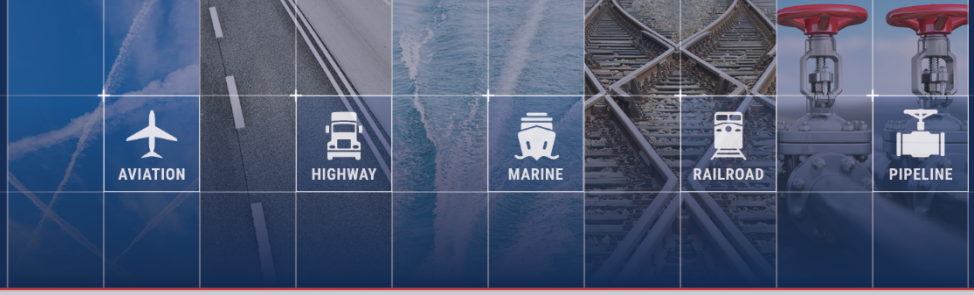

Aviation Investigation Final Report

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:		**Injuries:**	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.

Findings

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-in-charge 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 snow-covered 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.

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

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)		

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:**	O-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:**	

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

Administrative Information

Investigator In Charge (IIC):	Johnson, Clinton
Additional Participating Persons:	Eric 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