



Aviation Investigation Final Report

Location:	Palmer, Alaska	Accident Number:	ANC11CA058
Date & Time:	July 6, 2011, 09:48 Local	Registration:	N949AK
Aircraft:	AVIAT AIRCRAFT INC A-1B	Aircraft Damage:	Substantial
Defining Event:	Turbulence encounter	Injuries:	1 Serious, 1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that he was flying at a low altitude in mountainous terrain when the airplane encountered a strong downdraft, and began to descend. He added full engine power to stop the descent, but the airplane continued to descend, and impacted an area of down sloping, rock-covered terrain. The airplane sustained substantial damage to the fuselage, wings, and empennage. The pilot indicated that there were no preaccident mechanical problems with the airplane.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's decision to fly at a low altitude in mountainous terrain and weather conditions conducive to downdrafts.

Findings

Environmental issues	Downdraft - Contributed to outcome
Environmental issues	Terrain induced turbulence - Contributed to outcome
Aircraft	Climb capability - Capability exceeded
Personnel issues	Decision making/judgment - Pilot

Factual Information

History of Flight

Maneuvering-low-alt flying	Collision with terr/obj (non-CFIT)
Uncontrolled descent	Turbulence encounter (Defining event)

Pilot Information

Certificate:	Airline transport	Age:	60, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Front
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 6, 2011
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	11800 hours (Total, all aircraft), 600 hours (Total, this make and model), 10000 hours (Pilot In Command, all aircraft), 122 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	AVIAT AIRCRAFT INC	Registration:	N949AK
Model/Series:	A-1B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2444
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:		Engine Model/Series:	O-360-A1P
Registered Owner:	CLINE RICHARD L	Rated Power:	180 Horsepower
Operator:	CLINE RICHARD L	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	50 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Palmer, AK (OAK1)	Type of Flight Plan Filed:	None
Destination:	Palmer, AK (OAK1)	Type of Clearance:	None
Departure Time:	08:20 Local	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Serious	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious, 1 Minor	Latitude, Longitude:	61.484165,-149.041946(est)

Administrative Information

Investigator In Charge (IIC):	Johnson, Clinton
Additional Participating Persons:	Ray Lesane; Federal Aviation Administration; Anchorage, AK
Original Publish Date:	October 6, 2011
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=81043

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).