National Transportation Safety Board
Aviation Accident Final Report

Location:	Spanish Fort, AL	**Accident Number:**	ATL03FA008
Date & Time:	10/23/2002, 1945 CDT	**Registration:**	N76U
Aircraft:	Cessna 208B	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

!! NOTE: THIS REPORT WAS MODIFIED ON JANUARY 10, 2006. !!

The airplane was destroyed by impact forces. There was no evidence of fire. Wreckage examinations and all recovered wreckage from the impact area revealed no evidence of an in-flight collision or breakup, or of external contact by a foreign object. An examination of the engine and the propeller indicated that the engine was producing power at impact. The recovered components showed no evidence of preexisting powerplant, system, or structural failures.

Wreckage examinations showed crushing and bending consistent with a moderate angle of descent and a moderate right-wing-down attitude at impact. The amount of wreckage recovered indicates that all parts of the airplane were at the crash site. The wreckage was scattered over an area of about 600 feet.

An examination of radar and airplane performance data indicated that the accident airplane initiated a descent from 3,000 feet immediately after the accident pilot was given a second traffic advisory by air traffic control. The pilot reported that the traffic was above him. At the time the pilot stated that he needed to deviate, data indicate that the accident airplane was in or entering an uncontrolled descent.

Radar data indicated that, after departure from the airport, the closest identified airplane to the accident airplane was a DC-10, which was at an altitude of about 4,000 feet. The horizontal distance between the two airplanes was about 1.1 nautical miles, and the vertical distance between the airplanes was about 1,600 feet. The accident airplane was never in a location at which wake turbulence from the DC-10 would have intersected the Cessna's flightpath (behind and below the DC-10's flightpath). Given the relative positions of the accident airplane and the DC-10, wake turbulence was determined to not be a factor in this accident.

Although the DC-10 was left of the position given to the pilot by Mobile Terminal Radar Approach Control, air traffic controllers do not have strict angular limits when providing traffic guidance.

The Safety Board's airplane performance simulation showed that, beginning about 15 seconds before the time of the pilot's last transmission ("I needed to deviate, I needed to deviate"), his view of the DC-10 moved diagonally across the windscreen from his left to straight in front of the Cessna while tripling in size. The airplane performance simulation also indicated that the airplane experienced high bank and pitch angles shortly after the pilot stated, "I needed to deviate" (about 13 seconds after the transmission, the simulation showed the airplane rolling through 90° and continuing to roll to a peak of about 150° 3 seconds later) and that the airplane appeared to have nearly recovered from these extreme attitudes at impact. Performance data indicated that the airplane would had to have been structurally/aerodynamically intact to reach the point of ground impact from the point of in-flight upset.

There was no evidence of any other aircraft near the accident airplane or the DC-10 at the time of the accident. Soon after the accident, U.S. Coast Guard aircraft arrived at the accident scene. The meaning of the pilot's statement that he needed to deviate could not be determined. A review of air traffic control radar and transcripts revealed no evidence of pilot impairment or incapacitation before the onset of the descent and loss of control.

A sound spectrum study conducted by the Safety Board found no evidence of loud noises during the pilot's last three radio transmissions but found that background noise increased, indicating that the cockpit area was still intact and that the airspeed was increasing. The study further determined that the overspeed warning had activated, which was consistent with the performance study and extreme fragmentation of the wreckage.

Radar transponder data from the accident airplane were lost below 2,400 feet. The signal loss was likely caused by unusual attitudes, which can mask transponder antenna transmissions. A garbled transponder return recorded near the DC-10 was likely caused by the accident airplane's transponder returns masking the DC-10's returns (since the accident airplane was projected to be in line between the DC-10 and the ground radar) or by other environmental phenomena.

Red transfer or scuff marks were observed on many pieces of the airplane wreckage, and these marks were concentrated on the lower airframe skin forward of the main landing gear and the nose landing gear area. The Safety Board and four laboratories compared the red-marked airplane pieces to samples of red-colored items found in the wreckage. These examinations determined that most of the red marks were caused by parts of the airplane, cargo, and items encountered during the wreckage recovery. The marks exhibited random directions of motion, and none of the marks exhibited evidence of an in-flight collision with another aircraft. A small piece of black, anodized aluminum found embedded in the left wing was subsequently identified as a fragment from a cockpit lighting dimmer.

The accident occurred at night, with the moon obscured by low clouds. Instrument meteorological conditions prevailed, although visual conditions were reported between cloud layers. The terminal aerodrome forecast reported a possible cloud layer at 3,000 feet. Weather data and observations by the DC-10 pilot indicated that, after flying about 100 to 500 feet above the cloud layer and soon after sighting the DC-10, the accident airplane would have entered clouds.

A number of conditions were present on the night of the accident that would have been conducive to spatial disorientation. For example, no visible horizon references existed between the cloud layers in which the pilot was flying because of the night conditions. In addition, to initiate a visual search and visually acquire the DC-10, varying degrees of eye and head movements would have accompanied the pilot's shifting of attention outside the cockpit. Once the DC-10 was visually acquired by the pilot, it would have existed as a light source moving against an otherwise featureless background, and its relative motion across and rising in the Cessna's windscreen could have been disorienting, especially if the pilot had fixated on it for any length of time. Maneuvering the airplane during this search would likely have compounded the pilot's resultant disorientation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's spatial disorientation, which resulted in loss of airplane control. Contributing to the accident was the night instrument meteorological conditions with variable cloud layers.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: CRUISE - NORMAL

Findings
1. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
2. (C) SPATIAL DISORIENTATION - PILOT IN COMMAND
3. (F) WEATHER CONDITION - CLOUDS
4. (F) LIGHT CONDITION - NIGHT

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

Findings
5. TERRAIN CONDITION - SWAMPY

Factual Information

!! NOTE: THIS REPORT WAS MODIFIED ON JANUARY 10, 2006. !!

HISTORY OF FLIGHT

On October 23, 2002, about 1946 central daylight time (CDT), a Cessna 208B Cargomaster, N76U, call sign Night Ship 282, operated by Mid-Atlantic Freight, Inc., entered an uncontrolled descent from an altitude of 2,700 feet mean sea level (unless otherwise indicated, all altitudes are reported as height above mean sea level) and crashed in Big Bateau Bay, Spanish Fort, Alabama, shortly after takeoff from Mobile Downtown Airport (BFM), Mobile, Alabama. The pilot was killed, and the airplane was destroyed. The airplane was being operated under the provisions of 14 Code of Federal Regulations Part 135 as a commercial cargo flight (the airplane was carrying cargo for DHL International under contract). Instrument meteorological conditions (IMC) prevailed for the flight, which operated on an instrument flight rules flight plan.

According to Federal Aviation Administration (FAA) air traffic control (ATC) transcripts, the flight departed BFM about 1940. At 1942:21, the pilot contacted the Mobile Terminal Radar Approach Control (TRACON) and stated, "Mobile departure night ship ah two eighty two is with you at one thousand going to two thousand." The approach control east radar controller responded, "night ship two eighty two Mobile departure radar contact maintain three thousand turn right join victor [airway] four fifty four please." The pilot replied, "roger right turn four fifty four."

At 1944:25, the approach control east radar controller advised, "night ship two eighty two traffic at twelve o'clock of you and seven miles southbound heavy DC ten at four thousand." The pilot replied, "night ship two is looking I'm IMC." At 1945:34, the controller stated, "night ship two eighty two you're still IMC but that DC ten is one o'clock and two miles south bound at four thousand." At 1945:41, the pilot responded, "roger I got him above me right now." At 1945:57, the pilot stated, "I needed to deviate, I needed to deviate, I needed to deviate, I needed," and the transmission ended. The crash site was located about 7.7 nautical miles northeast of BFM.

Mobile TRACON Airport Surveillance Radar (ASR)-7 data, Atlanta Air Route Traffic Control Center National Track Analysis Program data, and the National Transportation Safety Board's airplane performance study indicated that, about the time of the pilot's last transmission, the accident airplane was descending through an altitude of about 2,300 feet, and the DC-10 was at an altitude of about 4,000 feet. Radar data indicated that the DC-10 was in front of the accident airplane at the time of the pilot's last transmission and that the airplanes' flightpaths did not intersect. The Mobile TRACON was also equipped with an automated radar tracking system-2E processor, which only records aircraft transponder data. Transponder data from the accident airplane were lost below 2,400 feet; however, a garbled transponder return was recorded near a DC-10 transponder return during the accident airplane's descent.

There were no known witnesses to the accident.

PERSONNEL INFORMATION

The pilot, age 54, held an airline transport pilot certificate with a single-engine land rating. The pilot's most recent FAA second-class airman medical certificate was issued on May 14, 2002,

with the limitations that he "must wear corrective lenses for distant vision" and "possess glasses for near vision."

According to the employment application that the pilot completed for Mid-Atlantic Freight, he had worked as a Cessna 208 simulator instructor at Pan Am Flight Academy, Memphis, Tennessee, and as a pilot for the New York City Police Department. The pilot's logbook was not located. The pilot reported on his airman medical certificate application that he had accumulated about 4,000 total flight hours. Company records indicated that he had accumulated about 4,584 total flight hours, about 838 hours of which were in the Cessna 208. The pilot's last Part 135 checkride occurred on July 13, 2002. Mid-Atlantic Freight reported that the pilot was familiar with the accident route of flight.

AIRPLANE INFORMATION

The accident airplane, serial number 208B0775, was registered by Atlantic Aero, Inc., on January 27, 2000. The airplane was equipped with a Pratt & Whitney Canada PT6A-114A engine and a McCauley Propeller Systems three-bladed, full-feathering propeller. At the time of the airplane's last periodic inspection, October 18, 2002, it had accumulated 3,991 total hours. At the time of the accident, the airplane had accumulated 4,002 total hours. Mid-Atlantic Freight reported that the airplane was carrying about 420 pounds of cargo.

METEOROLOGICAL INFORMATION

The two automated surface observing systems (ASOS) closest to the accident site were at BFM, which was located about 7.7 miles from the accident site, and Mobile Regional Airport (MOB), which was located about 16 miles from the accident site. (Times in weather observations are reported in coordinated universal time [UTC]. The "Z" designation that follows the time in the weather observations stands for Zulu, which indicates UTC time. CDT is 5 hours behind UTC time. Heights are reported in above ground level, and visibility is reported in statute miles.)

The BFM ASOS reported the following conditions:

2353Z: wind - 60° at 11 knots; visibility - 7 miles; sky condition - scattered at 900 feet and broken at 1,300 feet; temperature - 22° Celsius (C); dew point temperature - 21° C.

0053Z: wind - 60° at 11 knots; visibility - 5 miles; weather - mist; sky condition - scattered at 700 feet and overcast at 1,200 feet; temperature - 22° C; dew point temperature - 21° C; Remarks - Rain began at 2354Z and ended at 0050Z.

The MOB ASOS reported the following conditions:

0056Z: wind - 60° at 8 knots; visibility - 2 miles; weather - mist; sky condition - overcast at 400 feet; temperature - 20° C; dew point temperature - 19° C; Remarks - Rain began at 0041Z and ended at 0055Z.

An interpolated upper air sounding (that is, a vertical profile of atmospheric conditions) valid for the time of the accident for the Mobile area indicated that the dew point depression (temperature minus dew point temperature) below 5,000 feet was less than 2° C, consistent with the presence of clouds. Data from the Mobile Weather Surveillance Radar-1988 Doppler revealed 10- to 30-decibel reflectivities (atmospheric energy returns) over Mobile Bay, consistent with clouds and/or light rain. Geostationary Operational Environmental Satellite imagery and Advanced Very High Resolution Radiometer data from the National Oceanic and Atmospheric Administration-15 satellite also indicated clouds in the region.

The DC-10 pilot that had been flying near the accident airplane told Safety Board investigators that his airplane was "between layers of clouds starting at about 1,200 [feet] that topped at about 2,500 [feet] with more layers above his altitude [at 4,000 feet]." He added that the visibility was good between layers, that the air was smooth, and that he encountered "no turbulence or rain cells" along his flightpath.

A U.S. Coast Guard airplane was diverted from a training mission to locate the accident airplane; however, the search was abandoned because of low clouds and poor visibility. Helicopters located the crash site at 2242.

Calculated astronomical data indicated that the moon's elevation above the horizon was 0.1°, with 94 percent illumination at the time of the accident. The calculated bearing from the accident airplane to the moon was 67.5°.

WRECKAGE AND IMPACT INFORMATION

The accident airplane wreckage was located in Big Bateau Bay, a swampy/marshy area located between Mobile and Spanish Fort. The water in the wreckage area was from 4 inches to 3 feet deep, depending on the tide. The soft mud bottom was from 8 to 10 feet deep. Recovery of the wreckage required the use of airboats, and a barge was used to transport large pieces of wreckage to shore.

The wreckage was found scattered over a 600-foot area, oriented along a 166° heading. No evidence of fire was found. Portions of all major components of the airplane were found at the wreckage scene. The initial wreckage area, located in the northernmost point of the debris path, included the engine firewall and mount; the aft engine gearbox; and part of the instrument panel, which was found in multiple sections and entangled with surrounding structure. The propeller blades, recovered by the pilot's sister, were reportedly found near the instrument panel about 15 feet apart from each other. The main wreckage area, located about 105 feet south of the initial wreckage area, included most of the engine, which was found broken into two major sections and exhibited severe impact damage. The forward part of the engine was found about 422 feet south of the initial wreckage area and 317 feet south of the main wreckage area. The left wing lift strut was found about 105 feet west of the forward part of the engine, and a section of the left wing spar was found about 53 feet southwest of the left wing lift strut. Most of the aft fuselage was found in pieces randomly spread across the southern half of the debris field.

The odor of fuel was present at the accident site, and a fuel slick was observed on the surface of the water.

The accident airplane's recovered wreckage was transported to Atlanta Air Recovery, Griffin, Georgia, and examined. The wreckage was then transported to the Safety Board's Academy in Ashburn, Virginia, for further examination.

The forward fuselage, including the cockpit, was found fragmented. The main fuselage, forward of the rear fuselage cargo door area, was found in small pieces.

The aft cargo compartment fragments, tailcone, and empennage were the largest sections found. The horizontal stabilizers remained attached to the tailcone structure. The left horizontal stabilizer and elevator were found mostly intact but bent down about 90° midspan. Chordwise compression found on each horizontal stabilizer mated with corresponding damaged fuselage structure. The vertical stabilizer was found crushed chordwise and twisted; a

silhouette of the vertical stabilizer was found on top of the fuselage. The lower half of the rudder remained attached to the vertical stabilizer.

Both wings and control surfaces were found separated and broken into multiple pieces. Damage precluded a determination of control cable continuity for any flight control surface.

The right main landing gear (MLG) leg was found rotated aft about 90°, and the tire assembly was separated from the leg. The nose landing gear (NLG) piston was found bent aft and turned to the right about 60° as viewed from the pilot seat. Black marks from the strut seal were found on the chromed part of the NLG piston. The position of some of the marks on the piston were consistent with the gear being compressed at the time the marks were made and the piston being bent aft after the marks were made.

Most of the five-bay cargo pod that had covered the bottom of the fuselage was found in numerous small fragments. Numerous red marks were observed on fragments of the airframe and cargo pod, concentrated on the lower airframe skin forward of the MLG. Most of the marks were found within the area of the forward two bays of the cargo pod or above and aft of those bays. The marks were similar to paint transfer marks. Some of the marks exhibited signs of light scuffing, and none of the marks exhibited signs of substantial impact. The marks exhibited random directions of motion. Aligning the fragments revealed no punctures. All of the wreckage pieces that exhibited marks were cataloged and sent to various laboratories for further examination (discussed later).

Laboratory examination of a small piece of black, anodized aluminum found embedded in the left wing matched a missing area of the lighting dimmer that had been located on the lower left cockpit wall.

An external examination of the DC-10 was conducted, and no damage was found.

MEDICAL AND PATHOLOGICAL INFORMATION

The Alabama Department of Forensic Sciences State Medical Examiner performed an autopsy on the pilot on October 24, 2002. The cause of death was listed as "multiple blunt force injuries."

Toxicology samples from the pilot were submitted to the FAA Civil Aerospace Medical Institute, Oklahoma City, Oklahoma, and the results were negative for alcohol and other performance-impairing drugs.

TESTS AND RESEARCH

Airplane Performance Study

The Safety Board used Mobile TRACON ASR-7 radar data (correlated with ATC information) to derive the accident airplane's flightpath angle and ground speed. Radar data from the accident airplane and the nearby DC-10 were also used to calculate their respective positions, altitudes, and flightpaths. A simulation was developed to derive the accident airplane's flightpath and pitch and roll attitudes from its last radar-recorded position to the crash site, where the airplane orientation and ground track were matched.

The radar data showed the accident airplane climbing at an average ground speed of about 95 knots and at an average climb angle of about 6°. The airplane leveled off at the flight's assigned altitude of 3,000 feet about 1944:17 and accelerated to an average ground speed of about 140 knots shortly after the 1944:25 traffic advisory. The data showed that the airplane began to

descend immediately after the 1945:34 traffic advisory ("DC-ten is one o'clock and two miles") and that the ground speed rapidly increased. Data also showed that the descent angle further increased just before the pilot reported at 1945:41 that the DC-10 was above him.

Vertical and horizontal distances between the accident airplane and the DC-10 were calculated from the radar positions. The data indicated that, about the time of the last radar return, the horizontal distance between the two airplanes was about 1.1 nautical miles, and the vertical distance between the two airplanes was about 1,600 feet.

According to radar data, between the end of the pilot's 1945:41 transmission and his last transmission 16 seconds later, the DC-10 appeared to move across the Cessna's windscreen from about 25° left to straight ahead and rise from about 5° to 15°. Further, the angular size of the DC-10 appeared to increase from about 0.4° to 1.2°.

A simulation depicting the airplane's performance from the last radar-recorded position to the crash site showed that a combination of large, left-wing-down bank angles and large, nose-down pitch angles would have been necessary for the airplane to have entered the impact area from the north at the final orientation and high ground speed. To match the data, the airplane's left bank angle would had to have increased from about 30° to 150° in about 15 seconds. The simulation also indicated that, just before impact, the airplane had recovered from the extreme pitch and roll attitudes.

Engine and Propeller Examinations

The examination of the engine determined that the propeller shaft was intact and seized. The exhaust duct exhibited severe impact deformation, and a significant portion of it was detached. The gas generator case exhibited evidence of structural compression and buckling. The engine casing exhibited vertical impact damage on the bottom of the engine above and aft of the NLG mounting point. The examination revealed nicks on the leading edges of the airfoils (impeller, compressor, and turbine), turbine tip damage, blade damage in the direction of rotation, and circumferential damage around rotating components, consistent with the engine producing power at impact.

Recovered propeller parts were examined at the Safety Board's Materials Laboratory. The parts included two blades, photographs of the third blade, two hub pieces, the pitch control shaft and piston, and the pitch/feather housing. The two blades exhibited twisting, deformation, and forward bending, consistent with powered rotation at the time of impact. The pilot's sister provided photographs of one of the propeller blades, but she did not provide the actual blade. In photographs, the third blade appeared bent back upon itself and exhibited scratching and scoring damage in the chordwise direction, consistent with powered rotation at the time of impact. The blade shanks of all three blades exhibited damage from contact with the hub, bearings, retaining rings, and/or split retainers. Visual examination of the hub pieces with a binocular microscope revealed fracture features consistent with overstress separation. No evidence of progressive cracking was found.

Examinations of Marks on the Airplane Wreckage

Examination of the parts with transfer or scuff marks revealed different shades of red. Several of the parts examined had more than one red mark. Most of the red marks were found on the bottom of the aluminum airframe in cargo pod bays 1 and 2. The marks were concentrated in groups on the bottom fuselage skin, near the forward cargo pod divider walls.

Most of the red marks were surface scuffs, with no observed deformation of the underlying white paint or aluminum. However, some of the aluminum in the aft edge of the left wing strut was found dented, and the damage was associated with red marks. Red scuff marks were also found within the cargo pod on a corner of the fiberglass fuel reservoir drain tunnel, near the inside of a left-side pod door, and on a fragment of the pod's interior bottom corner. A plug of red material that resembled wax or crushed plastic was found blocking the drain fitting at the bottom of the engine accessory gearbox, where the drain hose would have been attached.

Examinations conducted at the Safety Board's Materials Laboratory identified three potential sources of the red colors: (1) equipment encountered during wreckage recovery; (2) cargo, including cargo bag material, baseball caps, and audiotape packaging; and (3) the airplane. The airplane contained several red items, including red laminate remnants of the primary and secondary electrical power distribution boxes, pitot tube cover fabric, a tow bar, a tail stand, a fire extinguisher, engine hose material, a battery case, red-coated exterior engine plugs (normally stowed in the forward cargo pod door), and plastic cockpit control knobs.

The Wright Patterson Air Force Base laboratory, Sherry Laboratories, the Federal Bureau of Investigation (FBI) laboratory, and Rinker Consulting Services (retained by U.S. Aviation Underwriters) used Fourier Transform Infrared Spectroscopy to examine and compare a total of 34 red-marked airplane pieces with 19 red reference items.

Wright Patterson examined two pieces of red-marked airplane fuselage skin, a piece of cargo bag material, and a piece of pitot tube cover fabric. In addition, Wright Patterson examined a red piece of unmanned aerial vehicle (UAV) material that had been obtained from Eglin Air Force Base. The examinations indicated that the materials in the red marks were not consistent with the pieces of the UAV, the cargo bag, or the pitot tube cover fabric. Regarding the UAV piece, the Wright Patterson laboratory report stated that the polyurethane coating on the exterior of the UAV material did not match the phthalate-based polyester material found in the red-marked airplane pieces.

Sherry Laboratories examinations revealed that red transfer marks on 21 of the 34 red-marked airplane pieces had spectra that matched the spectra of 1 or more of the 19 red reference objects (for example, one airplane part had two different types of marks that matched two different red objects). Marks on 13 airplane pieces matched the similar polymer coatings on the tow bar and the fire extinguisher and extinguisher bracket. Marks of three airplane pieces matched a postal service priority mail envelope. Marks on two airplane pieces matched the tail stand; marks on two airplane pieces matched rubberized fabric samples, consistent with a propeller restraint; and marks on two airplane pieces matched barge paint samples. Marks on three airplane pieces were identified by class of polymer but were not matched to any of the red objects. Marks on 12 airplane pieces were not identified by class of polymer or matched to any of the red items.

The FBI examined 5 of the 34 red-marked airplane pieces and 9 of the 19 red reference items. The FBI's examination results matched the results from Sherry Laboratories. No discrepancies were noted among the examination results obtained from the four laboratories.

Sound Spectrum Study of ATC Recording

Three radio transmissions from the accident airplane were examined on an audio spectrum analyzer at the Safety Board's laboratory to identify engine, propeller, and background noises. The three transmissions included the pilot's statements at 1944:29, 1945:41, and 1945:57 (his

last transmission). According to the sound spectrum study, no loud noises were detected during the transmissions, and engine sound signatures were similar during each transmission. The study indicated that the pilot's last transmission exhibited twice the sound energy of the two previous transmissions. The study also indicated that random background noise increased during the last transmission, consistent with an increase in airspeed (faster outside air passing over the fuselage skin). Further, the study identified a steady beeping tone during the last transmission, consistent with the airplane's airspeed (overspeed) warning horn.

ADDITIONAL INFORMATION

U.S. Air Force, Navy, and Air National Guard facilities reported that special use airspace, warning and restricted areas, and military operating areas in the region were not in use at the time of the accident. The closest military flight activity was a proficiency flight that ended about 90 minutes before the accident.

The Mobile TRACON east radar controller stated during a July 6, 2004, interview that he initiated the traffic advisories to the accident pilot to explain to him the reason that the clearance to a higher altitude was delayed. The controller noted that the traffic advisories were not required for safety purposes. The controller stated that, when he told the accident pilot to look for the DC-10 at the 12 o'clock position, the actual location of the DC-10 was slightly to the left of that position. The controller stated that he "led" the courses of both airplanes, taking into account the left-to-right crossing movement of the DC-10 and the accident airplane's expected turn to the northeast about the time he made the traffic advisories. The controller stated that he did not observe any untracked or primary targets on the radar near the accident airplane or the DC-10. The closest aircraft near the accident airplane and the DC-10 was a helicopter that had been in the general area about 5 minutes before the accident. The controller added that he recalled seeing some areas of precipitation on the radar but that he did not think that these areas were near the accident site.

Pilot Information

Certificate:	Airline Transport; Commercial	**Age:**	54, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane Single-engine	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	**Last Medical Exam:**	05/14/2002
Occupational Pilot:		**Last Flight Review or Equivalent:**	07/01/2002
Flight Time:	4584 hours (Total, all aircraft), 838 hours (Total, this make and model), 3384 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Cessna	**Registration:**	N76U
Model/Series:	208B	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	208B0775
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:	10/18/2002, AAIP	**Certified Max Gross Wt.:**	8785 lbs
Time Since Last Inspection:	11 Hours	**Engines:**	1 Turbo Prop
Airframe Total Time:	4001 Hours	**Engine Manufacturer:**	Pratt & Whitney Canada
ELT:	Installed, not activated	**Engine Model/Series:**	PT-6-114A
Registered Owner:	Atlantic Aero Inc	**Rated Power:**	675 hp
Operator:	Mid Atlantic Freight Inc.	**Air Carrier Operating Certificate:**	Air Cargo; On-demand Air Taxi (135)
Operator Does Business As:		**Operator Designator Code:**	MDC

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	**Condition of Light:**	Night/Dark
Observation Facility, Elevation:	BFM, 26 ft msl	**Observation Time:**	1856 CDT
Distance from Accident Site:	8 Nautical Miles	**Direction from Accident Site:**	31°
Lowest Cloud Condition:	Scattered / 900 ft agl	**Temperature/Dew Point:**	20°C / 19°C
Lowest Ceiling:	Overcast / 1300 ft agl	**Visibility**	7 Miles
Wind Speed/Gusts, Direction:	11 knots, 50°	**Visibility (RVR):**	
Altimeter Setting:	30.06 inches Hg	**Visibility (RVV):**	
Precipitation and Obscuration:			
Departure Point:	Spanish Fort, AL (BFM)	**Type of Flight Plan Filed:**	IFR
Destination:	Montgomery, AL (MGM)	**Type of Clearance:**	IFR
Departure Time:	1935 CDT	**Type of Airspace:**	Class C

Airport Information

Airport:	Brookley Downtown Airport (BFM)	**Runway Surface Type:**	Asphalt
Airport Elevation:	26 ft	**Runway Surface Condition:**	Wet
Runway Used:	32	**IFR Approach:**	None
Runway Length/Width:	9618 ft / 150 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	30.705833, -87.950000

Administrative Information

Investigator In Charge (IIC):	Butch Wilson	**Adopted Date:**	01/10/2006
Additional Participating Persons:	Emil A Cirone; FAA Birmingham FSDO; Vestavia Hills, AL Hardy R Douglas; Pratt & Whitney Canada; Quebec, Todd Sigler; Cessna Aircraft Company; Wichita, KS Edwar L Baxter; Mid-Atlantic Freight, Inc.; Greensboro, NC Patrick L McCormick; National Air Traffic Controllers Association; St. Petersburg, FL Charles Gray; Aviation Maintenance Consultants Inc.,/ Mid Atlant; Westminster, SC		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets 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.ntsb.gov/pubdms/.		