

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



ANC24FA032

WRECKAGE EXAMINATION

May 23, 2024

TABLE OF CONTENTS

A. ACCIDENT.....	3
B. WRECKAGE EXAMINATION.....	3
C. SUMMARY.....	3
D. DETAILS OF THE EXAMINATION.....	3
1.0 ACCIDENT SITE	3
2.0 AIRFRAME EXAMINATION.....	6
2.1 Fuselage.....	6
2.2 Empennage	8
2.3 Wings 10	
2.4 Landing Gear.....	11
2.5 Cockpit.....	11
2.6 Survivability.....	12
2.7 Fuel/Fuel System.....	13
3.0 ENGINE EXAMINATION	15
4.0 PROPELLER EXAMINATION	20
5.0 PILOT INFORMATION	21
6.0 AIRCRAFT INFORMATION	21
7.0 METEOROLOGICAL INFORMATION	22

A. ACCIDENT

Location: Nondalton, AK
Date: May 17, 2024
Time: 1145L
Airplane: Taylorcraft BC12-D N95744

B. WRECKAGE EXAMINATION

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C. SUMMARY

On May 17, 2024, about 1145 Alaska Daylight Time, a Taylorcraft BC12-D airplane, N95744, was substantially damaged when it was involved in an accident near Nondalton, Alaska. The pilot and passenger were fatally injured. The airplane was operated as a Title 14 Code of Federal Regulations Part 91 flight.

The pilot departed from Port Alsworth Airport (PTA), Port Alsworth, Alaska, at about 1130am Alaska daylight time (AKDT) and was traveling to Nondalton Airport (5NN) Nondalton, Alaska. About 800pm AKDT, the airplane was reported overdue. A search was initiated and the airplane was located at about 930pm about two to three miles east of 5NN under water in Six Mile Lake about 200 yards from the shore. On May 22, 2024 the airplane was recovered from the water. Examination of the airplane revealed flight control continuity from the cockpit to all flight control surfaces with the exception of the trim control. The engine could be rotated by hand, all intake and exhaust valves moved equally. The magnetos remained securely attached to the engine and sparked when rotated by hand. Intake, cylinders and exhaust were examined by a borescope and no abnormalities were observed. The propeller exhibited bending of the blades consistent with the engine producing power at the time of impact. The airplane was equipped with shoulder harnesses but were not used. Only the lap belt portion of the seat belt was used. The pilot did not have a pilot certificate, and never had an FAA medical certificate. Airplane logbooks could not be located

D. DETAILS OF THE EXAMINATION

1.0 Accident Site

Airplane was in Six Mile Lake in about 6 feet of water. Located about two to three miles to the East of the Nondalton airport and about 200 yards from the shore.

About 19 miles from the departure airport (Port Alsworth). The airplane was upside down with only the tundra tires above the water line. The fuselage was pointed 90 degrees to the left of a direct flight path with the nose of the airplane facing a southeast direction.



Figure 1 View of accident airplane at accident site. Photo provided by search team.



Figure 2. View of accident airplane before recovery operations. Photo provided by recovery team.



Figure 3 View from above the water looking down at the airplane at the accident site. Photo provided by the recovery team.

2.0 Airframe Examination

The airplane accident was on May 17th and the airplane was recovered from under the water on May 22nd. The airplane wings were still attached to the fuselage but had filled up with mud and silt. The recovery crew had to cut numerous locations in the fabric of the wing to remove the buildup of mud. While maneuvering the wreckage the wings were damaged and separated from the fuselage. They also had to cut the aileron flight control cables to lift the airplane from the water into the barge. All flight control cables and pulleys were in good condition. All breaks were from first responders, during recovery or from overload. No preimpact damage to the flight control system was observed.

2.1 Fuselage

The fuselage from the firewall to aft of the passenger compartment had numerous impact fractures. The underbelly fabric was separated from the firewall to about 6 feet from the tail.



Figure 4 Left front view of accident airplane



Figure 5 Right front view of accident airplane during wreckage examination.



Figure 6 View of the underside of the accident airplane during wreckage examination.

2.2 Empennage

The empennage was largely still intact. The rudder was destroyed and was held together by the fabric. The rudder was still attached to the lower and upper attachment points. The top of the vertical stabilizer was impact damaged. Flight control cables were attached to the rudder horn with no breaks to the attachment to the rudder pedals in the cockpit.

Both horizontal stabilizers and elevators were undamaged. They were still attached to all attachment points. Flying wires were undamaged. Flight control cables were still attached to the elevators with no breaks in the cable from the elevator into the cockpit. The elevator trim tab was undamaged but the bolt connecting the trim control cable to the trim tab was missing.



Figure 7 View of the flight control cables attachment to the rudder horn.

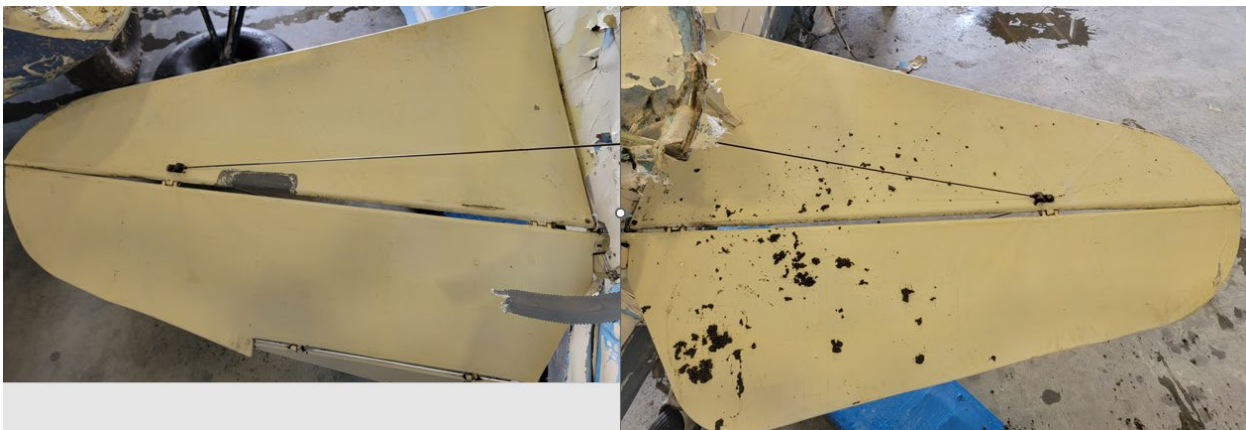


Figure 8 The left and right upper view of the horizontal stabilizers and elevators.



Figure 9 The underside view of the left and right horizontal stabilizers and elevators.



Figure 10 view of missing bolt in the attachment of the control cable to the elevator trim tab.

2.3 Wings

Looking at photos taken before recovery, the wings look undamaged. Wings were attached to the fuselage. Wing struts were connected with no visible damage. Ailerons look undamaged and still attached to the wing. During examination, the arm that controls the aileron movement was fractured from impact and recovery. The flight control cables were still attached from that bell housing arm to the fuselage where it was cut or an overload break occurred during recovery. From the fuselage the aileron cables were undamaged to the cockpit controls.



Figure 11 View of the left and right wings at recovery site.

2.4 Landing Gear

Right main landing gear remained attached to the fuselage. Left main landing gear leg was impact separated from the fuselage.

2.5 Cockpit

The fuselage tubes in the cockpit area had numerous overload fractures. The flight control yokes showed high impact loads. No gear or cargo was seen in the water or during the examinations.



Figure 12 View of cockpit instrument panel.



Figure 13 View of flight control yokes in the cockpit of the accident airplane.

2.6 Survivability

The airplane was equipped with a four-point seatbelt harness. The occupants had to be cut out of the airplane. The main seat buckle is still attached with a cut

either left or right of the buckle. The shoulder portion of the harness are undamaged and not attached to the buckle with one harness tucked up into the ceiling. The shoulder portion of the seat belts were not used. Resulting in additional head trauma during impact.



Figure 14 View of buckles and unattached shoulder harness.

2.7 Fuel/Fuel System

The airplane was on its back, when flipping the airplane upright there was a brief smell of fuel. The accelerator pump was functional. A borescope was used in the fuel system with no blockage, or abnormalities observed. Fuel line was impact separated at the carburetor. The carburetor was impacted separated from the induction system.



Figure 15 View of fuel line connection into the carburetor.



Figure 16 View of facture break between the carburetor and induction system.

3.0 Engine Examination



Figure 17 Date tag on the engine.

The engine was a continental C85-8 engine - 30532-8-8.

The engine had slick magnetos installed. Serial #93050033 and 93050020. Both magnetos looked fairly new, they were securely attached to the engine. Each magneto produced spark when rotated by hand. The high-tension ignition leads looked in good serviceable condition. The top cylinder spark plugs were removed. Two of the spark plugs were packed with mud and the other two had some mud with an oily appearance. A borescope was used to inspect all cylinders, the air intake system, fuel induction system and exhaust system. No blockages or abnormalities were observed.



Figure 18 Top view of the engine and propeller during engine examination.

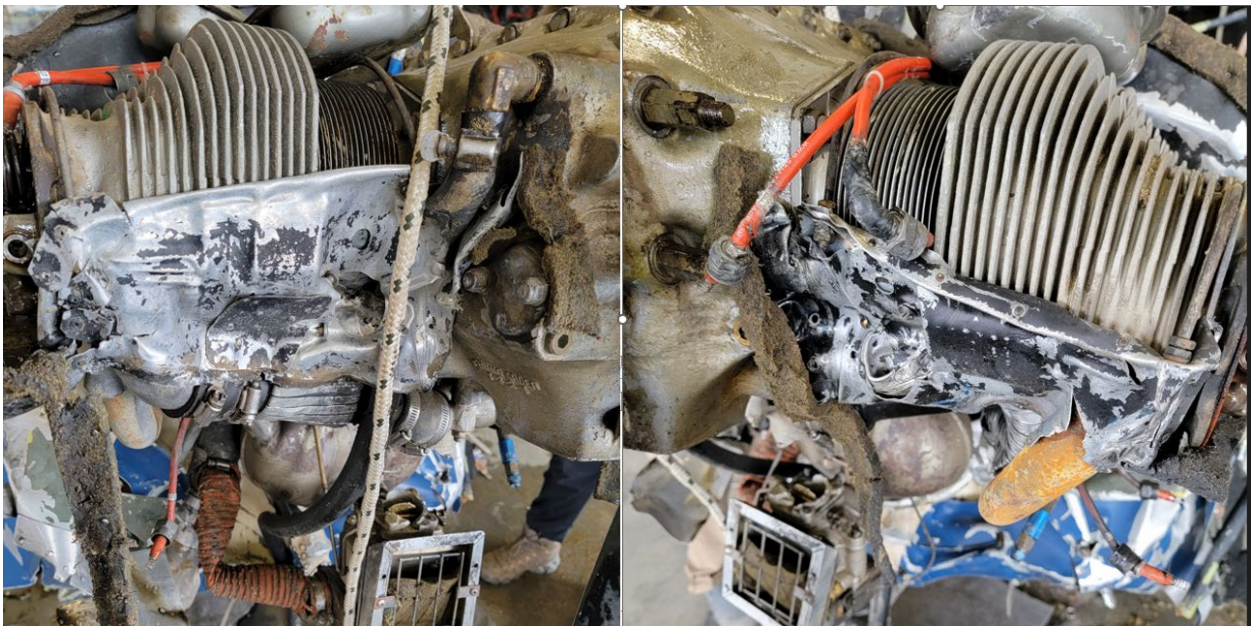


Figure 19 Left and right view of damage to engine baffling on the front of the engine.



Figure 20 View of impact damage to the front of the engine and damage to the engine propeller.

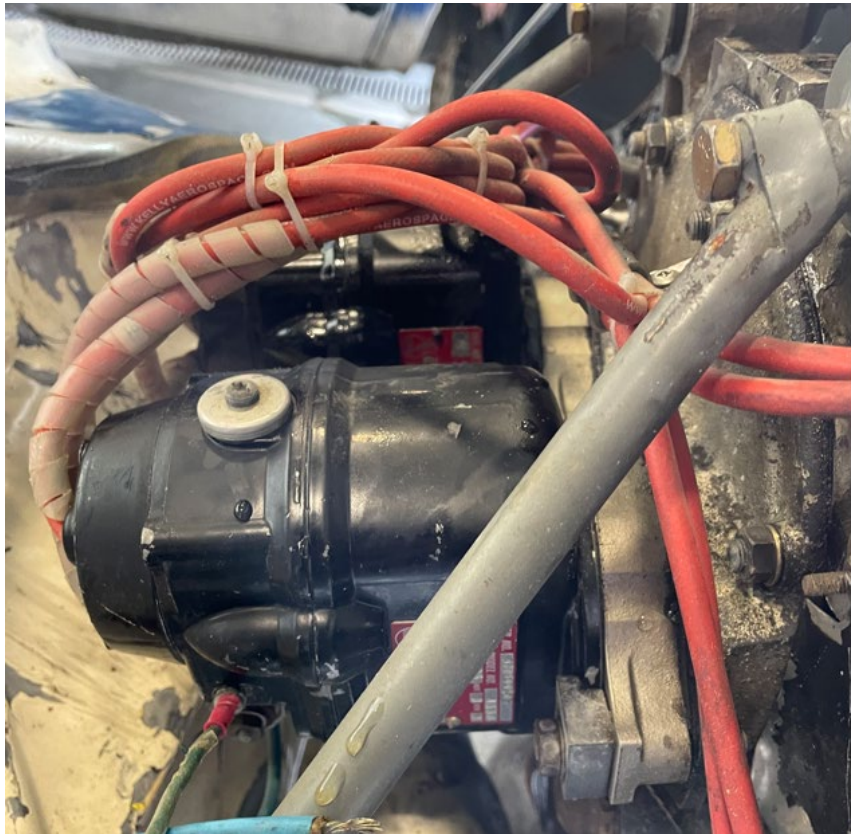


Figure 21 Right side view of the magnetos as installed on the engine.



Figure 22 Left and right data tags on the magnetos.

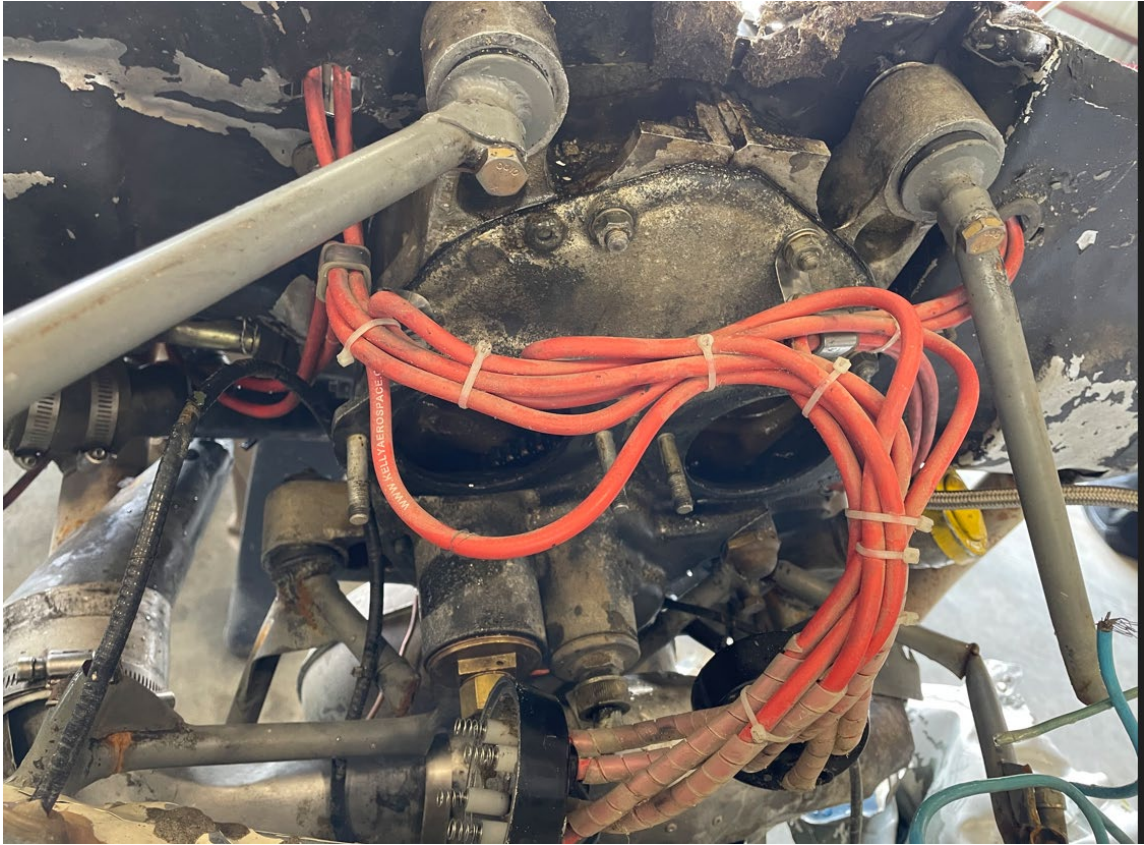


Figure 23 view of the accessory gear case after the removal of the magnetos.



Figure 24 View of the top sparkplugs.

4.0 Propeller Examination

The propeller exhibited bending of the blades consistent with the engine producing power at the time of impact.



Figure 25 View of the damage to one side of the propeller.



Figure 26 View of damage to the other side of the propeller.

5.0 Pilot Information

Neither the pilot nor the passenger had a pilot certificate. The pilot had never had a FAA medical.

6.0 Aircraft Information

No logbooks (pilot or airplane) were located.

7.0 Meteorological Information

According to the State trooper IIC - Witnesses reported the weather foggy with a ceiling of 300ft at best. During the wreckage examination the mechanics I talked to, said that it was foggy in the morning but around the time the accident airplane took off the fog was lifting. FAA weather cameras located a couple of miles from the accident site show low ceiling with a rain shower coming through the area.

Submitted by:

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AAI