



National Transportation Safety Board Aviation Accident Final Report

Location:	GEORGETOWN, SC	Accident Number:	MIA00FA058
Date & Time:	12/22/1999, 1525 EST	Registration:	N6261B
Aircraft:	Aero Commander 500	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The noninstrument-rated pilot attempted VFR flight into known instrument flight conditions after being briefed by an FAA Automated Flight Service Station that VFR flight was not recommended. The pilot encountered instrument flight conditions while maneuvering on initial takeoff climb, experienced an in-flight loss of control (stall/spin) due to failure to maintain airspeed, and subsequent in-flight collision with trees and terrain.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
The noninstrument-rated pilot's improper decision to attempt VFR flight into known instrument flight conditions, willful disregard of FAA Automated Flight Service Station weather forecast/weather observations, failure to maintain airspeed (VSO) while maneuvering on initial takeoff climb, resulting in an in-flight loss of control (inadvertent stall/spin), and subsequent in-flight collision with trees and terrain.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
 2. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - DISREGARDED - PILOT IN COMMAND
 3. (C) WEATHER FORECAST - DISREGARDED - PILOT IN COMMAND
 4. (C) WEATHER OBSERVATION - DISREGARDED - PILOT IN COMMAND
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Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING

Findings

5. (C) AIRSPEED(VSO) - NOT MAINTAINED - PILOT IN COMMAND
 6. STALL/SPIN - INADVERTENT - PILOT IN COMMAND
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Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: DESCENT - UNCONTROLLED

Findings

7. OBJECT - TREE(S)
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Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings

8. TERRAIN CONDITION - GROUND

Factual Information

HISTORY OF FLIGHT

On December 22, 1999, at about 1525 eastern standard time, an Aero Commander 500, N6261B, registered to a private owner, operating as a 14 CFR Part 91 personal flight, crashed after departing the Georgetown County Airport, (GGE) Georgetown, South Carolina. Instrument meteorological conditions (IMC) prevailed and no flight plan was filed. The airplane was destroyed. The noninstrument-rated private pilot and one passenger were fatally injured. The flight originated from GGE about 2 minutes before the accident.

A friend of the pilot stated the pilot had purchased the airplane recently and obtained a multiengine rating. The pilot and his father-in-law arrived at GGE at about 11:10. The pilot informed him that they flew VFR from Orlando, Florida, (ORL) to Charleston, South Carolina, at 7,500 feet. They encountered IMC conditions and flew below the cloud layer to GGE. The weather upon arrival at GGE was 600 overcast with 5 miles visibility. The pilot asked him if he wanted to fly with them to Grand Stand Airport (CRE) for lunch, but he convinced the pilot the weather was too bad, and they decided to remain in the local area. Prior to departing the airfield, the pilot told him to get in the airplane so he could show it to him. He started the airplane and taxied to another parking spot. They departed the airfield for lunch. While at lunch, the pilot informed him that they were going to return to ORL that afternoon. He attempted to talk the pilot into staying, but he declined, and they returned to the airfield.

Review of communication transcripts between Anderson Automated Flight Service Station (AND-AFSS) and the pilot revealed the pilot contacted AND-AFSS at 1438:27 (1938:27 UTC). The pilot requested a weather briefing from Georgetown to Craig Municipal Airport, Jacksonville, Florida. The pilot was informed that VFR flight was not recommended and the weather brief ended at 1940:52.

The friend of the pilot attempted to talk the pilot out of leaving again; however, the pilot stated he had an appointment the next morning and had to return. He subsequently agreed to remain over night, but changed his mind again when he learned that another pilot had just departed. The fixed-base operator was aware of his desire to leave, he asked another departing pilot if he would contact them on the UNICOM frequency and provide a pilot report. The AWOS computer weather at GGE indicated a ceiling of 500 feet with no visibility reported. The pilot who departed stated the ceiling was 500 feet, tops at 2,000 feet. He further stated that there was another layer at 8,000 feet, and then it was clear.

After listening to the pilot report, the pilot told his friend that he was going to depart. He requested fuel and they went out to the airplane to conduct a preflight. His passenger got in the right front seat and he eventually got in the left front seat. The engines were started and he watched them taxi to runway 5 where an engine run-up could be heard taking place. He then heard the pilot state over the UNICOM speakers that he was departing runway 5 with a left turn out. The airplane was observed on the takeoff roll, and became airborne just a little past midfield. When the airplane reached the end of the runway over an industrial park, the airplane encountered IMC conditions and disappeared from view. From the engine sound, the friend could tell where the airplane was in relation to the runway. The airplane was heard to make a left turn. When the airplane was abeam his position, he heard the engines go to a higher rpm, followed by a loud impact noise at about 1525.

A hunter who was located between 2 to 3 miles from the airport stopped to let another hunter out of his truck. He went about another 125 yards, stopped his truck, turned off the engine, opened his door, and got out to put some boots on. He heard an airplane approaching his location with the engines screaming. The weather was bad and the ceiling was very low. He observed the airplane in a nose-down attitude, inverted, with the right wing turned up a little. The airplane disappeared from view behind some trees and collided with terrain at about 1525.

PERSONNEL INFORMATION

The pilot held a private pilot certificate issued on December 4, 1999, for airplane single and multiengine land. Review of the pilot's logbook revealed that he had recorded as logged 564 total flight hours. He had accumulated 75.9 multiengine hours, and 69 hours in the Aero commander of which 28.5 hours were as the pilot-in-command. His first recorded flight in the Aero Commander was on November 13, 1999. He had logged 3.6 hours of simulated instrument flight (hood), and 3.5 hour of dual instrument flight in the Aero commander. His last simulated instrument flight was on November 7, 1996. The dual instrument flight in the Aero commander was on October 7, 1999, and October 9, 1999.

AIRCRAFT INFORMATION

Review of the engine logbooks for the left and right engine revealed both engines were recorded as being overhauled by Hartzog-Schneck Aviation Inc., Rockford, Illinois. The left engine was overhauled on July 27, 1966, and the right engine was overhauled on July 26, 1966. The last recorded annual inspection was completed on August 24, 1999. The total time on both engines since major overhaul was 718 hours at Hobbs time 331. The last recorded aircraft annual inspection was on August 24, 1999 at Hobbs 331.1. The total airframe hours was 3739. The last recorded maintenance on the airplane was on November 28, 1999, at Hobbs time 375.2.

Review of Felts Field Aviation Inc., invoice number 22009 revealed the altimeter, static system tests, and transponder test was inspected on April 1, 1998.

METEOROLOGICAL INFORMATION

The nearest weather reporting facility at the time of the accident was Myrtle Beach International, South Carolina. The 1553 surface weather observation was: 800 broken, visibility 3 miles, temperature 54 degrees Fahrenheit, dew point temperature 48 degrees Fahrenheit, wind from 200 degrees at 9 knots, and altimeter 30.20 inHg. Instrument meteorological conditions prevailed at the time of the accident. The pilot of N6261B called the Anderson South Carolina, Automated Flight Service Station (AFSS) between 1933Z to 1946Z for a weather briefing. The pilot of N6261 indicated his departure point and destination of Craig Field, Orlando, Florida, and that he was operating under VFR only. The AFSS briefer indicated that VFR was not recommended and preceded to provide the current in-flight weather advisories for the route, which included two AIRMETs for instrument meteorological conditions, the synoptic features impacting the area, a quick narrative of the radar summary chart, the local observations for Charleston and Myrtle Beach which reported ceilings overcast at 800 and 600 feet and visibility's 4 to 3 miles, and the forecast for Myrtle Beach. The pilot inquired about the cloud tops, and the AFSS briefer advised that the cloud tops were forecasted to be layered to 28,000 feet. The briefer advised the pilot that the cloud tops forecasted was not a situation where you could easily get on top of the stratus layer. For additional weather information see NTSB Meteorology Factual Report.

WRECKAGE AND IMPACT INFORMATION

The wreckage of N6261B was located in a marshy wooded area about 3 miles west north west of Georgetown County Airport, in the vicinity of Johnny Harrellson Farm, Georgetown, South Carolina.

Examination of the crash site revealed the airplane collided with trees and marsh area in a nose-down attitude on a heading of 169 degrees magnetic. The cockpit and passenger area were compressed aft from fuselage station -32.5 rearward to fuselage station 149.98. The leading edge of the left and right wings sustained compression damage from the wing root outboard to the wing tip. The left wing tip separated at wing station 257. The left engine separated from the left wing and was buried below the ground about 40 inches. The center fuel tank, both left wing inboard bladder fuel tanks, and the auxiliary fuel tank were ruptured. The left auxiliary fuel tank cap was strapped shut to prevent use. The right engine was located on the edge of an engine impact crater connected to the oil cooler hose and battery under the right wing. Both right wing inboard bladder fuel tanks and the auxiliary fuel tank were ruptured. The right auxiliary fuel tank cap was strapped shut to prevent use. Both wing flaps were extended 20 degrees. The main landing gear was in the retracted position. The aft empennage was bent forward at fuselage station 272.6.

Examination of the airframe and flight control assembly revealed no evidence of a precrash mechanical failure or malfunction. All components necessary for flight were located at the crash site. Continuity of the flight control assembly was confirmed for pitch, roll, and yaw.

Examination of the left and right engine assemblies and accessories revealed no evidence of a precrash mechanical failure or malfunction.

The left propeller was transported to Atlanta Air Salvage, Griffin, Georgia, for further analysis. The propeller assembly was attached to the propeller flange. One propeller blade had separated from the propeller hub, and was twisted toward low pitch. The start locks were missing. Both blade pilot tubes were broken. Both propeller blades had evidence of "s" bending and rotational scoring. One propeller blade was torn in half, and a portion of the propeller blade was not recovered. For additional information see Hartzell Propeller Teardown Report.

The right propeller was transported to Atlanta Air Salvage, Griffin, Georgia, for further analysis. The propeller assembly was partially attached to the propeller flange with one propeller blade attached to the propeller hub. The start locks were jammed in the out position. One propeller blade was bent aft about 30-degrees at 1/3 radius, it was twisted toward low pitch, and paint was missing from the camber side of the propeller blade leading edge. The remaining propeller blade was bent forward about 45-degrees at mid blade. There was no significant paint abrasion or rotational scoring. Hartzell concluded that the left and right propellers were rotating and operating with power. The propellers were not feathered, and there was no propeller discrepancies that could have precluded normal operation. For additional information see Hartzell Propeller Teardown Report.

Examination of the left Pesco vacuum pump revealed the drive coupling was not sheared and the vacuum pump would rotate freely when rotated by hand. The vanes were not damaged.

Examination of the right Pesco vacuum pump revealed the drive coupling was not sheared and the vacuum pump would rotate freely when rotated by hand. The vanes were not damaged.

All flight instruments were destroyed during the accident sequence.

MEDICAL AND PATHOLOGICAL INFORMATION

Postmortem examination of the pilot was conducted by Dr. Teresa A. Campbell, Resident in Pathology & Laboratory Medicine, Medical University of South Carolina, Charleston, South Carolina, on December 24, 1999. The cause of death was total body blunt force trauma. Postmortem toxicology of specimens from the pilot was performed by the Forensic Toxicology Research Section, Federal Aviation Administration, Oklahoma City, Oklahoma. The studies were negative for ethanol. Sertraline 3.727 (ug/ml, ug/g) a prescription antidepressant drug was detected in the kidney, and 23.239 (ug/ml, ug/g) was detected in the liver. Desmethylertraline 10.133 (ug/ml, ug/g), a metabolite of sertraline was detected in the kidney and 49.573 (ug/ml, ug/g) was detected in the liver. Diphenhydramine 0.213 (ug/ml, ug/g), an over the counter sedating antihistamine was detected in the kidney and 1.557 (ug/ml, ug/g) was detected in the liver. Pseudoephedrine, an over the counter decongestant was detected in the liver and the kidney. Ephedrine, a nutritional supplement known as ephedra and an over the counter asthma medication and phenylpropanolamine, an over the counter decongestant and a metabolite of ephedrine was detected in the liver.

Postmortem examination of the passenger was conducted by Dr. Teresa A. Campbell, Resident in Pathology & Laboratory Medicine, Medical University of South Carolina, Charleston, South Carolina, on December 24, 1999. The cause of death was total blunt force body trauma.

ADDITIONAL INFORMATION

The airplane wreckage was released to Mr. David E. Gourgues, Universal Loss Management, Inc., Orlando, Florida, on December 28, 1999. The left and right propellers were released to Mr. Christopher C. Cartwright, General Manager, Atlanta Air Salvage, Griffin, Georgia, on January 19, 2000. The aircraft logbooks were released to Mr. Gourgues on January 21, 2000. The pilot logbook was released to Mrs. Susan D. Hoffman, wife of the deceased pilot on February 15, 2000.

Pilot Information

Certificate:	Private	Age:	52, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
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:	07/08/1999
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	564 hours (Total, all aircraft), 69 hours (Total, this make and model), 470 hours (Pilot In Command, all aircraft), 116 hours (Last 90 days, all aircraft), 35 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aero Commander	Registration:	N6261B
Model/Series:	500 500	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	688-34
Landing Gear Type:	Retractable - Tricycle	Seats:	7
Date/Type of Last Inspection:	08/24/1999, Annual	Certified Max Gross Wt.:	6000 lbs
Time Since Last Inspection:	44 Hours	Engines:	2 Reciprocating
Airframe Total Time:	3783 Hours	Engine Manufacturer:	Lycoming
ELT:		Engine Model/Series:	O-540-A2B
Registered Owner:	SUSAN D HOFFMAN	Rated Power:	250 hp
Operator:	THOMAS H. HOFFMAN	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	MYR, 26 ft msl	Distance from Accident Site:	35 Nautical Miles
Observation Time:	1553 EST	Direction from Accident Site:	30°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	3 Miles
Lowest Ceiling:	Broken / 800 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	200°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	12° C / 9° C
Precipitation and Obscuration:			
Departure Point:	(GGE)	Type of Flight Plan Filed:	None
Destination:	ORLANDO, FL (ORL)	Type of Clearance:	None
Departure Time:	1523 EST	Type of Airspace:	Class E

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	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC): CARROL A SMITH **Report Date:** 12/05/2000

Additional Participating Persons: ANTHONY G FINOCCHI; WEST COLUMBIA, SC
EDWARD G ROGALSKI; BELLEVIEW, FL
RODGER J ADERMAN; ARLINGTON, WA
THOMAS MCCREARY; PIQUA, OH

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](#).