

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



ANC24LA042

WRECKAGE EXAMINATION

June 18, 2024

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A. ACCIDENT

Location: Willow, Alaska
Date: May 31, 2024
Time: 1900 Local
0300 Zulu
Airplane: Cessna 170A

B. WRECKAGE EXAMINATION

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C. SUMMARY

The pilot performed a normal coordinated 3-point landing at the approach end of the runway and "fast taxied" with the tail airborne. As the airplane neared the exit from the runway, the pilot reduced the throttle, the tail touched down normally. The pilot applied the brakes at which time the airplane veered to the right. The pilot applied opposite rudder and brakes; however, the airplane ground looped and sustained substantial damage to the left-wing and elevator.

D. DETAILS OF THE EXAMINATION

1.0 Accident Site

The accident occurred at the Willow Airport on runway 31, a dirt/gravel strip that is 4,400 feet long and 75' feet wide. The pilot reported touching down near the beginning of the runway and entering a "fast taxi" to the exit for fuel (Figure 1). It is estimated that the airplane traveled approximately 880 feet before the pilot reduced the throttle to idle to get ready to exit the runway.



Figure 1

2.0 Runway Inspection

An inspection of runway 31 revealed tracks from the accident aircraft as well as wing and elevator scars in the gravel consistent with the pilot's record of events (Figure 2). The tracks indicated that the airplane traveled in a gradual right turn approximately 120 feet from the center of the runway to the point where the wing and elevator impacted the ground.



Figure 2 Wheel marks and impact marks

Tracks from the tail wheel were also noted in the gravel indicating that the tail wheel was skipping prior to or during impact of the left wing and elevator (Figure 3). The impact scar from the left wing was approximately 11 feet in length.



Figure 3 Impact marks from tailwheel

2.1 Flight Control Continuity

The airplane was locked during initial examination; in order to establish continuity of flight controls one investigator moved the flight control surfaces while another investigator confirmed movement of the controls in the aircraft. No abnormalities were noted.

2.2 Tail Wheel Assembly

The pilot reported taxiing from the runway to transient parking with no issues, with the rudder and brakes functioning normally.

The tail wheel rotated without resistance a full 360° (Figure 5). The steering arm is observed to be bent (figure 4), the rigging of the steering chains tension is taut. The leaf spring was observed to have no anomalies.



Figure 5 Tail wheel assembly



Figure 4 Steering arm

2.3 Brake Calipers and Master Brake Cylinder

The brake calipers and pads (Figure 6-7) on both wheels were examined as well as the master brake cylinder (Figure 8-9). The brake pedals were moved the master brake cylinder functioned normally. No hydraulic leaks in the brake system were noted. There did not appear to be any rubbing from the double puck brake pads on the drum.

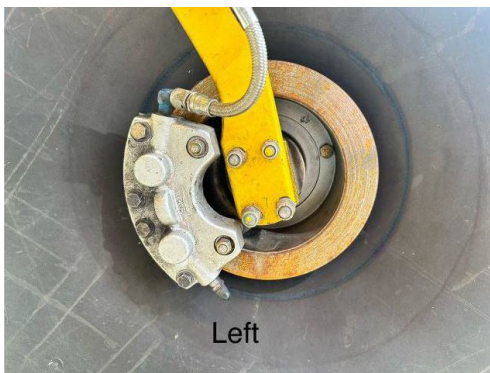


Figure 6 Left brake caliper and brake pad

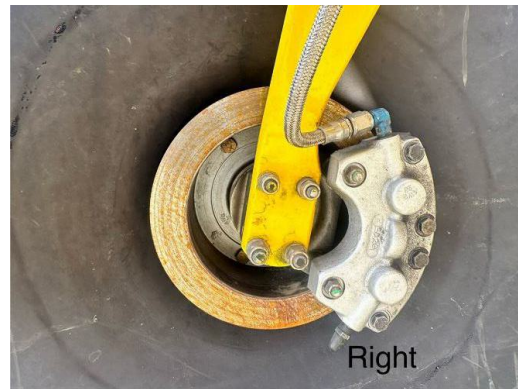


Figure 7 Right brake caliper and brake pad



Figure 8 View of master brake cylinder

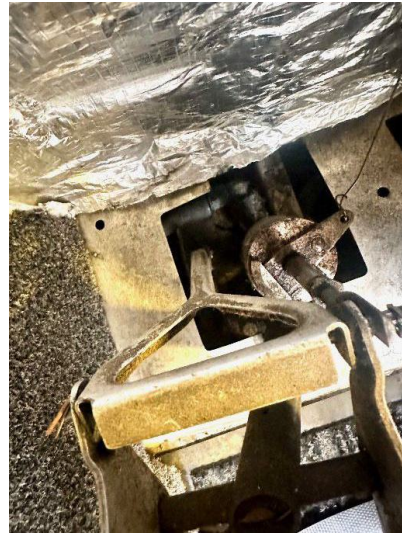


Figure 9 Top view of master brake cylinder

3.0 Aircraft Information

The accident airplane is a 1950 Cessna 170A with a Continental O300D engine and has a McCauley fixed pitch propeller. The aircraft had an annual inspection on May 31st, 2024.

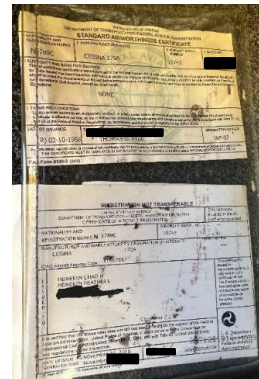


Figure 10 Airworthiness and Registration

4.0 Meteorological Information

The pilot reported VMC conditions and calm winds at the time of the accident.

Submitted by:

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