Aviation Investigation Final Report

Location:	GLENNALLEN, Alaska	**Accident Number:**	ANC01LA050
Date & Time:	April 21, 2001, 18:00 Local	**Registration:**	N6912M
Aircraft:	Stinson 108-3	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot, holder of a student pilot certificate, was on a cross-country personal flight over remote terrain. While in cruise flight, the engine suddenly began producing a heavy vibration. It also began to smoke and produce oil on the windshield, and then the propeller stopped. The airplane began to descend and the pilot turned toward a small frozen lake, located about 5 miles from a major highway. The area around the lake was surrounded by tall trees. The pilot selected a forced landing area between several trees in an area only large enough to fit the main fuselage. During the collision, the windshield was broken out, the cabin doors were torn off, and the wings were extensively damage, including rupturing of the wing fuel tanks. The cockpit area remain intact and the pilot exited the airplane with a small backpack. A postcrash fire then erupted and the airplane was consumed. The flight was not reported overdue, and no emergency locator transmitter (ELT) signals were detected by search and rescue personnel. The following day, the pilot said he used a handheld radio to contact an airplane flying over the area and requested assistance. The pilot of the other airplane landed on the small frozen lake and picked up the pilot. Following the accident, the pilot reported that internal components of the engine failed and ruptured the engine case.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A total failure of the engine and subsequent rupture of the crankcase during cruise flight. A factor in the accident was unsuitable terrain for a forced landing.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: CRUISE

Findings
1. (C) ENGINE ASSEMBLY - FAILURE
2. (C) ENGINE ASSEMBLY,CRANKCASE - RUPTURED

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
3. (F) TERRAIN CONDITION - NONE SUITABLE

Factual Information

On April 21, 2001, about 1800 Alaska daylight time, a tundra tire equipped Stinson 108-3 airplane, N6912M, was destroyed by impact and a postimpact fire after colliding with trees during a forced landing, about 27 miles southwest of Glennallen, Alaska. The airplane was being operated as a visual flight rules (VFR) cross-country personal flight when the accident occurred. The airplane was operated by the pilot. The pilot, holder of a student pilot certificate, received minor injuries. Visual meteorological conditions prevailed. A VFR flight plan was not filed. The flight originated at the Cordova Municipal Airport, Cordova, Alaska, about 1600.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC), on April 23, 2001, the pilot reported he was in cruise flight about 4,000 feet msl. The engine suddenly began producing a heavy vibration. It also began to smoke and produce oil on the windshield, and then the propeller stopped. The airplane began to descend and the pilot turned toward a small frozen lake, located about 5 miles from a major highway. The area around the lake was surrounded by tall trees. The pilot selected a forced landing area between several trees in an area only large enough to fit the main fuselage. During the collision, the windshield was broken out, the cabin doors were torn off, and the wings were extensively damaged, including rupturing of the wing fuel tanks. The cockpit area remained intact and the pilot exited the airplane with a small backpack. A postcrash fire then erupted and the airplane was consumed.

The flight was not reported overdue, and no emergency locator transmitter (ELT) signals were detected by search and rescue personnel. The following day, the pilot said he used a handheld radio to contact an airplane flying over the area and requested assistance. The pilot of the other airplane landed on the small frozen lake and picked up the pilot.

The pilot holds a student pilot certificate, and has about 1,000 hours of flight time. The pilot reported the engine had accrued 1,060.13 hours since a major overhaul. Following the accident, portions of the airplane and engine were removed from the crash scene. On August 23, 2001, the pilot reported to the NTSB IIC that internal components of the engine failed and ruptured the engine case.

Pilot Information

Certificate:	Student	**Age:**	36,Male
Airplane Rating(s):	None	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	January 24, 2000
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	March 11, 2000
Flight Time:	1000 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Stinson	**Registration:**	N6912M
Model/Series:	108-3	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	108-4912
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	February 9, 2001 Annual	**Certified Max Gross Wt.:**	2500 lbs
Time Since Last Inspection:	19 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	2882 Hrs at time of accident	**Engine Manufacturer:**	CONTINENTAL
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	O-470-K
Registered Owner:	On file	**Rated Power:**	230 Horsepower
Operator:	On file	**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:		**Visibility**	40 miles
Lowest Ceiling:	Broken / 8000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	100°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	CORDOVA, AK (CKU)	**Type of Flight Plan Filed:**	None
Destination:	BIG LAKE, AK (BGQ)	**Type of Clearance:**	None
Departure Time:	16:00 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	61.983333,-146.449996

Administrative Information

Investigator In Charge (IIC):	Erickson, Scott
Additional Participating Persons:	GRANT CHAPMAN; FAA-AL-ANC FSDO 01; ANCHORAGE, AK
Original Publish Date:	October 2, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=53190