of the wing and no fuel was noted in the fuel tank.
 - The right main landing gear remained attached, and the wheel pant was secured in place.
- The left wing remained attached to the fuselage.
 - The aileron remained secured and moved accordingly when the control cable was manipulated at the wing root.
 - The flap was in the up position.
 - The inboard portion of the flap exhibited a large dent. A smaller dent was on the outboard flap.
 - The fuel cap remained secured in place, it was removed, and no fuel was noted in the wing tank.
 - Several cuts were made in the top of the wing and no fuel was noted in the fuel tank.
 - The underside of the left wing exhibited cracking. In the vicinity of these cracks was a small area of blue staining consistent with 100LL aviation fuel.
 - No corresponding blue staining was noted in the snow below the wing.
 - The left main landing gear was bent outward and came to rest touching the lower wing skin.
 - The left main landing gear strut was heavily splintered.
 - The wheel pant was fracture separated and came to rest under the wing.
- The aft fuselage remained attached to the cabin area and was mostly intact.
 - The inspection panel on the right side of the fuselage was opened and the elevator/rudder controls remained in place.
- The empennage remained attached at the aft fuselage.
 - The vertical stabilizer was intact
 - The rudder was separated from all of its attachment points except the lowest one.
 - The RDM was secured in place and removed for download.
 - The horizontal stabilizers were intact, and the elevators remained attached.

- The elevators moved accordingly when manipulated by the control cables underneath the aft cabin seat.

2.1 Airframe Photos



Figure 7: Instrument Panel

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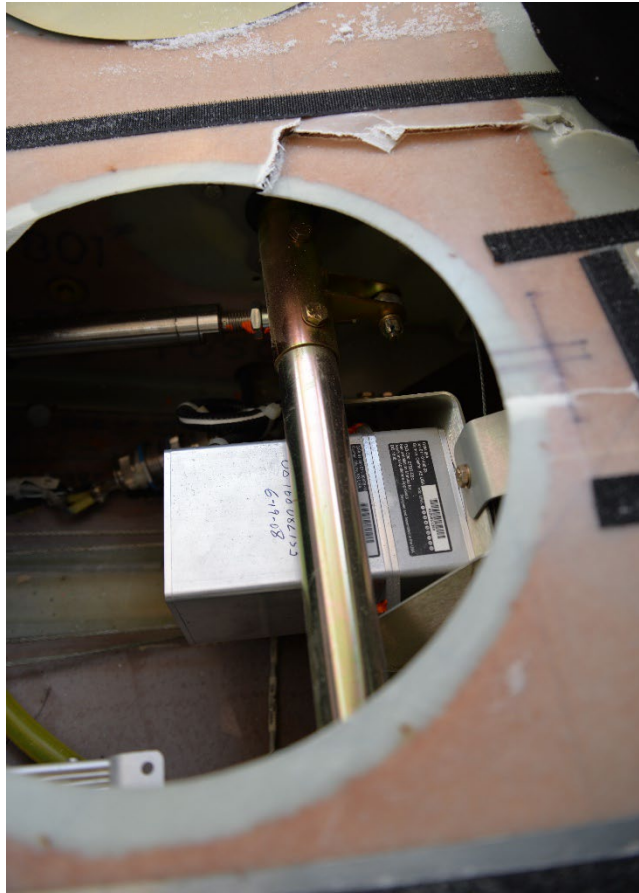


Figure 8: Flap Actuator Screw



Figure 9: Underside of Right Wing



Figure 10: Underside of forward fuselage/engine compartment



Figure 11: Blue stain observed in the snow as the engine was moved



Figure 12: Splintered left Landing gear Strut



Figure 13: Underside of Left Wing



Figure 14: Underside inboard left wing. Note: blue staining.

3.0 Engine Examination

- The upper engine cowling was removed.
 - Continental Motors, Model: IO-550-N, Serial #691789
- There were no obvious indications of catastrophic failure.
- The engine appeared clean, and all major components remained attached.
- The oil stick was removed, and the engine contained 4 quarts of oil.
 - Some oil was noted near the initial impact point.
 - When the airplane was moved for recovery purposes, the oil sump was observed breached, and oil exited the engine.
- The lower engine cowling was crushed upwards.
 - The nose landing gear strut was crushed upwards and to the right; into the engine compartment, and it breached the oil sump.
- When the airplane was moved for recovery, a small amount of fuel exited the engine compartment area and left about 6-inch fuel stain in the snow.
 - The lower cowling was crushed up into the engine compartment.

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3.1 Engine Photos



Figure 15: The Engine Compartment

4.0 Propeller Examination

- All three propeller blades were fracture separated from the propeller hub.
 - One blade came to rest near the first identified point of impact.
 - Chordwise scratching was noted on the chamber side of the blade near the blade tip.
 - The leading edge was polished about midspan extending to the blade tip.
 - A second blade was observed about 20 feet east of the initial point of impact.
 - Chordwise scratching was noted on the chamber side of the blade from about midspan all the way out to the tip of the blade.
 - The leading edge of the blade was polished in this area.
 - The third blade was observed about 400 feet southwest of the initial point of impact.
 - Longwise scuff marks were noted on the chamber side of the blade near the blade tip and about midspan.
 - Cracking was noted on the outboard tip, on the face side of the blade.
- The propeller spinner exhibited dents throughout. None of these dents indicated rotational scoring.

4.1 Propeller Photos



Figure 16: Dents to Spinner



Figure 17: Propeller Blade at the First Identified Point of Impact



Figure 18: Propeller Blade found about 20 feet east



Figure 19: Propeller Blade Found about 400 feet southwest

END.

Submitted by: Samantha Link

ON SCENE OBSERVATIONS