Aviation Investigation Final Report

Location:	Bluefield, West Virginia	**Accident Number:**	IAD01LA028
Date & Time:	January 19, 2001, 19:50 Local	**Registration:**	N99ED
Aircraft:	Piper 34-200T	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot attempted two ILS approaches to the airport, and then was contacted by a lineman informing him that the pilot-controlled runway lights were on the low setting, and he would increase their intensity. The pilot then flew a third approach, and while looking for the lights at the decision height, the airplane impacted trees and came to rest on the ground. The pilot reported no mechanical deficiencies with the airplane, and stated that he may have been concentrating on "looking for the lights," while on the approach and not monitoring his altitude. The weather reported at 1952, included a visibility of 1/4 mile with fog, few clouds at 100 feet, ceiling 800 feet overcast, temperature 39 degrees Fahrenheit, dew point 37 degrees Fahrenheit, and altimeter setting 29.78 inches of mercury. The altimeter setting noted in the airplane after the accident was 29.97. A review of the FAA ILS RWY 23 approach chart for the airport indicated that the decision height for the approach was 300 feet, and the minimum landing visibility was 1 mile. According to the Aeronautical Information Manual (AIM), Section 7-2-3 ALTIMETER ERRORS, "If you do not reset your altimeter when flying from an area of high pressure into an area of low pressure, your aircraft will be closer to the surface than your altimeter indicates. An inch error in the altimeter setting equals 1,000 feet of altitude."

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to enter the correct altimeter setting, which resulted in continued flight below the decision height and a subsequent collision with trees.

Findings

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

Findings
1. OBJECT - TREE(S)
2. DECISION HEIGHT - CONTINUED BELOW - PILOT IN COMMAND
3. (C) ALTIMETER SETTING - INCORRECT - PILOT IN COMMAND

Factual Information

On January 19, 2001, about 1950 eastern standard time, a Piper PA-34-200T, N99ED, was substantially damaged when it impacted terrain during an approach to the Mercer County Airport (BLF), Bluefield, West Virginia. The certificated commercial pilot was not injured. Instrument meteorological conditions prevailed and an instrument flight rules (IFR) flight plan was filed for the personal flight conducted under 14 CFR Part 91.

In a telephone interview, the pilot stated that the airplane received an annual inspection at the Greenbrier Valley Airport (LWB), Lewisburg, West Virginia, during the 6 weeks prior to the accident. On the day of the accident, the pilot was flown to the LWB airport by a colleague to pick up the airplane. Around 1200, he received a weather briefing from the Elkins Flight Service Station (FSS) which indicated IFR conditions along his route of flight to BLF. He noted that the freezing level was at 9,000 feet, and the winds were out of the southwest. The pilot performed a preflight inspection and a run-up inspection before his departure from LWB. He also performed a high-speed taxi on the runway to check the operation of the trim. The pilot filed an IFR flight plan and departed the airport about 1830. He reported that he had an uneventful takeoff from LWB, and an uneventful 30-minute flight to BLF.

Upon his arrival into the BLF area, he listened to the ASOS weather report, which indicated a 100-foot ceiling with fog. The pilot was cleared for the ILS Runway 23 approach, and noted that he "didn't think he could get into the airport;" however, he continued on the approach. At the decision height of the approach, the pilot saw "only clouds," and performed a missed approach procedure. He attempted a second ILS approach into BLF, and again at the decision height was not able to make visual contact with the runway or runway lights. The pilot performed another missed approach procedure, and considered amending his destination to Beckley, West Virginia, or Roanoke, Virginia, where he thought the weather was better. He was then contacted by a Bluefield FBO employee on the radio, and informed that his first two approaches had been conducted with the field lights on the low setting. The employee asked if the pilot would like the approach lights "turned up," and the pilot agreed. The pilot attempted a third approach into BLF, and was "looking for the lights at the decision height," when he felt the impact of trees "slapping" the airplane. Several seconds later, the airplane impacted the ground. The pilot reported that both wings had separated from the airplane and began burning after the impact.

The pilot stated that he never descended below the decision height while on an approach; however, during the accident flight, he may have been concentrating on "looking for the lights," and not monitoring his altitude. The pilot reported that there were no mechanical deficiencies with the airplane.

An employee of the Bluefield FBO reported that he heard the airplane perform two approaches

to Runway 23. After the airplane's second approach, the employee contacted the pilot and asked if he wanted the runway lights "turned up." The pilot replied "yes" and the employee increased the illumination of the runway edge lights. The employee stated that he heard the airplane's engines throughout all three approaches; however, he never saw the airplane. He reported the visibility at the time of the accident was 1/4 mile with "a lot of fog," which extended down to the ground.

Examination of the accident site by a Federal Aviation Administration (FAA) inspector revealed that the tops of a group of trees 60-70 feet tall were sheared, about 1,200 to 1,500 feet from the wreckage. The tops of a second group of trees 250 feet from the wreckage were also cut, as well as a third group of trees 150 feet from the accident site. Several broken tree branches were noted along the debris path. Additionally, a broken tree branch, which measured 12 inches in diameter and 20 feet long, was found near the base of the initial tree impact.

Examination of the wreckage revealed all major components were accounted for at the accident site, except the right propeller. The inboard portion of the right wing from the engine nacelle to the cabin fuselage displayed signatures consistent with fire damage. The right engine was attached to the wing and the right propeller was separated from the engine at the crankshaft flange. The inboard section of the left wing, from the engine to the fuselage, remained attached to the fuselage and sustained fire damage. The left propeller was separated from the engine at the crankshaft flange, and was located about 10 feet behind the left engine. The outboard section of the left wing came to rest on a heading of 190 degrees, about 20 feet to the rear of the fuselage. This section was almost completely burnt. The vertical stabilizer remained attached to the airplane, and revealed little damage. The fuselage section of the airplane remained intact and also displayed relatively little damage. Examination of the cockpit revealed the flaps were selected to 20 degrees and the stabilator trim was selected to the takeoff position. The throttle and propeller controls were full forward, and the mixture controls were full aft. The left engine fuel selector was set to the crossfeed position, and the right engine fuel selector was set to the off position. The altimeter indicated 2,400 feet, and 29.97 was selected in the Kollsman window.

According to the pilot, he obtained altimeter settings from Indianapolis Center and from the Bluefield ASOS; however he could not recall what the altimeter setting was.

In a telephone interview, a weather briefer at the Elkins Flight Service Station (FSS) stated that the pilot requested, and was given an "outlook briefing" for a flight from BLF to LWB, at 1030, on the day of the accident. The briefer informed the pilot that the forecast for his route of flight included IFR conditions with snow. Advisories were given for mountain obscurations and icing conditions at the freezing level. The pilot was also given a NOTAM for his flight, which reported the Runway End Identifier Lights (REIL) were out of service at BLF. The pilot was advised to call back before his departure, because the forecast was only valid until 0600, on January 20 in the BLF area. At 1615, the pilot called the Elkins FSS again, and filed two flight plans; one for a local flight in LWB, and one from LWB to BLF. He was asked if he needed weather precautions for the flight, and the pilot reported "no."

The weather at BLF, at 1952, was: winds from 260 degrees at 6 knots, visibility 1/4 mile with fog, few clouds at 100 feet, ceiling 800 feet overcast, temperature 39 degrees Fahrenheit, dew point 37 degrees Fahrenheit, and altimeter setting 29.78 inches of mercury. The elevation at BLF was 2,857 feet.

A review of the FAA ILS RWY 23 approach chart for BLF, indicated that the decision height for the approach was 300 feet, and the minimum landing visibility was 1 mile.

According to the Aeronautical Information Manual (AIM), Section 7-2-3 ALTIMETER ERRORS:

"b. If you do not reset your altimeter when flying from an area of high pressure into an area of low pressure, your aircraft will be closer to the surface than your altimeter indicates. An inch error in the altimeter setting equals 1,000 feet of altitude."

Pilot Information

Certificate:	Commercial	**Age:**	54,Male
Airplane Rating(s):	Single-engine land; Multi-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:**	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	June 26, 1999
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	July 1, 1999
Flight Time:	1226 hours (Total, all aircraft), 119 hours (Total, this make and model), 1133 hours (Pilot In Command, all aircraft), 26 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N99ED
Model/Series:	34-200T	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	34-7770052
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	January 19, 2001 Annual	**Certified Max Gross Wt.:**	4570 lbs
Time Since Last Inspection:	1 Hrs	**Engines:**	2 Reciprocating
Airframe Total Time:	5056 Hrs at time of accident	**Engine Manufacturer:**	Continental
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	TSIO-360E
Registered Owner:	Michael Shahan	**Rated Power:**	200 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Night
Observation Facility, Elevation:	BLF,2857 ft msl	**Distance from Accident Site:**	
Observation Time:	19:52 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Few / 100 ft AGL	**Visibility**	0.25 miles
Lowest Ceiling:	Overcast / 800 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	260°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.78 inches Hg	**Temperature/Dew Point:**	4°C / 3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Lewisburg, WV (LWB)	**Type of Flight Plan Filed:**	IFR
Destination:	Bluefield, WV (BLF)	**Type of Clearance:**	IFR
Departure Time:	18:30 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	Mercer County Airport BLF	**Runway Surface Type:**	Asphalt
Airport Elevation:	2857 ft msl	**Runway Surface Condition:**	Wet
Runway Used:	23	**IFR Approach:**	ILS
Runway Length/Width:	4742 ft / 100 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	37.295555,-81.207496

Administrative Information

Investigator In Charge (IIC):	Andrews, Jill
Additional Participating Persons:	Larry Lagana; Federal Aviation Administration; Charleston, WV
Original Publish Date:	January 2, 2002
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=51373