



National Transportation Safety Board Aviation Accident Final Report

Location:	Kodiak, Alaska	Accident Number:	ANC10LA025
Date & Time:	March 15, 2010, 12:30 Local	Registration:	N663SA
Aircraft:	BRITTEN-NORMAN BN-2A-21	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	2 Serious, 1 Minor
Flight Conducted Under:	Part 135: Air taxi & commuter - Scheduled		

Analysis

The airline transport pilot was taking off on a passenger flight under Title 14, CFR Part 135, when the accident occurred. He reported that during takeoff the wind was reported from 290-300 degrees, at 15 knots, gusting to 27 knots. He chose to make an intersection takeoff on runway 25 at its intersection with runway 29, rather than use the full length of runway 29. He said his airspeed did not develop as quickly as he had anticipated, and that with his airspeed lagging and poor climb performance, he realized the airplane was not going to clear the ridge at the end of the runway. He said he initiated a right descending turn to maintain his airspeed, but impacted trees alongside the runway. He reported that the airplane sustained substantial damage to the wings and fuselage when it impacted trees. He said there were no mechanical problems with the airplane prior to the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain clearance from rising terrain during takeoff resulting in collision with trees.

Findings

Aircraft	Climb rate - Capability exceeded
Personnel issues	Decision making/judgment - Pilot
Environmental issues	Crosswind - Effect on equipment
Environmental issues	Mountainous/hilly terrain - Contributed to outcome

Factual Information

On March 15, 2010, about 1230 Alaska daylight time, a Britten-Norman BN-2A-21 airplane, N663SA, sustained substantial damage following a loss of control and impact with terrain during takeoff initial climb at the Kodiak Airport, Kodiak, Alaska. The airplane was being operated by Servant Air, Kodiak, as a visual flight rules (VFR) passenger flight under Title 14, CFR Part 135, when the accident occurred. The airline transport pilot and one passenger received serious injuries, and the second passenger received minor injuries. Visual meteorological conditions prevailed, and company flight following procedures were in effect. The flight was bound for Old Harbor, Alaska.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC) on March 17, an FAA air safety inspector who interviewed witnesses at the airport, said one witness who was familiar with the Britten-Norman airplane said he saw the airplane at full power attempting to out climb the terrain at the end of the runway, before it descended into the trees. The witness reported that the right wing of the airplane struck the trees first, and then rolled left, striking trees with its left wing, and then continued its descent into the trees.

In a written statement to the NTSB dated March 23, the pilot said that the wind was reported as from 290-300 degrees, at 15 knots, gusting to 27 knots, and he chose to make an intersection takeoff on runway 25 at the intersection of runway 25 and runway 29. He said his airspeed did not develop as quickly as he had anticipated. The pilot reported that with his airspeed lagging and poor climb performance, he realized the airplane was not going to clear the ridge at the end of the runway. He said he initiated a right descending turn to maintain his airspeed, and flared for impact with the trees. The statement also indicated that there were no mechanical problems with the airplane prior to the accident.

History of Flight

Initial climb	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Airline transport	Age:	37, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	January 15, 2010
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	December 22, 2009
Flight Time:	7370 hours (Total, all aircraft), 106 hours (Total, this make and model), 6208 hours (Pilot In Command, all aircraft), 128 hours (Last 90 days, all aircraft), 45 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BRITTEN-NORMAN	Registration:	N663SA
Model/Series:	BN-2A-21	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	4
Landing Gear Type:	Tricycle	Seats:	10
Date/Type of Last Inspection:	March 3, 2010 100 hour	Certified Max Gross Wt.:	6600 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:	11348 Hrs as of last inspection	Engine Manufacturer:	LYCOMING
ELT:	C126 installed, not activated	Engine Model/Series:	IO-540-K1B5
Registered Owner:		Rated Power:	300 Horsepower
Operator:		Operating Certificate(s) Held:	Commuter air carrier (135), On-demand air taxi (135)
Operator Does Business As:	Servant Air	Operator Designator Code:	S4EA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	PADQ, 78 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	11:45 Local	Direction from Accident Site:	250°
Lowest Cloud Condition:	Scattered / 2500 ft AGL	Visibility	7 miles
Lowest Ceiling:	Broken / 4300 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	21 knots / 27 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	300°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.7 inches Hg	Temperature/Dew Point:	1°C / -3°C
Precipitation and Obscuration:			
Departure Point:	Kodiak, AK (PADQ)	Type of Flight Plan Filed:	Company VFR
Destination:	Old Harbor, AK (6R7)	Type of Clearance:	None
Departure Time:	12:30 Local	Type of Airspace:	

Airport Information

Airport:	Kodiak PADQ	Runway Surface Type:	Asphalt
Airport Elevation:	78 ft msl	Runway Surface Condition:	Wet
Runway Used:	25	IFR Approach:	None
Runway Length/Width:	7542 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	1 Serious, 1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Serious, 1 Minor	Latitude, Longitude:	57.75,-152.493896

Administrative Information

Investigator In Charge (IIC):	Lewis, Lawrence
Additional Participating Persons:	Scott Schwitzer; FAA FSDO-03; Anchorage, AK
Original Publish Date:	October 21, 2010
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=75500

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).