



National Transportation Safety Board Aviation Accident Final Report

Location:	Surrey, ND	Accident Number:	CEN09LA277
Date & Time:	05/03/2009, 1800 CDT	Registration:	N5106T
Aircraft:	CHAMPION 7GCBC	Aircraft Damage:	Destroyed
Defining Event:	Aerodynamic stall/spin	Injuries:	2 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

Witnesses stated that the airplane circled a house and descended “close to the ground,” flying at a low altitude along a row of trees. After traveling about one-half mile, the airplane turned right, pitched "upwards and then the nose dipped into the trees.” A postaccident examination of the airframe and engine did not reveal any anomalies consistent with a preimpact failure or malfunction. The pilot had recently started taking fluoxetine, a prescription antidepressant. The medication was unlikely to have resulted in substantial impairment, but the role of the condition for which the medication was prescribed could not be determined.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot’s failure to maintain control of the airplane during an abrupt pull-up maneuver, which resulted in an aerodynamic stall at low altitude.

Findings

Aircraft	Angle of attack - Capability exceeded (Cause)
Personnel issues	Aircraft control - Pilot (Cause)

Factual Information

HISTORY OF FLIGHT

On May 3, 2009, about 1800 central daylight time, a Champion model 7GCBC Citabria, N5106T, piloted by a commercial pilot, was destroyed during an in-flight collision with trees and terrain near Surrey, North Dakota. The flight was being conducted under 14 Code of Federal Regulations Part 91 without a flight plan. Visual meteorological conditions prevailed. The pilot and passenger sustained fatal injuries. The local flight departed Minot International Airport (MOT), Minot, North Dakota, about 1730.

A witness stated that he observed the airplane from a field across the road from his house. The airplane was north of his position and traveling south. He reported that it circled his house and descended "close to the ground," passing his location southbound along a row of trees. After it had traveled about one-half mile, the airplane turned toward the west, pitched "upwards and then the nose dipped into the trees."

A second witness located about one mile northwest of the accident site observed the airplane complete a circle (360-degree turn) and then fly south at a low altitude. The airplane was low enough that he thought that the pilot was spraying a field; although it seemed a little early in the season for spraying. He stated that the airplane subsequently pulled up above the tree line, turned to the right, and disappeared into the tree line. He estimated that the airplane reached a maximum altitude of about 200 feet above ground level.

PERSONNEL INFORMATION

The pilot held a commercial pilot certificate, with a single-engine land airplane rating. The certificate included a limitation that it was "not valid for carriage of persons for hire in airplanes on cross-country flights of more than 50 nautical miles or at night." His flight time logbook was not available to the NTSB during the course of the investigation.

The pilot was issued a second-class airman medical certificate on March 26, 2009, without limitations. On his application for the medical certificate, the pilot reported a total pilot flight time of 5,145.3 hours, with 556 hours flown during the previous 6 months. He noted his occupation as a self-employed "Farmer/Aerial Applicator" on that application.

A search of the Federal Aviation Administration airman database revealed no record of the passenger ever applying for or being issued a pilot certificate.

AIRCRAFT INFORMATION

The accident airplane was a 1966 Champion model 7GCBC, Citabria, serial number 78. It was powered by a 115-horsepower Lycoming O-235-C1 reciprocating engine. The most recent annual inspection was completed on January 19, 2009, at 1,643 hours total airframe time.

METEOROLOGICAL CONDITIONS

At 1754, weather conditions at Minot International Airport (MOT), located approximately 6 miles west of the accident site, were recorded to be: Winds variable at 4 knots, clear skies, 10 miles visibility, temperature 17 degrees Celsius (C), dew point -02 degrees (C), altimeter 29.92 inches of mercury.

WRECKAGE AND IMPACT INFORMATION

The accident site was located in a north-south oriented tree line about 100 feet east of a roadway. The airplane came to rest on an approximate heading of 345 degrees. The forward fuselage (nose and cockpit) came to rest nose down, oriented about 60-degrees relative to the ground. The aft fuselage was buckled near the rear seat and came to rest lying on its right side, with the tip of the right horizontal stabilizer at ground level. The empennage, with the elevator and rudder, remained attached to the fuselage. Flight control continuity from the elevator and rudder to the cockpit was confirmed.

The outboard section of the left wing and left aileron had separated from the airframe and were lodged in a tree about 12 feet above the ground. The inboard section of the left wing exhibited leading edge impact damage. The struts were buckled and deformed. The right wing sustained leading impact damage along the entire span. The right wing tip had separated and came to rest near the main wreckage. Discontinuities in the flight control system were consistent in appearance with overload failures.

The engine exhibited impact damage to the right, front (#1) cylinder. The remaining cylinders appeared intact. Internal engine continuity was confirmed via crankshaft rotation. Compression was obtained on all cylinders with the exception of the #1 cylinder. The spark plugs exhibited normal wear patterns, and the magnetos produced spark across all leads. Continuity of the engine controls was confirmed. Both propeller blades remained attached to the hub. One blade was bent aft approximately 180-degrees over the span of the blade. The second blade appeared intact. The spinner was deformed.

No anomalies consistent with a pre-impact failure or malfunction were observed.

MEDICAL AND PATHOLOGICAL INFORMATION

The pilot initially survived the accident and was transported to a local hospital for treatment. However, treatment efforts were not successful and the pilot died approximately 6 hours after the accident.

An autopsy of the pilot was performed at the North Dakota State Forensic Examiner's Office in Bismarck, North Dakota, on May 5, 2009. The autopsy report noted the cause of death as "Chest, abdominal & extremity injuries due to airplane crash" and that "There were no other abnormalities of the internal organs which would have caused or contributed to his death."

The Federal Aviation Administration Civil Aero Medical Institute toxicology report stated:

- 0.19 (ug/mL, ug/g) FLUOXETINE detected in Blood
- 0.022 (ug/mL, ug/g) FLUOXETINE detected in Urine
- 0.287 (ug/mL, ug/g) NORFLUOXETINE detected in Blood
- 0.041 (ug/mL, ug/g) NORFLUOXETINE detected in Urine

A family member of the pilot indicated that he had recently started taking fluoxetine, but did not indicate why or specifically when the medication had been prescribed.

The pilot's most recent application for airman medical certificate, dated March 26, 2009, noted "No" to "Do You Currently Use Any Medication," and for all items under "Medical History," including specifically "Mental disorders of any sort; depression, anxiety, etc."

History of Flight

Maneuvering-low-alt flying	Abrupt maneuver Aerodynamic stall/spin (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Commercial	Age:	43, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 2 Without Waivers/Limitations	Last Medical Exam:	03/01/2009
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	5150 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	CHAMPION	Registration:	N5106T
Model/Series:	7GCBC	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Aerobatic; Normal	Serial Number:	78
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	01/19/2009, Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1643 Hours	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	O-235 SERIES
Registered Owner:	On file	Rated Power:	115 hp
Operator:	On file	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	MOT, 1716 ft msl	Observation Time:	1754 CDT
Distance from Accident Site:	8 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	270°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	17° C / -2° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	4 knots, Variable	Visibility (RVR):	
Altimeter Setting:	29.92 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Minot, ND (MOT)	Type of Flight Plan Filed:	None
Destination:	Minot, ND (MOT)	Type of Clearance:	None
Departure Time:	1730 CDT	Type of Airspace:	

Airport Information

Airport:	Minot International (MOT)	Runway Surface Type:	
Airport Elevation:	1716 ft	Runway Surface Condition:	
Runway Used:	N/A	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Fatal		

Administrative Information

Investigator In Charge (IIC):	Timothy Sorensen	Adopted Date:	12/15/2009
Additional Participating Persons:	Karmen C Johnson; FAA-Fargo FSDO; Fargo, ND		
Publish Date:	12/15/2009		
Investigation Docket:	NTSB accident and incident docket 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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