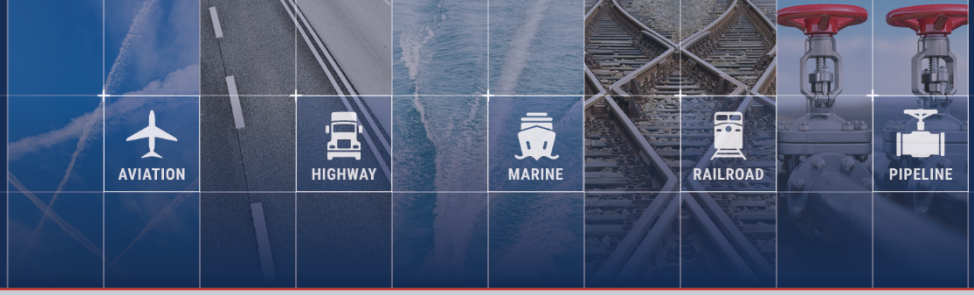

Aviation Investigation Factual Report

Location:	STATESVILLE, North Carolina	**Accident Number:**	MIA98FA182
Date & Time:	June 6, 1998, 14:00 Local	**Registration:**	TGHUH
Aircraft:	Piper PA-24-260	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Factual Information

HISTORY OF FLIGHT

On June 6, 1998, about 1400 eastern daylight time, a Piper PA-24-260, Guatemalan Registration TG-HUH, experienced an in-flight loss of control and collided with terrain near Statesville, North Carolina. Instrument meteorological conditions prevailed at the time and no flight plan was filed for the 14 CFR Part 91 personal flight. The airplane was destroyed and the private-rated pilot and commercial-rated passenger were fatally injured. The flight originated about 1335, from the Goose Creek Airport, Indian Trail, North Carolina.

The airplane departed under the provisions of visual flight rules for the purpose of flying to the Shiflet Field Airport, located in Marion, North Carolina, to pick up an individual and return to the Goose Creek Airport. A witness located about 1,300 feet and 240 degrees from where the airplane had in fact crashed, reported hearing an airplane fly low over or very close to her house flying either southeast bound or northwest bound. During this time the engine was sputtering. She then heard the engine rev up "high", associated with accelerating. She then heard and felt an impact in the form of rattled windows. At the time of the impact which was just before 1400 hours, it was "pouring down rain", and fog obscured the top of a 40-foot-tall tree in her yard. She and her husband drove from their house to a residence near where the airplane had in fact crashed, but were turned away by dogs. They then drove to the house of the Chief of Police for Troutman, and notified him of what she heard; he then immediately notified Emergency Communications. An Alert Notice was issued by the FAA on the day of the accident about 1923 hours, and the Civil Air Patrol (CAP) initiated a search for the airplane at 2112 hours. At 2300 hours that evening, the Troutman Police Chief called the witness who reported what she had heard to him, and asked specific questions about what she had heard. She called the chief the following morning and he advised her that what she heard could not be the accident airplane because it presumably did not depart until 1430 hours. On Monday, June 8th, she was advised by an individual at the Statesville airport, to contact an individual at the Raleigh, NC, Automated Flight Service Station (AFSS), which she complied with. The following morning about 0830 hours, she met representatives of the Civil Air Patrol (CAP) at her house and advised them of the possible crash site area. The airplane was reportedly located a short time later. The airplane was visually located on June 9th, between 0945-0950, by search and rescue personnel in a North Carolina State Highway Patrol helicopter.

A witness who is employed by US AIRWAYS as a first officer reported that on the day of the accident while outside near the crash site, the weather conditions consisted of a ceiling less than 1,000 feet, with 3-5 miles visibility, and light rain. He first heard an engine sputtering and knew that the airplane was low, but he didn't see it. He estimated that the airplane was flying from the south-southwest to the north-northeast, and about 25 seconds after hearing the sputtering sound, heard an impact. He and a friend attempted to locate the crash site but were

unable. He then contacted Charlotte Approach Control and he was advised that they were not "working" the airplane. On Monday morning, the Civil Air Patrol called him but he was not there. When he returned their phone call, the airplane had been located. He estimated that the airplane was in the clouds when he heard the sputtering engine.

According to another witness, on the day of the accident between 1330 and 1500 while outside of his building, he observed an airplane flying low and slow. The witness stated that the engine rpm's were decreased, and the airplane was flying west, up third creek. When asked to describe the airplane he reported that the airplane had one set of wings and the paint was two-tone. He estimated that the airplane was flying about 200 feet above the ground and was lower than tall pine trees in the area; the airplane was beneath the cloud cover.

PERSONNEL INFORMATION

No determination was made as to whether the pilot-in-command was current to fly in instrument meteorological conditions. Information pertaining to the pilot is contained on page 3 of the Factual Report-Aviation. Information pertaining to the passenger is contained in Supplement E.

AIRCRAFT INFORMATION

According to the New Piper Aircraft personnel, after manufacture, the airplane was assigned a Guatemalian registration. According to Maintenance information provided by personnel from Guatemala, the airplane was last inspected on October 21, 1993. The total time on the airplane and engine at that time was recorded to be 1,738:21 hours. That inspection was valid to October 21, 1994. There was no record of inspection in 1994. According to FAA personnel, the airplane reportedly entered the United States in 1994. There was no record in Guatemala which indicates that the airplane was de-registered or notice that the airplane was being moved from the country. Also, there was no record with the FAA that the airplane was registered in the U.S. No maintenance logbooks were located.

According to the original delivery documents provided by The New Piper Aircraft, the engine installed by serial number at the time of the accident was the same engine installed by serial number when the airplane was manufactured on December 2, 1966. The magnetos and propeller that were installed at the time of the accident were not the equipment installed when the airplane was manufactured in 1966. The airplane was equipped with auxiliary fuel tanks; the total usable fuel capacity to 86 gallons.

METEOROLOGICAL INFORMATION

On the day of the accident about 1011, the pilot contacted the Raleigh Automated Flight Service Station (AFSS)by telephone and requested a weather briefing for the cities of Charlotte, and Marion, North Carolina, with the pilot advising the briefer that Asheville was near Marion and there was rain in the Charlotte area. The briefer advised the pilot of light to moderate rain

showers between Charlotte and Asheville and IFR conditions were forecast to exist with ceilings below 1,000 feet or visibility less than 3 miles. The pilot was advised of the current weather near the departure airport and also was given the forecast weather for the Asheville area and advised him IFR conditions were forecast to end between 1100 and 1400 local and after 1400 to 1500 local, the Asheville area forecast indicated that the ceiling was to be 3500 broken.

At about 1108 local, the pilot contacted the Anderson (AFSS) also by telephone and requested a weather briefing for the cities of Charlotte and Asheville. The briefer advised the pilot of widely scattered rain showers between those areas moving east-northeast 15 to 20 knots. Flight precautions indicated IFR conditions for occasional ceilings and visibility between the briefing time and 1400 local for the North Carolina area. The briefer advised the pilot that VFR flight was recommended after 1200 to 1300 local.

At about 1310 local, the pilot contacted the Raleigh AFSS and requested a weather briefing between Charlotte and Asheville. The briefer advised the pilot of the current weather conditions at airports near his departure and destination airport. The weather conditions at an airport near the destination airport taken 16 minutes before the weather briefing indicated that the ceiling was 1,200 feet. The forecast for an airport near the destination between 0900 local that day and 0800 local the following day, indicated that from 1100 local, the ceiling was forecast to be 2,000 feet. The ceiling was expected between 1400 and 1500 local with the ceiling at 3500 feet broken. During the briefing, the specialist noted that the current ceiling was less than the forecast ceiling. The pilot inquired about whether the conditions would improve and the specialist stated "not any worse but no it's not that much better." The pilot advised "it is VFR ok I thank you much", then the briefing was concluded.

A weather observation taken at 1355 local from the Statesville Municipal Airport, Statesville, North Carolina, located about 102 degrees magnetic and 4.88 nautical miles from the crash site indicates that the wind was from 020 degrees at 6 knots. The visibility was 2 1/2 statute miles with heavy rain and fog. A broken layer of clouds existed at 400 feet and an overcast layer existed at 1,500 feet. The temperature and dew point were 16 degrees Centigrade each, and the altimeter was 29.91 inHg.

There was no record of any in-flight contacts with the accident airplane. Transcriptions from all three weather briefings are an attachment to this report.

COMMUNICATIONS

There were no recorded communications with the Charlotte Approach Control facility.

WRECKAGE AND IMPACT INFORMATION

The airplane crashed in a wooded area located 4.88 nautical miles east-southeast of the Statesville Municipal Airport and no more than 100 yards from a nearby residence. The tree

canopy above the crash site contained an opening and according to the Emergency Management Director who viewed the crash site from a helicopter, only two-three treetops near the 10-12 square feet wide canopy opening appeared to be broken. The airplane came to rest on a heading of 320 degrees magnetic with all main structural components necessary to sustain flight, in the immediate vicinity. The engine/propeller assembly, and the cockpit was buried beneath the ground to a depth of about 3-5 feet, with dirt covering the cockpit. Examination of the leading edges of both wings exhibited chordwise crushing aft to the main spars with evidence of the outer wing skin from the right wing displaced forward. The fuel selector was found positioned to the "left main" tank; air was blown through the valve and no obstructions were noted. The landing gear and flaps were determined to be retracted and the propeller which separated from the engine, was located buried in the ground near the engine. One of the propeller blades was found broken near the butt end of the blade, the other remained attached to the propeller hub. All flight control surfaces were found at the crash site and all counterweights with the exception of the left aileron counterweight, were installed and/or located. The left aileron was comprised of several pieces while the right aileron was one piece. Examination of the aileron flight control cables revealed continuity from the control surfaces to the cabin section where overload failure was noted. Examination of the rudder flight control cables revealed that the cables failed at the rudder bar. The elevator control cables were connected at the control surface forward to the "T-Bar Assembly." The attitude indicator and directional gyro which were impact damaged, were disassembled which revealed that the rotor and rotor housing of the directional gyro exhibited scoring. There was no evidence of scoring of either the rotor or rotor housing of the attitude indicator. The emergency locator transmitter (ELT) was located and the switch was found in the "off" position. The switch was placed in the "on" position and the unit did not operate. The ELT was retained for further examination. See Tests and Research Section.

The engine and propeller were removed from the accident site for further examination. Examination of the engine revealed that the crankshaft failed due to overload aft of the crankshaft flange which precluded rotation of the engine. All cylinders were removed from the engine which revealed that the only discrepancy noted was that the top piston ring from the No. 5 cylinder was failed. The crankshaft, and camshaft were not observed to be failed internally following removal of the cylinders. The right magneto which separated from the engine, was impact damaged which precluded testing. The left magneto which was installed on the engine, produced spark when rotated by hand. The vacuum pump which was also installed was removed and the drive coupling was not failed. Disassembly of the vacuum pump revealed that the rotor was broken, but the rotor vanes were not failed. No evidence of scoring was noted inside the vacuum pump housing. The servo fuel injector which was separated and impact damaged was examined. The inlet screen was found to be clean and the fuel diaphragm stem was bent and failed. Examination of the fuel manifold valve revealed no evidence of failure. The engine driven fuel pump which was impact damaged and partially separated was examined and the spring and diaphragm were not failed.

Examination of the separated propeller revealed that the blade that was separated exhibited evidence of forward bending with slight torsional twisting and chordwise scratches.

Examination of the remaining blade also revealed a slight forward bend with chordwise scratches.

MEDICAL AND PATHOLOGICAL INFORMATION

Postmortem examinations of the pilot and pilot-rated passenger were performed by Thomas B. Clark III, M.D., Pathologist, and Lee Ann Grossberg Krishnan, M.D., Pathologist, respectively. The cause of death for the pilot was listed as multiple traumatic injuries sustained in plane crash. The cause of death for the passenger was listed as numerous traumatic injuries secondary to a plane crash.

Toxicological testing was performed on specimens of the pilot by the FAA Toxicology and Accident Research Laboratory (CAMI) and the Office of the Chief Medical Examiner, Chapel Hill, NC. The results of analysis by CAMI was positive for ethanol in kidney (58 mg/dL) and muscle (32 mg/dL). Acetalhyde (29 mg/dL) was detected in kidney. Testing for carbon monoxide and cyanide was not performed due to a lack of a suitable specimen. No tested drugs were detected in muscle. The results of analysis by the Chapel Hill, NC, medical examiner was positive for ethanol (110 mg%), detected in the liver.

Toxicological testing was performed on specimens of the passenger by the FAA Toxicology and Accident Research Laboratory (CAMI) and the Office of the Chief Medical Examiner, Chapel Hill, NC. The results of analysis by CAMI was positive for ethanol in kidney (55 mg/dL) and muscle (114 mg/dL). Acetaldehyde was detected in muscle (14 mg/dL) and kidney (48 mg/dL). N-Butanol (11 mg/dL) was detected in muscle. A note beneath the ethanol section indicates that the ethanol found in this case is most likely from postmortem ethanol production. Testing for carbon monoxide and cyanide was not performed due to a lack of a suitable specimen. No tested drugs were detected in the muscle. The results of analysis by the Chapel Hill, NC, medical examiner was positive for ethanol (30 mg%) detected in the liver.

TESTS AND RESEARCH

Examination of the recovered ELT revealed that the power supply cable was not connected. The battery voltage was measured and found to be 6 volts under a no-load condition. The ELT was further disassembled resulting in inadvertent damage to the "G" switch. According to the ELT manufacturer, the unit will not operate with battery voltage as measured in the accident battery.

ADDITIONAL INFORMATION

A search for primary radar targets in the area of the crash site using the estimated time of the accident was performed by the Charlotte Terminal Radar Approach Control (TRACON) facility. A primary radar target was observed in the area of the crash site at the estimated time of the accident. A search for all primary radar targets was accomplished for the estimated flight time, flight path, and location. A primary radar target was noted about .625 mile north-

northeast of the departure airport, at 1335.58. The radar plot indicates that the airplane proceeded north-northeast, east of Charlotte, flying east of the Wilgrove Air park Airport about 5 miles. The airplane continued north-northeast bound flying east of the Spencer Airport, Concord, North Carolina, by about 4 miles. The airplane then flew nearly over the Rowan County Airport, Salisbury, North Carolina, then began a turn to the left flying northwest bound. The airplane continued flying northwest bound then began a turn to the right continuing to a southwest heading. The last primary radar target in the area was observed at 1400.21. The crash site was located 281 degrees and 3.81 nautical miles from the last primary radar target in the area. Altitude could not be determined for the observed primary radar target. Additionally, no determination could be made as to whether the observed primary radar target was the accident airplane. The radar data is an attachment to this report.

According to a friend of the pilot, on May 28th, the fuel tanks were filled at the Stanly County Airport, then she and the pilot flew to the Monroe Municipal airport located in Monroe, North Carolina, a flight lasting about 20-25 minutes. There, he performed about three or four full stop taxi back landings, lasting about 20 minutes. They then flew to and landed at the Goose Creek Airport located in Indian Trail, North Carolina. The total flight time that day while she was in the airplane was 1.2 hours.

According to the pilot's wife, they reside in Albemarle, North Carolina, and on May 29, 1998, she and her husband flew from the Stanly County Airport located in Albemarle, to an airport named "fairfield" located in South Carolina. After landing there, she inquired to her husband about the fuel status and he replied that 2 of the fuel tanks were full. No fuel was purchased there. They returned that same day, and she further stated that she does not believe that the airplane was flown after landing on the return flight until the accident flight. Review of the Southeast edition of the Airport Facility Directory revealed that the Fairfield County Airport is located in Winnsboro, South Carolina. The straight line distance from the Stanly County Airport to the Fairfield County Airport was determined to be about 81 nautical miles. The total flight time for that day was estimated to be 1.2 hours.

According to records provided by the Stanly County Airport Authority, the accident airplane arrived at the Stanly County Airport, Albemarle, North Carolina, on May 28th, about 1811, and on that same day, 62.2 gallons of fuel were added to the fuel tanks. The flight departed the morning of May 29th, and returned about 1650 that same day, then departed about 0830 on May 30th.

The total flight time since fueling at the time of the accident was estimated to be 2 hours 53 minutes. This was based on the statement made by the friend of the pilot pertaining to the flight duration since fueling on May 28th, the estimated 1 hour 14 minute round trip flight with the pilot's wife the following day, the estimated 13 minute flight on May 30th to the airport where the airplane was reported to have departed on the accident flight, and the estimated 25 minute accident flight.

The wreckage minus the retained emergency locator transmitter (ELT) was released to Mr.

Larry Dickerson, Director-Emergency Management, Iredell County, North Carolina, on June 11, 1998. The retained ELT was released to Mrs. Alma Rae Tucciarone-Bleavins, on February 26, 1999.

Pilot Information

Certificate:	Private	**Age:**	62,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:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	April 9, 1998
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	1460 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	TGHUH
Model/Series:	PA-24-260 PA-24-260	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	24-4642
Landing Gear Type:	Retractable - Tricycle	**Seats:**	5
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	3100 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	IO-540-D4A5
Registered Owner:		**Rated Power:**	260 Horsepower
Operator:	KENNETH M. BLEAVINS	**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	SVH ,965 ft msl	**Distance from Accident Site:**	5 Nautical Miles
Observation Time:	13:55 Local	**Direction from Accident Site:**	282°
Lowest Cloud Condition:	Unknown	**Visibility**	2.5 miles
Lowest Ceiling:	Broken / 400 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	20°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	17°C / 17°C
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	INDIAN TRAIL (28A)	**Type of Flight Plan Filed:**	None
Destination:	MARION (9A9)	**Type of Clearance:**	None
Departure Time:	13:35 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	STATESVILLE MUNICIPAL SVH	**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	
Runway Length/Width:		**VFR Approach/Landing:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	35.779914,-80.880302(est)

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	CHUCK KLEVEN; CHARLOTTE , NC PAUL LEHMAN; VERO BEACH , FL GERALD R JAMES; DALLAS , TX KEITH VAN; FOUNTAIN VALLEY, CA
Report Date:	April 5, 1999
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=38402