National Transportation Safety Board
Aviation Accident Final Report

Location:	GATLINBURG, TN	**Accident Number:**	ATL95FA050
Date & Time:	02/11/1995, 1327 EST	**Registration:**	N6749S
Aircraft:	BEECH B60	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

THE PILOT DEPARTED KNOXVILLE ON A LOCAL PLEASURE FLIGHT TO THE GATLINBURG AREA. A FEW MINUTES INTO THE FLIGHT, THE PILOT REQUESTED THE ILS APPROACH TO KNOXVILLE. ABOUT TWO MINUTES AFTER THE INITIAL REQUEST, HE REQUESTED IMMEDIATE RADAR VECTORS. THE CONTROLLER REQUESTED THE FLIGHT'S ALTITUDE, BUT THERE WAS NO REPLY FROM THE PILOT. THE AIRCRAFT COLLIDED WITH TREES AT THE 3500 FOOT LEVEL OF RISING TERRAIN SEVEN MILES SOUTHWEST OF GATLINBURG. A HIKER REPORTED HEARING, THE SOUND OF THE ENGINES RUNNING UNTIL THE AIRPLANE COLLIDED WITH TREES. THE HIKER ALSO STATED THAT CLOUDS OBSCURED THE TOPS OF THE MOUNTAINS. EXAMINATION OF THE ACCIDENT SITE DISCLOSED THAT WRECKAGE DEBRIS WAS SCATTERED OVER AN AREA 650 FEET LONG AND 75 FEET WIDE. THE WRECKAGE EXAMINATION FAILED TO DISCLOSE A MECHANICAL PROBLEM.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S CONTINUED VISUAL FLIGHT INTO INSTRUMENT WEATHER CONDITIONS THAT RESULTED IN A COLLISION WITH RISING TERRAIN.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: MANEUVERING

Findings
1. WEATHER CONDITION - LOW CEILING
2. (C) VFR FLIGHT INTO IMC - CONTINUED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: MANEUVERING

Findings
3. OBJECT - TREE(S)
4. TERRAIN CONDITION - MOUNTAINOUS/HILLY

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: MANEUVERING

Factual Information

HISTORY OF FLIGHT

On February 11, 1995, at 1327 eastern standard time, a Beech B60, N6749S, collided with mountainous terrain at the 3500 foot level of Cove Mountain, seven miles west of Gatlinburg, Tennessee. The personal flight operated under the provisions of 14 CFR Part 91, with no flight plan filed. Instrument weather conditions prevailed at the time and location of the accident site. The aircraft was destroyed by impact forces and a post-impact fire; the commercial-rated pilot was fatally injured in the accident. The flight departed Knoxville, Tennessee, at 1314 hours.

At 1303, the pilot of N6749S radioed Knoxville clearance delivery, and requested a Visual Flight Rules,(VFR), clearance to Gatlinburg at 3500 feet. The pilot was issued a clearance as requested. After takeoff, radar coverage was provided until the flight was four miles southwest of Gatlinburg.

AT 1324, the pilot of N6749S radioed Knoxville Approach Control and requested the ILS approach to Knoxville. Within two minutes of the initial radio call to approach control, the pilot requested immediate vectors. The controller radioed that the airplane was in radar contact, twenty miles southeast of Knoxville. The controller requested the flight's altitude, but there was no response from the pilot. The approach controller issued vector information, and instructed the pilot to maintain visual weather conditions. At 1326:30, radar and radio contact were lost with N6749S.

A hiker in the vicinity of the accident site recalled hearing an airplane overhead. He stated that the sound of the aircraft engines continued until the airplane impacted the trees.

PERSONNEL INFORMATION

Information on the pilot is included in this report at the data field labeled "First Pilot Information." The pilot's flight logs were not recovered for examination.

AIRCRAFT INFORMATION

Information on the airplane is included in this report at data field labeled "Aircraft Information."

WRECKAGE AND IMPACT INFORMATION

The accident site was located at the 3500 foot level of Cove Mountain and 7 miles west of the city of Gatlinburg. Examination of the accident site revealed that aircraft debris was scattered on a 210 degree magnetic heading, over an area 650 feet long and 75 feet wide (see attached wreckage diagram). A review of the profile view of the accident site revealed that the wreckage debris was scattered over rolling terrain and a small body of water. There was a narrow swath through the trees at the initial part of the wreckage path. The wreckage path examination discovered that the post-impact fire was wide spread but mostly concentrated in the vicinity of the main wreckage.

Debris from the right wing assembly was scattered on the ground and lodged in trees at the initial part of the wreckage path. Approximately 210 feet southwest of the initial collision with the trees, additional debris from the airframe, such as the baggage door, was located on the upslope of another ridge. About 30 feet upslope from the baggage door were pieces of the right

propeller assembly. One of the three propeller blades was torn from the hub assembly and was located 37 feet northwest of the propeller hub assembly. Examination of the right propeller assembly revealed that the blades had sustained twisting and impact damage.

Debris from the nose section of the airplane was located 21 feet southwest of the propeller assembly. The left horizontal stabilizer was also located in the immediate vicinity of the debris from the nose section. A piece of the vertical fin was found an additional 20 feet southwest.

A section of the right engine cowling was found 121 feet southwest of the vertical fin debris, under a freshly felled tree. The right engine assembly was located 3 feet southwest of the right engine cowling. Both components had sustained extensive impact damage. Several engine accessories were separated from their normally installed positions.

The main wreckage was located approximately 25 feet southwest of the right engine assembly. The fire damaged fuselage section and empennage assembly rested over a felled tree. The wreckage examination disclosed that the airframe center section sustained extensive fire damage. Flight and navigational instruments were also destroyed in the post-impact fire. Portions of both fire damaged wing assemblies, with the main landing gear attached, were attached to the airframe.

The left engine assembly rested adjacent to a tree 15 feet southwest of the empennage section. The propeller assembly had separated from the engine assembly and was not located at the accident site.

Both engines were removed from the accident site for further examination. The follow-up examination consisted of a complete disassembly of both engines. Both teardowns failed to disclose a mechanical malfunction or any component failure. The external and internal examinations also determined that impact damage to both engines was similar. The right engine sustained crankcase damage which prevented the rotation of the crankshaft. The left engine rotated freely and internal rotational action was established.

The left propeller was never located. Examination of the propeller hub extension retention bolts revealed that they failed in overload. The failure mode of the propeller hub extension bolts for the right propeller was also in overload.

METEOROLOGICAL INFORMATION

Visual weather conditions prevailed at the time of the accident at the reporting facility. According to witnesses in the immediate area of the accident site, clouds obscured the tops of the mountain. Weather information is contained in this report at the data field labeled "Weather Information."

MEDICAL AND PATHOLOGICAL INFORMATION

The postmortem examination of the pilot was performed by Dr. C. Blake at the Office of The Forensic and Pathological Office In Morristown, Tennessee, on February 13, 1995. The reported cause of death was multiple trauma secondary to the aircraft accident. The toxicological examinations revealed a carboxyhemoglobin saturation level of 2 % in liver samples. The liver samples also contained 0.22 mg/kg of chlorpheniramine(see attached toxicological report).

ADDITIONAL INFORMATION.

The aircraft wreckage was released to:

Mr. Kurt Brewer (insurance adjustor) 259 Spencer RD St. Peters, MO 63376

Pilot Information

Certificate:	Commercial	**Age:**	56
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):	Airplane Single-engine; None	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	08/11/1994
Occupational Pilot:		**Last Flight Review or Equivalent:**	
Flight Time:	1500 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BEECH	**Registration:**	N6749S
Model/Series:	B60 B60	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	P519
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	10/05/1994, Annual	**Certified Max Gross Wt.:**	6775 lbs
Time Since Last Inspection:	50 Hours	**Engines:**	2 Reciprocating
Airframe Total Time:	2488 Hours	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	TIO-541-E1C4
Registered Owner:	MALONE, EDWARD M.	**Rated Power:**	380 hp
Operator:	MALONE, EDWARD M.	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:	GKT, 1005 ft msl	**Distance from Accident Site:**	7 Nautical Miles
Observation Time:	1340 EST	**Direction from Accident Site:**	30°
Lowest Cloud Condition:	Unknown / 0 ft agl	**Visibility**	10 Miles
Lowest Ceiling:	Broken / 2300 ft agl	**Visibility (RVR):**	0 ft
Wind Speed/Gusts:	Calm /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	Variable	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	4°C / 0°C
Precipitation and Obscuration:			
Departure Point:	KNOXVILLE, TN (TYS)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	1314 EST	**Type of Airspace:**	Class G

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:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	

Administrative Information

Investigator In Charge (IIC):	PHILLIP POWELL	**Report Date:**	11/06/1995
Additional Participating Persons:	LYNN LAFEVER; NASHVILLE, TN DAN STRICKLAND; COLLEGE PARK, GA MARTHA FARMER; COLLEGE PARK, GA		
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/.		