Transportation Safety Board of Canada

Bureau de la sécurité des transports du Canada

AVIATION INVESTIGATION REPORT
A06P0157

COLLISION WITH TERRAIN

TWEEDSMUIR AIR SERVICES LTD.
CESSNA A185F CF-BUO
MOUNT DOWNTON, BRITISH COLUMBIA
07 AUGUST 2006

Canada

Aviation Investigation Report

Collision with Terrain

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Summary

The Tweedsmuir Air Services Ltd. float-equipped Cessna A185F (registration CF-BUO, serial number 18502201) departed Nimpo Lake, British Columbia, at 1245 Pacific daylight time with only the pilot on board. The pilot was to pick up a passenger at Kluskoil Lake, British Columbia, and then return to Nimpo Lake. The aircraft was reported overdue at 1500 and a search operation was initiated. An emergency locator transmitter signal was received and the aircraft wreckage was located on a hillside in the vicinity of Mount Downton at an elevation of 6824 feet above sea level. The aircraft was destroyed, but there was no fire. Both occupants received fatal injuries. The accident happened at about 1400.

Ce rapport est également disponible en français.

Other Factual Information

The graphical area forecast for the accident area for 1100 Pacific daylight time,[1] three hours before the accident, called for the following conditions: broken clouds based at 8000 feet above sea level (asl), topped at 18 000 feet asl; scattered altocumulus castellanus based at 20 000 feet asl; and prevailing visibility five to six statute miles (sm) in light rain showers and mist. A pilot flying in the area shortly after the time of the accident reported strong winds from the southeast of approximately 40 knots.

The wreckage was found on a steep, eastern-facing slope near Mount Downtown. Impact marks and propeller gouges on the loose shale surface and pieces of the left navigation light indicated that the left wing tip and propeller contacted the ground while the aircraft was upside down. The aircraft came to rest 72 feet down the slope on a heading of 220° magnetic. The top of the aircraft was torn open and the engine was displaced from its mounts. Only the front tips of the floats showed impact damage. Damage to the wings and tail was consistent with the aircraft contacting the terrain at slow forward speed, possibly after a stall, and flipping over nose first.

One propeller blade, which had broken free of the hub, was found at the point of impact. It exhibited severe tip, leading edge, and trailing edge damage. The other blade, still attached to the hub, was found 12 feet down the slope. It exhibited minor tip damage and minor leading edge damage, mostly toward the tip.

The fuel selector was found in the BOTH ON position. The fuel shut-off valve was found in the OPEN position. Both fuel tanks had ruptured, and there was a strong smell of fuel at the accident site.

All control surfaces were in place and all of the flight-control mechanisms appeared to have been functional.

It could not be determined if the pilot completed a weight and balance calculation before flight, and none was found. Luggage, an outboard motor, and numerous small items of survival equipment were identified. It was estimated that the aircraft gross weight was close to the aircraft maximum allowable weight.

Records indicate that the aircraft was certified, equipped, and maintained in accordance with existing regulations and approved procedures. The aircraft was manufactured in 1973 and had flown a total of 7497.5 hours, as of the day before the accident. The aircraft was equipped with a Continental IO-520-D engine, serial number 812757-R, which had accumulated 380 hours since overhaul. A review of the airframe, engine, and propeller logbooks showed nothing remarkable.

A video recorder belonging to the passenger and a digital camera belonging to the pilot were recovered from the wreckage. The video recorder was sent to the TSB Engineering Laboratory for analysis and to determine if further useful information would be evident on the recording. It was determined that the video recorder was being operated by the passenger. It showed the

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[1] All times are Pacific daylight times (Coordinated Universal Time minus seven hours).

aircraft approaching the accident site at a level insufficient to clear the terrain ahead. Rain was evident on the aircraft windows but the ceiling was visibly above the adjacent mountain tops. Some wildlife came into view at about the aircraft's two o'clock position. The camera panned to the right, following the wildlife to about the five o'clock position. It showed the aircraft rolling into a steep, right bank. The camera then panned to the inside of the aircraft, and the recording ended. It was determined from recorder and tape damage that the recorder was turned off by the passenger at the time the recording ended.

The pilot was certified and qualified for the flight in accordance with existing regulations. He had accumulated 830 hours of total flying time, including 250 hours on the Cessna A185F on floats. He held a valid commercial pilot licence issued by Transport Canada (TC), endorsed for all single pilot non-high performance, single- and multi-engine land and sea aeroplanes. His last medical was conducted on 08 June 2006 and was valid for 12 months. From May to October 2005, he had been employed as a Cessna 185 floatplane pilot by a company in Ontario. He then joined Tweedsmuir Air Services in May 2006. He completed company indoctrination training in May, which included a written examination, 7.9 hours of flight training on the float-equipped Cessna A185F aircraft by a company training pilot, and an additional 1.5 hours of flight training followed by a pilot competency check conducted by the company Operations Manager/Chief Pilot. Nothing in the pilot's training record indicated whether he had received any mountain flying training or accumulated any previous mountain flying experience.

The pilot had worked every day for the past 17 days and had flown 85 hours during that period. However, his daily flying time during that period exceeded five hours on only five days, with the majority being in the three- to five-hour range. All flying was carried out during daylight hours. An autopsy and a full toxicology examination were carried out on the pilot; nothing was found that could have led to or contributed to the accident.

Findings as to Causes and Contributing Factors

1. While flying in mountainous terrain, the pilot was manoeuvring close to terrain and struck the ground at slow speed, with the aircraft in a nose-down attitude, possibly after a stall.

2. The pilot's lack of experience in mountain flying likely caused him to misjudge how close to the terrain he could safely fly. The strong wind from the southeast may have been a factor.

This report concludes the Transportation Safety Board's investigation into this occurrence. Consequently, the Board authorized the release of this report on 28 March 2007.

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