Aviation Investigation Final Report

Location:	WEST PALM BEACH, Florida	**Accident Number:**	MIA99FA245
Date & Time:	September 3, 1999, 03:25 Local	**Registration:**	N338AS
Aircraft:	Beech B-90	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	8 Fatal
Flight Conducted Under:	Part 91: General aviation - Executive/Corporate		

Analysis

At 0314, the pilot reported to the Air Traffic Control (ATC) Tower that he wanted to divert from his destination to land at a closer airport, and was cleared for a visual approach. At 0325, the pilot issued a "Mayday." On final approach the airplane struck a building and wires about 1/2 mile short of the runway. Witnesses that saw the airplane just before impact said that the airplane was low, there was no in-flight fire, and the engine sounds "...appeared to be a fluttering sound as if air [was] passing through the propeller." The pilot had filed for a cruise altitude of 15,000 feet, with a time en route of 5 hours, and fuel on board 6 hours. Weight and balance calculations showed that the pilot was operating about 722 pounds above the maximum gross weight for the takeoff, climb, and maximum cruise power settings. The Pilot Operating Handbook calculations showed that most of the fuel would have been used during the flight. The engine and propeller examinations revealed that both engines were not producing power at impact (windmilling). There were no discrepancies found with the engines or propellers. Examination of the propellers revealed that they were not in the feather position and they were not in beta/reverse position. Line personnel at the departure airport confirmed that all the tanks were topped off (282 gallons added). It took the flight 32 minutes to reach a cruise altitude of 15,000 feet, which calculated to about 293.3 pounds (1 gallon of Jet "A" equals 6.7 pounds), and a flight time of 4.9 hours from takeoff to impact. Sample calculations indicated that the fuel burn rate would have caused the airplane to use 2,649.3 pounds of Jet "A" turbine fuel during the flight. The flight departed with all tanks full 384 gallons usable (2,572.8 pounds), which calculates to insufficient fuel for the completion of the flight. Two gallons of fuel was drained from the right nacelle tank at the crash site, and there was no evidence of in-flight leakage. The sample calculations do not consider performance degradation for operating the airplane above the maximum allowable gross weight, which would cause the fuel consumption to go up because more power was required for the over weight conditions. The pilot's flight plan was for economy cruise, plus the airplane was over gross weight at takeoff, and there are no performance charts for that condition. So, the performance was even poorer than shown on the maximum power chart for climb and cruise.

Calculations of the maximum allowable fuel that could be on board the aircraft showed that only 1851 pounds of turbine fuel could be carried to start the flight at the maximum allowable weight, or about 3.2 hours of flight. The en route winds aloft at the airplane's altitude indicated a slight tailwind for half the flight and a headwind of about 15 knots for the remainder of the flight.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: a total loss of engine power due to fuel exhaustion. Contributing factors in this accident were the pilot's operation of the airplane in an overweight condition, inadequate pre-flight and in-flight planning.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings
1. (F) PREFLIGHT PLANNING/PREPARATION - INADEQUATE - PILOT IN COMMAND
2. (F) IN-FLIGHT PLANNING/DECISION - INADEQUATE - PILOT IN COMMAND
3. FUEL CONSUMPTION CALCULATIONS - INACCURATE - PILOT IN COMMAND
4. (F) AIRCRAFT WEIGHT AND BALANCE - INADEQUATE - PILOT IN COMMAND
5. (C) FLUID,FUEL - EXHAUSTION

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings
6. OBJECT - BUILDING(NONRESIDENTIAL)
7. OBJECT - WIRE,STATIC
8. OBJECT - TREE(S)

Factual Information

HISTORY OF FLIGHT

On September 3, 1999, about 0325 eastern daylight time, a Beech B-90, N338AS, call sign Lifeguard 8AS, registered to CP Horizons Corporation, struck a building (pool warehouse) and crashed while on approach to Palm Beach International Airport, West Palm Beach, Florida, while on a Title 14 CFR Part 91 corporate flight. Visual meteorological conditions were reported, and an IFR flight plan was filed. The airplane was destroyed. There were no injuries to anyone on the ground. The airline transport-rated pilot-in-command, pilot/owner/passenger, seated in the right front seat, and six passengers were fatally injured. The flight had originated at 2231 from Pontiac, Michigan, en route to Boca Raton, Florida.

According to the flight plan, the pilot filed for a cruise altitude of 15,000 feet, with a time en route of 5 hours, and fuel on board 6 hours. The flight proceeded without incident until 0314, when the pilot of N338AS made initial contact with the Palm Beach Air Traffic Control (ATC) Tower, and was told that there was no weather information for Boca Raton.

Air traffic control recorded the following flight sequence before radio contact was established with West Palm Beach Tower.

At 2201, the pilot of N338AS called Lansing Automated Flight Service Station (AFSS) by phone and filed an IFR plan for a flight from Pontiac, Michigan to Boca Raton, Florida, and received the clearance at 2226, from Pontiac Clearance delivery. The initial clearance was issued "via the Pontiac 8 Departure, direct, maintain 3,000.

At 2231, Pontiac Tower cleared N338AS for takeoff on Runway 27L.

At 2244, the flight was cleared to 15,000 feet. At 2248, the pilot reported to the Cleveland ARTCC (Air Route Traffic Control Center), Litchfield (LFD) sector that he was leaving 13,000 for 15,000, and reported to the Cleveland ARTCC, Carleton Sector (CRL-R) at 2303, that he was at 15,000 feet.

There were three frequency changes from 2303 until 0112 when the pilot of N338AS made initial radio contact with Jacksonville Center, Sector R72, level at 15,000 feet, and he was given the Savannah, Georgia, altimeter setting.

At 0237, the pilot made radio contact with Miami ARTCC and was issued a clearance direct Boca Ration. At 0302, Miami assigned the flight an altitude of 6,000 feet.

At 0314, the flight was handed off to Palm Beach Tower, and the pilot reported on

frequency that he was descending from 7,000 to 6,000 feet.

At 0323, the pilot radioed, "...we'd like to land at Palm Beech International if we can." The flight was cleared to 1,500 feet, the pilot was told that the airport was at his 10 to 11 o'clock position, at 5 miles, and was asked if he had the airport in sight. He answered "affirmative," was cleared for a visual approach to runway 13, told that the winds were calm, and was cleared to land.

At 0325:27, a radio transmission came from the flight, "...Alpha Sierra, we need, ah, we got MAYDAY, A/Sierra...MAYDAY."

At 0325.40, a sheriff's department helicopter reported to the control tower that they had sited the aircraft wreckage, and requested that the fire department be sent.

Witnesses that saw the airplane just before impact said that the airplane was low, and they did not see any fire while the airplane was in-flight. According to a Palm Beach County Sheriff's deputy assigned to a perimeter about a 1/4 of a mile northeast of the crash site, "...I observed a twin engine aircraft at a low altitude pass overhead on what appeared to be an approach to Palm Beach County International Airport. From my position the aircraft was only in view for a second, however I did note that when the aircraft passed overhead, the sound of the aircraft appeared to be a fluttering sound as if air passing through the propeller. I was unable to determine if the engine was running at this time. A few seconds later, I heard a very loud concussion of what sounded to be an explosion...." (See Page 5 of the Palm Beach County Sheriff's Offense Report an attachment to this report).

The accident occurred during the hours of darkness about 26 degrees, 40 minutes north, and 080 degrees, 05 minutes west.

PERSONNEL INFORMATION

The pilot-in-command's flight logs were not found. Based on insurance company records the pilot's flight hours as of July 1999 were 11,562 hours of total flight time in all aircraft, and 11,062 hours as pilot-in-command of multi engine airplanes. In addition, 9,800 hours in turbine engine aircraft. It was not known how much flight time the pilot had in this make model airplane; however, associates of the pilot estimated that he had about 200 hours in this make and model aircraft.

AIRCRAFT INFORMATION

A review of the available aircraft records indicated that Beechcraft Aircraft Company manufactured the airplane in 1970. The available aircraft records indicated that the airframe had accumulated about 8,996 flight hours and about 7,510 cycles. The airplane records obtained from the FAA indicated that it had been exported to France in 1993, returned to the United States in 1995, exported to LaPaz, Bolivia in 1995, then returned to the United States in

February 1999. Extensive maintenance was performed from February 1999 through June 1999. The FAA issued a new airworthiness certificate in February 1999. The airplane had been weighed in February 1999 and its empty weight 6,255 pounds. The airplane was in an airworthy condition before the flight began.

METEOROLOGICAL INFORMATION

The reported weather at West Palm Beach for 0340; wind calm, visibility 10 sm, few clouds at 3,500, temperature 73 degrees F, dew point 72 degrees F, and the altimeter was 29.90 inches Hg. The en route winds aloft at the airplane's altitude indicated a slight tailwind for half the flight and a headwind of about 15 knots for the remainder of the flight.

COMMUNICATIONS

The pilot made several frequency changes during the flight, and there were no reported communication problems.

MEDICAL AND PATHOLOGICAL INFORMATION

Dr. Noel Palma performed autopsies on the pilot and the pilot/passenger, on September 4, 1999, at the Palm Beach County Medical Examiner's Office, West Palm Beach, Florida. According to the autopsy reports, the cause of death for both victims was "Multiple Injuries."

Toxicological tests were conducted at the Federal Aviation Administration, Research Laboratory, Oklahoma City, Oklahoma, and revealed, "No ethanol or drugs detected."

WRECKAGE AND IMPACT INFORMATION

The airplane struck a building, power lines, and came to rest in a cluster of trees about 1/2 mile short of runway 13, at the Palm Beach International Airport. There was a post crash fire. The airplane's left wing and empennage were separated from the fuselage, but remained attached by cables. All essential components to sustain flight were found in the immediate vicinity of the main wreckage. The airplane was found with the cabin inverted, and with the left wing folded forward along the fuselage. The empennage had rotated 180 degrees about the longitudinal axis and to the left of the fuselage. The right wing was resting on a fence and up against a palm tree. There was no evidence of metal splattering, soot streaking, or heat damage along any horizontal plane. All the heat damage was vertical and the melted metal was found directly beneath the fuselage. No evidence of an in-flight structural failure or an in-flight fire was found at the accident site. The post crash fire and impact forces destroyed about 80 percent of the fuselage structure.

The airframe fuel system was examined for evidence of failures, malfunctions or contaminants. The left nacelle, main, and right nacelle tanks had been breached and a faint odor of fuel was left near the resting place of the tanks. About 2 gallons of fuel was recovered

from the right nacelle tank the fuel was straw colored, clear, and free of extensive particles. The fuel did not contain any contamination. There was no evidence of fuel staining or discoloration aft of any fuel components or caps indicating that there was no in-flight fuel leak. There was no evidence of fuel leak in the engine compartments. The fuel panel was examined for switch position. The upper outer switches for the left and right systems (Firewall Shutoff Valve-Open, Boost Pumps-On) were in the up position. The inner upper switches (Transfer Pump-Off, left and right) were in the down position. The lower switch (Crossfeed-Open) was in the full up and locked position. The upper center switch (Transfer-Test) was in the neutral position. The normal in-flight crossfeed switch position should have been the auto (middle) position. The open position corresponds to a position that is for fuel leveling in-flight but on approach would be an indication that the fuel was gone in one of the (left or right) systems and the pilot was attempting to operate both engines on one fuel system.

The fuselage displayed fire damaged, and the floor of the cabin was consumed by fire. The radar assembly and its mounting points were separated and found with the nose gear structure assembly near the front of the fuselage. The lower forward fuselage was crushed from the nose radome aft to the wing root. The remainder of the lower forward fuselage was consumed by fire and torn from the fuselage during recovery.

The stair door was stowed and locked. During the hangar examination the door was unlatched and it opened. No evidence was found to indicate that there was an attempt to use the stair door for egress.

The nose landing gear displayed dirt and scrapings on the piston, and was found before the fence line, next to a dumpster about 25 feet from the main wreckage.

The left main landing gear's outboard attachment to the main spar displayed minor damage to the outer flange. There was ash colored fire damage in this area. The down locking arm was broken. The actuator was extended 8 1/2 inches from the center of the nut. The left main landing gear outer wheel rim was fractured into two pieces and found north of the warehouse. The tire was also found north of the warehouse.

The right main gear and piston were found in a warehouse, about 100 feet away from the wreckage site. The right main landing gear doors were open and the remaining right main landing gear cylinder was protruding and pushed aft. The left main tire and fractured pieces of the wheel's rim were found north of the warehouse, about 200 feet away. All evidence indicated that the landing gear was down and locked.

The flight controls were found in their respective attach points throughout the structure of the airframe. The ailerons were integral to their respective attach points except the outboard hinge on the right aileron was torn from its mounting structure consistent with the structural deformity of the wing. The elevators and rudder were integral to their respective mounting points except for the right hand outboard elevator was bent similar to the deformity of the horizontal stabilizer.

The control cables were loose throughout the airframe, and the cables were followed along their respective paths from the control points in the cockpit to the flight surface. No major flight control cable was broken. The trim cables were followed and the trim cables to the empennage were found torn, however, the trim positions of the cockpit controls matched the trim positions of the tabs. All of the trim tabs were found at the neutral position.

The flaps were found in the up position. The flap drive system was consumed by fire damage in the floor of the cabin.

The fuselage displayed fire damaged, with the floor of the cabin consumed by fire.

The cockpit instruments were found integral to their respective mounting structure and had soot covering the outside glass instrument faces. The engine instruments were indicating zero with the exception of the left fuel flow gauge, which indicated about 280 pounds per hour. The flight instruments indicated that the airplane's heading after coming to rest was 130 degrees, airspeed zero, altitude 50 feet, and an attitude of pitch level with a 15-degree left bank. The fuel quantity gauges indicated zero.

The engine control levers were generally forward. The condition levers were found full forward. The left propeller lever was slightly aft of the right, which was found full forward. The power levers were found with the right full forward and the left slightly aft of full forward.

The airplane's air/pneumatic systems were found separated into the sections of the airframe. No evidence of failures or in-flight malfunctions was found. The outflow valves were found in the open position with no sooting or other malfunctions evident. The valves were integral to the aft bulkhead structure and exhibited no damage. The air supply lines were found separated with the sections of the airframe. The compressor/blower was found separated but near its attach points. The blower was found with no evidence of heat damage, sooting, or evidence of malfunction during flight.

The combustion heater was found damaged with no evidence of in-flight fire or overheat. There was no evidence of fuel leakage in or around the heater. The ducting was crushed and separated from the heater exhaust.

The electrical systems of the airplane were destroyed by impact and post crash fire. The airplane's nickel cadmium battery was found with no damage, no arcing, and no evidence of over temperature. The associated wiring in the battery compartment was not damaged and displayed no evidence of arcing.

The nacelle electrical leads in both engine compartments aft of the firewall were examined and did not exhibit any evidence of over heating, arcing, or chafed insulation. The wiring in both wings was examined and did not exhibit any arcing. The wiring in the fire-damaged areas of the airplane was examined for arcing, in-flight failures, or malfunctions.

None were found.

Fire-damaged wires, missing insulation, and melted terminal blocks, characterized the wiring throughout the cabin area. No evidence of in-flight failures was found. The circuit breakers were fire damaged and did not exhibit any arcing from the wiring supply to the structure.

The left engine pylon was found broken from its wing structural attach points bent in crushing at about a 10-degree angle down.

The right engine pylon was found broken from its wing structural attach points bent towards the inboard side at about a 15-degree angle.

The nose compartment was substantially damaged. No testing was done to the avionics. There were no reported malfunctions of the avionics during the flight.

The air-conditioning assemblies were destroyed. The compressor assembly was examined for over heat, none was found. The air conditioning system was not integral to the structure of the airframe; arcing or in-flight failures or malfunctions were not found.

The left engine was a Pratt and Whitney PT6A-20, serial number PCE-20801. There were no reported malfunctions. The engine could not be rotated by hand. The engine was retained for examination at the manufacturer's facility.

The right engine was a Pratt and Whitney PT6A-20, serial number PCE-22008. There were no reported malfunctions. The engine could not be rotated by hand. The engine was retained for examination at the manufacturer's facility.

Both propellers appeared symmetrical in general appearance, with similar impact damage to both propellers. All the blades on both propellers displayed relatively little blade damage. They were not "corkscrewed" or extensively bent. There were light rotational scoring marks in the blades of both propellers.

TEST AND RESEARCH

The powerplant investigation was performed on 7-8 December l999, at the Pratt & Whitney Canada Service Investigation Facilities at St. Hubert, Quebec, Canada. At the request of the NTSB IIC, an Inspector from the Transportation Safety Board Canada supervised the engine examination. The engine and propeller examinations did not show evidence of power at impact. The propeller blades did not indicate substantial absorbed energy supporting other evidence that indicated very little power at impact. There were no discrepancies found with either of the engines. According to the Transportation Safety Board of Canada's inspector, "...the investigation team concluded that both engines were not producing power at impact (windmilling) this conclusion was also confirmed by...Hartzell [Propeller] who established that

damages on both propellers were not consistent with a full power engine." Examination of the propellers revealed that they were not in the feather position and they were not in beta/reverse position. (See Transportation Safety Board of Canada, Hartzell Propeller, and P&W teardown reports attachments to this report).

The NTSB Vehicle Recorders Division performed a sound spectrum study using a re-recording of air traffic control transmissions, in an effort to identify any background sound signatures that could be associated with the aircraft. The study revealed that the only signatures present were "voice." There were no signals evident that could be associated with the aircraft in any of N338As's transmission, except possibly in Transmission 4, but they were not attributed to the accident aircraft. The only aural warning sources in the cockpit were the gear warning horn, and the stall warning horn. (See NTSB Sound Spectrum Study an attachment to this report).

ADDITIONAL INFORMATION

The Beechcraft King Air B90 fuel system consisted of ten individual fuel tanks interconnected to supply fuel to the two turbine engines. There were five tanks in each wing that combined to provide fuel to each respective engine. A crossfeed valve connected the two separate systems. The valve was operated electrically by the pilot or automatically when the fuel pressure in either system drops. There are electric boost pumps in each nacelle tank and electric transfer pumps in each wing. The nacelle tanks have 61 usable gallons and the wing tanks have 131 gallons. There is a total usable fuel quantity of 384 gallons (2,572.8 pounds). There is some unusable fuel in each tank.

The nacelle tank for each engine is considered the main fuel tank. During flight, each main tank supplies fuel to its respective engine. The crossfeed valve is used to supply fuel from one system to both engines. Check valves in the fuel lines prevent fuel from being transferred from one side fuel system to the other. There are firewall fuel shutoff valves for each engine.

The airplane had departed Pontiac, Michigan (PTK) en route to Boca Raton (BCT), a trip of about 950 nautical miles. According to the FAA, the en route time was about 4.9 hours. The airplane had departed about 1.4 hours after its proposed time. The pilot initiated planned en route flight time on the FAA flight plan was 5 hours and the planned fuel on board was 6 hours. The airplane's empty weight was 6,255 pounds. The weight of the passengers, pilot, and baggage was measured to be 1,544 pounds. The airplane's maximum gross weight was limited to 9,650. The full fuel weight would have been about 2,573 pounds. The calculated gross weight at takeoff with full fuel was 10,372 pounds, or 722 pound over maximum gross weight.

The pilot had 282 gallons of fuel added in PTK. According to line personnel at PTK, the pilot requested and the refueler confirmed that all the tanks were topped off. According to the airplane's flight manual, the fuel flow at 15,000 feet cruising altitude at true airspeed of 218

would have been 525 pounds per hour. The airplane's flight manual indicated that the time to climb and fuel used would have been 24 minutes and 220 pounds (1 gallon of Jet "A" equals 6.7 pounds) respectfully. The air traffic control transcript of communications revealed that it took the flight 32 minutes to reach 15,000 feet, and that calculated to about 293.3 pounds, or a 73.3 pounds difference from the flight manual time to climb (24 minutes and 220 pounds). Sample calculations indicated that the fuel burn rate would have caused the airplane to use 2,576 pounds of Jet "A" turbine fuel during the flight. Add the 73.2 pounds to the sample calculation of 2,576 pounds of fuel used for the flight, and it becomes 2,649.2 pounds. Considering it was reported that the flight departed with all tanks full, or 384 gallons usable (2,572.8 pounds), minus the sample calculation of 2,649.3 pounds used for the flight, leaving insufficient fuel for the completion of the flight. The sample calculations do not consider performance degradation for operating the airplane above the maximum allowable gross weight. The fuel consumption goes up because more power is required for the over weight conditions. The pilot initiated flight plan was for economy cruise, plus the airplane was over gross weight at takeoff, and there are no performance charts for that condition. So the performance was even poorer than shown on the maximum power chart for climb and cruise. Calculations of the maximum allowable fuel that could be on board the aircraft showed that only 1851 pounds of turbine fuel could be carried to start the flight at the maximum allowable weight. (See NTSB Systems and Powerplants Group Chairman's Factual Report an attachment to this report).

The airplane was released to Mr. Charles Maynard, insurance adjuster for the owner's insurance company, on September 4, 1999. The engine and propeller were released to Mr. Charles Maynard on December 9, 1999.

Pilot Information

Certificate:	Airline transport; Commercial	**Age:**	47,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 1 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	August 9, 1999
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	11562 hours (Total, all aircraft), 200 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N338AS
Model/Series:	B-90 B-90	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	LJ-493
Landing Gear Type:	Retractable - Tricycle	**Seats:**	9
Date/Type of Last Inspection:	April 5, 1999 Annual	**Certified Max Gross Wt.:**	9650 lbs
Time Since Last Inspection:	75 Hrs	**Engines:**	2 Turbo prop
Airframe Total Time:	8832 Hrs	**Engine Manufacturer:**	P&W
ELT:	Installed, not activated	**Engine Model/Series:**	PT6A-20
Registered Owner:	C.P. HORIZONS CORP	**Rated Power:**	550 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Night/dark
Observation Facility, Elevation:	PBI ,18 ft msl	**Distance from Accident Site:**	
Observation Time:	03:40 Local	**Direction from Accident Site:**	130°
Lowest Cloud Condition:	Scattered / 3500 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	73°C / 68°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	PONTIAC , MI (PTK)	**Type of Flight Plan Filed:**	IFR
Destination:	BOCA RATION , FL (BCI)	**Type of Clearance:**	IFR
Departure Time:	22:31 Local	**Type of Airspace:**	

Airport Information

Airport:	PALM BEACH INTERNATIONAL PBI	**Runway Surface Type:**	Asphalt
Airport Elevation:	18 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	13	**IFR Approach:**	Visual
Runway Length/Width:	6931 ft / 150 ft	**VFR Approach/Landing:**	Full stop

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	7 Fatal	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	8 Fatal	**Latitude, Longitude:**	26.660444,-80.090484(est)

Administrative Information

Investigator In Charge (IIC):	Yurman, Alan
Additional Participating Persons:	HAZEL JONES; FORT LAUDERDALE, FL HAROLD R BARRENTINE; WICHITA , KS TOM BERTHE; LONGUEUIL , OF
Original Publish Date:	July 30, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=47268