



National Transportation Safety Board Aviation Accident Final Report

Location:	Glasgow, MT	Accident Number:	SEA04FA032
Date & Time:	01/01/2004, 1900 MST	Registration:	N3171S
Aircraft:	Cessna 182G	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	4 Fatal
Flight Conducted Under:	Part 91: General Aviation -		

Analysis

The pilot and three passengers were completing the final leg of a round robin cross-country flight that originated earlier in the day. Approximately 2 hours 30 minutes into the final leg of the cross-country flight, the pilot received an in-flight weather update for the route of flight. The weather specialist reported low ceilings and low visibilities along the intended route. Additionally, the specialist reported that VFR flights were not recommended due to an AIRMET for IFR conditions, icing conditions and areas of mountain obscuration. Subsequent to receiving the updated weather information, the pilot reported that he was diverting to an alternate airport northwest of his location. After failing to arrive at the planned destination, an ALNOT was issued for the missing airplane. The airplane wreckage was later located southeast of the intended alternate. Infrared weather satellite imagery showed areas of enhanced widespread cloud cover and cloud tops northwest of the accident location on the night of the accident. Dark night conditions prevailed at the time of the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Loss of aircraft control resulting in an in-flight collision with terrain. Factors include marginal weather and dark night conditions.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING

Findings

1. (F) WEATHER CONDITION - CLOUDS
2. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
3. (F) LIGHT CONDITION - DARK NIGHT

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings

4. TERRAIN CONDITION - GROUND

Factual Information

HISTORY OF FLIGHT

On January 1, 2004, about 1900 mountain standard time, a Cessna 182G, N3171S, was destroyed when it collided with snow-covered terrain in a remote area approximately 21 miles southwest of Glasgow, Montana. The airplane was owned by the pilot, and was being operated as a visual flight rules (VFR) cross-country personal flight under the provisions of Title 14, CFR Part 91, when the accident occurred. The private pilot and the three passengers aboard the airplane were fatally injured. Dark night conditions prevailed, and a flight plan was on file for the flight that originated from Mobridge, South Dakota. The pilot's flight planned destination was Cut Bank, Montana. The aircraft departed Mobridge approximately three hours prior to the accident.

At 1823 MST, the pilot of N3171S contacted Cedar City, Utah, Automated Flight Service Station (AFSS) and requested an in-flight "...weather update from Glasgow to Cut Bank, Montana." The specialist reported, in part, that low ceilings and low visibilities were forecast for Cut Bank. Additionally, the specialist reported that VFR flights were not recommended along the intended route of flight due to an AIRMET for IFR (instrument flight rules) conditions, icing conditions and areas of mountain obscuration.

Subsequent to receiving the forecasted weather information for the planned route of flight, as well as current weather observations for north central Montana, the pilot reported that he was diverting to Havre, Montana. At that time, the most current observation for Havre reported broken clouds at 5,500 feet and a visibility of eight statute miles.

On January 2, 2004, at 0047 MST, the Federal Aviation Administration (FAA) issued an ALNOT (alert notice) for the aircraft after it failed to arrive at the pilot's flight planned destination. Subsequent to the ALNOT, a search for the missing aircraft was initiated. On the afternoon of January 4, 2004, the aircraft wreckage was located approximately 21 miles southwest of Glasgow (southeast of the intended alternate).

PILOT INFORMATION

The pilot held a private pilot certificate with an airplane single-engine land rating. The pilot did not hold an instrument rating. The most recent medical certificate, a third class medical certificate, was issued on September 12, 2003. The medical certificate contained a limitation requiring the pilot to wear corrective lenses. On the medical application for this most recent medical, the pilot indicated that he had accumulated approximately 175 total flight hours, including approximately 3 hours in the six months preceding the application date.

Pilot logbook records indicated that the pilot received a private pilot certificate on February 28, 1979. Subsequent to completing the certificate and rating, the pilot logged approximately 23 flights; the last flight was dated March 24, 1979. From March 24, 1979, to September 3, 2003, no entries or flight activity was notated in the pilot's logbook. Commencing on September 4, 2003, and ending on October 2, 2003, there were seven entries in the logbook. "Flight review required by 61.56 completed on these dates..." was notated in the remarks sections of the entries. The pilot's total flight experience, at the completion of the flight review, was approximately 104 hours.

AIRCRAFT INFORMATION

The accident airplane, a 1964 Cessna 182 (serial number 18255671), was issued a normal airworthiness certificate in June of 1964. A Teledyne Continental O-470-R, rated at 230 HP, powered the four-place single-engine airplane.

Maintenance records indicated that the last inspection, an annual inspection of the airframe, engine and propeller, was completed on April 27, 2003. The airframe total time at inspection was approximately 3,303 hours. The engine time since major overhaul was approximately 421 hours. No open discrepancies were noted.

METEOROLOGICAL INFORMATION

The closest weather observation facility to the accident site is Glasgow, Montana, which is approximately 21 miles to the northeast. On January 1, 2004, at 1853 MST, the hourly Aviation Routine Weather Report (METAR) was, in part, wind from 320 degrees (true) at 5 knots; visibility, 10 statute miles; sky conditions and clouds, 8,500 overcast; temperature, minus 15 degrees C; dew point, minus 16 degrees C; altimeter, 29.67 inches.

Havre, Montana, is located approximately 110 miles northwest of the accident location, and was the pilot's intended alternate location. On January 1, 2004, at 1855 MST, the hourly METAR report for Havre, Montana, was, in part, winds from 020 degrees (true) at 5 knots; visibility, 5 statute miles; sky conditions and clouds, 2,300 broken, 4,700 overcast; temperature, minus 13 degrees C; dew point, minus 16 degrees C; altimeter, 29.69 inches.

Approximately 21 minutes later, an updated special weather report (METAR) for Havre was issued. At 1916 MST, the hourly report was, in part, winds from 030 degrees (true) at 9 knots; visibility, 3 statute miles with light snow; sky conditions and clouds, 1,100 overcast; temperature, minus 13 degrees C; dew point, minus 16 degrees C; altimeter, 29.69 inches.

The 1856 hourly METAR observation at Cut Bank, the pilot's original planned destination was, in part, winds from 350 degrees (true) at 13 knots; visibility .75 SM miles in light snow and mist; sky conditions and clouds, vertical visibility 600 feet; temperature, minus 16 degrees C; dew point, minus 17 degrees C.

Infrared weather satellite imagery showed areas of enhanced widespread cloud cover and cloud tops northwest of the accident location on the night of the accident (image attached).

WRECKAGE AND IMPACT INFORMATION

Personnel from the National Transportation Safety Board, Cessna Aircraft Company, Teledyne Continental, and Valley County Sheriff's Office accessed the wreckage site on January 7, 2004. Access to the accident site was delayed due to inclement weather conditions to include sub zero temperatures and blowing snow.

The wreckage was located on public land at 48 degrees 05.083 minutes north latitude and 107 degrees 06.85 minutes west longitude. The relatively flat terrain was covered with drifting snow measuring from 1 inch to 24 inches in depth. The accident site elevation was approximately 2,381 feet MSL.

The debris field encompassed an area approximately 540 feet in length, and approximately 200 feet in width at the widest point. The debris field traveled from north to south.

The first identified point of contact was a furrow like ground scar covered with snow. A piece

of green lens, identified as part of a navigation light lens, was located in the immediate area of the ground scar. A piece of navigation lens (red) was located along the wreckage track approximately 65 feet south of the ground impact scar.

A portion of lower wing skin, aileron and engine cowling were located along the wreckage track approximately 90 feet south of the ground scar. The pieces of wreckage were heavily deformed and distorted.

A portion of the engine accessory gear case (aft), left wing (to include lift strut, flap, and portion of the aileron) was located along the wreckage track approximately 190 feet south of the initial ground scar. Aft crashing, fragmentation and span wise bending was noted to the wing assembly.

The engine assembly was located approximately 325 feet south, and approximately 200 feet west of the initial ground scar. The engine oil sump, magnetos, a majority of the engine baffling and exhaust tubing was torn from the assembly. The carburetor was separated from the mounting flange. A section of the accessory gear case was broken away from the assembly. Engine oil was present in the engine as well as the immediate area where the assembly was located. The two bladed propeller assembly was separated from the crankshaft flange.

The main wreckage was located approximately 340 feet south of the initial ground scar. The wreckage consisted of the empennage, the aft section of the fuselage, a section of the aft cabin assembly, a piece of the left wing and the left landing gear assembly. The wreckage was heavily deformed and fragmented.

The left front seat was located approximately 530 feet south of the initial ground scar and marked the southern most point of the wreckage debris field. Two of the aircraft's occupants were recovered from the immediate area of the seat assembly.

Both propeller blades were recovered from the accident site after the initial onsite investigation. The blades (2) separated from the hub assembly during the accident sequence and were located in the confines of the debris field. Aft bending approximately 10 degrees, leading edge damage and S type bending was noted to the first propeller blade. Leading edge damage, bending and scratching was noted to the second propeller blade.

The control cables for the airplane's primary flight controls were present, however, control cable continuity could not be established due to the extent of damage to the aircraft.

The cockpit controls and instrument panel was located in the confines of the wreckage debris field. The components sustained extensive impact damage and a majority of the instrumentation was destroyed.

No evidence of any preaccident mechanical anomalies of the engine or airframe was discovered during the on-scene portion of the investigation.

MEDICAL AND PATHOLOGICAL INFORMATION

The FAA Civil Aeromedical Institute (CAMI), Oklahoma City, Oklahoma, conducted toxicology testing on the pilot. According to the postmortem toxicology report, results were negative for carbon monoxide, cyanide, and ethanol, legal and illegal drugs. See attached report for specific test results.

ADDITIONAL INFORMATION

Airport personnel reported that the airplane landed in Mobridge, South Dakota, at about 1600 CST on January 1, 2004, and was "topped off" shortly thereafter. Fuel records indicated the airplane received 46.8 gallons of 100 LL. Personnel at the airport stated the airplane departed Mobridge at about 1630 local.

The Safety Board released the wreckage, located in Glasgow, Montana, to Global Aerospace on September 29, 2004. The Safety Board retained no parts or components.

Pilot Information

Certificate:	Private	Age:	45, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	09/12/2003
Occupational Pilot:		Last Flight Review or Equivalent:	10/02/2003
Flight Time:	121 hours (Total, all aircraft), 32 hours (Total, this make and model), 63 hours (Pilot In Command, all aircraft), 27 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N3171S
Model/Series:	182G	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	18255671
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	04/27/2003, Annual	Certified Max Gross Wt.:	2800 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	3303 Hours as of last inspection	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	O-470
Registered Owner:	James W. Newman	Rated Power:	230 hp
Operator:	James W. Newman	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:		Condition of Light:	Night
Observation Facility, Elevation:	KGGW, 2294 ft msl	Distance from Accident Site:	70 Nautical Miles
Observation Time:	1853 MST	Direction from Accident Site:	18°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	100°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.71 inches Hg	Temperature/Dew Point:	-17°C / -19°C
Precipitation and Obscuration:			
Departure Point:	MOBRIDGE, SD (MBG)	Type of Flight Plan Filed:	VFR
Destination:	CUT BANK, MT (CTB)	Type of Clearance:	None
Departure Time:	1630 CST	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	3 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 Fatal	Latitude, Longitude:	48.096667, -107.114167

Administrative Information

Investigator In Charge (IIC): Dennis J Hogenson **Report Date:** 01/24/2005

Additional Participating Persons: Bobby Radtke; FAA FSDO; Helena, MT
Steve M Miller; Cessna Aircraft Company; Wichita, KS
R.S. "Scott" Boyle; Teledyne Continental Motors; Mobile, AL

Publish Date:

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 pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).