



# Aviation Investigation Final Report

<b>Location:</b>	PONTOTOC, Mississippi	<b>Accident Number:</b>	MIA94FA058
<b>Date &amp; Time:</b>	January 22, 1994, 16:15 Local	<b>Registration:</b>	N88255
<b>Aircraft:</b>	BELLANCA 8KCAB	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

Witnesses in the crash area observed the aircraft in a nose down descent and then recover to level flight at about 500 feet agl with near full engine power. The aircraft then flew off to the southeast. A witness located about 1 mile south of these witnesses heard the aircraft in what appeared to be a descent with near full engine power. He heard a noise similar to a rifle being fired followed immediately by all engine noise stopping. He later located the wreckage of the aircraft which had crashed into trees and then the ground. Post crash examination of the aircraft structure, flight controls, and engine revealed no evidence to indicate precrash failure or malfunction. The State Medical Examiner stated the pilot died as a result massive blunt force injuries due to crash. Toxicology testing indicated no evidence of alcohol or drug usage by the pilot prior to the crash.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT IN COMMAND'S FAILURE TO MAINTAIN ALTITUDE WHILE MANUEVERING RESULTING IN THE AIRCRAFT COLLIDING WITH TREES AND THEN THE GROUND.

## Findings

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

Findings

1. (C) ALTITUDE - NOT MAINTAINED - PILOT IN COMMAND
2. OBJECT - TREE(S)

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

Findings

3. TERRAIN CONDITION - GROUND

## Factual Information

### HISTORY OF FLIGHT

On January 22, 1994, about 1615 central standard time, a Bellanca 8KCAB, N88255, registered to Earl W. Crossley, collided with trees and then the ground near Pontotoc, Mississippi, while on a 14 CFR Part 91 personal flight. Visual meteorological conditions prevailed at the time and no flight plan was filed. The aircraft was destroyed and the commercial-rated pilot was fatally injured. The flight departed Tupelo, Mississippi, on January 22, 1994, about 1530.

Witnesses in the south of the accident site reported seeing the aircraft in a nose-down attitude with the engine power increasing to near full power as the aircraft leveled at about 500 feet agl. The aircraft then flew to the south-southwest and was lost from sight. A short time later, another witness reported hearing the aircraft in what appeared to be a descent with the engine operating near full power. Suddenly, he heard a loud noise similar to "rifles being fired" and the aircraft's engine noise ceased abruptly. He later located the wreckage of the aircraft.

### PERSONNEL INFORMATION

Information on the pilot is contained in this report.

### AIRCRAFT INFORMATION

Information on the aircraft is contained in this report.

### METEOROLOGICAL INFORMATION

Visual meteorological conditions prevailed at the time of the accident. Meteorological information is contained in this report.

### WRECKAGE AND IMPACT INFORMATION

The aircraft crashed in a wooded area just off Nanny Road, Pontotoc, Mississippi. Examination of the crash site indicated the aircraft crashed into about 40-foot-tall trees, while on a northeasterly heading, causing separation of the right wing. The aircraft then descended and crashed to the ground at a point 75 feet past the initial tree impact. The outboard 5 feet of right wing came to rest in the top of a tree. The inboard portion of right wing was found at the base of the tree which was initially impacted. The top 15 feet of the first tree impacted was separated and lying at the base of the tree on the northeast side. Several 4-to-8 inch tree branches were found cut, consistent with propeller strikes.

The main aircraft wreckage consisted of the engine, propeller, fuselage, and left wing. The main wreckage was lying on about a 20-degree heading. All components of the aircraft necessary for flight were located along the crash path or on the main wreckage. The engine and propeller were partially buried in the ground. Examination of the flight control systems indicated that all separation points within the control cables were typical of overstress separation.

Examination of the engine indicated that the engine rotated freely and continuity was established within the engine assembly, accessory drives, and valve train. Each cylinder produced normal compression. Each magneto operated normally. No contamination was found in the aircraft and engine fuel system and fuel was found in most of the engine fuel system components. All engine fuel system components, except the nos. 1 and 3 fuel nozzles, were bench tested and found to operate normally. The nos. 1 and 3 fuel injector nozzles had sustained crash damage.

Teardown examination of the propeller indicated the propeller blades were in the low pitch position during the crash before overstress separation of the pitch change pins. Each blade had sustained damage consistent with rotating under power when striking an object or the ground. About 2 inches of one blade tip separated and was not located. The fracture surface was consistent with overstress separation. The propeller governor operated normally during bench testing.

Examination of the pilot seats indicated the seat which was occupied by the pilot had a parachute attached to it. The seat also had a second pair of lap and shoulder harnesses for use when performing aerobatic flight. The second set of harnesses and parachute were being used by the pilot at the time of the accident.

## MEDICAL AND PATHOLOGICAL INFORMATION

Postmortem examination of the pilot was conducted by Dr. Emily W. Ward, M.D., State Medical Examiner, Jackson, Mississippi. The cause of death was reported as massive blunt force injuries due to crash. There were no reported findings that could be considered casual to the accident.

Postmortem toxicology studies on specimens obtained from the pilot were performed by Dr. Barry Levine, Ph.D., Chief, Forensic Toxicology Laboratory, Armed Forces Institute Of Pathology, Washington, D.C. The studies were positive for 42 mg/dl ethanol in blood, a trace of acetaldehyde in blood, and 3 percent carbon monoxide. The tests were negative for cyanide, basic, acidic, and neutral drugs. The studies were negative for ethanol in vitreous fluid. Dr. Dennis V. Canfield, Ph.D., Manager, Toxicology Laboratory, Federal Aviation Administration, stated that the ethanol finding in blood is most likely from postmortem ethanol production.

Additional toxicology studies on specimens from the pilot was performed by Emily

Jochimsen, Forensic Toxicology, Mississippi Crime Laboratory, Jackson, Mississippi. These studies were positive for .06 percent ethyl alcohol and negative for drug screening.

The pilot's wife reported after the accident that the pilot had just received new bifocal glasses the week before the accident. She submitted a statement to the NTSB from the pilot's eye doctor indicating the pilot had uncorrected 20/400 vision. She stated, had the pilot lost his glasses in flight he might not have been able to see the flight instruments. The pilot's glasses were located in the aircraft's wreckage. The Federal Aviation Administration Aviation Medical Examiner who examined the pilot on January 18, 1994, reported the pilot demonstrated uncorrected vision of 20/50 and normal field of vision. For additional medical and pathological information see Supplement K and attachments to this report.

### ADDITIONAL INFORMATION

The aircraft wreckage was released on January 24, 1994, to Charles R. Miller, 105 Lemons Drive, Tupelo, Mississippi.

#### Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	47, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 2 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	January 18, 1994
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	13352 hours (Total, all aircraft), 25 hours (Total, this make and model), 13162 hours (Pilot In Command, all aircraft), 140 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BELLANCA	<b>Registration:</b>	N88255
<b>Model/Series:</b>	8KCAB 8KCAB	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Aerobatic; Normal	<b>Serial Number:</b>	160-74
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	October 3, 1993 Annual	<b>Certified Max Gross Wt.:</b>	1800 lbs
<b>Time Since Last Inspection:</b>	45 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1381 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	IO-320-E1A
<b>Registered Owner:</b>	CROSSLEY, EARL W.	<b>Rated Power:</b>	150 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	TUP ,346 ft msl	<b>Distance from Accident Site:</b>	15 Nautical Miles
<b>Observation Time:</b>	16:56 Local	<b>Direction from Accident Site:</b>	95°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	3 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	170°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	8°C / -9°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	TUPELO , MS (TUP )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	15:30 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal	<b>Latitude, Longitude:</b>	34.240097,-89.000335(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Kennedy, Jeffrey
<b>Additional Participating Persons:</b>	MELVIN R ATHEY; JACKSON , MS CHUCK WHITTINGTON; JACKSON , MS JOHN T HAYDOCK; TUPELO , MS
<b>Original Publish Date:</b>	November 18, 1994
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=37413">https://data.nts.gov/Docket?ProjectID=37413</a>

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).