Aviation Investigation Final Report

Location:	MUNSON, Florida	**Accident Number:**	MIA99FA188
Date & Time:	June 25, 1999, 10:14 Local	**Registration:**	N3019W
Aircraft:	Beech C90	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled		

Analysis

The pilot received a preflight weather briefing and was advised of thunderstorms with tops to 45,000 feet along a portion of the route of flight. En route, the pilot was advised of significant areas of heavy precipitation to which the pilot responded, 'uh roger one nine whiskey it looks like on our radar here that uh we go straight ahead we'll be all right there.' The flight was cleared to descend to 11,000 feet and the pilot requested deviation to the right for weather avoidance. The pilot made several routine radio communications while descending at a calculated average rate of descent of approximately 2,571 fpm before encountering adverse weather. During this time while descending, the calculated calibrated airspeed increased from approximately 190 knots to approximately 265 knots (the design dive speed Vd). The flight encountered a level 5 weather echo then began a high rate of descent. Both horizontal stabilizers with elevators and both outer portions of both wings failed in a down direction. Examination of the flight control cables, fracture surfaces of the wings and horizontal stabilizers, engines, and propellers revealed no evidence of preimpact failure or malfunction. The pilot did not request pilot reports. The design maneuvering speed of the airplane is 169 knots indicated; the POH indicates to slow to this speed for turbulence penetration.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The poor in-flight weather evaluation by the pilot-in-command and his operation of the airplane at an indicated airspeed greater than the design maneuvering speed (Va) in a thunderstorm contrary to the pilot's operating handbook resulting in an in-flight breakup. A contributing factor in the accident was the failure of the pilot to obtain in-flight weather advisories with any air traffic control facility before encountering the adverse weather.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: DESCENT - NORMAL

Findings
1. WEATHER CONDITION - THUNDERSTORM
2. (F) IN-FLIGHT WEATHER ADVISORIES - NOT OBTAINED - PILOT IN COMMAND
3. (C) WEATHER EVALUATION - POOR - PILOT IN COMMAND
4. (C) AIRSPEED(VA) - EXCEEDED - PILOT IN COMMAND

Occurrence #2: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: DESCENT

Findings
5. HORIZONTAL STABILIZER - OVERLOAD
6. HORIZONTAL STABILIZER - SEPARATION
7. WING,WING ATTACHMENT FITTING - OVERLOAD
8. WING - SEPARATION

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
9. TERRAIN CONDITION - GROUND

Factual Information

HISTORY OF FLIGHT

On June 25, 1999, about 1014 central daylight time (all times central standard time), a Beech C90, N3019W, registered to Aerocenter, Inc., experienced in-flight structural failure near Munson, Florida. Instrument meteorological conditions prevailed at the time and an instrument flight rules (IFR) flight plan was filed for the 14 CFR Part 135 nonscheduled, domestic, passenger/cargo flight. The airplane was destroyed and the airline transport-rated pilot and one passenger were fatally injured. The flight originated approximately 0836 from the Zephyrhills Municipal Airport.

The flight departed under visual flight rules (VFR) and according to a chronological summary of communications with Tampa Air Traffic Control Tower (Tampa ATCT), at 0836, the pilot contacted Tampa Approach Control requesting IFR clearance to Brookley Field Airport. The flight was cleared to the Brookley Field Airport, and the final clearance was to climb and maintain 12,000 feet. Air traffic control communications were transferred to the Jacksonville Air Route Traffic Control Center (Jacksonville ARTCC). The flight continued and according to a transcription of communications, the flight was cleared to 14,000 feet, then at 0852:34, the flight was cleared to climb to 18,000 feet. Air traffic control communications was transferred to another sector in the Jacksonville ARTCC. At 0904:07, the controller stated, "and king air three zero one nine whiskey I'm depicting uh significant areas of heavy precipitation from about uh thirty miles south of panama city and it extends to about uh twenty east of panama city and they extend northeast bound almost to the seminole vortac...." The pilot responded, "uh roger one nine whiskey it looks like on our radar here that uh we go straight ahead we'll be all right there." The controller acknowledged the pilot's transmission; communications were transferred to Tyndall Approach Control. At 0933:41, the controller cleared the flight direct to the DEFUN intersection, then Crestview, then to the destination airport; this communication was acknowledged by the pilot. The flight remained in contact with Tyndall Approach Control until 0953:28, when air traffic control communications were transferred to the Jacksonville ARTCC. The pilot advised the Jacksonville Air Route Traffic Control Center controller that the flight was at 18,000 feet which was acknowledged by the controller. At 0954:25, the controller stated, "and king air one nine whiskey after crestview you're cleared uh loxly then brookley", which was acknowledged by the pilot. At 1004:18, the flight was cleared to descend to 16,000 feet which was acknowledged by the pilot. The pilot was also provided the Crestview altimeter setting of 30.02 inHg. At 1007:19, the controller broadcast on the same frequency, "attention all aircraft hazardous weather information convective sigmet uh three three eastern and six two central valid on hiwas flight watch or flight service station." At 1009:33, the controller cleared the flight to descend and maintain 11,000 feet, which was acknowledged by the pilot. At 1010:14, the pilot was advised to contact Pensacola Approach Control.

According to a transcription of communications with Pensacola Approach Control, at 1011, the pilot contacted the facility and advised that the flight was descending to 11,000 feet. The controller acknowledged the pilot's transmission and advised the pilot that the Pensacola altimeter setting was 30.01 inHg. The pilot repeated the same altimeter setting and at 1012:39, the pilot advised the controller, "king air three zero one niner whiskey would like to deviate about ten to fifteen degrees to the right for weather." The controller responded at 1012;44, "king air one niner whiskey approved when able direct brookly", to which the pilot responded "alright." At 1013:52, a broadcast from an unknown source indicates, "three thousand outta control and going down." An unintelligible communication from an unknown source was recorded at 1013:54. There were no further recorded communications from the pilot of the accident airplane.

Review of the chronological summary and transcription of communications from the first air traffic control (ATC) contact with Tampa Approach Control, to the last contact with Pensacola Approach Control revealed there was no record that the pilot requested pilot reports.

Three witnesses who were located near the accident site reported hearing a "whistling" sound, followed by a "boom" sound; a piece of the airplane landed in a tree near their position. Another witness reported hearing two loud "booms" but never saw the airplane. One witness who was located at Krul Lake reported observing the airplane circling the lake area two or three times and heard a strange noise coming from the airplane, followed by two loud "booms."

The main wreckage was found inverted at the edge of a wooded area with segments of both wings attached.

PERSONNEL INFORMATION

According to FAA records, the pilot was the holder of an airline transport pilot certificate and commercial pilot certificate with ratings airplane multi-engine land, and single engine land, respectively. He was the holder of a second class medical certificate dated September 16, 1998, with the limitation to wear corrective lenses. The records also indicate that on August 12, 1998, he passed his oral examination associated with the annual flight test but mechanical malfunction during the flight test caused cancellation of the flight. The pilot failed the flight portion of the annual flight test on August 14, and again 4 days later. He passed the annual flight test on August 26, 1998. On February 22, 1999, he passed the equipment test oral examination and also the semi-annual instrument proficiency flight test required by Title 14 Code of Federal Regulations (CFR) Part 135.297.

According to paperwork located in the wreckage, as of April 1, 1999, the pilot had accumulated 7,000 plus total flight hours, 3,000 plus of which were in single engine airplanes and 4,000 plus hours were in multi-engine airplanes. He indicated a total of 500 plus hours in

turbopropeller airplanes, 6,000 plus hours in cross-country flights, 1,000 plus hours at night, and 1,000 hours plus in night cross-country flight. Additionally, the paperwork indicated that he had attended Flight Safety November 6 through November 11, 1995, to attend the C/E 90 Initial Course.

AIRCRAFT INFORMATION

The aircraft total time at the time of the accident was approximately 3, 965 hours. The left and right engines had accumulated approximately 265 and 504 hours respectively, since major overhaul. The airplane was equipped with weather avoidance radar and a storm scope.

Review of the airplane maintenance records revealed an entry dated October 30, 1997, indicating that washer impressions in the left and right upper aft wing bolt fittings and on the left lower inboard spar cap were "dressed out". An entry dated April 14, 1999, indicates in part that 200-hour torque check of the left and right wing lower forward bolts was accomplished. Also, as a result of the inspection of the aft bulkhead and the horizontal stabilizer aft spars, installation of a shim was installed in accordance with instructions from Raytheon Aircraft Services. An entry dated May 19, 1999, indicates replacement of the wing bolts in accordance with 15-year replacement schedule. The supporting documentation indicates that depressions in the right lower aft outboard bathtub fitting were dressed and the left lower aft outboard bathtub fitting was replaced due to washer impressions and necking down of the bore. The pilot's and co-pilot's altimeters were signed off as being tested in accordance with 14 CFR Part 91.411(A), on April 7, 1999; the transponder was signed off as being tested that same day. The airplane's weather radar indicator was removed and sent to Honeywell for repairs on July 23, 1997; the indicator was installed in the airplane and ramp tested "good." There was no further entry in the airplane maintenance records pertaining to discrepancies or work performed on the weather radar. A rental repaired autopilot monitor was installed in the airplane on June 21, 1999, and "ground tests good." Copies of the maintenance records are an attachment to this report.

METEOROLOGICAL INFORMATION

According to the St. Petersburg (PIE) Automated Flight Service Station (AFSS), at 0841, the pilot contacted the facility by phone and filed an IFR flight plan. Review of a certified copy of the voice tape revealed that after the pilot filed the IFR flight plan, the briefing specialist questioned if the pilot had received a weather briefing; the pilot stated that he had not. The briefing specialist immediately stated, "... heavier thunderstorms up in through there." The pilot was advised of one area of thunderstorms at least 50 miles south of the Panama City area, into the Panama City area, with a real heavy cell just north of Mariana. The pilot was advised the second area was located just around the Mobile area on the east side of the bay, most of it extending into Gulf about 100 miles or more; the pilot responded, "don't think we want to go around that way do we." The briefing specialist suggested the pilot obtain pilot reports to which the pilot responded that the airplane was equipped with airborne radar, assistance was available from Air Route Traffic Control Center, and also he would obtain pilot

reports. The pilot was advised of convective sigmet 27E, indicating a developing area of thunderstorms moving from 260 degrees at 20 knots with tops above 45,000 feet. The briefing specialist advised the pilot that Tallahassee weather radar was depicting a thunderstorm with highest tops at 48,000 feet, located 85 miles west-southwest of Tallahassee. The pilot was provided with the then current weather for the destination airport, winds aloft, and NOTAMS.

A Factual Group Chairman weather report was prepared by the NTSB and is an attachment to this report. According to the report, radar plotting indicates no weather echo existed along the route of flight between 1010:29 and 1011:30 when using the radar data from Fort Rucker, Alabama, using the radar from 1013:49, at an elevation angle of .5 degree. The next two plotted radar targets indicates 10.5 dBz and 21.0 dBz weather echos along the route of flight at 1011:44, and 1011:58. No weather echos were noted at the route of flight at 1012:17, 1012:31, and 1012:45. Weather echos were then reported for the next 5 plotted radar targets. Radar data correlated with a weather radar image for a time of 1013:49, indicates an intense weather echo 54 dBZ, Video Integrated Processor (VIP) which is a Level 5 at the last plotted track point. Additionally, a base reflectivity image for 1013:49, indicates storm cells were identified about 4 nautical miles south and 5 nautical miles north of the last plotted track point.

A METAR weather observation taken at Whiting Field Naval Air Station-North Airport (Whiting NAS), located in Milton, Florida, at 1015, indicates light rain and mist. The recorded visibility was 5 statute miles; broken clouds existed at 1,500 feet and overcast clouds existed at 3,500 feet. The remarks section indicates lightning cloud to ground east, thunderstorm east through the south moving southeast. Whiting NAS is located approximately 12 nautical miles and 221 degrees from the accident site location.

COMMUNICATIONS

Transcriptions of communications with Jacksonville Air Route Traffic Control Center, Tyndall Approach Control, and Pensacola Approach Control are attachments to this report.

WRECKAGE AND IMPACT INFORMATION

The airplane crashed into a wooded area and came to rest inverted on a magnetic heading of 145 degrees (see photographs 1-5). The crash site was located at 30 degrees 51.66 minutes North latitude and 086 degrees 51.64 minutes West longitude. Both left and right wings were separated from the airplane outboard of each engine nacelle. Both horizontal stabilizers and elevators were also separated from the airplane; the separated components were located east of the main wreckage location. A plot of the separated components is contained in the NTSB Recorded Aircraft Radar & Trajectory Study. Extensive fire damage was noted to the fuselage from fuselage station (FS) 84 to 160, and from FS 206 to 298. The flaps and landing gear were retracted; the forward portion of the outer skin of the left gear door of the nose landing gear was pulled aft and rolled up. The forward portion of the outer skin of the right gear door of the nose landing gear exhibited a slight aft curl. The left propeller was

separated from the engine but was found immediately forward of the engine (see photograph 6). A tree had impaled the airplane in the area of the cockpit and bark along the length of the tree was missing on one side of the tree. The top side of the nose section indicates an approximate 20-degree crush angle. All autopilot servos were free to rotate except the aileron. The vertical stabilizer was bent approximately 90 degrees to the right; the aft spar of the vertical stabilizer was bent aft 90 degrees. No evidence of flight control preimpact failure or malfunction was noted for pitch, yaw, or roll. The top side of the cabin door was crushed. The airplane was recovered for further examination. Both engines and propellers were also retained for further examination.

Examination of the left wing revealed fire damage from wing station (WS) 28.975 to WS 99.6, which were in the area of the left nacelle and wing tank area; the landing gear was heat damaged. Compression wrinkles were noted in the bottom skin beginning at the aft spar at WS 245.1, and go outboard at an approximate 45-degree angle (see photograph 7). The root rib of the outboard section was compressed inboard. One of the aileron control cables exhibited overstress failure at the separated section of the wing, the other cable was connected at the bellcrank arm; the bellcrank arm was bent and fractured. The lower spar cap of the aft spar of the outboard section was displaced downward (see photograph 8). The outboard upper main spar bathtub fitting was fractured approximately centerline of the bolt hole; the fracture was inline and parallel to the spar web, the aft fractured side was displaced inboard and aft (see photograph 9). The outboard lower main spar bathtub fitting was fractured (see photograph 10). The upper and lower bathtub fittings of the inboard and outboard sections of the aft spar were secured, an approximate 5-inch segment of the aft spar of the outboard section remained attached to the inboard section (see photograph 11). The upper and lower bathtub fittings of the main spar of the inboard section were not failed; the attach hardware was in place (see photograph 12). The lower bathtub fitting of the aft spar of the inboard section was rotated counterclockwise. The butt rib at the fuel tank was displaced inboard and upward. A tear in the bottom wing skin associated with the flap cable was noted on the inboard section aft of the main landing gear. The leading edge exhibited chordwise crushing approximately 27 inches in length about 47.5 inches outboard of the wing panel attach fittings. No evidence of preimpact failure or malfunction of the fracture surfaces was noted and no hail dents were noted on the leading edge.

Examination of the right wing revealed an approximate 5-inch section of aft spar from the outboard section remained secured to the inboard section; both bathtub fittings were in place, the upper and lower bathtub fittings were rotated forward and aft respectively (see photograph 13). The inboard main spar upper and lower bathtub fittings bolts were not fractured; sections of fractured fittings remained secured around both inplace bolt shanks (see photograph 13). The outboard upper main spar bathtub fitting was fractured in an approximate horizontal plane about the nine o'clock position when viewed looking outboard; the bolt hole was fractured away (see photograph 14). The bottom section of the outboard lower main spar bathtub fitting was fractured and displaced down (see photograph 15). A tear in the bottom wing skin associated with the flap cable was noted on the inboard section immediately aft of the aft side of the landing gear doors. Both aileron control cables were

connected at the bellcrank near the control surface; both exhibited overload failure approximately 69 inches inboard of the wing panel. Compression wrinkles were noted in the top skin of the outboard section 11 feet 2 inches outboard of the attach point and also on the bottom wing skin beginning approximately 145.5 inches outboard of the wing attach point going outboard and forward at an approximate 30 degree angle. Compression wrinkles were noted on the bottom of the inboard right flap and on the bottom wing skin near the right main landing gear adjacent to the main spar. Compression wrinkles were also noted on the bottom fuselage skin of the carry through spar inboard of right butt line at fuselage station 164. No evidence of preimpact failure or malfunction of the fracture surfaces was noted, and no dents were located on the leading edge.

Examination of the left horizontal stabilizer revealed the forward and aft spars were fractured at the fuselage juncture; the top spar cap of the aft spar was not fractured. The fractured lower spar cap of the front spar at the fuselage was displaced down and aft. A compression wrinkle was noted near the bottom portion of the forward spar and a tear in the fuselage skin was noted beneath the front spar(see photograph 16). Examination of the separated stabilizer revealed the forward spar was displaced down and aft. The left elevator counterweight was separated but located. The outer 1/2 of the stabilizer was bent up; compression wrinkles were noted on the upper surface. No evidence of preimpact failure or malfunction of the fracture surfaces was noted, and no dents were noted on the leading edge. The left elevator trim actuator was not located.

Examination of the right horizontal stabilizer revealed the forward and aft spars were fractured at the fuselage juncture; the top spar cap of the forward spar was displaced down on the forward edge and the aft edge was rotated up and aft. The bottom spar cap of the forward spar at the fuselage was displaced aft approximately 45 degrees (see photograph 17). A tear in the fuselage skin and a compression wrinkle were noted beneath the forward spar. The main spar of the separated stabilizer was displaced down; the root rib exhibited compression wrinkles. A compression wrinkle was noted rear spar on the forward side of the spar web; the top spar cap was twisted forward approximately 70 degrees. A compression wrinkle was also noted on the fuselage near the aft spar on lower "L" angle, approximately 4 inches inboard from the fracture surface. The right elevator counterweight was separated but was located. No evidence of preimpact failure or malfunction of the fracture surfaces, and no dents were noted on the leading edge.

Examination of the left engine revealed no ferrous particles were noted on the gearbox chip detector. Evidence of light circumferential rubbing and scoring was noted on the compressor turbine, power turbine guide vane ring, and the power turbine. The blade tips of the compressor first stage shroud, the compressor turbine shroud, and the power turbine exhibited light circumferential rubbing due to radial contact with their adjacent blade tips. The fuel control unit, fuel pump, propeller governor, and overspeed governor were retained for further examination which revealed no evidence of preimpact failure or malfunction. A copy of the engine examination report and a copy of the engine controls report are an attachment to this report.

Examination of the right engine revealed the gearbox chip detector was clean. Evidence of light circumferential rubbing and scoring was noted on the compressor turbine, power turbine guide vane ring, and the power turbine. The blade tips of the compressor first stage shroud, the compressor turbine shroud, and the power turbine exhibited light circumferential rubbing due to radial contact with their adjacent blade tips. The fuel control unit, fuel pump, propeller governor, and overspeed governor were retained for further examination which revealed no evidence of preimpact failure or malfunction. A copy of the engine examination report and a copy of the engine controls report are an attachment to this report.

Examination of the left and right propellers at the manufacturers facility revealed no evidence of preimpact failure or malfunction. Beta coil spring marks on the corners of blade butts of both propellers indicate that the blades were in normal operating range and were not feathered at the time of impact. This information was also verified by the location of the counterweight impact markings found inside each propeller spinner. A copy of the report is an attachment to this report.

MEDICAL AND PATHOLOGICAL INFORMATION

Postmortem examinations of the pilot and passenger were performed by G.D. Cumberland, M.D., Forensic Pathologist, Chief Medical Examiner, District I, Florida. The cause of death for the pilot was listed as multiple blunt force injuries sustained as a pilot in an airplane crash. The cause of death for the passenger was listed as multiple blunt force injuries to the head, neck, chest, abdomen and extremities sustained as a passenger in an airplane crash.

Toxicological analysis of specimens of the pilot were performed by the FAA Toxicology and Accident Research Laboratory (CAMI), the University of Florida Diagnostic Referral Laboratories, and the Sacred Heart Hospital Laboratory. The result of analysis by CAMI was negative for tested drugs. Testing for carbon monoxide was not performed. The result was positive in the blood for cyanide (.26 ug/ml). Ethanol (12 mg/dL), and Acetaldehyde (3 mg/dL) were detected in the blood. Ethanol (22 mg/dL), and Acetaldehyde (1 mg/dL) were detected in muscle fluid. The notes sections states, "The ethanol found in this case may be potentially be from postmortem ethanol production and not from the ingestion of ethanol." The result of analysis by the University of Florida Diagnostic Referral Laboratories of blood specimen of the pilot was positive for ethanol (23 mg/dL); the comprehensive drug screen was negative. The result of analysis by the Sacred Heart Hospital Laboratory was positive in the blood (28.64 mG/dL) for ethanol.

Analysis of specimens of the passenger were performed by the Sacred Heart Hospital Laboratory and the University of Florida Diagnostic Referral Laboratories. The result of analysis by the Sacred Heart Hospital Laboratory was positive in the blood for ethanol (15.64 mG/dL). The result of analysis by the University of Florida Diagnostic Referral Laboratories was positive for ethanol (12 mg/dL); the comprehensive drug screen was negative.

TESTS AND RESEARCH

A "Recorded Aircraft Radar & Trajectory Study" was prepared by the NTSB, located in Washington, D.C. The study indicates that the airplane was in level flight at 18,000 feet at 1004:55, descended to 15,800 feet and remained in level flight at that altitude until 1010:01, descended to 14,800 feet at 1011:25, then began a continuous descent at 1012:03, until dropping from radar coverage at 1014:14, at 900 feet. The altitude profile chart indicates that between 1011:51, and 1013:15, the airplane descended from 14,700 feet to 11, 100 feet; an altitude loss of 3,600 feet during the 1 minute 24 seconds. The average rate of descent during this time was calculated to be approximately 2,571 feet per minute. The aircraft speeds chart revealed that the calibrated airspeed at 1012:00, was approximately 190 knots and increased to a maximum of approximately 265 knots at 1013:25. The altitude profile chart indicates that the airplane descended from 11,100 feet to 900 feet where the airplane was lost from radar, in a period of approximately 47 seconds. The average rate of descent during this time was calculated to be approximately 13,026 feet per minute. The aircraft speeds chart indicates that the calibrated airspeed reached the apex of approximately 265 knots at approximately 1013:25, and decreased from that point. The study concluded that the in-flight break up occurred approximately between 1013:50, and 1014:00. The notes and observations section of the study indicates, "...one should be wary of using the results of these calculations to determine whether or not the aircraft exceeded its design speed, or any other quantitative information, since the results are estimates only." The conclusion section of the study indicates, "In summary, the aircraft performance parameters calculated in this study provide an estimate and range of the performance envelope for N3019W prior to in-flight separation. The results should be used with caution, given the errors associated with the imprecise nature of the radar data." A copy of the study is an attachment to this report.

According to the Pilot's Operating Manual (POH) the maximum operating speed for the airplane is 208 knots, and the maximum design maneuvering speed is 169 knots. The safety information section of the manual indicates that for turbulent air, "If turbulence is encountered, reduce speed to the turbulent air penetration speed, if given, or to the maneuvering speed...." According to the "Airspeed Calibration-Normal System" chart, the calibrated airspeed in the flaps up configuration is within approximately 1 knot of the indicated airspeed between 160 and 210 knots. Copies of excerpts from the POH are an attachment to this report.

According to a document provided by the investigator from the airplane manufacturer, their analysis of the radar data indicates that the calibrated airspeeds exceeded the design diving speed (Vd) of 265 knots, prior to the in-flight separation. The document also indicates that the inflight break-up occurred at approximately 3,800 to 3,900 feet. A copy of the document is an attachment to the report.

ADDITIONAL INFORMATION

The airplane minus the retained components was released to Mr. Marshall Dean,

insurance adjuster for USAIG on November 6, 2000. The retained left and right propeller, engine controls from the left and right engines, and the left and right engines were also released to Mr. Marshall Dean, on November 9, 2000.

Pilot Information

Certificate:	Airline transport; Commercial	**Age:**	65,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:**	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	September 16, 1998
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	7000 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N3019W
Model/Series:	C90 C90	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	LJ-639
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	April 14, 1999 Continuous airworthiness	**Certified Max Gross Wt.:**	9650 lbs
Time Since Last Inspection:	66 Hrs	**Engines:**	2 Turbo prop
Airframe Total Time:	3965 Hrs	**Engine Manufacturer:**	P&W
ELT:	Installed, not activated	**Engine Model/Series:**	PT6A-20A
Registered Owner:	AEROCENTER, INC.	**Rated Power:**	550 Horsepower
Operator:		**Operating Certificate(s) Held:**	On-demand air taxi (135)
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:	NSE ,200 ft msl	**Distance from Accident Site:**	12 Nautical Miles
Observation Time:	10:15 Local	**Direction from Accident Site:**	221°
Lowest Cloud Condition:	Unknown	**Visibility**	5 miles
Lowest Ceiling:	Broken / 1500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	190°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	24°C / 23°C
Precipitation and Obscuration:	Light - None - Rain		
Departure Point:	ZEPHYRHILLS , FL (ZPH)	**Type of Flight Plan Filed:**	IFR
Destination:	MOBILE , AL (BFM)	**Type of Clearance:**	IFR
Departure Time:	09:36 Local	**Type of Airspace:**	Class E

Airport Information

Airport:		**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:**	30.630722,-87.040588(est)

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	HAROLD A COGHLAN; BIRMINGHAM , AL THOMAS A BERTHE; ROBERT L RAMEY; WICHITA , KS THOMAS M KNOPP; VANDALIA , OH
Original Publish Date:	April 9, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=46685