



Aviation Investigation Final Report

Location:	Foster City, Michigan	Accident Number:	CHI02FA172
Date & Time:	June 17, 2002,	Registration:	N5034D
Aircraft:	Cessna 182A	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Aerial observation		

Analysis

The airplane was reported missing and later found destroyed in a wooded area by search and rescue personnel. The wreckage path was consistent with a high-speed descent into terrain. Examination of the wreckage revealed no anomalies. The pilot had multiple serious medical conditions, several of which are specified as disqualifying for all classes of medical certificate in Federal Aviation Regulations including a thinned bulging section of heart wall, congestive heart failure, cardiac chest pain, coronary heart disease requiring angioplasty and bypass surgery complicated by atrial fibrillation and diabetes requiring insulin and oral hypoglycemic mediation. He also had significant disease of his heart valves. The pilot and his personal physician (also his Aviation Medical Examiner for many years) had not informed the Federal Aviation Administration regarding the pilot's conditions (known to the pilot and the Aviation Medical Examiner at the time of application), on seven applications for Airman Medical Certificates.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The incapacitation of the pilot. A contributing factor was the pilot and medical examiner providing false information on the pilot's medical applications.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings

1. DESCENT - UNCONTROLLED - PILOT IN COMMAND
2. (C) INCAPACITATION(CARDIOVASCULAR) - PILOT IN COMMAND
3. (F) PHYSIOLOGICAL CONDITION - PILOT IN COMMAND
4. (F) INFORMATION INSUFFICIENT - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On June 17, 2002, a Cessna 182A, N5034D, was reported missing. The airplane was found destroyed in a wooded area near Foster City, Michigan, after a four day search by search and rescue personnel. Visual meteorological conditions prevailed on the day that the airplane was reported missing. The 14 CFR Part 91 wildlife survey flight was not operating on a flight plan. The pilot was fatally injured. The flight departed from the Gogebic-Ironwood County Airport, Ironwood (IWD), Michigan, about 1415 central daylight time.

The pilot was contracted by the Michigan Department of Natural Resources to perform wolf survey flights documenting the number and location of wolves in the state.

On June 17, 2002, the pilot arrived at IWD about 1200, obtained 12.4 gallons of fuel and went to lunch with his friend. The pilot returned from lunch and departed. The pilot's typical flight pattern for wolf survey flights was to depart IWD, fly to the north and then to the northeast prior to returning to Stambaugh Airport, Stambaugh, Michigan

PERSONNEL INFORMATION

The pilot, age 77, held a commercial pilot certificate with airplane single engine land and instrument ratings. He also held a mechanic certificate with a powerplant rating. On February 7, 2001, he was issued a second class medical certificate. On February 28, 2002, his application for a second class medical certificate was deferred. At the time of application, he reported a total flight time of 16,500 hours of which 500 hours were in the past six months.

AIRCRAFT INFORMATION

The 1958 Cessna 182A, serial number 51134, was powered by a Continental O-470-L engine, serial number 63202-8-L, rated at 230 horsepower at 2,600 rpm. There were no aircraft logbooks in the wreckage and none were received by the National Transportation Safety Board.

WRECKAGE AND IMPACT INFORMATION

The main wreckage were located about 105 nautical miles southeast of IWD in a wooded area with trees about 60 feet in height. The wreckage path was about 450 feet long and oriented on a magnetic heading of 200 degrees. A path of broken tree limbs from the northeastern edge of the wreckage path towards the main wreckage exhibited an approximate downward angle of 20 degrees. Sections of the airplane's wings, empennage, engine and propeller were located along the wreckage path. The propeller with its attached hub was separated from the

engine and exhibited S-shaped bending.

The firewall and instrument panel was crushed with no evidence of any sooting or melting. Inspection of the instrument panel and cockpit revealed that the propeller control was extended outward about 1 1/4 inches and the mixture control was extended outward about 1/4 inch. The flap selector handle was in the 0 degree flap position. The altimeter setting was 29.92. The Hobbs meter indicated 1519.7. The fuel selector was in the left tank position.

No anomalies were noted with the airplane's flight control system or engine.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy of the pilot was conducted by the Dickinson County Medical Examiner, Dickinson County, Michigan, on June 22, 2002.

Federal Aviation Administration (FAA) toxicological test results indicated 44 (mg/dL, mg/hg) ethanol, 1 (mg/dL, mg/hg) n-propanol, and 5 (mg/dL, mg/hg) acetaldehyde detected in urine. The report states, "Since urine has a high level (1548 mg/dL) of glucose, the ethanol found in this case may potentially be produced from the bacterial contamination of the urine sample and not from the ingestion of alcohol."

The pilot had a history of gout, treated with medications, since at least 1980. In 1985, he had a large myocardial infarction (heart attack), resulting in a ventricular aneurysm (a thinned bulging section of the heart wall) and congestive heart failure. He was found to have severe blockages in two coronary arteries, for which he twice received angioplasty in 1985. He was treated with medication for coronary artery disease and congestive heart failure through at least 1991. He underwent coronary artery catheterization in 1992, which showed stable coronary anatomy. He again underwent cardiac catheterization in 1998, due to symptoms of congestive heart failure, with evidence of worsening coronary artery disease and severe left ventricular dysfunction, treated with medications. In March 2000, he was noted to have additional symptoms of congestive heart failure. He underwent cardiac catheterization again in October 2001 in response to complaints of angina. Cardiac catheterization demonstrated progression of coronary artery disease, which was managed with medications until March 2002, when he underwent coronary artery bypass surgery. From that time until the month prior to the accident, medical records document multiple occurrences of congestive heart failure and of atrial fibrillation, an abnormal heart rhythm. He was noted to have degenerative changes of his aortic valve during his initial hospitalization in 1985. He had high blood pressure, treated with medication, since at least 1996. He had high blood sugar, noted as early as his hospitalization in 1985, and for which he was treated with insulin in 1995. He had additional multiple markedly elevated blood sugar measurements, from 1999 through June of 2002, with the last fasting measurement of 473 mg/dL (normal values typically between 80 and 120 mg/dL) documented one week prior to the accident. He was on medication to reduce blood sugar since at least May 2001. He had significant back and leg pain from lumbar stenosis and synovial cyst diagnosed in 1997, and was hospitalized that year for spinal

surgery.

On repeated annual applications for Class 2 Airman Medical Certificate from 1978 to February of 2002, the pilot specifically denied any of his medical history or medication use to the FAA, and was issued a certificate for each of those applications except for the last. In 1986 the pilot submitted an affidavit to the FAA specifically denying receiving medical care for any problems between July 1986 and March 1987. The pilot's personal physician from at least 1985 was described in hospital records as his "good friend" and was also his FAA Aviation Medical Examiner (AME) from 1988 to 1994. This AME treated the pilot for his gout, heart disease, and diabetes, documenting detailed correspondence with the pilot's cardiologist as well as the prescription of multiple medications. This AME was noted to have flown back home with the pilot following his heart attack in 1985. The AME was also noted to have been contacted by the FAA Regional Flight Surgeon in 1986 and to have denied knowing the pilot. This AME signed the pilot's Applications for Class 2 Airman Medical Certificate from 1988 to 1994, indicating since 1991 that "I hereby certify that I have personally reviewed the medical history and personally examined the applicant named on this medical record. This report with any attachment embodies my findings completely and correctly." All of the pilot's Applications for Airman Medical Certificate from 1991 on include the notation "Whoever in any matter within the jurisdiction of any department of agency of the United States knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, of who makes false, fictitious or fraudulent statement or representations, or entry, may be fined up to \$250,000 or imprisoned not more than 5 years, or both." The AME was not redesignated by the FAA in 1995, because of failure to attend AME Seminars.

On autopsy, the pilot was noted to have a large heart, severe stenosis and calcification of mitral valve, atrial enlargement, and evidence of extensive remote ischemia/infarction. The pathologist noted that "...a sudden cardiac death could have likely occurred prior to the airplane crash. ..."

ADDITIONAL INFORMATION

The FAA, Cessna Aircraft Company, Continental Motors, and the Michigan Department of Natural Resources were parties to the investigation.

Pilot Information

Certificate:	Commercial	Age:	77, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 2 None	Last FAA Medical Exam:	February 28, 2002
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	16500 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N5034D
Model/Series:	182A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	51134
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:		Certified Max Gross Wt.:	2650 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	O-470-L
Registered Owner:	Robert Loo	Rated Power:	230 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	IMT,1131 ft msl	Distance from Accident Site:	16 Nautical Miles
Observation Time:	13:54 Local	Direction from Accident Site:	250°
Lowest Cloud Condition:	Scattered / 6000 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 9000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	9 knots / 0 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	30°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.92 inches Hg	Temperature/Dew Point:	21°C / 8°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	IRONWOOD, MI (IWD)	Type of Flight Plan Filed:	None
Destination:	UNKNOWN	Type of Clearance:	
Departure Time:	14:15 Local	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	45.89611,-87.764999

Administrative Information

Investigator In Charge (IIC):	Gallo, Mitch
Additional Participating Persons:	Bill Naymick; Grand Rapids FSDO; Grand Rapids, MI Tom Moody; Cessna Aircraft Company; Wichita, KS R.S. "Scott" Boyle; Continental Motors; Arvada, CO Bill Green; Michigan Department of Natural Resources; Roscommon, MI
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Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=54999

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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](#).