



# Aviation Investigation Factual Report

<b>Location:</b>	PICKENS, South Carolina	<b>Accident Number:</b>	MIA99FA232
<b>Date &amp; Time:</b>	August 22, 1999, 17:00 Local	<b>Registration:</b>	N67198
<b>Aircraft:</b>	Beech C24R	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal, 1 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Factual Information

### HISTORY OF FLIGHT

On August 22, 1999, about 1700 eastern daylight time, a Beech Sierra C24R, N67198, registered to a private individual, operating as a Title 14 CFR Part 91 personal flight, crashed while on landing approach to Pickens County Airport, Pickens, South Carolina. Visual meteorological conditions prevailed and a visual flight rules flight plan was filed. The airplane received substantial damage, the private-rated pilot sustained fatal injuries, and a passenger sustained serious injuries. The flight originated from Ocean City, Maryland, about 4 hours before the accident.

According to Pickens County Airport's fixed-base operator, who was manning the base radio on unicom frequency, the pilot transmitted, "Mayday" three times and said he had run out of fuel. The radio operator told him to switch on his fuel boost pump, transfer the fuel selector valve to the other tank, and to state his location. The next transmission was, "I'm not gonna' make it".

According to two eyewitnesses watching from their homes, the airplane went by their respective backyards at about 100 feet agl, with no discernible engine sound, and only the sound of swirling wind. One of the witnesses stated he knew the airplane would not make the airport. The other witness stated he thought the propeller was stopped when the airplane flew abeam of his location. Two other persons whose homes abut the tree stand where the airplane crashed said they heard no engine sounds, only the cracking and smashing of tree limbs.

### PERSONNEL INFORMATION

Only the pilot's current flight logbook was recovered. Total flight time had been brought forward; however, PIC and in-type flight times had to be estimated. Pickens County FBO personnel stated that the pilot owned mountain property in Cashiers, North Carolina, and it was his custom to fly to Pickens County from his home in Columbia, South Carolina, park the airplane, and drive a prepositioned car the remaining 45 miles to the property. They stated they thought the pilot had little long distance cross country experience. Additional information pertaining to the pilot is contained on page 3 of this report.

### AIRCRAFT INFORMATION

Luggage, personal items, and newly bought merchandise aboard the airplane revealed that the occupants had been on an extended trip through New England and New York state. Cargo aboard weighed 241 pounds. The pilot weighed about 230 pounds and the passenger weighed about 125 pounds. The passenger was occupying the right rear seat.

## METEOROLOGICAL INFORMATION

Visual meteorological conditions prevailed at the time of the accident. For additional information, see Weather Information on page 4 of this report. Transcripts of ATC radio communications and statements made by the passenger reveal that the flight made numerous altitude changes to remain in VFR conditions.

## WRECKAGE AND IMPACT INFORMATION

The airplane collided with a stand of large oak trees about 2 miles short of Pickens County Airport's runway 23, at coordinates N 34.50.17 by W 82.39.40 degrees. The general topography of the terrain surrounding the wreckage site is rolling, sparsely settled, rural woodlands whose average elevation is 900 to 1,100 feet. Examination of wreckage debris and trees revealed the first impact was the airplane's left wing with the tree canopy at about 75 feet above ground level, yawing the airplane left a full 180 degrees until final collision with a 22-inch diameter tree about 30 feet above ground level. The airplane slid down the tree, impaled on the left wing trailing edge. The length of the wreckage path through the tree canopy was about 185 feet, and was oriented about 245 degrees, magnetic. The wreckage site revealed no ground scars other than directly under the airplane, that came to rest oriented about 065 degrees, magnetic. The propeller blades revealed no bending, very little chordwise scratches, and the leading edges were stained green. The propeller spinner had sustained minor denting. Both fuel caps were installed, revealed a tight fit, and although showing some rubber seal aging, appeared to seal properly on their filler tube lips. The left wing spar was fractured and the only left-wing-to-fuselage attachments were control cables and fuel lines. The left wing fuel tank had been compromised. The one-piece horizontal stabilizer was displaced into the 10 o'clock-4 o'clock plane, (looking forward). All flight controls were present, intact, and control continuity in all three axes was operational. Both cockpit control yokes were displaced upward and rightward and the instrument panel's upper edge had been displaced forward about 1.5 inches. The pilot's seat-back was broken backward and was reclined within 20 degrees of being fully horizontal. Evidence of overstress in the downward and backward directions was revealed on the pilot's seat hardware. The fuselage and floorboards under the left side rudder pedals had sustained inward crushing. The only fuel found on the airplane was about a quart drained from the right wing inspection drain and the gascolator. The fuel selector valve was found on the right tank position. There was no odor of fuel at the site, and the surrounding foliage showed no signs of fuel spray. Disassembly of the fuel injection distributor block revealed a trace of fuel.

The wreckage was transported to the Pickens County Airport where an on-airframe engine run was performed. The engine driven fuel pump received impact damage and was inoperable; however, with electrical power on the airplane, the fuel boost pump operated satisfactorily. A small portable fuel supply was substituted for the damaged left tank and a small quantity of fuel was added to the right tank. The engine ran satisfactorily up to 75 percent power and the fuel selector worked normally when switching between the left and right

tanks. A magneto check was performed, with satisfactory results.

## MEDICAL AND PATHOLOGICAL INFORMATION

Postmortem examination of the pilot was conducted by Dr. James R. Pruitt, M.D., Pathologist, at Oconee Memorial Hospital, Seneca, South Carolina, on August 24, 1999, under authority of Pickens County Coroner, Mitchell Davis, M.D. The cause of death was attributed to traumatic injuries sustained in an aircraft accident. No findings that could be considered causal were noted. Toxicological tests were conducted at the Federal Aviation Administration Research Laboratory, Oklahoma City, Oklahoma. The tests were negative for ethanol, basic, acidic, and neutral drugs.

## TESTS AND RESEARCH

According to Dutchess County, (Poughkeepsie, New York) ATCT personnel, N67198 departed that airport at 1056 on August 22 under VFR conditions, and requested VFR flight through the New York VFR corridor. The airplane had tied down at the local fixed-base operator since August 20. There is no record of any fuelling being performed at Poughkeepsie. The aircraft was fuelled at Ocean City, Maryland, with 24 gallons of 100 LL aviation fuel that was requested and paid for by the pilot with a credit card at 1251. Flight-line/fuelling personnel could not remember to what level in each fuel tank the additional fuel reached, but they do remember that the tanks did not appear full. At 1333, N67198 was airborne and talking to Washington ARTCC Cape Charles radar, climbing VFR through 7,100 msl, to a planned cruise altitude of 8,500 msl. Routine ATC radar flight following occurred as the flight proceeded southwest bound. In order to maintain VFR conditions, the flight requested and was granted the following altitudes, msl, in order, along his flight path; 9,500, 10,500, 6,500, 4,500, 3,500, 4,500, and 6,500 feet. The flight's ATC radar coverage was terminated by Greenville-Spartanburg ATCT at 1650.

According to the Greenville-Spartanburg ATCT transcripts of radio calls, at 1700 an airborne Cessna transmitted to them the following, "We got a little problem over here [Pickens County Airport] and an aircraft inbound towards the airport is reported has run out of gas so it's going to have to put it down somewhere do you have anything on that? He called about ten minutes ago and said he couldn't make the airport. He was going down somewhere he indicated to the east north-east." During the Cessna's transmission, an emergency locator transmitter could be heard in the background at about 1708.

The FBO stated that by prior arrangements, upon arrival of the airplane, an annual inspection of the airframe and engine was to have been performed, and the pilot and passenger would have continued their trip by car.

## ADDITIONAL INFORMATION

The aircraft wreckage, minus the pilot's operating handbook, was released to a

representative of the operator/owner on August 24, 1999. The handbook was returned to the estate of the operator/owner on January 11, 2000.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	49,Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 3 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	January 7, 1999
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	278 hours (Total, all aircraft), 199 hours (Total, this make and model), 205 hours (Pilot In Command, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Beech	<b>Registration:</b>	N67198
<b>Model/Series:</b>	C24R C24R	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	MC-722
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	August 3, 1998 Annual	<b>Certified Max Gross Wt.:</b>	2750 lbs
<b>Time Since Last Inspection:</b>	87 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3376 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	IO-360-A1B6
<b>Registered Owner:</b>	JOHN T. KEYES	<b>Rated Power:</b>	200 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>	GMU ,1048 ft msl	<b>Distance from Accident Site:</b>	9 Nautical Miles
<b>Observation Time:</b>	20:53 Local	<b>Direction from Accident Site:</b>	110°
<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>	5 knots / None	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	0°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	32°C / 13°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	OCEAN CITY (N80 )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	PICKENS COUNTY (LQK )	<b>Type of Clearance:</b>	VFR on top
<b>Departure Time:</b>	13:00 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	Dry;Rough;Vegetation
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Serious	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal, 1 Serious	<b>Latitude, Longitude:</b>	34.880279,-82.699127(est)

## Administrative Information

**Investigator In Charge (IIC):** Stone, Alan

**Additional Participating Persons:** DON DODGE; COLUMBIA, SC  
EDWARD G ROGALSKI; WILLIAMSPORT, PA  
JOHN E WARD; WICHITA, KS  
ROBERT L RAMEY; WICHITA, KS

**Report Date:** April 21, 2000

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=47188>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).