National Transportation Safety Board
Aviation Accident Final Report

Location:	Tulsa, OK	**Accident Number:**	DFW05LA031
Date & Time:	12/08/2004, 1831 CST	**Registration:**	N6PE
Aircraft:	Beech B200	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General Aviation - Business		

Analysis

The 2,100-hour instrument-rated private pilot stated that prior to departure for a 507 nautical-mile cross-country flight, the fuel gauges indicated approximately 800 pounds of fuel on each side for a total of 1600 pounds; however, he did not visually check the amount of fuel that the tanks contained. During his approach to the destination airport, the right engine started to "sputter" before it finally quit. The pilot then "looked over at the fuel gauges and both tanks were showing empty." The left engine quit just a few moments later. The auto ignition installed in the airplane attempted to restart the engines. The engines restarted momentarily and then shut-off once more. The pilot declared an emergency and executed a forced landing onto a street below. After a hard landing onto the street, the right wing hit a telephone pole, and the left wing then hit several tree limbs before the airplane impacted a hill and came to a stop. The Federal Aviation Administration (FAA) inspector, who responded to the accident site, found the fuel transfer switch in the "right-crossfeed" position. The fuel system was examined and no leaks or anomalies were found. Approximately three-quarters of a gallon of unusable fuel was found in the right engine nacelle. Approximately four gallons (28 pounds) of usable fuel was found in the left engine nacelle.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of engine power due to fuel exhaustion as a result of the pilot's inadequate preflight and in-flight planning / preparation.

Findings

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

Findings
1. (C) FLUID,FUEL - EXHAUSTION
2. (C) PREFLIGHT PLANNING/PREPARATION - INADEQUATE - PILOT IN COMMAND
3. ALL ENGINES
4. IN-FLIGHT PLANNING/DECISION - INADEQUATE - PILOT IN COMMAND

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

Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: EMERGENCY LANDING

Findings
5. OBJECT - POLE
6. OBJECT - TREE(S)

Occurrence #4: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation:

Findings
7. TERRAIN CONDITION - RISING

Factual Information

On December 8, 2004, approximately 1831 central standard time, a Beech B200 twin-engine turboprop airplane, N6PE, was substantially damaged during a forced landing following a dual loss of engine power approximately four miles north of runway 18L at Tulsa International Airport (TUL), near Tulsa, Oklahoma. The instrument-rated private pilot, sole occupant and owner of the airplane, sustained minor injuries. Night visual meteorological conditions prevailed, and an instrument flight plan was filed for the business flight that was operating under the provisions of 14 Code of Federal Regulations Part 91. The cross-country flight originated from the La Crosse Municipal Airport (LSE), near La Crosse, Wisconsin, at 1607, with TUL as its intended destination.

In a telephone interview with an NTSB representative, the 2,100-hour pilot stated that upon departure from LSE for the 507 nautical-mile cross-country flight, the fuel gauges indicated approximately 800 pounds of fuel on each side, for a total of 1600 pounds; however, he did not visually check the amount of fuel in the tanks.

During his approach to TUL, the pilot was "cleared to land 18L." According to the pilot, approximately 6 miles from the runway, the right engine started to "sputter" before it finally lost power. The pilot then "looked over at the fuel gauges and both tanks were showing empty." The left engine lost power just a few moments later. The auto ignition system installed in the airplane attempted to restart the engines. The engines restarted momentarily and then shut-off once more. The pilot feathered both propellers and elected to "declare an emergency" to air traffic control (ATC). The pilot said that as he was descending without power, he was watching the moving-map display on his global positioning system (GPS) unit, and "knew that he was not going to make it to the runway."

At the time, the pilot was traveling on a southerly heading, but he spotted a street below that ran in an east-west direction and thought that it would be the most suitable place to execute his forced landing. There was a "half-mile break in the traffic on the road," and the pilot approached the street and stalled the airplane in an empty space directly over the street. After a hard landing onto the street, the right wing hit a telephone pole, and the left wing then hit several tree limbs before the airplane impacted a hill and came to rest upright. There was no postimpact fire.

According to the pilot, structural damage to the airplane included the outboard section of both wings, both propellers, and the right engine being separated from the airplane. The tail of the airplane was separated from the fuselage and had rotated in a clockwise direction.

The Federal Aviation Administration (FAA) inspector, who responded to the accident site, found the fuel transfer switch in the "right-crossfeed" position. The fuel system was examined, and no leaks or anomalies were found. Approximately three-quarters of a gallon of unusable fuel was found in the right engine nacelle. Approximately four gallons (28 pounds) of usable fuel was found in the left engine nacelle.

The airplane was equipped with the Hartzell/Raisbeck quiet turbofan propeller modification. The pilot stated that this modification would improve performance and decrease fuel consumption; however, according to the performance section of the Raisbeck FAA-approved Flight Manual Supplement for the B200, "the use of the basic POH performance for this configuration is approved" with some additional changes in takeoff speeds. Additionally, the

pilot's operating handbook (POH) states that "an error of 3 percent maximum may be encountered" in the fuel gauging system.

Based on calculations from the B200 basic POH, time, fuel and distance to climb to 28,000 feet would have been 16 minutes, 285 pounds (including 90 pounds for start, taxi, and takeoff), and 50 nautical miles respectively. According to a performance monitoring record from a previous flight (same altitude and route of flight) submitted by the pilot, the fuel flow of the left engine was 300 pounds per hour, and the fuel flow for the right engine was 265 pounds per hour for a total fuel consumption of 565 pounds per hour during cruise flight. Two hours and eight minutes at 565 pounds per hour was calculated for a consumption of 1,205.33 pounds of fuel consumed during cruise flight.

At 1753, the automated weather observing system at TUL reported wind from 180 degrees at 13 knots, 10 statute miles visibility, a clear sky, temperature 57 degrees Fahrenheit, dew point 42 degrees Fahrenheit, and an altimeter setting of 29.76 inches of Mercury.

Pilot Information

Certificate:	Private	**Age:**	45, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	**Seat Occupied:**	Left
Other Aircraft Rating(s):		**Restraint Used:**	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):		**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	03/25/2003
Occupational Pilot:		**Last Flight Review or Equivalent:**	08/05/2003
Flight Time:	2089 hours (Total, all aircraft), 469 hours (Total, this make and model), 5031 hours (Pilot In Command, all aircraft), 60 hours (Last 90 days, all aircraft), 18 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N6PE
Model/Series:	B200	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	BB-856
Landing Gear Type:	Retractable - Tricycle	**Seats:**	10
Date/Type of Last Inspection:	09/23/2004, AAIP	**Certified Max Gross Wt.:**	12500 lbs
Time Since Last Inspection:	52.4 Hours	**Engines:**	2 Turbo Prop
Airframe Total Time:	3084.63 Hours at time of accident	**Engine Manufacturer:**	Pratt & Whitney Canada
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	PT6A-42
Registered Owner:	Micheal Hentges	**Rated Power:**	850 hp
Operator:	RNH Air 1 LLC	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Night/Dark
Observation Facility, Elevation:	TUL, 677 ft msl	**Distance from Accident Site:**	4 Nautical Miles
Observation Time:	1753 CST	**Direction from Accident Site:**	180°
Lowest Cloud Condition:	Clear	**Visibility**	10 Miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	13 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	180°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.76 inches Hg	**Temperature/Dew Point:**	14°C / 6°C
Precipitation and Obscuration:			
Departure Point:	La Crosse, WI (LSE)	**Type of Flight Plan Filed:**	IFR
Destination:	Tulsa, OK (TUL)	**Type of Clearance:**	IFR
Departure Time:	1607 CST	**Type of Airspace:**	Class C

Airport Information

Airport:	Tulsa International Airport (TUL)	**Runway Surface Type:**	Asphalt
Airport Elevation:	677 ft	**Runway Surface Condition:**	Dry
Runway Used:	NA	**IFR Approach:**	Visual
Runway Length/Width:		**VFR Approach/Landing:**	Forced Landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	36.279167, -95.886111

Administrative Information

Investigator In Charge (IIC):	Hector R Casanova	**Report Date:**	03/30/2005
Additional Participating Persons:	Terry Carr; Oklahoma City FSDO; Oklahoma City, OK Edward Webber; Raytheon Aircraft Company; Wichita, KS		
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/.		