National Transportation Safety Board
Aviation Accident Final Report

Location:	Piqua, OH	**Accident Number:**	NYC01FA215
Date & Time:	08/24/2001, 0640 EDT	**Registration:**	N18260
Aircraft:	Beech BE-200	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Positioning		

Analysis

The airline transport rated pilot was attempting to land under visual flight rules for a scheduled passenger pick-up and subsequent charter flight. The pilot was communicating with a pilot at the airport, who was utilizing a hand held radio. The accident pilot reported he was not able to see the runway lights due to ground fog and continued to circle the airport for about 20 minutes. The pilot on the ground stated the airplane appeared to be about 1,500 feet above the ground when it circled, and then entered a downwind for runway 26. He was not able to hear or see the airplane as it flew away from the airport. He then began to hear the airplane during its final approach. The airplane's engines sounded normal. He then heard a "terrible sound of impact," followed by silence. When he arrived at the accident site, the airplane was fully engulfed in flames. The airplane impacted trees about 80-feet tall, located about 2,000 feet from, and on a 240 degree course to the approach end of runway 26. Several freshly broken tree limbs and trunks, up to 15-inches in diameter, were observed strewn along a debris path, which measured 370 feet. Examination of the wreckage did not reveal any pre-impact malfunctions. The weather reported at an airport about 19 miles south-southeast of the accident site, included a visibility of 1 3/4 miles, in mist, with clear skies and a temperature and dew point of 17 degrees Celsius. Witnesses in the area of the accident site generally described conditions of "thick fog" and a resident who lived across from the accident site stated visibility was "near zero" and he could barely see across the road.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper decision to attempt a visual landing under instrument meteorological conditions and his failure to maintain adequate altitude/clearance, which resulted in an in-flight collision with trees. A factor in this accident was the ground fog.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: APPROACH

Findings
1. (F) WEATHER CONDITION - FOG
2. (C) PLANNING/DECISION - HIGH - PILOT IN COMMAND
3. OBJECT - TREE(S)
4. (C) VFR FLIGHT INTO IMC - PERFORMED - PILOT IN COMMAND
5. (C) ALTITUDE/CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

History of Flight

On August 24, 2001, about 0640 eastern daylight time, a Beech BE-200, N18260, operated by Middletown Corporate Aviation Inc., was destroyed when it impacted terrain while on approach to the Piqua Airport (I17), Piqua, Ohio. The certificated airline transport pilot was fatally injured. Instrument meteorological conditions prevailed and no flight plan had been filed for the flight that departed the Greene County-Lewis A. Jackson Regional Airport (I19), Dayton, Ohio. The positioning flight was conducted under 14 CFR Part 91.

The airplane was based at I19, and had been chartered by Hartzell Propeller Inc., for a flight scheduled to depart I17, at 0630, the morning of the accident.

The chief pilot for Hartzell Propeller resided near the airport. During an interview he said he awoke at 0430 and noticed there was "some fog" outside. He thought that if the chartered airplane had not arrived at the airport during the previous evening, the airplane might not be able to land at Piqua due to the fog. He then elected to drive to the airport to prepare a company airplane for the flight. Shortly thereafter, the accident pilot telephoned and asked about the fog. The chief pilot went outside and could see the stars and the runway lights, and relayed that information to the accident pilot. The accident pilot said he would fly up to Piqua, and the chief pilot informed the accident pilot he would be outside with a hand held radio. About 0620, the airplane appeared over the airport. The accident pilot clicked the pilot controlled runway lights up bright and said over the radio that he could see the rotating beacon, but not the runway lights. The chief pilot stated he could see the stars and the airplane when it was in the area. He estimated the ground visibility was about 1/4 to 1/2 mile with visual flight conditions above the ground fog.

The chief pilot further stated that as the sky started to lighten, the ground fog became worse. The accident pilot radioed that it looked worse to him also. The chief pilot told the accident pilot not to take any chances, and he could make the flight in the company airplane. The accident pilot said he would circle a little longer, and about 0640, he flew over the airport and said it looked better. The chief pilot stated the airplane looked to be about 1,500 feet above the ground while it circled and when it entered a downwind for runway 26, a 3,997 foot-long, 75 foot wide, asphalt runway. He was not able to hear or see the airplane as it flew away from the airport. He then began to hear the airplane during its final approach. The airplane's engines sounded normal. He then heard a "terrible sound of impact," followed by silence. When he arrived at the accident site the airplane was fully engulfed in flames.

A witness traveling east on the road adjacent to the accident site stated:

"I heard a crackling noise and looked up. I saw a light colored plane in-between two trees, overtop a house. It started to cartwheel, wing to wing, with the wings facing the east/west direction...the plane hit the ground and burst into flames...."

The accident occurred during the hours of daylight approximately 40 degrees, 10.110 minutes north latitude, and 84 degrees, 17.764 minutes west longitude.

PERSONNEL INFORMATION

The pilot held an airline transport pilot certificate with an airplane multi-engine land rating and a commercial pilot certificate with an airplane single engine land rating. The pilot's

logbook was not located; however, he reported 7,000 hours of total flight experience on his most recent application for a Federal Aviation Administration (FAA) first class medical certificate, which was issued on February 17, 2001. Additionally, on an insurance form dated August 20, 2001, the pilot indicated he had accumulated 2,400 hours in the BE-200, which included 500 hours during the previous 12 months.

AIRCRAFT INFORMATION

The airplane was maintained under an FAA approved aircraft inspection program. Maintenance records revealed the airplane had undergone a "Phase II" inspection on July 27, 2001. At that time, the airplane had been operated for 10,821 total hours and 11,841 cycles. The right and left engines had been operated for 4,706 and 4,720 hours since overhaul, respectively.

METEOROLOGICAL INFORMATION

The weather reported at the James M. Cox Dayton International Airport, Dayton, Ohio, which was about 19 miles south-southeast of the accident site, at 0645, included a visibility of 1 3/4 miles, in mist, with clear skies and a temperature and dew point of 17 degrees Celsius. Witnesses in the area of the accident site generally described conditions of "thick fog" and a resident who lived across from the accident site stated visibility was "near zero" and he could barely see across the road.

WRECKAGE INFORMATION

The airplane impacted trees about 80-feet tall, located about 2,000 feet from, and on a 240 degree course to the approach end of runway 26. The airplane came to rest approximately 370 feet from the initial tree strike, and the debris path was oriented on a magnetic heading of 245 degrees. Several freshly broken tree limbs and trunks, up to 15-inches in diameter, were observed strewn along the debris path.

All major components of the airplane were accounted for at the accident site. The main wreckage came to rest upright on a heading of 232 degrees, and was consumed by a post crash fire. The inboard 8 feet of the left wing remained attached to the fuselage, and the outboard section of the left wing was separated at the outboard attach point of the outboard flap. Additionally, outboard portions of the left wing were observed in the trees and on the roof of an adjacent residence. The entire right wing was consumed by fire, except for the right wing tip, which was attached to the right aileron at its outboard hinge. The empennage was separated from the fuselage, and was charred. The horizontal stabilizer was intact and remained attached to the vertical stabilizer at all attach points. The rudder remained attached to the vertical stabilizer at the upper and middle hinges. The bottom hinge was consumed by fire.

Both elevator flight control arms were separated from the bell crank assembly and located in the vertical stabilizer. Flight control continuity was confirmed from the elevator control arms and the rudder control surface to the point of the empennage separation. Due to fire and impact damage, left and right aileron control continuity could not be confirmed. Additionally, the floor of the main wreckage was collapsed downward, and flight control continuity could not verified through the fuselage. One left aileron cable was found with a portion of the aileron bell crank still attached. The other left aileron cable separated approximately 4 feet outboard of the fuselage. The terminating ends of both right aileron cables were located in the remains of the

right wing, with portions of the aileron bell crank still attached. Additionally, it was noted that the aileron cables were connected to the control cable chain, which connected to the control yoke.

The left engine separated from the left wing and came to rest about 270 feet from the initial tree strike, and 52 feet to the north of the debris path. The fuel control unit and fuel pump were separated from the accessory section and located on the debris path. The engine gas generator section was crushed rearward, and the 1st stage compressor section could not be rotated by hand. The oil filter and "P3" air filters were removed, and were absent of contamination. Additionally, fuel was observed in the fuel pump, and both the inlet and outlet fuel pump filters were absent of contamination.

The left engine propeller assembly separated at the engine "B-flange" and was located on the left side of a parallel ground scar, which originated about 120 feet prior to the main wreckage. One propeller blade had separated from the hub and was located approximately 170 feet from the initial tree strike. The blade was twisted and contained "S-bending". The other two propeller blades remained attached at the hub. One blade was bent aft, and the other blade contained "S-bending" and a separated tip.

The right engine was found with the main wreckage, in the area of the fire-consumed right wing. The fuel control unit was separated aft of its mounting flange; however, it remained attached to the engine via plumbing and linkages. The fuel pump remained attached to the accessory section. The oil and "P3" air filters were removed, and were absent of contamination; however, they were heat distressed. The compressor section was rotated by hand, and the engine also rotated freely via the propeller.

The right engine propeller assembly remained attached to the engine and airframe. The right engine propeller blades were partially consumed by fire and were found at or near a feathered position. One propeller blade was melted and had folded over 180 degrees. A second propeller blade was bent forward about 45 degrees, and was partially melted. A third propeller blade was bent aft about 30 degrees, and also partially melted. Additionally, the propeller blades contained chord-wise scratches.

The left and right landing gear was observed in the extended position, and the nose gear was separated from its upper trunnion and found near the left engine.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot, on August 24, 2001, by the Montgomery County Medical Examiners Office, Dayton, Ohio.

The toxicological testing report from the FAA Toxicology Accident Research Laboratory, Oklahoma City, Oklahoma, was negative for drugs and alcohol for the pilot.

ADDITIONAL INFORMATION

Re-Fueling Information

Refueling records obtained from a fixed base operator (FBO) at I19, indicated the airplane was refueled with 323 gallons of Jet-A fuel, the evening before the accident. An employee at the FBO stated that both of the airplane's inboard and outboard fuels tanks were "topped-off."

Wreckage Release

The airplane wreckage was released on August 25, 2001, to a representative of the owners insurance company.

Pilot Information

Certificate:	Airline Transport; Commercial	**Age:**	59, 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 1 Valid Medical--w/ waivers/lim.	**Last FAA Medical Exam:**	02/17/2001
Occupational Pilot:		**Last Flight Review or Equivalent:**	07/07/2001
Flight Time:	7100 hours (Total, all aircraft), 2400 hours (Total, this make and model), 6900 hours (Pilot In Command, all aircraft), 175 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N18260
Model/Series:	BE-200	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	BB-900
Landing Gear Type:	Retractable - Tricycle	**Seats:**	11
Date/Type of Last Inspection:	07/27/2001, AAIP	**Certified Max Gross Wt.:**	12500 lbs
Time Since Last Inspection:		**Engines:**	2 Turbo Prop
Airframe Total Time:	10821 Hours as of last inspection	**Engine Manufacturer:**	Pratt & Whitney Canada
ELT:	Installed, not activated	**Engine Model/Series:**	PT6A-42
Registered Owner:	Middletown Corporate Aviation Inc.	**Rated Power:**	850 hp
Operator:	Middletown Corporate Aviation Inc.	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	**Condition of Light:**	Dawn
Observation Facility, Elevation:	DAY, 1009 ft msl	**Distance from Accident Site:**	19 Nautical Miles
Observation Time:	0645 EDT	**Direction from Accident Site:**	165°
Lowest Cloud Condition:	Clear	**Visibility**	1.75 Miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	360°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.13 inches Hg	**Temperature/Dew Point:**	17°C / 17°C
Precipitation and Obscuration:			
Departure Point:	DAYTON, OH (I19)	**Type of Flight Plan Filed:**	None
Destination:	Piqua, OH (I17)	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	Class G

Airport Information

Airport:	PIQUA (I17)	**Runway Surface Type:**	Asphalt
Airport Elevation:	994 ft	**Runway Surface Condition:**	Dry
Runway Used:	26	**IFR Approach:**	None
Runway Length/Width:	3997 ft / 75 ft	**VFR Approach/Landing:**	Full Stop; Traffic Pattern

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	N/A	**Aircraft Fire:**	On-Ground
Ground Injuries:	N/A	**Aircraft Explosion:**	On-Ground
Total Injuries:	1 Fatal	**Latitude, Longitude:**	40.168611, -84.301389

Administrative Information

Investigator In Charge (IIC):	Luke Schiada	**Report Date:**	08/26/2002
Additional Participating Persons:	Dennis R Tom; Cincinnati, OH Robert L Ramey; Wichita, KS Tom McCreary; Piqua, OH Carl W Mason; Columbus, 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.ntsb.gov/pubdms/.		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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.