



National Transportation Safety Board Aviation Accident Final Report

Location:	LOUISVILLE, MS	Accident Number:	MIA99FA269
Date & Time:	09/27/1999, 0605 CDT	Registration:	N100EE
Aircraft:	Piper PA-31P	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal

Flight Conducted Under: Part 91: General Aviation - Personal

Analysis

The pilot received a weather briefing before departure and when near the destination airport, cleared for the NDB approach. The pilot reported the procedure turn inbound; published MDA is 1,300 feet msl. Witnesses on the airport reported heavy low fog and heard the pilot announce over the UNICOM frequency, 'Oh there is fog rolling into Starkville too?' One of the witnesses advised the pilot they could go to another airport due to the fog; the pilot responded he would execute the approach. The witnesses heard the engines operating at full power then heard the impact and saw a fireball. The airplane impacted the runway inverted, slid across the runway, and came to rest in grass off the runway. A postcrash fire destroyed the airplane. Tree contact approximately 972 feet northwest of the runway impact location separated approximately 51 inches of the left wing. Examination of the engines, propellers, and flight controls revealed no evidence of preimpact failure or malfunction. The pilot had twice failed his airline transport pilot checkride. The designated examiner of the second failed flight test indicated the pilot was marginal in all flight operations. The NDB was checked after the accident; no discrepancies were noted.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's disregard for the published minimum descent altitude resulting in tree contact and separation of 51 inches of the left wing. Findings in the investigation were the pilot's two failures of the ATP checkride in a multiengine airplane.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: APPROACH

Findings

1. (C) OBJECT - TREE(S)

2. (C) MINIMUM DESCENT ALTITUDE - DISREGARDED - PILOT IN COMMAND

Occurrence #2: ABRUPT MANEUVER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

3. DIRECTIONAL CONTROL - NOT POSSIBLE - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

4. TERRAIN CONDITION - RUNWAY

Factual Information

HISTORY OF FLIGHT

On September 27, 1999, about 0605 central daylight time, a Piper PA-31P, N100EE, registered to a private individual, collided with a tree then the runway during a non-precision instrument approach to Louisville Winston County Airport (LMS), Louisville, Mississippi. Instrument meteorological conditions prevailed at the time and an instrument flight rules (IFR) flight plan was filed for the 14 CFR Part 91 personal flight. The airplane was destroyed by impact and postcrash fire and the commercial-rated pilot, the sole occupant, was fatally injured. The flight originated about 0526, from Tupelo Municipal-CD Lemons Airport, Tupelo, Mississippi.

According to a transcription of communications with Memphis Air Route Traffic Control Center (ARTCC), at 0526:26, the pilot contacted the facility and advised that the flight had departed Tupelo, was at 1,000 feet requesting IFR clearance to Louisville. The flight was cleared as filed, then cleared to climb to 4,000 feet, which was acknowledged by the pilot. At 0548:02, the flight was cleared to descend and maintain 3,000 feet which was acknowledged by the pilot. At 0548:14, the controller advised the pilot that there was no weather reporting at his destination airport but provided the weather for the Golden Triangle Airport that included the altimeter setting of 30.01 inHg. At 0548:34, the controller radioed the pilot and stated, "yes sir are you ah ah vmc conditions now or imc." The pilot advised the controller that the flight was above a layer and requested the non-directional beacon (NDB) instrument approach to runway 17. At 0549:17, the flight was cleared for the NDB instrument approach to runway 17 at the Louisville airport, which was acknowledged by the pilot. At 0550:31, the controller advised the pilot to report the procedure turn inbound, which was acknowledged. At 0559:30, the pilot advised the controller, "and Memphis ah zero echo echo, its not looking to good down here at Louisville they look like they're socked in we're gonna give it a shot we would like to put Starkville down for an alternate." At 0559:57, the controller advised the pilot that Starkville was listed as the alternate airport and at 0601:01, the pilot advised the controller that the flight was, "...turning inbound on the ndb one seven approach Louisville." The controller advised the pilot at 0601:08, that radar services were terminated and frequency change to the advisory frequency was approved. The pilot acknowledged the transmission at 0601:19; there were no further recorded transmissions from the pilot.

According to five individuals (non-pilots) who were waiting at the airport for the airplane to land; and planned to be flown by the accident pilot to an airport in Ohio, the weather condition at the LMS airport consisted of low heavy fog. One of the individuals reported that it took him an additional 15 minutes to drive to work due to the fog. The airport where the accident occurred has an outside mounted speaker which broadcasts communications of the UNICOM frequency. The individuals reported that the airport rotating beacon was on and the runway lights for runway 17/35, were on a low intensity setting. They reported hearing a "clicking" sound over the speaker and noted that the intensity of the runway lights increased. The airplane flew over the airport two times, the first time was from the north to the south at a high altitude, and the second time from the south to the north. They heard the pilot announce his approach over the speaker and one of the individuals picked up the microphone and radioed the pilot over the UNICOM frequency stating who he was and they could meet at another airport due to the fog. The pilot responded that we probably will but let me shoot this approach and I will get back to you. You should hear me in about 40 seconds. They then heard

the pilot communicate over the UNICOM frequency, "Oh, there is fog rolling into Starkville too?" While standing outside, they heard the engines operating at full power then heard two sounds followed by another sound. They observed a fireball cross the runway and heard two explosions. At no time did they observe the airplane while airborne and they reported that the pilot sounded calm while he was communicating on the UNICOM frequency. Copies of the witness statements are attachments to this report.

Review of the Data Analysis and Reduction Tool (DART) Log and Track Sort provided by the Memphis ARTCC revealed that from the time the pilot reported that the flight was procedure turn inbound (0601:01) to the last radar target (0604:19), revealed that the airplane descended from 2,800 to 1,300 feet mean sea level (msl). The heading changed from 003 degrees magnetic to the last recorded heading of 174 degrees. The last radar target occurred at 33 degrees 10 minutes 36 seconds North Latitude and 089 degrees 04 minutes 27 seconds West Longitude. That location when plotted was determined to be located about 1.8 nautical miles from the approach end of runway 17.

PERSONNEL INFORMATION

According to FAA records, the pilot was the holder of a commercial pilot certificate with ratings airplane single engine land, instrument airplane, and multi engine land. The multi engine land rating was added to his commercial pilot certificate on October 27, 1989. He was the holder of a second-class medical certificate issued August 2, 1999, with the restriction that the holder must wear corrective lenses. The records also indicate that he had a total flight time of 4,100 hours with no recorded enforcement or accidents or incidents. He failed twice a check-ride for the airline transport pilot certificate with a multi-engine rating. The first failure occurred on April 20, 1996. The second failure occurred 8 days later. According to the designated examiner who administered the April 28th flight test, "the applicant was marginal in most areas of flight operation[s]..."

AIRCRAFT INFORMATION

Review of the airplane maintenance records indicate that the airplane was last inspected in accordance with a 100-hour inspection that was signed off on September 25, 1999. No determination was made as to the time since this inspection at the time of the accident. Further review of the aircraft logbook revealed that the pitot static system, the two altimeters installed, the transponder, and the encoder were inspected last on February 26, 1999. The airplane was equipped with a radar altimeter.

METEOROLOGICAL INFORMATION

There is no weather reporting facility at the accident airport. A surface weather observation taken at 0555 local from the Golden Triangle Regional Airport, indicates that the wind was from 120 degrees at 4 knots, the visibility was 10 statute miles, overcast clouds existed at 1,400 feet, the temperature and dew point were approximately 70 and 67 degrees Fahrenheit, respectively, and the altimeter setting was 30.02 inHg. The Golden Triangle Airport is located approximately 30 nautical miles and 050 degrees magnetic from the accident airport.

A surface weather observation taken at 0555 local from the Columbus Air Force Base, indicates that the wind was variable at 3 knots, the visibility was 6 statute miles with mist, few clouds existed at 2,000 feet, scattered clouds existed at 11,000 and 25,000 feet, the temperature and dew point were each approximately 70 degrees, and the altimeter setting was 30.01 inHg. Review of the instrument approach procedure for the NDB approach to runway 17

indicates to use the Columbus AFB altimeter setting.

According to a transcription of communications and review of a voice tape with the Greenwood, Mississippi, Automated Flight Service Station (AFSS), revealed that at 0503:28, a person using the registration number of the accident airplane called and advised the briefing specialist that he was planning a "possible" visual flight rules (VFR) flight from Tupelo, to Louisville, Mississippi. The briefing specialist advised the person an airmet for instrument flight rules (IFR) conditions existed from 0900-1000 hours from the Golden Triangle Airport/Columbus area to the coast; VFR was not recommended until between 0900-1000. The current weather conditions at the time of the briefing for the departure airport, Meridian, Mississippi, and for the Golden Triangle Regional airport, and the forecast for the departure airport and also for Meridian, was provided. An IFR flight plan was filed for the flight from Tupelo, to Louisville, Mississippi, listing the name of the accident pilot. Winds aloft and NOTAM's which indicated that two unlighted towers were located near the destination airport, were also provided. The briefing specialist provided that the first unlighted tower was located 2.14 miles southeast of the destination airport at 942 feet mean sea level (msl), and the second unlighted tower was located 8 miles east of the destination airport at 905 feet msl. A second IFR flight plan was filed for the proposed flight from Louisville, Mississippi, to Steubenville, Ohio; which listed a total of five on board. A weather briefing was also provided for that flight.

Sun and moon calculations were performed indicating that the beginning of civil twilight was at 0623, on the day of the accident; the sunrise was calculated to occur at 0647.

COMMUNICATIONS

The pilot was in contact with Memphis Air Route Traffic Control Center prior to the accident and transcriptions of communications are an attachment to this report. There were no reported communication difficulties.

AERODROME INFORMATION

The Louisville Winston County Airport has one runway designated 17/35 which is 4,519 feet long and 75 feet wide. Runway 17 is served in part by a non directional beacon (NDB) instrument approach. The minimum descent altitude for a straight in approach to runway 17 is 1,300 feet mean sea level (msl). The published missed approach point for the approach is the NDB, which is located on the field. The common traffic advisory frequency (CTAF) 122.7 MHz, is not recorded.

An entry in the Facility Maintenance Log for the airport NDB on the day of and after the accident indicates that in the presence of an FAA inspector, the NDB is working "normal."

WRECKAGE AND IMPACT INFORMATION

The crash site was located on the Louisville Winston County Airport. The main wreckage consisting of the fuselage with the right wing, partial segment of the left wing, and left engine was located inverted on grass approximately 130 feet east of the eastern edge of runway 17/35. The main wreckage was on a magnetic heading of 152 degrees located at 33 degrees 08.726 minutes North Latitude and 089 degrees 03.732 minutes West Longitude. Fire damage to the airplane and grass east of the eastern edge of runway 17/35 was noted.

Examination of the runway revealed a burn scar across the runway oriented on a magnetic heading of approximately 116 degrees. The scar was located approximately 2,452 feet down from the approach end of runway 17. White paint transfer measuring 56 inches in diameter

similar to the shape of the upper portion of the fuselage was noted on the runway at the initial impact point. The left propeller with all propeller blades attached was found embedded at the western edge of the runway to the right of the wreckage path centerline. Three ground scars associated with the left propeller were noted to the right of the centerline of the wreckage path. The distance between the first and second ground scars was 27 inches. The right propeller with two propeller blades attached was found embedded in the runway asphalt to the left of the wreckage path centerline. The separated blade from the right propeller was found to the right of the wreckage path centerline. The distance between the first and second ground scars associated with the right propeller was 27 inches. A paint transfer from the leading edge of the right wing was noted to the left of the wreckage path centerline and was measured and found to be continuous from the winglet to the engine centerline location. The ground scar from the left wing was measured and found to measure 9 feet 8 inches in length from the center of the propeller location. The total defined ground scar length from the right winglet to the remaining section of the left wing measured 37 feet 9 inches.

Examination of the airplane revealed that a portion of the left wing was separated; all landing gears were extended. Examination of the flight controls revealed elevator, and rudder control cable continuity from each rear bellcrank to forward of the main spar where the cables were cut during recovery. Aileron balance cable continuity was confirmed; both aileron cables were attached at each chain but were cut near the chains. The right engine was separated from the airframe and located approximately 100 feet forward of where the airplane came to rest. Post crash fire damaged the cockpit, cabin, and remaining sections of both wings. Located in the wreckage was a remaining section of a Jeppesen Sanderson, Inc., (Jeppesen) instrument approach chart for the NDB approach to runway 17 at the accident airport. There was no evidence of ground contact to the lower portion of both engine cowlings or to the nosecone. Examination of the left forward baggage door revealed impact damage to the upper forward corner of the door.

Examination of the area surrounding the airport revealed damage to an approximate 70-foot-tall tree located at 33 degrees 08.882 minutes North Latitude and 089 degrees 03.838 minutes West Longitude. A 51-inch segment of the left wing that included the winglet was located approximately 365 feet south from the tree impact location. A second separated segment of the leading edge of the left wing was located approximately 352 degrees and 36 feet from the 51-inch segment of the left wing; a semicircular indentation was noted in the leading edge. The runway impact location was approximately 151 degrees and 972 feet from the tree impact location.

Examination of the left engine revealed fire and impact damage that precluded rotation. Examination of the camshaft through the heat damaged engine oil sump revealed no evidence of preimpact failure or malfunction. The magnetos exhibited fire and impact damage; both were separated. Impact and heat damage to the turbocharger system, ignition system, and fuel injection system precluded testing. Components of the left engine were found along the wreckage path; the left propeller shaft was separated from the engine. Examination of the engine revealed no evidence or preimpact mechanical failure or malfunction.

Examination of the left propeller revealed one of the propeller blades exhibited chordwise scratches with the leading edge twisted towards low pitch. The second propeller blade was bent approximately 110 degrees and the leading edge was twisted towards low pitch. The third propeller blade exhibited "S" bending near the tip; no gouges were noted in the leading edge. A

gouge on the trailing edge was noted approximately 23 inches inboard from the blade tip.

Examination of the right engine revealed impact damage that precluded rotation. The top of the crankcase was mostly broken exposing the crankshaft and connecting rods; the entire nose gear section was broken away. The magnetos were separated. Impact and/or heat damage to the turbocharger system, ignition system, and fuel injection system precluded testing. Components of the right engine were found along the wreckage path; the right propeller shaft was separated from the engine. Examination of the engine revealed no evidence or preimpact mechanical failure or malfunction.

Examination of the right propeller revealed one propeller blade was fractured inside the propeller hub. Examination of the separated blade revealed heavy chordwise scratches from the blade tip inboard 33 inches. The leading edge near the tip was twisted towards low pitch and a slight "S" bend near the blade tip was noted. The counterweight was separated and the counterweight bolts were fractured. The second propeller blade was free to rotate in the propeller hub and was curled aft approximately 180 degrees at the blade tip. A gouge in the trailing edge of the blade was noted approximately 27 inches from the blade tip was noted. The third propeller blade exhibited "S" bend and the leading edge twist towards low pitch. The leading edge was noted to be gouged and missing approximately 1/4 span within 15 inches from the blade tip. Chordwise scratches approximately 23 from the blade tip was noted and damage to the trailing edge of the blade for nearly the entire span was noted. A gouge in the blade back was noted approximately 17 inches from the blade tip.

MEDICAL AND PATHOLOGICAL INFORMATION

Postmortem examination of the pilot was performed by Stephen Haynes, M.D., designated pathologist, Mississippi State Medical Examiner's Office. The immediate cause of death was listed as airplane crash and the underlying cause of death was listed as massive cranial cerebral trauma with subtotal evulsion of the brain.

Toxicological analysis of specimens of the pilot was performed by the FAA Accident and Research Laboratory. The results of analysis was negative for carbon monoxide, cyanide, ethanol, and tested drugs.

ADDITIONAL DATA/INFORMATION

According to the secretary who chartered the flight, 3 days before the accident she contacted the accident pilot and asked if he could fly a group in a Navajo type airplane to West Virginia. The pilot advised her in a later phone call that he could get access to a Navajo; the trip was planned to have five passengers. The secretary further stated that the accident pilot had flown six trips for their company in the past 2 years.

According to the attorney who represents the owner of the airplane, the accident pilot had "on occasion" flew the accident airplane. The accident pilot "...asked to use the aircraft on September 27, 1999, and he was given permission to use it on that date."

According to personnel from the propeller manufacturer, based on the distance from the first to second propeller ground scars for both propellers (27 inches) and assuming full engine/propeller rpm at impact, the calculated ground speed was 143 knots.

The airplane wreckage was released to Mr. Robert C. Loyd, Louisville Winston County Airport Authority President, on September 29, 1999. The retained maintenance records were released to Mr. Russell Day of Universal Loss Management, Inc., on May 18, 2000.

Pilot Information

Certificate:	Commercial	Age:	38, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	08/02/1999
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	4100 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N100EE
Model/Series:	PA-31P PA-31P	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	31P-7530003
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	09/25/1999, 100 Hour	Certified Max Gross Wt.:	7800 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:	Installed	Engine Model/Series:	TIGO-541-E1A
Registered Owner:	MERLINE NIX	Rated Power:	425 hp
Operator:	MERLINE NIX	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Night/Bright
Observation Facility, Elevation:	GTR, 264 ft msl	Distance from Accident Site:	30 Nautical Miles
Observation Time:	0555 CDT	Direction from Accident Site:	50°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	Overcast / 1400 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	120°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	21° C / 19° C
Precipitation and Obscuration:			
Departure Point:	TUPELO, MS (TUP)	Type of Flight Plan Filed:	IFR
Destination:	(LMS)	Type of Clearance:	IFR
Departure Time:	0526 CDT	Type of Airspace:	Class G

Airport Information

Airport:	LOUISVILLE WINSTON COUNTY (KLMS)	Runway Surface Type:	Asphalt
Airport Elevation:	575 ft	Runway Surface Condition:	
Runway Used:	17	IFR Approach:	ADF/NDB
Runway Length/Width:	4519 ft / 75 ft	VFR Approach/Landing:	None

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:	

Administrative Information

Investigator In Charge (IIC):	TIMOTHY W MONVILLE	Report Date:	05/09/2001
Additional Participating Persons:	ALLEN M DAVIS; JACKSON, MS PAUL LEHMAN; VERO BEACH, FL GREGORY ERIKSON; WAYNE, IL		
Publish Date:			
Investigation Docket:	NTSB accident and incident docket 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](#).