



# National Transportation Safety Board Aviation Accident Factual Report

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<b>Location:</b>	HAINES, AK	<b>Accident Number:</b>	ANC96FA137
<b>Date &amp; Time:</b>	09/01/1996, 1756 AKD	<b>Registration:</b>	N2181Z
<b>Aircraft:</b>	Piper PA-32	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	4 Serious, 2 Minor
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Non-scheduled - Sightseeing		

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## HISTORY OF FLIGHT

On September 1, 1996, about 1756 Alaska daylight time, a wheel equipped Piper PA-32 airplane, N2181Z, registered to and operated by LAB Flying Service, sustained substantial damage when it collided with a glacier approximately 11 miles southwest of Haines, Alaska. The commercial certificated pilot and three of the five passengers aboard received serious injuries; the remaining two passengers received minor injuries. The 14 CFR Part 135 scheduled commuter flight, Flight 514, operated in visual meteorological conditions. The flight originated at Gustavus, Alaska, about 1740, and the destination was Haines.

The route of flight from Gustavus was principally northward along the eastern coastline of Glacier Bay, into Muir Inlet, and then northeast over the Casement Glacier towards the Davis Glacier and Haines. The airplane collided with the Davis Glacier while in a descending turn to reverse direction.

The pilot reported in his written statement to the NTSB that he had previously flown the same route from Gustavus to Haines earlier that day, and thus was familiar with the terrain and weather conditions in the vicinity. He estimated the sky conditions as approximately 6,000 feet overcast, with visibility about 12 to 15 miles. As he approached the Davidson Glacier, the pilot said he could see a fog bank near Sullivan Mountain, which was near his intended route of flight. He said he elected to fly closer to the fog bank to see if he could see through the adjacent pass which would lead him to the Chilkat Inlet and Haines. Approximately 3 to 5 miles from the fog, he decided he could not see through the pass, and began a left turn to reverse direction. His intent was to fly to the south and find another pass. Approximately 150 degrees through the turn, the pilot wrote: "...I felt the airplane get pushed downward. It felt like a negative "G". I glanced down at my VSI (vertical speed indicator) and it was pegged at a 2500 fpm descent. Before and during the turn I was at 5300 feet msl. I immediately firewalled the controls, decreased my bank angle, and tried to outclimb the downdraft. Within seconds we were forced on the glacier at approximately 4700 feet. I believe the accident was caused by unforecasted, unforeseen, weather phenomena, (downdraft), and possibly the engine's inability to reach full power to outclimb the downdraft. 2181Z had numerous problems beforehand, and

when I firewalled the controls, I didn't feel or hear the engine power increase."

The pilot's written statement to the NTSB differs, in part, from information and statements credited to the pilot by Federal Aviation Administration inspectors and an Alaska State Trooper who interviewed the pilot prior to the preparation of the pilot's written statement to the NTSB.

The pilot was interviewed by Alaska State Trooper Donald E. Otis, on September 1, at 2115. Trooper Otis met the pilot at the Haines Heliport, which is where the pilot was taken immediately after leaving the accident site. According to Trooper Otis' report (attached), the pilot said words to the effect: " I was coming through at about 4200 feet. There was a little bit of fog layer right before goat wall which is a mountainside, so I started to turn around. It was a standard procedure turn, everything was fine, nice and smooth, lot of airspeed. For some reason I couldn't hold altitude. Airplane started descending so I added full prop and throttle and started pulling back but airplane kept descending. I couldn't hold it up, it was smooth, I don't know if there was a downdraft off the mountain. I think the engine was working fine but I just couldn't hold the altitude and as I came around I came upon the ice, skinned the top of it and hit the ice. It was more of a crash than a controlled landing."

The pilot was also interviewed by two FAA inspectors from the Juneau Flight Standards District Office. Their interview was conducted in Haines, on September 4. A copy of the transcript from that interview is appended. A review of the interview transcript did not reveal any comment by the pilot that the airplane was not airworthy, or that there was any in-flight, preimpact mechanical malfunction. The transcript also indicates the pilot began his turn away from the fog bank about 3/4 of a mile away.

Another LAB airplane closely followed the accident flight. This airplane carried the accident airplane's passenger baggage. The second airplane's pilot flew over the accident site almost continuously until rescuers arrived. According to FAA inspector Robert Kolvig, he interviewed the pilot of the second airplane soon after the accident. Inspector Kolvig asked the pilot if he experienced any turbulence or downdrafts in the vicinity of the accident site. The pilot reported that he had not.

The NTSB investigator-in-charge (IIC) spoke with the pilot of a Coastal Airways helicopter that was sent to the accident site to assist in the rescue. The pilot characterized the weather as calm winds, stable air, and foggy. He said some areas were in a "white out" condition because of the fog, snow, and overcast sky, and that in places it was difficult to discern the horizon. He also said the pilot apparently turned to the north, into the rising glacier, instead of going down slope. The helicopter pilot estimated the crash site's elevation to be between 4,700 and 4,800 feet msl.

#### PASSENGER STATEMENTS

The NTSB IIC had telephonic interviews with three of the passengers, Janice Larkin, John Bemben, and David Gagne, on April 24, March 21, and March 20, respectively.

Janice Larkin was seated in the left rear of the airplane. She said that she does not have total recollection of the flight and the events just preceding the accident, due to her injuries and the aftermath of the accident itself. She said she is not a pilot, but has had some glider pilot training. She described the departure weather from Gustavus as 6,000 to 8,000 feet overcast, in light to moderate rain. The pilot originally told the passengers that they could not go by the glacier route due to weather, but at some point changed his mind and went over the glacier anyway. She thought they were flying at 500 feet above the ground, or lower. She, and a couple of the other passengers, were taking pictures outside during much of the flight. Just before the accident, she recalls a cloud bank ahead of the flight, and then a turn, or roll to the right, and then a turn (she believes) to the left. She thinks there was also some "squirrely" air motions just before impact. She does not recall the pilot making any comments immediately before the crash.

John Bemben was seated directly behind the pilot. He said he noticed the pilot flying lower over the glacier, possibly because of a lowering overcast. Just prior to the accident, he estimated the height over the glacier as about 100 feet. He said the airplane turned to the left, and the pilot made no comment about any impending crash. He said he was taken totally by surprise at the impact. He also said he was unaware of any turbulence or surface winds, although the pilot had been turning the airplane frequently so that they could take pictures.

David Gagne was seated on the right side of the airplane behind the front seat passenger. He characterized the weather as overcast, gray, raining, and white ice below. He said he could not estimate their height above the glacier because there was "no scale to anything." He did not recall any turbulence or winds. He said the pilot had been turning the airplane fairly frequently to allow picture taking. Just prior to the crash, he said the pilot turned to the right and then back to the left. He said the pilot made no pre crash comments, and that the accident impact took him by surprise.

#### DAMAGE TO AIRCRAFT

The airplane was damaged beyond economical repair.

#### METEOROLOGICAL INFORMATION

The closest weather reporting site to the accident is Haines, located approximately 11 miles northeast of the accident site. The weather observations are taken by a contract employee of the National Weather Service. The weather observation closest to the time of the accident was taken at 1845, and reported: Sky, 2,500 feet overcast; Wind, 020 degrees at 3 knots; Temperature, 52 F; Dewpoint, 51 F.

Skagway is another reporting site, and it is located approximately 28 miles northeast of the accident site. At 1753, Skagway reported: Sky, 6000 feet overcast; Wind, calm; Temperature, 53 F; Dewpoint, 49 F.

The pilot's weather observation at the time of the accident, as noted in his report to the NTSB, is: Sky, (about) 6,000 feet overcast; Wind, 270 degrees at 12 knots; Temperature, 45 F. The pilot also noted the formation of a fog bank to the east of the accident site. At the request of FAA inspectors who interviewed him, the pilot drew the approximate route of flight on a Juneau Sectional Chart. In his hand drawn depiction, he indicated the wind was from the east, not the west, as he indicated in his report to the NTSB.

#### WRECKAGE AND IMPACT INFORMATION

An on-site inspection of the crash area and airplane was conducted on September 4, by FAA inspectors from the Juneau Flight Standards District Office.

The airplane came to rest on the Davidson Glacier, upright and facing in an easterly direction. The elevation of the accident site was approximately 4,800 feet msl, and the geographic coordinates were 59.05 north, 135.35 west. The surface of the glacier was rough and undulating, with many crevasses.

All major components of the airplane were present at the crash site.

Virtually every surface of the airframe exhibited some degree of buckling, compression, twisting or other distortion. The floor of the cabin had been displaced upwards, and all the passenger seats were displaced and distorted. The forward portion of the fuselage, inclusive of the cabin floor, instrument panel, firewall and engine, was displaced downward and several feet to the airplane's left.

The engine remained attached to the engine mounts, and the three propeller blades remained in their respective hubs. All three propeller blades exhibited aft bending and torsional twisting.

Both main landing gear separated from the airplane upon impact.

#### ADDITIONAL INFORMATION

The engine was examined by a representative of the engine manufacturer (Lycoming), on September 9. The manufacturer's representative discovered no preimpact mechanical anomalies with the engine. A portion of the engine manufacturer's report is attached.

The NTSB did not take custody of the wreckage, and no portion of the airplane was retained by the NTSB.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	25, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	12/15/1995
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	930 hours (Total, all aircraft), 239 hours (Total, this make and model), 291 hours (Last 90 days, all aircraft), 93 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N2181Z
<b>Model/Series:</b>	PA-32 PA-32	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	32-7940104
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	08/05/1996, 100 Hour	<b>Certified Max Gross Wt.:</b>	3400 lbs
<b>Time Since Last Inspection:</b>	82 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	6740 Hours	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	IO-540-K165
<b>Registered Owner:</b>	LAB FLYING SERVICE	<b>Rated Power:</b>	300 hp
<b>Operator:</b>	LAB FLYING SERVICE	<b>Operating Certificate(s) Held:</b>	Commuter Air Carrier (135); On-demand Air Taxi (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	LABA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Unknown	Condition of Light:	Day
Observation Facility, Elevation:	PAH, 16 ft msl	Distance from Accident Site:	11 Nautical Miles
Observation Time:	1905 ADT	Direction from Accident Site:	210°
Lowest Cloud Condition:	Scattered / 2000 ft agl	Visibility	0 Miles
Lowest Ceiling:	Overcast / 4500 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	30°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	12° C / 9° C
Precipitation and Obscuration:			
Departure Point:	GUSTAVUS, AK (GST)	Type of Flight Plan Filed:	Company VFR
Destination:	, AK (HNS)	Type of Clearance:	None
Departure Time:	1745 ADT	Type of Airspace:	Class G

## Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	3 Serious, 2 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 Serious, 2 Minor	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	JAMES D LABELLE
Additional Participating Persons:	ROBERT W KOLVIG; JUNEAU, AK
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 <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .