

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



ANC24FA089

Wreckage Exam

September 10, 2024

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A. ACCIDENT

Location: King Salmon, AK
Date: September 7, 2024
Time: 0924L
Helicopter: Bell 206B N306FW

B. FIELD NOTES

IIC	Mark Ward NTSB Anchorage, AK
Investigator	Stacia Joyce NTSB Anchorage, AK
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C. SUMMARY

On September 7, 2024, about 0924 Alaska daylight time, a Bell 206B helicopter, N306FW, sustained substantial damage when it was involved in an accident near King Salmon, Alaska. A passenger was fatally injured, the pilot and three passengers sustained minor injuries. The helicopter was operated as a Title 14 Code of Federal Regulations Part 135 flight.

The accident helicopter, owned and operated by Egli Air Haul, was transporting four passengers to a sport fishing camp located to the south of the King Salmon Airport (AKN).

Weather conditions at AKN at the time of the accident were reported to be, in part: Wind 170° at 5 knots; visibility ¼ mile with fog; indefinite ceiling of 200 feet.

According to archived Federal Aviation Administration (FAA) data, the accident pilot contacted the AKN control tower specialist on duty to request a special visual flight rules (SVFR) clearance to depart to the south. The controller on duty issued the pilot a SVFR clearance and instructed the pilot to report clear of the Class D airspace to the south. The helicopter then departed to the south.

Shortly after the helicopter departed, the control tower specialist received a phone call from an observer to the south of the airport indicating that a helicopter had just crashed into the Naknak River, near Grassy Point. The control tower specialist then attempted to reach the departing helicopter, but no further radio communications were received.

During a brief postaccident interview with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC), the accident pilot reported encountering an area of dense fog while flying over the very calm water of the Naknek River and he subsequently lost all visual reference, and the helicopter struck the surface of the river.

D. DETAILS OF THE EXAMINATION

1.0 Accident Site

Accident site was in the water of the Naknek River. The river is bordered by featureless terrain. The picture below was taken at the accident site 3 days after the accident. (Figure 1)



Figure 1 view looking across the river at the accident site on a clear day.

2.0 Airframe Examination

2.1 Fuselage

The fuselage was intact with all major components still attached. Figure 2,3,4,5)



Figure 2 view of the left side of the helicopter.



Figure 3 view of the right side of the helicopter.

2.2 Tail boom

Tail boom was attached to the fuselage. (figure 4,5,6)



Figure 4 view of the left and right side of the tail boom.



Figure 5 view of the left and right side of the tail boom.



Figure 6 view of the tail boom attachment to the fuselage.

2.3 Main rotor drive system

The transmission turned freely by hand with no abnormal noises or movements. Movement of the input drive shaft into the transmission was observed when rotating the main rotor blades.

Main rotor blade no.1 (figure 7) was largely intact with a downward bend about mid span, tip area damage and separation of the trailing edge of the rotor blade. Main rotor blade no.2 (figure 8) was impacted separated about three feet from the attachment point to the main rotor hub. (figure 9) The separated section was not recovered. All damage observed was from impact with water/ terrain.



Figure 7 view of the no.1 main rotor blade.



Figure 8 view of the no.2 main rotor blade.



Figure 9 view of the mast and main rotor hub.

2.4 Tail rotor drive system

The tail rotor blades, and gear box were undamaged. (figure 10) The tail rotor rotated freely by hand and the drive shaft moved in concert. The drive shaft was connected to the engine with a torsional fracture in the drive shaft into the tail rotor gear box. (figure 11)



Figure 10 view of the tail rotor blades.



Figure 11 view of the location of the torsional damage to the tail rotor driveshaft.



Figure 12 View of torsional damage to the tail rotor driveshaft.

2.5 Survivability

The one fatal was unable to exit the helicopter when the helicopter went under the water. The passenger was in the front left seat using a 4-point seatbelt restraint system. (figure 13) The headset wire connection was pulled apart near the connection for push to talk. (figure 14)



Figure 13 View of the front left seat.



Figure 14 View of the front left seat.

2.6 Fuel/Fuel System

No fuel was observed in the fuel tank.

2.7 Flight control system

Cyclic and collective flight controls were traced from the cockpit controls to the pitch control rods attached to the main rotor head. One pitch control rod connected to the No.2 main rotor blade was fractured. The cyclic stick and collective were fractured at the base. (figure 17) Anti-torque control (yaw) was traced from the anti-torque pedals to the tail rotor with impact fractures at the bottom of the flight control broom closet and again at the top of the broom closet. Tail rotor pitch control operated smoothly and freely.

The floor under the flight control hydraulic system and main transmission was heaved upward. (figure 15,16) No damage was observed with the flight control hydraulic servos. All hoses were attached and undamaged.



Figure 15 View of the right side damage to the floor below the main transmission and flight control servos.



Figure 16 View of the left side of the hydraulic servos and main transmission.



Figure 17 View of the cyclic control fracture.

3.0 Engine Examination

All fuel, oil and electrical lines in the engine compartment were undamaged and connected. Fuel control unit was undamaged. Throttle control from cockpit was traced to the fuel control unit.

Rotational scoring observed on the tail rotor drive shaft under the engine and on the input shaft to the K-flex. (figure 20,21) The K-flex was fractured separated between the engine and main transmission

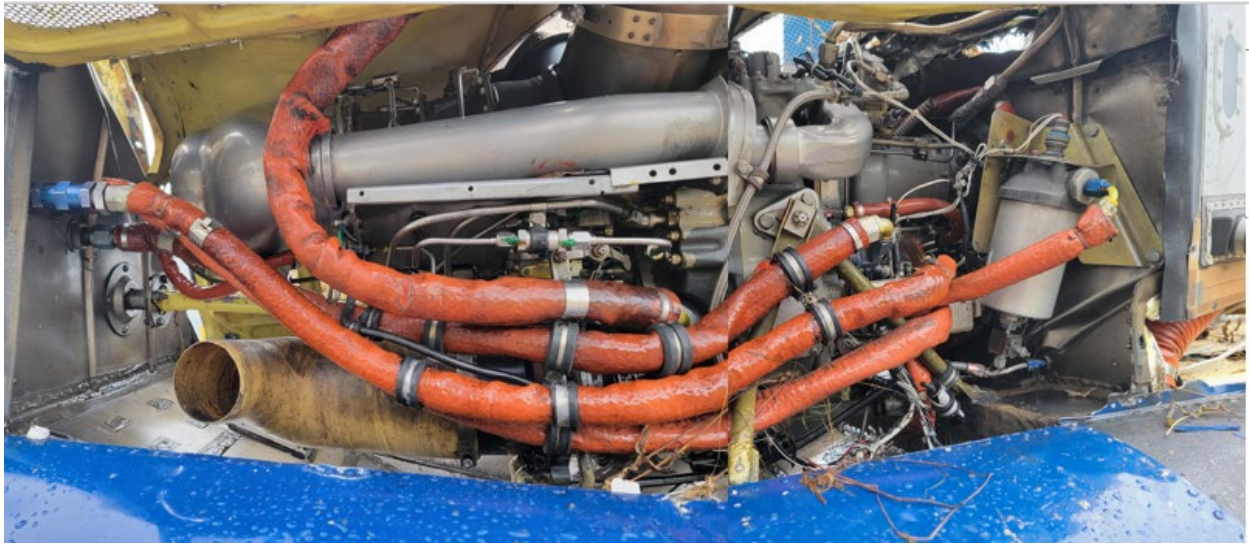


Figure 18 view of the right side of the engine.



Figure 19 View of the left side of the engine and fuel control unit.

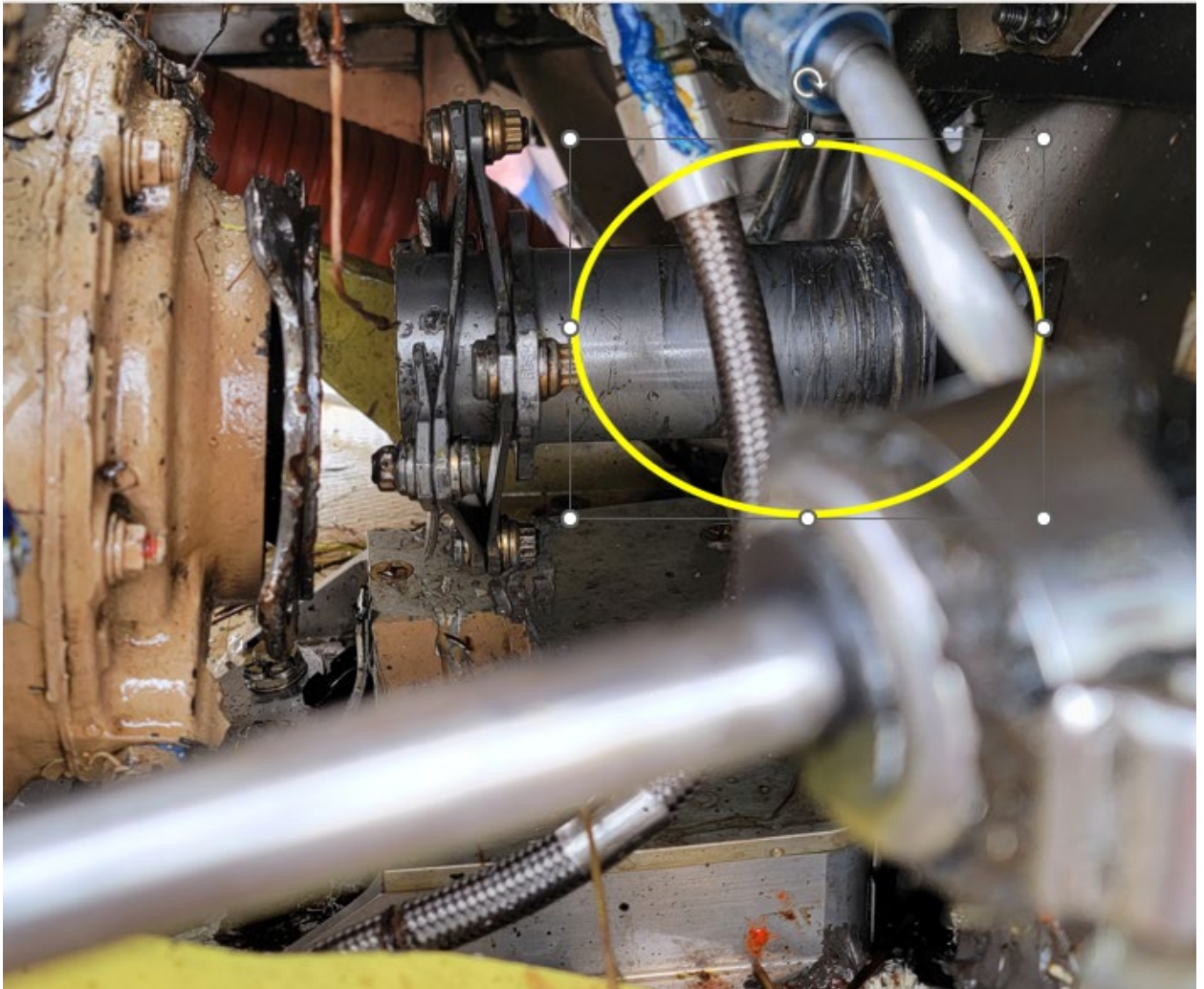


Figure 20 view of rotational scoring on the driveshaft from the engine to the main transmission.

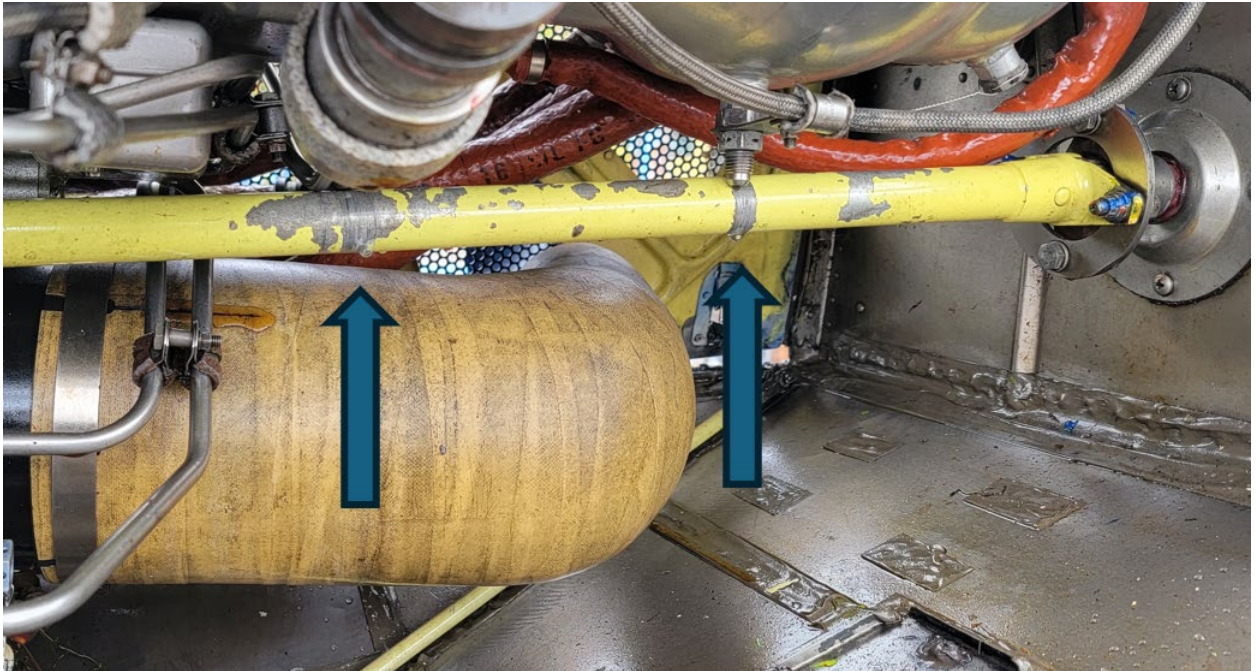


Figure 21 view of tail rotor driveshaft rotational scoring.

4.0 Witness interview

Talked to Michelle Hansen, who is a pilot. She was walking her dog along the river. The accident helicopter flew over her. The helicopter was flying very low over the tree line less than 100 feet above the water. She heard a pop (loud sound) then nothing, she ran towards the accident location and called in the accident to get boats headed that way. She noted that she had just walked past the accident location minutes prior and noticed 60 to 80 ducks in the area. She said the weather at the time of the accident was very foggy and you could not see the other side of the river due to the fog.

Talked to Bryan Fender who is a pilot. Bryan operates a Beaver floatplane operation located about 300 yards from the end of runway 18 at the King Salmon airport. He heard the helicopter start up and was surprised to hear the helicopter takeoff in the foggy conditions. He heard the helicopter fly over then everything went silent. He knew something had to of gone wrong. He went up the river access road and located the helicopter in the water. He saw the pilot and 3 passengers in the water. He called Branch River Services for boats. When the boats arrived, they hooked on to the sinking helicopter and dragged it towards the shore. They recovered the fourth passenger and began to perform CPR. The weather at the accident site was very dense fog. You could not see across to the other side of the river.

5.0 Pilot Information

Interview over the phone when the pilot reported the accident. The pilot reported that this was a part 135 flight. They were changing out sport fishermen from a fishing camp. Normal flight/mission, it was foggy but it was improving. He obtained a Special VFR clearance to depart from the King Salmon airport. He departed to the south and flew over the Naknak river. The water was calm, with no depth perception. Over the water they encounter a dense fog bank and he experienced spatial disorientation. He lost sight of the ground. He attempted to maintain heading and altitude and the next thing he remembers is being upside down in the river. He did not believe there was anything mechanically wrong with the helicopter. The distance between shoreline was about 200 yards.

6.0 Meteorological Information

The pilot was informed the weather was wind 170 at 5 knots, one quarter mile visibility with fog, and an indefinite ceiling of 200 feet.

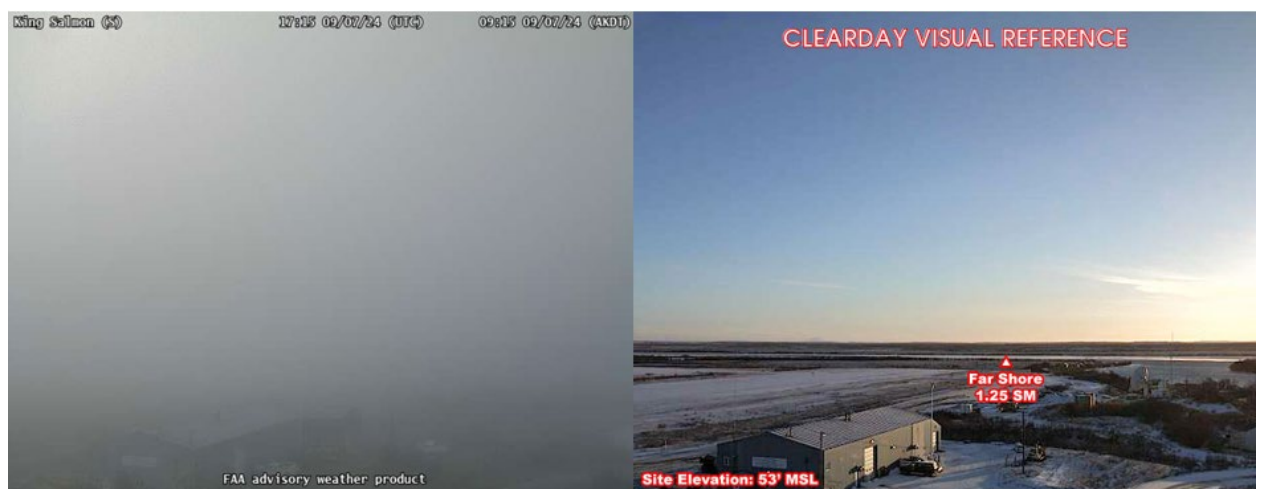


Figure 22 View of FAA weather cam images near the time of the accident.

Submitted by:

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AAI