



# Aviation Investigation Final Report

<b>Location:</b>	Tulsa, Oklahoma	<b>Accident Number:</b>	FTW02LA190
<b>Date &amp; Time:</b>	June 22, 2002, 10:30 Local	<b>Registration:</b>	N224CR
<b>Aircraft:</b>	Beech BE-300	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

While climbing through 9,500 feet msl, the inboard access panel for the left engine cowling became open. During the turn to return to the departure airport, the door separated from the airplane. The pilot landed the airplane without further incident. The integrity of the pressure vessel was compromised on the left side of the cabin. The Pilot's Operating Handbook and FAA Approved Flight Manual, Section IV Normal Procedures, Preflight Inspection states in part, " to check the engine cowling, doors, and panels."

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate preflight of the airplane resulting in the in-flight separation of the left engine inboard access door.

## Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation: CLIMB - TO CRUISE

Findings

1. (C) DOOR,INSPECTION - SEPARATION
2. (C) AIRCRAFT PREFLIGHT - INADEQUATE - PILOT IN COMMAND

## Factual Information

On June 22, 2002, at 1030 central daylight time, a Beech BE-300, twin-engine airplane, N224CR, was substantially damaged following the in-flight separation of a portion of the left engine cowling during the initial climb from the Tulsa International Airport (TUL), near Tulsa, Oklahoma. The airplane was owned by Wells Fargo Bank Northwest of Salt Lake City, Utah, and was being operated by Flight Concepts, Inc., Tulsa, Oklahoma, under Code of Federal Regulations Part 91. The airline transport pilot and the passenger were not injured. Visual meteorological conditions prevailed for the cross-country flight, and a flight plan was not filed. The personal flight was originating at the time of the accident.

On the Pilot/Operator Aircraft Accident Report (NTSB Form 6120.1/2), the pilot reported that while climbing through 9,500 feet msl, the "left inboard engine access door opened." The pilot reduced the power to flight idle, and then requested and received a clearance to return to TUL for landing. During the turn to return to the airport, at approximately 90 degrees of the turn, the "door separated" from the airplane. The pilot continued to the airport and performed a normal landing without further incidence. In the same report, the pilot reported that the latches for the aft cowling door (Raytheon part number 130-910031-40) had "failed," allowing the door to become open, and puncturing the fuselage.

The FAA inspector, who responded to the accident site, and the pilot found the lower panel of the left engine inboard cowling missing. The integrity of the pressure vessel was compromised for approximately 6-8 inches along the left side of the cabin.

A review of the maintenance records by the FAA inspector, revealed that the P3 filters were removed and replaced on June 19, 2002. Company maintenance department personnel reported that both engine cowlings were opened during the maintenance, and subsequently they were secured for flight.

The Pilot's Operating Handbook and FAA Approved Flight Manual, Section IV Normal Procedures, Preflight Inspection states in part: Engine Cowling, Doors, and Panels (left side)...SECURE.

## Pilot Information

<b>Certificate:</b>	Airline transport	<b>Age:</b>	33, Male
<b>Airplane Rating(s):</b>	Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	June 14, 2002
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	January 30, 2002
<b>Flight Time:</b>	6705 hours (Total, all aircraft), 1400 hours (Total, this make and model), 6615 hours (Pilot In Command, all aircraft), 138 hours (Last 90 days, all aircraft), 48 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Beech	<b>Registration:</b>	N224CR
<b>Model/Series:</b>	BE-300	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	FL-60
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	11
<b>Date/Type of Last Inspection:</b>	October 12, 2001 AAIP	<b>Certified Max Gross Wt.:</b>	15000 lbs
<b>Time Since Last Inspection:</b>	193 Hrs	<b>Engines:</b>	2 Turbo prop
<b>Airframe Total Time:</b>	5271.6 Hrs at time of accident	<b>Engine Manufacturer:</b>	Pratt & Whitney Canada
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	PT6A-60
<b>Registered Owner:</b>	Wells Fargo Bank Northwest	<b>Rated Power:</b>	1050 Horsepower
<b>Operator:</b>	Flight Concepts, Inc.	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	8 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	21°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Tulsa, OK (TUL)	<b>Type of Flight Plan Filed:</b>	IFR
<b>Destination:</b>	Georgetown, TX (GTU)	<b>Type of Clearance:</b>	IFR
<b>Departure Time:</b>	10:30 Local	<b>Type of Airspace:</b>	Class D

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	36.198333,-95.888053

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Roach, Joyce
<b>Additional Participating Persons:</b>	Robert Giguere; FAA FSDO; Oklahoma City, OK
<b>Original Publish Date:</b>	September 30, 2003
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=55051">https://data.nts.gov/Docket?ProjectID=55051</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).