

National Transportation Safety Board

Office of Aviation Safety

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ANC23LA002

WRECKAGE EXAMINATION

September 19, 2023

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A. ACCIDENT

Location: Cordova , AK
Date: October 16, 2022
Time: 1427 Local
2227 Zulu
Airplane: Piper PA-32-300 N3423W

B. WRECKAGE EXAMINATION

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C. SUMMARY

On October 16, 2022, about 1427 Alaska Standard time, a Piper PA-32-260 airplane, N3432W was substantially damaged when it was involved in an accident about 5 miles south of Cordova, Alaska. The pilot was fatally injured. The airplane was operated as a Title 14 Code of Federal Regulations Part 91 personal flight.

The pilot had departed from the Yakutat Airport (YAK), Yakutat, and was traveling along the coast to Birchwood Airport (BCV) Chugiak, Alaska. The pilot was talking to a Flight Service Station (FSS) requesting updated weather in the Anchorage area. During the conversation, the transmission between the pilot and FSS stopped, and an Emergency Locator Transmitter (ELT) activated. Poor weather conditions hampered search and rescue efforts. The US Coast Guard located the airplane wreckage along a steep mountain side at an elevation of about 1,866 ft. Due to the weather and terrain they were unable to confirm the airplane or any persons on board.

On October 17, The Air National Guard was able to access the site by hiking in and confirmed the identity of the airplane and pilot. On October 18, the weather improved enough for the Alaska Army National Guard to recover the pilot.



Figure 1. Accident airplane at accident site looking up terrain. Photo courtesy of the Coast Guard.



Figure 2. Accident airplane at the accident site looking along the side of the mountain. Photo courtesy of the Coast Guard.

D. DETAILS OF THE EXAMINATION

1.0 Accident Site

The airplane impacted the side of a mountain in steep terrain at about 1866 ft MSL.

2.0 Airframe Examination

The wreckage was recovered from the accident location and moved to the Merle K (Mudhole) Smith airport (PACV) in Cordova Alaska for examination.



Figure 3. Rear view of accident airplane at the recovery site before wreckage examination.



Figure 4. Front view of accident airplane at the recovery site before the wreckage examination.



Figure 5. Right side view of accident airplane at the recovery site.

2.1 Empennage

Vertical stabilizer had minor impact points along the leading edge with horizontal scratches along the sides starting at the leading edge (*figure 6,7*). The tip cap of the vertical stabilizer was impact separated (*figure 8*).



Figure 6. View of leading edge of the vertical stabilizer.



Figure 7. View of the right side of the vertical stabilizer and rudder.



Figure 8. View of the upper portion of the vertical stabilizer and rudder.

The rudder was attached to all attachment points and moved freely with minor impact damage to the fiberglass cap on top of the rudder. Rudder flight control cables were attached to the rudder with an overload break at pullies located about 5.5 ft into the airplane from the lower baggage compartment wall (*figure 18,19,20*).

Elevator was attached at all attachment points and moved freely. Left side of the elevator at about 32" and 43" outboard there were quarter size impacts to the leading edge (*figure 14*). At about 48" outboard the left elevator was bent upward at about 80° along a rivet line (*figure 10*). The left cap showed signs of impact damage. Right side of the elevator's leading edge had impacts starting at about 48" outboard with a large impact centered on the tip cap (*figure 14*). Starting at about 48" outboard, at a rivet line the right elevator is bent upward about 90° (*figure 11*). Elevator control cable continuity established from the elevator to the break in the fuselage about 5.5 ft into the airplane from the beginning of the lower baggage compartment wall (*figure 18,19,20*).

Trim tab was relatively undamaged and was attached to all attachment points (*figure 12, 15*). Some movement of the trim tab was possible but was limited by

impact damage to the trim cable assembly. Trim tab control continuity was established from the trim tab to the break in the fuselage about 5.5 ft into the airplane from the beginning of the lower baggage compartment wall (*figure 18,19,20*). The right trim tab control assembly attachment bracket near the trim tab was still attached, the left side bracket was impact damaged with 45° shear lips and all clean breaks.

Visual inspection from the tail into the Empennage revealed all cables and pulleys in good condition. Both sides on the Empennage had impact damage from impact with the elevator. The right side of the empennage/fuselage had accordion impact damage at about a 45° angle (*figure 16*).



Figure 9. View of the left vertical stabilizer and rudder.



Figure 10. View of the left side of the empennage and damage to the left side of the elevator.



Figure 11. View of the damage to the right side of the elevator.



Figure 12. View of damage to left side of the elevator.



Figure 13. View of damage to leading edge of the right side of the elevator.



Figure 14. View of leading edge of the left side of the elevator.



Figure 15. View of the trim tab and upper portion of the elevator.



Figure 16. View of the right side of the empennage and fuselage.



Figure 17. View of the left side of the empennage.



Figure 18. View of cabin floor about 5.5 ft from the baggage compartment wall.



Figure 19. View of flight control cable breaks along the floor about 5.5 ft from the baggage compartment wall.



Figure 20. Side view of the flight control cables about 5.5 ft from the baggage compartment wall.

2.2 Wings

Left wing leading edge was impact damaged from the root to at about one foot outboard and significant impact damage about 67" outboard to the wing tip (*figure 21*). Fiberglass wing tip was impact separated. The left wing fuel cap was missing. Left aileron had a slight upward bend centered about mid span and was still attached to all attachment points. Left aileron control tube was still connected to the aileron and control cables. The cables pulled out into the upper wing surface near the wing root with broom strawing at the break in the cable from overload forces (*figure 24*). The left flap was impact separated from the left wing with the flap attachment portion still attached to the wing.

Right wing was impact separated from the fuselage. One section separated at the wing root (*figure 26,27*) and the other section was from the wing tip to about 62" in from the wing tip (*figure 25*). The fuel tank cap was still installed but the fuel tank had significant impact damage. Control cables for the right aileron were still attached from the aileron push tubes to a break under the flight controls in the cockpit from overload forces.



Figure 21. View of left wing. Leading edge down.



Figure 22. View of left wing looking at the underneath side of the wing.



Figure 23. View of left wing from the rear looking at the flap attachment area.



Figure 24. View of left wing at the root. Flight control cables pulled through upper wing surface.



Figure 25. View of outer right wing section.



Figure 26. View of inner right wing section.



Figure 27. View of right wing looking out from the wing root.

2.3 Landing Gear

The left landing gear was still attached to the left wing, the right landing gear was impact separated from the right wing (*figure 28,29*). Both wheels turned freely.



Figure 28. View of right landing gear assembly.



Figure 29. View of the right landing gear assembly looking down from the attachment point to the tire.

2.4 Cockpit

Cockpit had significant impact damage. The flight controls/cables were all impacted separated at the floor below the instrument panel (*figure 32*).



Figure 30. View of cockpit area.



Figure 31. View of instrument panel.



Figure 32. View of control cable breaks under the floorboard near the instrument panel area.



Figure 33. View of flap handle and trim setting.

2.5 Cabin



Figure 34. Front view of cabin area.



Figure 35. View of the left side of cabin area.



Figure 36. View of the right side of the cabin area.

3.0 Engine Examination

Engine could be rotated by hand. Limited by the ability of one person to lift and turn the engine with the propellers attached. Magnetos were securely attached to the engine (*figure 42, 43*). Removed the sparkplugs to inspect inside of the cylinders but due to broken intake and exhaust connections, water had entered into the cylinders. The engine internals were exposed to the elements for almost a year. The spark plugs and inside of the cylinders were rusted.



Figure 37. View of the engine data tag.



Figure 38. View of the front and underside of the engine.



Figure 39. View of the right side of the engine.



Figure 40. View of the right side of the engine.



Figure 41. View of the left side of the engine.



Figure 42. View of the right engine magneto.



Figure 43. View of the left engine magneto.



Figure 44. View of engine carburetor.

4.0 Propeller Examination

All three propeller blades had rotational scoring and bending of the blades indicating the engine was producing power at the time of impact (*figure 45-49*).



Figure 45. View of engine propeller.



Figure 46. View of engine propeller.



Figure 47. View of engine propeller.



Figure 48. View of engine propeller.



Figure 49. View of engine propeller.

Submitted by:

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