

Aviation Investigation Final Report

Location: North Pole, Alaska Accident Number: ANC08LA030

Date & Time: December 26, 2007, 15:58 Local Registration: N7637D

Aircraft: Piper PA-22-150 Aircraft Damage: Substantial

Defining Event: 2 None

Flight Conducted Under: Part 91: General aviation - Instructional

Analysis

A certificated flight instructor (CFI) was providing flight instruction to a student pilot during civil twilight. The CFI reported that while on approach to an unlighted, snow-covered gravel runway, he instructed the student pilot to go-around when he realized that the airplane was not lined up with the runway. He said that his verbal command to immediately applying full engine power and initiate a go-around was followed, but the engine did not respond. The CFI took control of the airplane, confirmed that the throttle was at maximum, and then he landed the airplane in the deep snow. As the main and nose wheels touched down in the deep snow, the airplane decelerated rapidly, and the nose landing gear collapsed. The airplane sustained substantial damage to the fuselage and wings. An FAA airworthiness inspector reported that his postaccident inspection of the airplane disclosed a number of maintenance deficiencies, but found none that would have accounted for the loss of engine power.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power for an undetermined reason during an attempted go-around, resulting in a forced landing and a collision with snow-covered terrain. A factor associated with the accident was the lack of suitable terrain for a forced landing.

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Factual Information

History of Flight

On December 26, 2007, about 1558 Alaska standard time, a Piper PA-22-150 airplane, N7637D, sustained substantial damage during a forced landing following a reported loss of engine power while on approach to the Bradley Sky-Ranch Airport, North Pole, Alaska. The certificated flight instructor and the student pilot/airplane owner were not injured. The airplane was being operated as a visual flight rules (VFR) instructional flight under Title 14, CFR Part 91 when the accident occurred. Visual meteorological conditions prevailed at the time of the accident, and a VFR flight plan was in effect. The flight originated at the Fairbanks International Airport, Fairbanks, Alaska, about 1542.

During a telephone conversation with the National Transportation Safety Board investigator-incharge on January 29, the flight instructor reported that while on approach to runway 33, an unlighted, snow-covered gravel runway, he instructed the student pilot to go-around when he realized that the airplane was not lined up with the runway. He said that the student pilot followed his verbal command by immediately applying full engine throttle, but the engine did not respond. The instructor said that he then took control of the airplane, confirmed that the throttle was maximum, then pulled aft on the control yoke to cushion the landing on the snowcovered terrain. He said that when the main and nose wheels touched deep snow, the airplane decelerated rapidly, and the nose landing gear collapsed. The airplane sustained substantial damage to the fuselage and wings.

The accident occurred during the hours of sunset, which began at 1444. Civil twilight for North Pole ended at 1608, or 10 minutes after the accident occurred.

A Federal Aviation Administration (FAA) airworthiness inspector from the Fairbanks Flight Standards District Office (FSDO) responded to the accident scene shortly after the accident, and examined the airplane prior to recovery efforts. The inspector reported that during his inspection of the airplane, he noticed a placard on the airplane's instrument panel, mounted just above the engine throttle that said: "2 second delay, advance throttle slowly."

In the flight instructor's written statement to the NTSB he noted that either carburetor icing, or an incorrect fuel mixture adjustment may have contributed to the loss of engine power.

After the airplane was recovered from the accident site, the FAA inspector reported that throughout his postaccident inspection of the airplane he discovered a number of maintenance deficiencies, but found none that would have accounted for the loss of engine power.

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The closest weather observation facility is Fairbanks, which is 12 miles west of the accident site. On December 26, 2007, at 1553, an Aviation Routine Weather Report (METAR) was reporting, in part: Wind, 040 degrees at 4 knots; Visibility, 10 miles; ceiling, 4,100 feet broken; temperature, 0 degrees F; dew point, minus 8 degrees F; altimeter, 29.93 inHg.

Flight instructor Information

Certificate:	Commercial; Flight instructor	Age:	56,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	September 1, 2007
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	August 1, 2007
Flight Time:	833 hours (Total, all aircraft), 30 hours (Total, this make and model), 461 hours (Pilot In Command, all aircraft), 4 hours (Last 90 days, all aircraft), 13 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Student pilot Information

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Certificate:	Student	Age:	56,Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	October 1, 2007
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	30 hours (Total, all aircraft), 20 hours (Total, this make and model), 6 hours (Pilot In Command, all aircraft), 22 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

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Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N7637D
Model/Series:	PA-22-150	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	22-5346
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	October 1, 2007 Annual	Certified Max Gross Wt.:	2000 lbs
Time Since Last Inspection:	35 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	4913.5 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	0-320
Registered Owner:	Robert Allen & Gary Baumgartner	Rated Power:	150 Horsepower
Operator:	Forest M. Kirst	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Dusk
Observation Facility, Elevation:	PAFA,434 ft msl	Distance from Accident Site:	12 Nautical Miles
Observation Time:	15:53 Local	Direction from Accident Site:	280°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Broken / 4100 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	40°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.93 inches Hg	Temperature/Dew Point:	-18°C / -22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	FAIRBANKS, AK (FAI)	Type of Flight Plan Filed:	VFR
Destination:	FAIRBANKS, AK (FAI)	Type of Clearance:	None
Departure Time:	15:42 Local	Type of Airspace:	

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Airport Information

Airport:	Bradley Sky-Ranch Airport 95Z	Runway Surface Type:	Gravel;Snow
Airport Elevation:	483 ft msl	Runway Surface Condition:	Snow
Runway Used:	33	IFR Approach:	Visual
Runway Length/Width:	4100 ft / 60 ft	VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	65.765274,-147.390548

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Administrative Information

Investigator In Charge (IIC):

Additional Participating
Persons:

Cric Jones; Federal Aviation Administration; Fairbanks, AK
Robert F Wesner; Federal Aviation Administration; Fairbanks, AK

Original Publish Date:

December 11, 2008

Last Revision Date:

Investigation Class:

Class

Note:

Investigation Docket:

https://data.ntsb.gov/Docket?ProjectID=67442

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.

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