National Transportation Safety Board
Aviation Accident Final Report

Location:	MANSFIELD, OH	**Accident Number:**	IAD97FA025
Date & Time:	11/30/1996, 1030 EST	**Registration:**	N9129N
Aircraft:	Aero Commander 681	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

After 2 previous attempts, the pilot was cleared for a third VOR Runway 14 Approach. He was issued landing information, and he reported the airport in sight. The minimum descent altitude (MDA) for the approach was 1,620 ft msl. The airport elevation was 1297 ft. The airplane was observed by an ATC controller to descend, and the controller's Brite scope (radar) displayed 1,400 ft. The controller observed the airplane's landing light bob up and down, followed by the nose pitching up. At about the same time, a ground witness in the area saw the airplane at low altitude; according to this witness, the pilot tried to 'pull the plane up' just before it collided with the static cable of a power line. The cable was about 85 feet above ground level (1,382 feet MSL) and approximately 2 miles from the approach end of the runway. No preimpact malfunction of the airplane, engine, or VOR was found.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's early descent below the minimum descent altitude (MDA), while preparing to land from an instrument approach, and his failure to maintain adequate altitude and clearance from obstruction(s).

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: APPROACH - FAF/OUTER MARKER TO THRESHOLD (IFR)

Findings
1. (C) MINIMUM DESCENT ALTITUDE - NOT MAINTAINED - PILOT IN COMMAND
2. OBJECT - WIRE,TRANSMISSION
3. (C) ALTITUDE/CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

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

Factual Information

HISTORY OF FLIGHT

On November 30, 1996, at 1030 eastern standard time, an Aero Commander 681, N9129N, was destroyed when it collided with power lines and terrain while on an instrument approach at Mansfield Lahm Airport, Mansfield, Ohio. The certificated private pilot was fatally injured. Instrument meteorological conditions prevailed and an instrument flight rules (IFR) flight plan was filed. The personal flight was conducted under 14 CFR Part 91, and originated at Greene County Airport in Dayton, Ohio, at 0915, destined for Mansfield, Ohio.

The pilot had planned to pick up his family at Mansfield, and return the same day. According to Air Traffic Control (ATC) records, at 0948, the pilot radioed Dayton Approach Control after departing Greene County Airport, and received an IFR clearance to Mansfield Airport. The flight proceeded uneventful for the next 57 minutes.

At 1012, the pilot was cleared to descend to 3,000 feet. At 1017, the pilot was issued a clearance for the VOR runway 14 approach. At 1018, the pilot contacted the Mansfield tower, and was cleared to land on runway 14.

At 1019, the pilot advised the tower that he was on the wrong course, and requested vectors for another approach. The tower coordinated with approach for the tower to vector the pilot for another approach. At 1023, the tower cleared the pilot for a second approach. At 1025, the pilot was again cleared to land on runway 14. At 1026, the pilot advised the tower that he did not see the airport, and requested a third approach. The tower advised the pilot that he was coming as far as the VOR, and the airport was four miles beyond the VOR. The pilot was then given vectors for a third approach.

At 1030:27, the tower advised the pilot that he was over the VOR, and the pilot acknowledged that he had the runway in sight. At 1030:36, the pilot was issued the wind and a landing clearance, which the pilot acknowledged. The controller reported that after he issued the landing information, he could see the airplane from the tower. He said the pilot, "...descended quickly and appeared very low. His mode C indicated 1,400 on the brite scope. I observed the landing light of the airplane bobbing up and down on final. I then observed the aircraft fly up in the air and flip into the ground... ."

A witness who was hunting in the area at the time of the accident said, "...we heard the plane coming. I turned around and looked and the plane was low. It looked like the pilot tried to pull the plane up, and the high voltage wire was already around the right wing. I could hear what sounded like the propeller hitting the wire. After that the pilot was still trying to pull the plane up... ."

The airplane struck power lines about 2 miles northeast of the approach end of runway 14, and descended into a soybean field. The accident occurred during the hours of daylight about 40 degrees, 50 minutes North latitude, and 82 degrees, 32 minutes West longitude.

PILOT INFORMATION

The pilot held a Private Pilot Certificate with ratings for airplane single and multi-engine land, and instrument airplane. A review of his log book revealed that he had accumulated over 587 hours of total flight experience. He had logged more than 155 hours actual instrument hours, which included 8 hours within the last 90 days. The last recorded actual instrument

experience was October 23, 1996. His most recent FAA Third Class Medical Certificate was issued on September 11, 1995, with limitations to wear corrective lenses.

METEOROLOGICAL CONDITIONS

At 1016, Mansfield Lahm Municipal Airport, Mansfield, Ohio, reported the following observation:

Sky condition, ceiling 500 overcast; visibility, 2 1/2 miles in mist and fog; temperature, 43 degrees Fahrenheit (F); dew point, 43 degrees F; winds from 170 degrees at 14 knots; and altimeter, 29.92 inches Hg.

WRECKAGE AND IMPACT INFORMATION

The airplane wreckage was examined at the accident site on December 1, 1996. The wreckage came to rest within the dimensions of the airplane, oriented on a magnetic heading of 200 degrees. All major components of the airplane were accounted for at the scene.

Examination of the accident site revealed that the airplane struck power lines about 2 miles from the approach end of runway 14, then collided with terrain. The power lines were 1,382 feet above mean sea level (MSL), and sections of cable was found wrapped around the right wing.

The right wing remained intact, except for the right aileron which had separated. On the right forward side of the wreckage in the mud, were ground imprints, similar to the size and shape of the right wing.

One of the propeller blades from the right engine separated, and was located forward of the right engine. The right engine remained attached to the wing, but was twisted. One of the left propeller blades was separated, and was not found. Examination of the remaining blades for the left and right engine revealed evidence of cuts on the propeller de-icing boots. The cuts were similar in size and shape to the static line cable. The tips of the two propeller blades for the left engine were separated.

The tail section including the vertical stabilizer, rudder, left and right horizontal stabilizer, and left and right elevator was intact. The forward fuselage and flight instruments were destroyed. Cable continuity could not be determined in the field due to the field being soft and muddy. The airplane was moved to a hangar, and further examined on December 12 and 13 at the Mansfield Airport.

The right wing was crushed chordwise and there were several chordwise cuts similar in size and shape to the static cable. A section of cable remained lodged in the wing. The left wing was intact. Both left and right ailerons were separated from their respective wings. The push/pull rods were attached to the ailerons.

The elevator trim tabs and the rudder trim tab were in the neutral position. The flap hydraulic cylinder rod was extended about 4 inches. According to the Twin Commander investigator, this corresponded to full flap down position.

The nosegear was damaged as well as the left main landing gear. The right main gear was in the down and locked position. The landing gear selector was in the down and locked position.

Flight control cable continuity was confirmed from the surfaces to the cabin area.

Examination of the wreckage revealed no pre-impact failure of the airplane or engine.

TESTS AND RESEARCH

Both engines were removed and sent to Allied Signal Aerospace, Phoenix, Arizona, where they were examined on March 11 and 12, 1997, under the supervision of the National Transportation Safety Board. The examination revealed that both engines exhibited rotational damage at the time of impact. No pre-existing conditions were found on either engine which would have prevented normal operation.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy and toxicological testing of the pilot was conducted by Dr. Keith N. Norton, M.D. Medical Examiner of the Franklin County, Columbus, Ohio.

Toxicological testing was conducted by the FAA Toxicology Accident Research Laboratory, Oklahoma City, Oklahoma, on March 5, 1997.

ADDITIONAL INFORMATION

According to the Instrument Approach Procedures Chart for the Mansfield Lahm Municipal Airport, the airport elevation was 1,297 feet MSL, and the minimum descent altitude (MDA) for the VOR Approach was 1,620 feet MSL. An operational test of the VOR approach was conducted, and it operated satisfactory.

The aircraft wreckage was released on March 13, 1997, to Rick Krueger, a representative of the owner's insurance company.

Pilot Information

Certificate:	Private	**Age:**	50, Male
Airplane Rating(s):	Multi-engine Land; 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 3 Valid Medical--w/ waivers/lim.	**Last FAA Medical Exam:**	09/11/1995
Occupational Pilot:		**Last Flight Review or Equivalent:**	
Flight Time:	587 hours (Total, all aircraft), 64 hours (Total, this make and model), 504 hours (Pilot In Command, all aircraft), 17 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aero Commander	**Registration:**	N9129N
Model/Series:	681 681	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	6056
Landing Gear Type:	Retractable - Tricycle	**Seats:**	11
Date/Type of Last Inspection:	05/16/1996, 100 Hour	**Certified Max Gross Wt.:**	9400 lbs
Time Since Last Inspection:	86 Hours	**Engines:**	2 Turbo Prop
Airframe Total Time:	5688 Hours	**Engine Manufacturer:**	Garrett
ELT:	Installed, not activated	**Engine Model/Series:**	TPE-331
Registered Owner:	AMBER AVIATION INC	**Rated Power:**	650 hp
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:	MFD, 1297 ft msl	**Distance from Accident Site:**	4 Nautical Miles
Observation Time:	1016 EST	**Direction from Accident Site:**	133°
Lowest Cloud Condition:	Unknown / 0 ft agl	**Visibility**	2.5 Miles
Lowest Ceiling:	Broken / 500 ft agl	**Visibility (RVR):**	0 ft
Wind Speed/Gusts:	14 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	170°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	6°C / 6°C
Precipitation and Obscuration:			
Departure Point:	DAYTON, OH (I19)	**Type of Flight Plan Filed:**	IFR
Destination:	, OH (MFD)	**Type of Clearance:**	IFR
Departure Time:	0915 EST	**Type of Airspace:**	Class D

Airport Information

Airport:	MANSFIELD LAHM MUNI (MFD)	**Runway Surface Type:**	Asphalt
Airport Elevation:	1297 ft	**Runway Surface Condition:**	Soft; Wet
Runway Used:	14	**IFR Approach:**	VOR/DME
Runway Length/Width:	9000 ft / 150 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	BEVERLEY DRAKE-NURSE	**Report Date:**	06/26/1998
Additional Participating Persons:	RONALD BARONE; CLEVELAND, OH ROGER J ADERMAN; ARLINGTON, WA DAVE CHAPEL; PHOENIX, AZ MIKE CUMMINS; PHOENIX, AZ		
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.ntsb.gov/pubdms/.		