Aviation Investigation Final Report

Location:	PENSACOLA, Florida	**Accident Number:**	ATL97FA030
Date & Time:	December 28, 1996, 11:05 Local	**Registration:**	N23652
Aircraft:	Beech A36	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 Fatal, 2 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The flight had arrived at the destination airport, and the pilot had completed an instrument approach, but low clouds prevented him from landing. He requested a second instrument approach. While on a five mile final, the pilot experienced a loss of engine power. Efforts to restart the engine failed. The airplane collided with trees five miles short of the airport. Examination of the airframe failed to disclose a mechanical problem or a system malfunction. During the examination of the wing assembly, there was no fuel recovered from the left fuel tank. The right wing displayed evidence of hydraulic fluid action in the vicinity of the fuel tank installation; the left fuel bladder was not damaged. The engine operated through all power ranges during the functional test. The aircraft fuel selector was in the left tank position.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's mismanagement of the fuel supply that resulted in fuel starvation and the subsequent loss of engine power. A factor was low ceilings.

Findings

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

Findings
1. (C) FLUID,FUEL - STARVATION

2. (C) FUEL MANAGEMENT - INADEQUATE - PILOT IN COMMAND
3. (C) FUEL TANK SELECTOR POSITION - IMPROPER - PILOT IN COMMAND

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

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
4. (F) WEATHER CONDITION - LOW CEILING
5. OBJECT - TREE(S)

Factual Information

HISTORY OF FLIGHT

On December 28, 1996, at 1105 central standard time, a Beech A-36, N23652, collided with trees five miles north of the Pensacola Regional Airport in Pensacola, Florida, while attempting an emergency landing. The personal flight operated under the provisions of Title 14 CFR Part 91 with an instrument approach clearance. Instrument weather conditions prevailed at the time of the accident. The airplane was substantially damaged. The pilot and one passenger were fatally injured, and two passengers were seriously injured. The flight's departure location was from Tampa's Peter O'Knight Airport at an undetermined time.

On December 28, 1996, at 0708:26, a man who identified himself as the pilot of N23652, telephoned St. Petersburg Automated Flight Service Station (AFSS) and requested an instrument flight briefing weather for a flight from The Peter O'Knight Airport in St. Petersburg, Florida, to Pensacola, Florida. The pilot was given the standard briefing that included existing and forecast weather conditions for the intended route of flight. At the completion of the weather briefing, the pilot filed an instrument flight plan. The pilot reported on the flight plan an enroute flight time of two hours and thirty minutes, and a total fuel endurance of four hours and thirty minutes. There was no further communication between the pilot and the St. Petersburg AFSS. A review of communication information between the pilot and other air traffic control facilities appeared to have been routine for a flight operating under visual weather conditions.

According to the passenger, seated in the right front seat of the airplane, she observed the events leading up to the accident. She stated that the flight departed Tampa, Florida, at approximately 1030 eastern standard time. Because the pilot experienced some difficulty with the aircraft communication radios, he used a hand-held portable transceiver; the aircraft radio receiver operated normally. After takeoff, the passenger recalled that the pilot followed the coast line to maintain visual contact while cruising at 8000 feet.. Approximately 45 minutes into the flight, over Crystal River Powerplant, the pilot switched the fuel selector from the left fuel tank to the right fuel tank.

At 1007, the pilot established initial radio contact with Tyndall AFB Approach Control, and requested routine visual flight following to Pensacola. At 1017, Tyndall Approach Control handed the flight off to Eglin AFB Approach. At 1031, Pensacola Approach reported that, the flight was a visual handoff from Eglin AFB Approach, and the pilot had requested an approach into Pensacola, but the pilot was informed of the instrument weather conditions that had prevented other flights from landing. The pilot stated that he would hold south of the airport until approach and landing weather minimums existed. After several minutes of visual holding, Pensacola Approach Control reported that the Runway Visual Range (RVR) for runway 17 had

improved to 2,800 feet. The pilot was issued an instrument approach clearance for runway 17 and was also given radar vectors for a final approach. After missing the first approach, the pilot requested a second approach.

At 1104:37, while on a five mile final of the second ILS runway 17 approach, the pilot reported an engine problem and subsequently, that the engine had quit. The pilot requested radar vectors for the final approach to runway 17. The passenger stated that the pilot switched the fuel selector from the right fuel tank to the left fuel tank and attempted to restart the engine. After several attempts, the engine started and ran for about one minute and quit again. At the same time the passenger noticed that both fuel gauges were showing 3/4 tank of fuel. The passenger also stated that, the pilot said, he had flown in the Pensacola area, and was familiar with the terrain. The pilot abandoned efforts to restart the engine and continued an emergency descent for a forced landing. During the final phase of the emergency descent, the passenger felt a jolt and heard a ripping sound on the right side of the airplane. The passenger blacked out, and regained conscience after the airplane had collided trees and the ground. The passenger recalled the strong smell of fuel around her at the accident site. The airplane collided with trees north of the airport in a swampy area.

PERSONNEL INFORMATION

The pilot held an airline transport pilot certificate with a single engine, multiengine, and airplane instrument rating. His certificate was issued March 26, 1993. His last medical certificate, a first class, was dated February 1, 1996. There were no limitations or waivers on his medical certificate. Additional personnel information is contained in this report on page 3 under "First Pilot Information." The review of the limited pilot information failed to reveal the pilot's total flight experience in the Beech A36.

AIRCRAFT INFORMATION

The airplane log indicated the annual inspection was completed on November 20, 1996. There were no discrepancies noted in the airplane's log book. Additional information about the airplane is contained on page 2 under "Aircraft Information." According to an official from Tampa Flying Service, they operated N23652 under a lease agreement from a military officer.

METEORLOGICAL INFORMATION

The weather at the time of the accident was instrument meteorological conditions. The pilot attempted an instrument approach with the weather just above the required approach minimums. Additional information about the weather is contained on pages 3 and 4 under "Weather Information." The pilot had received a weather briefing and was aware of the marginal weather conditions at the destination airport (see attached preflight weather briefing included in the transcription of communication). According to the approach controllers at Pensacola, low clouds had prevented any flights from landing at Pensacola throughout the previous night and early morning.

WRECKAGE AND IMPACT INFORMATION

Examination of the accident site disclosed that aircraft wreckage debris was scattered over an area 100 feet long and 40 feet wide. The wreckage debris was orientated on a 195 degree magnetic heading. Examination of the accident site also disclosed that airframe debris from the right horizontal stabilizer was approximately 75 feet north of the main wreckage. Several freshly broken trees were also located in the vicinity of the right stabilizer. Additional wreckage debris was located 35 feet north of the inverted main wreckage.

Examination of the airframe and subsystems failed to disclose a mechanical malfunction or system failure. Additional examinations of the airframe and fuel system revealed that the left fuel tank was not damaged during the crash sequence; no fuel was recovered from the left fuel tank. The left fuel cell was removed from the wing assembly and functionally checked for leaks and breaches in the rubber material; none were found. Examination of the right wing structure disclosed that the skin material in the immediate vicinity of the fuel bladder had been displaced or ballooned outward from the structural supports. The permanent deformation to the right wing skin material was typical of hydraulic action on trapped fluids. The right wing assembly sustained impact damage along the leading edge in the vicinity of the wing root and approximately 30 inches inboard from the wing tip. There was no fuel recovered from the right wing tank. Reportedly heavy rains had fallen before and after the accident, and there were no obvious signs of fuel spillage in the vicinity of the accident site.

An examination of the engine, under the supervision of the National Transportation Safety Board was completed by the manufacturer, Teledyne Continental Motors. During the functional examination, the engine started and maintained operating RPM; the engine was able to achieve 2660 RPM at full power. The engine ran successfully.

MEDICAL AND PATHOLOGICAL INFORMATION

The postmortem examination of the pilot was performed in the Sacred Heart Hospital Morgue in Pensacola, Florida, on December 29, 1996 155 hours by Dr. E.S. Harvard. The toxicological examinations on the pilot were negative for alcohol and drugs.

ADDITIONAL INFORMATION

The review of air traffic data revealed that the pilot never activated the filed flight plan, and the exact departure time was not established.

According to flight plan information provided by the pilot, the total flight time for this flight should have been two hours and thirty minutes. Based upon this data, the airplane was estimated to have used approximately 43 gallons of fuel during this flight. Each wing tank has 37 gallons of usable fuel. Approximately 30 gallons of fuel was estimated to have been in

the right tank at the time of the accident.

The aircraft wreckage was released to Mr. Ty Dedman, (Insurance Adjuster with Sample International) 555 West Granada Blvd. Suite G-3, Ormand Beach, Florida 32174.

Pilot Information

Certificate:	Airline transport; Commercial	**Age:**	40,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	February 1, 1996
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	4000 hours (Total, all aircraft), 3500 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N23652
Model/Series:	A36 A36	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Utility	**Serial Number:**	E-1295
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	November 20, 1996 100 hour	**Certified Max Gross Wt.:**	3600 lbs
Time Since Last Inspection:	28 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1728 Hrs	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	IO-550-B-6
Registered Owner:	HURD AERO	**Rated Power:**	300 Horsepower
Operator:	RODNEY BAILEY	**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	PNS ,121 ft msl	**Distance from Accident Site:**	5 Nautical Miles
Observation Time:	11:05 Local	**Direction from Accident Site:**	180°
Lowest Cloud Condition:	Unknown	**Visibility**	0.25 miles
Lowest Ceiling:	Unknown	**Visibility (RVR):**	2800 ft
Wind Speed/Gusts:	7 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	120°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	20°C / 20°C
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	TAMPA , FL (TPF)	**Type of Flight Plan Filed:**	IFR
Destination:	(PNS)	**Type of Clearance:**	IFR
Departure Time:	00:00 Local	**Type of Airspace:**	Class C

Airport Information

Airport:	PENSACOLA INTERNATIONAL PNS	**Runway Surface Type:**	Asphalt
Airport Elevation:	121 ft msl	**Runway Surface Condition:**	Wet
Runway Used:	17	**IFR Approach:**	ILS
Runway Length/Width:	7002 ft / 150 ft	**VFR Approach/Landing:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Fatal, 2 Serious	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal, 2 Serious	**Latitude, Longitude:**	30.469411,-87.190284(est)

Administrative Information

Investigator In Charge (IIC):	Powell, Phillip
Additional Participating Persons:	GAYLE LIEURANCE; BIRMINGHAM , AL
Original Publish Date:	March 31, 1998
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=3772