



National Transportation Safety Board Aviation Accident Final Report

Location:	PAXSON, AK	Accident Number:	ANC97LA139
Date & Time:	09/01/1997, 1445 AKD	Registration:	N4520C
Aircraft:	Cessna 170B	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 Serious
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The airplane was departing from the 3,500 feet msl airstrip in what the pilot described as 'optimum carb ice conditions' of 40 degrees F with 'lots of moisture.' The carburetor heat control was 'off' for takeoff. At 50 feet above ground level on climb out, the pilot applied carburetor heat and 'the engine died.' She deselected carburetor heat, the engine began to run rough, and the airplane began to lose altitude. When the pilot began a left turn to avoid trees, the left wing and nose dropped, and the airplane impacted terrain. The electric stall warning had been disconnected.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper use of carburetor heat during a takeoff in carburetor icing conditions. Factors associated with the accident were the pilot's decision to operate the airplane with known deficiencies (a disabled stall warning horn), an inadvertent stall, and the presence of carburetor icing conditions.

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - NONMECHANICAL
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (F) WEATHER CONDITION - CARBURETOR ICING CONDITIONS
2. (C) CARBURETOR HEAT - IMPROPER USE OF - PILOT IN COMMAND

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Occurrence #3: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Findings

3. (F) STALL WARNING SYSTEM - DISABLED
4. (F) OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT - INTENTIONAL - PILOT IN COMMAND
5. STALL - INADVERTENT - PILOT IN COMMAND

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

On September 1, 1997, about 1445 Alaska daylight time, a Cessna 170B airplane, N4520C, sustained substantial damage when it impacted terrain 24 miles to the northeast of Paxson, Alaska. The airplane came to rest 400 feet south of the departure end of a graded, unnamed, airstrip on the middle fork of the Chistochina River, at position 63-07.6 north latitude, 144-38.8 west longitude. The private certificated pilot and single passenger both sustained serious spinal injuries. The airplane was owned and operated by the two occupants. The flight was conducted under 14 CFR Part 91 as a personal flight, returning to Girdwood, Alaska. Visual meteorological conditions prevailed at the time of the accident, and no flight plan was filed.

An FAA inspector's examination of the wreckage revealed that the carburetor heat control was in the cold position, and there was fuel in the wing tanks.

NTSB interviews with the pilot and passenger revealed that there was a "torrential downpour" of rain the night before the accident, and "lots of dew and moisture" before the takeoff. The pilot also stated that it was "optimum carb icing conditions, and 40 degrees F."

The pilot said she did a "longer warmup than normal," and used carburetor heat during back taxi. She said she placed carburetor heat off for the takeoff. She indicated that during the initial climb, passing 50 feet above ground level, she applied carburetor heat and the engine "completely died." She removed the carburetor heat, and the engine came back but, "ran rough, as if it was flooded," and the airplane began to lose altitude.

Both occupants described tall trees in the flight path. The pilot described turning left toward lower terrain, the nose and left wing dropping, and impacting in a flat attitude.

The pilot said in an interview with the NTSB that the stall warning had been disabled prior to her purchase of the airplane. She stated it was not needed because there is a noticeable buffet prior to the airplane stalling. Type Certificate Data Sheet A-799 states in part, "...the following items of equipment must be installed: ...stall warning kit... ."

The Joint Rescue Coordination Center in Anchorage, Alaska, initiated a search after receiving a beacon from the airplane's emergency locator transmitter. The airplane was located about 1700, and the occupants transported to a hospital in Fairbanks, Alaska, at 2000.

No NTSB Pilot/Operator Report was received from the pilot.

Pilot Information

Certificate:	Private	Age:	33, Female
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	08/27/1997
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	325 hours (Total, all aircraft), 288 hours (Total, this make and model), 300 hours (Pilot In Command, all aircraft), 48 hours (Last 90 days, all aircraft), 16 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N4520C
Model/Series:	170B 170B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	25464
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	08/07/1997, Annual	Certified Max Gross Wt.:	2200 lbs
Time Since Last Inspection:	15 Hours	Engines:	1 Reciprocating
Airframe Total Time:	2780 Hours	Engine Manufacturer:	Continental
ELT:	Installed, activated, aided in locating accident	Engine Model/Series:	C145-2
Registered Owner:	DANIEL A. BROKAW	Rated Power:	145 hp
Operator:	ERIN K. BASHAW	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0000	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	Light and Variable /	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	4° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	None
Destination:	GIRDWOOD, AK (AQY)	Type of Clearance:	None
Departure Time:	1444 ADT	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	Gravel
Airport Elevation:	3500 ft	Runway Surface Condition:	Dry
Runway Used:	18	IFR Approach:	None
Runway Length/Width:	3000 ft / 75 ft	VFR Approach/Landing:	Forced Landing

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	1 Serious	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Serious	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	MATTHEW L THOMAS	Report Date:	11/10/1998
Additional Participating Persons:	KENNETH R EPPERSON; ANCHORAGE, AK		
Publish Date:			
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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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).