



National Transportation Safety Board Aviation Accident Data Summary

Location:	BARROW, AK	Accident Number:	ANC98MA008
Date & Time:	11/08/1997, 0808 AST	Registration:	N750GC
Aircraft:	Cessna 208B	Injuries:	8 Fatal
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Scheduled		

Analysis

The pilot, who was also the station manager, arrived at the airport earlier than other company employees to prepare for a scheduled commuter flight, transporting seven passengers and cargo to another village during hours of arctic, predawn darkness. Heavy frost was described on vehicles and airplanes the morning of the accident, and the lineman who serviced the airplane described a thin glaze of ice on the upper surface of the left wing. The pilot was not observed deicing the airplane prior to flight, and was described by the other employees as in a hurry to depart on time. The pilot directed the lineman to place fuel in the left wing only, which resulted in a fuel imbalance between 450 and 991 pounds (left wing heavy). The first turn after takeoff was into the heavy left wing. The airplane was observed climbing past the end of the runway, and descending vertically into the water. No preimpact mechanical anomalies were found with the airplane or powerplant. The aileron trim indicator was found in the full right wing down position. Postaccident flight tests with left wing heavy lateral fuel imbalances, disclosed that approximately one-half of right wing down aileron control deflection was used to maintain level flight, thus leaving only one-half right wing down aileron control efficacy. Research has shown that frost on airfoils can result in reduced stall angles of attack (often below that required to activate stall warning devices), increases in stall speeds between 20% and 40%, asymmetric stalls resulting in large rolling moments, and differing stall angles of attack for wings with upward and downward deflected ailerons (as when recovering from turns).

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's disregard for lateral fuel loading limits, his improper removal of frost prior to takeoff, and the resulting inadvertent stall/spin. Factors involved in this accident were the improper asymmetrical fuel loading which reduced lateral aircraft control, the self-induced pressure to takeoff on time by the pilot, and inadequate surveillance of the company operations by company management.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (F) FLUID,FUEL - ASYMMETRICAL
2. (F) REFUELING - IMPROPER - PILOT IN COMMAND
3. (C) AIRCRAFT WEIGHT AND BALANCE - DISREGARDED - PILOT IN COMMAND
4. (F) AIRCRAFT CONTROL - REDUCED
5. (C) STALL/SPIN - INADVERTENT - PILOT IN COMMAND
6. (C) ICE/FROST REMOVAL FROM AIRCRAFT - IMPROPER - PILOT IN COMMAND
7. (F) SELF-INDUCED PRESSURE - PILOT IN COMMAND

8. (F) INADEQUATE SURVEILLANCE OF OPERATION - COMPANY/OPERATOR MGMT

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Pilot Information

Certificate:	Airline Transport; Commercial; Foreign	Age:	40
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	3500 hours (Total, all aircraft), 200 hours (Total, this make and model), 3400 hours (Pilot In Command, all aircraft), 16 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N750GC
Model/Series:	208B 208B	Engines:	1 Turbo Prop
Operator:	HAGELAND AVIATION SERVICES INC	Engine Manufacturer:	P&W
Operating Certificate(s) Held:	Commuter Air Carrier (135); On-demand Air Taxi (135)	Engine Model/Series:	PT6A-114
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Scheduled		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Night/Dark
Observation Facility, Elevation:	BRW, 10 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None / 0 ft agl	Wind Speed/Gusts, Direction:	8 knots / , 170°
Temperature:	12° C	Visibility	7 Miles
Precipitation and Obscuration:			
Departure Point:	(BRW)	Destination:	WAINWRIGHT, AK (AIN)

Airport Information

Airport:	WILEY POST MEMORIAL (BRW)	Runway Surface Type:	Asphalt
Runway Used:	24	Runway Surface Condition:	Water--choppy
Runway Length/Width:	6500 ft / 150 ft		

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	7 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:			

Administrative Information

Investigator In Charge (IIC):	MATTHEW L THOMAS	Adopted Date:	02/22/2000
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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